

Relation between organizational structure and organizational entrepreneurship (Case study: manufacturing companies in the west of Mazandaran province)

**Maryam Ooshaksaraie¹ , Mohammad Hadi Asghari² , Zeinab Farajpur³ ,
Mohammad Taleghani⁴**

^{1,2,3,4}Department of Business Management & Accounting, Tonekabon branch, Islamic Azad University, Tonekabon, Mazandaran , Iran

Abstract

This research main purpose was to examine and study the relationship between organizational structure (organic and mechanic) and organizational entrepreneurship in manufacturing companies in the west of Mazandaran. The method to carry out this project was descriptive (correlation).the research statistical society consisted of authorities and managers of manufacturing companies in the west of Mazandaran province (25 companies) and amounted to 250 people that using Kerjesi and Morgan and simple random sampling 152 people were selected as a sample, eventually 133 questionnaires were returned. Information gathering tool was two researcher- made questionnaires including: 1-organizational entrepreneurship questionnaire containing 20 five-alternative questions from Likert spectrum based on Anthonic and Hisrich model. 2- Organizational structure questionnaire containing 27 five-alternative questions from Likert spectrum based on Robins, hoy and Michel model. Obtained data were analyzed using Pearson correlation coefficient and multi variable regression analysis. Research results showed that 1- there is a significant relationship between organizational structure and organizational entrepreneurship. 2- There is a significant relationship between organic organizational structure and organizational entrepreneurship. 3- There is a significant relationship between mechanic organizational structure and organizational entrepreneurship.

Key words: organic organizational structure, mechanic organizational structure, organizational entrepreneurship

1 Introduction

In the present era that is subject to quick alterations, manufacturing organizations should identify new opportunities and solutions in order to survive and remain in the arena of competition with other rivals. New opportunities and solutions that enable organization managers and employees get ahead of the other rivals owing to their initiatives and creativity and produce their customers required goods and services with the least price. So entrepreneurship as a key factor in economical, social, cultural development gives this opportunity to organization managers and employees. Entrepreneurship has various forms and definitions. What we focus on in this research is organizational structure and its relationship with organizational entrepreneurship in manufacturing companies. Till early 1970s, research on entrepreneurship was concentrated upon individuals' measures or attributes. Researchers found out that organizations themselves execute entrepreneurship activities. This led to the formation of organizational entrepreneurship idea. Organizational entrepreneurship is a concept focused on organization rather than individuals, and on organizational cultures and processes. Every change in the organization is under the influence of organization structure, in other words it is organization structure that creates harmony between all of activities and goals and establishes a discipline to achieve organizational goals. Also determines where one should be placed, with whom he should communicate and what methods and principles he should follow to achieve his goals. In fact structure purpose is to design a regular communicative paradigm to reach organization goals. So in order to achieve organizational

entrepreneurship we need an appropriate organizational structure. Robins classifies organizations in to two groups of mechanical and organic. Those organizations that are at high level in terms of flexibility variable and at low level in term of concentration, formality, complexity, effectiveness, and efficiency variables have organic structure. Besides, management can integrate every constituting component such as complexity, formality and concentration with various methods and match them with each other but each organization whole structure takes the shape of either of these two designs. Mechanical structure that is characterized with high complexity, high formality and confined communicative network and little participation of inferior members in decision making process. Mechanical structure is equivalent with pyramid shaped structures. On another extreme there is organic structure, this structure has little complexity and formality. It has extensive communicative network and enjoys from wide participation in decision making process.

In studies carried out on entrepreneurship, continuously this question is raised that what is the prerequisite of organizational entrepreneurship and how is it stabilized in organization and how to pave the way for its emergence? To achieve this goal organization needs an appropriate structure. So it is of great importance to deliberate over the relationship between organizational structure (organic and mechanic) and organizational entrepreneurship. Entrepreneurship should take place in appropriate setting. Organizational structure that encourages entrepreneurship behavior (discovering opportunity, facilitating opportunity, following opportunity) is primary and required element for organizational entrepreneurship success. For this sake in this study we want to answer the question “which one of organizational structures (organic or mechanic) provides more appropriate setting for organizational entrepreneurship?”

2 Research Background

Various studies have been carried out in the field of organizational structure and organizational entrepreneurship here we pay attention to some of them.

-Rezazade (1382) in a research examined the relationship between organizational structure and organizational entrepreneurship in Tehran welfare organization and found below results. There is a significant but reverse relationship between organizational structure complexity and organizational entrepreneurship. Also, there is a significant but reverse relationship between organizational structure formality and organizational entrepreneurship. There is a significant but reverse relationship between concentration and organizational entrepreneurship.

-Hosein Khanifar and Fardin Vakili (1387) in a study entitled “relation between organizational structure type and organizational entrepreneurship in small and medium economical companies” examined issues in the field of mechanical- organic structures and knowledge structure and organizational entrepreneurship. Obtained results show that there is a significant relationship between organizational structure type and organizational entrepreneurship. There is a reverse relationship between mechanical structure and organizational entrepreneurship. Also there is a significant relationship between knowledge structure and organizational entrepreneurship.

-Kord Naiig et al (1388) performed a study entitled “examination of relationship between organizational structure elements and entrepreneurship culture” in Tehran University. Research result is indicative of a significant relation between all of the tenfold dimensions of entrepreneurship culture and organizational structure except risk taking. But regression tests show that components supporting management, reward system, and control system more than the other components have made a meaningful impact upon entrepreneurship organizational structures.

-Habibola Javanmard and Abas Mardani (1388) have done a research entitled “examination of Arak industrial city mini industries entrepreneurial development with structural approach”. This research results show that there is a positive relation between flexibility in rules and regulations, transparency in duties, presence of work teams, entrepreneurial organizational relationship, and entrepreneurial development of mini industries.

-Alimardani et al (1388) have done a research entitled “examination of relation between organizational structures and organizational entrepreneurship” in Tehran Shahid Beheshti University. Research result was indicative of a significant relation between organizational structure and organizational entrepreneurship and a reverse relation between organizational structure components and organizational entrepreneurship and no relation between specialization inclination and organizational entrepreneurship.

-Moghimi(2004), has done a research aimed at explanation of organization interior and exterior effective factors upon organizational entrepreneurship, in Iran public organization. According to his research results some factors such as strategy, research and development system, status of processes and methods, control system, organizational structure (organic and mechanical structure), financial system, organization reward and payment organization, management attributes, leadership style and organizational communicational system have been considered effective in organizational entrepreneurial development.

-Kariue Ana et al(1998) in a research entitled “ the effect of formality and concentration upon entrepreneurship in export companies” reached to this conclusion that total indexes correlation predicts a direct and significant relationship between entrepreneurial behavior and every components of formality and centrality. Generally it can be argued that high level of concentration in organization causes low level of entrepreneurship and formality high level has positive relation with organizational entrepreneurship.

-Rendal Shomer citing from David Son and Wickland(2001), studied relation between freedom of choice and distress derived from organizational factors and organizational trends and concluded that to train entrepreneur people organization should possess following attributes, it makes progress from low entrepreneurship activities to higher entrepreneurship activities. Units should be quite independent and hierarchical, there should be risk taking groups unconnected to companies, organization bureaucracy should reach to its least and organization flexibility should increase.

-Rinor(2008) in his research found out that organization entrepreneurial strategies especially on the field of gaining organization clients satisfaction and expansion of organization human forces have positive relation with organizational entrepreneurial development.

-Damirbeg et al (2006) in his research argued that organization management giving support to employees is a key factor in development of organizational entrepreneurship in public organizations. In his view easiness of relation between organization management and employees plays an important role in this respect.

Chen (2005) in a research in 75 Chinese public organizations found out that organization culture, flexible organizational strategies, management giving support to entrepreneurs and employees active participation in organizational decision making play a major role in organizational entrepreneurship development.

Veng(2005) in a research in Chinese public organizations concluded that there is a positive relation between organization relations and organizational entrepreneur development.

-Heil(2003) in a research in eight organizations in southern Africa recognized organizational structure, organization reward and encouragement system, organization management and organizational culture, as effective factors upon entrepreneurship development.

3 Study Purpose

General purpose: examination of relation between organizational structure (organic and mechanic) and organizational entrepreneurship in manufacturing companies in the west of Mazandaran province.

Minor purposes: 1-examination of relation between mechanic structure and organizational entrepreneurship.

2-examination of relation between organic structure and organizational entrepreneurship.

4 Research Main Hypothesis

there is a significant relationship between organizational structure (organic and mechanic) and organizational entrepreneurship.

4.1 Research Secondary Hypothesizes

1-there is a significant relation between organic organizational structure and organizational entrepreneurship.

2-there is a significant relationship between mechanical organizational structure and organizational entrepreneurship.

5 Statistical Society and Sample Volume

all bosses, managers and authorities of 25 manufacturing companies in the west of Mazandaran who owned 10 to 49 employees were selected whose number amounts to 250 persons. The reason for selecting these companies was their acceptable abundance.

According to Kerjsi and Morgan table 152 persons were selected on the basis of society volume so considering this fact that average number of manufacturing companies' managers and authorities was nearly 10 persons therefor 15 manufacturing companies were selected with simple random sampling method in the west of Mazandaran province. Out of 152 distributed questionnaires, returned and useable questionnaire equaled to 133 questionnaires.

6 Study Instrument

to examine and test research hypotheses two surveyor made questionnaires were used. 1) Organizational entrepreneurship questionnaire is designed from Anthonic and Histrich model. This questionnaire contains 20 five alternative questions of Likert spectrum. 2) Organizational structure questionnaire is designed based on Robins, Hoy and Michel model and contains 27 five alternative questions of Likert spectrum. This questionnaire measures organizational structure (organic and mechanic).

7 Determination of Admissibility and Reliability of Data Gathering Instrument:

Admissibility: in this research to examine and determine admissibility of organizational entrepreneurship questionnaire and organizational structure (organic, mechanic), the surveyor offered them to consultant professors and counselor and the other experts. They having done required examination and revisions verified its content admissibility.

Reliability: to determine reliability organizational entrepreneurial and organizational structure questionnaires were applied upon 30 people samples and then using SPSS software the Kronbakh Alpha coefficient of organizational entrepreneurial questionnaire was obtained 0/935, and the Kronbakh alpha coefficient of organizational structure questionnaire(organic and mechanic) was obtained 0/826.

8 Research Method

According to applied instruments, in the research entitled “examination of relation between organizational structure (organic and mechanic) and organizational entrepreneurship” research method was descriptive and of correlation type.

8.1 Data analysis method

In descriptive analysis of data, abundance computation, abundance percent, average, standard deviation, diagram drawing, and table designing are used and in data deductive analysis, Pearson correlation coefficient test and multi variable regression analysis are used.

9 Analysis of data related to the research main hypothesis examination

There is a significant relation between organizational structure (organic and mechanic) and organizational entrepreneurship.

Table(1) correlation coefficient matrix of organizational entrepreneurship and organizational structure variables.

sig	r	number
...	0/654	133

P** < %1

Using table (1) data the research main hypothesis is studied. There is a significant relation between organizational structure and organizational entrepreneurship(r=0/654; p=0/001).

Study of the research first secondary hypothesis: there is a significant relation between organic organizational structure and organizational entrepreneurship.

Table(2) correlation coefficient matrix of organizational entrepreneurship variables and organic organizational structure

Sig	r	number
...	**0/441	43

P**<0/01

Using the above table data the research first secondary hypothesis is studied. There is a significant relation between organic organizational structure and organizational entrepreneurship(r=0/441;p/000).

Table(3) summary of variables step by step regression analysis

An estimate standard error model	modified R	R ²	R	prediction component
12/47708	0/175	0/195	0/441	organic organizational structure 1

Above table shows that organic organizational structure component can justify about 0/195 of variance.

Table(4) variance analysis results obtained from one model regression

Significance level	F test	squares average	freedom degree	squares sum	model
0/003	9/911	1542/848	1	1542/848	regression
		155/678	41	6382/780	remain
			42	7925/628	sum

As above table shows obtained F is significant at the level %1[(F=9/911;P=0/000) with freedom degree(41,1)]therefor with reliance 0/99 we conclude that thee is a significant relation between organic organizational structure variable and organizational entrepreneurship.

Table(5) analysis coefficients of step by step regression

Standard coefficient			standard error	standard coefficients non		
P	t	Beta		slope coefficient	component	model
0/726	0/353		20/527	7/249	stable figure	1
0/003	3/148	0/441	257	0/809	organic organizational structure	

According to above results and F significance in variance analysis table (4) and the table t we can write regression equation for model 1 like this: $y=a+bx$

Organizational entrepreneurship prediction=stable value+ slope(organic organizational structure)

Organizational entrepreneurship=7/249+0/809(organic organizational structure)

According to slope value in above equation we can conclude the more organic organizational structure grade the more organizational entrepreneurship rate. According to standard beta value it is known that for one unit increase in organic organizational structure grade, organizational entrepreneurship increases by 0/441.

Examination of research second secondary hypothesis: there is a significant relation between mechanic organizational structure and organizational entrepreneurship.

Table(6) correlation coefficient matrix of organizational entrepreneurship variables and mechanic organizational structure

Sig	r	number
...	0/450**	90

According to the above table data the research second specific hypothesis is examined. There is a significant relation between mechanic organizational structure and organizational entrepreneurship($r=0/450;p/000$).

Table(7) summary of variables step by step regression analysis

An estimate standard error	modified R	R ²	R	PREDICTION COMPONENT	MODEL
8/17602	0/193	0/203	0/450	MECHANIC ORGANIZATIONAL STRUCTURE	1

PREDICTION COMPONENT: MECHANIC ORGANIZATIONAL STRUCTURE

Above table shows that mechanic organizational component can justify about 0/203 of variance.

Table(8) the results of variance analysis obtained from one model regression

Significance level	F test	squares average	freedom degree	squares sum	model
0/000	22/348	1493/906	1	1493/906	regression
		66/848	88	5882/5830	remain
			89	7376/489	sum

as table(8) shows obtained F is significant at level %1. [($F=348/22;p 0/000$) freedom degree(88,1)]. Therefor with confidence of %99 we conclude that there is a significant relation between mechanic organizational structure variable and organizational entrepreneurship.

Table(9) analysis coefficients of step by step regression

Standard coefficient			standard error	standard coefficients non		
P	t	Beta		slope coefficient	component	model
0/624	-0/491		16/953	-8/328	stable figure	1
0/000	4/727	0/450	0/179	0/846	organic organizational structure	

According to above results and F significance in variance analysis table(8) and obtained t we can write the following regression equation for model(1):

$$Y=a+bx$$

Organizational entrepreneurship prediction=fixed value+slope(mechanic organizational structure)

Organizational entrepreneurship=-8/328+0/846(mechanical organizational structure)

According to slope value in above equation we can conclude that with an increase in mechanical organizational structure grade, the rate of organizational entrepreneurship increases. According to standard beta value it is known that for one unit increase in mechanical organizational structure grade by 0/450 value is added to organizational entrepreneurship.

10 Conclusion

The research main hypothesis test results: there is a significant relation between organizational structure (organic and mechanic) and organizational entrepreneurship. According to the results of Pearson correlation coefficient test it was known that there is a significant relation between organizational structure(organic and mechanic) and organizational entrepreneurship($r=0/654$), and this relation is statistically significant at level 0/01. This result is compatible with Hanifar and Vakili research(1387) entitled "relation between organizational structure type and organizational entrepreneurship in small and medium economical companies" because they, during their study came to the conclusion that there is a significant relation between organizational structure and organizational entrepreneurship. This conclusion is compatible with findings of Mehrzad Alimardani, Mohammad Ghahrmani and Mahmood Abolghasemi(1388). They, in a research entitled " examination of relation between organizational structure and organizational entrepreneurship" in Shahid Beheshti university concluded that there is a significant relation between organizational structure and organizational entrepreneurship. Also they are compatible with findings of Farajola Rahimi Philabadi(1383) cited from Alimardani(1388). Rahimi Philabadi in a research he performed in Kosar economical complex, concluded that there is a significant relation between organizational structure and organizational entrepreneurship.

Results of first secondary hypothesis test:" there is a significant relation between organic organizational structure and organizational entrepreneurship". According to Pearson correlation coefficient test results it can be stated that there is a relation between organic organizational structure and organizational entrepreneurship($r=0/441$), and this relation is significant at level 0/01. According to slope value in equation and also standard beta value it was known that for one unit increase in organic organizational structure, organizational entrepreneurship increases by 0/441. This finding is compatible with findings of Seyed Mohammad Moghimi research (1383) entitled "effective factors upon organizational entrepreneurship in organizations of Iran government cultural and social services center. Moghimi

research findings show that there is a significant relation between entrepreneurial organizational structure and entrepreneurship in organizations of Iran government cultural and social services center. In other words entrepreneurial organization advocates avoidance of mechanical structure and establishment of organic structure.

Results of second secondary hypothesis test:” there is a significant relation between mechanic organizational structure and organizational entrepreneurship.” According to Pearson correlation coefficient test results it can be stated that there is a relation between mechanic organizational structure and organizational entrepreneurship($r=0/450$), and this relation is significant at level %1 . According to slope value in equation and also standard beta value it was known that for one unit increase in mechanic organizational structure, organizational entrepreneurship increased by 0/450.

This finding isn't compatible with findings of Alimardany et al research (1388) entitled” examination of relation between organizational structure and organizational entrepreneurship at Tehran Shahid Beheshti University. Results of Alimardani et al research is indicative of a reverse relation between mechanic organizational structure and organizational entrepreneurship and a reverse relation between organizational structure components (formality, complexity and concentration) and organizational entrepreneurship. This result is not compatible with findings of Hosein Rezazade(1382). Rezazade in a research studied relation between organizational structure and organizational entrepreneurship in Tehran welfare organization and obtained following results: there is a significant relation between mechanic organizational structure dimensions (formality, complexity) and organizational entrepreneurship. Obtained correlation coefficients were negative and indicative of reverse relation between mechanic organizational structure and organizational entrepreneurship. This result is not compatible with findings of Albert Kareu Ana, Michel h Moris and Antony in 1998 entitled “impact of concentration and formality upon entrepreneurship in export companies.

Their research result showed that concentration high level in organization leads to low level of entrepreneurship. According to the findings of this research it can be said that in studied statistical society that is small manufacturing companies in the west of Mazandaran province(with 10-49 personals), companies with mechanical structure include more organizational entrepreneurship unlike pre obtained results. In other words in these companies with an increase in mechanic organizational indexes (formality, concentration, complexity) and a decrease in flexibility, organizational entrepreneurship increases. Managers in these companies are inclined towards following compiled instructions even in the field of encouraging employees towards creativity and initiative. In fact in these companies managers advocate enforcement of rules and regulations pertaining to employees surveillance and control. They allow employees to participate in decision making less. In fact managers of manufacturing companies prefer to follow mechanic structures and reject organic structures. This fact can be attributed to organization structure freshness in small companies. These companies need more formality and are in formality stage. In this status organizational entrepreneurship shows more relation with organizational structure.

References

- [1] Alimardani, Mehrzad. Ghahrmani, Mohammad and Abolghasemi, Mohammad. (1388). Examination of relation between organizational structure and organizational entrepreneurship. *Rahyafti no annal in educational management*. 2,3,131-144.
- [2] Burglemann, R.A.(1983). *Designs for corporate Entrepreneurship*, California Management Review,26:154-66.
- [3] Caruana, A.H, Morris, M.J. and Vella, A. (1998). The Effect of Centralization and Formalization on Entrepreneurship in Export Firms, *Journal of small business management*, Jan 1998, 36, 1, ABI/INFORM Global 16-285.
- [4] Chen, J., Zhu, Z. & Anquan, W. (2005). A system model for corporate entrepreneurship. *International Journal of Manpower*, 26(6), 529-543.
- [5] Cornwall,J.R.& perlman,B(1990). *Organizational Entrepreneurship*, home wood:Irwin.

- [6] Davidsson, p. & Wiklund, J. (2001), " levels of analysis in intreprenurship research": Current research practice and suggestion for the future, *Entrepreneurship theory and practice*, Vol.26.No.4.
- [7] Demirbag, M., Koh, S. C. L., Tatoglu, E. & Zaim, S. (2006). TQM and market orientation's impact on SMEs' performance, *Industrial Management & Data Systems*, 106 (8), 1206-28.
- [8] Greenberg, Jerald and Baron, Robert A. (1997). *Behavior In Organizational*, Sixth edition Prentice Hall, Inc.
- [9] Hill, M. E. (2003). *The Development of an Instrument to Measure Intrapreneurship: Entrepreneurship within the Corporate Setting*. Full thesis submitted in fulfillment of the requirements for the degree Master of Arts (MA) in Industrial Psychology. Department of Psychology Rhodes University. Grahams town. <http://eprints.ru.ac.za/210/1/hill-ma-thesis.pdf>.
- [10] Javanmard, Habibola and Mardani, Abas (1388) . Examination of entrepreneurial development of Arak industrial city small industries with structural approach. *Two scientific- common annals* 59, 19, 113-126.
- [11] Jennings, D.F. (1994). *Multiple perspectives of Entrepreneurship*. Ohio: south western publishing.
- [12] Khanifar, Hosein and Vakili, Fardin (1387). Relation between organizational structure type and organizational and economical entrepreneurship in small and medium economical companies. *Entrepreneurship development annal*, 1 and 2. 35-55.
- [13] Kord Naiig , asadola. Moghimi, Seyed Mohamad . Ghanati, Sosan and Yazdani, Hamid Reza . (1388). Examination of relation between organizational structure elements and entrepreneurial culture in Tehran university. State management publication.
- [14] Kuratko, p. and Hod gettes pilchard. (2001). *Entrepreneurship: a contemporary approach*. Harcourt college publisher.
- [15] Miller, D. Friesen, P. (1982). Innovation in conservative and entrepreneurial firms. *Two models of strategic momentum*, *strategic management. journal*, 1:1-25.
- [16] Moghimi, Mohammad. (1383). Effective factors upon organizational entrepreneurship in organizations of Iran cultural and social services center. *Management culture*. 2, 7. 27-78.
- [17] Raynor, M. E. (2008). *Strategic options: A new tool for managing in turbulent environments*. 9(1), 21-29, QEmerald Group Publishing Limited, ISSN 1751-5637 Business Strategy Series.
- [18] Reza zade, Hosein. (1383). Relation between organizational structure and organizational entrepreneurship (case study of Tehran welfare organization). MA thesis, Tehran University.
- [19] Robins, Steven, P. (1376). *Organization theory (structure, design, applications)*. (Translation of Seyed Mahdi Alvani and Hasan Danaii far). Tehran: Safar publications.
- [20] Wong, K. Y. (2005). Critical success factors for implementing knowledge management in small and medium enterprises, *Industrial Management & Data Systems*, 105 (3), 261-79.