

# Identification and evaluation of factors influencing outsourcing of activities: A case study of gas company of Mazandaran Province

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## Abstract

Outsourcing as a simple and economic executive instrument is increasingly being used by interested managers of business and industrial organizations. But, they encounter some conceptual problems in this process. Unfortunately, studies on service outsourcing are scarce while there is significant research on using outsourcing for hard product activities. Main goal of present study is to investigate and prioritize factors influencing outsourcing of activities. Six hypotheses are proposed. Main variables consist of quality promotion, cost, specialization, importance of activities and outsourcing. Present research is a descriptive-survey-causal and applied study. Gas Company of Mazandaran Province and Suburb was selected as statistical population. Data collected using questionnaires and research hypotheses were analyzed using structural equation model and LISREL software. Finally, some recommendations were provided based on research hypotheses.

**Keywords:** outsourcing, specialization, importance of activities, quality promotion

## Introduction

Today many organizations pursue delegation and outsourcing of organizational activities to maintain competitive advantage in global markets. Previously outsourcing was used when organizations were not able to do their specific activities because of various reasons such as lack of required resources, lack of capacity, financial distress and/or technology limitations. But, today's time for

vertical integration has passed when organizations themselves implemented and operated all activities of supply chain from beginning to end (from supply layer to layer of distribution and delivery of products and services to customer). Now time of organizational outsourcing has emerged. Thus, outsourcing phenomenon is increasingly being prevalent in firms and is one of the strategic decisions attracted attention of many organizational experts (Rodriguez, 2006). However, every organization prioritizes outsourcing of activities based on its nature and resources, environmental and competitive conditions or technological requirements. In general outsourcing, regardless its reasons, should finally enhance competitive edge and create sustainable competitive advantage (Khalili, 2002). Sometimes organizations have required resources and knowledge but despite this fact they outsource some activities so that they can release their specialist workforce and focus organizational power on their core activities and enhance their competitive advantage.

## Literature Review

Outsourcing as a simple and economic executive instrument is increasingly being used by various organizations. In today's business environment, firms are no longer able to perform all service activities internally. Competitive advantage is more likely to be achieved when external suppliers produce and provide products or services in a more effective and efficient way. According to Peter Drucker outsourcing will indeed be a fundamental revolution in future structure of organizations all over the world. That means it is no longer necessary for big business firms, public departments, hospitals and

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big universities to employ a great number of people. Outsourcing like other scientific concepts has various definitions from different perspectives. In its basic meaning, outsourcing is defined as delegation of some firm activities by employees to external parties and in this way those employees are not involved in that process and delegated activities are conducted by supplier staff. This concept is prevalent in traditional outsourcing but in modern outsourcing employees are not really moved and a new service is conducted by another firm within business processes of the same firm. Wilcox introduced outsourcing as a concept opposite to conducting activities within the organization. According to this definition outsourcing leads to formation of contracts in which contractors provide services to the market by employing resources under control and management of the purchaser. In other words outsourcing is a situation in which some part of firm tasks are moved outside of it and conducted by others. Purpose for outsourcing is to reduce costs, enhance quality and/or release some resources of firm to assign it to higher priority activities. One scientific definition for outsourcing is as follows: "Outsourcing is a form of pre-determined external contract with another institution for production of products and services previously being internally produced." (Rajab Zadeh and Anvari, 2006, 521).

Main questions raised in present study are as follows:

1. What are the factors influencing activities of Gas Company of Mazandaran Province and Suburb?
2. What is the prioritization of these factors?

### *Significance and objective of the study*

Lack of a scientific and organized framework for

strategic decision making always creates problems for industrial and business managers. Thus if no appropriate and scientific models are used in outsourcing not only the expected benefits are not obtained from it but also more problems and costs are created for the organization. It is noteworthy that while there is a great deal of research on using outsourcing for activities related to manufacturing of products, unfortunately there are no scientific studies on service outsourcing. Outsourcing is not the problem top management faces with but also the difficult task in determining the service which should be outsourced and also factors having the most influence on this process should be identified and the latter is the most prominent challenge of organizations involving in service outsourcing.

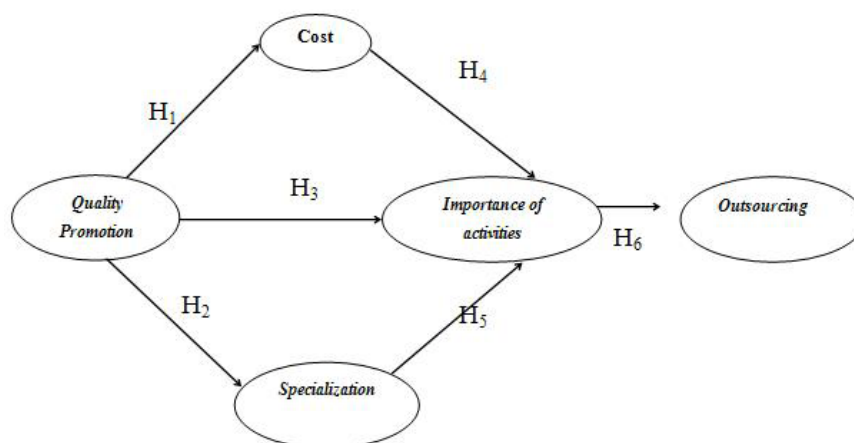
Regarding the research objectives, they can be summarized in the following framework:

- Evaluation of factors influencing outsourcing
- Prioritization of factors influencing outsourcing

Of course, the main goal of present research was to help Gas Company of Mazandaran Province and Suburb with identifying factors having the most influence in service outsourcing.

### *Conceptual Model and Research Background*

The model employed in present study was formulated based on a review of models proposed in other studies. This model is capable to provide the relationships between intended variables in a complete way. Thus using this model and resting on theories and paradigms proposed by scholars the following analytical model is provided.



**Diagram 1. Conceptual model.**

*Traditional Outsourcing:* In traditional outsourcing immediately meeting of needs is of most importance. Suppliers are selected based on price, quality and quickness. Strategic planning is paid no or little attention. Purchaser of outsourcing services is in the main control of outsourcing relationship. There is no integration at process or task and even staff levels. Thus there is no certainty in relationships. This activity is purely a tactical one and is limited to a specific task (Linder, 2001).

*Partnership Outsourcing:* When outsourcing shifts from traditional form to a partnership one it is called partnership outsourcing. In this case the organization intends to use resources and technology of the supplier. Effects of this type of outsourcing is more extensive but in selecting appropriate supplier cost is still of most importance compared to other factors.

*Strategic Outsourcing:* Strategic outsourcing is at a higher level than traditional one because competitive advantages are related to all functional tasks of organization. It encompasses central merits which should realize competitive advantage of organization both inside and outside of organization. Contrary to traditional outsourcing, in strategic one there are not obstacles associated with core activities of organization i.e. ones which make it able to increase its innovation capacity for exploiting an active part of a networked economy. With regard to relationships, strategic outsourcing is associated with a lower level of commitment and a higher level of risks compared to traditional one. Here the risks are not solely lack of important organizational information but when organization establishes relationships with multiple external partners the risks are intensified (Berg & Young).

*Outsourcing of Marketing:* Today a great number of firms have outsourced their marketing and sales functions. Previously outsourcing was prevalent in such domains as public relations, advertising, distribution, foreign sales and also electronic and tele-marketing. Especially suppliers in advertising and public relations showed that they have an outstanding capability compared with other firms.

### *Definition of Operational Variables*

*Outsourcing:* Principally outsourcing in its main form points to purchase of products or services previously being produced internally. But today outsourcing refers to purchase of any services whether previously being produced internally or not (Ashraf Zadeh, 2008, p.2).

*Quality Promotion:* Morris and Bell (1995) propose that quality means entire characteristics and shape or appearance of a product or service and the way of providing it which are capable to meet demands and requirements of service receivers based on a professional and learned judgment. Quality promotion includes creation of appropriate infrastructure and making decisions on promotion of processes.

*Specialization:* Today many organizational activities are conducted in a specialized way and sometimes organizations are not capable to conduct them. In outsourcing of a specialized service such as financial, engineering or legal services presence of a person being expert in related field within organization is necessary to follow up the related issues and receive results of the intended service so that no serious damages are incurred by organization.

*Cost:* Cost is an important concept in today organizations. Today organizations assign more priority to decreased overhead than other advantages. In Iranian context, the main goal of outsourcing is to reduce costs. In discussion on cost, it is not appropriate to merely calculate exact costs of the outsourced service but more extensive benefits for organization should also be considered.

### *Research Hypotheses*

A firm which decides to outsource a number of its activities faces with some questions. In relation to the above issues, four hypotheses are provided with respect to important factors from the author's viewpoint:

H1. Quality promotion has a direct and significant relationship with cost.

H2. Quality promotion has a direct and significant relationship with specialization.

H3. Quality promotion has a direct and significant relationship with importance of activities.

H4. Cost has a direct and significant relationship with importance of activities.

H5. Specialization has a direct and significant relationship with importance of activities.

H6. Importance of activities has a direct and significant relationship with outsourcing of activities.

### *Research Methodology*

Research method is a causal-descriptive-survey one. It is descriptive because actual organizational situation is described without any intervention and it is causal because the effect of one factor on another one is calculated.

### Data Collection Instrument

Questionnaire is one of the most prevalent instruments to gather information in survey research and consists of a set of meaningful questions which evaluates opinions, views, perspectives and insights of the respondent using various scales. Number of questions in present research questionnaire was 25. Table 1 indicates the reliability of this questionnaire.

**Table 1. Reliability Analysis of Questionnaire.**

| Criteria                 | questions | Cronbach $\alpha$ | N  |
|--------------------------|-----------|-------------------|----|
| Quality Promotion        | 5-1       | 0.968             | 5  |
| Cost                     | 10-6      | 0.965             | 5  |
| Specialization           | 15 - 11   | 0.959             | 5  |
| Importance of Activities | 20-16     | 0.938             | 5  |
| Outsourcing              | 25-21     | 0.984             | 5  |
| Total                    | 25-1      | 0.994             | 25 |

**Table 2. Demographic characteristics of statistical sample.**

| Persons characteristics | Subgroup      | Number | Frequency |
|-------------------------|---------------|--------|-----------|
| Gender                  | Female        | 250    | 65        |
|                         | Male          | 134    | 35        |
| Age                     | 25 >          | 77     | 20        |
|                         | 25-35         | 96     | 25        |
|                         | 35-45         | 153    | 40        |
|                         | <45           | 58     | 15        |
| Education               | Under Diploma | 77     | 20        |
|                         | Diploma       | 96     | 25        |
|                         | Bachelor      | 153    | 40        |
|                         | MA & Upper    | 58     | 15        |

### Statistical Population

Statistical population of present research included all staff and professionals involved in outsourcing function of Gas Company of Mazandaran Province and Suburb. Among them, according to population of target society and Krejcie Morgan table, 384 ones were selected as statistical sample. Table 2 shows the demographic information about the participants.

### Data Analysis Techniques

Data required for present research was collect-

ed using questionnaire which had an approved validity. Data were analyzed by software LISREL and SPSS using appropriate statistical tests and structural equations model and confirmatory and path analysis models were used to support or reject the hypotheses.

### Results

Importance of activities depends on their sub-processes lack of them even for a short moment leads to stoppage of providing services to customers (Alvani and Ashraf Zadeh, 2004, 55).

#### Hypothesis Testing

H1. Quality promotion has a direct and significant relationship with cost.

According to results obtained from research analytic model, t-statistic was 9.76 and standardized coefficient of estimation was 0.82. Thus, t-statistic is not in the range of -1.96 and 1.96 and therefore there is a direct and significant relationship between quality promotion and cost.

H2. Quality promotion has a direct and significant relationship with specialization.

According to results obtained from research analytic model, t-statistic was 11.35 and standardized coefficient of estimation was 0.86. Thus, t-statistic is larger than 1.96 and research hypothesis is confirmed with confidence level of 99 percent. Therefore, quality promotion has a direct and significant relationship with specialization.

H3. Quality promotion has a direct and significant relationship with importance of activities.

According to results obtained from research analytic model, t-statistic was -0.93 and standardized coefficient of estimation was -0.18. Thus, t-statistic was in the range of -1.96 and 1.96 and therefore research hypothesis is rejected and there is not a significant relationship between quality promotion and importance of activities.

H4. Cost has a direct and significant relationship with importance of activities.

According to results obtained from research analytic model, t-statistic was 5.05 and standardized coefficient of estimation was 0.63 and because t-statistic is larger than 1.96 thus hypothesis is supported and there is a significant relationship between cost and importance of activities.

H5. Specialization has a direct and significant relationship with importance of activities.

According to results obtained from research t-

statistic was 3.04 and standardized coefficient for estimation was 0.46 and because t-statistic is larger than 1.96, thus hypothesis is supported and there is a significant and direct relationship between specialization and importance of activities.

H6. Importance of activities has a direct and significant relationship with outsourcing of activities.

According to results obtained from research t-statistic was 5.05 and standardized coefficient for estimation was 0.63 and because t-statistic is larger than 1.96, thus hypothesis is supported and there is a significant and direct relationship between importance of activities and outsourcing of activities. In the following table, the amount of fitness indices has been shown based on model output, which indicates the standardization of all amounts.

**Table 3. Model Output.**

| Fitness Index | Value  |
|---------------|--------|
| RMSEA         | .78    |
| Df            | 296    |
| Chi-square    | 871.17 |
| NFI           | .92    |
| CFI           | .94    |
| IFI           | .94    |
| RFI           | .91    |
| GFI           | .93    |
| AGFI          | .92    |

## Discussion and Conclusion

H1. According to results obtained from data analysis there is a direct and significant relationship between quality promotion and cost. Some organi-

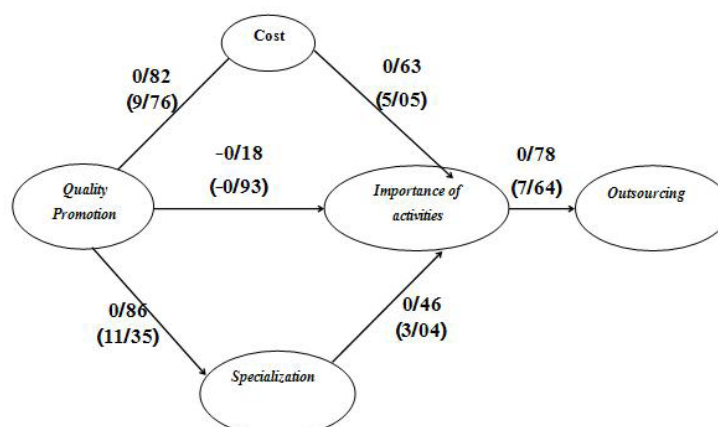
zations because of lacking required capabilities to conduct a service activity or conduct it with desired quality take action to outsource it. Thus according to results of data analysis they should consider cost factor so that such problems as increased overhead, etc. are not created which are not aligned with firm goals.

H2. According to results obtained from data analysis there is a direct and significant relationship between quality promotion and specialization. Presence of specialized organizations having required software and hardware equipment for conducting service activities prepares the ground for obtaining better and higher quality results from outsourcing.

H3. According to results obtained from data analysis there is a direct and significant relationship between quality promotion and importance of activities. With increase in quality of some service activities, the importance of those services does not increase compared to other ones and organizations should pay more attention to these services so that do not incur unnecessary costs.

H4. According to results obtained from data analysis there is a direct and significant relationship between cost and importance of activities. Organizations nominate many activities for outsourcing but those which have higher costs often also of the most importance from all viewpoints. Therefore, organizations should pay more attention to their costly activities because they are among the most important ones.

H5. According to results obtained from data analysis there is a direct and significant relationship between specialization and importance of activities. According to obtained results those activities which are conducted in a specialized manner are of more importance and demands more attention from organizations.



**Diagram 2. Conceptual model.**

H6. According to results obtained from data analysis there is a direct and significant relationship between importance of activities and outsourcing. Organizations intensively focus on conducting their core activities which are conducted in a specialized way and also incur high costs. That is why they delegate them to specialized firms in the form of outsourcing.

Regarding the results of this study and the obtained output from data analysis, there is a relationship between the quality promotion indices and expenses or cost, cost and the importance of activities or actions, specialization with the importance of activities and finally the importance of activities with outsourcing and these relations have been defined directly based on the model while the relation between quality promotion index and outsourcing were defined indirectly based on the model. However, with regard to the obtained output, these two indices can be directly related to each other. In other words, quality promotion can have a significant effect on the outsourcing of activities directly.

### Recommendations for Future Research

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Interested researchers are recommended to

do the same research with different variables such as distribution. It is recommended to use other alternative models which can show relationships between variables in a clear manner. Also, it is recommended to do the same research on other statistical populations involving in outsourcing activities.

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