

The Recognition of Factors Influencing Human Resources Planning at the Isfahan Steel Company Based on Shannon Entropy

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ABSTRACT

Using information systems is one of the important factors influencing improvement of organizations competitive conditions. Nowadays enterprise resources planning (ERP) has been recognized as one of the modern planning and management instruments in the world. With respect to the volume of spent money, the concise analysis and examination of how doing projects has much importance for companies. Our country is not exempt from this issue. Therefore this study was aimed to recognize factors influencing human resources planning. In order to this, the statistical population of this study was the Isfahan Steel Company. Then in order to recognizing factors influencing human resources planning, the Shannon entropy has been used to recognizing these factors and also determining these factors importance on implementing human resources project planning. This information was collected from 35 managers and supervisors through polling. In order to this, the 31 critical success factors have been recognized based on literature review and through interview and then these factors have were categorized into six different sets. Based on the findings, three important factors have been recognized that includes the team members' maturity and ability, user supportiveness, and top management commitment and obligation. Additionally each of these factors has some sub-factors that have been indicated in the study.

KEYWORDS: Shannon entropy, managers' knowledge, team members' maturity and ability

1. INTRODUCTION

Human resources planning utilize many information systems that have complex model and technologies (Umble,2003,241). About 60% of current companies in the Fortune list implemented the human resources planning systems and used these systems (Hanifzadeh,2007,29). The word of human resources planning system is a general term for comprehensive software that helps organizations to integrating all of their existing functional processes and areas in related businesses. Implementation of these projects need to many times and resources (Hanifzadeh,2007,13). Yet many of implemented organizational projects systems failed or were successful less than expected rate. The managers should strive to transform their personals to fans and supporters of organizational resources planning based on their expectations and attitudes. Therefore the top managers should know to consider what factors to accepting organizational resources planning more than the professional aspects of projects. Based on this, in current study we want to examine the factors influencing human resources planning system and also importance of each of these factors through method of Shannon entropy at the Isfahan Steel Company.

2. LITERATURE REVIEW

The informational revolution in the years of 1990's and inability of existing systems to integrating and creating comprehensive system in the organizations leads to developing MRP and MRPII systems and creating solutions to planning organizational resources in frame of software packages. The organizational resources planning systems could consider as the most important instrument of organizational development in the field informational technologies. The software package of human resources planning in the years of 1990's entered to market through Gartner group. They used word of organizational resources planning for the systems that they developed(Shafaei,2006,237). Term of organizational resources planning defined as the system that their moguls integrate all of inter-organizational activities such as planning, production, sales, marketing, distribution, and financial accounting and have a database and a function in the organization(Mohaghegh,2007,56).The offered software through original sellers of organizational resources planning such as People Soft, SAP, and Oracle were sold to others. This software includes many cases that the organizations could use them. Of course many of organizations prefer to selectan especial package rather than selecting different modules of the different sellers(Rohani,2006,39).Development and evolution of organizational resources planning and successful implementation of these systems has been studied by many researchers and authors. Generally we have two types of

researches. The first is the researches who study professional businesses (Holland,1999,30),(Yusuf,1998,66)and the lastis who study about an industry(Yahyaei,2004,56),(Berchet,2005,588) and (Huang,2001,276). Though implementing organizational planning systems can havetangible and intangible benefits for the organizations. Also there are many instances that these projects failed to successful. The projects manager mainly concentrate on financial and technical aspects of projects and unaware of nontechnical aspects (human factors and organizational processes) of them. Therefore the organizations should examine the core critical success factors in order to successfulness in the implementation of projects and avoidance of failure. Each of these factors has especial and correlative impact (Hanifzadeh,2007,85). Yahyaei (2004) studied Iranian companies and recognized the obstacles of implementing organizational resources planning systems in these organizations. Based on his findings, the organizational, individual, project-related, and technological obstacles influenced failure of implementingorganizational resources planningsystems in these organizations. These factors have been indicated at the figure 1. Alizade (2006) analyzed different models in terms of critical factors in the implementation of organizational resources planning systemsand then resulted that there were seven critical success factors that these also have 38 sub-factors. These seven factors include: appropriate business systems, organizational top management supportiveness, knowledge ofproject management, business perspectives of project, accepting change and managing it, combination of team members, integration, configuration, development, experiment, debugging, monitoring, and assessing project performance (Alizadeh,2006,87). The process of organizational resources planning includes three steps: pre-implementation, implementation, and finally step of operation and utilization of system. The implemented project that monitored by Oracle Company and plan modules have been installed and localized in the seventeen sub-systems.

Organizational obstacles

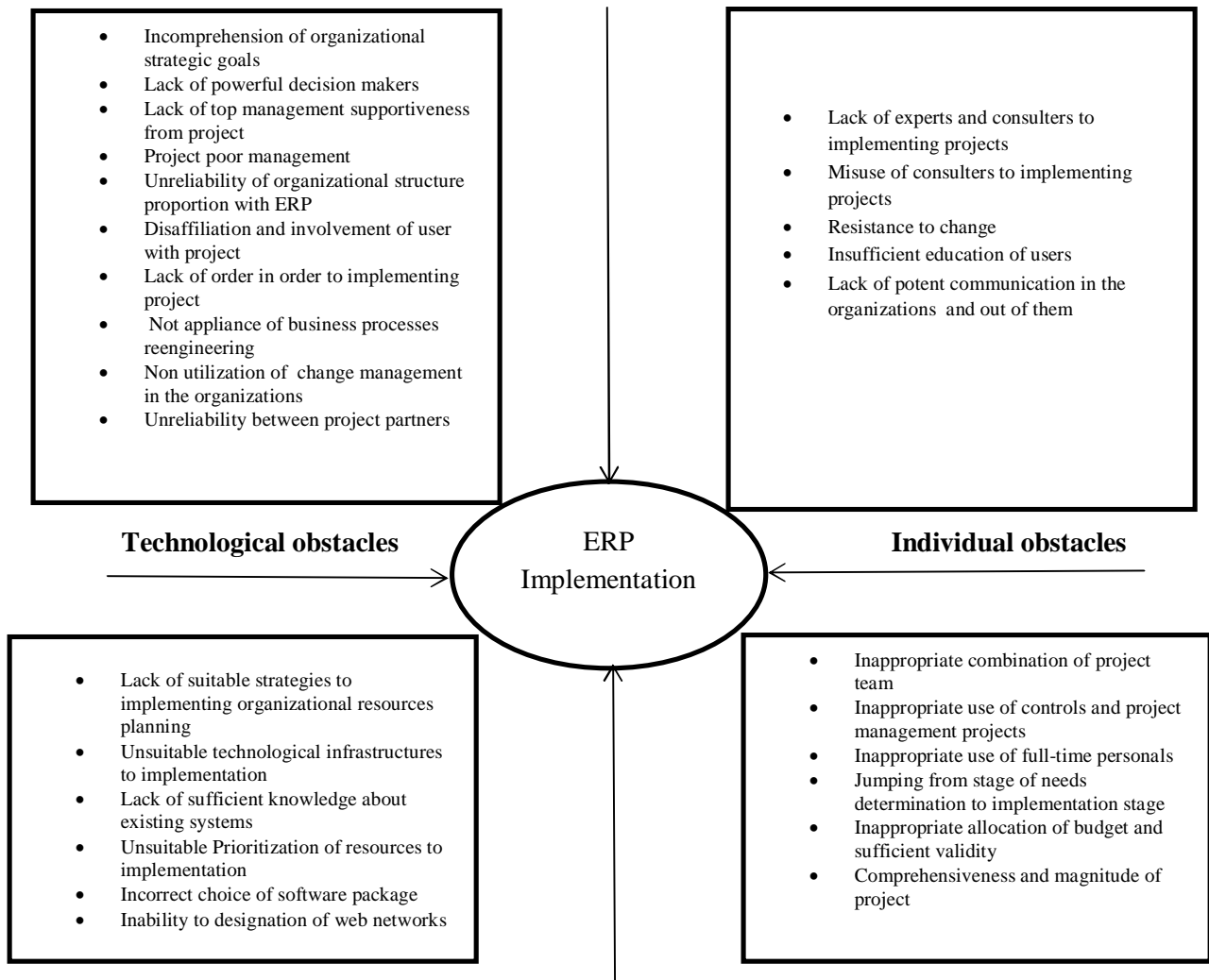


Fig 1: Exponential model (Yahyaei, 2004)

3. RESEARCH METHODOLOGY

After examining literature review, the conceptual framework of this study has been designed as following model and then based on this conceptual model some open questions have been asked from supervisors and middle managers. Because this study is a descriptive and practical research, so in order to collecting data the following methods have been used. The first is library study that has been done comprehensively such as studying thesis, researches, books, and also internet. The second is open questionnaire that has been designed based on conceptual framework in order to inferring the supervisors and managers perspectives and then these questionnaires were distributed between the 35 supervisors and managers and the data analysis has been done based on these questionnaires data. Therefore the open questionnaires have been used in order to collecting data then the content analysis has been used to exploiting factors. Then in order to examining importance of each of recognized factors, Shannon entropy has been used.

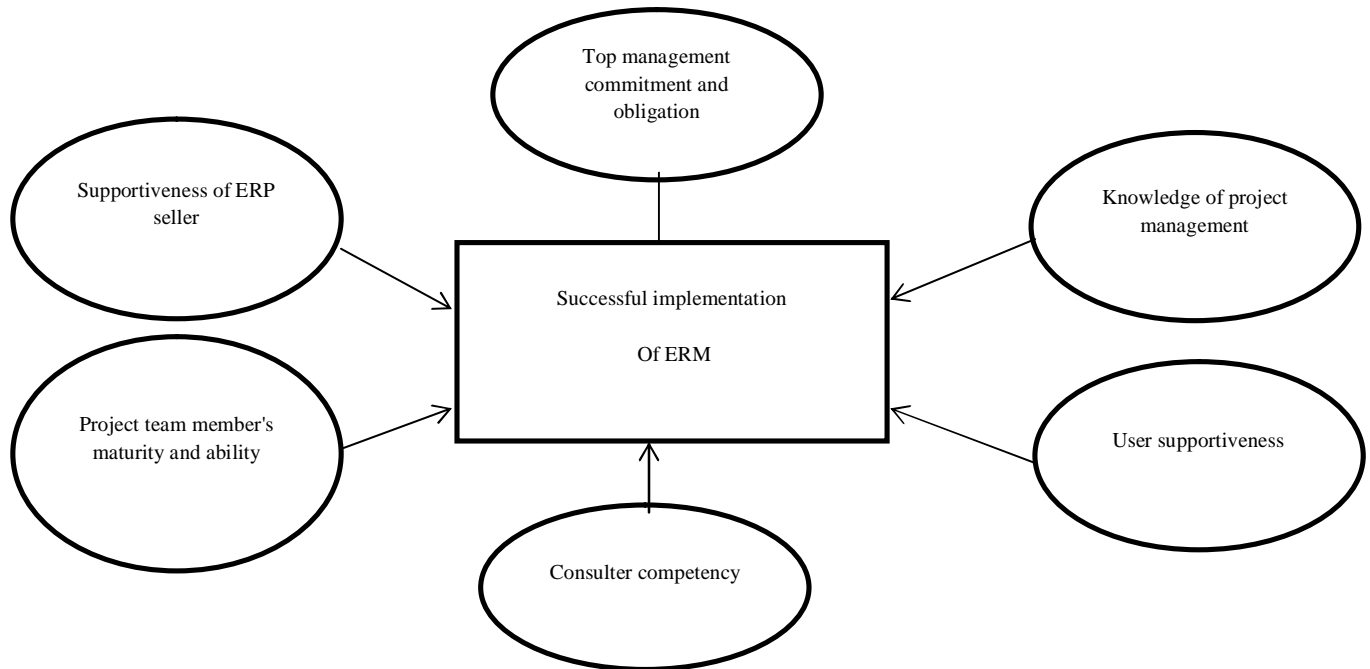


Fig 2: Conceptual framework

4. CONTENT ANALYSIS

The method of content analysis has been defined in some of research methodology books as a research method or strategy and in some of other as a method of collecting and analysis of data (Danaeifard,2011,135). The managers and supervisors perspectives about the model and its components have been analyzed and examined through the content analysis. This method has three steps that have been indicated at the following section.

4.1. Pre-analysis (preparing and organizing): this step includes determining the questions that the researcher wants to answer them. In this study, we want to answer these questions through content analysis.

4.2. Evaluation of material (message): In this step the researcher wants to encoding messages. The encoding is process that the raw data placed in the units that lead to describing them. Also it is should remembered that in this content analysis more than evident content, deeper meanings of the content have been analyzed. On the other hands the category and units of analysis were choice so that are comprehensive and universal to place all of factors in the appropriate categories.

4.3. Data processing: in order to processing data, the Shannon entropy has been used. Nowadays many techniques have been offered in order to this that their basis is on percentage of categories frequency. Unfortunately these techniques have their own mathematical problems that lead to unreliable results. But the new method that derived from theory of systems "Shannon entropy: seemed to be better than similar ones. This method has modern view of data processing in the field of content analysis that is valuable and reliable method than other methods. In order to using the Shannon entropy, first the message should counted based on categories.

Table 1: categories frequency based on respondent

respondent \ factor	x	x ₂	...	x _n
1	F ₁₁	F ₁₂	...	F _{1n}
2	F ₂₁	F ₂₂	...	F _{2n}
...	F _{3n}
m	F _{m1}	F _{m2}	...	F _{mn}

Based on collected data from tables, the steps of algorithm indicated at the following section.

Step 1: fist the resulted matrix of frequency through formula 1:

$$(i: 1, 2, \dots, m) \quad (j: 1, 2, \dots, n) \quad P_{.j} = \frac{F_{.j}}{\sum_{i=1}^m F_{ij}}$$

Step 2: the value of each of categories uncertainly has been calculated through formula 2:

$$(j: 1, 2, \dots, n) \quad E_j = -K \sum_{i=1}^m [P_{ij} \cdot \ln P_{ij}]$$

Step 3:the importance coefficient of each of categories calculated through the categories information bar.

$$(j: 1, 2, \dots, n) \quad W_j = \frac{E_j}{\sum_{j=1}^n E_j}$$

After collecting the questionnaires, the data have been encoded and categorized in the frame of concepts hierarchal. For example the some factors have been recognized in the first level that includes: appropriate business systems, organizational top management supportiveness, knowledge of project management, business perspectives of project, accepting change and managing it, combination of project team members, integration, configuration, development, experiment, debugging, monitoring, and assessing project performance. Then the weight has been calculated for each factor based on the frequency of them through the Shannon entropy. Based on the findings of the Shannon entropy, the rate of basic factors has been offered at the following section. The mentioned number in the parentheses indicated to coefficient of importance for each factors (table 1).

- 1: team members maturity and ability (18%)
- 2: user supportiveness (17.3%)
- 3: top management commitment and obligation (17%)
- 4: seller supportiveness (16.7%)
- 5: knowledge of project management (16%)
- 6: consulter competency (15%)

In the following section, all of sub-factors have been examined. In this step sub-factors with their frequencies has been offered. The result of the Shannon entropy about the components team members' maturity and ability, the rate of these sub-factors has been indicated at the following section (table 2).

- 1: existence of suitable plan and distinct methodology in order to implementing (14.5%)
- 2: suitable and appropriate project team with respect to needed expertise (13.5%)
- 3: project team members' professional knowledge
- 4: existence of sufficient cooperation and coordination among the project team members (13%)
- 5: existence of powerful decision makers in the project system (13%)
- 6: existence of the powerful communications inside and outside of project team (12%)
- 7: project team members' perception and understanding of organizational strategic goals (12%)
- 8: project team members full time engagement (9%)

The results of the Shannon entropy about the users' supportiveness

The rate of these factors has been indicated at the following section (table 3).

- 1: personals welcome to change (28%)
- 2: ability to using web networks (26%)
- 3: communicating about the progress of organizational resources planning project toward users (25%)
- 4: the user involvement and cooperation in the project (21%)

The results of the Shannon entropy about the commitment and obligation of top management

The rate of the top management commitment and obligation has been indicated at the following section (table 4)

- 1: top management mental and inspirational supportiveness from project implementation (27%)
- 2: top management material and facilities from project implementation (25.5%)
- 3: establishment of strategic committee and periodic session with the presence of chief executive officer (24%)

4: change of the management function in terms of implementing

The results of the Shannon entropy about the seller supportiveness

The rate of the Shannon entropy about the seller supportiveness has been indicated at the following section (table 5)

- 1: educating users during the step of implementation (26%)
- 2: choosing the suitable solution for implementation (25%)
- 3: the probability of offering rapid resolution of executive problems about organizational resources planning after the implementation step (25%)
- 4: the proportion of offered modules with organizational structure (24%)

The results of the Shannon entropy about the elements of knowledge of project management

The rate of the Shannon entropy about the elements of knowledge of project management has been indicated at the following section (table 6)

- 1: creating needed appropriate infrastructures to organizational resources planning project (13%)
- 2: using the controls and techniques to managing project (13%)
- 3: applying the change management in the organization (13%)
- 4: suitable scheduling and prioritizing the project resources (13%)
- 5: existence strategies and prioritizing the modules in order to implementing organizational resources planning project (12%)
- 6: the leadership style of project management (12%)
- 7: the project managers scientific and executive background (12%)
- 8: implementation of reengineering for the commercial processes (BPR) in the organization (11%)

The results of the Shannon entropy about the elements of consultants' competency

The rate of the Shannon entropy about the elements of consultants' competency has been indicated at the following section (table 7)

- 1: sufficient reliability between the organization and consultants (37%)
- 2: the technical and business knowledge of the consultants (32%)
- 3: the sufficient awareness of the consultant cooperation with your organizational goals (31%)

5. DISCUSSION AND CONCLUSION

Using information systems is one of the important factors influencing improvement of organizations competitive conditions. Nowadays enterprise resources planning (ERP) has been recognized as one of the modern planning and management instruments in the world. With respect to the volume of spent money, the concise analysis and examination of how doing projects has much importance for companies. Our country is not exempt from this issue. Therefore this study was aimed to recognize factors influencing human resources planning. In order to this, the statistical population of this study was the Isfahan Steel Company. Then in order to recognizing factors influencing human resources planning, the Shannon entropy has been used to recognizing these factors and also determining these factors importance on implementing human resources project planning. This information was collected from 35 managers and supervisors through polling. In order to this, the 31 critical success factors have been recognized based on literature review and through interview and then these factors have been categorized into six different sets. Based on the findings, three important factors have been recognized that includes the team members' maturity and ability, user supportiveness, and top management commitment and obligation. Additionally each of these factors has some sub-factors that have been indicated in the study.

Based on the findings, six factors influenced organizational resources planning at the Isfahan steel company. These factors include the project team members maturity and ability, user supportiveness, top management commitment and obligation, seller supportiveness, knowledge of project management, consultant competency, that their important coefficient ordinary were 18%, 17.3%, 17%, 16.7%, 16%, and 15%. In the next step, some of sub-factors have been recognized for each factor. In order to this, the first factors include eight sub-factors as following existence of suitable plan and distinct methodology in order to implementing, the suitable and appropriate project team with respect to needed expertise, project team members professional knowledge, existence of sufficient cooperation and coordination among the project team members, existence of powerful decision makers in project system, existence of the powerful communications inside and outside of project team, project team member perception and understanding of organizational strategic goals, and project team members fulltime engagement. Between this sub-factors some of them is important than others, such as existence of suitable plan and distinct methodology in order to implementing and suitable and appropriate project team with respect to needed expertise. Therefore it is necessary to choosing appropriate personals that have sufficient skills, could presence fulltime at the project, and be able to perform inter-functional in different fields. The second factor is the user supportiveness that this includes some sub-factors including the personals welcome to change, ability to using web

networks, communicating about progress of project of organizational resources planning toward users, and user involvement and cooperation in the project. The factor "personals welcome to change" is important than other factors. Therefore it is necessary to preparing all of organizational levels to changing and coping with new processes through reinforcing their cooperation. The third factor is top management commitment and obligation that includes some sub-factors such as the top management mental and inspirational supportiveness project implementation, top management material and facilities of project implementation, establishment of strategic committee and periodic session with the presence of chief executive officer, and change of the management function in terms of implementing. The top management mental and inspirational supportiveness project implementation and top management material and facilities of project implementation are important than others. Therefore it is necessary that top management attend to human resources in order to implementing organizational resources planning system and also direct and monitor the personals in terms of implementing organizational resources planning system. The next factor is seller supportiveness that includes some sub-factors such as educating users during the implementation stage, choosing the suitable solution for implementation, probability of offering rapid resolution to executive problems about organizational resources planning after the implementation step, and the proportion of offered modules with organizational structure. Educating users during the implementation stage, choosing the suitable solution for implementation, and probability of offering rapid resolution to executive problems about organizational resources planning after the implementation step are important than others. This means that the educating periods should schedule and repeated periodically. Also in order to offering rapid resolution to executive problems about organizational resources planning after the implementation step, some supportive groups should form. The next factor is knowledge of project management including creating needed appropriate infrastructures for organizational resources planning project, using the controls and techniques to managing project, applying change management in the organization, suitable scheduling and prioritizing the project resources, existence strategies and prioritizing the modules in order to implementing, the leadership style of project management, the project managers scientific and executive background, implementation of reengineering for the commercial processes (BPR) in the organization. The results indicated that all of these mentioned eight factors had similar influence and then attending to all of these factors equally is necessary. The final factor is consultant competency that includes three sub-factors as sufficient reliability between the organization and consultants, consultants technical and business knowledge, and the sufficient awareness of the consultant cooperation with your organizational goals. The sufficient reliability between the organization and consultants is important than others. The importance of this factor is because of that there aren't experts of this software in organizations and so these experts enter to organization from outside. Therefore it is expected that using beneficial and dynamic experiences of our studied company (Isfahan Steel Company) could lead to reduction the risk, cost, and the time of choosing, establishment, and implementing such projects.

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Table 1: the raw data, adjusted data, and Important factor for the components of model

score	raw data						normalized data						Unreliability value					
	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆
X ₁	1	1	2	-	2	2	.012	.02	.04	-	.055	.069	-.053	-.078	-.128	-	-.16	-.18
X ₂	2	1	1	2	3	2	.025	.02	.02	.046	.083	.069	-.092	-.078	-.078	-.14	-.21	-.18
X ₃	2	1	1	2	2	-	.025	.02	.02	.046	.055	-	-.092	-.078	-.078	-.14	-.16	-
X ₄	1	2	2	1	1	-	.012	.04	.04	.023	.027	-	-.053	-.128	-.128	-.086	-.097	-
X ₅	3	2	2	1	1	-	.038	.04	.04	.023	.027	-	-.124	-.128	-.128	-.086	-.097	-
X ₆	2	1	2	1	1	2	.025	.02	.04	.023	.027	.034	-.092	-.078	-.128	-.086	-.097	-.11
X ₇	2	1	1	-	-	1	.025	.02	.02	-	-	.034	-.092	-.078	-.078	-	-	-.11
X ₈	1	2	1	-	1	1	.012	.04	.02	-	-	.034	-.053	-.128	-.078	-	-.097	-.11
X ₉	2	2	1	-	1	-	.025	.04	.02	-	.027	-	-.092	-.128	-.078	-	-.097	-
X ₁₀	3	2	1	-	-	1	.038	.04	.02	-	-	.034	-.124	-.128	-.078	-	-	-.11
X ₁₁	3	2	2	2	2	1	.038	.04	.04	.046	-	.034	-.124	-.128	-.128	-.14	-.16	-.11
X ₁₂	2	1	2	2	1	1	.025	.04	.04	.046	.027	.034	-.092	-.128	-.128	-.14	-.097	-.11
X ₁₃	2	1	2	2	1	-	.025	.02	.04	.046	.027	-	-.092	-.078	-.128	-.14	-.097	-
X ₁₄	2	-	3	1	2	1	.025	.02	.06	.023	.055	.034	-.092	-.078	-.168	-.086	-.16	-.11
X ₁₅	3	-	-	2	-	-	.038	-	-	.046	-	-	-.124	-	-	-.14	-	-
X ₁₆	3	2	2	2	-	1	.038	-	-	.046	-	.034	-.124	-	-.128	-.14	-	-.11
X ₁₇	4	2	2	1	-	-	.05	.04	.04	.023	-	-	-.15	-.128	-.128	-.086	-	-
X ₁₈	3	2	2	1	2	-	.038	.04	.04	.023	.055	-	-.124	-.128	-.128	-.086	-.16	-
X ₁₉	3	1	-	1	1	-	.038	.04	-	.023	.027	-	-.124	.128	-	-.086	-.097	-
X ₂₀	2	1	-	1	1	-	.025	.02	-	.023	.027	-	-.092	.078	-	-.086	-.097	-
X ₂₁	3	2	2	1	2	-	.038	.02	-	.023	.055	-	-.124	-.078	-.128	-.086	-.16	-
X ₂₂	2	-	2	1	-	1	.025	.04	.04	.023	-	.034	-.092	-.128	-.128	-.086	-	-.11
X ₂₃	2	2	2	2	-	1	.025	-	.04	.046	-	.034	-.092	-	-.128	-.14	-	-.11
X ₂₄	1	2	2	2	2	-	.012	.04	.04	.046	.055	-	-.053	-.128	-.128	-.14	-.16	-
X ₂₅	1	-	2	1	1	1	.012	.04	.04	.023	.027	.034	-.053	-.128	-.128	-.086	-.097	-.11
X ₂₆	1	-	1	1	1	-	.012	-	.02	.023	.027	-	-.053	-	-.078	-.086	-.097	-
X ₂₇	4	2	2	2	1	1	.05	-	.04	.046	.027	.034	-.15	-	-.128	-.14	-.097	-.11
X ₂₈	4	2	2	2	2	1	.05	.04	.04	.046	.055	.034	-.15	-.128	-.128	-.14	-.16	-.11
X ₂₉	3	2	-	2	-	2	.038	.04	-	.046	-	.069	-.124	-.128	-	-.14	-	-.18
X ₃₀	2	2	-	2	-	2	.025	.04	-	.046	-	.069	-.092	-.128	-	-.14	-	-.18
X ₃₁	2	1	2	-	1	2	.025	.02	.04	-	.027	.069	-.092	-.078	-.128	-	-.097	-.18
X ₃₂	2	2	2	-	1	-	.025	.04	.04	-	.027	-	-.092	-.128	-.128	-	-.097	-
X ₃₃	2	2	-	1	1	1	.025	.04	-	.023	.027	.034	-.092	-.128	-	-.086	-.097	-.11
X ₃₄	1	2	1	2	1	2	.012	.04	.02	.046	.027	.069	-.053	-.128	-.078	-.14	-.097	-.18
X ₃₅	2	1	1	2	1	2	.025	.02	.02	.046	.027	.069	-.092	-.078	-.078	-.14	-.097	-.18
SUM	78	48	50	43	36	29	1.00	1.00	1.00	1.00	1.00	1.00	-3.409	3.29	3.302	3.218	-3.13	-2.8

0.96 0.92 0.93 0.90 0.88 0.79
 Important Factor: 0.18 0.17 %17.3 %16.7 0.16 0.15

- V1: team members maturity and ability (18%) V2: user supportiveness (17.3%)
 V3: top management commitment and obligation (17%) V4: seller supportiveness (16.7%)
 V5: knowledge of project management (16%) V6: consuler competency (15%)

Table 2: the maturity and ability of project team members

score	raw data								normalized data								Unreliability value								
	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₇	V ₈	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₇	V ₈	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₇	V ₈	
X ₁	2	1	2	2	1	-	2	-	.04	.02	.05	.05	.03	-	.04	-	-.13	-.08	-.15	-.15	-.10	-	-	-.13	-
X ₂	1	2	1	-	-	2	-	2	.02	.05	.025	-	-	.04	-	.05	-.08	-.15	-.09	-	-	-.13	-	-.15	
X ₃	2	2	1	1	-	2	-	1	.04	.05	.025	.02	-	.04	-	.025	-.13	-.15	-.09	-.08	-	-.13	-	-.09	
X ₄	1	-	-	1	2	-	2	-	.02	-	-	.02	.06	-	.04	-	-.08	-	-	-.08	-.17	-	-.13	-	
X ₅	2	2	1	-	1	3	3	1	.04	.05	.025	-	.03	.06	.06	.025	-.13	-.15	-.09	-	-.1	-.17	-.17	-.09	
X ₆	1	1	1	1	1	2	2	2	.02	.02	.025	.02	.03	.04	.04	.05	-.08	-.08	-.09	-.08	-.1	-.13	-.13	-.15	
X ₇	-	3	1	2	1	2	2	2	-	.07	.025	.05	.03	.04	.04	.05	-	-.19	-.09	-.15	-.1	-.13	-.13	-.15	
X ₈	1	2	2	1	2	4	2	2	.02	.05	.05	.02	.06	.08	.04	.05	-.08	-.15	-.15	-.08	-.17	-.2	-.13	-.15	
X ₉	2	-	2	1	1	2	2	1	.04	-	.05	.02	.03	.04	.04	.025	-.13	-	-.15	-.08	-.1	-.13	-.13	-.09	
X ₁₀	-	-	2	2	1	2	2	1	-	-	.05	.05	.03	.04	.04	.025	-	-	-.15	-.15	-.1	-.13	-.13	-.09	
X ₁₁	2	1	3	3	1	2	2	2	.04	.02	.075	.07	.03	.04	.04	.05	-.13	-.08	-	-.19	-.1	-.13	-.13	-.15	
X ₁₂	-	2	2	-	2	2	2	2	-	.05	.05	-	.06	.04	.04	.05	-	-.15	-.15	-	-.17	-.13	-.13	-.15	
X ₁₃	2	2	1	1	2	2	3	1	.04	.05	.025	.02	.06	.04	.06	.025	-.13	-.15	-.09	-.08	-.17	-.13	-.17	-.09	
X ₁₄	1	2	1	2	2	1	2	2	.02	.05	.025	.05	.06	.02	.04	.05	-.08	-.15	-.09	-.15	-.17	-.08	-.13	-.15	
X ₁₅	1	2	-	2	-	-	2	-	.02	.05	-	.05	-	-	.04	-	-.08	-.15	-	-.15	-	-	-.13	-	
X ₁₆	-	2	1	2	-	3	2	2	-	.05	.025	.05	-	.06	.04	.05	-	-.15	-.09	-.15	-	-.12	-.13	-.15	
X ₁₇	-	1	1	2	-	1	3	-	.02	.025	.05	-	.02	.06	-	-	-.08	-.09	-.15	-	-.08	-.17	-		
X ₁₈	2	1	1	2	1	1	1	2	.04	.02	.025	.05	.03	.02	.02	.05	-.13	-.08	-.09	-.15	-.1	-.08	-.08	-.15	
X ₁₉	3	-	1	-	2	2	1	-	.07	-	.025	-	.06	.04	.02	-	-.19	-	-.09	-	-.17	-.13	-.08	-	
X ₂₀	2	-	1	1	-	2	-	2	.04	-	.025	.02	-	.04	-	.05	-.13	-	-.09	-.08	-	-.13	-	-.15	
X ₂₁	1	1	2	1	2	2	1	1	.02	.02	.05	.02	.06	.04	.02	.025	-.08	-.08	-.15	-.08	-.17	-.13	-.08	-.09	
X ₂₂	1	1	1	1	1	1	2	1	.02	.02	.025	.02	.03	.02	.04	.025	-.08	-.08	-.09	-.08	-.1	-.08	-.13	-.09	
X ₂₃	1	2	-	-	1	2	2	-	.02	.05	-	-	.03	.04	.04	-	-.08	-.15	-	-	-.1	-.13	-.13	-	
X ₂₄	1	-	2	1	1	1	2	2	.02	-	.05	.02	.03	.02	.04	.05	-.08	-	-.15	-.08	-.1	-.08	-.13	-.15	
X ₂₅	2	1	-	2	1	1	1	2	.04	.02	-	.05	.03	.02	.02	.05	-.13	-.08	-	-.15	-.1	-.08	-.08	-.15	
X ₂₆	2	2	1	2	2	2	1	1	.04	.05	.025	.05	.06	.04	.02	.025	-.13	-.15	-.09	-.15	-.17	-.13	-.08	-.09	
X ₂₇	-	1	2	2	1	1	1	1	-	.02	.05	.05	.03	.02	.02	.025	-	-.08	-.15	-.15	-.1	-.08	-.08	-.09	
X ₂₈	2	-	2	1	1	1	2	1	.04	-	.05	.02	.03	.02	.04	.025	-.13	-	-.15	-.08	-.1	-.08	-.13	-.15	
X ₂₉	2	1	1	1	-	1	2	2	.04	.02	.025	.02	-	.02	.04	.05	-.13	-.08	-.09	-.08	-	-.08	-.13	-	
X ₃₀	1	1	1	1	-	1	1	-	.02	.02	.025	.02	-	.02	.02	-	-.08	-.08	-.09	-.08	-	-.08	-.08	-.09	
X ₃₁	3	2	-	-	1	1	1	1	.07	.05	-	-	.03	.02	.02	.025	-.19	-.15	-	-	-.1	-.08	-.08	-.15	
X ₃₂	-	2	1	1	1	2	2	2	-	.05	.025	.02	.03	.04	.04	.05	-	-.15	-.09	-.08	-.1	-.13	-.13	-.15	
X ₃₃	-	-	1	2	1	1	2	2	-	-	.025	.05	.03	.02	-	.05	-	-	-.09	-.15	-.1	-.08	-	-.15	
X ₃₄	2	1	-	1	1	1	-	1	.04	.02	-	.02	.03	.02	-	.025	-.13	-.08	-	-.08	-.1	-.08	-	-.09	
X ₃₅	1	2	1	-	2	-	1	-	.02	.05	.025	-	.06	-	.02	-	-.08	-.15	-.09	-	-.17	-	-.08	-	
SUM	45	42	40	42	36	53	54	42	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	3.03	3.25	3.06	3.19	3.33	2.45	-3.57	-3.39	

.85 .91 .86 .90 .94 .69 .99 .95
 Important Factor: .12 .13 .12 .13 .13 .09 %14.5 %13.5

- V1: existence of suitable plan and distinct methodology in order to implementing (14.5%)
- V2: suitable and appropriate project team with respect to needed expertise (13.5%)
- V3: project team members' professional knowledge
- V4: existence of sufficient cooperation and coordination among the project team members (13%)
- V5: existence of powerful decision makers in the project system (13%)
- V6: existence of the powerful communications inside and outside of project team (12%)
- V7: project team members' perception and understanding of organizational strategic goals (12%)
- V8: project team members full time engagement (9%)

Table 3: user supportiveness

score	raw data				normalized data				Unreliability value			
	V ₁	V ₂	V ₃	V ₄	V ₁	V ₂	V ₃	V ₄	V ₁	V ₂	V ₃	V ₄
X ₁	1	-	-	2	.02	-	-	.07	-.08	-	-	-.019
X ₂	1	1	2	1	.02	.05	.05	.04	-.08	-.15	-.15	-.013
X ₃	1	1	2	1	.02	.05	.05	.04	-.08	-.15	-.15	-.013
X ₄	1	1	2	1	.02	.05	.05	.04	-.08	-.15	-.15	-.013
X ₅	2	1	1	1	.04	.05	.03	.04	-.13	-.15	-.1	-.013
X ₆	2	1	1	-	.04	.05	.03	-	-.13	-.15	-.1	-
X ₇	3	-	1	-	.07	-	.03	-	-.19	-	-.1	-
X ₈	3	-	1	-	.07	-	.03	-	-.19	-	-.1	-
X ₉	2	-	1	1	.04	-	.03	.04	-.13	-	-.1	-.013
X ₁₀	2	-	1	1	.04	-	.03	.04	-.13	-	-.1	-.013
X ₁₁	1	-	1	1	.02	-	.03	.04	-.08	-	-.1	-.013
X ₁₂	1	1	1	1	.02	.05	.03	.04	-.08	-.15	-.1	-.013
X ₁₃	1	1	2	1	.02	.05	.05	.04	-.08	-.15	-.15	-.013
X ₁₄	1	-	1	2	.02	-	.03	.07	-.08	-	-.1	-.019
X ₁₅	1	-	1	2	.02	-	.03	.07	-.08	-	-.1	-.019
X ₁₆	1	-	1	1	.02	-	.03	.04	-.08	-	-.1	-.013
X ₁₇	1	1	1	1	.02	.05	.03	.04	-.08	-.15	-.1	-.013
X ₁₈	1	1	1	2	.02	.05	.03	.07	-.08	-.15	-.1	-.019
X ₁₉	2	1	2	-	.04	.05	.05	-	-.13	-.15	-.15	-
X ₂₀	1	-	2	-	.02	-	.05	-	-.08	-	-.15	-
X ₂₁	1	-	1	-	.02	-	.03	-	-.08	-	-.1	-
X ₂₂	-	-	1	-	-	-	.03	-	-	-	-.1	-
X ₂₃	-	-	1	-	-	-	.03	-	-	-	-.1	-
X ₂₄	1	-	1	-	.02	-	.03	-	-.08	-	-.1	-
X ₂₅	1	-	1	-	.02	-	.03	-	-.08	-	-.1	-
X ₂₆	1	-	1	-	.02	-	.03	-	-.08	-	-.1	-
X ₂₇	2	1	1	-	.04	.05	.03	-	-.13	-.15	-.1	-
X ₂₈	2	2	1	-	.04	.01	.03	-	-.13	-.23	-.1	-
X ₂₉	2	2	1	-	.04	.01	.03	-	-.13	-.23	-.1	-
X ₃₀	2	-	1	1	.04	-	.03	.04	-.13	-	-.1	-.013
X ₃₁	2	1	1	1	.04	.05	.03	.04	-.13	-.15	-.1	-.013
X ₃₂	-	1	-	1	-	.05	-	.04	-	-.15	-	-.013
X ₃₃	-	1	-	1	-	.05	-	.04	-	-.15	-	-.013
X ₃₄	1	-	-	2	.02	-	-	.07	-.08	-	-	-.019
X ₃₅	1	1	2	2	.02	.05	.05	.07	-.08	-.15	-.15	-.019
SUM	45	19	38	27	1.00	1.00	1.00	1.00	-3.2	-2.71	-3.45	-3.09

Important factor: .9 .76 .97 .86
 %26 %21 %28 %25

- V1: personals welcome to change (28%)
- V2: ability to using web networks (26%)
- V3: communicating about the progress of organizational resources planning project toward users (25%)
- V4: the user involvement and cooperation in the project (21%)

Table 4: the commitment and obligation of top management

score	raw data				normalized data				Unreliability value			
	V ₁	V ₂	V ₃	V ₄	V ₁	V ₂	V ₃	V ₄	V ₁	V ₂	V ₃	V ₄
X ₁	1	1	2	1	.04	.04	.05	.02	-.13	-.13	-.15	-.08
X ₂	1	1	1	1	.04	.04	.02	.02	-.13	-.13	-.08	-.08
X ₃	1	-	1	1	.04	-	.02	.02	-.13	-	-.08	-.08
X ₄	1	1	1	2	.04	.04	.02	.045	-.13	-.13	-.08	-.14
X ₅	1	1	-	1	.04	.04	-	.02	-.13	-.13	-	-.08
X ₆	1	-	2	2	.04	-	.05	.045	-.13	-	-.15	-.14
X ₇	1	-	1	1	.04	-	.02	.02	-.13	-	-.08	-.08
X ₈	-	-	1	2	-	-	.02	.045	-	-	-.08	-.14
X ₉	-	1	1	2	-	.04	.02	.045	-	-.13	-.08	-.14
X ₁₀	-	1	1	2	-	.04	.02	.045	-	-.13	-.08	-.14
X ₁₁	1	1	2	-	.04	.04	.05	-	-.13	-.13	-.15	-
X ₁₂	-	-	2	-	-	-	.05	-	-	-	-.15	-
X ₁₃	-	1	2	-	-	.04	.05	-	-	-.13	-.15	-
X ₁₄	1	-	-	1	.04	-	-	.02	-.13	-	-	-.08
X ₁₅	-	1	-	1	-	.04	-	.02	-	-.13	-	-.08
X ₁₆	-	1	1	1	-	.04	.02	.02	-	-.13	-.08	-.08
X ₁₇	1	1	1	2	.04	.04	.02	.045	-.13	-.13	-.08	-.14
X ₁₈	-	-	2	2	-	-	.05	.045	-	-	-.15	-.14
X ₁₉	-	1	-	2	-	.04	-	.045	-	-.13	-	-.14
X ₂₀	-	1	2	2	-	.04	.05	.045	-	-.13	-.15	-.14

score	raw data				normalized data				Unreliability value			
	V ₁	V ₂	V ₃	V ₄	V ₁	V ₂	V ₃	V ₄	V ₁	V ₂	V ₃	V ₄
X ₂₁	1	1	-	1	.04	.04	-	.02	-.13	-.13	-	-.08
X ₂₂	1	1	1	1	.04	.04	.02	.02	-.13	-.13	-.08	-.08
X ₂₃	1	-	2	1	.04	-	.05	.02	-.13	-	-.15	-.08
X ₂₄	1	-	-	1	.04	-	-	.02	-.13	-	-	-.08
X ₂₅	1	2	1	2	.04	.08	.02	.045	-.13	-.2	-.08	-.14
X ₂₆	1	-	1	-	.04	-	.02	-	-.13	-	-.08	-
X ₂₇	1	-	1	-	.04	-	.02	-	-.13	-	-.08	-
X ₂₈	-	1	2	2	-	.04	.05	.045	-	-.13	-.15	-.14
X ₂₉	1	2	-	2	.04	.08	-	.045	-.13	-.2	-	-.14
X ₃₀	1	-	1	1	.04	-	.02	.02	-.13	-	-.08	-.08
X ₃₁	1	-	1	1	.04	-	.02	.02	-.13	-	-.08	-.08
X ₃₂	1	2	1	1	.04	.08	.02	.02	-.13	-.2	-.08	-.08
X ₃₃	-	-	2	2	-	-	.05	.045	-	-	-.15	-.14
X ₃₄	1	-	3	1	.04	-	.07	.02	-.13	-	-.19	-.08
X ₃₅	1	2	2	2	.04	.08	.05	.045	-.13	-.2	-.15	-.14
SUM	23	24	41	44	1.00	1.00	1.00	1.00	-2.99	-2.88	-3.12	-3.24

.84 .81 .88 .91
Important factor: %24 %23.5 %25.5 %27

- V1: top management mental and inspirational supportiveness from project implementation (27%)
- V2: top management material and facilities from project implementation (25.5%)
- V3: establishment of strategic committee and periodic session with the presence of chief executive officer (24%)

Table 5: the seller supportiveness

score	raw data				normalized data				Unreliability value			
	V ₁	V ₂	V ₃	V ₄	V ₁	V ₂	V ₃	V ₄	V ₁	V ₂	V ₃	V ₄
X ₁	2	1	2	2	.04	.03	.05	.09	-.13	-.1	-.15	-.21
X ₂	2	1	1	1	.04	.03	.025	.045	-.13	-.1	-.09	-.14
X ₃	1	1	2	1	.02	.03	.05	.045	-.08	-.1	-.15	-.14
X ₄	1	1	2	-	.02	.03	.05	-	-.08	-.1	-.15	-
X ₅	1	-	1	1	.02	.03	.025	.045	-.08	-.1	-.09	-.14
X ₆	1	-	1	-	.02	-	.025	-	-.08	-	-.09	-
X ₇	2	-	1	-	.04	-	.025	-	-.13	-	-.09	-
X ₈	2	-	1	-	.04	-	.025	-	-.13	-	-.09	-
X ₉	2	-	2	-	.04	-	.05	-	-.13	-	-.15	-
X ₁₀	2	-	2	-	.04	-	.05	-	-.13	-	-.15	-
X ₁₁	2	-	2	-	.04	-	.05	-	-.13	-	-.15	-
X ₁₂	1	1	2	-	.02	.03	.05	-	-.08	-.1	-.15	-
X ₁₃	1	1	3	-	.02	.03	.075	-	-.08	-.1	-.19	-
X ₁₄	1	2	1	-	.02	.06	.025	-	-.08	-.16	-.09	-
X ₁₅	1	2	1	-	.02	.06	.025	-	-.08	-.16	-.09	-
X ₁₆	1	2	1	-	.02	.06	.025	-	-.08	-.16	-.09	-
X ₁₇	1	2	1	-	.02	.06	.025	-	-.08	-.16	-.09	-
X ₁₈	1	1	1	1	.02	.03	.025	.045	-.08	-.1	-.09	-.14
X ₁₉	1	1	-	1	.02	.03	-	.045	-.08	-.1	-	-.14
X ₂₀	1	1	-	1	.02	.03	-	.045	-.08	-.1	-	-.14
X ₂₁	1	1	-	1	.02	.03	-	.045	-.08	-.1	-	-.14
X ₂₂	-	1	1	1	-	.03	.025	.045	-	-.1	-.09	-.14
X ₂₃	1	1	1	1	.02	.03	.025	.045	-.08	-.1	-.09	-.14
X ₂₄	1	1	1	1	.02	.03	.025	.045	-.08	-.1	-.09	-.14
X ₂₅	1	1	1	1	.02	.03	.025	.045	-.08	-.1	-.09	-.14
X ₂₆	1	1	2	1	.02	.03	.05	.045	-.08	-.1	-.15	-.14
X ₂₇	2	1	2	-	.04	.03	.05	-	-.13	-.1	-.15	-
X ₂₈	2	1	-	1	.04	.03	-	.045	-.13	-.1	-	-.14
X ₂₉	2	2	-	1	.04	.06	-	.045	-.13	-.16	-	-.14
X ₃₀	2	2	1	1	.04	.06	.025	.045	-.13	-.16	-.09	-.14
X ₃₁	2	1	1	1	.04	.03	.025	.045	-.13	-.1	-.09	-.14
X ₃₂	-	1	1	1	-	.03	.025	.045	-	-.1	-.09	-.14
X ₃₃	-	1	-	1	-	.03	-	.045	-	-.1	-	-.14
X ₃₄	1	2	1	1	.02	.06	.025	.045	-.08	-.16	-.09	-.14
X ₃₅	2	1	1	1	.04	.03	.025	.045	-.13	-.1	-.09	-.14
SUM	45	35	40	22	1.00	1.00	1.00	1.00	-3.21	-3.32	-3.25	-3.01

.9 .93 .91 .85
Important factor: %25 %26 %25 %24

- V1: educating users during the step of implementation (26%)
- V2: choosing the suitable solution for implementation (25%)

V3: the probability of offering rapid resolution of executive problems about organizational resources planning after the implementation step (25%)

V4: the proportion of offered modules with organizational structure (24%)

Table 6: the knowledge of project management

score	raw data								normalized data								Unreliability value								
	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₇	V ₈	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₇	V ₈	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₇	V ₈	
X ₁	1	1	-	-	-	1	-	1	.04	.037	-	-	-	.03	-	.02	-.13	-.12	-	-	-	-	-.1	-	-.08
X ₂	2	-	1	1	1	2	1	2	.08	-	.03	.037	.038	.06	.03	.05	-.2	-	-.1	-.12	-.012	-.17	-.1	-.15	
X ₃	2	1	1	1	1	2	1	2	.08	.037	.03	.037	.038	.06	.03	.05	-.2	-.12	-.1	-.12	-.12	-.17	-.1	-.15	
X ₄	1	1	2	1	1	1	1	1	.04	.037	.07	.037	.038	.03	.03	.02	-.13	-.12	-.19	-.12	-.12	-.1	-.1	-.08	
X ₅	-	-	1	1	1	1	1	1	-	-	.03	.037	.038	.03	.03	.02	-	-	-.1	-.12	-.12	-.1	-.1	-.08	
X ₆	-	2	1	2	1	1	1	1	-	.07	.03	.07	.038	.03	.03	.02	-	-.19	-.1	-.19	-.12	-.1	-.1	-.08	
X ₇	1	1	1	1	1	1	1	3	.04	.037	.03	.037	.038	.03	.03	.07	-.13	-.12	-.1	-.12	-.12	-.1	-.1	-.19	
X ₈	-	1	1	1	1	1	1	1	-	.037	.03	.037	.038	.03	.03	.02	-	-.12	-.1	-.12	-.12	-.1	-.1	-.08	
X ₉	1	1	2	-	1	1	1	1	.04	.037	.07	-	.038	.03	.03	.02	-.13	-.12	-.19	-	-.12	-.1	-.1	-.08	
X ₁₀	-	-	1	-	2	1	-	1	-	-	.03	-	.077	.03	-	.02	-	-	-.1	-	-.2	-.1	-	-.08	
X ₁₁	2	-	1	-	1	1	-	2	.08	-	.03	-	.038	.03	-	.05	-.2	-	-.1	-	-.12	-.1	-	-.08	
X ₁₂	2	-	2	1	1	2	-	2	.08	-	.07	.037	.038	.06	-	.05	-.2	-	-.19	-.12	-.12	-.17	-	-.15	
X ₁₃	-	1	-	1	1	2	-	1	-	.037	-	.037	.038	.06	-	.02	-	-.12	-	-.12	-.12	-.17	-	-.15	
X ₁₄	-	1	-	1	1	2	-	1	-	.037	-	.037	.038	.06	-	.02	-	-.12	-	-.12	-.12	-.17	-	-.08	
X ₁₅	-	1	-	-	1	2	-	1	-	.037	-	-	.038	.06	-	.02	-	-.12	-	-	-.12	-.17	-	-.08	
X ₁₆	-	1	-	-	1	2	1	1	-	.037	-	-	.038	.06	.03	.02	-	-.12	-	-	-.12	-.17	-.1	-.08	
X ₁₇	1	1	-	-	1	-	1	1	.04	.037	-	-	.038	-	.03	.02	-.13	-.12	-	-	-.12	-	-.1	-.08	
X ₁₈	1	1	-	-	1	-	1	1	.04	.037	-	-	.038	-	.03	.02	-.13	-.12	-	-	-.12	-	-.1	-.08	
X ₁₉	1	1	1	1	1	-	1	1	.04	.037	.03	.037	.038	-	.03	.02	-.13	-.12	-.1	-.12	-.12	-	-.1	-.08	
X ₂₀	-	1	2	1	-	-	1	1	-	.037	.07	.037	-	-	.03	.02	-	-.12	-.19	-.12	-	-	-.1	-.08	
X ₂₁	1	-	-	2	-	-	1	1	.04	-	-	.07	-	-	.03	.02	-.13	-	-	-.19	-	-	-.1	-.08	
X ₂₂	-	-	1	2	-	-	1	1	-	-	.03	.07	-	-	.03	.02	-	-	-.1	-.19	-	-	-.1	-.08	
X ₂₃	-	-	1	1	-	-	1	1	-	-	.03	.037	-	-	.03	.02	-	-	-.1	-.12	-	-	-.1	-.08	
X ₂₄	-	1	1	1	-	-	1	1	-	.037	.03	.037	-	-	.03	.02	-	-.12	-.1	-.12	-	-	-.1	-.08	
X ₂₅	-	1	1	-	2	-	1	1	-	.037	.03	-	.077	-	.03	.02	-	-.12	-.1	-	-.2	-	-.1	-.08	
X ₂₆	2	1	-	-	-	1	1	1	.08	.037	-	-	-	-	.03	.02	-.2	-.12	-	-	-	-	-.1	-.08	
X ₂₇	1	1	-	-	-	1	2	-	.04	.037	-	-	-	.03	.066	-	-.13	-.12	-	-	-	-.1	-.18	-	
X ₂₈	-	1	1	1	-	2	2	-	-	.037	.03	.037	-	.06	.066	-	-	-.12	-.1	-.12	-	-.17	-.18	-	
X ₂₉	-	2	1	1	2	1	1	2	-	.07	.03	.037	.077	.03	.03	.05	-	-.19	-.1	-.12	-.2	-.1	-.1	-.15	
X ₃₀	1	-	1	1	1	1	1	2	.04	-	.03	.037	.038	.03	.03	.05	-.13	-	-.1	-.12	-.12	-.1	-.1	-.15	
X ₃₁	1	1	3	1	1	1	1	2	.04	.037	.1	.037	.038	.03	.03	.05	-.13	-.12	-.23	-.12	-.12	-.1	-.1	-.15	
X ₃₂	2	-	-	1	-	1	1	2	.08	-	-	.037	-	.03	.03	.05	-.2	-	-	-.12	-	-.1	-.1	-.15	
X ₃₃	-	1	-	1	-	1	1	1	-	.037	-	.037	-	.03	.03	.02	-	-.12	-	-.12	-	-.1	-.1	-.08	
X ₃₄	1	1	1	1	-	1	1	1	.04	.037	.03	.037	-	.03	.03	.02	-.13	-.12	-.1	-.12	-	-.1	-.1	-.08	
X ₃₅	-	1	2	1	1	2	1	-	-	.037	.07	.037	.038	.06	.03	-	-	-.12	-.19	-.12	-.12	-.17	-.1	-	
جمع	24	27	30	27	26	34	30	42	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-2.76	-3.14	-2.88	-3.09	-3	-3.13	-2.96	-3.23	

.77 .88 .81 .87 .84 .88 .83 .9
 Important factor .11 .13 .12 .13 .12 .13 .12 .13

V1: creating needed appropriate infrastructures to organizational resources planning project (13%)

V2: using the controls and techniques to managing project (13%)

V3: applying the change management in the organization (13%)

V4: suitable scheduling and prioritizing the project resources (13%)

V5: existence strategies and prioritizing the modules in order to implementing organizational resources planning project (12%)

V6: the leadership style of project management (12%)

V7: the project managers scientific and executive background (12%)

V8: implementation of reengineering for the commercial processes (BPR) in the organization (11%)

Table 7: the consulter competency

score	raw data			normalized data			Unreliability value		
	V ₁	V ₂	V ₃	V ₁	V ₂	V ₃	V ₁	V ₂	V ₃
X ₁	2	1	1	.05	.02	.05	-.15	-.08	-.15
X ₂	1	2	1	.02	.04	.05	-.08	-.13	-.15
X ₃	1	2	1	.02	.04	.05	-.08	-.13	-.15
X ₄	1	2	1	.02	.04	.05	-.08	-.13	-.15
X ₅	1	2	1	.02	.04	.05	-.08	-.13	-.15
X ₆	2	1	1	.05	.02	.05	-.15	-.08	-.15
X ₇	2	1	-	.05	.02	-	-.15	-.08	-
X ₈	2	1	-	.05	.02	-	-.15	-.08	-
X ₉	1	1	-	.02	.02	-	-.08	-.08	-
X ₁₀	1	1	-	.02	.02	-	-.08	-.08	-
X ₁₁	1	-	-	.02	-	-	-.08	-	-

score	raw data			normalized data			Unreliability value		
	V ₁	V ₂	V ₃	V ₁	V ₂	V ₃	V ₁	V ₂	V ₃
X ₁₂	-	2	1	-	.04	.05	-	-.13	-.15
X ₁₃	-	2	1	-	.04	.05	-	-.13	-.15
X ₁₄	-	3	1	-	.06	.05	-	-.17	-.15
X ₁₅	2	2	1	.05	.04	.05	-.15	-.13	-.15
X ₁₆	1	2	1	.02	.04	.05	-.08	-.13	-.15
X ₁₇	1	2	-	.02	.04	-	-.08	-.13	-
X ₁₈	1	2	-	.02	.04	-	-.08	-.13	-
X ₁₉	1	3	-	.02	.06	-	-.08	-.17	-
X ₂₀	1	2	-	.02	.04	-	-.08	-.13	-
X ₂₁	2	1	-	.05	.02	-	-.15	-.08	-
X ₂₂	2	1	-	.05	.02	-	-.15	-.08	-
X ₂₃	2	1	1	.05	.02	.05	-.15	-.08	-.15
X ₂₄	2	1	1	.05	.02	.05	-.15	-.08	-.15
X ₂₅	2	2	1	.05	.04	.05	-.15	-.13	-.15
X ₂₆	-	1	1	-	.02	.05	-	-.08	-.15
X ₂₇	-	1	1	-	.02	.05	-	-.08	-.15
X ₂₈	2	1	1	.05	.02	.05	-.15	-.08	-.15
X ₂₉	2	1	-	.05	.02	-	-.15	-.08	-
X ₃₀	1	2	-	.02	.04	-	-.08	-.13	-
X ₃₁	1	2	-	.02	.04	-	-.08	-.13	-
X ₃₂	1	-	-	.02	-	-	-.08	-	-
X ₃₃	-	-	1	-	-	.05	-	-	-.15
X ₃₄	-	2	1	-	.04	.05	-	-.13	-.15
X ₃₅	2	1	1	.05	.02	.05	-.15	-.08	-.15
SUM	41	51	20	1.00	1.00	1.00	-3.15	-3.49	-3

Important factor: .88 .98 .84
 %32 %37 %31

- V1: sufficient reliability between the organization and consultants (37%)
 V2: the technical and business knowledge of the consultants (32%)
 V3: the sufficient awareness of the consultant cooperation with your organizational goals (31%)