

Corporate Entrepreneurship: Obstacles and Alternatives The Case of Industrial Corporations in Iran

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Abstract

Despite the domination of entrepreneurship approach in individual, organizational and national levels and because of global environmental competition, industrial/manufacturing firms and corporations especially in the developing countries seem to be unable to follow up this approach in their own organizations. A relevant research in 130 Iranian industrial firms in 2000, examined the entrepreneurial barriers in such firms in the form of structural and behavioral obstacles as inter-organizational and environmental elements.

This article based on the results of this field study, attempts to review organizational entrepreneurship and explain the research methodology as well as analyze the scientific findings by applying statistical methods and provide suggestions to remove the barriers in the way of corporation entrepreneurship.

Keywords: *Organizational Entrepreneurship, Industrial Corporations, Structural Barriers, Behavioral Barriers, and Environmental Barriers.*

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Introduction

Modern societies are facing a complex and changing environment, which is experiencing challenging conditions. Under these circumstances, the successful societies and organizations would be able to use their own human resources effectively because in the present era, i.e. the Information Age, knowledge and information are sources of power. Those capable of utilizing the mental force of their human resources more effectively could ensure their survival, growth and profitability by applying their creativity, innovation and entrepreneurship in providing their products and services. By their own superior and elite characteristics, entrepreneurs would be able to provide necessary resources for growth and development of production. Also, human resource elements would create new jobs and increase the range of new products and services appropriate with the customers needs through industrial innovations. Regarding the position entrepreneurship plays in development of the community, it has been treated as a extraordinary issue by planners and policy-makers of the Islamic Republic of Iran since the beginning of the new century. Hence, relevant measures and mechanisms for developing entrepreneurship in public/private sectors as well as civil society were included in the 3rd Economic, Social and Cultural Development Plan of the Islamic Republic of Iran and it is particularly considered in the 4th Development Plan. As a first step, a project called "Karad" has been implemented at the Ministry of Science, Research and Technology since 2000, which now covers nearly 50 universities throughout the country. The aim of this project is to develop entrepreneurship in training, research and other areas through which graduates in the field would be educated and the grounds prepared to apply entrepreneurial projects by using their intellectual capability. In addition to universities, the government attempts to support individuals and firms in this field by applying certain rules and providing some facilities. Despite the huge improvements in the recent years, it must be regretted that there are still serious barriers in the way of developing individual, organizational and national entrepreneurship in the IRI. The present article, based on the findings of a field study, attempts to examine some structural, behavioral and environmental barriers to entrepreneurship in Iranian industrial corporations and provide guidelines for entrepreneur-

ship development in such corporations.

Literature Review

Entrepreneurship, innovation and new ventures provide the fuel for the engine of the modern economy. The importance of these three elements cannot be underestimated.

Entrepreneurship is a process that takes place in different environments and settings causing changes in the economic system through innovations by individuals who generate or respond to economic opportunities that create value for both the individuals and the society (Moghimi, 2004, p.71).

Entrepreneurship is one of the four mainstream economic factors: land, labor, capital, and entrepreneurship (Holt, 2002, p.3).

Entrepreneurship is an attempt to create value through recognition of business opportunity, the management of risk-taking proportionate to the opportunity, and through the communicative and management skills to mobilize human, financial and material resources necessary to bring a project to fruition (Khanka, 2003, p.8).

The "heart of entrepreneurship" is an orientation toward seeing (and acting on) opportunity resources. In a rapidly changing world, organizations need to continually identify new opportunities beyond existing competencies. If they are to survive, organizations thus need to focus strategically on the identification of viable new opportunities (Krueger, 1998, p.174).

Every society and every successful company has key individuals as entrepreneurs, with the ability to identify opportunities and who have the ability to obtain the resources (economic, technical, and human) necessary to satisfy new needs, and better satisfy existing needs (Hansemark, 1998, p.28). The significance of entrepreneurship in creating wealth and in the development of society and companies has been emphasized by many researchers (Shumpeter, 1934; McClelland et al, 1953; Kock, 1965; Kirner, 1989; Casson, 1982; Low & Mac Millan, 1988; Kirshhoff, 1989; Singh, 1989; Shaver Scott, 1991; Baldwin, 1995; Kirshhoff & Acs, 1997).

The birth and renewal phases of organizations, the subject of study of entrepreneurship, has increasingly been recognized as critical in the field of strategic management. According to Kirner, entrepreneurship

involves the identification of market opportunity and the creation of combinations of resources to pursue it (Lober, 1998, p.26).

The essence of entrepreneurial success is found in the strategies that link the company and its environment (Osborne, 1995, p.4).

Despite the substantial interest and research in entrepreneurship and entrepreneurs, defining and understanding entrepreneurship and entrepreneurs remain difficult and challenging. Essentially there is very little consensus on what entrepreneurship is and what an entrepreneur does. From a survey of the entrepreneurship literature, Cunningham and Lischeron have identified six different major schools of thought.

The "great person school" views an entrepreneur as a person who is born with intuition, vigor, energy, persistence and self-esteem, while the "classical school" identifies entrepreneurship with innovation, creativity and discovery. The "management school" describes an entrepreneur as one who organizes, owns, manages and assumes risk. In a similar manner, the "leadership school" views an entrepreneur as one who motivates, directs and leads. In contrast, the "intrapreneurship school" focuses on skilful managers within complex organizations (Koh, 1996, pp.13-4).

Intrapreneurship Classification Streams: Two streams or approaches to the classification of organizational level entrepreneurship can be identified. The first stream, which can be labeled the entrepreneurial orientation approach, is based on Miller and Friesen's (1983) categorization of innovative strategy making. Covin and Slevin (1986, 1991) have expanded on this concept, renamed it entrepreneurial posture, and retained three now widely-accepted characteristics of firm level entrepreneurship: Innovativeness, proactiveness and risk taking. Lumpkin and Dess (1996) have named the concept the entrepreneurial orientation and further extended the concept by identifying two additional dimensions: Autonomy and competitive aggressiveness. Instead of talking about characteristics of organizational level entrepreneurship and considering entrepreneurial orientation a unidimensional concept, as evident in studies of Covin and Slevin (1986, 1991), Lumpkin and Dess (1996) considers entrepreneurial orientation a multi-dimensional concept. Knight (1997) also favors this multidimensional concept but has reduced Covin and Slevin's (1986, 1991) categorization to two dimensions (innovativeness and proactiveness) on the basis of his empirical findings.

The second stream, which is evident in works of Guth and Ginsberg (1990) and Zahra (1991, 1993), can be labeled the corporate entrepreneurship approach, since it deals with entrepreneurship at the overall corporation level. This approach, in a manner similar to the entrepreneurial orientation approach, accounts for innovativeness in broad, Schumpeterian terms. However, in contrast to the entrepreneurial orientation approach, the corporate entrepreneurship approach specifically identifies two important characteristics of organization level entrepreneurship. The first characteristic consists of corporate venturing activities or the creation of new businesses by the established corporation, whereas the second is strategic renewal as a means of redefining strategy and organizing the corporation. Hence, the corporate entrepreneurship approach complements the entrepreneurship orientation approach by adding venturing and strategy considerations.

Previous views of organizational level entrepreneurship (intrapreneurship) can be integrated and classified into eight dimensions: New ventures; new businesses; product/service innovativeness; process innovativeness; self-renewal; risk taking; proactiveness; and competitive aggressiveness (Bostjan & Hisrich, 2003, pp. 7-24).

Intrapreneurship Dimensions: Intrapreneurship can be more precisely understood through its content and characteristic dimensions. Past classifications of organizational level entrepreneurship characteristics are summarized in Table 1 and discussed below:

Table II Classifications of organizational level entrepreneurship

Scholars	Concept	Characteristic dimensions	Definitions
Miller and Friesen (1983)	Innovation (a dimension of strategy - making)	New products	"Introductions of new products and production-service technologies, the search for novel solutions to marketing and production problems" (Miller and Friesen, 1983,p.222)
		Risk taking Proactiveness	"The attempt to lead rather than follow competitors"(Miller and Friesden, 1983,p.222)
Covin and Slevin (1986, 1991)	Entrepreneurial posture	Risk taking	"Risk taking with regard to investment decisions and strategic actions in face of uncertainty" (Covin and Slevin, 1991,p.10)
		Innovativeness	"The extensiveness and frequency of product innovation and the related tendency toward technological leadership"(Covin and Slevin, 1991,p.10) "The pioneering nature of the firms propensity to aggressively and proactively compete with industry rivals"(Covin and Slevin,1991,p.10)
Guth and Ginsberg (1990)	Corporate entrepreneurship	Proactiveness Internal innovation or venturing	"The birth of new businesses within existing organizations" (Guth and Ginsberg,1990,p.5)

		Strategic renewal	"The transformation of organizations through renewal of the key ideas on which they are built" (Guth and Ginsberg, 1990,p.5)
Zahra (1991,1993)	Corporate entrepreneurship	Innovation and venturing	"Creating new business through market developments or by undertaking product, process, technological and administrative innovations" (Zahra, 1993, p.321)
		Strategic renewal	"The redefinition of the business concept, reorganization, and the introduction of system-wide , changes for innovation" (Zahra,1993,p.321)
Lumpkin and Dess (1996)	Entrepreneurial orientation	Autonomy	"Independent action of an individual or a team in bringing forth an idea or a vision and carrying through completion"(Lumpkin and Dess,1996, p.140)
		Innovativeness	"A firms tendency to engage in and support new ideas, novelty , experimentation, and creative processes that may result in new products, services or technological processes" (Lumpkin and Dess, 1996,p.142)
		Risk taking	"A sense of uncertainty ... probability of loss or negative outcome ... high leverage from borrowing and heavy commitment of resources" (Lumpkin and Dess, 1996,p.144)
		Proactiveness	"Taking initiative by anticipating and pursuing new opportunities and by participating in emerging markets"(Lumpkin and Dess, 1996,p.146)
		Competitive aggressiveness	"Propensity to directly and intensely challenge its competitors to achieve entry or improve position" (Lumpkin and Dess, 1996,p.148)
Knight (1997)	Entrepreneurial orientation	Innovativeness	"Pursuit of creative or novel solutions to challenges confronting the firm, including the development or enhancement of products and service, as well as administrative techniques and technologies for performing organizational functions" (knight, 1997, p.214)
		Proactiveness	"The opposite of reactivity and is associated with aggressive posturing relative to competitors" (knight, 1997,p.214)

In recent years the subject of intrapreneurship or corporate entrepreneurship has become quite popular with its concept thoroughly understandable. Most researchers agree that the term refers to entrepreneurial activities that receive organizational sanction and resource commitments for the purpose of innovative results. The major thrust of intrapreneuring is to develop the entrepreneurial spirit within organizational boundaries, thus allowing an atmosphere of innovation to prosper (Kuratko & Hodgetts, 2001, pp.52-3).

Stoner et. al. (1995) defines corporate entrepreneurship or intrapreneurship in the following manner: "Corporate entrepreneurship involves fostering entrepreneurial behaviors within an established organization. In short, corporate entrepreneurship means that corpora-

tions can foster profit- making innovations by encouraging employees to think like entrepreneurs, and then giving them the freedom and flexibility to pursue their projects without bogging down in bureaucratic inertia" (Echols and Neck, 1998, pp.38-9).

Corporate entrepreneurship, also referred to as corporate venturing and intrapreneurship, focuses on firms as the location for entrepreneurial development of new ventures within firms or it can be viewed more broadly as the struggle of firms to renew themselves through using new combinations of resources (Lober, 1998, p.26).

Four broad typologies or categories of corporate entrepreneurship have been identified in the literature, namely:

1. Corporate venturing;
2. Intrapreneuring;
3. Corporate renewal or transformation;
4. Industry rule breaking.

Corporate venturing involves the starting of businesses within a business, usually emanating from a core competency or process.

Intrapreneuring, first taken up by Pinchot (1985), is an attempt to take the mindset and behaviors that external entrepreneurs use to create and build businesses, and bring these large corporate setting.

The fourth type of corporate entrepreneurship is a subset of transformation, but involves not only transformation of the enterprise but also the competitive environment of the industry into something significantly different than it was (Stopford and Baden-Fuller, 1993).

They are also determinant of the extent to which individuals will allow themselves to grow to meet the demands of the future. Individuals displaying the appropriate blend of the above attitudinal and behavioral predispositions will be in a position to add value to their own careers and the attainment of their organizational goals. The challenge for the organization is to ensure that at an organizational level the blend of attitudinal and behavioral preferences is appropriate to enable it to meet the challenges it is facing (Johnson, 2001, pp. 135-140).

The obstacles to corporate entrepreneuring usually reflect the ineffectiveness of traditional management techniques as applied to new -venture development.

Although it is unintentional, the adverse impact of particular tradition-

al management techniques can be so destructive that the individuals within an enterprise will tend to avoid corporate entrepreneurial behavior. Understanding these obstacles is critical to fostering corporate entrepreneurship because they are the foundation points for all other motivational efforts. To gain support and foster excitement for new - venture development, managers must remove the perceived obstacles and seek alternative management actions (Kuratko & Hodgetts, 2001, p.54).

Methodology:

Considering the importance of entrepreneurship and the necessity of its development in industrial corporations, this research attempts to examine the barriers of entrepreneurship in Iranian industrial corporations. On this basis, the present research consists of a major and some secondary goals:

■ Major Aim:

Determining and explaining the barriers of entrepreneurship in Iranian industrial corporations and providing guidelines for developing corporate entrepreneurship.

■ Secondary Goals:

1. Determining and explaining behavioral barriers of entrepreneurship in Iranian industrial corporations,
2. Determining and explaining structural barriers of entrepreneurship in Iranian industrial corporations,
3. Determining and explaining environmental barriers of entrepreneurship in Iranian industrial corporations,
4. Providing fundamental guidelines regarding behavioral, structural and environmental barriers of entrepreneurship in Iranian industrial corporations.

Conceptual Model:

Since every research should be based on a conceptual framework in order to exploit and determine variables and research hypothesis, the present study has also a conceptual model, which contains all three aspects (behavioral, structural and environmental elements). Figure 1 shows the conceptual model of this research.

Conceptual Definitions:

There are three main independent variables in this research, each of which consists of some secondary independent variables:

1. Structural elements: These include variables, which form structural, physical and systematic elements inside the corporation. In other words, structural elements include organizational elements except than human elements.
2. Behavioral elements: These include all human elements (managers and employees) and issues-related human relations, attitudes and managers' and employees' behaviors inside the corporation.
3. Environmental Elements: These include a set of elements, which influence over corporations' performance but are out of the managers' control.

In the present research, there is a secondary variable called "corporate entrepreneurship". It means a process that develops products through creating an entrepreneurial culture inside an active corporation and

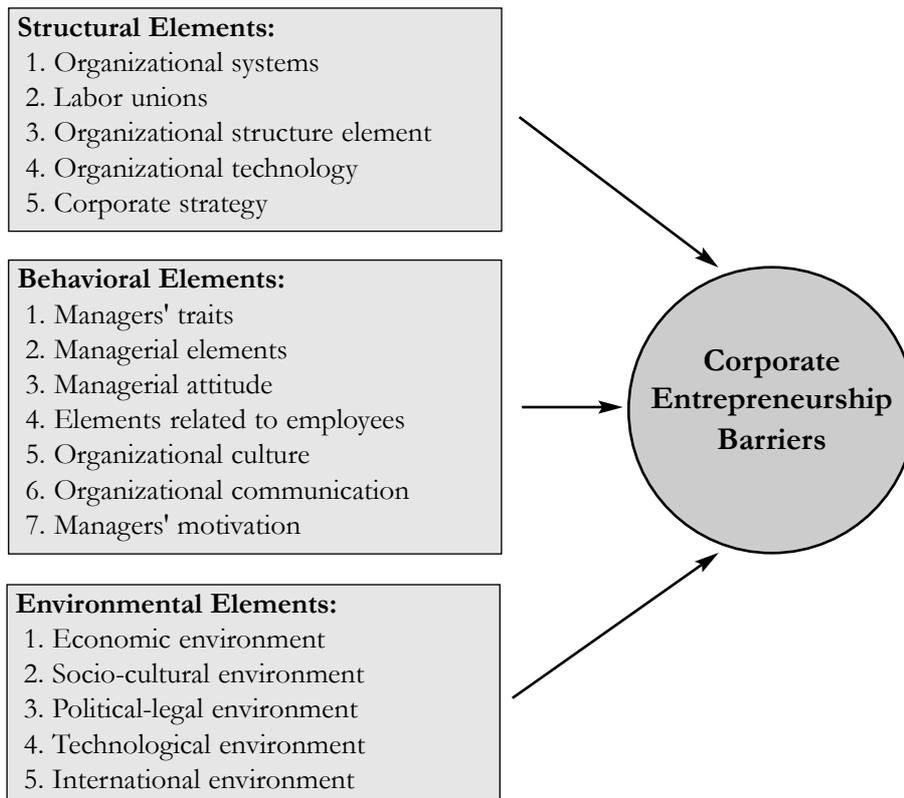


Figure 1: Research Conceptual Model

prepares the ground for emerging the creativity and innovation.

Research Hypothesis

Regarding the represented conceptual model, there are three main and 17 secondary hypotheses in this research. The main ones are as follows:

1. Structural elements in industrial firms prevent corporate entrepreneurship. This hypothesis consists of five secondary hypotheses so the structural elements are examined in the framework of five independent variables. These variables are organizational systems, labor unions, organizational structure aspects, organizational technology and corporate strategy.

2. Behavioral elements in industrial firms prevent corporate entrepreneurship. This hypothesis includes seven secondary hypotheses and its independent variables are managers' traits, managers' elements, managerial attitude, elements related to employees, organizational culture, organizational communication, and managers' motivation.

3. Environmental elements in industrial firms prevent corporate entrepreneurship. It consists of five secondary hypotheses and its independent variables are economic environment, socio-cultural environment, political-legal environment, technological environment, and international environment.

Methodology and Data Collection

In this research, survey method has been used. There are two main methods for doing a survey: Questionnaire and interview. Both methods are applied in this research. However, the questionnaire method has been more focused. In addition to using research literature for designing the questionnaires, some local data were utilized by conducting interviews with industrial corporations' CEOs. Then, by considering the general rules and principles of questionnaires as well as conceptual model variables, a questionnaire with 135 questions was prepared.

Statistical Community and Sampling Method

The statistical community of this research contains all Iranian industrial corporations and the method of this research is random categorized sampling. Initially, all industrial units were divided into eight

groups according to the categorization of Ministry of Industries:

1. Group 1: Food, pharmacological and health industries
2. Group 2: Textile and clothing industries
3. Group 3: Electronics industries
4. Group 4: Chemical and cellulose industries
5. Group 5: Mineral industries
6. Group 6: Metal industries
7. Group 7: Machines and equipment industries
8. Group 8: Auto industries

In order to determine the number of samples, we used sampling formula in which standard statistic (Z^2) is 1/96, probability of success (P) is 1/60, probability of failure (4) is 0/40, permissible error (?) by using similar studies is 0/06 and the population of the sample is 130 corporations.

Data Analysis

Before completing the questionnaires and implementing the field study, the team of researchers examined the validity of the questions and then evaluated their reliability by initial distribution of the questionnaires among some samples. Those questions with less reliability were amended. After collecting the questionnaires, the questions were again evaluated by applying Cronbach Alfa method so the reliability was estimated at 0/78 - a relatively high reliability.

To analyze the data, all information was initially computerized by using SPSSWIN software and then was statistically analyzed by Binominal Test. Research hypothesis and secondary variables were transformed to statistical hypothesis as follows:

H0: Independent variable promotes corporate entrepreneurship

H1: Independent variable prevents corporate entrepreneurship

Regarding the above-mentioned statistical hypotheses, the results are represented in the following tables as structural, behavioral and environmental elements:

Behavioral Barriers of Entrepreneurship in Iranian Industrial Corporations

The findings of Binominal Test of behavioral elements (50 elements)

indicated that there are 17 major behavioral barriers inside the Iranian industrial corporations as follows:

Table 2: Behavioral Barriers of Entrepreneurship in Iranian Industrial Corporations

Row	Behavioral barriers of entrepreneurship in Iranian industrial corporations	Testing Probability	Observed Probability	Level of Significance	Error Rate	Result
1	Lack of managers' risk - taking (H1)	0.60	0.50	0.00	0.05	H1 confirmation
2	Managers suffer daily - working (H0)	0.60	0.70	0.00	0.05	H0 confirmation
3	Lack of ambitious among managers (H1)	0.60	0.30	0.00	0.05	H1 confirmation
4	Lack of inward control center (H1)	0.60	0,10	0.00	0.05	H1 confirmation
5	Believing in limits among managers (H0)	0.60	0.80	0.00	0.05	H0 confirmation
6	Lack of systemic thinking among managers (H1)	0.60	0.20	0.00	0.05	H1 confirmation
7	Non-acceptance of entrepreneurship by managers (H1)	0.60	0.30	0.00	0.05	H1 confirmation
8	Non-domination of informal effective communications (H1)	0.60	0.30	0.00	0.05	H1 confirmation
9	Non-existence of performance based reward (H1)	0.60	0.50	0.00	0.05	H1 confirmation
10	Lack of managers' job satisfaction (H1)	0.60	0.55	0.00	0.05	H1 confirmation
11	Non-existence of efficiency -based payment system (H1)	0.60	0.10	0.00	0.05	H1 confirmation
12	Non-familiarity of managers with entrepreneurship scientific discussions (H1)	0.60	0.20	0.00	0.05	H1 confirmation
13	Non-attention to innovation in organizational communications (H1)	0.60	0.20	0.00	0.05	H1 confirmation
14	Lack of employees' risk - taking (H1)	0.60	0.10	0.00	0.05	H1 confirmation
15	Non-existence of an effective leadership style (H1)	0.60	0.40	0.00	0.05	H1 confirmation
16	Non-endurance toward discords (H1)	0.60	0.40	0.00	0.05	H1 confirmation
17	Lack of succeeding need among employees (H1)	0.60	0.40	0.00	0.05	H1 confirmation

Although there are many behavioral barriers in the scope of behavioral issues and the unique characteristics of entrepreneurs in industrial corporations, there are also many behavioral specifications for the entrepreneurship of managers and employees of Iranian industrial corporations. The characteristics of Iranian industrial corporations' managers include responsibility, self-confidence, decisiveness, innovation, desire to succeed, enduring the ambiguities, adaptability, analyzing, hard work, futurism, entrepreneurship attitude, commitment, knowing the social position of work, and strong managerial motivation. Besides, the results show that the employees have individual initiatives, the management supports the employees and the staff has high organizational commitment and organizational identity.

Structural Barriers of Entrepreneurship in Iranian Industrial Corporations

In this research, by using binomial test, 12 structural variables were examined of which eight major structural barriers in industrial corpora-

Table 3: Structural Barriers of Entrepreneurship in Iranian Industrial Corporations

Row	Structural Barriers of Entrepreneurship in Iranian Industrial Corporations	Testing Probability	Observed Probability	Level of Significance	Error Rate	Result
1	Limits of managers' monitoring scope (H1)	0.60	0.10	0.00	0.05	H1 confirmation
2	Lack of research and development system (H1)	0.60	0.40	0.00	0.05	H1 confirmation
3	Lack of an appropriate performance assessment system (H1)	0.60	0.50	0.00	0.05	H1 confirmation
4	Lack of an efficient financial and budget system (H1)	0.60	0.20	0.00	0.05	H1 confirmation
5	Non-applying cost leadership strategy (H1)	0.60	0.20	0.00	0.05	H1 confirmation
6	Lack of information management system (H1)	0.60	0.45	0.00	0.05	H1 confirmation
7	Non-existence of efficiency in job designing (H1)	0.60	0.25	0.00	0.05	H1 confirmation
8	Heterogeneity of inter - corporation labor unions with corporations' goals	0.60	0.30	0.00	0.05	H1 confirmation

tions were identified and represented in the following table:

Although statistical analysis of most hypotheses indicated that in many corporations, structural elements are the main obstacles of entrepreneurship development inside the firms, utilizing modern technologies and some positive structural characteristics such as the low rate of formality and complexity, inter alia, prepare the ground for entrepreneurship development.

Environmental Barriers of Entrepreneurship in Iranian Industrial Corporations

In this research, the variables of environmental elements are examined by binomial test in the form of 41 hypotheses of which eight environmental barriers in industrial corporations were identified and represented in the following table:

Table 4: Environmental Barriers of Entrepreneurship in Iranian Industrial Corporations

Row	Environmental Barriers of Entrepreneurship in Iranian Industrial Corporations	Testing Probability	Observed Probability	Level of Significance	Error Rate	Result
1	Difficulties of government export policies for corporations' export (H0)	0.60	0.65	0.008	0.05	H0 confirmation
2	Government foreign exchange policies do not encourage development of activity and innovation of corporations (H1)	0.60	0.10	0.00	0.05	H1 confirmation
3	Difficulties of labor regulations for companies (H0)	0.60	0.50	0.001	0.05	H1 confirmation
4	Difficulties of trading regulations for corporations (H0)	0.60	0.80	0.00	0.05	H1 confirmation
5	Private ownership rules do not facilitate new investments in the country (H1)	0.60	0.50	0.06	0.05	H1 confirmation
6	Lack of appropriate rules and regulations to support registration of new inventions (H1)	0.60	0.10	0.00	0.05	H1 confirmation
7	Lack of stable governmental rules for corporations' operation (H1)	0.60	0.10	0.00	0.05	H1 confirmation
8	Lack of economic security for investment in private sector (H1)	0.50	0.10	0.00	0.05	H1 confirmation
9	Intervention of external informal groups in corporations' affairs (H1)	0.50	0.10	0.00	0.05	H1 confirmation

10	Existence of some contradictories in rules dominating corporations' operation (H0)	0.50	0.50	0.00	0.05	H1 confirmation
11	Neglecting some social rights (H1)	0.50	0.10	0.00	0.05	H1 confirmation
12	Lack of entrepreneurship culture in the society (H1)	0.50	0.20	0.00	0.05	H1 confirmation
13	Non-introduction/recognition of successful entrepreneurs (H1)	0.50	0.20	0.00	0.05	H1 confirmation
14	Inattention to work culture in society (H1)	0.50	0.10	0.00	0.05	H1 confirmation
15	There is no entrepreneurship practice in Iranian households (H1)	0.50	0.10	0.00	0.05	H1 confirmation
16	Self-centeredness spirit among individuals (H1)	0.50	0.80	0.00	0.05	H1 confirmation
17	Lack of effective initiatives by mass media to promote (H0)	0.50	0,09	0.00	0.05	H1 confirmation
18	Lack of understanding entrepreneurship training programs in universities (H1)	0.50	0.10	0.00	0.05	H1 confirmation
19	Social resistance to changes (H1)	0.50	0.10	0.00	0.05	H1 confirmation
20	Lack of feed-back and performance assessment culture in society (H1)	0.50	0.10	0.00	0.05	H1 confirmation
21	Insufficient infrastructural investment by government in industry section (H1)	0.50	0.20	0.00	0/05	H1 confirmation
22	Lack of cooperation of raw materials suppliers with industrial firms (H1)	0/50	0.30	0.00	0.05	H1 confirmation
23	Insufficient support of industrial corporations by banks and financial institutes (H1)	0.50	0.10	0.00	0.05	H1 confirmation
24	High interest rate of loans granted by banks and financial institutes (H0)	0.50	0.60	0.00	0.05	H0 confirmation
25	Government failure to supply the foreign exchange needed by industrial corporations (H1)	0.50	0.50	0.00	0.05	H1 confirmation
26	Low level of welfare and income (H1)	0.50	0.00	0.00	0.05	H1 confirmation
27	Failure to meet customers' needs by industrial corporations (H1)	0.50	0.40	0.00	0.05	H1 confirmation
28	Inattention of industrial corporations to products' quality control (H1)	0.50	0.30	0.01	0.05	H1 confirmation
29	Technical development of foreign rival companies (H0)	0.50	0.50	0.01	0,05	H0 confirmation
30	Lack of prudence in transfer of technology to the country (H0)	0.50	0.60	0.00	0.05	H0 confirmation
31	Technical knowledge is not transferred from one industrial corporation to the other (H1)	0.50	0.20	0.00	0.05	H1 confirmation

On the whole, the findings on evaluating the effects of environmental elements on entrepreneurship of Iranian industrial corporations indicated that major environmental elements prevent corporate entreprene-

urship and that these elements are present in all economic, technical, political, social, cultural and international aspects. One of the important matters in environmental elements is the undesirable impact of cultural-social issues on corporate entrepreneurship. It is noteworthy that Islam promotes working, production and entrepreneurship values.

Since the vast majority of Iranians are Muslims, it seems that there is a wide gap between Islamic values for business/production and social performance. We can expect a great promotion in the field of entrepreneurship in all individual, organizational and national levels if such values are socially institutionalized.

Recommendations

Based on foregoing findings, the following recommendations are made to improve corporate entrepreneurship in industrial corporations in the Islamic Republic of Iran. Some of these recommendations are applicable to industrial corporations of other countries as well, especially in the Third World.

1. Creating an Efficient Organizational Culture to Develop Entrepreneurship

An appropriate organizational culture is among the important and effective factors in recognition, development, improvement and maintaining entrepreneurial organizations. An appropriate organizational culture is in the line of organization's mission, shared aims, goals and strategies. There is a flexible culture in entrepreneurial organizations in which innovation, risk-taking, organizational learning, futurism, team working, honesty, mutual confidence, pleasant work accompanied with emotion and eagerness, competition and customer-orientation are supported. The findings of the present study show that many organizational culture aspects in industrial corporations are the barriers of entrepreneurship development. Generally, the following guidelines are proposed to remove such barriers:

There should be a high level of win-win and confidence between managers and employees of industrial corporations in order to create entrepreneurship culture. The individuals must concern implementing new ideas rather than maintaining their own interests and position. Feigning

is one of the specifications of such culture. In traditional corporations, the employees have to feign which is the result of formal and severe control made by such organizations. In order to establish an entrepreneurial organization, we should create a culture through which the individuals link their interests to organization's interests.

The values and philosophy of management and the top management support for risk-takers and innovators in entrepreneurial organizations are considerably important. The managers of industrial corporations should have the following characteristics which indicate entrepreneurship support by management to create entrepreneurship culture in their own corporations:

- Accepting the responsibility of entrepreneurial initiatives
- Risk-taking as a positive characteristic
- Appraising idea owners
- Supporting small pilot projects
- Financing new projects
- Adaptability of management philosophy and values with entrepreneurship
- Appraising risk-takers
- Believing in shared management
- Enduring derivation from the rules
- Applying employees' new ideas

In order to facilitate employees' thinking in organization, we should create an environment where different ideas/thoughts are freely expressed.

One of the attractive and important ways for improving individuals' personalities, entrepreneurship and innovation, is to create a contribution-searching system. Employees continuously think and innovate when they know that they are encouraged if they represent new ideas. However, the roots of virtue, initiative and entrepreneurship will be dried if the managers neglect their employees' ideas/thoughts by dictatorship ways.

By applying the results of this research, organizational entrepreneurship culture model is represented in the form of ten-element organizational culture for promoting entrepreneurship culture in industrial corporations.

Table 5: Entrepreneurial Organizational Culture Elements

Organizational Culture Elements	Initiatives for Creating Entrepreneurial Organizational Culture in Industrial Units
1. Risk-taking	The managers and employees should be encouraged to experience their failures without fearing the related consequences, consider their mistakes and learning opportunities and support risk-taking in all levels of the corporation.
2. Control	Controlling rules, regulations and policies should be decreased to a minimum level and a free controlling system should be designed.
3. Individual initiation	Organizations should allow innovators to go around all sections which are out of their working scope and encourage them to implement their own ideas.
4. Management support	It should be a dominant principle in an entrepreneurial organization that employees are the most valuable resource and it should be possible to select a leader from all levels of the organization. Besides, managerial style should be contributive or consoling and the individuals should be allowed to make mistakes.
5. Integration	A culture should be created through which all individuals have a similar and single attitude toward the organization despite their different desires, ideologies, needs and characteristics. Because of a shared aim, difference of opinions not only do not cause any tension but also promotes congeniality.
6. Coaching and supervision	The goals should be clear and the individuals should be encouraged to consider various guidelines for achieving such goals.
7. Identity	Some measures should be considered by which all employees feel organizational mission and motivate to achieve it.
8. Reward system	There should be appropriate, equal, in-time and objective-oriented rewards for risk-taking, innovation, fruitful failures and successes.
9. Enduring the difference of opinions	There should be a shared aim by which difference of opinions not only do not cause any tension but also promotes congeniality.
10. Communication models	There should be an atmosphere in the corporation in which everyone could communicate with the others directly/personally and those who have some information transfer them to others. Communications should be both horizontal and vertical.

2. Increasing Necessary Risk-Taking Attitude to Develop Entrepreneurship

The necessity of risk-taking emerges from the fact that in many cases, decision-making as one of the main responsibilities of managers' should be done in uncertain conditions. In this case, decision-making needs a high risk-taking especially in the present environmental situation, which is very complicated, dynamic and uncertain. Risk-taking is one of the main behavioral characteristics of entrepreneurs and an inseparable element of entrepreneurship process. Documented studies indicate that in entrepreneurial organizations, management and employees should have desire toward taking risk, failure and success.

Any kind of risk, however, is not imagined for organizational entrepreneurship and only rational and systematic risks are considered. The

results of present research show that managers and employees of Iranian industrial units lack necessary risk-taking capabilities. To promote rational and systematic risk-taking for developing organizational entrepreneurship, the following guidelines are considered:

Since risk-taking is the most important characteristic of entrepreneurs, it is necessary for an organization to create an environment for attracting managers and employees and improving their entrepreneurship motivation. There should be conditions through which they accept failure and mistake as an inevitable issue in innovation process.

Bureaucracy is one of the most important barriers of organizational risk-taking which increases security-searching that is in contradiction with risk-taking. In traditional organizations, most people try to underestimate the risks of their works and the organization only tries to maintain current situation and existing merits. Because of the close relationship between risk-taking and the type of organizational structure, flexible structures appropriate with entrepreneurs' risk-taking morale should be created. Complementary recommendations are mentioned in structural guidelines.

Assessment and reward system has a central role in improving risk-taking mentality inside the organization and announcement of achievable and clear criteria make the employees commit to more new risky situations. A clear and focused common perspective could decrease uncertainty and increase risk-taking. Therefore, risk-taking bonus should be included in a reward system to make that system more attractive for entrepreneurs.

The managers and employees of most corporations are reluctant to risk since all they can gain is, for example, 20% profit. Meanwhile, they might lose their job in the expense of such an advantage. There should be conditions in the Iranian industrial corporations through which the people being assured that no one can deteriorate them if it is proved that their failure has been out of their control. Entrepreneurs must be assured that organization will not dismiss anyone because of miscounting the risks and will determine reward/risk ratio in a way that is meaningful and attractive for all personnel. If an organization would like to survive, it cannot decrease risk level to zero. An entrepreneurial organization should accept a part of individuals' mistakes. In this case, learning lessons from a mis-

take should be more important than mistake itself. There are many failures and mistakes resulted in learning and they are more effective and useful for long-term survival of an organization than many successes.

3. Improving Managerial Attitudes to Develop Entrepreneurship

The role of managers is highly important in industrial units. Unfortunately, the findings of this study indicate that managerial attitudes and some managerial elements are among organizational entrepreneurship barriers in industrial units. In this regard, the following guidelines are represented to remove these barriers. The main mechanism in removing these barriers is to design a training system in corporations. A training system should provide scientific and practical patterns, which can institutionalize entrepreneurship among managers and employees. Providing awareness programs, organizing seminars, publishing articles and holding training courses can guide managerial attitudes toward entrepreneurship in corporations. According to the results of this research, entrepreneurship trainings in the following fields are prioritized:

Managers' thinking system is one of the entrepreneurship barriers in organizations. Managers only attempt to implement their operational and tactical plans and execute strategic planning partially. Today, organizations need to consider these as systems. In order to avoid managers' negligence, systemic thinking training programs should be provided for industrial units.

One of the results of this research is that managers do not entertain entrepreneurship in their organizations. Since the people in traditional organizations are limited to their terms of reference and particular responsibilities, their abilities are not developed. So the people neither have the time to pursue their ideas nor are allowed to go out of their job scope. Unfortunately, this is a common situation in many industrial units. To remove such barriers, besides entrepreneurial trainings for managers and employees, the organizational structure as well as rules and regulations should be flexible.

The results of this research show that managers are not familiar with entrepreneurship issues. It seems that the most important barrier in organizational entrepreneurship, is managers' and employees' unfamiliarity with entrepreneurship concepts. It is suggested that the Ministry

of Industries try to establish a training unit titled "entrepreneurship training courses in small industries" and design entrepreneurship training courses appropriate with managers' and employees' needs to train them entrepreneurship theoretically and practically.

4. Promoting Achievement Motivation to Develop Entrepreneurship

High motivation or need for achievement is one of the most important traits of entrepreneurs. The results of this research indicate that the employees of the studied industrial corporations lack the motivation for achievement. Since one of the most important aspects of entrepreneurship is motivation to achieve success, the following guidelines are suggested to improve employees' motivation in industrial units:

The employees should be trained to behave like those who have a strong motivation to improve.

The people should be encouraged to identify real and predetermined goals in their work.

The people should be aware of their own capabilities and abilities.

The spirit of team working, contribution and group orientation should be created through getting familiar with hopes, fears, successes and failures.

5. Establishing Efficient Communications to Develop Entrepreneurship

Overall effective communications and free exchange of ideas in the organization are among characteristics of entrepreneurial organizations. Unfortunately, the results of this research do not support such matter in studied industrial corporations. Because of the bureaucratic orientation and hierarchy in the Iranian industrial corporations, the relations inside such corporations are heavily formal and up-down.

Formal communications destroy the emergence of innovation and entrepreneurship morale. Therefore, overall communications (vertical, horizontal and crossing) should be established in corporations.

Communication systems should contain the following specifications:

- Everyone can start communicating with others.
- Those who have information should transfer them to others.

- Direct and personal communications should be established.
- Details of messages should not be controlled.
- Feedback of communication should be rapid, wide and necessary.

6. Creating and Promoting Research and Development System to Develop Entrepreneurship

Most corporations have a research and development unit but the role, philosophy and management of these units in entrepreneurial organizations are different from traditional organizations. The results of this research show that the majority of studied corporations in Iranian industrial units either lack a research and development unit or their existing units are not active.

Owing to the fact that research and development is among the important and effective elements in organizational entrepreneurship, we should try to establish such units in corporations and include entrepreneurial characteristics in their activities. Research and development units should communicate with market, customers as well as research units of the market and forget their traditional status. Research and development unit in a traditional organization is usually a formal headquarters and the responsibility and final decision-making about such a unit is done by outside senior managers. In an entrepreneurial organization, research and development unit is run by innovator's risk-taking team. Although in traditional organizations research projects are picked and implemented at the request of senior management, entrepreneurial organizations select their research projects based on market research results and customers' attitudes. Meanwhile, the attitude of innovator's risk-taking team is sufficient for final decision-making.

Moreover, we should consider the continuous relations and cooperation of the research and development unit with other units which change their traditional role (as a simple research or technical unit for scientists and engineers) to an entrepreneurial role to emphasize on applied research rather than basic studies and create a balance between basic and applied researches. Besides, the entrepreneurial organizations should not only evaluate their research projects on the basis of hasty results and easy implementation but also take into account the success and development of long term innovations. In the meantime, they should communicate more with

outside research centers and benefit from them in different ways.

7. Designing an Information Management System to Develop Entrepreneurship

Regarding the rapid growth of technology in global level especially in big industrial countries, what is of increasing importance is the role of information and its effects on the decisions made by the managers of large or small industries. The success of entrepreneurial firms' business depends on applying the resources such as fund, referrals, physical assets, customers, etc. The managerial process pursued by an entrepreneurial organization consists of promoting ideas and strategies, human resource management and management of the systems to assure business blossom. Promoting the ideas and strategies as well as involving the individuals, require information and figures. The way of collection, analysis, saving and reporting the financial and non-financial data to entrepreneurs and other decision-makers which help the success of entrepreneurial organizations is very important.

The results of this research show that the majority of studied industrial corporations lack information management system. Correct, precise and independent information about human resources is a confident and principal basis by which managers and entrepreneurs make decisions. It is obvious that because of lack of an information management system, the management will receive and use inaccurate information in their decision-making. This will face the organization with serious problems and it is a problem which many Iranian industrial managers suffer from. If, on the one hand, the organizations create, invest, control and maintain such systems, they would obtain the real tool and a prerequisite of entrepreneurship namely information. On the other hand, by using the advantages of optimization and preventing high costs of purchasing new parts and equipment, they would be able to compete with domestic and foreign products.

Therefore, by considering the significance of precise, confident and up-to-date information and its independence on human resources in the framework of an information system, it is proposed that industrial corporations, with the help of the Ministry of Industries, attempt to create information management systems.

8. Creating Efficient Job Planning System to Develop Entrepreneurship

One of the major considerations in organizational entrepreneurship is an efficient job planning system which takes into account the adaptability of organization's and employees' needs in job planning. The results of this research show that there is no efficient job planning system in 75% of the studied corporations. In order to plan a job appropriately, we should consider the capabilities, interests, individuals' personalities and organizational needs. Obeying the adopted organizational rules and regulations by the personnel, is the best situation for corporations. However, the employees are more satisfied if they have enough freedom for their behaviors in the organization. Of course, unrestrained freedom is not possible. So, the jobs should be designed in a way that a balance is created between the needs of the individual and the organization. In job planning, coordination between the staff and the job should be considered in detail. An individual has its own capabilities and demands. A job has also its own conditions by which we can explain the required capabilities and job characteristics that meet the individual's needs. When there is coordination between talent-oriented jobs and individual's capabilities, the organization would be more satisfactory. In this case, the likelihood of entrepreneurship and achieving the aims of the corporation will increase.

In order to create entrepreneurship in Iranian industrial corporations, job planning should be done in a way that any individual could define his/her tasks. Thinking on the basis of traditional bureaucracy in which the company writes terms of reference, is nothing but a mistake.

Employees must write their own terms of reference and the organization must define only a part of the job. It is obvious that the management should provide its guidelines and insure that the defined jobs are compatible with shared aims. However, we can leave the details to the employees. By providing a general aim compatible with organizational objectives to a worker or engineer, he or she can do a major part of the job planning.

If we are looking forward to a particular behavior in the corporation, we should apply a performance assessment system and encourage that behavior. Therefore, we should create a performance assessment system

appropriate with entrepreneurial characteristics to develop entrepreneurship. The results of this research show that the majority of industrial corporations lack entrepreneurial performance assessment system. Despite many difficulties in establishing an effective performance assessment system for developing entrepreneurship, it is necessary to create such a system on the basis of contribution of workers and engineers. We can utilize this system simultaneously to adapt the needs of the individual and the corporation and to achieve organizational superiority. In order to establish a performance assessment system on the basis of entrepreneurial characteristics, we should use financial incentives and organizational appreciation rather than deteriorating entrepreneurial activities and applying severe official rules and norms.

In the case of learning the lessons, unavoidable failures should be endured.

9. Designing Efficient Financial and Budgeting System to Develop Entrepreneurship

Basically, entrepreneurial activities and operations tend to spend the resources. Many research studies have found that resource availability and management financial support are the most important characteristics of entrepreneurship organizations. Therefore, many factors in measuring entrepreneurship depend on financial and budgeting system. The results of this research indicate that the majority of the studied industrial corporations lack an efficient budgeting system. Owing to the fact that financial and budgeting system influences highly over entrepreneurship achievement, it is proposed that in designing budgeting system and allocating financial resources, budgeting based on chapters, materials and costs should be replaced with operational plans. Meanwhile, the problems in budget allocating process, resource availability, lack of resources, financing for new plans and diversity of management financial support for developing entrepreneurship should be considered. Prioritization of financing the costs of research and development as well as marketing new products, are important features in the financial and budgeting system of entrepreneurial organizations, which needs to be considered seriously.

10. Creating Efficient Incentive System to Develop Entrepreneurship

Reward or incentive system is among the most important elements of corporate entrepreneurship and all studies about organizational entrepreneurship have emphasized on significance and efficiency of this system. The results of this research show that incentive system based on performance is not dominant in the studied corporations. The following suggestions are made to establish an incentive system appropriate with entrepreneurship conditions in industrial corporations:

Due to the important role of incentive system and to increase its efficiency, managers and employees should be clearly aware of the reward and incentive criteria. Basically, risk-taking, innovation, team work and active behaviors should be encouraged. Encouraging risk-taking is too important so that many people believe a reward system won't be attractive for entrepreneurs if it does not include risk-taking encouragement. In such a system, incentives should be based on long term evaluation. It means that we must not judge the people hastily and should design an objective system with appropriate feedback for this purpose.

In contrast to traditional organizations, entrepreneurial organizations attempt to implement a win-win culture or scenario. In traditional organizations, promotion or bonus is considered a way of weakening the others, but in entrepreneurship organizations, every one should be a winner. Of course, it does not mean that some people do not work better than the others. It means that all employees should be rewarded if most of them work well.

Inter-organizational and non-cash rewards are among the basic principles of an entrepreneurial organization's incentive system. These incentives which satisfy individuals' mental and spiritual needs include feeling of excellence and efficiency, feeling of doing a good job, feeling of respect, feeling of team work, feeling of freedom, feeling of autonomy, and feeling of improvement. The people would like to pride in what they do and they need to work based on their motivations. Therefore, in designing incentive systems, we should consider not only financial and material rewards but also inter-organizational and non-cash incentives.

If an incentive system is to operate effectively, it must not be in a way that individuals would lose their sensitivity towards rewards. Lack of

sensitivity is a result of individuals' mistrust and disbelief in their own capabilities in achieving a level of performance which would result in promotion. On the other hand, the criteria for team-work should not be neglected in a rewarding system and it must operate in a way that the people motivated to emphasize on projects with long term results rather than those with short term results.

In order for a reward system to encourage entrepreneurship, the organizations must facilitate individuals' contribution in implementing this system and monitoring the distribution of rewards because it would reduce skepticism in the organization. Furthermore, the people would be committed to the organization and resist high risk initiatives.

11. Improving Government Role to Develop Entrepreneurship

The government has a key role in developing corporate entrepreneurship. The results of this research show that most corporations are not satisfied with the role of the government in improving entrepreneurship. The government has two roles in encouraging organizational entrepreneurship and entrepreneurial activities:

A. The tasks rooted in its domination such as issuing licenses to adjust economic and social relations. In this line, adopted rules have an important role in entrepreneurial activities. The barriers of such rules in entrepreneurship include (1) rules and regulations which influence over entrepreneurship scope and may be preventive (2) rules which prevent business growth (3) rules which prevent business exit.

Government policy-makers should identify the legal barriers and remove unnecessary rules.

B. Supportive role is another function of the government. The government could play an important supportive role for entrepreneurs because entrepreneurship usually starts from small businesses. Small businesses and industries lack sufficient human and financial strength to provide necessary infrastructures for themselves. The government has a task to support entrepreneurs via providing infrastructural services until they focus their activities on manufacturing. Infrastructural services consist not only of water and power supply but also awareness and research services, financial supports, etc.

In this line, a special group must be assigned to evaluate the role of

the government in regard with organizational entrepreneurship. The evaluated issues can include: where the rules are preventive, who are the conflicts between; and where the supportive role of the government is insufficient. On this basis and in order to develop entrepreneurship, governmental rules and regulations should be amended and revised.

Besides, some rules and regulations should be devised to support and register new inventions and protect the rights of the entrepreneurs and entrepreneurial organizations.

12. Designing Export Policies to Develop Entrepreneurship

This research shows that the government's export policies are problematic for the studied industrial corporations' entrepreneurship. There is a bureaucratic process for paying small amounts of taxes and tariffs of exported products to the banking system. Data analysis, calculating the required foreign currency and its confirmation by a special -authority, evaluating different issues at the pricing commission, expert re-evaluation, customs declaration, adopting the products with determined prices, evaluating the goods in customs, foreign currency contract in banking system, the concerns of re-paying of foreign currency and other issues, in one hand, decrease the motivation of entrepreneurial corporations for export and, in the other hand, increase bureaucracy ten times.

Foreign currency contract with limited interests for the country is a kind of imposed tariff on exporters and has an oppressive bureaucracy. This contract spends money, work, time and energy of an entrepreneurial exporter and destroys his/her power to bargain, keeping the goods, in-time selling and finding a suitable buyer in abroad.

So, revising the export rules and regulations is proposed to accelerate the export of products by corporations and promoting corporate entrepreneurship in industrial sector. Naturally, export must not need any allowance and in the beginning of the year, if necessary, the goods which need such allowance should be announced. Moreover, issuing different and conflict export/import official notices by various organizations, limits the activities of entrepreneurial exporters. We face not only unstable rules but also export organs. So, we have neither large exporting firms nor an agency which applies a single policy for its activities. It

seems necessary that the government should establish and develop such organs.

13. Revising Labor Laws to Develop Entrepreneurship

Many managers in the studied corporations believe that labor laws are problematic for running the firms. Some managers maintain that the Ministry for Labor treats the corporation managers as if no worker should be dismissed or replaced. Hence, corporation managers pursue an anti-labor movement and develop some kind of distrust towards the workers so that they tend to conclude contracts under one-year term in order to escape the restrictions imposed by the Labor Law. This in turn could cause other problems.

In the meantime, since there are many advantages in the labor laws for female workers, corporation managers are strongly avoiding employment of female workers. Therefore, because of the present labor laws, the cooperation between managers and workers is not well-organized and there arise contradictions and tensions in corporate level. So, it is proposed that labor laws be discussed and criticized in a nonpolitical climate and consider not only necessary grounds for developing entrepreneurship in corporations but also the interests of the workers.

14. Improving Social Culture to Develop Entrepreneurship

Since its considerable effects on individuals' acquired characteristics in national level and its limits and opportunities for organizations, society's culture has remarkable effects on entrepreneurship process. The results of the present research indicate that working/entrepreneurship culture is not dominant in the society and there is no entrepreneurship practice in Iranian households. National culture, values, manners and dominant frameworks effect not only on national and macro planning but also on single and collective attitudes to entrepreneurship. In this line, avoiding traditionalism will promote entrepreneurship spirit in the society if the changes are in unavoidable frameworks and principles of the society, are not resulted in social disorders and if money-making is done by providing various ideas and creating appropriate grounds for adopting necessary rules and regulations to protect investment security. An appropriate national culture will result in promoting individual and organizational

entrepreneurship. Therefore, the following suggestions are made to promote entrepreneurship culture in the society especially in organizations:

Necessary individual characteristics for entrepreneurship and national culture as well as attitudes such as working conscience, social discipline, meritocracy and law-orientation will shape children mentality in primary school courses. Therefore, it is necessary to consider this attitude in planning adolescents' and adults' educating courses.

Since some characteristics are acquirable, entrepreneurship training programs in university courses especially in management and technical/engineering fields are among the principal needs of the society which to be met.

In addition to university courses, some in-service training should be considered for promoting entrepreneurship characteristics of active managers in different industrial and commercial sectors.

Mass media have an effective role in identifying and institutionalization the role and significance of all individuals of the society which needs to be considered significantly.

Conclusion

Regarding the effective role of entrepreneurship in developing the societies economically and socially as well as the attention of planners and policy-makers to this important issue in different individual, organizational and national levels, the first step in achieving this aim is to identify the effective factors and barriers of entrepreneurship. This research in corporate level of the industrial corporations of the Islamic Republic of Iran, addresses entrepreneurship barriers by considering a conceptual model which consists of structural, behavioral and environmental elements. The findings indicate that there are entrepreneurship barriers in all the three structural, behavioral and environmental scopes. Although barriers of environmental and structural scopes are more than behavioral scope, we must attempt to remove the barriers in all the three scopes in order to develop entrepreneurship in Iranian industrial sector which is applicable in other sectors (service and agriculture) and other countries (especially developing countries). Our suggestions were presented under 14 separate sections. Owing to the fact that entrepreneur-

ship is a new issue in the developing countries, the role of the government is very important in institutionalizing entrepreneurship culture and providing special facilities for individual and organizational entrepreneurs.

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