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THE RELATIONSHIP BETWEEN OUTSOURCING AND ORGANIZATIONAL AGILITY IN MAZANDARAN UNIVERSITY OF MEDICAL SCIENCES AND HEALTH SERVICES

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ABSTRACT

The present research aimed to investigate the relationship between outsourcing and organizational agility at Mazandaran University of Medical Sciences and Health Services. The authors of the current work used survey research method as well as a standardized outsourcing questionnaire tool and an agility questionnaire designed by Rahnavard and Seifolahi. Five hundred and fifty two employees of Mazandaran University of Medical Sciences comprised the statistical population of the research. Based on Karjesi and Morgan table, the sample size consisted of 226 people and the questionnaires were distributed among the sample population through systematic sampling. The results of the research showed that there was a significant relationship between outsourcing and organizational agility of the employees of Mazandaran University of Medical Sciences. In addition, the relationship between different characteristics of outsourcing (customer orientation, strategic alignment, human resources, and internal processes) with organizational agility is proven; however, the financial perspective of outsourcing and organizational agility has not yet been proved. Finally, the results of the research demonstrated that an improvement in outsourcing can lead to a better organizational agility.

Keywords: *Outsourcing, Organizational Agility, Mazandaran University of Medical Sciences and Health Services*

INTRODUCTION

The start of the 21st century witnessed a tremendous change in market values and the needs of its customers. This caused modern organizations to encounter fast and inevitable changes in customers' attitudes. Modern age has brought with it environmental uncertainty and fast-paced changes which on the one hand threaten the organization and on the other hand can be an opportunity for the it for gaining the upper hand in business activities (Jafarnezhad *et al.*, 2013). From early 1990's, organizations came to this understanding that agility was an important solution for dynamic management and environmental changes; this could indeed be a strategy in enhancing the capabilities of productive companies in being competitive (McKenzie and Aitkin 2012). In tumultuous markets, organizational agility is considered as the capacity in identifying and using opportunities before the rivals (Zingier and Owen, 2013). In fact, agility is the ability to survive in a competitive environment which is constantly changing (Oliveira *et al.*, 2012).

Recent research done by McKenzie showed that nine out of ten managers perceive organizational agility as an important and a necessary asset in a successful business. The results of the research showed that agility can result in an increase in income, and an increase in customer satisfaction, improvement and rise in speed (Sull, 2010).

In fact, organizational agility is based on the three principles of quality, speed, and expense and organizations should do their utmost to make the best use of the above three principles (Yarmohammadian *et al.*, 2013). One of the methods used in improving quality, speed and expense and the subsequent organizational agility is through handing over some of the responsibilities of an organization to other companies which is called outsourcing. As a matter of fact, in recent years, outsourcing has become an important tool in the improvement of the performance of many organizations

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and has thus drawn the attention of many managers to itself. Some organizations, in order to raise the quality of their services, have started using outsourcing. It seems that organizations, through outsourcing, can concentrate on more value-added activities and maximize their efficiency. It can, however, reduce innovation and control over different activities (Kremic *et al.*, 2006). The results of some new research show that outsourcing can considerably facilitate the need of an organization in reaching agility (Kang *et al.*, 2012).

It is expected that by optimizing various activities in state universities, officials can have more time at their disposal for upgrading the quality of education and prepare the ground for a more dynamic learning environment. This can in return help the organizational agility of that particular institution. Therefore, the current research attempts to answer the question of whether there is any relationship between outsourcing and organizational agility at Mazandaran University of Medical Sciences and Health Services.

Purpose of the Study

Identifying and determining the relationship between outsourcing and organizational agility at Mazandaran University of Medical Sciences and Health Services was the primary purpose. The secondary purposes of the study were:

- Identifying the financial aspect of outsourcing with organizational agility
- Identifying the relationship between customer-oriented outsourcing and organizational agility.
- Identifying the relationship between outer-environment aspect of outsourcing and organizational agility.
- Identifying the relationship between customer-oriented outsourcing and organizational agility.
- Identifying the relationship between outside environment aspect of outsourcing and organizational agility.
- Identifying the relationship between strategic alignment out-sourcing and organizational agility.
- Identifying the human resources aspect of outsourcing with organizational agility.

Research Questions

The relationship between out-sourcing and organizational agility at the Mazandaran University of Medical Sciences was the primary research question. The secondary research questions were:

1. Is there a relationship between outsourcing and organizational agility?
2. Is there a relationship between out-sourcing customer orientation and organizational agility?
3. Is there a relationship between out-sourcing outside environments with organizational agility?
4. Is there a relationship between strategic alignment aspect of outsourcing and organizational agility?
5. Is there a relational between outsourcing human resources and organizational agility?
6. Is there a relationship between outsourcing internal processes and organizational agility?

Conceptual Model of the Research

Based on theoretical principles, the conceptual model of this research consists of the following components:

In a systematic activity, some organizations implement a number of different measures in order to obtain optimal output such as performance improvement, and agility.

Outsourcing, with the purpose of boosting performance, can logically lead to more agile organizations and therefore considering the theoretical framework of the research, two general variables have been investigated in this study.

In the first part of the study, the different aspects of outsourcing taken from the conceptual model of Rahnavard and Seifolahi (1390) are presented. The second part of the organizational agility model is based on Sharifi and Zhung's (1999) conceptual model.

There is a relationship between these two variables. Based on this model, there is also a relationship between different aspects of outsourcing and organizational agility. This means that outsourcing and its components can lead to organizational agility.

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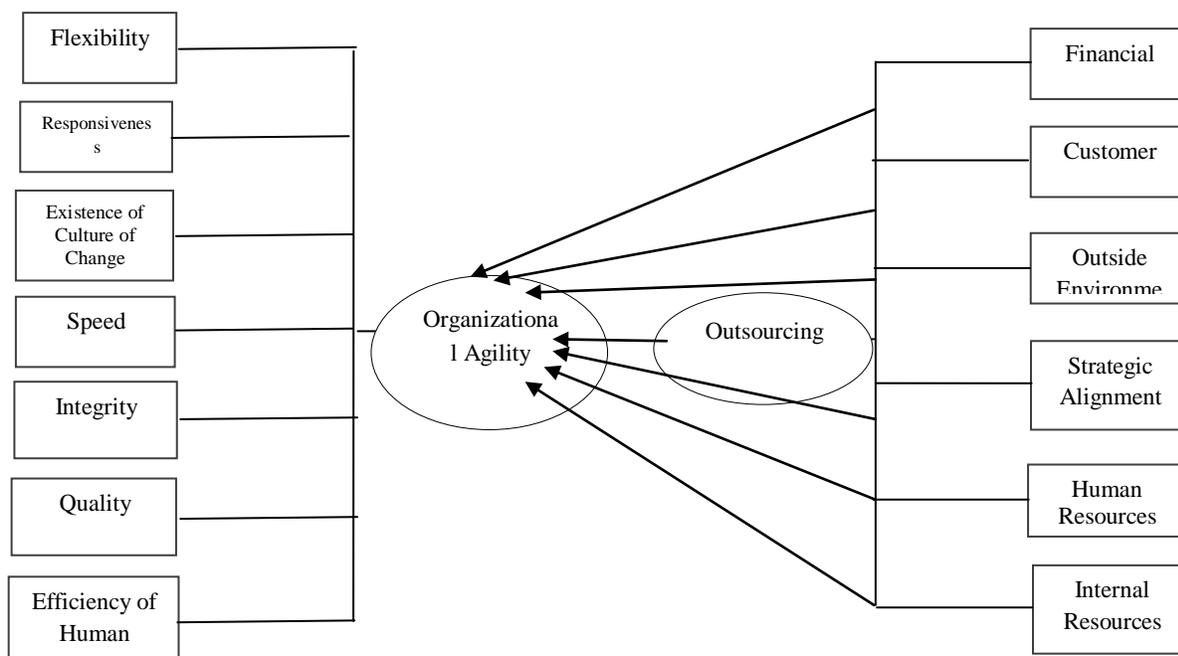


Figure 1: Conceptual Model of the Research (Adopted from Sharifi and Zhung, 1999; Rahnavard and Seifolani, 1390)

Review of the Related Literature

Definition of Agility

Longman dictionary defines the word agility as ability to move quickly and easily and the ability to think very quickly and intelligently. It is also the capability of a company to quickly change or adopt in response to changes in the market. A high level of agility in an organization can help it to react wisely to the emergence of fresh competitors, new industry-changing technologies, or sudden changes in market conditions. If an organization can successfully tackle emergent occasions then it can be called agile (Azar and Pishdar 57:1390). Though there have been many different definitions of the word “agility”, none contradict each other. All definitions given, one way or another, express the idea of speed and change in the business environment. Since agility is a relatively new topic in business courses, no one given definition exists. Both Sharif and Zhuns (1999) are of the opinion that agility is the ability of an organization in perceiving, feeling, and predicting changes in a working environment. Such an organization should have the ability to sense environmental changes and look at them as possibilities for growth and development. They also see agility as the capability in overcoming unpredictable challenges and confronting unprecedented threats in the work environment (Sharif and Zhung, 1999).

Maskell (2001) has defined agility as the ability in improving and growing in a continuous and unpredictable environment. And thus, organizations should not fear any changes in their business environment; they should instead use such changes as opportunities for achieving competitive advantages in a market environment (Maskell, 2001).

Vernadat believes that agility can be defined as close organizational alignment with changing work needs in order to gain a competitive edge in business dealings. In such an organization, the goals of the employees are aligned with the goals of the organization and have two aims that are coupled with giving a proper response to the changing needs of customers (Vernadat, 1999). Goldman (1995) believes that organizational agility can be defined as an organization’s ability in reacting swiftly to the needs of the market and its customers. Kidd (1994) believes that in order to operationalize agility paradigm, it should be conceived as a combination of numerous institutions with each having a special skill or capability for common activities. This way they are able to cooperate with each other and can respond in a timely manner to various customers.

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An agile organization is one that can handle all business emergencies in a speedy and wise manner; it also has very high level of adoptability in reacting to unprecedented and unpredictable events and the market needs of its customers. In such a business, there will be processes and structures that facilitate speed, adaptability, and strength. It will also have a structure and a system that can show a strong spirit of competition. Such definitions of agility are of an organization that is dynamic, adaptable, and growing. The tendency toward being dynamic is caused by the needs of the day. The conditions that make an organization agile today may not necessarily have the same impact at another time. One should not also forget that a market environment can have a serious effect on the agility needed. This changeability is mainly due to the fact that agility will not happen unless there is a movement toward adaptability and alignment. And last, agility is growth-based and utilizes the ability of an organization in understanding and restructuring strategies and also introducing new innovations and skills (Razi, 2008).

Definition of Outsourcing

A dictionary definition of the word outsourcing would define it as making profit through outside sources. This strategy happens when an organization no longer uses its internal resources to engage in a project in achieving its goals. Instead it makes use of an outside company (Mokhtari, 2013). Outsourcing is the provision of a certain type of service from one company to another (Alvani *et al.*, 2009). Outsourcing consists of the two words *out* and *sourcing*. In order to better understand the meaning of the word outsourcing, one needs to know the meaning of the word sourcing. *Sourcing* means the act of giving and giving the right of decision making to another person (Seyed, (2012). The following are some sample definitions of the word outsourcing:

According to Gibson (1996), outsourcing is the practice used by a company in transferring portions of its work to outside suppliers rather than doing it internally (Rahnavard and Seifolahi, 2012). Cohen and Young in their book *Beyond Outsourcing: Achieving Growth and Agility* see outsourcing as a vitally important asset in getting control of their sourcing decisions and making sure that their service relationships deliver long-term value and support business strategies. They also set an outsourcing that is in complete alignment with other strategies of the organization, especially strategies that lead to the improvement of human resources as the main condition for achieving success (Cohen and Young, 10-11:2005).

Review of Literature in Iran

We could not find, in our review of literature, any research that could shed light on the relationship between outsourcing and agility. In the research background, however, each one of these variables is independently investigated. The following are some of the related research.

Mosazadeh *et al.*, (2014) carried out a research entitled “Identification and Prioritization of Hospitals Capable of Being Outsourced Based on Relevant Indexes”. The outcome of the research showed that using outsourcing can result in an efficient management of resources and a rise of customer satisfaction. Since many hospital wards are potentially able to outsource many of their services and activities, it can be used as a means to measure the level of success by determining the specific indexes.

Madhooshi and Kohkan (2013) conducted a research in which they studied the effect of outsourcing strategy on the productivity of some branches of Eghtesad Novin banks. The result of the research showed that outsourcing had no significant effect on any productivity components. There have, however, been positive and significant relationships among the components of productivity. As a result, the use of outsourcing as a strategy had little effect and did not result in an increase in productivity among Eghtesad Novin banks of Mazandaran.

Nikpour and Berkem (2012) in a research entitled “Organizational Agility and the Model of an Agile Organization” attempted to conduct a research on the literature available and then list the needs for an agile organization, the characteristics of an agile organization, models of an agile organization, agility capabilities, ways of improving them, the tools and principles of designing an agile organization and the benefits of improving the agility of an organizational are dealt with.

Azar and Pishdar (2012) in a research entitled “Identifying and Measuring Organizational Agility” measured the level of organizational agility in three informatics companies by using a questionnaire. The

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results of the research showed that by upgrading the level of the supreme council of informatics, organizational agility level would not rise. It also appeared that these two issues are independent of each other. Additionally, it was determined that the existence of a series of factors such as the implementation of simple and fundamental changes as well as small changes could lead to a difference. And therefore, informatics organizations can, through raising their capabilities, improve their competitive edge in this industry. Ebrahimian and Ebrahimian (2012) in a research entitled “Organizational Agility; Organizational Responsiveness and Flexibility” showed that traditional organizations cannot give a timely response to the changes in the environment and to the needs of their customers.

This can endanger their survival at a later stage. In addition, a study and an analysis of other different sources showed that learning organizations as well as virtual organizations have the upper hand in adapting themselves with the environment around them and this way avoid being pushed off stage.

Hosseini *et al.*, (2012) in a research entitled “Outsourcing Programs Effectiveness Level at Islamic Azad University, South Tehran Branch” concluded that outsourcing accelerated the speed of work being done, better control of activities, increase in the quality of the service provided, use of technical skills, liberation of capital, decrease in workforce and a better time management by the officials of the university. “An Investigation of the Relationship between Organizational Agility and Job Satisfaction of the Employees of Public Offices of the City of Kerman” is the title of a research done by Nikpour and Salajeghe (2011). It was a descriptive and correlational research which was carried out through survey method. The statistical population of the research was comprised of 1915 public employees of some state organizations in the city of Kerman in 2011. The research sampling was based on systematic classification and 322 people were selected as research samples. In order to analyze the data the inferential and descriptive method was used and the data collection instrument were researcher-made questionnaires for measuring organizational agility and job satisfaction. The research findings showed that there was a significant relationship between organizational agility and its sub-variables such as responsiveness, qualification, flexibility, and speed and job satisfaction. Mahmoudi *et al.*, (2011) in their research entitled “Study of the Use of Outsourcing Strategy on the Productivity of the Banking Industry; Case Study of Eghtesad Novin Banks of the Province of Mazandaran”. The researchers found out that there was not any significant relationship between outsourcing and the productivity components.

After studying the conceptual models of agility, Fathian (2011) in his research entitled “Introducing a Model for Agility in Organizations” proposed a model for boosting agility. He, then, studied it through the perspective of factor analysis method. The final model had such varied features as speed, responsiveness, flexibility, efficiency development, products and service improvement, and customer data enrichment.

Ghasemi in his research entitled “Identification and Analysis of Effective Factors on the Agility of the Employees of Melli Bank of Sanandaj” came to this conclusion that the employees of the bank enjoyed an optimal level of agility. The influencing factors in the agility of the employees of the bank were a positive attitude toward change and new technologies and bank data systems, reaction to the changes in the environment and the attitudes of the customers and good relationship among the employees of the bank.

Rahnamay *et al.*, (2009) in a research entitled “Organizational Agility and the Role of Human Resources in Its Development” concluded that an agile organization is based on aligning technological information, employees, and working processes in a coherent and flexible system.

Review of Related Literature Overseas

Elinder and Jordahl investigated political preferences and public sector outsourcing in Swedish nurseries and primary schools. The result of the research showed that outsourcing models in above-mentioned places used Canadian models.

Al-ahmad and Al-oqailiin their research entitled, Towards a Unified Model for Successful Implementation of Outsourcing and Reversibility of Information Systems tried to introduce a conceptual framework which can result in a successful outsourcing project. One of their main goals was to provide a conceptual framework that could help implement both reversibility and outsourcing successfully. In addition to the dangers associated with the process of outsourcing, many researchers concentrate on the

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outsourcing process after the relationship between the organization and the vendor is determined while the activities that are related to post-outsourcing and pre-sourcing are not taken into consideration or generally ignored. Another goal of the research was to integrate the outsourcing phase with pre-outsourcing and post-outsourcing phases.

Kang *et al.*, (2012) in a research entitled “The Role of Organizational Control in Outsourcing Practices: an Empirical Study” concluded that there was a significant relationship between outsourcing strategies, organizational control and the results of outsourcing performance. Their findings also suggested that for having a good outsourcing, output control and process control are suitable in creating appropriate outsourcing practices.

Lee and Choi in their study of the role of trust on IT outsourcing came to note that continuous trust could directly impact outsourcing benefits such as improved performance of outsourcing systems, improvement of services, increase in IT capabilities and accessibility to skilled personnel.

Lee and Kim in their research entitled “The Impact of Outsourcing Services on the Value of a Company” stated that outsourcing could generally lead to a positive value in a company. They, however, might influence differently the various layers of decision making in outsourcing.

Based on the research results of Lussier, the use of outsourcing methods would not only lead to reduction of job classes, deregulation and the hierarchy of superiors and inferiors, it could also have fruitful effect on the efficiency level and improve production and could help reduce costs through the use of timely monitoring.

Gewald and Dibbern (2009) studied the risks and benefits sensed by top managers as deterring factors in outsourcing business processes. The results of the research showed that the sensed risks and benefits could be good factors in predicting outsourcing concepts in business processes.

A study of outsourcing in non-clinical sectors of Taiwanese hospitals showed that most of the outsourcing happened in garbage collecting sector and the least amount of outsourcing happened in the upkeep of hospital instruments. In the clinical sector, most outsourced sectors were services related to hemodialysis and ambulance and the least outsourced sector was related to food, pharmacy, and nursing (Hsiao *et al.*, 2009)

Bellenghi *et al.*, (2008) in their study revealed that more than 80 percent of American hospitals, according to US Association of Health Information outsourcing services, have outsourced the medical information to special companies. They hope they can, this way, reduce the burden of executive affairs.

Chris (2008) In a research introduces eleven factors in outsourcing other countries which play an important role in bringing in foreign revenues; those factors are: infrastructure (basic structure), security, skill, Workforce quality, outsourcing reality (having a proper understanding of the contradictions of the target country), the geopolitical conditions, culture, time difference, difficulty in controlling and visiting the site in the target country, difficulty in transferring resources, price increase trend, and workforce reaction. Chian and Chen (2008) categorized the parameters affecting outsourcing into four managerial, strategic, economic and qualitative considerations. The results of the research carried out by Baloh *et al.*, (2008) showed that an influential factor in a successful outsourcing can depend on bilateral relations that are based on the cooperation and participation of a receiving organization and an organization that provides outsourcing services. A participation that is accompanied by research and development can ease access to new scientific sources, continuous scientific innovations, creation of knowledge and a reduction in internal expenses of an organization.

Qumer and Henderson-Sellers (2008) conducted a research entitled “A Framework to Support the Evaluation, Adoption and Improvement of Agile Methods in Practice”. They studied agility from four perspectives or dimensions. The first one was method scope characterization which was divided into eight parts. These eight indicators are: the size of the project, the size of the team, the method of development, the simplicity of coding, technology environment, physical environment, business culture and abstract mechanism.

Their second perspective is agility characterization which is divided into five parts: flexibility, speed, learning and responsiveness. Considering the indicators that were analyzed by different researchers, it is

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necessary to predict the agility indicators of an organization in order to raise the efficiency and exactness of the results. Tibor (2006) in his research recounts a number of factors such as reduction in expenditures, raising quality as benefits and some others such as losing data and an increase in prices as risk factors. These are actually the main reasons why an organization decides to avoid or resort to outsourcing. If there is a decision to make use of outsourcing, then effective factors such as expenses, environment, strategy, activity features, will specify the kind of activity that can be outsourced. Appendix A shows summary of the related research.

MATERIALS AND METHODS

Research Methodology

Since the current research describes the variables under study and their relationship with each other, in categorization of research plans it is a descriptive and posteriori kind of research in which statistical and qualitative methods of research are used in analyzing and processing data. The methodology used in this research is descriptive and correlational; and through this research method the relationship between outsourcing and organizational agility is investigated.

The statistical population of the research is comprised of all the 552 employees of Mazandaran University of Medical Sciences. In this research, considering the magnitude of the statistical population and by using Krejcie and Morgan model, 226 people were used as research samples. And in order to hand out the questionnaires systematic sampling model method was used. In this method a computer produces a random list of 230 employees with high school diplomas and higher education degrees in Excel software and then the questionnaires are distributed among them. Overall, 230 questionnaires were collected; out of 230 questionnaires, 226 were usable. In collecting data for this research the survey method and questionnaire tool were used. Rahnavard and Seifolahi's (2012) questionnaire tool was used to determine outsourcing and Sharif and Zhung's standardized questionnaire was used to determine the organizational agility level.

Outsourcing Questionnaire of Rahnavard and Seifolahi

The questionnaire contains 22 items and based on Likert scale (1. very much 2. much 3. medium 4. low 5. very low). This questionnaire measures different customer perspectives, internal processes, human resources, financial, strategic alignment and outside environment of outsourcing).

Agility Questionnaire of Sharif and Zhung

Agility questionnaire designed by Sharif and Zhung (1999) has 31 questions and 5 answers aiming to measure the agility of an organization; it also measures the flexibility, responsiveness, efficiency of human resources, speed, and culture of change, integrity, and quality.

Validity of Measuring Tool

In this research, in order to choose the questionnaires, first sources available and related to the subject of research were studied and then Sharif and Zhung's standardized outsourcing questionnaire as well as Rahnavard and Seifolahi's outsourcing questionnaire was used. Then the supervisor of the dissertation was consulted with about the questions of the questionnaires and only then the validity of the questionnaire was confirmed.

Reliability

Reliability is a property of the measuring instrument which shows equal measures in similar situations. It is natural that the ability of a measuring instrument would change from one situation to another. The reliability of Rahnavard and Khanvand's (2009) outsourcing questionnaire was determined by Cronbach's alpha test of 0/91. In this research, in order to determine the reliability of the research the pretest method was used. In the pretest, 30 employees of this organization took part. Reliability analysis of the items was determined through internal consistency and the reliable analysis of Cronbach's alpha. The results of the pretest are given below:

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Table 1: The reliability of the research tool

Questionnaire	Number of Items	Frequency	Alpha Index
Organizational Outsourcing	22	30	0/881
Organizational Agility	30	31	0/934

The results of the table indicate that the obtained Cronbach alpha index is more than 80 percent which means that the designed items of the questionnaire are suitable for measuring the variables of the study. For the analysis of the collected data, the SPSS software was used. The results of the study in presented in two separate sections of descriptive and inferential analysis. For the analysis of the data, in addition to the descriptive method of mean, standard deviation, frequency tables, bar graphs and pie charts, Pierson correlation coefficient were used for inferential analysis.

RESULTS AND DISCUSSION

Results

The Demographic Features of the Participants

The participants of the study consisted of 104 (46%) males and 122 (54%) females which as can be seen the majority was female.

The age range of the participants was as follows:

3.5 % were less than 25 years old, 14.2 % were between 26 to 30, 34.5% were 35 years old and 47.8 % were more than 36 years old.

As regards the educational background, 12 people (5.3%) had a diploma, 29 (12.8 %) had associate degrees, 93 (41.2%) were BA holders and 92 (40.7 %) had a higher education degree of either MA or PhD. In sum, most of the respondents were BA holders.

With respect with work experience, 39 (17.3 %) of the respondents had less than 5 years of experience, 34 (15%) had an experience of between 6 to 10 years, 56 (24.8 %) between 11 to 15 years and 97 (42.9 %) of them had more than 16 years of work experience.

The Outsourcing Condition of the Organization

The outsourcing variable was assessed through the 22 questions of the standardized outsourcing questionnaire of Rahnavard and Farajollahi (2013). For each question, a Likert Scale of 1 to 5 points was considered so the respondents’ scores ranged from 22 to 110.

Table 2: Descriptive statistics for outsourcing

SD	Mean	The Highest	The Lowest Score	Outsourcing Status
13.58	65.05	110	34	Status

Based on the above table (2), the mean score of the respondents’ perspective toward the outsourcing status was found to be 65.05 ± 13.58 which shows that the variable under investigation enjoys a medium to high status in the organization in question. Six aspects of outsourcing were investigated the results of which is indicated in table 3 below.

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Table 3: Six aspects of outsourcing

Aspects of Organizational Outsourcing	Minimum Score	Maximum Score	Mean	Standard Deviation
Customer	3	15	8.2	2.3
Internal Processes	6	25	14.5	3.6
Human Resources	3	15	9.1	2.5
Financial	2	10	6.3	1.8
Strategic Alignment	3	15	8.9	2.4
Outside Environment	4	15	8.9	2.1

The above table demonstrates that the mean for all aspects of outsourcing from the point of view of respondents is at a medium to high level. The results of the studies conducted by Mahmoudi *et al.*, (2011), Hsiao *et al.*, (2009), Bellenghi *et al.*, (2008), Chian and Chen (2008), also indicated medium status for outsourcing.

The Status of Organizational Agility

The organizational agility as the dependent variable of the study was investigated through the standardized questionnaire of Sharif & Zhung. The questionnaire constituted 31 questions for each, a Likert Scale of 1 to 5 was used. On the basis of this, the respondents' scores would range between the lowest score of 31 to the highest score of 155.

Table 4: Shows the descriptive statistics for organizational agility

Organizational Agility Status	Minimum score	Maximum Score	Mean	Standard Deviation
	54	160	96/1	17/6

Based on the obtained mean of the responses being 96.1 ± 17.6 , it is obvious that the status of organizational agility from the point of view of the respondents is medium. Organizational agility was investigated with regard to seven components.

Table 5: Shows the descriptive statistics of the components of organizational agility

Components of Organizational Agility	Minimum Score	Maximum Score	Mean	Standard Deviation
Flexibility	8	25	15/1	3/1
Responsiveness	3	15	8/7	2/2
Culture of Change	8	30	17/9	3/7
Speed	3	10	6/6	1/6
Integrity	10	25	15/5	3/9
Quality	3	15	9/5	2/3
Efficiency of human Resources	5	25	14	3/9

Generally speaking, it can be concluded that the organizational agility in all the investigated aspects of Mazandaran University of Medical Sciences was at a medium level. The results are consistent with the studies of Azar and Pishdar (2012), Ebrahimian and Ebrahimian (2012), Nikpour and Salajegheh (2011), Fathian (2011), Qumer and Henderson-Sellers (2008). However, the study of Ghasemi (2011) indicated that the organizational agility of the Melli Bank was almost optimal.

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Inferential Analysis

For the purpose of inferential analysis, first the test of normality of Kulmogrof-Smirnof (K-S) was used for checking the normality of the distributors. The results of the test indicated a normal distribution. Therefore, Pearson product moment correlation coefficient was used to investigate that relationship between the various aspects of the variables of the study.

The Primary Research Question

Is there a relationship between outsourcing and organizational agility at Mazandaran University of Medical Sciences?

Table 6: Pearson product correlation coefficient For the primary research question

	Organizational	Agility
Outsourcing	Pearson coefficient	0.419
	Sig. value	0.000
	Sample number	226

As illustrated in Table 6, there is a significant relationship between outsourcing and organizational agility (sig=0.000). Since the sig value is less than 0.01, thus it can be concluded with 99% certainty that there is a relationship between the aforementioned variables at Mazandaran University of Medical Sciences. This result is consistent with the findings of Golafshani *et al.*, (2012) Lee and Choy (2011) and Bellenghi *et al.*, (2008).

The First Research Question

Is there a relationship between financial aspect of outsourcing and the organizational agility?
 To answer this question, Pearson product correlational coefficient was used. The following table indicates the result of the analysis:

Table 7: Pearson product correlation coefficient for the first research question

The financial Aspect of outsourcing	Organizational Agility	
	Pearson coefficient	0.050
	Sig. value	0.457
		226

As can be seen in Table 7, since the sig. value is more than 0.05 (sig=0.457); therefore, it can be concluded that there is no significant relationship between the financial aspect of outsourcing and the organizational agility. In other words, from the perspective of the respondents, investment capability for the major activities of the organization has not increased after outsourcing. This means that, generally speaking, the organizational costs are not reduced and this has not resulted in organizational agility.

The Second Research Question

Is there a relationship between the customer oriented aspect of outsourcing with the organizational agility?

Table 8: Pearson product correlation coefficient for the second research question

Customer oriented aspect of outsourcing	Organizational Agility	
	Pearson coefficient	0.516
	Sig. value	0.000
	N	226

Table 8 shows that based on the reported sig value (sig=0.000) which is less than 0.01, it can be concluded that there is a significant relationship between the customer oriented aspect of outsourcing and

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the organizational agility. This means that outsourcing has increased customer satisfaction which in turn has resulted in a decrease in complaint and criticism of the organization and thus has improved the organizational agility. The result of this question is in line with Ghasemi's (2010) study.

The Third Research Question

Is there a relationship between the outside environment aspects of outsourcing and the organizational agility?

Table 9: Pearson product correlation coefficient for research question 3

Outside Environment Aspect of Outsourcing	Organizational Agility	
	Pearson coefficient	0.167
	Sig. value	0.012
	N	226

As table 9 indicates, since the observed sig. value is less than 0.05 (sig=0.012); thus, there is a low level of significant relationship between the outside environment aspect of outsourcing and the organizational agility. This means that through outsourcing, the organization is capable of doing its main activities more rapidly and with higher quality which will in turn increase access to the outside sources for better services. The result of this question is consistent with Ghasemi (2009).

The Fourth Research Question

Is there a relationship between strategic alignment aspect of outsourcing and the organizational agility?

Table 10: Pearson product correlation coefficient for research question 3

Strategic Alignment Aspect of Outsourcing	Organizational Agility	
	Pearson coefficient	0.286
	Sig. value	0.002
	N	226

Based on the results indicated in table 10, it can be concluded that there is a direct relationship between the strategic alignment aspect of outsourcing and the organizational agility. The sig. value observed is less than 0.01 (sig=0.002).

It also shows that outsourcing can lead to a more focused management of employees' key capabilities and an increased amount of time for doing the activities.

Outsourcing can also result in an increase and an alignment in activities with missions which is done removing the marginal activities.

Eventually, all this can increase the organizational agility. The same results were reported in Kunga *et al's* (2012) research study.

The Fifth Research Question

Is there a relationship between the human resources aspect of outsourcing and the organizational agility?

Table 11: Pearson product correlation coefficient for research question 5

Human Resources Aspect of Outsourcing	Organizational Agility	
	Pearson coefficient	0.215
	Sig value	0.003
	N	226

As table 11 indicates, at a medium significant level, (sig=0.003) which is less than 0.01, there is a direct relationship between human resources aspect of outsourcing and organizational agility. Outsourcing can

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increase employees’ motivation and satisfaction which would then result in the agility of the organization. The same results were obtained by Ghasemi (2010) and Rahnamai *et al.*, (2010).

The Sixth Research Question

Is there a relationship between the internal processes of outsourcing and organizational agility?

Table 12: Pearson product correlation coefficient for research question 6

Internal Processes of Outsourcing	Organizational Agility	
	Pearson coefficient	0.223
	Sig value	0.001
	N	226

Table 12 shows that there is a significant relationship at a medium level between the variables under investigation. Since the sig value (sig=0.001) is less than 0.01, thus it can be concluded that there is a relationship between the internal processes of outsourcing and the organizational agility.

Reducing the marginal activities creates the opportunity for doing the activities in different ways and other facilities which would in turn result in organizational agility. The results are consistent with Rahnamay *et al.*, (1387) and Kunga *et al.*, (2012).

Multivariate Analysis

In order to investigate the simultaneous effect of the independent variables of the study (outsourcing and its relevant indicators) on the dependent variable (organizational agility), multivariate regression analysis was used. Regression analysis is a technique through which the interrelationship of two or more variables could be predicted. If the purpose of the analysis is to simultaneously predict a variable through a number of independent variable multivariate regression analysis is used. In fact, through this technique the interrelationship among the empirical events in the form of (Y) for the dependent variable an xi, x1, x2, x3... xk for the independent variable is shown.

Table 13 indicates the multiple correlation coefficient index (R) of the variable under investigation. The coefficient index of (R=0.498) illustrates that the aspects of outsourcing are simultaneously correlated with the organizational agility. R2 is estimated to be 0.248 which means that more than 24% of the changes in the organizational agility could be explained by the mentioned variables and the other 76% are related to other factor not investigated in this study. The observed F is reported to be 32.59 which considering the p value of (0.000), indicates a high level of significance of the results.

Table 13: A compact model of multivariate regression

R	R-square	Adjusted R-square	F	Sig
0/498	0/248	0/241	32/59	0/000

Table 14: The impact factors of the organizational agility model

Model	B	Beta	t	sig
Fixed Amount	114/780	-	19/890	0/000
Customer-oriented Aspect	1/137	0/531	8/597	0/000
Strategic Alignment Aspect	4/659	0/298	2/551	0/011
Internal Processes Aspect	1/173	0/254	2/361	0/000
Human Resources Aspect	0/353	0/242	4/365	0/019
Outside Environment Aspect	1/255	0/215	2/816	0/009
Financial Aspect	-1/646	-0/175	-1/809	0/072

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To determine which one of the independent variables is more predictive and indicator of the dependable variable of the study (i.e. organizational agility), the regression analysis tables are used in the table and the relative importance of each of the independent variables is indicated through the regression indexes or weights. As the tables show, the independent variables of customer-organization, internal processes, human resources, strategic alignment and outside environment are significant aspects affecting the dependent variable of the study with different weights. However, no significant relationship was found between the financial aspect and the organizational agility. According to table 14 the strongest predictor of organizational agility is found to be the customer. Oriented aspect ($B=0.531$) which is regarded as the most effective variable of all in the second place, the strategic alignment with the standard regression index of ($B=0.298$) has a higher power of prediction in comparison to other aspects of outsourcing.

The internal processes aspect comes third in the table, ($B=0.254$) which in comparison to the aspects of human resources efficiency and outside environment seems to have a more predictive power. In the fourth place, the aspect of human resources can be seen with the index of ($B=0.242$). And finally, the aspect of outside environment is shown to have the least predictive power of all in determining the organizational agility ($B=0.215$).

Discussion and Conclusion

Today, organizations have fundamentally changed and no longer bear any resemblance to the previous ones. They are parts of a world in which change and complexity are considered the main components of change. In order to make use of the transient opportunities of the present era, they have to create a more flexible structure and use the outside resources of the organizations.

What is seen in today's organizations are mainly the basic changes in the structures, behaviors and networking of their activities. They do not try to do all their needed activities, rather each organization concentrates on keeping one or two of the key activities which would result in entrepreneurship and would do the rest of the activities through other means in which they have the necessary capability. This is, in fact, a fundamental change in the structure of the future organizations of the world.

The dominant viewpoint in this regard, is to reduce the government activities and move toward minimalization, re-engineering, privatization, outsourcing and contracting, etc. Through outsourcing, the organizations would be able to do their duties more rapidly and with lower risks which would in turn result in increasing the productivity and quality, and lowering the costs of recruitment and administration of human resources and finally improvement in performance and efficiency of the organization.

Outsourcing as a suitable method can be a useful tool for saving time and costs as well as upgrading the quality and liberating resources. In other words, outsourcing is, in fact, like a fundamental change in the structure of the organizations. This means that governmental organizations and administrations do not necessarily have to change into bureaucratic centers which employ a large number of people and devour the public capitals. Rather, such organizations would turn into centers of revenue production and would therefore obtain considerable results. This is because they concentrate on those activities for which they have been trained and would do only those activities which are exactly related to their organizational purposes; the types that they are good at and are well aware of. The rest of the services in such organizations are given to the outside agencies. Obviously, an important point in the definition of privatization of the governmental companies is increasing the efficiency of activities in particular and deducing the running expenses of the economic agencies and systems in general. One of the qualities which can prepare an organization to constantly face change and have the necessary capability for survival in crisis is the organizational agility.

Agility would give an organization the strength for change; this would prepare the ground for the opportunities which are made available as a result of those changes. An agile organization is one which can change and adapt itself to the environmental changes through a triumphant strategy. The basis of an agile organization is in the integrity of its information system, technology, people, business processes and facilities. Such an organization can generally lead to the decrease of the production costs and the increase of the market share, the satisfaction of customer needs, the preparation for introducing a new product, the assessment and estimation of the activities which lack added value, and the increase of the organizational

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competition. Thus, an agile organization as the 21st century paradigm has a lot of supporters and has turned into a successful strategy in today's competitive markets that change rapidly with their customers' changing needs.

The present paper investigated the relationship between outsourcing and the organizational agility. The results indicated that outsourcing has an upward movement at the Mazandaran University of Medical Sciences and Health Services. The organizational agility was found to be at a medium level at this university. The findings demonstrated that there was a significant relationship between different aspect of outsourcing (customer-orientation, internal processes, human resources, strategic alignment and outside environment) and the organizational agility. However no meaningful relationship was found between the financial aspect of outsourcing and the organizational agility.

The results of the present study along with the findings reported by other researchers pinpoint the following conclusions. Outsourcing would lower the unnecessary workload of the organization; it would increase the possibility of service improvement in the key activities of the organization; it would improve the productivity and efficiency of the organization; it would help the employees to do their jobs with more flexibility and psychological tranquility and be more responsiveness to their activities; it would increase the organizational readiness for change; and finally it would increase organizational agility. Thus any attempts for outsourcing the unimportant activities of an organization would result in the rise of organizational agility.

REFERENCES

- Al-Ahmad W and Al-Oqaili A (2013)**. Towards a unified model for successful implementation of outsourcing and reversibility of information systems. *Journal of King Saud University – Computer and Information Sciences* **25** 229–240.
- Alvani M and Ashrafzadeh F (2009)**. *Management of Outsourcing as a Path to Development* (Tehran: Mobtakeran publication).
- Alvani M Pourezzat A and Seeyar A (2009)**. An Investigation of the Relationship between Organizational Justice and commitment. *Quarterly of Human Resources and Management in Oil Industry* **12**(5) 44-62.
- Azar Pishdar M (2012)**. Identification and Measurement of the Organizational Agility Indicators (Case Study). *Management Research* **4**(11) 32-48.
- Bies W and Zacharia L (2007)**. Medical tourism: Outsourcing surgery. *Mathematical and Computer Modelling* **46** 1144–1159.
- Cai X, Chen J, Xiao Y, Xu X and Yu G (2013)**. Fresh-product supply chain management with logistics outsourcing. *Omega* **41** 752–765.
- Cascio W F and aguinis H (2005)**. Applied psychology in human resource in personality. *Position in the Organization* **14** 112-121.
- Chen SFS (2008)**. The motives for international acquisitions: Capability procurements, strategic considerations, and the role of ownership structures. *Journal of International Business Studies* **39** 454–471
- Chin-Yin H and Shimon Y (1999)**. Enterprise Agility. *International Journal of Agile Manufacturing Systems* **11** 51-59.
- Chris H (2008)**. Venture firms will ask you about outsourcing. Retrieved from: www.inventureglobal.com.
- Ebrahimian JY and Ebrahimain JM (2012)**. Organizational Agility, Responsiveness Speed and Flexibility. *Police Force Human Development* **39** 65-78.
- Elinder M and Jordahl H (2013)**. Political preferences and public sector outsourcing. *European Journal of Political Economy* **30** 43-57.
- Fahimi M, Hesani E and Ahani M (2013)**. Knowledge management and its relationship with organizational agility: The case of Sepah Bank branches of Shiraz. *International Journal of Research in Management* **3**(3) 2249-5908.

Research Article

- Fathian M and Golchinpour M (1387).** Strategies for Agility in Producing Organizations. *Tadbir* **7** 175-191.
- Fathian M and Sheikh a (2011).** Presenting a Model for Organizational Agility. *Journal of Industrial Engineering and Management* **2** 33-57.
- Gewald H and Dibbern J (2009).** Risk and benefits of business process outsourcing: A study of transaction services in the German banking industry. *Information & Management* **12** 249-257.
- Ghahramani M and Hasanmoradi N (2007).** Making a Model for Outsourcing Organizational Education. *Message of Management* **1** 3 112-1126.
- Ghasemi Sh (2010).** Identification and Analysis of the Factors Affecting Employees' Agility in Melli Bank of Sanandaj. Unpublished MA thesis, Sanandaj Branch, Islamic Azad University.
- Goldman S and Nagel R and Preiss K (1995).** *Agile Competitors and Virtual Organizations* (Kenneth: Reinhold).
- Gunasekaran (1999).** Agile Manufacturing: A Framework for research and development. *International Journal of Production Economics* **13** 87-105.
- Hale J (2006).** *Outsourcing Training and Development: Factors for Success* (San Francisco: Routledge).
- Hasoumi F, Yarmohamadian MH and Fadavi MS (2014).** Innovation and agility in organizations. *Journal of Behavioral Sciences in Asia* **8** 66-72.
- Hormozi AM (2001).** Agile Manufacturing: The next Logical Step. *Benchmarking an International Journal* **8**(2) 132-143.
- Hosseini GA and Seeyar A (2009).** The Degree of Efficiency of Outsourcing Plans of the Islamic Azad University of South Tehran Branch. *Cultural Management* **5**(11) 76-93.
- Jafarnejad A, Sadeghian ES, Davoodi SMR and Abtahi SM (2013).** Priorities of the agility motivations by using MCDM approach: A case Study. *Journal of Applied Sciences Research* **9**(4) 2691-2696.
- Jalalinia E and Yazdi F (2009).** A Business process outsourcing framework based on business process management and knowledge management. *Business Process Management Journal* **15** 6 845-864.
- Kanga M, Wua X, Hongb P and Park Y (2012).** Aligning organizational control practices with competitive outsourcing performance. *Journal of Business Research* **65** 1195–1201.
- Karimi M, Shahandeh A and Parvzian J (2012).** An Investigation of the Role of the Aspects of Organizational Structure in Facilitating the Organizational Agility of the Software-Producing Organizational. *Research for Managing Human Resources* **3**(2) 36-53.
- Kazazi A and Sohrabi R (2011).** Presenting the Indicators of Assessing the Agility of the Iranian National Petroleum Organization. (A case study). *The Research Journal of Managing Change* **4** 141-165.
- Kidd P (2000).** Two definitions of agility. Retrieved from www.CheshiireHenbury.com.
- Kidd PT (1994).** A 21st century paradigm. In: *Agile Manufacturing: Forging New Frontiers* (Addison-Wesley: Wokingham).
- Kite G (2012).** The impact of information technology outsourcing on productivity and output: New evidence from India. *Procedia Economics and Finance* **1** 239 – 248.
- Kremic T, Tukul O I and O-Rom W (2006).** Outsourcing Decision Support: A Survey of Benefits, Risks, and Decision Factors. *Supply Chain Management: An International Journal* **11**(6) 467- 482.
- Lacity M C and Khan SA (2009).** A review of the IT outsourcing literature: Insights for practice. *Journal of Strategic Information Systems* **18**(3) 130-146.
- Lahafi B (2012).** An Investigation of the Relationship between Team work and Organizational Agility (A Case Study). Unpublished MA Thesis, Islamic Azad University, Sanandaj Branch.
- Lee RP and Kim D (2010).** Implications of service processes outsourcing on firm value. *Industrial Marketing Management* **39** 853–861.
- Lee YCY and Zhen H (2012).** An integrated framework for outsourcing risk management. *Industrial Management & Data Systems* **112**(4) 541 – 558.
- Liou JJH and Chang YT (2010).** Developing a hybrid multi-criteria model for selection of outsourcing providers. *Expert Systems with Applications* **37** 3755-3761.

Research Article

- Madhooshi M and Koochan MA (2013).** Determining the Role of Outsourcing on Organizational Productivity. *Research Journal of Administrative Management* **4**(7) 54-68.
- Mahmoudi MM, Rahmani Z and Basiratnia M (2012)** investigating the Effect of using the Outsourcing strategy on the Productivity of the Banking Industry (A Case Study). *Quarterly of Industrial Management* **5**(13) 71-88.
- McKenzie J and Aitken P (2012).** Learning to lead the knowledgeable organization: Developing leadership agility. *Strategic HR Review* **11**(6) 329-334.
- Mousazadeh Y, Jababri BH, Jananti A and Asghari JM (2014).** Identification and Prioritization of Hospital Units which can be outsourced on the basis of Relevant Aspects (A Qualitative Study). *Journal of Health and Hygiene* **4** 2 122-133.
- Nickpour A and Berkem Y (2013).** Organizational Socialization and a Model for Having an Agile Organization. *Economic Development Strategy* **30** 151-171.
- Nickpour A and Salajegheh S (2011).** An Investigation of the Relationship between organizational Agility and Job Satisfaction of employees' of Governmental Organization of Kerman. *Research in Management* **7** 85-97.
- Oliveira M, Valentina L and Possamai O (2012).** Forecasting project performance considering the influence of leadership style on organizational agility. *International Journal of Productivity and Performance Management* **61**(6) 653-671.
- Rahnavard F and Seifollahi A (2012).** *Outsourcing*. Tehran: Research Planning and Management.
- Rajabzadeh H, Hassanzadeh A, Nalchigar N and Nalchigar S (2012).** Presenting a Model of Effective Factors in the Creation of Electronic Chains and Its Impact on Organizational Performance. *Management Informational Technology* **2**(4) 66-97.
- Rezaee A (1387).** Localization of Zackman's Model of Organizational Agility. Unpublished MA Thesis. Islamic Azad University of Science and Research, Tehran Branch.
- Rokninejad M (2008).** *New Theories and Models of Organizational Commitment* (Tehran: SAMT Publication).
- Salooneh Sh (1390).** An Investigation of the Effects of Outsourcing Human Researches on Organizational Performance (Case Study: Alborz Distribution Company). Unpublished MA Thesis at the Islamic Azad University of Sanandaj.
- Seyed JR, Hasan GT and Valipour B (2012).** *The Outsourcing Process* (Tehran: Negah Danesh, Novin Publication).
- Shahaee B and Rajabzadeh A (2006).** Investigating the Aspects of Organizational Agility in Governmental Organizations with Information Technology Approach. *Second International Conference on the Management of Information Technology and Communication, Iran*.
- Shahhaee B (2006).** The Human Aspect of Organizational Agility. *Tadbir* **175**.
- Sharifi H and Zhang Z (2000).** Agile manufacturing in practice: Application of a methodology. *International Journal of Operations & Production Management* **21** 772-794.
- Sull D (2010).** Competing through organizational agility. Retrieved from www.Mckinseyquarterly.com.
- Vernadat F (1999).** Research agenda for agile manufacturing, LGIPM, ENIM/University. *International Journal of Agile Management Systems* **11** 37-40.
- Zyngier S and Owen J (2013).** Strategic Knowledge Management for Innovation and for Organizational Agility. *46th Hawaii International Conference on System Sc, USA*.

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Appendix: Summary of the Related Research

No.	Author	year	Title of the Research	Conclusion
1.	Mosazadeh <i>et al.</i> ,	2013	Identification and Prioritization of Hospitals Capable of Outsourcing Based on Relevant Indicators	Using outsourcing in order to have an efficient management of resources and raising quality and satisfaction
2.	Madhooshi and Kohkan	2012	The Role of Outsourcing Strategy on the Productivity of Eghtesad Novin Banks of the Province of Mazandaran, Iran	The results of the research showed that outsourcing does not have any meaningful effect on any of the components of outsourcing
3.	Nikpour and Berkem	2012	Organizational Agility and the Model for an Agile Organization	Introduction of a model for organizational agility
4.	Azar and Pishdar	2-11	Identification and Measurement of Organizational Agility Indicators	The results of the research demonstrated that according to Higher Council of Informatics the development in the ranking of an organization does not necessarily raise organizational agility
5.	Ebrahimian and Ebrahimian	2011	Organizational Agility: Responsiveness and Organizational Flexibility	Traditional organizations cannot answer the needs of their customers and the changes that happen around them in a timely manner. Learning as well as virtual organizations are among those that by having the characteristics of an agile company can adapt themselves with their surroundings.
6.	Hosseini <i>et al.</i> , 1390	2011	Outsourcing Programs Effectiveness Level at Islamic Azad University, South Tehran Branch	Outsourcing will result in an increase in the speed of the jobs being done. It can also raise service quality and a reduction in workforce and economizing in the time of the officials of the university.
7.	Nikpour and Salajegheh	2011	An Investigation of the Relationship between Organizational Agility and the Job Satisfaction	There is a significant relationship between organizational agility and its sub variables such as: responsiveness, efficiency, flexibility, speed in work, and job satisfaction.

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			of the Employees of Public Offices of the City of Kerman	
8.	Mahmoudi <i>et al.</i> ,	2011	Study of the Use of Outsourcing Strategy on the Productivity of the Banking Industry; Case Study of Eghtesad Novin Banks of the Province of Mazandaran	There is no significant relationship between outsourcing in this bank and the components of productivity.
9.	Fathian	2011	Introducing a Model for Agility in Organizations	The final model has various aspects of speed, responsiveness, flexibility, and efficiency development, improvement of products and services, and enriching the customers.
10.	Ghasemi	2010	Identification and Analysis of Influential Factors on the Agility of the Employees of Melli Bank of Sanandaj	The agility of the employees is optimal. The influencing factors in the agility of the employees of the bank were: a positive attitude toward change and new technologies and bank data systems, reaction to the changes in the environment and the attitudes of the customers and good relationship among the employees of the bank.
11.	Rahnamay <i>et al.</i> ,	2009	The Role of Human Resources and Its Development in Making an Organization Agile.	An agile organization is based on aligning technological information, employees, and working processes in a coherent and flexible system.
12.	Elinder and Jordahl	2013	A Study of Political Considerations in Public Sector Outsourcing	The result of the research showed that the outsourcing models in above-mentioned places used Canadian models.
13.	Al-ahmad and Al-oqaili	2013	Towards a Unified Model for Successful Implementation of Outsourcing and Reversibility of Information Systems	The results of the research lead to the presentation of a model that could lead to successful outsourcing and reversibility projects.
14.	Kang <i>et al.</i> ,	2012	The Role of Organizational Control in	concluded that there was a significant relationship between outsourcing strategies, organizational control and the results of

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			Outsourcing Practices: an Empirical Study	outsourcing performance
15.	Lee and Choi	2011	The Impact of Outsourcing Services on the Value of a Company	continuous trust can directly impact outsourcing benefits such as improved performance of outsourcing systems, improvement of services, increase in IT capabilities and accessibility to skilled personnel
16.	Lee and Kim	2010	The Impact of Outsourcing Services on the Value of a Company	Outsourcing can generally lead to a positive value in a company
17.	Gewald and Dibbern	2009	The Effect of Outsourcing Services on the Value of a Company	sensed risks and benefits could be good factors in predicting outsourcing concepts in business processes
18.	Hsiao <i>et al.</i> ,	2009	An Investigation of Outsourcing in Taiwanese Hospitals	In non-clinical sectors of Taiwanese hospitals showed that most of the outsourcing happened in garbage collecting sector and the least amount of outsourcing happened in the upkeep of hospital instruments.
19.	Bellenghi <i>et al.</i> ,	2008	Outsourcing Health Services Data in US Hospitals	Outsourcing in these hospitals has led to the admission of more patients from other US states and the use of private rehabilitation in mental outpatients which led to economizing.
20.	Chris	2008	Outsourcing Factors in Countries	infrastructure (basic structure), security, skill, Workforce quality, outsourcing reality (having a proper understanding of the contradictions of the target country), the geopolitical conditions, culture, time difference, difficulty in controlling and visiting the site in the target country, difficulty in transferring resources, price increase trend, and workforce reaction.
21.	Chian and Chen	2008	Parameters in Determining Outsourcing Decisions	Categorized the parameters affecting outsourcing into four managerial, strategic, economic and qualitative considerations.
22.	Baloh <i>et al.</i> ,	2008	Effective Factors in Successful Outsourcing	They showed that an influential factor in a successful outsourcing can depend on bilateral relations that are based on the cooperation and participation of a receiving organization and an organization that provides outsourcing services.
23.	Qumer and Henderson-Sellers	2008	A Framework to Support the	The important factors in agility are: the size of the project, the size of the team, the

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		Evaluation, Adoption and Improvement of Agile Methods in Practice	method of development, the simplicity of coding, technology environment, physical environment, business culture and abstract mechanism.
24.	Tibor	2006 Effective Factors in Outsourcing	If there is a decision to make use of outsourcing, then effective factors such as expenses, environment, strategy, activity features, will specify the kind of activity that can be outsourced.
