

Study the Effect of Individual Factors to Implementing the Agility Strategy in Isfahan Municipality

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Abstract

In this study we try to evaluate the effect of individual factors to implementing the agility strategy in Isfahan municipality in the period of 1391-1392. Furthermore this study is considered as descriptive survey. The data gathering tool was a questionnaire consisted of 56 questions. To confirm the validity of questionnaire the teachers' academic advisors and some managers' opinions were used and SPSS software was used to measure the reliability of that; By using this software, Cornbrash's alpha equal to 0/974, respectively. This questionnaire was distributed between managers and employees upper than 13 grade of the municipality in a random way. The Statistical volume of the sample using Cochran formula and Morgan obtained 325. Research data using various statistical tests such as the Kolmogorov - Smirnov, ranking Friedman, single-sample t and Pearson correlation were analyzed. Data analysis suggests that individual factors that include the level of professionalism of the staff, organizational commitment, and job motivation are effective to implementing the agility strategy.

Keywords: Agility Strategy, Organization, Individual Factors.

Introduction

Strategic agility is the ability of organizations to achieve lower production costs , higher market share , meet customer needs , facilitate the rapid introduction of new product or service , eliminating activities without added- value and increase the competitiveness of companies (Yusuf et al , 2010). In the other words, according to Kidd (1994) Strategic agility

is a fast and active accompany with the firm when it is encountered with unexpected changes and unpredictable environmental changes. In this research, the necessary infrastructure for implementing the agility strategy in Isfahan municipality is exposed as the style of individual agents.

In agile organizations, staff like organization's body deployed agility throughout the organization. . Since manpower is one of the most important assets of any organization and plays a key role in the success of the organization, activities related to human resources can be very effective in creating enterprise agility. It can be stated that the Agile organizations need staff more professional, multi-skilled and with sufficient skills to adapt to constant improvement and rapid developments inside and outside the organization. On the other hand, in agile organizations because of unforeseen changes may occur in the work, furthermore to meet the changing demands of the market, customers , laws , and ... staff should have a sense of commitment to the organization and they should help it to achieve goals are not easy to reach. . Such employees must believe in the values and goals of the organization and work towards meet them.

A review of the research literature

Karwowski et al (2007) study entitled " A review of enterprise agility: Concepts, frameworks, and attributes " have done. In that research they reviewed the existing knowledge in the field of organizational agility and nimble workforce and other organizational elements in order to extend the concept of agility across the organization. Furthermore, the overall characteristics such as flexibility, agility, responsiveness, speed, culture change, integration, low-complexity, high-quality products and customized, that is used throughout the organization, are recognized.

Morty et al (2006), research as " agility areas of supply chain of a firm: creating scale and model tests " conducted. The results suggest that a firm's supply chain agility directly affected by flexibility in manufacturing processes in supply chain affected. The results also show that the agility of supply chain affected in domestic supply chain by existed flexibility companion the three processes (preparation / supply, manufacturing, distribution / supply). The population of this study consisted of all of the general managers, vice president and production managers on production companies with hundreds of employees. At least about a hundred and twenty surveys were answered.

Bagherzadeh et al (1389), in a study entitled " Evaluation of agility capabilities in Public Organizations (A Case Study of Post Office in Mazandaran) " showed that the situation of four agility capabilities(responsiveness, competence , flexibility , and speed) in the Office of Evaluation is undesirable , and this can be regarded as a serious warning for this organization. The results indicate that there is a significant gap between the existing and desired agility capabilities. In this study, the effect of agility strategy on four mentioned capabilities (agility organizations with which they are measured) were tested and evaluated until the results were mentioned, earned.

Jafarnejad and colleagues (1388), in a study entitled " offering a method to measure agility in supply chains using composition of graph theory, matrix approach and fuzzy logic and" based on the proposed model, Ismael and et al, use of responsiveness, flexibility, speed and competence as key indicators to measure agility. To quantify these indicators, fuzzy logic, graph theory and logic matrix have used. . Their research has shown that speed and flexibility are important factors in the supply chain agility. Another important factor that can be

mentioned is virtual communication along the chain, and use of the modular design. Indicators of competence and common culture and shared decision are infective.

Agility definitions that have been proposed include:

Agile word in the dictionary means: fast moving, active and agile, able to move quickly and easily, and being able to think fast in a smart way. Many definitions have been proposed for agility but none of them are not against each other and they do not contradict each other. Generally these definitions show speed and change ideas in the business environment. Considering agility as a new discussion, there is no comprehensive definition that is accepted by everyone.

Yakuka U.S. Institute in 1991 defines agility as: a production system with special abilities include the domestic capabilities, hardware and software updates, efficient information systems and human resources. Human resources are in the service of the company and always to meet the changing needs of the organization plan and ready to accept any changes in the internal and external environment of the organization.

Flydnr and Fukurka (1998) define agility as: the ability to produce a wide range of products with low price, high quality, customization and short waiting time.

According to Sharifi and Zhang (1999), agility is the ability of any organization for sensing, understanding and predicting changes in the work environment. Such an organization must be able to detect environmental changes, and look to them as growth and prosperity agents. Elsewhere they have another definition of agility as: the ability to overcome unexpected challenges to encounter with an unprecedented threat business environment and to achieve advantages and benefits of changes as opportunities for growth and advancement. The latter definition is more comprehensive and it has greater affinity with that of our present discussion.

Individual factors include the following:

The level of professionalism of the staff and its relationship with the agility

Professionalism is the level of formal education and training of staff. For example, if in an organization, employees for taking jobs, force to pass long term courses, it is said that this organization is very professional. To determine the level of professionalism of the organization, average years of education and training of its staff will be used. This period, for medical profession seems to be 20 years and in the course of construction companies have approximately 10 years. Since that manpower is one of the most important assets of any organization and plays an essential role in the success of an organization, so activities related to human resources can have variety affections in creating enterprise agility.

In general, organizations are to use of the number of appropriate people with certain characteristics in the appropriate time and place. It can be said that agile organizations need to have more professional staff with sufficient skills to adapt to constant improvement and rapid developments inside and outside the organization. In the following four categories of thinking associated with the agility in the knowledge organizations is mentioned:

- Conceptual knowledge (knowing what), which is an introduction to professional discipline.
- Advanced skills (know- how) that involves applying the rules for organizing complex and compelling problems of the world.

- Understanding Systems (knowing why) that contains knowledge about causal relationships in complex organizations, and the ability to anticipate unintended consequences or intelligence interactions.
- Self-motivation creativity (keep why), which includes desire, motivation, desire and innovation to adapt to changing external conditions. Self-motivation creativity is essential for agility (Hamid et al, 1388).

Organizational Commitment

By reviewing on theoretical concepts associated with organizational commitment, we understand there is not full agreement on a single and common definition of organizational commitment between behavioral sciences experts and psychology experts. They have tried to reveal the hidden aspects of organizational commitment from different perspectives. Porter et al (1983) defined commitment as the rate of individual's Engagement with a particular organization and determining his or her identification with that, furthermore commitment has been defined as the individual's involvement with the organization. . The applied index is used to measure this variable that includes an assessment of the motivation, the desire to remain in the organization and determining the individual identification based on the values of the organization. Organizational commitment can be defined as the connection of the soul with organization where the feeling of being busy with work, loyalty, belief and values of the organization are in place. For this reason, the employees believe to the values of the organization are used as affecting variables to implementing agility strategy. Porter and Estyers (1983) defined organizational commitment as: the relative degree determination of one's identification with a particular organization and his involvement with the organization. This definition includes three elements:

- 1 - A strong belief in the organization's goals and values.
- 2 - The tendency of considerable efforts for the organization.
- 3 - Strong and deep wish to continue membership in the organization.

For this reason, desirable to remain employees in the organization is used as one of affecting items to implementing agility strategy in the organization.

Motivation in the organization and its relationship with the agility

Because of significance that agile organizations granted for their human resources, then they are always in search to find the best way to create motivation for staff and to spend time and energy for motivating employees to work and creativity.

Leaders of these organizations have used the following factors for motivation:

- Trust staff Subdivisions.
- Respect to individuals, in these organizations honor individuals have been established and in all cases to prevail.
- Participate employees to decision making and carrying out.
- Expect high productivity and efficiency of employees (Peters and Waterman, 1982).

Correct understanding of motivation can serve as valuable tools to recognize the causes of behavior in organizations and to predict the effects of management actions to occur.

Understanding Motivation can also be directed behaviors in organizations so that individual and organizational objectives such as agility are provided. Different definitions of motivation are presented. It is a process whereby a person moves or stimulates him (Brin, 2003) , the technological process witch direct individual or make his determination Stronger (Lyndnr , 1998) , but in the workplace , motivation means people's tendency to try and keep it to achieve organizational goals (deylaman , 2003).

Research method

The society of this study consisted of employees of the municipality, which includes 14 regions and 8 times totally 2101 patients took part in this research who had been vice president with Morgan Cochran formula.

Implementing the processes of agile strategy is used in the cited organization is applicable. 2 variables topics namely parameters for implementing the agile strategy and individual factors are investigated in this study. The variables of individual factors as previously mentioned are divided into three categories: The level of professionalism of the staff, organizational commitment and motivation in the organization. This research is descriptive- survey, therefore the method for collecting data is for testing the hypothesis is a questionnaire. The following formula is used to determine the sample size.

$$n = \frac{\frac{z^2 pq}{d^2}}{1 + \frac{1}{N} \left(\frac{z^2 pq}{d^2} - 1 \right)}$$

N= Size of society

Z= the standard normal probability

D= the maximum size of an optimal sampling error (the accuracy of this study, 0/05 is considered

n= Size of Sample

Descriptive statistics of individual factors

Table1:

Descriptive statistics Table individual factors

statistics	individual factors
Mean	3/96
Standard deviation	0/61
Minimum	1/69
Maximum	5
bias	-1/17
Standard deviation of bias	0/136
Strain	1/68
Strain SD	0/271

Individual factors mean equal to 3/96 and standard deviation equal to 0/61.

The lowest values among the scores were 1/69 and maximum score 5 have been reported. In comparison with the strain (1/68) and bias (-1/17) with twice the standard deviation of the normal distribution of data, it is confirmed that the distribution of strain is positive.

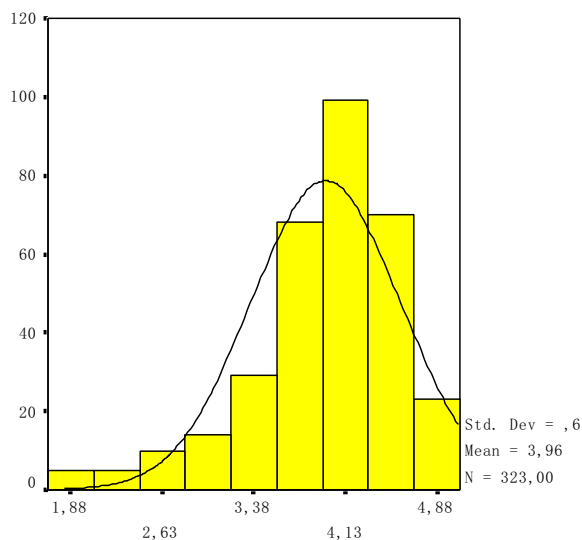


Figure 1: histogram of individual factors

Investigate the normal distribution of data (Kolmogorov -Smirnov)

In order to study if distribution of a quantitative variable is normal, Kolmogorov-Smirnov (KS) test is used. In this test, the null hypothesis claims about the distribution of data (Azar and Momeni, 1386). In the present study, the normal distributions using the KS tests to be examined.

Table2:

Table Kolmogorov–Smirnov

Variable	Mean	Standard deviation	Kolmogorov–Smirnov	Sig
The level of professionalism of the staff	3/99	0/58	1/34	0/54
Organizational Commitment	3/77	0/7	1/54	0/67
Motivation in the organization	4/12	0/79	1/34	0/54
Individual factors	3/96	0/61	1/12	0/15

As shown in Table 2, the results of this test indicate that all of the samples follow a normal distribution because sig 0/05 is bigger than significant amount.

The major hypothesis

Individual factors effect on implementing the agility strategy in Isfahan municipality.

Table3:

The effect of individual factors on implementing agility strategy

The mean value	sig	Degrees of freedom	The test statistic t
3/96	0/000	324	27/29

Comparison of significance level (Sig = 0) with a significance level of 0/05, indicating the null hypothesis (individual factors have no effect on implementing agility strategy) will be rejected .So hypothesis of the study is confirmed.

Mean value equal to 3/96 indicate the high effect of individual factors on implementing the agility strategy in Isfahan municipality.

The first sub-hypothesis

The level of professionalism of the staff effects on implementing the agility strategy in Isfahan municipality.

Table4:

The effect of level of professionalism of the staff on implementing agility strategy

The mean value	sig	Degrees of freedom	The test statistic t
3/99	0/000	324	29/89

Comparison of significance level (Sig = 0) with a significance level of 0/05, indicating the null hypothesis (the level of professionalism have no effect on implementing agility strategy) will be rejected .So hypothesis of the study is confirmed.

Mean value equal to 3/99 indicate the high effect of level of professionalism on implementing the agility strategy in Isfahan municipality.

The second sub-hypothesis

Organizational commitment effects on implementing the agility strategy in Isfahan municipality.

Table5:

The effect of organizational commitment on implementing agility strategy

The mean value	sig	Degrees of freedom	The test statistic t
3/77	0/000	324	19/22

Comparison of significance level (Sig = 0) with a significance level of 0/05, indicating the null hypothesis (Organizational commitment have no effect on implementing agility strategy) will be rejected .So hypothesis of the study is confirmed.

Mean value equal to 3/77 indicate the high effect of Organizational commitment on implementing the agility strategy in Isfahan municipality.

The Third Sub-Hypothesis

Motivation in the organization effects on implementing the agility strategy in Isfahan municipality.

Table6:

The effect of Motivation in the organization on implementing agility strategy

The mean value	sig	Degrees of freedom	The test statistic t
4/12	0/000	324	24/74

Comparison of significance level (Sig = 0) with a significance level of 0/05, indicating the null hypothesis (Motivation in the organization have no effect on implementing agility strategy) will be rejected .So hypothesis of the study is confirmed.

Mean value equal to 4/12 indicate the high effect of Motivation in the organization on implementing the agility strategy in Isfahan municipality.

Friedman Ranking for affecting factors on organizational agility

Table7:

Friedman ranking

The average rank	Factors	Rank
10/21	Motivation in organization	1
8/65	levels of professional staff	2
6/46	Organizational Commitment	3
396/5	Chi-square value	
13	Degrees of freedom	
0/0	sig	

According of the above table, affecting factors on implementing agility strategy have significant differences based on Friedman ranking. Among these components work motivation or motivation in the organization was identified as the most important factor and organizational commitment was recognized as the least important factors.

Correlation table

Correlation between affecting factors on implementing agility strategy

Table 8:

Correlation between individual factors

Work motivation	Organizational Commitment	levels of professional staff		
0/7	0/65	1	Pearson correlation	levels of professional staff
0	0	-	sig	
0/7	1	0/65	Pearson correlation	Organizational Commitment
0	-	0	sig	
1	0/7	0/7	Pearson correlation	Work motivation
-	0	0	sig	

Investigate the correlation between individual factors indicates that these correlations in the 0/05 level was significant and correlation between these factors are similar and closely matched.

Structural modeling of individual factors to implementing the agility strategy in Isfahan Municipality

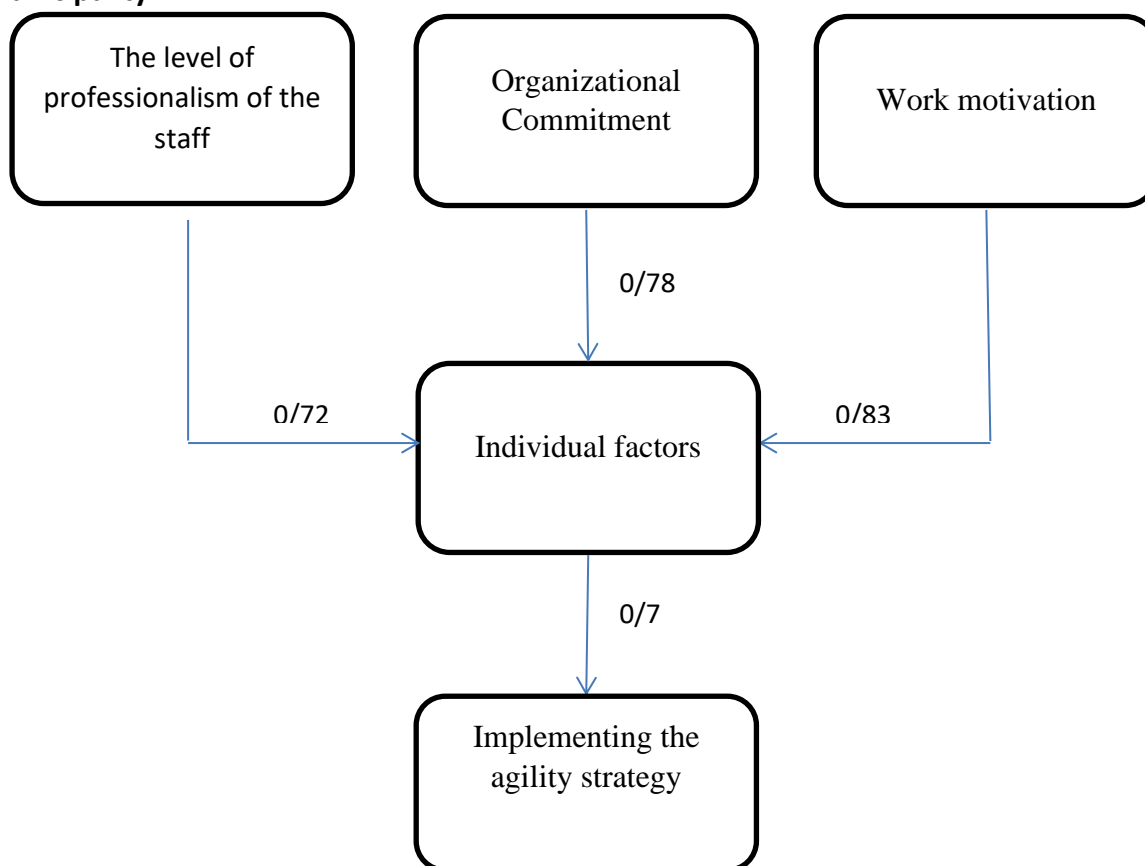


Figure 2: Structural model of individual factors

According to this model the impact of individual factors to implementing the agility strategy is 0.7. Among these factors work motivation is the parameter which has the greatest influence to implementing the agility strategy in Isfahan municipality.

The results of the research hypotheses

The premise of the question was: Do individual factors effect on implementing the agility strategy in Isfahan municipality?

According to tables 3, 4,5,6,7 and 8 main hypotheses about the impact of individual factors to implementing the agility strategy of the municipality of Isfahan was approved. Accordingly, individual factors include the level of professionalism of the staff; organizational commitment and work motivation are effective in implementing agility strategies. Based on the model, the effect of this factor on implementing of agility strategy is 0.7. Furthermore this result is consistent with Sherehiy and Karwowski (2007) and Sharifi and Zhang (1999) and Shaffer (1997). In agile organizations, employees such as organization's physical, flows agility throughout the organization. . So the question seems to be answered.

The Results of The Application of Research Findings

Since manpower is one of the most important assets of any organization and plays a key role in the success of the organization, organizations must use of the number of appropriate people with certain characteristics in the appropriate time and place. It can be said that agile

organizations need to have more professional staff with sufficient skills to adapt to constant improvement and rapid developments inside and outside the organization. So in time of employment, companies should take note on level and major of their education, training acquired, being multi- skilled and being able to solve the problem individually. After that try to promote the level of employee's profession proportionate with organization's needs.

One of the issues that have significant effect to make organizations more agile is a high level of organizational commitment of employees. To enhance the level of organizational commitment, companies should increase the amount of promoting in the career opportunities, job security, organizational participation, employee's perception from organizational support, and organizational justice. The increase in these cases, made employees to believe more about the values and goals of the organization and as a consequence, in times of crisis organization can act more agile.

An organization that wants to guarantee its lifetime in a very changeable environment, should makes many efforts to improve staff motivation levels .Just as the first time of recognizing management science and study and research in work environment, that employees believe this factor is very vital to growth, progress and reaming of staff and organizations in the competition world, the municipality employees believe work motivation is the most important factor that plays key role on implementing the agility strategy in the municipality of Isfahan as well. By discriminating motivation, behaviors can be directed as a way that organizational and individual objectives have met. So to increase the level of employee's motivation in the organization, some issues like favorite work conditions , good supervision , career success ground , good salary and job security should be provide. Finally deal with employees as human capitals, and appreciated from them.

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