

Impact of Information Technology (IT) Projects Outsourcing of Telecom Company on Customer Satisfaction

(Case Study: Kashan Telecom)

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Abstract

The goal of present study is the impact of Telecom outsourcing IT projects on customer satisfaction (case study of telecommunications management of Kashan). The mentioned project is practical (applicable) in terms of the purpose and is of descriptive survey type. The study population consisted of all customers (end users) of Pishkhan Dolat offices in Kashan with the total number of 180000 and all employees of the telecommunications management of Kashan with the number 355 people. For the customer, 384 people are selected according to Cochran formula. But since the second population is 355 and statistical methods need equal number of records in each variable, 355 people were selected by a simple random method. Also the same number of questionnaires, namely 355, were selected for the staff by the census enumeration and the relevant questionnaires were distributed. The gathering instrument of Rudsaz questionnaire (2014) with 33 questions was used for outsourcing services to be distributed among the staff of Telecommunications Company and a questionnaire of 25 questions was used for customer satisfaction, which were confirmed in terms of content validity of the questions by the supervisor. In order to assess the validity and reliability of the questionnaires, Cronbach's alpha coefficient is used and the values obtained are above 7.0, thus the reliability is confirmed. To test the hypotheses, the structural model method with the help of Lisrel software was used. The results showed that providing executive consultancy services, executive support services, and the system performance in outsourced IT projects has an impact on the customer satisfaction.

Keywords: Outsourcing, Customer Satisfaction, Consulting Services, Support Services, System Performance.

1. Introduction

Outsourcing of IT services is referred to transmission of a part or all of internal information technology activities of an organization to a supplier outside of the organization through contracts. This process usually involves the

transmission of production factors, staff (employees), equipment, technology, and other service-related assets that have been outsourced as well as the right to decide about all these issues.

Information technology services outsourcing is the reduction of operating costs of well-known informational systems so that if this strategy is properly done, it helps to establish a system within the organization in order to gain a competitive advantage and maintain it and provide better services at lower costs (Sengupta & Zviran, 1997).

2. Article Context

Today, many companies, institutions, organizations, government ministries, and the private sector have attempted to outsource their affairs and various services, particularly their support services, and this can be more seen in the IT sector than other sectors. Since the design to implementation of the information systems has various and complex stages, most companies or organizations outsource their IT services to external companies for several reasons, including lack of capacity and expertise.

An important issue raised in relation to outsourcing IT services is that due to the popularity of outsourcing IT services in various organizations, increasing customer satisfaction have naturally become a major challenge for service providers as well as the contracting organization. Since customer satisfaction is essential in the success of outsourcing process and the continuity of outsourcing contracts, and due to the increased competitive environments and reports related to the reduction of outsourcing success rates, it has become an important issue to measure and evaluate customer satisfaction. The following research with the introduction of a comprehensive system to assess customer satisfaction of outsourcing IT services can provide a basis to focus on limited resources and supplying qualitative priorities in order to enhance customer satisfaction.

Considering the above and due to the pervasiveness of outsourcing IT in organizations, the author seeks to understand how far outsourced IT services are satisfactory for the end users of these services and the organization outsourced the service. Due to the cost pressures and new orientations in the telecommunications industry, the value of outsourcing has rapidly grown (increased). Now, sectors that have been identified as the competition core, are affected.

According to the previous studies in this research, considering its title, theoretical definitions and fundamentals have been provided, and reviewing research literature, the following hypotheses (assumptions) are presented.

- Providing executive consultancy services in outsourced IT projects affect customer satisfaction.
- Providing executive support services in outsourced IT projects affect customer satisfaction.
- System performance in outsourced IT projects has an impact on customer satisfaction.
- Implementation of outsourced projects of IT services has an impact on customer satisfaction.

The conceptual model of the study is presented in the following.

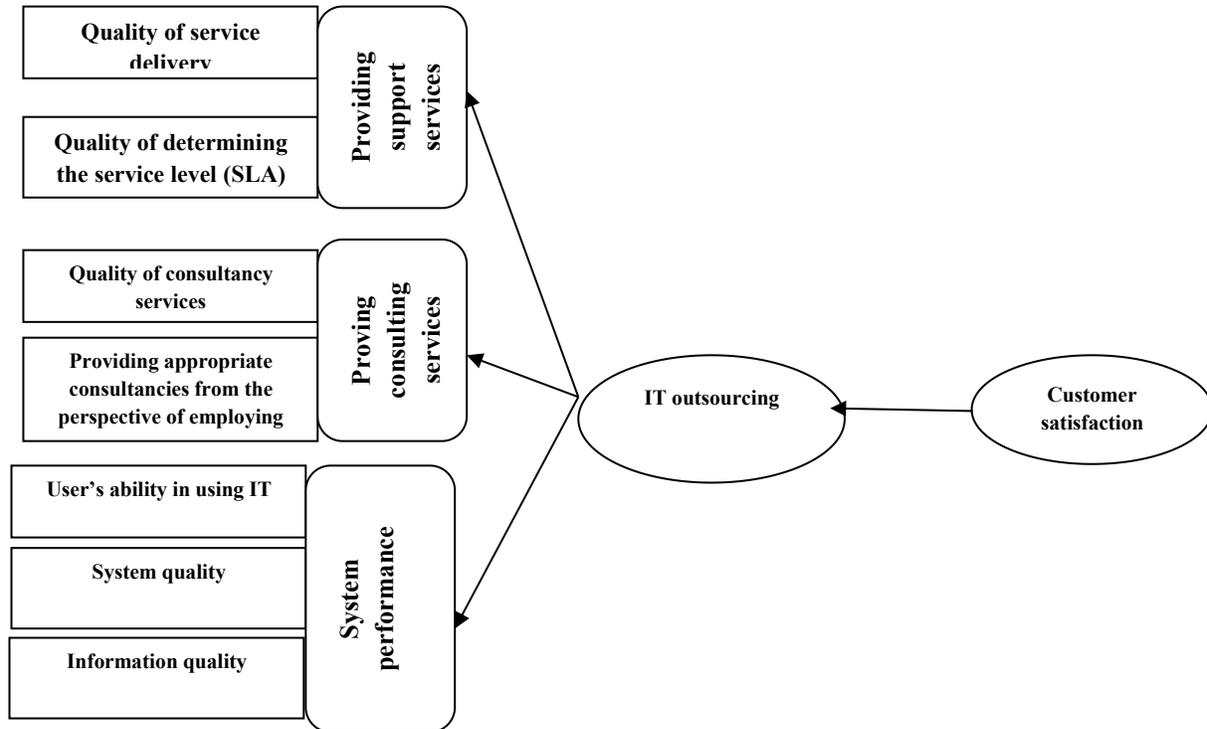


Figure 1: research conceptual model of Rudsaz (2014).

3. Research Methodology

The present study has an applied purpose and the data collecting method is descriptive survey which has been conducted based on an opinion poll and data collection tools are the information from a questionnaire or interview. This research is survey in terms of the description method. The study population for the customer satisfaction questionnaire included all the customers (end users) of Pishkhan Dolat offices in Kashan which were 180,000 people, and also for the outsourcing questionnaire, all the employees of the Kashan Telecom were 350 persons.

This study is conducted to determine the sample size based on Morgan table with a confidence Level of 95% and the maximum permissible error of 5% which should be 384 for 180,000 customers. However, since the population of the second community is 355 people, and statistical methods require an equal number of records in each variable, 355 people were randomly selected. For the same number of the staff, namely 355 questionnaires were selected using the census method and the related questionnaires were distributed.

The main tool for gathering information in this study is questionnaire. In the present study, a questionnaire of 33 questions was used for outsourcing services to be distributed among Telecom staff and a questionnaire of 25 questions was used for the customer satisfaction.

4. Research Findings

To assess the reliability of the questionnaires used, Cronbach’s alpha coefficient was used. Using the Cronbach’s alpha method, the reliability of the questionnaires are confirmed.

Table 1. Cronbach’s alpha coefficient of research variables

Cronbach’s alpha coefficient	Number of questions	variable
0.92	12	Consulting services
0.81	10	Support services
0.89	11	System performance
0.83	25	Customer satisfaction

For the relationship between the assumptions with two variables, the correlation method will be used to study the relation and significance. It should be noted that for all calculations and tests conducted for these analyses, Lisrel software was also used to delineate the structural model. In the following, research variables are given according to the drawn (outlined) structural model and the terminology of model fitting.

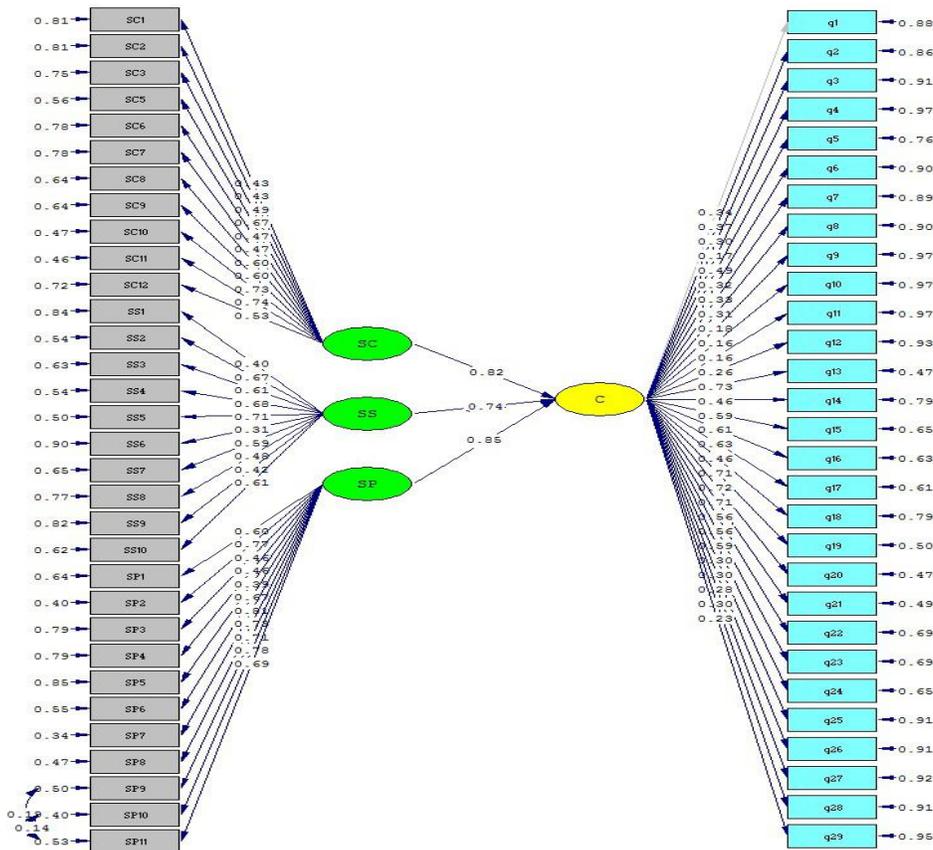


Figure 1: Structural model of the research in standard mode

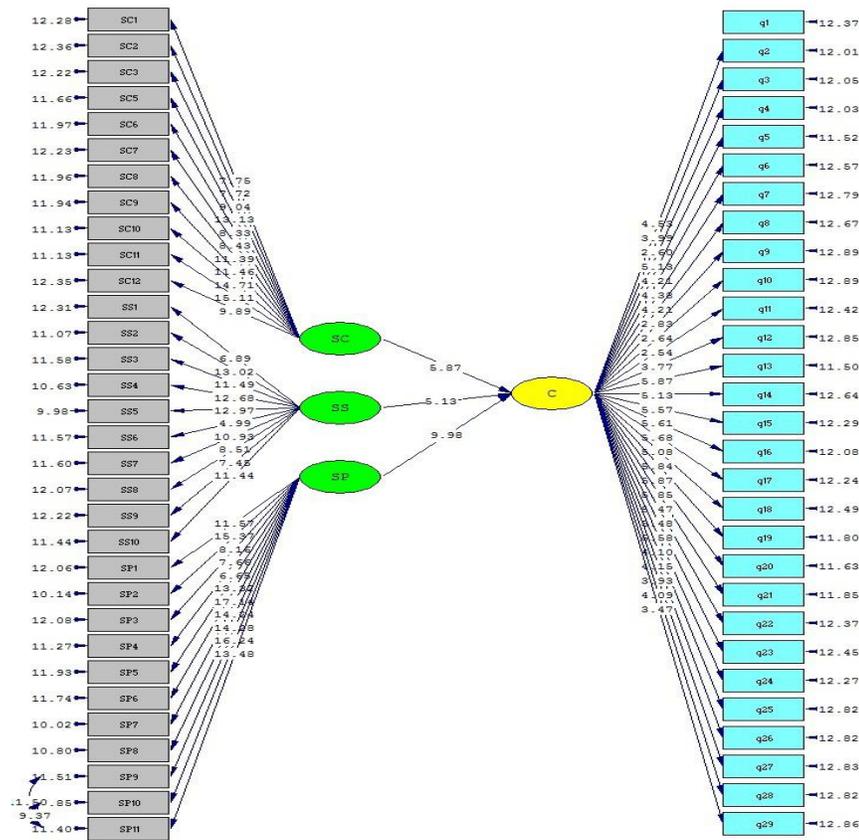


Figure 2. Structural model of the research in significance mode

Path coefficients and the significance between research variables are presented in the following table. As can be seen, the path coefficients for all six relationships are obtained in the significance level 05.0 (t greater than 96.1 and t less than -96.1).

Path coefficients and the significance between research variables are presented in the following table. As can be seen, the path coefficients in the above ten relationships are obtained in the significance level 05.0 (t greater than 96.1 and t less than -96.1) for seven relations and they are not significant for three relations.

Table 2. Results of the direct relation and significant coefficients of the model assumptions

Test result	significance	Path coefficient	Symbol	Path
Accepted	87/5	84/0	C --- SC	Providing consultancy services---customer satisfaction
Accepted	13/5	74/0	C --- SS	Providing support services---customer satisfaction
Accepted	98/9	85/0	C --- SP	System performance---customer satisfaction

In the following path diagrams, the characteristics (specifications) related to the impact of outsourcing on customer satisfaction are presented.

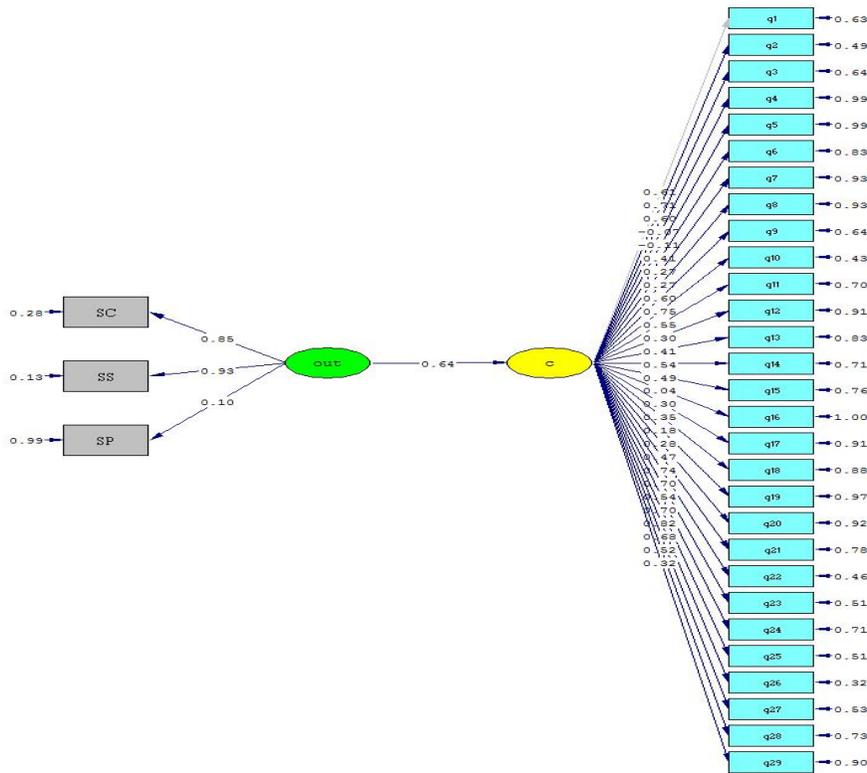


Figure 3: Structural research model in standard mode

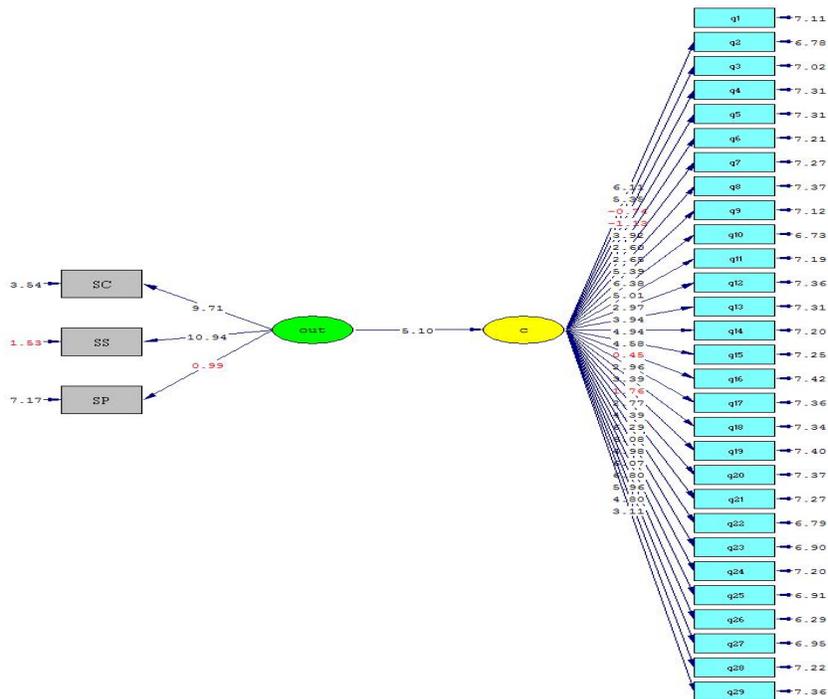


Figure 4: Structural research model in significance mode

As it is recognizable from the table of the structural model diagram in both standard and significance mode, path coefficient of 64.0 is achieved between the IT outsourcing and customer satisfaction. The t statistic for this relation is 10.5, and its value is obtained above the significance threshold, i.e. 1.96. Based on the above, it can be concluded that outsourced IT has an impact on customer satisfaction. Thus, the main hypothesis of this study is confirmed.

Table 3. Variance analysis table for the age moderating variable and customer satisfaction

Significance level	Fisher statistic	Average of squares	Degree of freedom	Sum of squares	Variations source	variable
186/0	615/1	337/445	3	011/1336	Between group	
		825/275	322	753/88816	intergroup	Customer satisfaction
			325	764/70152	total	

To evaluate the mean difference between age moderating variable of the study population and the customer satisfaction variable, the result of analysis of variance (ANOVA) test was obtained at 186.0. This value is higher than 05.0, therefore, for customer satisfaction of Kashan Telecom IT outsourcing among various people with different ages, there is no significant mean difference.

Table 4: Analysis of Variance for the moderating variable of years of service and customer satisfaction

Significance level	Fisher statistic	Average of squares	Degree of freedom	Sum of squares	Variations source	variable
058/0	516/2	017/677	3	051/2031	Between group	
		064/269	312	072/839408	intergroup	Customer satisfaction
			315	123/85979	total	

The result of analysis of variance (ANOVA) test for the evaluation of mean difference between the moderating variable of work experience of the study population and customer satisfaction was 058.0. The obtained value is higher than the 05.0 level, therefore, customer satisfaction of Kashan Telecom IT outsourcing among people with different work experience has no significant mean difference.

5. Discussion and Conclusion

Although this level of dissatisfaction is not too serious and it may be caused by the high level of users' expectations of services in this area or with respect to the weight and importance given to this area by the IT experts, special attention has not been paid to this field, however, providing high quality support services for users of information systems is of particular importance. The ability of using and taking advantage of IT information systems in the process of doing job tasks is an essential prerequisite for most jobs, especially in the public and government sector. If users do not have the ability to use and benefit from information and practical (functional) systems, by the mere use of such facilities in the organization, we will not achieve expected goals and results. In this regard, the organization must ensure that all potentials of its users and employees are in line to utilize simple information systems and it is easy for users to work with them so as to facilitate performing job duties rather than associating task performing with difficulty and complexity. When the number of users of information systems is large, such as users of functional systems used in government and public organizations, improving and enhancing users' capacity (throughput) towards the use of these systems certainly provides a significant impact on the compensation cost and support services. Hence, the use of information systems in accordance with standards in order to reduce the costs of support services is very necessary.

According to the results obtained from the survey and IT professionals, the most important criterion in the process of outsourcing information and communication technology (ICT) services relates to the system performance. For the success and increase of satisfaction level of organizations of outsourcing contracts, arranging contracts with service providers should be based on the present condition, analysis of organizational situation and strategic goals, and the exact definition of the type of activity that the organization has decided to outsource it, and so on. Because outsourcing information and communication technology services in addition to several benefits that may bring to the organization which have outsourced the service, it may cause undesirable outcomes such as transportation (displacement) costs, including the cost of stopping the activity of an organization and transferring outsourcing to another supplier or modifying the cost of contracts, etc. If these issues are discussed in detail when setting up a contract, they will be definitely helpful when problems arise. For example, to prevent the problem of transportation costs, the foresaid problem can be avoided by setting up continuous and short-term contracts and dividing the target activity to different parts (sections). Setting up such contracts, the suppliers are obliged to fulfill their commitments (obligations) in a specified short time, and, on the other hand, the possibility of terminating the contract by the organization which have outsourced the service exists at any moment in case of dissatisfaction with the suppliers' activities or in order to avoid the cost of contract modifications, a detailed description of the obligations of the parties should be provided in the outsourcing contract. Another effective criterion from the expert's point of view is the level of user performance ability in the application of information and communication technologies. It is obvious that the users' overall familiarity and knowledge of information systems not only leads to greater effectiveness and efficiency of provided trainings, but also makes users interact with the system more easily and take more advantage of it in order to perform their job duties.

In summary, the following should definitely be considered in providing high quality support services:

- Study and development of applied and information systems is perfumed by the survey from users and in accordance with their desires and needs.
- Studying, testing and acceptance of information systems are performed in order to develop the hardware and software equipment and updating software systems is also done according to the users' demands and needs.
- Taking into account the support requirements for the users within the organization based on public needs
- Ensuring that users are completely supported in applications (programs) associated with changes in the course of performing their job responsibilities.

- Ensuring that the end-user is adequately benefited the maximum performance advantages of information systems in carrying out the tasks, and preservation, promotion, and evaluation of users' skills and expertise in working with applied systems.
- Ensuring that new members of the organization are adequately received required trainings.
- Providing support services through the Help Desk or providing online support services.

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