

## Research Paper

**Designing a structural model of organizational agility based on the drivers of organizational intelligence and entrepreneurship**Masoume Erfani Khangakhi <sup>1</sup> , Somayeh Sadat Mostafaei Kangarshahi <sup>2</sup> 

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**Abstract**

The purpose of the present study was to investigate the relationship between organizational entrepreneurship and organizational agility of employees with the mediating role of organizational intelligence in water and wastewater departments of Qom province. The research method was descriptive-survey. The employees of water and wastewater departments of Qom province were 388 people. The sample size was 184 people based on the Krejci and Morgan table. The method was a relative stratified random sampling. The library and field methods were used to collect data. The data collection tools were the standard questionnaires of organizational agility by Sharifi and Zhang (2004), organizational intelligence by Albrecht (2002), and organizational entrepreneurship by Anderson (2006). Confirmatory factor analysis was used to determine the validity of the research tool. Cronbach's alpha coefficient was used to determine the reliability of the research tools. Descriptive and inferential statistical methods were used to analyze the collected data. To test the research hypotheses, first the Kolmogorov-Smirnov test was used to examine the normality of the data distribution and the structural equation method was used to examine the effect of independent and mediating variables on the dependent variable using SPSS and LISREL statistical software. The research findings showed that there is a positive and significant relationship between organizational entrepreneurship and organizational intelligence and organizational agility. There is a positive and significant relationship between organizational intelligence and organizational agility. The research results also showed that organizational intelligence plays a mediating role in the relationship between organizational entrepreneurship and organizational agility.

**Keywords:**

organizational entrepreneurship, organizational agility, organizational intelligence.

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Email: <a href="mailto:Me.khaneghai@iausr.ac.ir">Me.khaneghai@iausr.ac.ir</a>	This work is licensed under a <a href="https://creativecommons.org/licenses/by/4.0/">Creative Commons Attribution-NonCommercial 4.0 International License</a> .	

## Extended Abstract

### Introduction

In today's complex, dynamic, and highly variable environment, companies need to design and adopt strategies that can help them improve their performance. Because in such a competitive environment, companies are able to survive if they do not get left behind by the competition and keep pace with the changing and dynamic conditions of the competitive market, and this has made the need for innovation and entrepreneurship inevitable for the survival of organizations (Atefat Doost et al, 2013). On the other hand, company managers can benefit from entrepreneurial opportunities by using innovation capabilities as well as new marketing strategies and capabilities, so entrepreneurship and marketing are highly dependent on each other (Bordbar & Khani, 2012). Organizational agility is an important factor that enables the manager to deal with changes correctly, quickly and more effectively, to make the best use of potential opportunities arising from change, to move towards improving and advancing the organization and meeting the organization's future goals and needs; and to provide high-quality products and services in a relatively short period of time (Nikpour & Selajqeh, 2019). Today, it can be claimed with complete confidence that identifying and using organizational intelligence can increase the competitiveness of an organization and differentiate it from other organizations. By utilizing organizational intelligence, the organization increases the effectiveness of using existing information structures in line with its goals, and information is developed from an operational and limited state to use in the executive layers of the organization for the use of managers (Louis & Wilson, 2025). Considering that managers operate in organizations that are affected by their internal and external environments and, like humans, require the power to learn in order to respond to their own issues and problems. Therefore, the issue of organizational intelligence can be of great help to managers in this regard and enable them to respond to needs and problems and react to environmental changes in a timely manner, considering their organizational memory. This research attempts to examine the effect of knowledge sharing on organizational agility with the mediating role of employees' organizational intelligence and to answer the question of whether there is a relationship between organizational entrepreneurship and employees' organizational agility with the mediating role of organizational intelligence in water and wastewater departments of Qom province.?

### Theoretical framework

#### Organizational Agility

Goldman et al. (1995) defined agility as the ability of a manufacturer to respond quickly to sudden and unpredictable changes. Goldman and Nagel (1995) defined agility as a proactive response to changes, and Naylor (1999) defined it as the exploitation of changes as inherent opportunities inherent in turbulent environments. The ability to survive and thrive in an environment with continuous and unpredictable changes. Agility has actually become a paradigm for engineering competitive enterprises. The need for this new paradigm is based on the increasing rate of change in the environment, which forces institutions to respond proactively to changes. Markets and customers want cheap products that are tailored to their tastes and have quick access to them (Bahrami et al, 2016).

#### Organizational Intelligence

The Japanese T. Matsuda is also one of the creators of the theory of organizational intelligence, who considers this term to be a combination of two factors: organizational intelligence and machine intelligence. Today, Matsuda's theory is discussed in many scientific

and academic circles around the world. The concept of organizational intelligence and its application in today's organizations is so important and valuable that many countries such as France, Japan, Sweden and the United States have made significant progress in using organizational intelligence systems. It is worth noting that many experts generally use the terms "organizational intelligence" and "competitive intelligence" interchangeably (Hamidi et al, 2017).

### Organizational Entrepreneurship

**Corporate Entrepreneurship:** Processes in which a company engages in internal development with diversity. Diversity requires a new combination of resources to expand the company's activities in unrelated or nearly related areas for its current range of competencies. **Organizational Entrepreneurs:** They are visionaries who take responsibility for creating innovation of any kind within the organization. They are the ones who articulate and justify the reason for starting an idea (Chou, 2018).

(Louis & Wilson, 2025) In an article titled Asymmetric Model of Organizational Agility, they examined the effects of creativity in organizational processes on organizational agility of employees. The results of the study showed that employee creativity, scientific literacy, and organizational efficiency play an effective role in increasing organizational agility of employees. (Taheri & Seydi, 2023) In their study, they examined the relationship between organizational intelligence and organizational entrepreneurship of employees of Lamerd Cement Factory, considering the mediating role of organizational commitment, and concluded that there is a significant relationship between organizational intelligence and organizational entrepreneurship, considering the mediating role of organizational commitment. (Safari et al, 2022) In a study they conducted on physical education teachers in the cities of Momsani, they concluded that there was a positive and significant relationship between organizational intelligence and intellectual capital with entrepreneurial capabilities.

### Research Methodology

The research method is descriptive-survey in nature. The statistical population of the study consisted of 388 employees of the water and wastewater departments of Qom province. The sample size of this study was 184 people based on the Krejci and Morgan table. The stratified random sampling method was used. The library and field methods were used to collect data. The data collection tools were the standard questionnaires of organizational agility by Sharifi and Zhang (2004), organizational intelligence by Albrecht (2002), and organizational entrepreneurship by Anderson (2006). Confirmatory factor analysis was used to determine the validity of the research tool. Cronbach's alpha coefficient was used to determine the reliability of the research tools. Descriptive and inferential statistical methods were used to analyze the collected data. To test the research hypotheses, first the Kolmogorov-Smirnov test was used to examine the normality of the data distribution and the structural equation method was used to examine the effect of independent and mediating variables on the dependent variable using SPSS and LISREL statistical software.

### Research Findings

Descriptive statistics related to demographic information showed that 62% of the sample size of employees were men and the remaining 38% were women. People between 31 and 40 years old made up the largest sample size with 52%. People between 51 and 60 years old made up the smallest sample size with 7%. People with a bachelor's degree made up the largest sample size with 49%. People with a diploma and associate's degree made up the smallest sample size with 16%. People with 11 to 20 years of work experience made up the largest sample size with 54% and people with less than 10 years of work experience made up the smallest sample size with 15%.

Inferential statistics showed that the strength of the relationship between organizational entrepreneurship and organizational intelligence was calculated to be 0.71, which indicates a favorable correlation. The t-test statistic was also obtained as 8.26, which is greater than the critical t-value at the

5% error level, i.e. 1.96, indicating that the observed correlation is significant. The strength of the relationship between organizational intelligence and organizational agility was calculated to be 0.80, indicating that the correlation is favorable. The t-test statistic was also obtained as 9.08, which is greater than the critical t-value at the 5% error level, i.e. 1.96, indicating that the observed correlation is significant. The strength of the relationship between organizational entrepreneurship and organizational agility was calculated to be 0.54, indicating that the correlation is favorable. The t-test statistic was also obtained as 6.71, which is greater than the critical t-value at the 5% error level, i.e. 1.96, indicating that the observed correlation is significant.

### Conclusion

Based on the test of the first hypothesis, the research findings showed that there is a significant relationship between organizational entrepreneurship and organizational intelligence. The result of the test of the first hypothesis is explained as follows: people in different work units help each other and freely share information and ideas, and most employees see their relationship with the organization as a long-term relationship. In such circumstances, there is a natural mechanism at different levels of the organization to support innovation, and employees are supported in finding better ways of doing things. In addition, employees at different levels are allowed to question the accepted ways of doing things. In such circumstances, the skills of the employees of the operational units are developed in the organization and the organization responds to the needs of the employees. The research findings related to the test of the second hypothesis indicate the relationship between organizational intelligence and the organizational agility of the employees. The result is explained as follows: people in different work units help each other and freely share information and ideas, and most employees see their relationship with the organization as a long-term relationship. In such circumstances, there is a natural mechanism to support innovation at different levels of the organization and employees are supported to find better ways of doing work. In addition, employees at different levels are allowed to question the accepted ways of doing things. The research findings related to the test of the third hypothesis indicate the relationship between organizational entrepreneurship and organizational agility. The result is explained as follows: knowledge gained from experience is shared among organizational employees, and the organization's top management uses an appropriate electronic system to store and exchange employee information. In addition, the organization attaches importance to modeling successful organizations and ministries, and the knowledge and experience of employees are used to carry out exceptional projects. Communication networks are also used to use the knowledge of experts outside the organization, and finally, meetings are held with employees of other organizations to exchange knowledge and experience. In such circumstances, the organization's top management responds to the needs of employees, and employees are satisfied with the services provided by the organization. The results of the fourth hypothesis showed that organizational intelligence plays a mediating role in the relationship between organizational entrepreneurship and organizational agility. The result is explained as follows: the managers of the operational units use the knowledge and experiences of the employees in similar projects and the knowledge gained from the employees' expertise is shared with other colleagues. In addition, periodic discussion and exchange meetings are held between the employees of different units. On the other hand, the regulations (instructions) in the organization have changed and the employees and the manager have the necessary flexibility in the organization. The changes required by the client are made at a high speed and the cost of implementing changes in the organization is reduced. The results of the hypothesis test are consistent with and supported by the research findings of (Safari et al, 2022) and (Taheri & Seydi, 2023) and (Azma et al, 2017) and (Kiani et a, 2016).



In this regard, the following practical suggestions can be made: Providing services to employees as soon as possible. Carrying out activities in the organization as soon as possible. Processing data and information in the organization as quickly as possible. The services provided in the organization should be of the required quality. Developing the skills of employees in the organization. Different work units in the organization should cooperate with each other. The employees of the organization should do the work that is very important to them through the purposefulness of their work unit's programs. The organization's programs should be designed in such a way that employees feel that work activities are meaningful to them. Employee training programs should be designed in such a way that they gain sufficient mastery of the skills required for their jobs.