

Entrepreneurial Factors Contributing towards the Firm's Growth in terms of Employment Generation: A Case Study of Electric Fan Producing Firms in Gujrat District

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Abstract: The objective of the present study is to investigate the importance of entrepreneurial factors being an important source of firm's growth in terms of generating employment opportunities. Primary data collected from a survey of 237 electric fans producing units of Gujrat is being utilized to empirically test the role of entrepreneurial and non-entrepreneurial determinants of firm growth. Multinomial Logit model is employed to find out the role of entrepreneurial factors along with non-entrepreneurial characteristics as important determinants of employment generation. Different problems and obstacles hindering firms' growth in terms of generating employment activities are also been undertaken in the present analysis. The characteristics like educational level of owner/manager of the firm, attitude like part time business, unemployment push, use of internal and external sources of financing, market orientation, sales to local market, number of markets dealing with, risk taking attitude on behalf of entrepreneur, family business, industry specific know how desire of independence, previous ownership experience, working through networks, partnership business, decision to innovate in terms of introduction of new product, new process and major improvements in existing system, diversification in terms of products, on job training, utilization of unique knowhow, price adaptability are found to be important factors affecting firms' growth in terms of employment generational activities. Government should device such policy measures that can help small units to grow and provide employment opportunities.

Keywords: Entrepreneurial factors, Firm growth, employment generation, Multinomial Logit Model, Organizational and Commercial capabilities.

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1. Introduction

The importance of industrialization cannot be denied being a better mean to provide employment opportunities, its contribution towards economic growth as compared to traditional agricultural sector, and more foreign

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exchange earnings through exports of value added products and optimal utilization of domestic resources by establishing forward and backward linkages in the economy (Safdar & Siddiqi, 2011a). In case of developing countries like Pakistan, motivation behind each development policy is to provide employment opportunities to its accelerated growth of population along with a considerable increase in their living standard along with a significant reduction in the poverty levels (Safdar & Siddiqi, 2011b) but establishment of large scale industrialization requires resources in abundance, therefore alternatively, emphasis should be laid on the establishment of small scale sector in order to resolve all these problems¹.

Almost economies of all countries are influenced by performance of SMEs especially in the rapidly changing and progressively growing global market (Aharoni, 1994). Small and medium enterprises (SMEs) are considered to be an important source of generating employment opportunities (Carree & Klomp, 1996, Safdar & Siddiqi, 2011c). The SME have proved themselves as a major source of economic growth and technological progress (Mulhern, 1995, Thornburg, 1993). The experience of developed nations showed that promoting SMEs sector is one of best way to boost up employment activities and particularly a developing country like Pakistan can provide more employment opportunities to its growing population by promoting SMEs sector.

Therefore, it is necessary to facilitate the growth SMEs as they constitute about 99 percent of industrial establishments and according to Kaldor's Laws manufacturing industry contributes directly to economic development (Safdar & Siddiqi, 2011d). Consequently, it is important to understand different determinants of firm growth in order to device such policy options that can facilitate small firm's growth. The focus on the firm growth has been intensified in the last two decades. Various disciplines investigated to find out the determinants of firm growth include innovation, strategy, psychology, economics and network theory.

¹ Government of Pakistan had estimated a required investment of Rs. 5.2 trillion in large scale sector to provide employment opportunities to an addition of 16 million persons to the labor force while only Rs. 8 billion are required in case of small/micro scale sector. (<http://www.pakistan.gov.pk/ministries/planninganddevelopment> ministry/mtdf)

However, it is observed that information regarding firm growth is quite inadequate (Davidsson & Wiklund, 2000, Wiklund et.al, 2007) because of the fragmented nature of existing literature. As research from a psychological point of view asserts on the entrepreneurial behavior (Begley & Boyd, 1987), investigation regarding firm's strategy focuses on the association among business strategy, environment and growth (McDougall et.al 1992). Whereas, research relating to economic conditions concentrate on the relation between firm's growth and its size (Audretsch et.al, 2004). Thus, the existing literature presents more diverse point of views, with a little attention on more integrated presentation of entrepreneurial determinants that explains the process of firm growth.

Therefore, special attention should be given to identify the major determinants of firm growth in a more integrated manner. Consequently, in the present study, the determinants of firm growth are classified into three dimensions including entrepreneurial and non- entrepreneurial characteristics along with the major factors that restrict firm's growth.

The present study has tried to present a broad prospect regarding major determinants of firm growth. A detailed data survey on firm growth is being employed for analytical purposes, conducted by author in the districts of electric fans producing units of Gujrat, presenting detailed information concerning main factors that influence the firm growth. The study has provided an opportunity to explore different determinants of firm growth in an inclusive manner. It has tried to identify the most important factors considered responsible for firm growth by employing a data set comprising of 237 small units.

The study is pioneer in its nature as no empirical study in a particular sector of Gujrat district has so far been conducted to find out the major determinants of firm growth in terms of employment generating activities.

2. Literature Review

Rapid increase of the population in a developing country like Pakistan asks for the provision of employment opportunities on the same rate in order to improve their living standard along with a steady economic growth. SMEs are considered as a better mean for providing employment opportunities as there are about 3.2 million economic establishments In Pakistan, 99 percent of these are accorded as SMEs, and accommodate about 80 percent of non-farm labor force². The role of small and medium enterprises (SMEs) as key source in providing employment opportunities is now well established. The literature review regarding role of SMEs in employment generation can be categorized on the basis of the entrepreneurial and non- entrepreneurial characteristics and growth barriers that restrict the firm growth.

2.1 Entrepreneurial Characteristics

The growth and development of a small firm depends entirely on the motivation and ambition of the owner of that unit. Among the prominent features of an entrepreneur that effects the firm growth involves general background of the owner involving age and education of the owner along with his growth motivation³ and management know how⁴, organizational practices on the behalf of entrepreneurs', technological capabilities and market structure followed by entrepreneurs.

2.1.1 General Background

Growth ambition of the owner is influenced by his age factor and this effect is being investigated by many studies. A significant negative relation between age of the owner and growth ambition is indicated by different studies (Autere & Autio, 2000, Welter, 2001). According to the

2 Economic census of Pakistan 2005.

3 It comprises of risk taking attitude, desire of independence, unemployment push and part time business approach

4 Management know how involves family business, industry specific knowhow, previous ownership experience, work through networks and partnerships.

literature, firm growth is positively influenced by high levels of education (Sapienza & Grimm, 1997, Storey, 1994)⁵. But different empirical studies yield different results as Kolvereid (1992) showed that highly educated entrepreneurs are keen to grow their businesses. A positive relationship between former level of education and firm growth was found in ten out of seventeen empirical studies surveyed by Cooper et al. (1992)⁶.

2.1.2 Growth motivation

In the literature relating to small businesses, the small business owner and the entrepreneur are distinctly differentiated. According to Birch (1987) the small business owners are considered as income substituters as they replace the paid-employment income with business income⁷. The importance of personality traits of entrepreneurs is a key factor but they may not essentially leads towards real firm growth. Personality traits effect the growth motivation (Delmar, 1996) in a more promising manner. Therefore, it is concluded that both the willingness and ability of owner along with growth motivation play an important role in entrepreneurial ventures.

The most important characteristic of an entrepreneur to develop his business is considered as risk taking propensity. An entrepreneur can be distinguished from simple business owner as they look for new opportunities, deal with uncertainties in a more promising manner⁸. Gundry and Welsch (1997) realized that the commitment to growth is the main factor that differentiates "high" growth from "low" growth businesses. The internal locus of the control is found to be an important characteristic of successful owner-managers along with the belief of control over their fate (Brockhaus and Horwitz, 1986, Caird, 1990, Chell et al., 1991). Perren (2000) found that the desire to be "one's own boss"

5 Education is most probably associated with information and skills, inspiration, self assurance, problem solving aptitude, dedication and control.

6 A Bachelor degree holding entrepreneur was found to have a positive influence on growth and survival of small firms (Cooper et al. (1994)).

7 Hay (1994) has termed income substituters as "life-stylers" because their goal is to achieve long-term stability instead of growth, and they use business as an income generating activity adequate to sustain a certain "life-style."

8 See for example (McClland, 1961, Timmons et al., 1985, Chell et al., 1991, Morris and Sexton, 1996)

was a significant feature in motivating the entrepreneurs to develop their business. Glancey (1998) showed that entrepreneurs initially stimulated by 'being your own boss' are more prone to low growth levels.

The literature suggests that some individuals may have started small businesses because the pressure of unemployment forced them to do it. This factor makes distinction between push and pull hypothesis as the individuals have opted to start a small business because they were left with no other choice (the push hypothesis) and not because they were characterized by entrepreneurial stance and aptitude (the pull hypothesis) (Zhenxi et al., 1999). Likewise, it is argued that individuals who are engaged in a parallel paid-employment job have less time and motivation to invest in the growth of their business (Riding et al., 1998).

2.1.3 Management know-how

The characteristics of management know-how of an entrepreneur are considered as an important factor in the process of firm growth. Management know-how is the possible outcome of many factors like having an intergenerational heritage, or having experience of paid-employment in a similar business, or by having previous management experience being owner of some other business.

Literature suggests that individuals from families owning a business are more inclined to start an entrepreneurial venture by developing knowledge of how to run a business. Empirical evidence suggests that belonging to an entrepreneurial family, augments the probability of survival (Cooper et al., 1994, Papadaki et al., 2000). However, firm's performance is found to be positively affected by prior entrepreneurial experience⁹. According to the literature, the related experience contributes positively in enhancing self-confidence among entrepreneurs (Orser et al., 1998) and leads them to venture success (Delmar and Shane 2006). Past experiences can help them in both in managing new venture (Ripsas, 1998, Shepherd et al.,

⁹ A positive relationship was found among entrepreneurs with general business management experience and their growth ambition (Orser, Hogarth-Scott and Wright 1998).

2000) and take advantage of an already established network of customers, employees, investors and suppliers (Campbell, 1992) playing a crucial role for the success of a new business.

According to the literature, contact with professional advisors like bankers, accountants, business associates, customers and suppliers can help small business owners in gaining knowledge and access to information networks leading to develop more formal joint venture and alliances. Partnerships and alliances can help both in distributing spread risks and sharing costs along with opening of new markets and development of new services, products and processes (OECD, 2000, Barringer & Greening, 1998). The business ventures also provide psychological support in decision making and other major problems faced by the firm (Perren, 2000).

2.1.4 Organizational/ Business Practice

According to Schumpeterian tradition, growth is positively associated with a company's capacity to innovate (Nelson and Winter, 1978, 1982). Furthermore, in order to enjoy a steady growth, firms are required to respond constantly according to the needs of their customers in new and specific manners. Innovativeness being an important component of entrepreneurial orientation¹⁰ refers to the willingness of a firm to maintain creativeness and experimentation to introduce new products/services, technological control, and R&D in developing new processes.

According to economic theory it is proposed that firms that cater to their local markets are able to attain competitive advantages by quickly responding to customers and properly utilizing networks and community support systems (Safdar and Siddiqi, 2011c). On the basis of resource-based analysis, financial resources and human capital are the termed as most important resources for the growth of small business (Wiklund et al., 2007). Secured financial resources are considered as predominantly vital in supporting firm growth¹¹ because it is comparatively easy to convert them into other types of resources (Dollinger, 1999). A firm having

10 Entrepreneurial orientation is defined as a combination of innovation, proactiveness and risk taking on the firm level (Miller, 1983).

11 Bamford, Dean & McDougall, 1997, Sexton & Bowman-Upton, 1991

sufficient resources is capable of doing experiments, increasing both innovativeness and chances to pursue new opportunities of firm growth (Castrogiovanni, 1996, Zahra, 1991).

Financial resources of a firm depend mainly on the past financial performance of a firm, as past profit can be reinvested into the business. Eventually, a firm not only depends on external funding, but also utilizes its internal resources to finance business. The firms with superior financial performance have the chance to grow according to the evolutionary theory of "Survival of the fittest" (Coad 2007).

2.1.5 Technological Capabilities of Entrepreneur

Technological capabilities can be defined as "the firm's current ability and its future potential to utilize firm-specific technology to resolve technical problems and to augment the technical functioning of its production processes along with its finished products". The essential component of competition is differences in the technology adopted by different firms; therefore it plays a major role in growth performance of small firms. It involves diversification in their product mix, number of markets dealing with, presence of unique know-how along with on job training capacity of the firm.

Literature suggests positive effect of diversification on growth process of firms by helping them to deal with particular product line demand constraint and creating new growth opportunities. Diversification into new products is considered not only as an important medium of competition but also as a major engine to firm growth (Marris and Wood, 1971).

By utilizing modern means of communication and networks, the firm can diversify its geographic markets. Therefore, the diversification into different geographic markets like national and international markets, will lead to a positive impact on firm's growth. A positive correlation between firm growth and diversification into markets was found by Becchetti and Trovato (2002). Literature concerning determinants of firm growth considers both human capital and financial resources as most important factors effecting small business growth (Wiklund et al., 2007). Human

capital can be defined as a combination of knowledge, experience and skills. On the firm level, the experience, skill and knowledge of the total employees contribute more promisingly as compared to the entrepreneur alone (Chandler & Hanks, 1994, Birley & Westhead, 1990). Human capital can be measured both in terms of specific and generic terms. Generic human capital is defined in terms of different levels of educational attainment by workers. Specific human capital can be measured by employing a dummy variable indicating whether firm is offering on job training to its workers or not (Lee et.al, 2005).

Small firms carry out a large number of technological innovations based on their unique know how approach in an unbalanced manner among industrialized nations and also in newly industrialized countries like Korea. They play an important role in the diffusion of technology and their unique know-how is often based on the improvements of general technologies developed by large firms (Safdar and Siddiqi, 2011c).

2.1.6 Market Structure

The major force behind a firm's growth is considered to be the market structure in which it operates. The growth process of firm is influenced by the fact that whether the firm is operating in competitive market conditions or not. An important aspect of an industry's market structure is whether the entrepreneurs' are able to compete for their products in market or not. The market structure comprises of market orientation and the price adaptability on behalf of its owner/manager.

The efficiency with which a firm sells its products and services to the customers determines its growth establishing market orientation an important determinant of firm growth. Accordingly, market orientation results in improved satisfaction of customers and stakeholders leading to the firm's growth (Hult, Snow & Kandemir, 2003, Narver & Slater, 1990). Empirical evidence suggests that market orientation is significantly associated to the overall growth performance of a firm (Jaworski & Kohli, 1993).

Numerous empirical studies have established the significance of market demand for a firm's innovative activities and its growth (Cohen, 1995,

Kleinknecht, 1996). The firm's ability to adapt its pricing policy according to competitive pressures is positively associated with the growth of expected sales.

2.2 Non- entrepreneurial Characteristics

Individual competencies can be described as the knowledge, abilities or skills mandatory to execute a particular job. Under firm characteristics, the study has employed different determinants of firm growth like Individual firm's characteristics and its share in market.

2.2.1 Individual Firm

The classical firm features can be referred as firm age and size. The Gibrat's law can be considered as pioneer referring to the discussion on the relationship between firm age/size and firm growth (Audretsch et al., 2004). The law focuses on the independence of growth and size¹². According to this law the firm's growth is proportional to their size, and the growth of all firms takes place at the same rate over an interval of time, despite of their initial size within the same industry¹³. Researchers investigating firm growth by differentiating firms with respect to their sizes proposed that Gibrat's law of size independence is only convincing for firms above a specific size threshold (Bigsten & Gebreyesus, 2007). A negative relationship is found by an empirical study in US between firm growth, age and size, as postulated by Jovanovic's model (Variyam et al., 1992, Evans, 1987). A negative effect of size on firm growth is also indicated incorporating different countries and industries (Calvo, 2006, Bottazzi & Secchi, 2003, Goddard, Wilson & Blandon, 2002, Almus & Nerlinger, 2000, McPherson, 1996, Dunne & Hughes, 1994).

The capacity of firms to change their market share in response to such pressures helps them to increase their market share accordingly (Harabi, 2005).

12 See e.g. Hart and Prais, 1956, Simon and Bonini, 1958, Hymer and Pashigan, 1962

13 Studies yielding negative support to Gibrat's Law includes Becchetti & Trovato, 2002.

2.3 Growth Barriers

Along with the above mentioned determinants facilitating firm's growth, there are also factors that obstruct the potential growth of the firm named as growth barriers (Davidsson, 1989). Literature suggests that SMEs are mostly hindered by barriers relating to market's entry and their growth in the early stages of their life span as compared to their large counterparts. Frequently addressed restrictions for small businesses growth comprises of institutional barriers, non-institutional barriers and financial barriers.

2.3.1 Institutional Barriers

Institutional barriers are mainly associated with the firms' interaction with government, comprising of taxation problems, legalization issues, and government support programmes along with other barriers. Consistent results from both the theoretical and empirical data states that certain institutions discriminate against the SMEs growth intentionally in the form of un-favorable tax system, complicated rules and regulations and biased policies, thus hampering firm's growth (Davidsson & Henreksson ,2002). The institution barriers employed in the study to calculate their impact on firm's growth comprises of regulation on foreign trade, level of taxes, other regulations, political instability, inflation and price Instability.

According to the theory, trade promotes productivity growth within industries, leading weak firms to exit and allowing strong firms to flourish (Bolaky et.al 2006). Grey economy is considered to be a consequent outcome of over-regulation relating to a particular company sector, providing incentives to the firms to influence the regulatory authorities in their support, leading to the establishment of culture of "unproductive entrepreneurship" (Baumol, 1990). Some suggest that the cumulative effect of rules and regulations is more problematic for small firm as compared to that of an individual regulation (Harris, 2002). The collective impact of employment and other regulations is severely hampering small firm's growth (Edwards et. al., 2003).

Political instability is considered as one of the major constraints having a negative impact on the productivity of manufacturing sector featuring

poor business environment (Elhiraika et.al., 2006). At the aggregate level, a high level of risk factor is attached with the presence of weak institutions that can in turn lead to political instability with a considerable negative impact on overall economic growth and even a stronger adverse effect on individual firm's performance (Fosu, 2003, Gyimah-Brempong, 2004).

Inflation is considered to be one of the important factors that cause the disturbance of business planning – leading to an unfavorable consequence to the firm's capital investment.

2.3.2 Non-institutional barriers

Non-Institutional barriers are mainly associated with the firms' internal resources and capacity utilizations, the scope of market dealing with, different issues relating to human resource management and problems relating to diversify into new markets (Barlett et.al. 2001).

The importance of market demand for a firm's growth is evident from literature (Cohen, 1995, Kleinknecht, 1996). Lack of market demand hinders firm growth. A major factor inhibiting SME's growth is the entrepreneur's inability to branch out the business functions to its managers (Storey 1994). This propensity can be highlighted by shortage of skilled managers, along with their deficiency of business expertise in the vicinity of promotion and business expansion (Bartlett et.al 2001). In addition, they face competition from improved quality and reasonably priced imports. In the presence of all these factors, it can be stated that inability of firms to access new markets can be considered as a major hindrance to firm's growth (Bartlett & Bukvic, 2001).

2.3.3 Financial Barriers

Financial barriers correspond to the lack of financial resources. Credit restriction, equity capital and lack of external debt are considered to be the main hindrance to the growth of SMEs (Becchetti & Trovato, 2002, Pissarides, 1998, Riding & Haines, 1998). According to empirical

evidence the financial institutions behave more conservatively while providing loans to SMEs. SMEs are usually charged comparatively high interest rates along with high collateral and loan guarantees (Stiglitz & Weiss, 1981).

On the basis of literature review research model presented in fig 1 can be formulated to investigate the role of entrepreneurial factors in the process of firm's growth.

3. Research Method

3.1 Sources of Data

In the present study, primary data collected through a detailed survey of electric fans producing units is being utilized for analytical purposes. The format of the SMEs questionnaire covers broad aspects of firm growth involving different characteristics of each unit along with its entrepreneurial and non-entrepreneurial characteristics along with a detailed profile of factors that restrict small units to grow further. 237 electric fans producing units were investigated out of which 86 units were found to be experiencing firm growth in terms of employment expansion a total of 83 firms had experienced an employment contraction in the last two years till the survey time, while 68 firms showed no change in their employment growth pattern.

3.2 Multinomial Logit Model for Employment growth

To evaluate the probability of a firm experiencing growth in terms of employment expansion, multinomial logistic regression analysis with maximum likelihood estimation is employed. In the analysis dependent variable takes the value 1 when the firm has practiced a growth in employment in the last two years, it takes the value of 2 when the firm has practiced growth in negative terms and 3 when the firm has experienced no growth in terms of employment generation in the last two years. Explanatory variables in this analysis can be divided into three main categories the entrepreneurial and non-entrepreneurial determinants of firms' growth, along with different factors that restrict a firm to grow in terms of employment growth.

Basic model can be written as

$$\text{Employment} = a_0 + a_1X + e \quad (3.1)$$

Where

Employment = 1 (if firm is growing in positive terms of employment generation)

= 2 (if firm is growing in negative terms of employment generation)

= 3 (if firm is not growing in terms of employment generation)

X = entrepreneurial and non-entrepreneurial, and factors inhibiting firm's growth.

The interpretation of the multinomial logit model is also presented in terms of relative risk ratios. To interpret the effect on independent variables on the probabilities of each choice marginal effects of each outcome are also calculated. On the basis of the research model presented in the fig.1, major determinants along with their conceptual definitions are presented in Table 1.

4. Estimation Results

Firms were divided into three main categories depending upon their status with respect to employment generating opportunities. . By comparing the level of employment at Feb, 2008 and Feb, 2010, a firm can be assigned the status that whether a firm has experienced growth (increase), has not faced growth (constant) or has practiced growth in negative terms (negative).

The results of the main firm growth equation 3.1 are being shown in Table (2). Estimated results of a multinomial Logit model can be presented in two stages, first by comparing firms experiencing growth with category facing no growth. And secondly, by comparing firms experiencing

negative growth with category facing no growth being the reference category.

In case of first stage, firm size, Illiterate owner/manager of the firm, part time business, external sources of financing, market orientation, other regulations affecting firms' growth, political instability, inflation, lack of market demand and skilled labor, restricted access to new markets and financial constraints are found to be significantly and negatively in the sense that if these factors increases by one point, the multinomial log-odds of a firm experiencing positive growth with respect to situation where firm experiencing no growth would be expected to decrease by coefficient values of these factors by units while holding all other variables in the model constant.

On the other hand, firm age, sales to local market, number of markets dealing with, entrepreneur educated up to secondary level, risk taking attitude on behalf of entrepreneur, family business, industry specific know- how, previous ownership experience, working through networks, partnership business, innovation in terms of introduction of new product and major improvements in existing system, internal sources of financing, diversification, on job training, presence of unique knowhow and increase in market share are found to be significantly and positively in the sense that if these factors increases by one point, the multinomial log-odds of a firm experiencing positive growth with respect to situation where firm experiencing no growth would be expected to increase by coefficient values of these factors by units while holding all other variables in the model constant.

While, age of owner, desire of independence, unemployment push, and innovation in terms of introduction of new process, decrease in market share, price adaptability, and foreign trade regulations affecting firms' growth are proved to be insignificant in the present analysis.

In case of comparison of negative growth firms with respect to no growth category, age of owner, Illiterate owner/manager of the firm, , unemployment push, external sources of financing, decrease in market share, foreign trade regulations affecting firms' growth, level of taxes, other regulations affecting firms' growth, political instability, inflation, lack of market demand and skilled labor, restricted access to new markets

and financial constraints are found to be significantly and positively in the sense that if these factors increases by one point, the multinomial log-odds of a firm experiencing negative growth with respect to situation where firm experiencing no growth would be expected to increase by coefficient values of these factors by units while holding all other variables in the model constant.

Whereas, firm age, sales to local market, number of markets dealing with, entrepreneur educated up to secondary level, risk taking attitude on behalf of entrepreneur, desire of independence, family business, industry specific know how, previous ownership experience, working through networks, partnership business, innovation in terms of new process, internal sources of financing, diversification, increase in market share and price adaptability are found to be significantly and negatively in the sense that if these factors increases by one point, the multinomial log-odds of a firm experiencing negative growth with respect to situation where firm experiencing no growth would be expected to decrease by coefficient values of these factors by units while holding all other variables in the model constant.

The factors of firm size , age of owner, part time business, and innovation in terms of introduction of new product and major improvements in existing system, on job training, presence of unique knowhow, market orientation, and are proved to be insignificant in the present analysis.

5. Conclusion

Small and medium enterprises are considered as an important source of providing employment opportunities. In order to explore the contribution of small firms toward employment generation, primary data is being employed collected from a survey of 237 small industrial units. Multinomial Logit model is utilized to find out the contribution of entrepreneurial and non- entrepreneurial factors as important determinants of employment generation. Different problems and obstacles encountered by SMEs in generating employment activities are also been undertaken in the present analysis.

Multinomial Logit model is being utilized to present a comprehensive view of the comparison of firms generating employment opportunities and those not been able to excel in the process of growth with respect to the reference category.

As far as entrepreneurial factors are concerned, the characteristics like educational level of owner/manager of the firm, attitude like part time business, unemployment push, use of internal and external sources of financing, market orientation, sales to local market, number of markets dealing with, risk taking attitude on behalf of entrepreneur, family business, industry specific know how desire of independence, previous ownership experience, working through networks, partnership business, decision to innovate in terms of introduction of new product, new process and major improvements in existing system, diversification in terms of products, on job training, utilization of unique knowhow, price adaptability are found to be important factors affecting firms' growth in terms of employment generational activities.

Government should provide support to small units so that they can provide employment opportunities. Education of the owner is proved to be significantly affecting the probability of firm growth. Such policy measures should be devised that can help entrepreneurs in their educational training along with the provision of technical and managerial facilities that can promote firms in terms of employment growth. Government should support firms to overcome obstacles that restrict firm's growth. Firm's growth in terms of employment can yield better outcome if these small units are provided with basic infrastructural support in terms of finance, technical and commercial support.

Fig 1: Research Model: Firm Growth

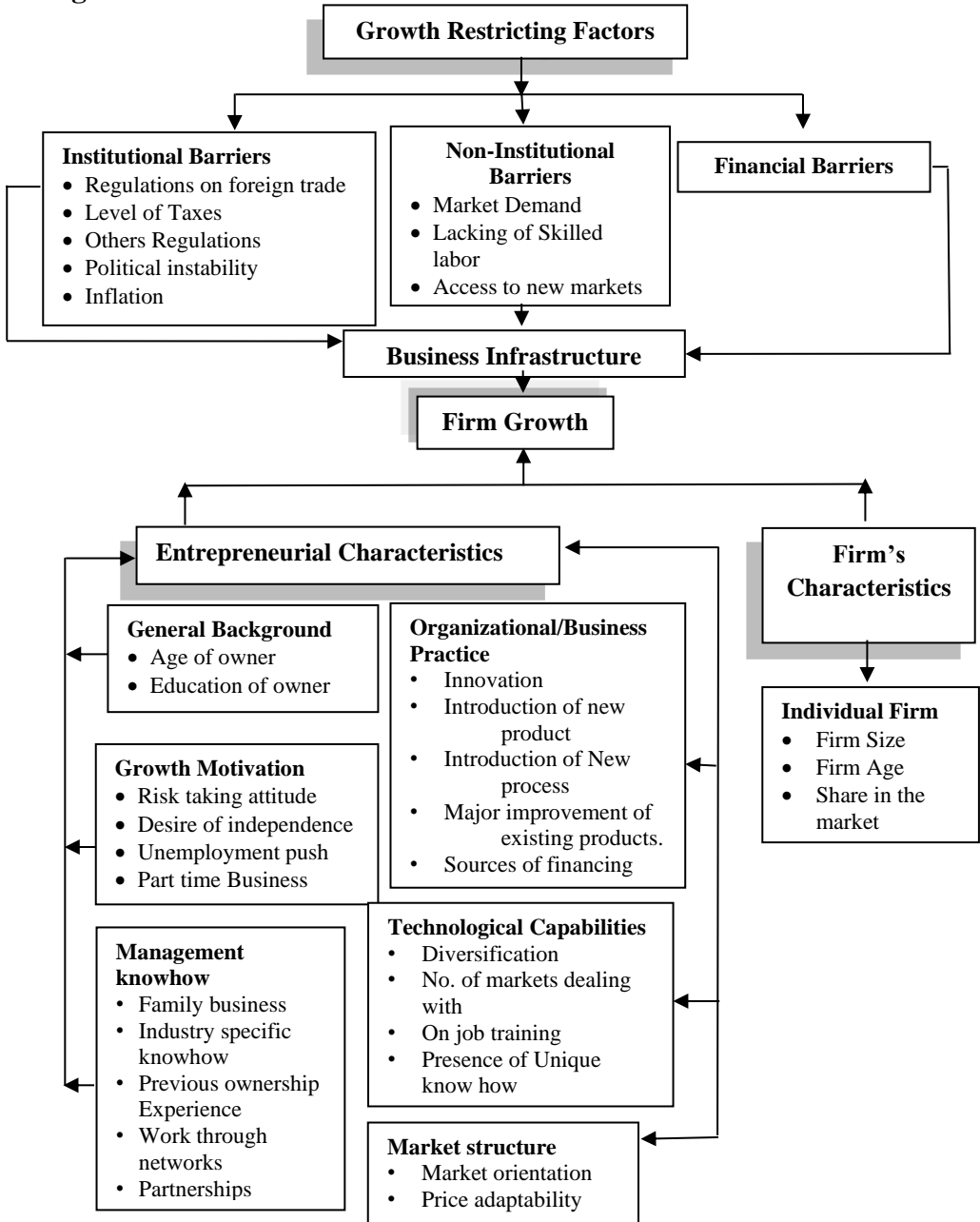


Table 1: Determinants of Firm growth

VARIABLES	VARIABLES DISCRPTION
DEPENDENT VARIABLE	
EMPLGROWTH	Growth in the employment in the last two years (1= increase or positive, 2=decrease or negative, 3=no growth)
INDEPENDENT VARIABLES	
1. ENRTERPRENUIAL CHARACTERISTICS	
2. GENERAL BACK GROUND	
AGEOWNER	Age of the owner in years
EDUOWNER	Education of the owner (0= Illiterate, 5= upto secondary education, 10= upto matric or college, university education)
1. GROWTH MOTIVATION	
RISK	Risk taking propensity of the owner (1= keen to take risks,0=otherwise)
BOSS	Desire of independence (1= started business to be boss,0=otherwise)
UNEMPPUSH	Unemployment Push (1= started business because of unemployment, 0= otherwise)
PARTTIMEB	Part time business (1= currently employed elsewhere, 0=otherwise)
2. MANAGEMENT KNOW HOW	
FAMILYB	Family Business (1= the current business is your family business,0=otherwise)
INDKNOWHOW	Industry specific knowhow (1= any experience of the same business, 0=otherwise)
PREWOWNER	Previous ownership (1= owned some other business,0=otherwise)
NETWORKS	Work through networks (1=yes, 0=no)
PARTNERSHIP	(1= Business is in partnership, 0=otherwise)
3. INNOVATION	
NEWPRODUCT	If the firm has introduced new product in the last two years (1=yes,0=no)
NEWPROCESS	If the firm has introduced new process in the production during the last two years (1=yes, 0=no)

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MAJIMPROVEMENTS	If the firm has introduced major improvements in the existing system in the last two years (1=yes, 0=no)
LOCALMSALES	Percentage of sales to local markets
FINANCSOURCES	Sources of financing (1=internal, 2=external, 3=both)
4. TECHNOLOGICAL CAPABILITIES	
DIVERCIFICATION	Diversified their product mix during last two years (1=yes, 0=no)
MARKETSNO	No. of markets dealing with
ONJOBTRAIN	On job Training (1=yes, 0=no)
UNIQUEKNOWHOW	Presence of unique knowhow (1=yes,0=no)
5. MARKET STRUCTURE	
MARORIENTATION	Do the owner has market orientation (1=yes, 0=no)
PRICEADAPT	Easily adapt market prices (1=yes, 0=no)
2. FIRM LEVEL CHARACTERISTICS	
1. INDIVIDUAL FIRM	
SIZE	No. of full time employees working
FIRMGAGE	No. of years since establishment
MARKETSHARE	Share of the firm in the market during last two years (1=increased, 2=decreased, 3=constant)
3.GROWTH BARIERS	
1. NSTITUTIONAL BARRIERS	
FOREIGNTRADE	Business gets affected by regulations on foreign trade (1=yes, 0=no)
TAXES	Business gets affected by level of taxes (1=yes, 0=no)
OTHERS	Business gets affected by other regulations (1=yes, 0=no)
POLITICALINS	Business gets affected by political instability (1=yes, 0=no)
INFLATION	Business gets affected by inflation and price instability (1=yes, 0=no)
2. NON-INSTITUTIONAL BARRIERS	
MARKETD	Changes in market demand due to imports or other factors effect business (1=yes, 0=no)
LACKSKILL	Constraint of skilled workers effect business (1=yes, 0=no)

ACCESSNEW	Limitation to access new markets affects (1=yes, 0=no)
3. FINANCPROB	Financial constraints hinders firm's growth (1=yes, 0=no)

Table 2: Multinomial Logistic Results Firm Growth

Covariates	Gujarat	Coefficients	RR R	marginal effects	Coefficients	RR R	Marginal effects
	Total sample	Increase			Decrease		
Intercept		-0.035			1.621		
Age of owner		-0.002	0.998	-0.003	0.046** *	1.047	0.040
Firm size		-0.025** *	0.975	-0.075	0.005	1.006	0.204
Age of Firm		0.024** *	1.024	0.046	-0.025** *	0.976	-0.014
Sales to local market		0.009*	1.009	0.019	-0.027** *	0.973	-0.252
No. of market dealing with		0.256** *	1.292	0.096	-0.369** *	0.691	-0.529
Education of Firm's owner	Illiterate	-0.238*	0.788	0.025	0.584** *	1.793	0.003
	Primary level	0.086*	1.090	0.026	-0.746** *	0.472	-0.032
	Matric or above	---	---	---	---	---	---
Risk taking propensity of the owner	No	0.494** *	1.639	0.070	-0.408** *	0.665	-0.042
	Yes (Ref)	---	---	---	---	---	---
Desire of independence	No	0.142	1.153	0.003	-0.954** *	0.385	-0.023
	Yes (Ref)	---	---	---	---	---	---
Unemployment	No	-0.098	0.907	-0.018	0.674**	1.962	0.025

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Push	Yes (Ref)	---	---	---	---	---	---
Part time business	No	-0.150*	0.861	0.027	0.105	1.111	-0.007
	Yes (Ref)	---	---	---	---	---	---
the current business is your family business	No	0.268**	1.307	0.051	-0.298**	0.742	-0.015
	Yes (Ref)	---	---	---	---	---	---
Industry specific knowhow	No	0.712** *	2.037	0.114	-0.765** *	0.465	-0.021
	Yes (Ref)	---	---	---	---	---	---
Previous ownership experience	No	1.228** *	3.414	0.191	-0.303*	0.739	-0.013
	Yes (Ref)	---	---	---	---	---	---
Work through networks	No	0.629**	1.875	0.087	-0.682**	0.506	-0.023
	Yes (Ref)	---	---	---	---	---	---
Business is in partnership	No	1.105** *	3.019	0.152	-0.653** *	0.520	-0.014
	Yes (Ref)	---	---	---	---	---	---
Introduction new product in the last two years	No	0.072*	1.075	0.019	-0.187	0.829	-0.019
	Yes (Ref)	---	---	---	---	---	---
Introduction new process in the production during the last two years	No	0.074	1.077	0.007	-0.299**	0.741	-0.026
	Yes (Ref)	---	---	---	---	---	---
Introduction major	No	0.273**	1.314	0.046	-0.065	0.937	-0.022

improvements in the existing system in the last two years	Yes (Ref)	---	---	---	---	---	---
Sources of financing	Internal	1.500** *	4.480	0.013	-0.619*	0.539	-0.037
	External	- 1.833** *	0.160	-0.034	0.951*	2.589	0.012
	Both (Ref)	---	---	---	---	---	---
Diversification	No	0.285**	1.330	0.020	- 0.313**	0.732	-0.020
	Yes (Ref)	---	---	---	---	---	---
On Job training	No	0.640** *	1.896	0.086	-0.051	0.950	-0.045
	Yes (Ref)	---	---	---	---	---	---
Presence of unique know how	No	0.328**	1.389	0.043	-0.143	0.867	-0.030
	Yes (Ref)	---	---	---	---	---	---
Market orientation	No	0.016	1.017	0.002	0.041	1.042	0.041
	Yes (Ref)	---	---	---	---	---	---
Share of the firm in the market during last two years	Increase	0.470** *	1.601	0.077	- 1.032** *	0.356	-0.053
	Decrease	-0.237	0.789	-0.021	0.269*	1.308	0.043
	Constant (Ref)	---	---	---	---	---	---
Price adaptability	No	0.066	1.068	0.001	- 0.388**	0.679	-0.050
	Yes (Ref)	---	---	---	---	---	---
Firm's growth affected by regulations on foreign trade	No	-0.012	0.988	-0.007	0.303**	1.354	0.018
	Yes (Ref)	---	---	---	---	---	---

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Firm's growth affected by level of taxes	No	- 0.819** *	0.441	-0.122	0.699** *	2.012	-0.011
	Yes (Ref)	---	---	---	---	---	---
Firm's growth affected by other regulations	No	- 1.114** *	0.328	-0.157	0.375*	1.455	0.042
	Yes (Ref)	---	---	---	---	---	---
Firm's growth affected by political instability	No	-0.386*	0.680	0.022	0.397*	1.488	0.087
	Yes (Ref)	---	---	---	---	---	---
Firm's growth affected by inflation	No	-0.223*	0.800	0.037	0.161*	1.174	-0.014
	Yes (Ref)	---	---	---	---	---	---
Firm's growth affected by lack of market demand	No	- 0.691**	0.501	-0.104	1.372** *	3.943	0.030
	Yes (Ref)	---	---	---	---	---	---
Firm's growth affected by lack of skilled labor	No	- 0.279**	0.757	-0.050	0.262**	1.300	0.019
	Yes (Ref)	---	---	---	---	---	---
Firm's growth affected by restricted access to new markets	No	-0.177*	0.838	-0.044	0.423** *	1.527	0.011
	Yes (Ref)	---	---	---	---	---	---
Financial constraint	No	- 1.312**	0.269	-0.210	1.356** *	3.881	0.029

s hinders firm's growth		*					
	Yes (Ref)	---	---	---	---	---	---

Note: *** Significant at 99 percent, ** Significant at 95 percent, *Significant at 90 percent

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