

Identification of the effective factors on successful outsourcing in the East Azerbaijan Water and Sewage Firm

Farajallah Rahnavard¹, Abbas Niknejad² and Abbass Talebnejad Hokmabadi^{3*}

1- Associate Professor at management and planning higher education and research institute

2- Assistant Prof, University of Tehran

3- MBA Student, University of Tehran, Aras International Campus, Jolfa

Corresponding author: Abbass Talebnejad Hokmabadi

ABSTRACT: This research was conducted in order to identify the effective factors on successful outsourcing in the East Azerbaijan Water and Sewage Firm. The statistical population consists of 300 managers, experts, counselors and contractors of East Azerbaijan Water and Sewage Firm that they work in the dependent departments and whole statistical population was used as the research sample. The data were collected by the author made questionnaire and the content and nominal validity of the questionnaire was confirmed by the experts and its reliability was measured by Cronbach alpha coefficient so that the coefficient was obtained for all variables higher than 0.7. The data were analyzed by explanatory factorial analysis and Freedman test by software SPSS16. The results of the explanatory factorial analysis showed that the effective factors on successful outsourcing in the East Azerbaijan Water and Sewage Firm are the process management, supervision and evaluation, human force support, knowledge transfer and communication management. The results of Freedman ranking showed that knowledge transfer has the highest grade and supervision and evaluation, process management, human force support and communication management are in the next ranks respectively.

Keywords: outsourcing, outsourcing establishment, East Azerbaijan Water and Sewage Firm.

INTRODUCTION

Since industrial revolution the firms have tried to enhance their competitive advantages for increase of profitability and the market share. The model and the vision dominated on the industries after World War II was a big integrated firm that owned its assets and also managed and controlled the activities. In that period, different scholars like Marquez, Kinez and emphasized on the famous managers like Henry Ford and big industries economic performance positive aspects and mass production and persuaded the managers to integrated and combined collaboration in all aspects. For this reason, in 1950s and 1960s the common vision was diversification of the products and expansion of the firms and etc. Diversification of the products led them to be hopeful on preservation of their profit. At that time, expansion of the management was necessary. The firms under the competitive conditions for universal markets in 1970 concluded that they lack agility to competitiveness and they encounter with inflated management structure. It was concluded that the firm strategy should be inversed and for increase of flexibility the firms should concentrate on the limited activities. In the third millennium the firms found that they should outsource the activities that they cannot do them. As Walsh (1991) suggested although outsourcing has tangible and intangible advantages for organizations but manner of implementation is one of the key issues in management of organizations. The successful outsourcing requires identification of the preventive and progressive factors. So, it is necessary to concentrate on specific conditions. Any organization has specific conditions. Thus any organization needs to evaluate outsourcing strategy in special conditions.

Implementation of outsourcing is a complex process and in spite of the effort of the scholars for clarification (Sicilian and Satire, 2000; Pendi and Bansal, 2003; power and 2006; Queen, 1999) the unknown aspects require to

reinvestigation. One of these unknown aspects is lack of native model for successful services outsourcing. While, there are significant academic researches on outsourcing in production scope (Chrome, 2000, Lim and Lee, 2004). Unfortunately, there are limited academic studies in this case (Wilcox and Fini, 1994). However, it is necessary to offer models based on the researches with higher fitness for determination of the country native conditions. So, this research aims to identify the effective factors on outsourcing in East Azerbaijan Water and Sewage Firm. Now, due to turbulent environment and increase of competition the administrative systems have to use outsourcing and domestic resources strategies broadly. Study on the effective factors such as outsourcing is necessary in order to employ proper managerial arrangement and it depicts need to research on successful outsourcing plans.

Outsourcing is decision making for providing items and services out of the organization (Lalonde, 1998:82). Outsourcing means contract with suppliers and using new ways for reliable supply and offering services accompanied by knowledge, experience and creativity of the new suppliers (Lender, 1997:45). Outsourcing is contract between two organizations for offering service and products. There is a difference between ventures or investment since supplement from supplier to consumer is one way process (Belcourt, 2006:290). Outsourcing is a powerful and flexible approach that the managers employ it for reaching the strategic and tactic goals. Indeed, it is a kind of service offering by the foreign contractors. Outsourcing has studied by several researchers and they focused on the reduction of operational const. In recent years, outsourcing has passed its progressive trend from traditional to strategic points. It is considered traditional when an activity is not a key action for an organization but strategic outsourcing is done when organizations outsource some of their activities that they could obtain unique competitive position. For beginning of outsourcing an organization should measure its activities for evaluation of the experiences in this regard. Outsourcing without evaluation of operations and insignificant contracting will lead to loss of control of quality and service levels, reduction of information security and weakness of staff (Rahnavar, and Seyfullahi, 2011). Outsourcing consists of three elements:

1-employer: employer is a legal and real entity that transfers the specific operation to others (contractor).

2-contractor: contractor is a legal and real entity that is responsible for execution of the contract items until end of the contract.

3-contract: it is a legal relationship between employer and contractor that is brings obligation for both parties (Rahnavar, and Seyfullahi, 2011).

In outsourcing a series of specific activities is restructured with resources outside of the organization with particular capabilities. While, contracting is a part of organization activities that it is done by the contractor and the structure is not reshaped. A contractor signs contract for one or several projects and the organization does not change and no participatory relationship is established with the contractor. While, in outsourcing the process is owned by other construct and a participatory relationship is established and in other words, bilateral relationship is provided based on participation (Talebi and Mohammad Karimi, 2010).

Research background

Although about outsourcing of public sector services, little research has been done, but few studies that have been carried out are presented as follows:

The study on the impact of knowledge sharing in the success of IT outsourcing (Rahnavard and Khavandkar, 2008) suggests that government agencies should consider outsourcing based on the knowledge since such an approach leads to the strengthening of a partnership relationship based on trust.

Enhancing organizational capability, knowledge sharing assures outsourcing success.

In a research on governmental activities relationship with development of entrepreneurship (Faraji and Samii, 2008) concluded that:

- reorganization and to reform of structure and adopt a flat
- Replacing the formal relationships and informal communication with bureaucratic administrators with minimal distortion of the feedback operational staff involved in decision-making and implementation of outsourcing process
- Improving teamwork in organizations
- The joint venture between the employee and the organization
- Appoint experts to scan the environment and investigate the competition and take advantage of opportunities

In a research on organizational readiness in insurance companies (Kurdistani, 2009) indicate that the major advantage of BPO is due to the efficiency and effectiveness of the providers but it is not well known. Financial companies direct the institutional environment at the beginning so they first need to prepare and deliver a level of maturity. Hence, the most important success factors are willingness, preparedness and readiness. It is recommended to consider the cultural factors of both parties and the managers viewpoints about outsourcing. Bolhari, (2010) evaluated four balanced scorecard method for evaluation of outsourcing process that the managers should apply this model to achieve operational model. Bakhshandeh (2013) in his research thesis entitled "Factors Affecting

Outsourcing Services in the Agricultural Bank” studied inhibitory and progressive outsourcing factors. Based on the findings the progressive factors are operating requirements, competition in the industry with the percentage of variance 66.46 as the first factor and the cultural and social factors compliance with the percentage of variance equal to 6.20 as second and the savings in operating costs with the percentage of variance 4.76 percent as the third factor affecting outsourcing success. On the other hand, in the inhibiting factors, factor related to outsourcing services specific issues with variance of 69.20 was considered as the first factor and competencies and characteristics of the combined operating assets and hidden costs with the percentage of variance 8.56 was introduced as the second factor and contractors operating issues and problems arising from the lack of qualified firms outsourcing contracts with banks by 7.06 percent of the variance was the third factor and the factor of the requirements of the corporate governance through hierarchical control in the bank by variance of 4.02 was considered as the fourth factor influencing the decision to outsourcing.

Lecity (2000) emphasizes on the importance of corporate outsourcing studies and the use of previous experience and suggests that the companies should pay attention to the outsourcing process implementation. Rivard (2005) classified the barriers to the successful implementation of outsourcing strategies in the absence of sufficient knowledge and experience in the organization and employees involved in outsourcing. Wong (2008) depicted the risk of executing an outsourcing strategy to achieve the desired results and failure to perform duties in the absence of information systems organization. Gonzalez (2010) refers to barriers to implementing strategies such as rejection of contracts, lack of specialized staff and lack of ability to adapt to new technology. Al-Ahmad and Al-Ogaili (2013) considers the executive’s domain knowledge, experience in the field of outsourcing, commitment and management support team, executive team as the factors affecting the implementation of outsourcing.

factors affecting the implementation of outsourcing				
Knowledge transfer	Communication management	Human resources management	Supervision and evaluation	Process management
<ul style="list-style-type: none"> Communicative channel Information transfer 	<ul style="list-style-type: none"> Managers domination on negotiation skills Optimal contract Agreement Fair contract 	<ul style="list-style-type: none"> Help to stuff and performance Reduction of the stuff resistance Intellectual properties Contractors motivation and training Financial facilities 	<ul style="list-style-type: none"> Related definitions Proper selection of the contractors Contractors capabilities Quality of services Continuous improvement of process Financial management 	<ul style="list-style-type: none"> Planning Definitions of goals Strategic teams Management support Outsourcing method Meeting between contractor and customer

Figure 1. Research conceptual model

MATERIALS AND METHODS

The present research is applied and it is objective research from philosophy perspective. In this research type the data are objective and defined and other measurable features can be used. This research is cross sectional and its strategy is descriptive. The data were collected by author made questionnaire that its validity was confirmed by the experts and its reliability was measured by Cronbach alpha coefficient of more than 0.7 that depicts high reliability of the data. The statistical population consists of 300 executives and experts, consultants and contractors of the company’s headquarters in East Azerbaijan Water and Sewage Firm and the test method used for the exploratory factor analysis for improve adequacy of the data. The population was considered statistically equivalent.

RESULTS AND DISCUSSION

Exploratory factor analysis test

In factor analysis, it must first ensure that the issue of whether the data are suitable for factor analysis or not? For doing so, KMO index and the Bartlett test was used.

Table 1 shows KMO index, Bartlett’s test value and freedom degree and significance level. Since the KMO value equals 0.936 so the number of answers matches with number of respondents. Also the significance level of Bartlett test is smaller than 5% that shows that factor analysis is proper to identify the structure of the factor model and the hypothesis of identified correlation matrix is rejected.

Table 1. sample fitness test

KMO test		0.936
Bartlett test	X ²	3.663
	Fd	351
	Sig	0.000

Table 2 shows that there are five effective factors in East Azerbaijan Water and Sewage Firm that processes management factors has the highest effect with variance of 15.379 and then supervision and evaluation with 13.794 is next factor and human resources support with variance of 13.166, knowledge transfer with 9.844 and communication management with variance of 7.333 are in next ranks.

Table 2. factors correlation matrix

Statements	1 st	2 nd	3 rd	4 th	5 th
Formation of Leadership Team (Executive Committee) to set up and move offshore project	0/724				
Key duties considered in outsourcing	0/704				
Plans for outsourcing process	0/662				
- Regular meetings between goal-oriented client (agency) and the contractors	0/649				
-Selection of appropriate outsourcing objectives and activities	0/559				
-Involvement and support and effective management of the company's outsourcing strategy	0/564				
-Define clear goals and expectations of outsourcing activities subject to extra monitoring and evaluation	0/53				
Aligning time periodic payments commensurate with work completed outsourcing (financial management)		0/711			
- Define the process of adjustment in expectations, price, and procedures related to outsourcing		0/702			
- Adequacy of inspections services contracts (monitoring contractor)		0/682			
Ensure that the contractor is capable of heading operations outsourcing		0/596			
- Contractor selection based on acceptable standards		0/587			
-Definition of appropriate scale for monitoring contractor performance		0/537			
-Effort to continuous improvement outsourcing process in organization		0/509			
-Placing facilities and financial support available to employees covered by the outsourcing			0/695		
- Measures taken to reduce the resistance of the unit employees who are eligible for outsourcing			0/623		
- The existence of incentive mechanisms to encourage contractors to provide quality services			0/617		
-To help those surplus (due to outsourcing) to find a suitable job			0/597		
- Efforts to maintain high employee morale and performance			0/574		
- Training and knowledge transfer to contractors			0/558		
- Data transfer between the client (organization) and the Contractor			0/508		
-Channels of communication knowledge sharing between the parties (and the contractor) Communication Manager				0/815 0/806	
- Being fair in dealing with both parties (the optimal contract)					0/762
Negotiate and contract with a contractor approaches					0/575

Develop communication protocols between agencies (outsourcing) and the Contractor						0/534
- Negotiating skills for managers mastery of appropriate contracts with contractors						0/516
Specific value	4/152	3/724	3/555	2/658	1/980	
Variance	15/379	13/794	13/166	9/844	7/333	
Collective variance	15/379	29/173	42/338	52/182	59/515	

According to table 2 final variance (59.515) shows that five factors depict 59 % of the variability in the successful establishment of outsourcing. According to the results the effective factors on outsourcing can be shown as fish bone in figure 2.

Freedman ranking test:

In order to ranking the effective factors on outsourcing in this firm Freedman test was used. Table 3 depicts the results. The test value of $X^2= 303571$ and $P= 0.000$ was obtained that is less than 0.05 and the difference is significant.

Table 3. factors ranking Freedman test

Statistics	Value
X2	303.571
Fd	4
no	300
Sig	0.000

Of the effective factors knowledge transfer with average of 4.00 is in the first rank and supervision and evaluation with 3.5 is in second rank and process management with 2.96 is in the third rank and human resources support with 2.32 is in the fourth rank and communication management with 2.22 is in the fifth rank.

Table 4. effective factors on outsourcing

Variables	Mean	Ranking based on Freedman
Knowledge transfer	4	1
Supervision and evaluation	3/5	2
Process management	2/96	3
HR support	2/32	4
Communication management	2/22	5

Conclusion and propositions:

In this research the effective factors on East Azerbaijan Water and Sewage Firm outsourcing are as follows: processes management with variance of 15.379 and then supervision and evaluation with 13.794 is next factor and human resources support with variance of 13.166, knowledge transfer with 9.844 and communication management with variance of 7.333 are in next ranks. Figure three depicts the effective factors as fish bone.

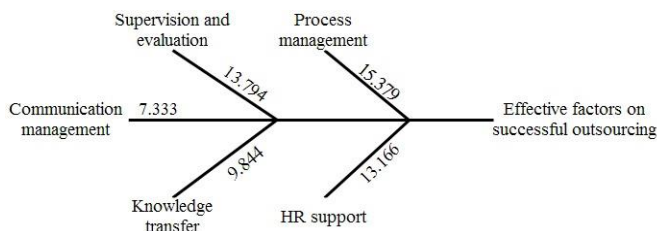


Figure 2. effective factors on outsourcing

According to the results followings are recommended:

Process Management

- Formation of Leadership Team (Executive Committee) to set up and move offshore project outsourcing
- In the process of outlining the key tasks that must be carried out rapidly
- Have contingency plans in relation to activities outsourcing
- Regular meetings between goal-oriented client (agency) and the contractors
- Selection of appropriate outsourcing objectives and activities
- Involvement and support and effective management of the company’s outsourcing strategy

-Define clear goals and expectations of outsourcing activities subject to extra

monitoring and evaluation

- Aligning time periodic payments commensurate with work completed outsourcing (financial management)
- Define the process of adjustment in expectations, price, and procedures related to outsourcing
- Adequacy of inspections services contracts (monitoring contractor)
- Ensure that the contractor is capable of heading operations outsourcing
- Contractor selection based on acceptable standards
- Definition of appropriate scale for monitoring contractor performance
- Effort to continuous improvement outsourcing process in organization

Protection of Human Resources

- Placing facilities and financial support available to employees covered by the outsourcing
- Measures taken to reduce the resistance of the unit employees who are eligible for outsourcing
- There are mechanisms for securing intellectual property organization
- The existence of incentive mechanisms to encourage contractors to provide quality services
- To help those surplus (due to outsourcing) to find a suitable job
- Efforts to maintain high employee morale and performance
- Training and knowledge transfer to contractors

Knowledge Transfer

- Data transfer between the client (organization) and the Contractor
- Channels of communication and knowledge sharing between the parties (and the contractor)

Communication Manager

- Being fair in dealing with both parties (the optimal contract)
- Negotiate and contract with a contractor approaches
- Develop communication protocols between agencies (outsourcing) and the Contractor
- Negotiating skills for managers mastery of appropriate contracts with contractors

Suggestions for future research

- Identify factors affecting the deployment of outsourcing based on other factors that have been identified in this study.
- Investigate the factors affecting the implementation of outsourcing based on different models
- Effectiveness of outsourcing on organizational performance factors
- Review and restrictions on outsourcing implementation
- The role of the effectiveness of risk management in outsourcing.

REFERENCES

- Al-Ahmad V and Al-Ogaibi A. 2013. Towards a unified for successful implementation of outsourcing and reversibility-computer and information science,25(2),pp.229-240
- Bakhshandeh AR. 2012. Identify factors affecting outsourcing operations, a counter service branch of the Agricultural Bank, Public Administration degree, Master Thesis, Islamic Azad University of Qazvin, Accounting & Management.
- Belcourt M. 2006. Outsourcing: the benefits and risks, Human resource management review,Vol.16, 269-279
- Bolhari AR and Lajavardi SJ. 2010. Providing a model for identifying candidate process outsourcing organization based on Balanced Scorecard and Matrix Approach to Outsourcing Strategies, Journal of Public Administration, Volume 2, Issue 5, pp. 127-142.
- Croom SR. 2000. "The impact of web-based procurement on the management of operating resources supply," The Journal of Supply Chain Management, Vol.36, No.1, pp.4-13
- Gonzalez R, Gasco J and Llopis J. 2010. Information systems outsourcing reasons and risks: a new assessment. Industrial Management & Data Systems 110 (2), 284–303.
- Gorji MB and Samii R. 2008. The relationship between state assignment and development activities in the context of corporate entrepreneurship, Journal of Management Culture, Year 6 , No. 18 , Fall and Winter, pp. 95-121.
- Kurdistani N. 2009. Review on insurance agencies in preparation for the adoption and implementation of innovative technologies, electronic theses, Master of Business Management, Allameh Tabataba'i University, School of Management.

- Lacity MC and Willcocks LP. 2000. Relationships in IT outsourcing: a stakeholder perspective. In: Framing the Domains of IT Management Research: Projecting the Future through the Past. Pinnaflex Education Resources, Inc., Ann Arbor, Michigan, pp. 355–384.
- Lalonde BJ. 1998. Building a supply chain relationship. *Supply Chain Management Review* 2.
- Leem CS and Lee HJ. 2004. Development of Certification and Audit Process of Application Service Provider for IT Outsourcing, *Technovation*, Vol.24, No1, pp.63-71.
- Lenders MR and Fearon HE. 1997. *Purchasing and supply management* 11th edition. Irwin, Chicago.
- Pandey V and Bansal V. 2003. A Decision-Making Framework for IT Outsourcing using the Analytic Hierarchy Process, *Journal of Academy of Business and Economics*, South Stockholm University, Sweden.
- Power MJ, Desouza KC and Bonifazi C. 2006. *The outsourcing handbook : how to implement a successful outsourcing process*, UK: Kogan Page Limited.
- Saunders MNK, Lewis P & Thornhill A. 2003. *Research methods for business students (3rd Ed)*. Harlow: FT Prentice Hall.
- Sislian E and Satir A. 2000. "Strategic sourcing: a framework and a case study", *Journal of Supply Chain Management*, Vol. 36 No. 3, pp. 4-11.
- Talebi D and Mohammad Karimi Y. 2011. *Outsourcing*, Shahid Beheshti University, Tehran, first edition.
- Walsh K. 1991. *Competitive Tendering of Local Authority Services: Initial Experience*, Department of the Environment, HMSO, London.
- Willcocks L and Fitzgerald GA. 1994. *Business Guide to IT Outsourcing*, Business Intelligence, London.
- Wong SF. 2008. Drivers for IT back-sourcing decision. *Communications of the IBIMA* 2 (14), 102–108.