

The effect of necessity and opportunity driven entrepreneurship on business growth

Mohammad Reza Zali¹, Nezamedin Faghieh², Sepideh Ghotbi³, Sahar Rajaie⁴

1. Assistant Professor of Tehran University, Tehran, Iran and

2. Professor of Tehran University, Tehran, Iran and

3. Faculty of Entrepreneurship, Tehran University, Tehran, Iran and

4. Faculty of Entrepreneurship, Tehran University, Tehran, Iran

Corresponding Author email: sepidehghotbi@ut.ac.ir

ABSTRACT: This paper investigates the effect of necessity and opportunity driven entrepreneurship on business growth and business growth expectation in 53 countries corresponding to three contrasting economies (factor, efficiency and innovation-driven economies). The results have shown the relationship between necessity-driven entrepreneurship and both business growth and business growth expectations are negative while the relationship between opportunity-driven entrepreneurship and both business growth and business growth expectation are positive.

Keywords: necessity-driven entrepreneurship; opportunity-driven entrepreneurship; business growth; business growth expectation.

INTRODUCTION

The idea that entrepreneur is at the centre of the economic growth process was described by Schumpeter (1934). Since then, there has been a vast and growing literature on various aspects of entrepreneurship and its link to economic growth (Dejardin, 2000; Langowitz and Minniti, 2007; Heertje, 2006; Audretsch et al., 2006).

Early researchers focused on certain personality characteristics or individual traits to explain entrepreneurial behavior. These can be described as internal factors. In the mid-1960s, McClelland (1961) proposed the "need to achieve" as a key factor. Others proposed a related concept called the 'locus of control' (Chen, Green and Crick, 1998; Mueller and Thomas, 2000).

Entrepreneurs are also seen as risk-takers, problem-solvers and innovators. An additional approach that is adopted to explain entrepreneurial behavior is the relationship between an individual and the social environment. Some of these external factors which have been considered are: work experience, role models, education, culture and environment. Entrepreneurship is said to be the result of the interaction between the internal and external factors (Smith-Hunter, Kapp and Yonkers, 2003).

Not all those who become entrepreneurs respond to their environment in a uniform way. Some respond to a perceived market opportunity. Others are forced into starting a business due to unfavorable circumstances. These forces have been categorized as the 'pull' and 'push' factors (Buttner and Moore, 1997; Harding et al., 2006; McClelland and Swail, 2005; Stevenson, 1986). The 'pull' perspective associates venture initiation with the notion of seizing an opportunity and making a deliberate choice to become self-employed. Conversely, others may be 'pushed' into becoming entrepreneurs by such external factors as losing a job, hitting a glass ceiling or having to juggle work with family responsibilities. Since the works of Reynolds et al. (2002), these motivations have given rise to the concepts of necessity entrepreneurship and opportunity entrepreneurship. Necessity entrepreneurs are driven by push motivations and opportunity entrepreneurs by pull motivations (Bhola et al., 2006). Since one of the main goals of any business is primarily survival and then growth, studying business growth and identifying the reasons for its success to achieve growth can have a great benefit for small and medium businesses and help them significantly to achieve their vision in a faster and safer way. The benefits of business growth are wide-ranging. Growing businesses generate employment, expand resource bases, improve competitive positioning, and increase the capabilities and self-esteem of owner-managers (Cardozo et al., 1996). Thus in this paper we examine the effect of necessity and opportunity-driven entrepreneurship on business growth.

The paper is organized as follows: The next section deals with the necessity and opportunity driven entrepreneurship literature review. Section 3 provides the literature review of determinants of business growth. In section 4 the methodology for this research is outlined, including the questionnaire design, data collection and analysis, respondent profile, and data analysis. Section 5 presents the results of the analysis. Section 6 ends up with conclusion.

Theoretical background

Necessity and Opportunity driven Entrepreneurship

Since the work of Reynolds et al. (2002), the distinction between push and pull motivations does not appear explicitly in the studies dealing with new venture creation decision-making factors anymore. This distinction has been replaced by the concepts of necessity (push) and opportunity (pull) entrepreneurs.

Reynolds et al. (2001) observed that age patterns are different for opportunity and necessity entrepreneurs. Giacomini et al. (2007) find that age positively affects the start-up of a business because of "exit from unemployment", which could be related to the fact that older people have a lower employability. The same authors find that age is negatively related to the "search of the profit" and "social development" opportunity motivations. Block and Sandner (2009) and Wagner (2005) find that opportunity entrepreneurs are older than necessity entrepreneurs. Bergmann and Sternberg (2007) do not find a significant effect of age on necessity nascent entrepreneurship, while age has an inverse U-shaped relationship with opportunity nascent activity. In Wagner (2005), the relationships are exactly reversed, i.e., no effect of age on opportunity nascent activity, and inversely U-shaped in case of necessity nascent entrepreneurial engagement.

Block and Wagner (2007) find that education and general labor market experience positively affect the earnings of opportunity entrepreneurs but not those of necessity entrepreneurs. On the other hand, specific vocational training boosts the earnings of necessity entrepreneurs but not those of opportunity entrepreneurs.

In terms of the role of gender, several studies have focused on distinguishing between motivations of male and female entrepreneurs. While men are more likely to strive for monetary rewards (Manolova, Brush and Edelman., 2008; Brush and DeMartino and Barbato, 2003; Kent et al., 1982; Lee, 1997; Marlow, 1997; Stevenson and Gumpert, 1985), women have a tendency to balance social and economic goals (Cadieux et al., 2002; Holmquist and Sundin, 1988; Kaplan, 1988). Some of the more recent studies also note that women tend to put more emphasis on intrinsic goals (Manolova, Brush and Edelman, 2008; Cornet, Constantinidis and Asendei, 2003; Kirkwood, 2003; McGregor and Tweed, 2000). That is, women seek non-financial goals such as independence and work-family balance (Borgas, Filion and Simard, 2008; DeMartino and Barbato, 2003; Birley, 1989; Brush, 1990; Ducheneault and Orhan, 2000; Holmquist and Sundin, 1990). Others have noted that female entrepreneurs tend to pursue self-oriented goals. That is, women pursue goals such as personal growth, control over their destinies and so on. This, in turn, helps to explain why businesses owned by women tend to be small and less geared towards growth than those owned by males (Orser, Riding and Manley, 2006; Anna et al., 2000; Du Rietz and Henrekson, 2000; Minniti, 2004; Orser, Hogarth-Scott and Wright, 1997; Rooney et al., 2003).

In a recent study, Kirkwood and Campbell-Hunt (2006) report that 'push' factors were sometimes the only one driver for women, whereas men tended to be influenced by both 'pull' and 'push' factors. In their review of women entrepreneurship in Canada, Jennings and Cash (2006) note that some of the motivating factors among men and women entrepreneurs were similar. Both groups reported control over their own destinies as well as desire for challenging work and a positive work environment as important motivations.

It is often argued that entrepreneurs motivated by push factors tend to possess lower endowments of relevant human capital which they need to manage a successful high-growth business. Because opportunity entrepreneurs start voluntarily (often in an area of their expertise), they may be better prepared for their entry into self-employment and have higher chances of survival. On the other hand, opportunity entrepreneurs tend to be more motivated by non-monetary rewards than necessity entrepreneurs. If then, after start-up, opportunity entrepreneurs are disappointed with the intrinsic benefits, they probably decide more rapidly to close down their businesses and look for new opportunities than necessity entrepreneurs (Block and Sandner, 2009). Opportunity entrepreneurs tend to have higher opportunity costs than necessity entrepreneurs.

At the macro level, several studies point at a performance disadvantage of necessity entrepreneurship. Acs and Varga (2005) show that whereas opportunity entrepreneurship has a positive impact on technological change, necessity entrepreneurship does not have an effect. In another study, Acs (2006) shows that there is a positive relationship between income level and the share of opportunity versus necessity entrepreneurs in a country. Wong et al. (2005) find the expected signs of the relationships between opportunity and necessity entrepreneurship and economic performance, but their findings are not significant.

At the micro level, Amit and Muller (1995) find that pull entrepreneurs are more successful, both in terms of venture success (sales per employee) and personal income. This result is similar when controlled for other relevant factors that may influence income. Block and Wagner (2007) find that the opportunities exploited by opportunity entrepreneurs on average are more profitable than those exploited by necessity entrepreneurs, i.e., the earnings of opportunity entrepreneurs are 15

percent higher than those of necessity entrepreneurs. The lower earnings of necessity entrepreneurs are confirmed by Block and Sandner (2009). Vivarelli (2004) finds that performance of the firms started up by individuals based on a convinced choice (i.e., positive entrepreneurial calculation) is higher than for the start-ups driven by a defensive reason (e.g., escape from unemployment)

Previous empirical research has shown that necessity and opportunity entrepreneurs differ both in terms of their socio-economic characteristics and of their entrepreneurial behavior (e.g. Verheul et al., 2010; Block & Sandner, 2009; Caliendo & Kritikos, 2009; Hechavarria & Reynolds, 2009; McMullen et al. 2008, Hessels et al. 2008; Morris et al. 2006; Hughes, 2006). As a result, necessity and opportunity entrepreneurs have distinct impacts on the post-creation characteristics of the firm they create.

Business growth

"The term 'growth' is used in ordinary discourse with two different connotations. It sometimes denotes merely increase in amount; for example, when one speaks of 'growth' in output, export, and sales. At other times, however, it is used in its primary meaning implying an increase in size or improvement in quality as a result of a process of development, akin to natural biological processes in which an interacting series of internal changes leads to increases in size accompanied by changes in the characteristics of the growing object" (Penrose, 1959: 1). Firm growth is difficult to grasp phenomenon. McKelvie and Wiklund (2010) suggest a classification of prior research into the following three broad streams: growth as an outcome; the outcome of growth; and the growth process. In a recent review, they describe a myriad of problems associated with growth research and conclude that they have failed to develop a cumulative body of knowledge. Coad goes further to say that the findings of empirical work indicate "that growth is largely a random process," and that "theoretical predictions have been of limited use in understanding growth of firms, if not downright misleading." This problem of inconsistent results alerts us to the need for more focused and circumscribed research approaches that attempt to shed light on specific facets of growth, rather than on the multifaceted phenomenon of growth as a whole. Gilbert et al. conclude that the focus on why growth rates vary has been done "to the exclusion of how and where [within the organization] that growth is occurring,"

Indeed a number of authors such as , Littunen and Tohmo (2003), Yasuda (2005), and Yang and Huang (2005) have looked at the determinants of business growth. the literature review shows that lack of financing, lack of management skills, market challenges, and regulatory issues, adversely affect the small business growth. (Gill, A & Biger, N, 2012) Also entrepreneurial competencies are seen as important to business growth and success, according to Brinckmann (2008). Bishop, K, et al. (2009) suggested that the main factors which influence firm growth can usefully be divided as follows:

Individual characteristics associated with the founders and owner-managers of new firms

Firm-level attributes reflecting past decisions taken within firms with regard to the acquisition of resources and the development of capabilities.

Business environment factors which help shape those firm-level decisions, eg, market structure (levels of competition) and relevant government policies and national institutions

Much of the literature on business start-ups suggests that decisions to create a new business are positively related to the education and relevant experience of the individuals concerned, in part because these attributes assist in gaining access to financial capital (Bates, 1990; Robinson et al, 2006). At the same time, the probability of starting a new business tends to decline with the age of individuals, perhaps because of greater risk-aversion among the middle-aged (Georgellis and Wall, 2005).

Individual characteristics also affect the likelihood of new businesses succeeding, for example, van Praag (2001) found that new business failure was associated with lack of relevant industry expertise and also with the individuals concerned seeking to start up in self-employment as a means of escaping unemployment.

Several studies have examined the impact of gender on the management of small businesses and

while certain factors have been identified as influential management issues that have a distinctive gender dimension (e.g., access to support, finance, premises and childcare were thus identified by (Fielden et al., 2003), most empirical studies that have examined this subject (e.g. Morris et al., 2006; Robinson and Finley, 2007) have

tended to conclude that by itself, the business owner’s gender is not a significant factor in explaining a small firm’s growth behavior.

In order to distinguish between small firm founders whose firms stand a real chance of achieving high growth and those which are unlikely to grow, the Global Entrepreneurship Monitor carries out surveys of the adult population in different countries to identify the incidence of ‘high-expectation entrepreneurship’ (defined as involvement with nascent or new ventures that expect to have 20 or more employees in five years’ time). Across all 34 participating countries, only a very small proportion of new entrepreneurs (averaging 6.5% in 2000-06) display such expectations which are positively associated with both education and household income (Autio, 2007).

The founding conditions (Carroll and Hannan 1989, Stinchcombe 1965) and environmental characteristics have been realized to play important roles in business growth. For example, Carlsson (2002) or Davidsson and Henreksson (2002) find that institutional factors, such as regulations, taxation, scientific resources or capital availability, may affect the growth of businesses. In a broader context, Shane and Kolvereid (1995) suggest that variations in national environments account for almost all performance changes. The conjuncture and the general tendencies of the environment cannot be ignored by those attempting to explain the growth process (Davidsson et al. 2002)

Research model

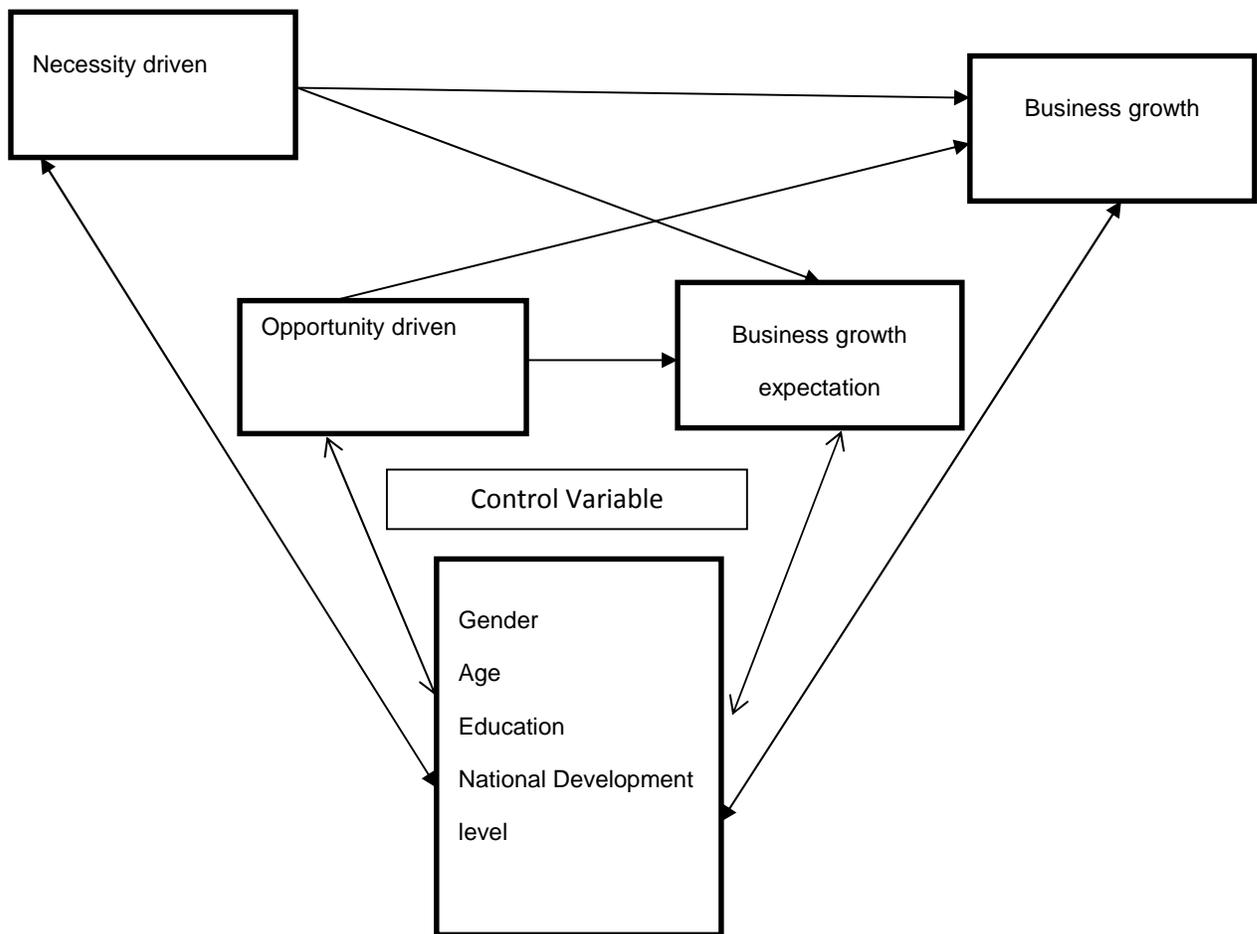


Figure1. Conceptual Model

Necessity and Opportunity driven Entrepreneurship and business growth

The motivations that underlie the new venture formation are complex and have long been of interest to entrepreneurship researchers (Krueger and Brazeal, 1994; Reynolds and Miller, 1992).

A number of authors argue that an owner's motivation for starting and running a business affect the growth of their firm. A business which has been set up to exploit an opportunity in the market is expected to have a higher propensity to grow than a business for which the main drivers are push factors such as unemployment, dissatisfaction with present employment or personal lifestyle reasons (Hamilton and Lawrence, 2001; Smallbone et al., 1995; Smallbone and Wyr, 2000). While empirical evidence has supported this idea, it is necessary to realise that owner motivation itself does not necessarily convert into actual growth. It is also important to bear in mind that an entrepreneur's motivation to grow will be tempered by personal tradeoffs between the prospect of improved financial results and concerns for the well-being of employees (Wiklund et al., 2003). Reynolds et al.(2003) find that those involved in "opportunity entrepreneurship" expect to create more jobs in five years than those involved in "necessity entrepreneurship", thus inferring higher growth potential. We therefore formulate our hypothesis as follows:

H1: Opportunity driven entrepreneurship positively affects business growth.

H2: Opportunity driven entrepreneurship positively affects business growth expectation.

H3: Necessity driven entrepreneurship positively affects business growth.

H4: Necessity driven entrepreneurship positively affects business growth expectation.

METHODS

REASERCH METHODOLOGY

We use the data collected in Global Entrepreneurship Monitor, GEM (www.gemconsortium.org). GEM data collection is based on the Adult Population Survey, APS, as the primary research tool. To ensure consistency and cross-country comparability, each country conducts the same survey. In 2010, at least 2000 adults were questioned in each of the 60 countries. The individual surveys are harmonized into one master dataset. The GEM Annual Report is based on the results of the adult population survey each year. The results in this article are mainly based on the data of the APS survey. The sample size in this paper includes 17,913 (nascent and baby business owner-manager) entrepreneurs.

Research variables

Independent variable

The following item was used to measure entrepreneurial motivation:

"Were you involved in starting up a business to seize a business opportunity or because you had no other choice for finding work?" (nominal variable)

Dependent variables

There are two items used measuring business growth and business growth expectations as follows:

"Not counting the owners, how many people are currently working for this business?"(scale variable)

"Not counting the owners, how many people will be working for this business five years from now?"(scale variable)

Control variables

In order to avoid the unwanted effects of some variables on the independent variables and thus the outcome of the research, it is necessary to hold them constant. Hence, these variables were defined as control variables in the regression equation. Four variables were defined as control variables in this study including: owner's age, education, gender, national development level.

The analysis and statistical tests include frequencies and linear regression analyses.

RESULTS

Table 1,2 shows the results of the regression analysis. We find support for Hypothesis 1,2 asserting that opportunity-driven entrepreneurship has positive effects on business growth and business growth expectation. Four variables such as owner's age and education, gender and national development level have been entered as control variables in the regression equation, in order to control their unwanted effects. Moreover, the significant level for control variables is not considered important in the analyses.

Table 1. Multiple regression coefficients

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.525	.045		11.699	.000
Involved in Opportunity early-stage Entrepreneurial Activity	.089	.020	.059	4.455	.000
COUNTRY GROUP GCR REPORT 2009-2010 - 3 CAT	.022	.010	.029	2.272	.023
DEMA. What is your gender?	-.124	.016	-.098	-7.618	.000
DEMB. What is your current age (in years)?	-.005	.001	-.106	-8.043	.000
GEMEDUC. GEM harmonized educational attainment	.000	.000	.140	10.838	.000

a. Dependent Variable: LOG.OMY5JOB1

Table 2 . Multiple regression coefficients

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.525	.045		11.699	.000
Involved in Opportunity early-stage Entrepreneurial Activity	.089	.020	.059	4.455	.000
COUNTRY GROUP GCR REPORT 2009-2010 - 3 CAT	.022	.010	.029	2.272	.023
DEMA. What is your gender?	-.124	.016	-.098	-7.618	.000
DEMB. What is your current age (in years)?	-.005	.001	-.106	-8.043	.000
GEMEDUC. GEM harmonized educational attainment	.000	.000	.140	10.838	.000

a. Dependent Variable: LOG.OMY5JOB1

Table 3, 4 shows the results of the regression analysis. Hypothesis 3, 4 are rejected, asserting that necessity-driven entrepreneurship has negative effects on business growth and business growth expectation. Four variables such as owner’s age and education, gender and national development level have been entered as control variables in the regression equation, in order to control their unwanted effects. Moreover, the significant level for control variables is not considered important in the analyses.

Table 3. Multiple regression coefficients

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.260	.038		6.755	.000
Involved in Necessity early-stage Entrepreneurial Activity	-.172	.026	-.078	-6.522	.000
COUNTRY GROUP GCR REPORT 2009-2010 - 3 CAT	-.016	.008	-.022	-1.890	.059
DEMA. What is your gender?	-.091	.014	-.077	-6.524	.000
DEMB. What is your current age (in years)?	.000	.001	-.004	-.368	.713
GEMEDUC. GEM harmonized educational attainment	.000	.000	.165	13.862	.000

a. Dependent Variable: LOG.OMNOWJOB11

Table 4. Multiple regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	.573	.045		12.861	.000
Involved in Necessity early-stage Entrepreneurial Activity	-.104	.031	-.043	-3.332	.001
COUNTRY GROUP GCR REPORT 2009-2010 - 3 CAT	.028	.010	.038	2.916	.004
DEMA. What is your gender?	-.121	.016	-.096	-7.466	.000
DEMB. What is your current age (in years)?	-.006	.001	-.123	-9.467	.000
GEMEDUC. GEM harmonized educational attainment	.000	.000	.143	11.064	.000

a. Dependent Variable: LOG.OMY5JOB1

CONCLUSION

This paper Uses data from GEM 2010 surveys to examine the effects of necessity and opportunity-driven entrepreneurship on business growth and business growth expectations in 53 countries corresponding to three contrasting economies(factor, efficiency and innovation-driven economies). This study includes 59.9% men and 40.1% women that majority of them have graduate experience and most of them are 25-34 years old. Furthermore in our sample, countries with factor-driven economies have more necessity-driven entrepreneurs than other economies and opportunity driven entrepreneur in innovation driven economies are prevail. In much of the recent literature on entrepreneurs' motives, there has been a tendency to differentiate between necessity and opportunity entrepreneurs (Harding et al., 2006; Maritz, 2004; Minniti et al., 2006; Perunovic', 2005). Thus, this paper contributes to this field by indicating different effects of necessity and opportunity driven entrepreneurship on business growth and business growth expectations. Several studies have explored that an owners' motivation for starting and running a business affect the growth of their firms. A business which has been set up to exploit an opportunity in the market is expected to have a higher propensity to grow than a business for which the main drivers are push factors such as unemployment, dissatisfaction with present employment or personal lifestyle reasons (Hamilton and Lawrence, 2001; Smallbone et al., 1995; Smallbone and Wyer, 2000). But our findings indicate relationships between necessity-driven entrepreneurship and both business growth and business growth expectations are negative, while the relationship between opportunity-driven entrepreneurship and both business growth and business growth expectation are positive.

Limitations and Future research

Recognizing the limitations of this study can contribute to deeper studies in terms of quality in future. First, the data used in this study are for the year 2010, consequently the nature of data are not longitudinal and we suggest that the effects of business growth can be examined for several years. Second, as mentioned in data section, data collection differs among different countries. Third, future research may collect data from different data sources other than GEM data to investigate the role and effects of necessity and opportunity driven entrepreneurship on business growth by examining other mediating factors in this relationship(e.g. national culture) . Despite its limitations, this study still offer a research source for further studies on the business growth as opportunity driven motivation booster in firms across different industries.

REFERENCES

- Acs ZJ, Varga A.2005. Entrepreneurship, agglomeration and technological change, *Small Business Economics* 24, 323-334.
- Acs ZJ.2006. How is entrepreneurship good for economic growth?, *Innovations*, Winter 2006, 97-107.
- Amit R, Muller E.1995. "Push" and "pull" entrepreneurship, *Journal of Small Business and Entrepreneurship* 12 (4), 64-80.
- Anna AL, Chandler GN, Jansen E, Mero NP.2000. Women Business Owners in Traditional and Non-Traditional Industries. *Journal of Business Venturing*, 15(3):279-303.
- Audretsch David B, Keilbach MC, Lehmann EE.2006. *Entrepreneurship and Economic Growth*. Oxford: Oxford University Press.
- Autio E.2007. 'GEM Global Report on High Growth Entrepreneurship,' Babson College, London Business School, GERA.
- Bates T. 1990. 'Human capital inputs and small business longevity,' *The Review of Economics and Statistics*, 72(4): p551-559.
- Baygan G. 2000. Les Femmes Entrepreneurs à la tête de PME: Pour une participation dynamique à la mondialisation et à l'économie fondée sur le savoir. Document de référence, Atelier No. 4, Mieux connaître l'entrepreneuriat féminin, OECD.

- Bergmann H, Sternberg R.2007. The Changing Face of Entrepreneurship in Germany. *Small Bus. Econ.*, 28(2-3): 205-221.
- Bhola R, Verheul I, Thurik R, Gilo I.2006. Explaining engagementlevels of opportunity and necessity entrepreneurs.EIM Business andPolicy Research, H200610.
- Birley S.1989. Female Entrepreneurs: Are they Really any Different? *Journal of Small Business Management*, 27(1), 32-37.
- Block J, Sandner P.2009. Necessity and Opportunity Entrepreneurs and Their Duration in Self-employment: Evidence from German Micro Data, *Journal of Industry, Competition and Trade*, 9(2), p. 117-137.
- Block JH, Wagner M.2007.Opportunity recognition and exploitation by necessity and opportunity entrepreneurs: Empirical evidence from earnings equations, in: Solomon, George T. (ed.),*Proceedings of the Sixty-Sixth Annual Meeting of the Academy of Management*, ISSN 1543.
- Borges C, Filion LJ, Simard G.2008. Specificities of the Venture Creation Process by Women. *Proceedings of the Annual Conference of the ICSB/CIPE (Halifax,N.S.)*.
- Brinckmann J.2008. Functional management competence and growth of young technology based firms. *Creativity and Innovation Management*, 17(3), 186-203.s
- Brush C.1990. Women and Enterprise Creation: Barriers and Opportunities. In: S. Gould and J. Parzen (eds.). *Enterprising Women: Local Initiatives for Job Creation*, 37-58.
- business service firms in Finland", *Small Business Economics*, Vol. 21 No. 2, pp. 187-200.
- Buttner EH, Moore DP. 1997. Women's Organizational Exodus to Entrepreneurship: Self-reported Motivations and Correlates with Success. *Journal of Small Business Management*35(1), 34-46.
- Cadieux L, Lorrain J, Hugron P. 2002. La succession dans les entreprises familiales dirigées par les femmes: une problématique en quête de chercheurs, *Revue internationale P.M.E.*, 15(1), 115-130.
- Cardozo R, Elder T, Harmon B.1996. "When does growth pay?", in Reynolds, P., Birley, S., Butler, J., Bygrave, W., Davidsson, P., Gartner, W. and McDougall, P. (Eds), *Frontiers of Entrepreneurship Research*, Babson College, Wellesley, MA, pp. 480-90.
- Carlsson B.2002. "Institutions, entrepreneurship, and growth: biomedicine and polymers in Sweden and Ohio", *Small Business Economics*, 19(2), 105-121.
- Carroll GR, Hannan MT.1989. "Density delay in the evolution of organizational populations: A model and five empirical tests", *Administrative Science Quarterly*, 34, 411-430.
- Chen CC, Greene PG, Crick A.1998."Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?", *Journal of Business Venturing*, Vol. 13 No. 4, pp. 295-316.
- Cornet A, Constantinidis C, Asendéi S.2003. Les femmes entrepreneurs face à la formation, au financement et aux réseaux, *Rapport national le Fonds social européen*.
- Davidsson P, Henreksson M. 2002. "Institutional determinants of the prevalence of startups and high-growth firms: Evidence from Sweden", *Small Business Economics*, 19(2), 81-104.
- Davidsson P, Kirchhoff B, Hatemi JA, Gustavsson H.2002. "Empirical analysis of business growth Factors using Swedish data", *Journal of Small Business Management*, 40(4), 332-349.
- Dejardin M.2000. Entrepreneurship and Economic Growth: An Obvious Conjunction? *Institute for Development Strategies*. Available at: www.institutefordevelopmentstrategies.com
- DeMartino R, Barbato R.2003.Differences between women and men MBA entrepreneurs: exploring family flexibility and wealth vreation as career motivators, *Journal of Business Venturing* 18(2003), 815-832.
- Du Rietz A, Henreksson M. 2000. Testing the Female Underperformance Hypothesis. *Small Business Economics*, 14(1), 1-10.
- Duchéneaut B, Orhan M. 2000. *Les femmes Entrepreneurs en France: Percée des Femmes dans un Monde Construit au Masculin*, Seli Arslan, Paris.
- Fielden S, Davidson M, Dawe A, Makin P.2003.Factors Inhibiting the economic growth of femaleowned small businesses in North West England. *J.Small Bus. Enterprise Dev.*, 10: 152-166. DOI:10.1108/14626000310473184
- Georgellis Y, Wall H.2005. 'Gender differences in self employment,'*International Review of Applied Economics*, 19(3): p321-342.
- Giacomin O, Guyot JL, Janssen F, Lohest O. 2007. Novice creators: personal identity and push pull dynamics, *CRECIS Working Paper 07/2007*, Center for Research in Change, Innovation and Strategy, Louvain School of Management, downloadable through www.crecis.be.
- Gill A, Biger N. 2012. Factors that affect small business performance in Canada. *International Journal of Entrepreneurial Venturing*, 4(2), 181-193.
- Hamilton RT, Lawrence L. 2001. "Explaining size differences in smaller firms",*International Small Business Journal*, Vol. 19 No. 2, pp. 49-60.
- Harding R, Brooksbank D, Hart M, Jones-Evans D, Levie J, O'Reilly J, Walker J. 2006. *Global Entrepreneurship Monitor – United Kingdom 2005*. London: London Business School.
- Hechavarria DM, Reynolds P. 2009. Cultural norms & business start-ups: the impact of national values on opportunity and necessity entrepreneurs, *International Entrepreneurship and Management Journal*, 5(4), p.417-437.
- Heertje A.2006. Schumpeter on the Economics of Innovation and the Development of Capitalism. Northampton, MA: Edwin Elgar.
- Hessels J, van Gelderen M, Thurik R.2008. Entrepreneurial aspirations, motivations, and their drivers, *Small Business Economics*, 31(3), p.323-339.
- Holmquist C, Sundin E. 1988. Women as Entrepreneurs in Sweden: Conclusions from a Survey. *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College, 643-653.
- Holmquist C, Sundin E.1990. What's Special about Highly Educated Women Entrepreneurs? *Entrepreneurship and Regional Development*, 2(1), 181-193.
- <https://www.businessgrowthinitiative.org/KeyPracticeAreas/Documents/Entrepreneurship%20and%20Economic%20Growth.pdf>. (accessed on 15 June 2009).
- Hughes KD.2006. Exploring Motivation ans Success Among Canadian Women Entrepreneurs. *Journal of Small Business and Entrepreneurship*, 19(2), 107-120.
- Jennings Jennifer E, Cash Michelle P.2006. Women's entrepreneurship in Canada: progress, puzzles and priorities. In Brush, Candida G. et al. *Growth-oriented Women Entrepreneurs and their Businesses*. Northampton, MA: Edward Elgar Publishing, pp. 53-87.
- Kaplan E. 1988. Women Entrepreneurs: Constructing a Framework to Examine Venture Success and Business Failures. In: B.A. Kirchoff et al, (eds.). *Frontiers of Entrepreneurship Research Wellesley, MA: Babson College*, 625-637.

- Kent CA, Sexton DL, Vesper KH. 1982. *Encyclopedia of Entrepreneurship*, Englewood Cliffs, NJ: Prentice Hall.
- Kirkwood J, Campbell-Hunt C.2006. Beyond Push and Pull Factors: Exploring the Process of How Women and Men Decide to Become Entrepreneurs. Proceedings of the 51st World Conference of the ICSB (Melbourne, Australia).
- Kirkwood J.2003. The Motivation of Entrepreneurs: Comparing Women and Men. Proceedings of the 48th World Conference of the ICSB (Belfast, Northern Ireland).
- Langowitz N, Minniti M.2007. The Entrepreneurial Propensity of Women. *Entrepreneurship Theory and Practice*, 31(3), 341-360.
- Lee J. 1997. The Motivation of Women Entrepreneurs in Singapore. *International Journal of Entrepreneurial Behavior & Research*, 3(2), 93-110
- Littunen H, Tohmo T. 2003. "The high growth in new metal-based manufacturing and
- Manolova TS, Brush GB, Edelman LF.2008.What do woman entrepreneurs want?, *Strategic Change* 17, 69-82.
- Marlow S.1997.Self-employed Women–New Opportunities,Old Challenges? *Entrepreneurship & Regional Development*, 9, 199-210.
- McClelland D.1961. *The Achieving Society*, Van Nostrand, Princeton, NJ.
- McClelland E, Swail J.2005.Following the Pathway of Female Entrepreneurs. *International Journal of Entrepreneurial Behaviour and Research*, 11(2), 87-107.
- McGregor J, Tweed D.2000.Women Managers and Business Owners in New Zealand. In: Davidson, M., J. and Burke, R., J., (eds.). *Women in Management: Current Research Issues* (40-52), Thousand Oaks, Ca: Sage.
- McKelvie A, Wiklund J. 2010. Advancing firm growth research: A focus on growth mode instead of growth rate. Invited presentation at Lund University, Sweden, May 27.
- McMullen JS, Bagby DR, Palich LE.2008. Economic Freedom and the Motivation to Engage in Entrepreneurial Action, *Entrepreneurship Theory and Practice*, 32(5), p. 875-895.
- Minniti M, Arenius P, Langowitz N. 2004. *Global Monitor Entrepreneurship – 2004 Report on Women and Entrepreneurship*. Wellesley, Mass: Babson College and London Business School (The Center for Women's Leadership).
- Morris MH, Miyasaki NN, Watters CE, Coombes SM.2006. The Dilemma of Growth: Understanding Venture Size Choices of Women Entrepreneurs. *Journal of Small Business Management*, 44(2), 221-244.
- Mueller S, Thomas A.2000. Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*,16(1): 51-75.
- Orser BJ, Hogarth-Scott S, Wright P.1997. The Will to Grow: Gender Differences in Enterprise Expansion.Proceedings of the 14th Annual Conference of the CCSBE-CCPME (Vancouver, B.C.).
- Orser BJ, Riding AL, Manley K.2006. Women Entrepreneurs and Financial Capital, *Entrepreneurs Theory and Practice*, 30(5), 643-661.
- Penrose E.1959. *The Theory of the Growth of the Firm*. New York: John Wiley.
- Reynolds PD, Bygrave WD, Autio E, Cox LW, Hay M.2002.*Global Entrepreneurship Monitor, 2002 Executive Report*.
- Reynolds PD, Camp SM, Bygrave WD, Autio E, Hay M.2001.*Global Entrepreneurship Monitor, 2001 Executive Report*.
- Robinson C, O'Leary B, Rincon A.2006. 'Business start-ups, closures and economic churn: a review of the literature,' Final Report prepared for the Small Business Service.
- Robinson S, Finley J. 2007. Rural women's selfemployment: A look at Pennsylvania. *Acad.Entrepreneurship J.*, 13: 21-30.
- Rooney J, Lero D, Korabik K, Whitehead DL.2003. Self-Employment for Women: Policy Options that Promote Equality and Economic Opportunities. Ottawa, Ont: Status of Women Canada.
- Schumpeter J.1934. *The Theory of Economic Development*. Harvard University Press, Mass.
- Shane S, Kolvereid L.1995. "National Environment, Strategy, and New Venture Performance: A Three Country Study", *Journal of Small Business Management*, 33,37-50.
- Smallbone D, North D. 1995. "Targeting established SMEs: does their age matter?",*International Small Business Journal*, Vol. 13 No. 3, pp. 4-22.
- Smallbone D, Wyer P.2000. "Growth and development in the small firm", in Carter, S. and James-Evans, D. (Eds), *Enterprise and Small Business*, Prentice Hall, Harlow.
- Smith-Hunter A, Joanne K, Virginia Y.2003. A psychological model of entrepreneurial behavior. *Journal of the Academy of Business and Economics*, 2(2): 180-192.
- Stevenson HH, Gumpert DE.1985. The Heart of Entrepreneurship. *Harvard Business Review*, 63(2), 85-94.
- Stevenson LA. 1986. Against all Odds: The Entrepreneurship of Women. *Journal of Small Business Management*, 24, 30-36.
- Stinchcombe AL.1965. "Social structure and organizations", In March, J. (Eds.), *Handbook of Organizations*, Chicago: Rand McNally, 142-193.
- Van Praag M.2001. 'Business Survival and Success of Young Small Business Owners: an empirical analysis,' downloadable from Social Science Research Network, <http://ssrn.com>
- Verheul I, Thurik R, Hessels J, van der Zwan P.2010. Factors Influencing the Entrepreneurial Engagement of Opportunity and Necessity Entrepreneurs, *EIM Research Reports*, H201011, March 2010, 1-24.
- Vivarelli M. 2004. Are all the potential entrepreneurs so good? *Small Business Economics* 23, 41-49.
- Wagner J. 2005. "Der Noth gehorchend, nicht dem eignen Trieb" – Nascent necessity and opportunity entrepreneurs in Germany: Evidence from the Regional Entrepreneurship Monitor, IZA Discussion Paper No. 1608.
- Wiklund L, Shepherd D. 2003. "Aspiring for, and achieving growth: the moderating role of resources and opportunities", *Journal of Management Studies*, Vol. 40 No. 8, pp. 1919-41.
- Wong PK, Ho YP, Autio E. 2005. Entrepreneurship, innovation and economic growth: Evidence from GEM data, *Small Business Economics* 24, 335-350.
- Yang CH, Huang CH.2005. "R&D, size and firm growth in Taiwan's electronics industry", *Small Business Economics*, Vol. 25 No. 5, pp. 477-87.
- Yasuda T. 2005. "Firm growth, size and behavior in Japanese manufacturing", *Small Business Economics*, Vol. 24 No. 1, pp. 1-15.