

Designing a Conceptual Framework for Organizational Entrepreneurship in the Public Sector in Iran

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Abstract

There are considerable debates about the existence, nature, and application of entrepreneurship within the public sector. The present survey analyzes the application of entrepreneurship in Iranian public sector organizations. For this purpose, the situation of entrepreneurship within the head offices of Iranian public service organizations was considered. Also, based on McKeinsy and Daft's frameworks, different internal and external factors were determined and the effects of them on organizational entrepreneurship were studied. The findings of the present study show that these organizations do not have a desirable entrepreneurial posture; in addition, to develop this posture, internal and external organizational factors should provide the necessary conditions and support entrepreneurial behaviors and activities in public organizations. This survey identifies numerous shortcomings and provides some suggestions for developing and cultivating organizational entrepreneurship, so the results and findings of this survey can clarify the route toward establishing and developing organizational entrepreneurship within Iran's public sector. In this regard and based on the findings, a framework is provided for the relationships of internal and external factors with organizational entrepreneurship in Iran's public service sector.

Keywords:

Entrepreneurship, Organizational entrepreneurship, Public entrepreneurship, Public sector.

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Introduction

Public sector organizations are considered as a main tool for implementing governmental functions. Thus, the inefficiencies of public sector organizations could produce numerous problems for a country. The paradigm of good governance has been expanded in the minds of many stakeholders at central and local government and fosters the spirit of the local government to remedy and improve their performance in order to provide the best service quality for the society (Ghina, 2012). It seems that traditional approaches are no longer efficient and that bureaucracies have faced pressures and requirements, which makes change, transformation, creativity, invention, and innovation inevitable. In response to these necessities and forces, widespread changes have been introduced in public sector management, often in order to make it more effective and efficient. Outsourcing, downsizing, reengineering, and even new approaches such as privatization, reinventing government, managerialism, etc, have this objective (Osborne & Gaebler, 1992; Beck *et al.*, 2005; Borins, 2000). Furthermore, learning and innovation are essential needs for growth and survival. As a result, organizations strongly pursue innovative and entrepreneurial methods and approaches for combating inflexible bureaucracies in order to promote effectiveness, efficiency, and flexibility. In this regard, and in the same way, organizational entrepreneurship increasingly has emerged as a selected weapon for many organizations, especially for large ones. Organizational entrepreneurship tries to establish, and of course institutionalize innovative mindset and capabilities within the organizational culture and practices (Stoner *et al.*, 1995). Organizational entrepreneurship can be applied in the public sector as well. Different countries such as United States, UK, Australia, New Zealand, Greece, etc. have tried to improve innovation, creativity, flexibility, and entrepreneurship within their public sector through comprehensive changes in methods and attitudes, and by different techniques such as restructuring, managerialism, privatization, e-government, and even reinventing government (Zampetakis &

Moustakis, 2007; Beck *et al.*, 2005). The present study tries to investigate entrepreneurial orientation in public sector in general and within the Iranian public organizations in particular. Various studies have investigated the need of reinventing and improving the performance of government and applying market mechanisms into public sector and also promoting creativity and developing risk-taking cultures and then have introduced public entrepreneurship term (Osborne & Gaebler, 1992; Peters, 1987; Bellone & Goerle, 1992). However, research in public entrepreneurship area is in infancy and the findings often rely on qualitative and subjective methodologies (Ferlie *et al.*, 2003; Zerbinati & Suitaris, 2005).

The general trend in Iran's public organizations confirms that one of the most important causes of inefficiencies and ineffectiveness of Iranian public organizations is the absence of organizational innovation and entrepreneurship. Administrative system pathologies in Iran show that this bureaucratic system suffers from dangerous diseases such as the lack of participative and involvement mortality, high centralization and inflexibility, complex and vague work processes, prevailed headless and inattentive mortality about the results of the work, low responsibility and high projection, low productivity, and inefficiency and ineffectiveness (Alvani & Riahi, 2003). The present survey, while investigating different attributes and aspects of public entrepreneurship, emphasizes the significant role of this phenomenon on improving the performance of public organizations with the focus on Iran's public sector as the research domain. In this regard, the main question is that how entrepreneurship can be developed and improved within the public organizations? Answering this question needs identifying different related influential factors and determining their effects as well.

Theoretical Framework

Organizational Entrepreneurship

The resource-based view (RBV) suggests that variation in competitive markets stems from differences in the characteristics of competitors'

resources and capabilities. Specifically, resources or capabilities that are valuable and difficult to imitate offer the potential for competitive advantage (Scheepers *et al.*, 2008). However, to possess these resources alone is insufficient to gain a competitive advantage and create value; firms must effectively manage their resources and build unique capabilities to gain an advantage and realize value creation (Sirmon *et al.*, 2007). Entrepreneurship refers to the process of value adding through bringing about a unique combination of resources to exploit an opportunity (Stevenson *et al.*, 1985). Until the early 1970s, research on entrepreneurship focused on individual characteristics and actions. Researchers subsequently recognized that organizations themselves undertake entrepreneurial activities (Miller & Friesen, 1982; Jennings, 1994; Burgelman, 1983). This finding led to the introduction of corporate entrepreneurship notion. Corporate entrepreneurship is a concept which is focused on organizations and organizational culture and processes rather than individuals (Cornwall and Perlman, 1990; Jennings, 1994). Entrepreneurship has been defined as a process that can be applied within every organization regardless of its size or type (Burgelman, 1983; Drucker, 1985; Gartner, 1985; Kao, 1989). An entrepreneurial organization is regarded as one that undertakes innovative activities in order to acquire distinguishing capabilities and abilities. Organizational entrepreneurship is considered as a strong means for revitalizing current organizations and as a tool for developing and improving the businesses, increasing profits and income, as well as proactively developing new products, services and processes (Kuratko *et al.*, 1990; Lumpkin & Dess, 1996; Miles & Covin, 2002; Zahra, 1991; Zahra *et al.*, 1999). Organizational entrepreneurship is based on the abilities of an organization in learning through searching new knowledge and using current knowledge. This learning process depends on organization's intellectual capital (Hayton, 1995). Organizational entrepreneurship is a strategic direction which includes renewing products, processes, services, strategies, or even organization as a whole (Covin & Miles, 1999). Jennings and

Lumpkin (1989) defined organizational entrepreneurship as the degree of developing new product and market. An entrepreneurial organization could be regarded as one which undertakes innovative activities in order to acquire distinguishing capabilities, while a conservative organization considers innovation only in response to challenges and when it would be a necessary action (Burgelman, 1983; Hornsby *et al.*, 2002; Sirvastava & Lee, 2005).

Some of the researchers conceptualize organizational entrepreneurship as comprehensive entrepreneurial attempts that require organizational and managerial support and resource provision for developing innovative activities in the form of products, process, and organizational innovations (Kanter, 1985; Zahra & Covin, 1995). Organizational entrepreneurship is focused on reinforcing and enhancing an organization's ability to attain entrepreneurial skills and capabilities (Hornsby *et al.*, 2002). In general, it can be said that organizational entrepreneurship refers to undertaking entrepreneurial activities in established organizations.

Public Entrepreneurship

Entrepreneurship literature has mainly focused on industrial and business corporations and little implication have been provided about the applications of entrepreneurship in other contexts, especially in public sectors. The sparse literature about public entrepreneurship often juxtaposes private sector models with public managers' practices and is based mainly on abstract thoughts and anecdotal experiments (Sadler, 2000). Only since the mid-1990s attention has been paid to the differences between public and private sectors and the potential effects of these differences on developing entrepreneurial organizational frameworks within public sectors (Sadler, 2000; Boyett, 1997; Borrins, 1998). Public organizations are often portrayed as monopolistic, conservative, and bureaucratic entities and this portrayal leads to a conclusion that public sectors cannot be entrepreneurial (Hughes, 1998). However, it is possible that it is not the public sector itself that is inimical to entrepreneurship but traditional public sector structures, bureaucracy, values, and practices

cause the main obstacles (Sadler, 2000). Drucker (1985) wrote that entrepreneurship such as private sector is also a public sector phenomenon. He argued that part of the entrepreneurial process involved systematic search for and analysis of opportunities which have potential to generate innovation. These opportunities may not be commercially advantageous, but can be transformed into a new value within the bundle of public sector objectives. Public sector entrepreneurship is not necessarily wealth seeking and its ends may not always be monetary (Boyett, 1997). Public entrepreneurship is beyond income creation, rather it deals with governance thoughts and also it may exist along with bureaucratic conditions (Liewellyn & Jones, 2003). Considering governance issues, entrepreneurship becomes a tool by which public institutions can establish new relationships with the public whose services are offered to them and are created because of them and are responsible to them (Edwards *et al.*, 2002).

However, public entrepreneurship notion was regarded superficially and passed its beginning stages during the 1960s. In public sector context, entrepreneurship has been studied from different and even contrary viewpoints. Linden (1990) related public entrepreneurship to a careful and conscious search for innovative changes. Bellone and Goerle (1992) referred it to creating new sources of income and delivering better services through citizen participation. Osborne and Gaebler (1992) suggested continuous innovation for improving public organizations' effectiveness and efficiency. Other approaches to public entrepreneurship, both in theory and practice, include promoting democracy (Shochley *et al.*, 2002), downsizing functions and personnel (Gore, 1993), transforming the focus of employees' efforts toward purposeful objectives (Osborne & Gaebler, 1992), privatization (Savas, 1987; Zahra & Hensen, 2000), utilizing governmental assets in more effective and efficient ways in order to create new sources of income (Bellone & Goerle, 1992), strong customer orientation under the condition of competitive market forces (Cullen & Cushman, 2000), and undertaking an entrepreneurial role

through risk taking and creativity (Lewis, 1980). There are diverse views about government and entrepreneurship that propose different issues and complexities. Furthermore, different studies tried to adjust the "profitability" stereotype in entrepreneurship and revealed its social advantages (Pittaway, 2005; Thompson, 2002; Weerawardena & Mort, 2006). However, there is a consensus that understanding public entrepreneurship concept in the areas of public policy, decision-making, and public functions is necessary and important (Leadbeater, 1997). Public entrepreneurship relates to innovation and providing public services in a way that leads to enhancing social capital (Borins, 2000; Boyett, 1997; Zhao, 2005). In addition, public entrepreneurship can be seen as a tool for managing public organizations. Caruana and his colleagues (2002) argued that public organizations can provide new values for different stakeholders through undertaking an entrepreneurial approach toward current resources. Public entrepreneurship is a very extensive issue and research findings often are based on successful public entrepreneurs' case studies (e.g. Boyett, 1997; Ramamurti, 1986).

Internal and External Organizational Factors Affecting Entrepreneurship

The effects of entrepreneurial organizational practices on organization performance and success induced researchers to perform different studies about related organizational factors (e.g. Zahra, 1991; Zahra & Covin, 1995; Covin & Slevin, 1991). As Antoncic and Scarlat (2008) and Kearney *et al.* (2008) noted, a significant amount of research has been conducted including two groups of corporate entrepreneurship antecedents: factors of the firm's external environment and organizational level internal factors. Findings show that internal organizational factors play a vital role in encouraging organizational entrepreneurship (Covin & Slevin, 1991; Kuratko *et al.*, 1993; Hayton, 2005). Researchers have attempted to determine some of the key variables affecting organizational entrepreneurship: Organizational factors such as reward and control systems (Sathe, 1985), culture (Kanter, 1985; Hisrich & Peters, 1986), structure (Covin & Slevin, 1991; Naman & Slevin, 1993), and managerial

support (Stevenson & Jarillo, 1990; Kuratko *et al.*, 1993). These factors, both independently and collectively, are recognized as important antecedents of entrepreneurial activities since they affect internal environment of the organization, which in turn, determine the willingness toward entrepreneurial practices and support them within an organization. Burgelman (1983) clearly shows that internal organizational factors affect the types of the organizational entrepreneurial activities. On the other hand, external environmental factors, also, have great impacts on organization functions and performance. Zahra and O'Neil (1998) pointed out that external environmental factors and the interaction between the organization and its environment encounter managers with the challenge of responding creatively and acting innovatively. Organization theory states that external changes can result in internal adjustments in structure, strategy, processes, and methods (Emery & Trist, 1965; Thompson, 1965; Lawrence & Lorsch, 1967). Contingency theorists propose that relatively stable and predictable work environment in the 1950s and 1960s led to the development of large and mechanistic organizations in private sectors. These theorists suggest that when the rate of environmental changes increases, smaller and more flexible structures become suitable (Ansoff, 1979; Burgelman, 1983; Burns & Stalker, 1961; Miller, 1983). Previous researches show that entrepreneurship provides a strategic response against environment turbulence (Covin & Slevin, 1989; Morris & Sexton, 1996). Environmental instabilities, while threat current operational methods, provide numerous opportunities for innovative behavior (Morris & Jones, 1999). Public organizations are often regarded as monopolistic entities which face inevitable demands and possess determined resources. However, nowadays, public organizations encounter unprecedented demands which are increasingly becoming complicated more and more. External environments of public organizations can be regarded as turbulent environment, which represents a very dynamic, difficult, and complex environmental condition (Nutt & Bachoff, 1993; Miller & Friesen, 1982; Osborne & Gaebler, 1992).

In the present survey, for identifying these internal and external factors, different models and theories were investigated and finally according to McKeinsy 7S Model, internal organizational factors include structure, strategy, systems, staff, skill, style, and shared values. Also, to determine external organizational factors, Richard L. Daft's framework was selected because of its comprehensiveness. However, since the present research has been done within the Iranian public organizations domain, it was necessary to adjust Daft's framework according to Iran's public sector specifications. In this regard, and among the factors presented in Daft's model, the more influential factors were determined using Delphi method and on the basis of some of the management specialists and public managers' viewpoints. Finally six factors were recognized as the influential external organizational factors which include: government, market, industry, technology, socio-cultural, and economic factors. Figure 1 shows the research factors and variables.



Fig. 1. Research's conceptual framework

Research Hypotheses

Based on research's conceptual framework, research hypotheses consist of two main hypotheses and thirteen sub-hypotheses as follows:

H1. Internal organizational factors affect entrepreneurial organizational posture in Iranian public sector organizations.

H1.1. Organizational strategy affects entrepreneurial organizational posture in Iranian public sector organizations.

H1.2. Organizational structure affects entrepreneurial organizational posture in Iranian public sector organizations.

H1.3. Organizational systems affect entrepreneurial organizational posture in Iranian public sector organizations.

H1.4. Leadership and management style affects entrepreneurial organizational posture in Iranian public sector organizations.

H1.5. Organization staff affects entrepreneurial organizational posture in Iranian public sector organizations.

H1.6. Organizational culture affects entrepreneurial organizational posture in Iranian public sector organizations.

H1.7. Organization skills affect entrepreneurial organizational posture in Iranian public sector organizations.

H2. External organizational factors affect entrepreneurial organizational posture in Iranian public sector organizations.

H2.1. Technology affects entrepreneurial organizational posture in Iranian public sector organizations.

H2.2. Economy affects entrepreneurial organizational posture in Iranian public sector organizations.

H2.3. Government affects entrepreneurial organizational posture in Iranian public sector organizations.

H2.4. Socio-cultural factors affect entrepreneurial organizational posture in Iranian public sector organizations.

H2.5. Industry affects entrepreneurial organizational posture in Iranian public sector organizations.

H2.6. Market condition affects entrepreneurial organizational posture in Iranian public sector organizations.

Research Methodology

Methodologically, the present study is a descriptive research, i.e. researcher tries to describe the current situation and focuses on existing relations, beliefs, processes, and trends. Iranian public service organizations constitute the present research domain. Furthermore, because of the high centralization of Iran's public administration system, the present study was accomplished in public sector

headquarters; therefore, target domain of the present study is those public service organizations that use public budgets in any way and also produce income from their main services. Such organizations consist of 27 entities which all of them were regarded in the present study. On the other hand, based on the research objectives and variables, the statistical population of the present research encompasses top-level managers of Iranian public sector headquarters who possess particular characteristics which were mentioned above. Top managers were selected because they play the main role in organizational entrepreneurial activities and also because organizational entrepreneurship development requires top managers' full supports. Meanwhile, they possess complete information about their organizational entrepreneurial activities.

Research Instrument

In the present research, needed data and information were collected by referring to related documents and library resources and also by using a questionnaire. Because of studying different variables, a relative comprehensive questionnaire was formulated which is consistent with research objectives and hypotheses. Questionnaire validity was guaranteed through enacting reforms on it based on the viewpoints of different specialists. It has been tried to formulate the questions based on literature and avoid unclear or ambiguous items. Therefore, content and exterior validities were verified. Also, questionnaire reliability was tested using alpha choronbach coefficient. Its high coefficient ($\alpha=0.9611$) shows that the questionnaire has good and acceptable reliability.

Statistical Analysis

Recognizing the statistical distribution type of research variables is a precondition for determining true statistical methods for analyzing data and testing research hypotheses. Results of K-S test show that all of the variables follow normal distribution, and therefore parametrical statistical techniques can be used to test the hypotheses. Pearson correlation coefficient was used for investigating the correlations

between dependent and independent variables. Table 1 shows these coefficients. The results of correlation test indicate that there is a significant correlation between structure, staff (employees), budget and financial, R&D, and performance appraisal systems, style, organizational culture, and socio-cultural factors, with organizational entrepreneurship at the level of 0.99. Also, at 0.95, there is significant correlation between strategy, staff (managers), information systems, and technology, and organizational entrepreneurship. Results show the significant correlation of compensation system, skills, and market and industry factors with organizational entrepreneurship at the level of 0.90. However, results of the correlation test did not confirm the significance of the correlation between human resource system, reward system, government and economic factors, and organizational entrepreneurship within the studied organizations.

Table 1. Pearson correlation test

Factor	Pearson Coefficient	Sig.	Factor	Pearson Coefficient	Sig.
Structure	0.539	0.004	Strategy	0.448	0.019
Staff (Managers)	0.479	0.011	Staff (employees)	0.537	0.004
Systems (MIS)	0.476	0.012	Systems (Financial)	0.594	0.001
Systems (R&D)	0.648	0.000	Systems (HRM)	0.042	0.8
Systems (Reward)	0.146	0.467	Systems (Compensation)	0.344	0.079
Systems (appraisal)	0.517	0.006	Style	0.503	0.007
Organizational culture	0.567	0.002	Skills	0.369	0.058
Government	0.265	0.182	Market	0.320	0.10
Industry	0.319	0.10	Technology	0.422	0.28
Socio-cultural	0.546	0.003	Economy	0.234	0.24

Table 2. T-Test Results

Mean	Std.	Deviation from Mean	Error	Sig.
2.631	0.382	-0.369	0.05	0.00

Table 2 shows the results for investigating the entrepreneurial posture of organizations.

T-test results show that entrepreneurial organizational posture in

studied organizations is slightly lower than the mean level. Therefore, it cannot be said that these organizations have high entrepreneurial posture. This result is consistent with the researchers' presupposition about the low entrepreneurial condition in Iranian public organizations.

The Relative Importance of the Factors

Friedman test was used to investigate whether affective factors on organizational entrepreneurship are the same or different. Friedman's test results consist of two outputs. Table 3 shows the first output and determines that the importance of the factors or research independent variables are not the same. In the second output, the mean scores of these factors have been presented. Because of the significant differences, it can be claimed that the order of factors is according to Table 4. However, it should be noted that the Friedman test could only address the similarity of scores and analyze their priorities in a descriptive explanation mood.

Table 3. Friedman test

Factor	Mean score	Factor	Mean score
Systems (MIS)	18	Government	11.02
Systems (HRM)	15	Staff (employees)	10.52
Staff (Managers)	14.89	Systems (financial)	7.46
Industry	14.81	Systems (R&D)	7.52
Technology	14.72	Style	7.09
Skills	14.17	Socio-cultural	6.87
Strategy	13.43	Systems (appraisal)	6.46
Market	13.61	Systems (compensation)	3.72
Systems (reward)	12.50	Structure	2.20
Organizational culture	12.56	Economic	2.02

Table 4. Friedman test

N	27
χ^2	332.846
df.	19
Sig.	0.00

Testing the Hypotheses

Linear regression analyses were used to investigate the effects of internal and external organizational factors on organizational

entrepreneurship and testing hypotheses. Research main hypotheses are investigated based on their sub-hypotheses. Durbin-Watson statistic was at 2.134 which were placed at 1.5-2.5 range; therefore, the supposition of un-correlations between errors cannot be rejected and regression analysis can be used. Furthermore, the distribution of errors with zero mean is normal, so there is no problem in using regression analyses. As table 5 shows, R^2 , for research variables, is at 0.963 which represents that independent variables- in present study- can explain %96.3 of the variations of dependent variable, i.e. organizational entrepreneurship. In addition, results of regression factor analysis shows that the significant is lower than 0.05, so the regression model could significantly explain the variations of dependent variable. Table 7 represents the coefficients and related significance of independent variable. Beta coefficients represent the order of variables' influence on organizational entrepreneurship.

Table 5. Regression Model results

Model	R	R Square	Adjusted R Square	Std. Errors of the estimate	Durbin-Watson
1	0.982	0.963	0.842	0.152	2.134

Table 6. Analysis of Variance

Model	Sum of Squares	df	Mean Squares	F	Sig.
1 Regression	3.669	20	0.183	7.902	0.008
Residuals	0.139	6	0.023		
Total	3.808	26			

The first main hypothesis of this research consists of seven sub-hypotheses, each of which is related to one internal variable that include: structure, strategy, staff, style, system, skill, and culture. The results of regression analysis support the significant effects of the style, skills, human resource system, and R&D system at 0.95 levels. Also, the significance of the other internal factors was rejected at 0.95 levels. However, the results of the regression analyses for the first main hypothesis, that is for seven internal organizational factors, in general, support the effects of these factors on organizational entrepreneurship at 0.95 levels.

Table 7. Regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	-2.388	1.533		-1.558	0.170
	Structure	-0.116	0.266	-0.109	-0.437	0.677
	Strategy	-0.441	0.247	-0.414	-1.780	0.125
	Staff (Managers)	0.511	0.524	0.378	0.976	0.367
	Staff (Employees)	0.113	0.356	0.087	0.318	0.716
	Systems (MIS)	0.305	0.178	0.367	1.715	0.137
	Systems (Financial)	0.000	0.186	0.000	0.002	0.018
	Systems (R&D)	0.658	0.205	0.801	3.2.5	0.018
	Systems (HRM)	-0.740	0.231	-0.684	-3.206	0.018
	Systems (reward)	0.101	0.312	0.075	0.324	0.757
	Systems (compensation)	0.411	0.207	0.427	1.988	0.094
	Systems (appraisal)	-0.147	0.273	-0.180	-0.539	0.609
	Style	1.391	0.374	1.397	3.717	0.010
	Organizational culture	0.127	0.357	0.099	0.357	0.734
	Skills	-0.841	0.312	-0.813	-2.692	0.036
	Government	1.281	0.512	0.692	2.502	0.046
	Market	0.471	0.150	0.598	3.129	0.020
	Industry	0.688	0.186	0.942	3.709	0.010
	Technology	-0.533	0.175	-0.581	-3.044	0.023
	Socio-cultural	-1.704	0.433	-1.272	-3.933	0.008
	Economic	0.535	0.306	0.236	1.746	0.131

The second main hypothesis investigates the effects of external organizational factors on organizational entrepreneurship. This main hypothesis consists of six sub-hypotheses that include six factors; government, market, industry, technology, economic, and socio-cultural factors. The results of statistical analyses show the direct and significant effects of government, market, industry, technology, and socio-cultural factors on organizational entrepreneurship at %95 levels. Also, the significant effect of economic factor on organizational entrepreneurship did not supported at 0.95 level. Generally, the results of regression test for six external organizational factors supported the significant effects of them on organizational entrepreneurship in studied organizations. Table 8 represents the results of regression test for main hypothesis. Also, graph 1 shows the scatter plot of the regression analyses.

Table 8. Regression analysis for the main hypotheses

Model	R	R Square	Adjusted R Square	Std. Errors of the estimate	Durbin-Watson
1	0.723	0.522	0.482	0.27532	0.195

Model	Sum of Squares	df	Mean Squares	F	Sig.
1 Regression	1.989	2	0.994	13.120	0.000
Residuals	1.819	24	0.076		
Total	3.808	26			

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.973	0.737		-1.319	0.200
	Internal organizational factors	0.726	0.268	0.478	2.714	0.012
	External organizational factors	0.614	0.331	0.327	1.856	0.046

Based on the analyses above, the general regression formula for internal and external organizational factors is as follows: "y" represents "organizational entrepreneurship", "X₁" and "X₂" represent internal and external organizational factors.

$$y = -0.973 + 0.478X_1 + 0.327X_2$$

Discussion and Conclusion

With evolution of global economy and increase of awareness about competitiveness, governments increasingly attempt to perform another function, i.e., developing and fostering entrepreneurship (Raynolds, 2004). So, the role of the government shifts to determining the interactions between economic and social goals (Luke & Verreynne, 2006). However, in Iranian public organizations there is not a good entrepreneurial condition. The results of the present study, also, support this issue. Findings show that seven internal factors besides six external factors can explain 96.3 percent of organizational entrepreneurship variations in studied organizations. Therefore, focusing on these factors can clear, to a large extent, the path toward fostering and developing entrepreneurial orientation within Iranian public sectors. Analyses show that entrepreneurial posture of Iran's

public organizations is lower than the mean level. Among these factors, the entrepreneurial condition of technology, industry, skills, and information systems were slightly better than other factors. In the following section, the condition of internal and external organizational factors about the studied organizations will be explained and some suggestions will be proposed for improving their entrepreneurial posture. Table 9 shows the entrepreneurial characteristics of internal and external factors based on research findings.

Furthermore, in the present study, the condition of entrepreneurial orientation was investigated in Iran's public sector organizations. Certainly, short term and sectional approaches cannot be helpful. Entrepreneurship, and in turn organizational entrepreneurship, is a complex and multidimensional phenomenon which is affected by different factors. Therefore, institutionalizing entrepreneurship within the organizations, and particularly within public sector organizations, requires a systematic, realistic and long term approach. Considering factors investigated in the present study and paying attention to the strengths and weaknesses of them can significantly clear the path toward establishing entrepreneurship and achieving entrepreneurial organizations within the public sector. However, further research should be done in the field of public entrepreneurship. The framework below, which has been drawn from the findings of the present study, shows the relationships between different internal and external factors with organizational entrepreneurship in the public sector.

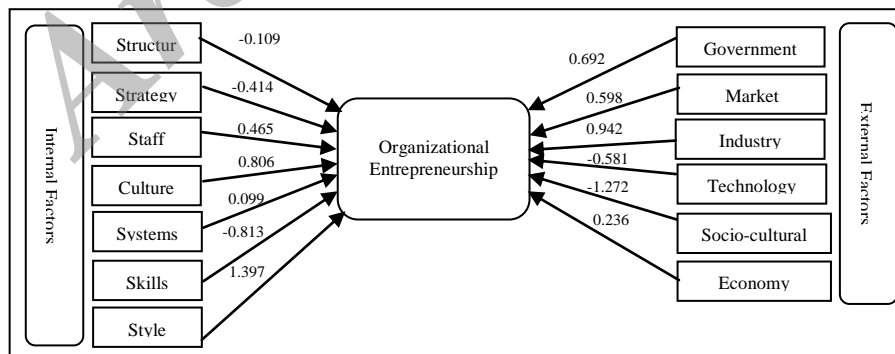


Fig. 2. Effects of internal and external organizational factors on organizational entrepreneurship (Source: research findings)

Table 9. Entrepreneurial characteristics of internal and external factors

Factor	Entrepreneurial Characteristics
Structure	Organic structure with high Flexibility and Diversification, low formality and complexity, minimum hierarchies and regulations, low centralization, high professionalism and adaptability, open communication, developed organic clusters.
Strategy	Prospective strategy with clear mission and vision, high flexibility, and customer orientation.
Staff (Managers)	Inspiring managers; change oriented, opportunistic, energetic, creative, innovative, proactive, prospective, realistic, self-confident, and result-oriented.
Staff (Personnel)	High performance employees; responsible, high organizational commitment, futuristic, creative and innovative, motivated and excellent morality.
Information Systems	Integrated Information Systems; providing accurate, comprehensive, on-time and cost effective information.
Financial Systems	Efficient Financial Systems; easy and quick budget allocating, various financial supports of entrepreneurial projects, prioritizing R&D and marketing new products and services in financing, utilizing new budgeting procedures.
R&D Systems	Customer oriented R&D; pervasiveness of informal work-groups, long-term perspective, understanding different changes in customer values and expectations, high autonomy at R&D department.
HRM System	Strategic HRM; matching of employees with their jobs, clear rules and regulations for recruitment and selection, entrepreneurial HRM sub-systems.
Reward System	Diversified reward system; short-term and long-term view, equity-based rewards, clear reward measures, encouraging and supporting innovation and risk-taking.
Compensation System	Flexible compensation system; pay-for-performance, regarding creativity and risk-taking behaviors, intrinsic and extrinsic compensations.
Performance Appraisal System	Balanced performance appraisal system; regarding short-term and long-term measures, using particular measures for creativities, emphasizing on future movements, balance between autonomy and control, focusing on measurable goals, insisting on learning from experiments.
Style	Entrepreneurial management; transformational leadership, participative style.
Culture	Entrepreneurial organizational culture; emphasizing on ethics, honesty and trust, paying attention to employees' knowledge, employees' commitment, work as a fun activity, job meaningfulness, continuous focusing on details, encouraging creativity and innovation, regarding employees as the most valuable resource, change orientation views, teamwork, result-orientation, insisting on reaching to organization vision.
Skills	Organizational best capabilities; teamwork skill, communication skills especially with politicians, media and stakeholder groups, productive utilization of diverse resources, learning capabilities, effective change management, work intelligence.
Government	Entrepreneur government; meritocracy, definite rules, paying attention to economical and social condition in rule approving processes, clear and accurate rules especially in commerce and work, regarding innovative activities in public policy-making.
Market	Dynamic markets; intelligent and knowledge customers, diversified customers, eager customers for interactive communication with organization.
Industry	Dynamic industry; different changes in related industries, widespread interaction among organizations in an industry and other related fields.
Technology	Advanced technologies; innovation in technology, adaptable technologies regarding organizations' condition.
Socio-cultural	Entrepreneurial society; intention to participation, emphasizing on success and prosperity, adhering to professional ethics, social equity, entrepreneurial education system, intention to improving status quo, social mobility, autonomous thinking, hard-working, frugality, personal responsibility, self-regulation, masculinity.
Economy	Progressive economy; low inflation, frequent resources, low corruption, plentiful financial resources especially in allocated budgets, emphasizing on capital development, supporting intellectual property.

At the end, a relative comprehensive framework for establishing organizational entrepreneurship is proposed which can be applied in public sectors. According to the framework below, the process of establishing organizational entrepreneurship initiates with the decision of the top management. Then, necessary plans should be formulated which are oriented towards achieving innovation, proactiveness, and organizational strategic renewal. In this regard, paying attention to the roles and effects of internal and external organizational factors is inevitable. Enacting these plans can result in achieving entrepreneurial organizations. Finally, according to the feedbacks from the outputs of organizational entrepreneurship processes and through internal and external organizational factors, continuous improvements should be done. On the other hand, it should be noted that establishing an entrepreneurial organization needs the other important points that are very applicable and useful for practitioners. Table 10 shows some of the main practical points which are regarded as necessary in establishing an entrepreneurial organization.

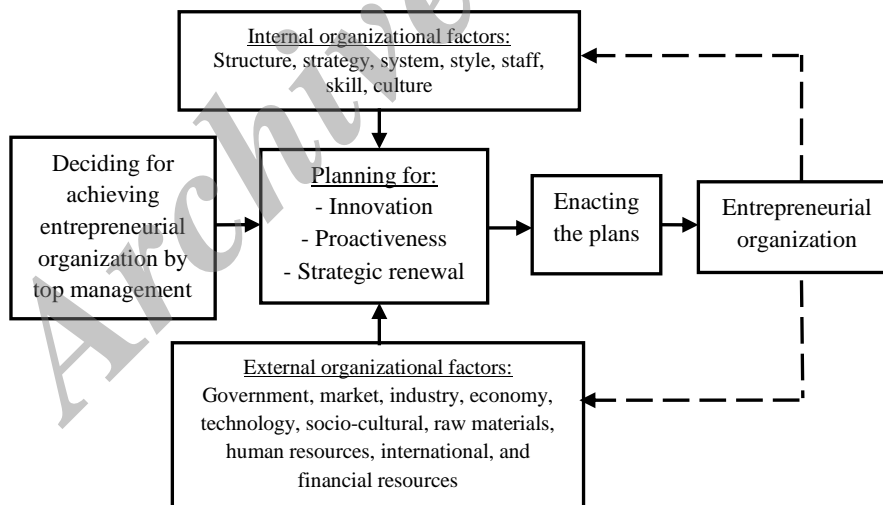


Fig. 3. The process of establishing an entrepreneurial organization (Source: research findings)

Table 10. Main practical points necessary for establishing an entrepreneurial organization

1. Understanding the external environment
- Studying current change incentives
- Studying potential change incentives
- Analyzing the organizational status according to change trends and requirements
2. Managing institutionalization change motives
- Paying attention to pressure points
- Considering environment as turbulent and hostile
- Explaining environmental turbulence
3. Providing organizational vision according to environmental turbulence
- Developing objectives consistent with organizational vision
- Ensuring comprehensive understanding of environmental turbulence
4. Managing Institutionalization ambiguities
- Communicating ambiguities in goals and clarifying organizational vision
- Ensuring comprehensive acceptance of organizational vision
- Ensuring understanding the ambiguities in objectives
5. Enacting innovation
- Providing resources necessary for realizing innovation
6. Coordinating the structure
- Accepting public responsibilities and control requirements in public sector
- Increasing flexibility
- Coordinating line and staff personnel in different groups with common goals
7. Managing political climate
- Avoiding political unawareness
- Admitting political influences in processes
8. Decision making
- Promoting volunteer programs and moving toward participative decision making
9. Managing autonomy
- Recognizing organization boundaries and performance areas
- Involving upper-level organizations in risky projects and ensuring their special interests

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