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A Model of Effective Internal Factors for SMEs' Performance

Jahangir Yadollahi Farsi
Associate Professor inTehran University
Email: yfarsi@ut.ac.ir
Aliakbar Aghajani
Scientific Assistant in Neka Payame Noor University
Email: aghajaniali3@yahoo.com
Mohammad Mahdi Mardanshahi
PhD in Entrepreneurship
Email: mehdy1352@yahoo.com

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Abstract

The present research was conducted to build a conceptual model of internal effective factors of small and medium enterprises in Mazandaran Province. To accomplish the goal of the research first, a complete review of the related literature was conducted. Second, questionnaires were given to the corresponding population. Finally, the gathered data were calculated and analyzed using SPSS, Excel and LISREL software. The research found that selected internal factors have impact on SMEs' performance.

Keywords: Financial, Strategy, Information Technology, Selling and Marketing, Human resource, Small and Medium Enterprises.

Introduction

The small and medium enterprises are known as the salient resources of creating occupation in developed and developing countries (Yadollahi, Aghajani & Aghajani, 2009). These enterprises have an important role in the creation of new jobs, innovation, flexibility and economic growth (Birch, 1979). There are extensive documents reporting that new small enterprises grow up faster (Evans, 1987; Wagner, 1994; Cabral, 1995; Tether et al, 1998; Brixy et al, 1999), create more jobs, distribute wealth more effectively (Schumpeter, 1942), and are more innovative (Chakrabarti, 1991). Creation of new small and medium enterprises and their entrance into an industry is the key element in economic growth and industry evolution (Schumpeter, 1934). The new small and medium enterprises are exposed to exit risk, especially at the beginning of entry (Geroski, 1995). These enterprises are exposed to industry shock because of the variable nature of technology (Gort & Klepper, 1982). Thus, studying small and medium enterprises and recognizing the effective factors is very important because, the enterprises can stop or decrease unemployment.

There are different definitions of SMEs (Kassim, 2003; Ratanapornsiri, 2003). It should be noted that small and large are relative concepts and cannot have any reasonable definition. Definitions differ not only among countries, but also within a country. (Aghajani, 2008). The criteria to define the characteristics of SMEs also differ. They include capital stock, product volume, unit products for export, number of employees, annual sales, price of the shares (Kassim, 2003). Some of the researchers define small and medium enterprises as those which have lower than 250 employees, and other researchers believe that these enterprises have lower than 500 employees (Beck, Wigand & konig, 2005). European Union defines small and medium enterprises as private organizations that are separate from agriculture, and have lower than 500 employees (Kassim, 2003). In Iran, the Ministry of Mines and Industries defines small and medium establishments as industrial and service units that have lower than 50 personnel (Ahmadpour & Moghimi, 2006؛ Aghajani, 2008).

A lot of trade enterprises especially new ones go bankrupt every year (Acs et al, 1993), which creates urgency to study the effective factors for enterprises performance. While there are many studies about enterprises, because of the lack of data, experimental researches about the effective factors for enterprise performance are limited (Huyghebaert et al, 2000, 627).

Although, small and medium enterprises' success and survival is important for economic growth, a few newly established enterprises survive (Shane, 2000). Present researches report that about 40 percent of enterprises survive nearly for a year, and about 60 percent of them for nearly 5 years (Kirchhoff, 1994). Thus, investigating the effective factors for enterprise performance can help SMEs to improve their performance and prolong their existence in the industry.

The effective factors can be classified into internal and external. External factors may include government rules, economic and political situations, unions, consultation enterprises etc. Internal factors refer to financial and human resources, operations, product and marketing research and development

abilities. The studies have shown that internal factors are the main cause of bankruptcy (Yadollahi et al, 2009). Likewise in Iran many small and medium businesses encounter difficulties to grow and as a result they exit in the first year.

Therefore, the purpose of the present research is to determine the effective internal factors for small and medium enterprises' performance.

Research Background

This section covers some of the most important studies related to the effective factors for SME's performance.

Many researches focus on investigating such factors as a sense of belonging, (lohrke, Kreiser & Weaver, 2006; Sun, Yazdani & Overend, 2005), participation in enterprise activities (Vassie & cox, 1998), HR productivity, promotion, decision making, knowledge and experience (Morgan, Colebourne & Thomas, 2006, Sohn, Kim & Moon, 2007), outsourcing as a means to decrease costs, risk, innovation and creativity, relationship in the organization (Greenhalgh, 2000, Bradford & Florin, 2003). Other researches emphasis the key role of human resources in today's competitive market and focus on such factors as HR empowerment (Sun, Yazdani & Overend, 2005), academic education, counselors, salary and overall workforce welfare (Peel, Bridge, 1998; Lee, Kim & Kim, 2007). Other researchers have investigated organizational structure, and believe that enterprise structure plays an important role in today's enterprise and consider such factors as organizational levels (Mintzberg, 1993), instructions (Lin & Zhang, 2005), trust (Bradford & Florin, 2003), bureaucracy. Another group of researchers point out the significance of size in enterprises. Some researchers emphasize the important role of organizational systems, and consider factors such as: customers, resources (Greenhalgh, 2000), goals (Andersen, **&** Foss 2005), systems and methods (Vassie, Cox, 1998), system quality (Lee, Kim & Kim, 2007), system relationships, appropriate control system (Dickson, Weaver & Hoy, 2006, Pansiri, 2007) and organizational system flexibility. There are also researches that focus on such factors as advertisement, feedback, customer service, electronic commerce, brand (Wilkinson & Brouthers 2006), market research (Andersen & Wang & Lin, 2008; & Foss, 2005), market analysis (Pansiri, 2007). Dickson, Weaver & Hoy (2006) focus on R&D and alliances. Lee, Kim & Kim (2007) emphasize creativity, skills and technology as important internal factors for enterprise performance. Moragn, Colebourne & Thomas (2006) and Wang & Lin (2008) and others consider that information technologies play significant role in enterprise performance. They believe that information technologies should be updated systematically (Qian, 2003) and used in all fields of business. Zahra (2000) and others emphasize factors related to business strategy. They believe that strategy is an instrument that can enable enterprises to improve their performance, reach their long-term goals and gain competitive advantage.

Qian (2003), Viguri et al (2002) and Yapp et al (2006) study operation and production factors including international and national standards, goods quality and characteristics, product waste, ability to produce new goods and cost efficiency.

Finally, Berger et al (2006), Sohn et al (2007) and Voodeckers et al (2006) consider financial factors as significant for firm performance. Those factors include but are not limited to financial resources, liquidity, investment decisions and capital structure.

Based on the previous researches this study has identified and examined the factors which are most effective for enterprise performance. As a result, this paper presents an 11-dimensional conceptual model comprised of effective variables.

Research Goals and Methodology

In this research, the effective internal factors for performance of SMEs in Mazandaran will be investigated. Accordingly, primary and secondary goals of the research are as follows: the primary goal is to determine a conceptual model of effective internal factors for the performance of small and medium enterprises in Mazandaran Province. Following, the secondary goal is to measure the effectiveness of management, selling and marketing activities, financial resources, technology, research & development, operation and production, organizational systems, human resources, structure, organization size and strategy on the performance of small and medium enterprises in Mazandaran Province.

Consequently, the following hypotheses were put forward:

H_0: The selected internal factors have no impact on SMEs' performance (RMSEA ≥ 0.05)

H_1: The selected internal factors have impact on SMEs' performance (RMSEA < 0.05)

This research is an applied research. Mixed method is used for the purpose of data collection and analysis. The data is collected using both observation and questionnaires. Descriptive statistics and correlation analysis have been run to obtain both descriptive and inferential statistics.

The research population includes all the small and medium enterprises that are member of commerce office of mines and industries in Mazandaran Province. The total number of the enterprise is 340 which include 98 medicine enterprises (29%), 54 metal enterprises (16%), 14 clothing and knitting enterprises (4%), 51 chemical enterprises (15%), 62 machinery and equipment enterprises (78%) and finally, 61 other enterprises. 250 questionnaires were distributed among the mentioned enterprises of which 209 were finally selected. The reliability of the questionnaires was tested using Ceronbach's Alpha (0.94). The collected data was analyzed using Excel, SPSS and LISREL. The descriptive statistics was run using excel while to determine the impact of the selected variables on enterprise performance SPSS and LISREL were applied.

Data Analysis

The results of descriptive statistics are shown below.

Table 1: Descriptive Statistics

Total				Male	Female	Quantity	Gender
209				14	195	frequency	
100%				7%	93%	Percent	
Total		60-51	50-41	40-31	30-20	Quantity	Age
209		40	75	66	20	frequency	
100%		19%	36%	32%	13%	Percent	
Total				Married	single	Quantity	Marital Status
209				196	12	frequency	
100%				93%	7%	Percent	
Total	PhD	MA	BA	Upper diploid	diploma	Under diploma	Quantity	Education
209	6	21	73	39	64	6	frequency	
100%	3/	10%	34%	19%	31%	3%	Percent	
Total	Up 40	36-40	31-35	26-30	20-25	Below 20	Quantity	Marriage age
209	10	17	22	70	73	15	frequency	
100%	5/	8%	11%	34%	35%	7%	Percent	
Total		Four	Three	Two	One	Quantity	Children
209		55	27	47	80	frequency	
100%		26%	13%	22%	39%	Percent	
Total	Up 40	36-40	31-35	26-30	20-25	Below 20	Quantity	Entrepreneurship age
209	3	2	29	69	80	20	frequency	
100%	1/	1%	14%	34%	40%	10%	Percent	
Total	Etc	Make machine	Chemical	Knitting	metallic	nutritious	Quantity	Filed of industry
209	45	36	23	8	32	63	frequency	
100%	22/	17%	11%	4%	15%	31%	Percent	

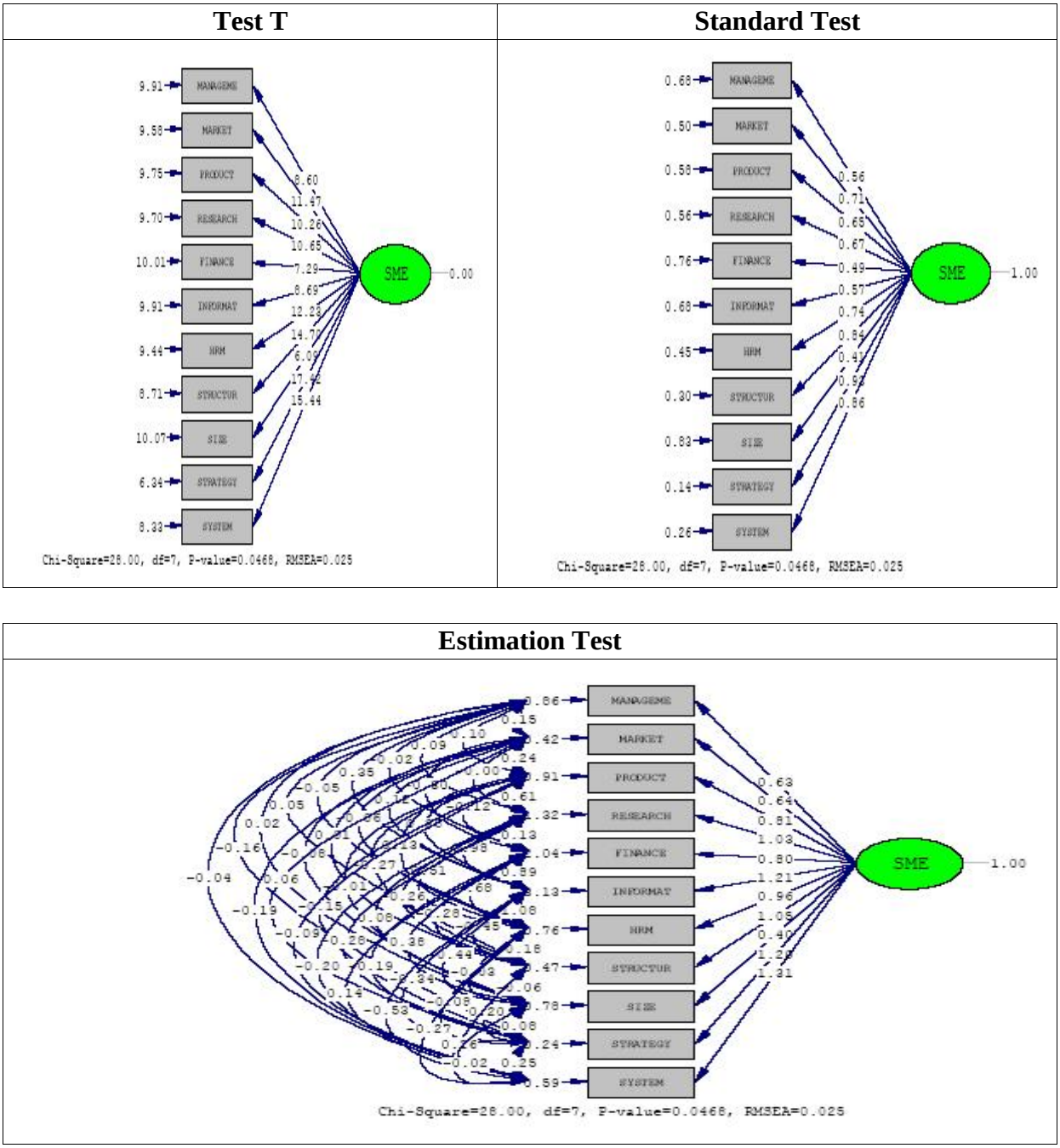

Figure 1: Estimation test

The following table reveals the results of the analysis which indicates that the research model is a good fit. Further as RMSEA <.05, the null hypothesis is rejected confirming that the selected internal factors have impact on SMEs' performance.

Table 2: Fit Indices

Index	Means	Standard Degree	Estimated Degree
RMSEA	Root Mean Square Error of Approximation	RMSEA <.05	0.02
GFI	Goodness of Fit Index	GFI > 0.9	0.94
AGFI	Adjusted Goodness of Fit Index	AGFI > 0.9	0.91
PNFI	Parsimony Normed Fit Index	PNFI > 0.9	0.93
CFI	Comparative Fit Index	CFI > 0.9	0.97
NFI	Normed Fit Index	NFI > 0.9	0.93
NNFI	Non-Normed Fit Index	NNFI > 0.9	
X2/df	x2 to its degree of freedom	X2/df ≥.05	3.71
TLI	Tucker Lewis Index	TLI > 0.9	0.95

Table 3: Direct effect of independent factors on SMEs

Factor	Estimated Influence	Standard Influence	T-value
Managerial	0.63	0.56	8.60
Selling & Marketing	0.64	0.71	11.47
Operation & Product	0.81	0.65	10.26
Research & Development	1.03	0.67	10.65
Financial	0.80	0.49	7.29
Information Technology	1.21	0.57	8.69
Human resource	0.96	0.74	12.23
Organizational structure	1.05	0.84	14.70
Organization size	0.40	0.41	6.09
Strategy	1.20	0.93	17.42
Organizational system	1.20	0.86	15.44

Table 4: Indirect effect of independent factors on SMEs

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11
X1		.15	.10	.09	-.02	.35	.05	.05	.02	-.16	-.14
X2	.15		.24	.00	-.30	.12	-.06	.01	-.08	.06	-.19
X3	.10	.24		.61	.12	.36	.13	.27	-.01	-.15	-.09
X4	.09	.00	.61		.13	.98	.51	-.26	.08	-.28	-.20
X5	-.02	-.30	.12	.13		.89	.68	-.28	.38	-.19	.14
X6	.35	.12	.36	.98	.89		1.08	-.45	-.44	-.34	-.53
X7	.05	-.06	.13	.51	.68	1.08		-.18	-.03	-.08	-.27
X8	.05	.01	.27	-.26	-.28	-.45	-.18		-.06	.20	.26
X9	.02	-.08	-.01	.08	.38	-.44	-.03	-.06		.08	-.02
X10	-.16	.06	-.15	-.28	-.19	-.34	-.08	.20	.08		.25
X11	-.14	-.19	-.09	-.20	.14	-.53	-.27	.26	-.02	.25	

Conclusion and Suggestions

The results of the data analysis indicate that the selected factors have impact on SMEs' performance.

Hence this research complies with the previous researches.

As so, it should be recommended that the managers should consider the mentioned factors and use them to gain competitive advantage, flexibility against environmental, technological and industrial changes. They should encourage creativity and innovation, technological promotions, study market and produce goods and services according to customer needs which will result in high customer loyalty and will ensure SMEs growth and profitability.

This research unfortunately does not cover external factors, so it is suggested for the other researchers. Since this is the first research that studies the impact of internal factors on SMEs performance in the country, the research variables and data may not be as accurate as they were expected. Therefore, it is suggested to conduct more research on internal factors that can influence the performance of SMEs. Finally it is suggested to study the impact of demographic factors on the performance of SMEs in Mazandaran.

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