

## Identifying and Prioritizing the Key Factors of ERP System Implementation in Saderat Bank using Theme Analysis Method and Fuzzy Dematel

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### Abstract

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The purpose of this study was to identify the key factors in implementing the organization's resource planning system in Chaharmahal and Bakhtiari Saderat Bank using theme analysis method. This research was a type of qualitative research that was done in an applied way. The research population consists of 15 experts and specialist in system implementation, resource planning in Chaharmahal and Bakhtiari Saderat Bank, however, due to the limitations and difficulty of access to all members of the community, so seven of these experts and specialist in the implementation of ERP system have been selected as a sample. To this end, to identify and screen the indicators from the perspective of experts and using the theme analysis method of success factors to implement organizational resource planning based on concepts in seven main groups of vision, project resource planning project management, ERP project team, management commitment, readiness for change, training, continuous improvement are categorized. According to the fuzzy Dematel method, "management commitment" is the most effective. The "Outlook" and "ERP Project Management" criteria are in second and third place with almost the same impact. The criteria of "ERP project team", "readiness for change" and "training" are also in the next degrees of effectiveness. The criterion of "continuous improvement" is also the least effective. It was also found that the criteria of "management commitment" and "ERP project management" have the most interaction with other criteria studied. The criteria of "continuous improvement" and "readiness for change" have the least interaction with other criteria.

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## Introduction

Recent advances in information technology and computer software have now enabled managers to easily and quickly access various data of the organization through various information systems. Organizational resource planning systems are one of the achievements in the field of planning to improve organizational processes and make more accurate and easier decisions for managers at different levels and ultimately businesses. Establishing organizational resource planning systems in today's organizations, however, is one of the factors in the success of their management, however, it should be noted that their purchase and establishment alone is not the cause of success, and the factors affecting their failure or success should also be considered (Ashkani and Ehterami, 2015). In response to growing global competition, many companies around the world have started implementing ERP. The ERP system market is one of the fastest growing markets in the software industry (Jayawickrama and Yapa, 2013). In recent years, the influence of enterprise resource planning (ERP) systems in small, medium and large organizations has been steadily increasing. In order to respond to the rapidly changing business environment, technological advances, and increasing pressures and competition, organizations have to adapt their systems and upgrade ERP (Barth and Koch, 2019). The use of information systems that can cover all activities and tasks in an organization and provide the necessary information to its users in a timely manner is a vital tool in today's organizations. Without these systems, it is impossible to increase the capabilities of the organization, improve performance, make better decisions and achieve a competitive advantage (Zande Delnobarı et al., 2018). Among these, the organization's resource planning systems are the latest management tools that are able to collect information in the organization using information

technology in all areas of the organization in a coherent and integrated manner and the information and results obtained from it. Provide its users at different levels of the organization. These systems can be considered the latest information technologies in the last decade, the result of which is rapidly changing and evolving (Rahati and Mansourzadeh, 2018). Implementing ERP systems takes considerable time and resources from the organization and many examples of failure of organizational resource planning projects have been reported despite high investment (Amin Tahmasebi et al., 2017). Providers of enterprise resource planning systems claim that their product has been tested many times and created under extensive experience. And that enables them to offer great solutions for different sectors of industry and services. This fact is evident in many organizations, but experience shows that these products in many other organizations have not been able to be as useful and effective as they should be. Therefore, addressing the success factors of ERP systems in different organizations has been an important challenge for researchers since the advent of ERP. The banking sector is one of the key pillars supporting the country's economy. Therefore, within the organization, without the use of comprehensive organizational planning, the possibility of uniting different activities such as organizational technologies and responding quickly to internal and external changes and ultimately achieving agility is not very significant. On the other hand, despite the many advantages of ERP systems, the implementation of some of these projects fails. Implementation of ERP systems is difficult, costly and sometimes has major shortcomings and deficiencies that require a fundamental change in organizational processes. Therefore, organizations should be fully aware of the key factors of success and failure

ERP solutions and for this reason, the question is ‘what are the factors for the success of the implementation of comprehensive organizational planning in

Saderat Bank?’ and how do you prioritize these key success factors? Below is some related research:

**Table 1: Summary of previous research**

Researcher Name (Year)	Title	Results
Nkasu (2020)	Study on the impact of critical success factors on the implementation of Organizational Resource Planning (ERP) systems in the UAE	Ten components of project management, information technology, training, team composition, department integration, staff participation, planning, cost, software quality capabilities, process integration were identified as factors in the successful implementation of an ERP system - within the UAE
Madi (2020)	Important factors for the success of enterprise resource planning (ERP) implementation in Jordanian higher education	In this study, three new CSFs were found, namely individual training guidelines for ERP systems, availability and staff training, and appropriate information technology.
Barth and Koch (2019)	Critical success factors in ERP enterprise resource planning promotion projects	This article identifies 14 important success factors for ERP upgrade projects. Among them, effective project management, external support, ERP team composition and the use of multiple system perspectives play a key role in the success of ERP promotion. In addition, comparisons were made of critical success factors for ERP implementation projects that have many similarities and differences between these types of projects.
Chofreha et al. (2018)	A framework for sustainable enterprise resource planning systems	Twelve experts participated in the interview to evaluate the content and usefulness of this framework. The results of the analysis showed that the initial S-ERP framework should be divided into two parts: the sustainability implementation framework and the system implementation framework.
Rahati and Mansourzadeh (2018)	Investigating the effect of comprehensive organizational planning (ERP) on the agility of private banks in Iran, especially Pasargad Bank in Tehran	The results showed that the comprehensive organizational planning system has a positive and significant effect on organizational agility on competence, flexibility, speed and accountability as well as the comprehensive organizational planning system (ERP).
Zendedel Nobari et al. (2018)	Identification of national parameters affecting the risk factors of ERP deployment in Iran with a multidisciplinary theory approach	The results of this study show that the cultural characteristics of the country with a frequency of 64, the level of development of the country with a frequency of 38 and the level of international political relations with a frequency of 29 are the most important parameters affecting ERP risk factors in the country, respectively.
Babaiianpour et al. (2017)	Identify and rank barriers to successful ERP implementation by considering the life cycle of this system	The results show confirmation of company strategy factors, knowledge management and information accuracy, organizational structure, experience, knowledge and expertise of project team members, and support and participation of top managers in the pre-implementation phase, and confirmation of all effective factors during implementation is ERP. Also change management factors, ERP acceptance / resilience system, cooperation and communication between departments, stakeholder participation (end users, shareholders, etc.), and the use of a steering committee approved by the statistical sample in the next stage of ERP implementation it placed.
Lee et al. (2017)	Investigating the critical success factors for the life cycle of enterprise resource planning systems from an IT governance perspective	Thirty-five critical success factors were identified from articles published in top journals. These CSFs are then categorized into five.
Jayawickrama and Yapa (2013)	Identify the factors influencing the successful implementation of ERP projects, find out the level of performance of each factor in Sri Lankan organizations and recommend the best way to reduce the failure of ERP projects	There were three factors from the employer's point of view and from the consultant's point of view that their level of performance was poor, which are: Product selection method, project design, employer commitment, consultants' qualifications and required communication support at the pre-implementation stage. Except for these, the level of performance is appropriate for other factors.

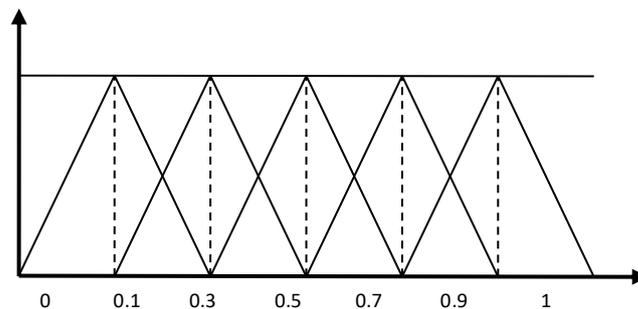
**Material and methods**

Considering that the main purpose of conducting research is to study and rank the factors and indicators of success in implementing the organization's resource planning system, it can be said that the said research is in the field of applied research in terms of purpose. Due to the fact that the research data was collected with the help of interviews and review of previous research and then prioritized by fuzzy dimtel method is a type of mixed research (qualitative-quantitative). This study reviewed the studies and literature on the implementation of the organization's resource planning system. Based on this, the criteria and success indicators of implementing the organization's resource planning system were identified. In order to localize the model indicators, the points of view and views of experts in this field have been used. The members of the specialized committee are experts and members of the implementation team of the organization's

resource planning system and some managers of the internal units of the organization. Based on the studies and perceptions obtained from the opinions of experts, a set of criteria and indicators for each of these criteria were identified using the theme analysis method. The research population includes 15 experts and specialist in the implementation of the organization's resource planning system in Chaharmahal and Bakhtiari Saderat Bank, but due to limited and difficult access to all members of the community, so 7 of these experts and experts in the implementation of ERP system to the sample title has been selected. In this study, the fuzzy dimtel technique has been used to consider the interactions. To determine the effects and interactions between the factors, the data were collected with a five-point Likert scale and fuzzy according to Table 2 and Figure 1.

**Table 2: Verbal variables and corresponding fuzzy numbers in the Dematel technique**

Verbal variables	Triangular fuzzy numbers
Effectless	$(0.3 \cdot 0.1 \cdot 0)$
Low impact	$(0.1 \cdot 0.3 \cdot 0.5)$
Medium impact	$(0.3 \cdot 0.5 \cdot 0.7)$
High impact	$(0.5 \cdot 0.7 \cdot 0.9)$
Extreme impact	$(1 \cdot 0.9 \cdot 0.7)$



**Figure 1: Triangular fuzzy numbers in the dematel technique**

1. Direct connection matrix formation: The relationships between the criteria are displayed as a matrix. The point of view of

In order to calculate the internal relations, the following steps will be performed:

(1) and (2). First, the sum of all rows and columns is calculated. The inverse of the largest number of rows and columns is  $k$ . Then, by multiplying the value of  $k$  by the direct correlation matrix, the normal direct correlation matrix is obtained.

$$k = \frac{1}{\max(\sum_{i,j=1}^n a_{ij})} \quad (1)$$

In the row  $i$  column and column  $j$  mm direct correlation matrix  $n$ :  
 number of rows or columns :  $a_{ij}$

$$N = K * D \quad (2)$$

D: Direct communication matrix

N: Normal direct connection matrix

1. Calculate the complete correlation matrix: This matrix is calculated according to Equation (3).

$$T = N \times (I - N)^{-1} \quad (3)$$

T: Complete communication matrix

I: Identity matrix

(4). Creating a causal diagram:

The Rows Summation Vector (D) for each factor indicates the extent to which that factor affects the other factors in the system (the extent to which the variables are affected).

The Columns Summation Vector (R) for each factor indicates the degree to which that factor is affected by other factors in the system (the degree to which variables are affected).

Therefore, the horizontal vector (D + R), called Prominence, and is the amount of effect and the effect of the desired factor in the system. In other words, the higher the D + R factor, the more it interacts with other system factors.

The vertical vector (D-R), called the relation, and indicates the power of each factor. In general, if D-R is positive, it is considered a causal variable and if it is negative, it is considered a disability.

Finally, a Cartesian coordinate system is drawn. In this device, the longitudinal axis

several experts, a simple average of opinions is used and we form a direct communication matrix.

2. Formation of normal direct communication matrix: The normalized matrix is obtained according to equations

is D + R and the transverse axis is based on D-R. The position of each factor is determined by a point with coordinates (D + R, D-R) in the device. In this way, a graphic diagram will be obtained.

Threshold Value calculation of relations: to determine the Network Relations Map (NRM), the threshold value must be calculated. In this way, partial relationships can be omitted and a network of significant relationships can be drawn. Only relationships whose values in the full correlation matrix are greater than the threshold value will be displayed in the NRM. To calculate the threshold value, the relations are sufficient to calculate the average of the complete matrix values. Once the threshold intensity is determined, all values of the complete correlation matrix that is smaller than the threshold are zero, i.e. that causal relationship is not considered.

## Results

What are the key factors in implementing ERP system in Chaharmahal and Bakhtiari Saderat Bank?

First, based on the research literature and specialized interviews, a set of indicators for the success of the implementation of the organization's resource planning system has been identified. For screening and final confirmation of the indicators, the method of theme analysis (theme) has been used. Using interviews with experts in the open coding stage, 130 codes were extracted from the interviews. After this step, the researchers compared the extracted codes with each

other and deleted or merged duplicate codes, at which point their number reached 75 codes. In the next stage, researchers, according to the nature of these 75 codes and their conceptual relationship with each other, categorized them in the first stage. At this stage, 23 interpretive themes were obtained. Finally, in the second stage of coding, the researchers, considering the nature of these 28 subcategories and carefully examining the relationships between them, reduced the categories to 7 more general themes according to the type of each subcategory.

**Table 3: Interpretive indicators of ERP implementation success**

Symbol	Description of the index
R1	Existence of vision, clear goals, business plan and model in the organization
R2	Status of existing business systems and information technology of the organization
R3	Define the vision, mission, goals and scope of the ERP project
R4	Detailed design, scheduling, cost and resource planning of the project
R5	Assignment of duties and responsibilities
R6	Project monitoring, evaluation and control
R7	The project team consists of business process experts, IT experts, ERP vendors and consultants
R8	Allocate full-time project team members to ERP implementation
R9	Active presence of leaders and capable decision makers in the project
R10	Exchange of information, communication and proper cooperation between project team members and members of the organization
R11	Support and commitment of the organization's management in allocating resources to the project
R12	Knowledge and experience of organizational management of ERP system
R13	Establish a compensation system and retain project team members
R14	Mediation of the organization's management in case of disputes between project team members
R15	Re-engineering business processes
R16	Minimal ERP system customization
R17	Change the structure and culture of the organization in accordance with the best solutions
R18	Teaching members of the organization about new processes, performance and how to use the ERP system
R19	Development of ERP knowledge in scientific centers for power generation simultaneously with the project
R20	Accurate and systematic selection of ERP bundles
R21	Proper configuration of ERP software
R22	Targeted and complex tests on the software
R23	Quick fix of software executable bugs

Once concepts have been created, the analyst needs to group them into words with more explanatory power called general context. Once a theme is identified, it becomes easier to remember it, to think about it, and most importantly to explain its features and dimensions. Therefore, in this stage, through the comparative process, the similarities and differences of the concepts extracted from interviews, news and reports were extracted and examined and similar

concepts were placed in a category or category. This step is done with the focus on questions that fall into the category of theoretical questions.

The formation of general themes in open coding guided the selection of questions in subsequent interviews, and the orientation of the selection of questions led to the order and sequence of themes. Table 2 introduces the categories related to each category of concepts

**Table 4: Classification of indicators into the main criteria of ERP success**

Sym bol	General Theme	Description of the Index
C1	Vision	Existence of vision, clear goals, business plan and model in the organization
		Status of existing business systems and information technology of the organization
C2	ERP project management	Define the vision, mission, goals and scope of the ERP project
		Detailed design, scheduling, cost and resource planning of the project
		Assignment of duties and responsibilities
		Project monitoring, evaluation and control
C3	ERP project team	The project team consists of business process experts, IT experts, ERP vendors and consultants
		Allocate full-time project team members to ERP implementation
		Active presence of leaders and capable decision makers in the project
		Exchange of information, communication and proper cooperation between project team members and members of the organization
C4	Management commitment	Support and commitment of the organization's management in allocating resources to the project
		Knowledge and experience of organizational management of ERP system
		Establish a compensation system and retain project team members
		Mediation of the organization's management in case of disputes between project team members
C5	Ready for change	Re-engineering business processes
		Minimal ERP system customization
		Change the structure and culture of the organization in accordance with the best solutions
C6	Education	Teaching members of the organization about new processes, performance and how to use the ERP system
		Development of ERP knowledge in scientific centers for power generation simultaneously with the project
C7	Continuous improvement	Accurate and systematic selection of ERP bundles
		Proper configuration of ERP software
		Targeted and complex tests on the software
		Quick fix of software executable bugs

Question 2: What is the priority of the main factors for implementing the ERP system in Chaharmahal and Bakhtiari Saderat Bank?

According to the research model, the next step in determining the internal relations is the success criteria of ERP implementation to obtain the matrix of relations of the main criteria of W22. To reflect the internal relations between the main criteria, the fuzzy Demetel technique has been used. So that experts are able to express their views on the effects (direction and intensity of effects) among the factors with more mastery. It should be noted that the matrix

obtained from the Demetel technique (internal communication matrix) shows both the causal relationship between the factors and the effectiveness of the variables.

Step 1: Calculate the direct connection matrix

In the group Demetel technique, that is, when the perspective of several experts is used, a simple arithmetic mean of the comments is used and a direct correlation matrix is formed.

By calculating the fuzzy mean of the experts' point of view, the direct correlation matrix is calculated according to the table.

**Table 5: Direct correlation matrix of ERP implementation success metrics**

	A1			A2			A3			A4			A5			A6			A7		
A1	0.00	0.10	0.30	0.44	0.64	0.83	0.36	0.56	0.76	0.41	0.61	0.80	0.24	0.44	0.64	0.50	0.70	0.86	0.33	0.53	0.70
A2	0.36	0.56	0.76	0.00	0.10	0.30	0.41	0.61	0.80	0.39	0.59	0.79	0.39	0.59	0.77	0.36	0.56	0.76	0.39	0.59	0.76
A3	0.36	0.56	0.76	0.33	0.53	0.71	0.00	0.10	0.30	0.39	0.59	0.77	0.33	0.53	0.73	0.44	0.64	0.83	0.39	0.59	0.79
A4	0.44	0.64	0.84	0.44	0.64	0.83	0.39	0.59	0.77	0.00	0.10	0.30	0.31	0.51	0.70	0.41	0.61	0.80	0.30	0.50	0.70
A5	0.33	0.53	0.73	0.30	0.50	0.70	0.36	0.56	0.74	0.33	0.53	0.73	0.00	0.10	0.30	0.36	0.56	0.76	0.41	0.61	0.81
A6	0.24	0.44	0.64	0.33	0.53	0.71	0.36	0.56	0.76	0.30	0.50	0.70	0.27	0.47	0.67	0.00	0.10	0.30	0.41	0.61	0.81
A7	0.13	0.33	0.53	0.30	0.47	0.67	0.24	0.44	0.64	0.30	0.50	0.70	0.30	0.50	0.69	0.24	0.44	0.64	0.00	0.10	0.30

Step 2: Define the direct connection matrix  
 The fuzzy relation has been used to de-fuzzy the direct connection matrix. According to the de-fuzzing calculations, the determined

values of the direct communication matrix are shown in Table 6:

**Table 6: Matrix of direct relationship of the main criteria with the definite values**

	A1	A2	A3	A4	A5	A6	A7
A1	0.13	0.63	0.55	0.60	0.44	0.68	0.52
A2	0.55	0.13	0.60	0.57	0.57	0.55	0.57
A3	0.55	0.52	0.13	0.57	0.52	0.63	0.57
A4	0.63	0.63	0.57	0.13	0.49	0.60	0.49
A5	0.52	0.49	0.54	0.52	0.13	0.55	0.60
A6	0.42	0.52	0.55	0.49	0.47	0.13	0.60
A7	0.31	0.47	0.44	0.49	0.49	0.44	0.13

Step 3: Calculate the normal direct connection matrix

First, the sum of all rows and columns is calculated. The inverse is the largest

number of rows and columns k. The largest number is 3.58, so all values of the direct connection matrix are multiplied by the inverse of this number, 0.28, to obtain a normal direct connection matrix. This matrix is shown in Table 7.

**Table 7: Normal direct correlation matrix of the main criteria**

N	A1	A2	A3	A4	A5	A6	A7
A1	0.035	0.175	0.153	0.167	0.123	0.190	0.144
A2	0.153	0.035	0.167	0.160	0.159	0.154	0.159
A3	0.153	0.145	0.036	0.160	0.145	0.176	0.161
A4	0.176	0.175	0.160	0.036	0.138	0.168	0.138
A5	0.146	0.138	0.152	0.145	0.036	0.154	0.168
A6	0.117	0.145	0.153	0.138	0.130	0.035	0.168
A7	0.087	0.132	0.123	0.138	0.137	0.124	0.035

Step 4: Calculate the complete correlation matrix

To calculate the complete correlation matrix, the same matrix is first formed.

Then we subtract the same matrix minus the normal matrix and invert the resulting

Matrix. Finally, according to Equation (3), we multiply the normal matrix by the inverse matrix, and the complete correlation matrix is obtained, which is shown in Table

8.

**Table 8: Complete correlation matrix of main criteria**

T	A1	A2	A3	A4	A5	A6	A7
A1	1.89	2.17	2.14	2.15	1.98	2.28	2.20
A2	1.99	2.04	2.15	2.15	2.00	2.25	2.21
A3	1.96	2.11	2.01	2.12	1.96	2.23	2.18
A4	2.02	2.18	2.16	2.05	2.00	2.27	2.20
A5	1.90	2.04	2.04	2.04	1.80	2.14	2.11
A6	1.78	1.94	1.95	1.93	1.80	1.93	2.01
A7	1.57	1.73	1.72	1.73	1.62	1.80	1.69

Therefore, the pattern of meaningful Relationships is in accordance with Table 9:

**Table 9: Significant Relationship Patterns Key Criteria for ERP Success**

	A1	A2	A3	A4	A5	A6	A7
A1		x	x	x		x	x
A2			x	x		x	x
A3		x		x		x	x
A4	x	x	x			x	x
A5		x	x	x		x	x
A6							x
A7							

According to the complete correlation matrix, the causal relationship pattern of The main criteria of ERP success can be shown according to Table 10.

**Table 10: Pattern of causal relationships of the main criteria for ERP success**

T	D	R	D+R	D-R
"Vision"	14.80	13.12	27.91	1.681
"ERP Project Management"	14.79	14.21	29.00	0.587
"ERP Project Team"	14.57	14.17	28.74	0.397
"Management commitment"	14.87	14.17	29.04	0.707
"Ready to change"	14.07	13.16	27.23	0.908
"Education"	13.35	14.09	28.25	-1.550
"Continuous improvement"	11.87	14.60	26.47	-2.728

In Table 10, the Rows Sumation Vector (D) indicates the extent to which that factor affects the other factors in the system. Accordingly, "organization management" has the greatest impact. The criteria of "Existing Business Vision, Plan and Systems" and "ERP Project Management" are in the second and third place with almost similar impact. The criteria of "ERP project team", "change readiness" and "training" are also in the next degree of effectiveness. The criterion of "continuous improvement" is also the least effective.

- The Columns Sumation Vector (R) for each factor indicates the extent to which that factor is affected by other factors in the system. Accordingly, the criterion of "continuous improvement" has a very high degree of effectiveness. The "perspective" criterion also has the least impact of other criteria.

### Discussion and conclusion

The purpose of this study was to identify the key factors of ERP system implementation in Chaharmahal and Bakhtiari Saderat Bank using theme analysis method. Organization, ERP project team, management commitment, change readiness, training, continuous improvement are categorized. Organizational resource planning system is the main factor of successful information management in organizations. But the deployment of many ERP systems has failed. Because the managers of the organizations think that just buying the system (ERP) is enough. Organizational resource planning systems are very complex information systems and many factors affect their successful deployment. Organizations should be aware of the most important factors influencing successful deployment (ERP) and provide those (Taherpour Kalantari et al., 2011) Research findings are consistent with Agola et al. (2015) on software development, testing

The horizontal vector (D + R) is the amount of effect and effect of the desired factor in the system. In other words, the higher the D + R factor, the more it interacts with other system factors. Accordingly, the criteria of "management commitment" and "ERP project management" have the most interaction with other criteria. The criteria of "continuous improvement" and "awareness of change" have the least interaction with other criteria.

- Vertical vector (D - R), shows the power of influence of each factor. In general, if D - R is positive, the variable is a causal variable, and if it is negative, it is a disability. In this model, "education" and "continuous improvement" are disabled variables and other variables are causal.

and debugging. In addition, the results of the studies of Barth and Koch (2019) and Jayavikrama and Yapa (2013) in the field of organization management and project management are in line with the results of this study.

Also, the results of Taherpour Kalantari et al. (2011) showed that perspectives and strategies are the success factors of ERP implementation, which is in line with the results of this study. Pourjabar et al. (2013) also stated project management as one of the most important key factors in implementing ERP system. Findings are consistent with the research of Babaijanpour et al. (2017) on change management and education.

In the next step, the pattern of preference variables and causal relationships between the main variables is investigated using the fuzzy DEMATEL technique. Accordingly, "management commitment" has the greatest impact.

The "Outlook" and "ERP Project Management" criteria are in second and third place with almost the same impact.

The criteria of "ERP project team", "readiness for change" and "training" are also in the next degrees of effectiveness. The criterion of "continuous improvement" is also the least effective. Also, using the fuzzy DEMATEL method, it was determined that the criteria of "management commitment" and "ERP project management" have the most interaction with other studied criteria. The criteria of "continuous improvement" and "readiness for change" have the least interaction with other criteria.

Since management commitment, change management and project management are key factors in establishing ERP, it is suggested:

Hold a seminar on ERP for bank managers and explain the benefits of ERP deployment to them. This will lead managers to be interested in using ERP.

Provide managers with small brochures and booklets on ERP to better understand the concept of ERP.

Successful examples of ERP application in Iran and abroad should be introduced to managers to review successful examples of ERP application.

Managers should form an advisory unit on ERP criteria to familiarize their members with ERP.

Since continuous improvement is one of the key factors in establishing ERP, it is recommended:

The executive problems of ERP software should be fixed immediately after deployment, so that the production and service processes of the organization are not stopped. The nature of the software based on entering critical areas or the occurrence of errors causes the customer to request support services at unpredictable times, and depending on the type and time of this error, a different amount of effort is required from the supporter.

For successful system implementation, all organizational processes must conform to the ERP model. An ERP system alone

cannot improve an organization's performance until the organization reorganizes its business processes.

To improve software performance and align it with the needs of the organization, work processes must be re-engineered in accordance with the software, not to start adapting the software to the structure and processes of the organization.

Since "vision" is one of the key factors in establishing ERP, it is suggested:

It is recommended that a clear vision and goals be created by a specialized team for the establishment and success of ERP in the organization.

During the readiness assessment studies, the necessary prerequisites for the successful implementation of the project are determined and the readiness of the organization for the implementation of the system is measured.

Since "education" is one of the key factors in establishing ERP, it is suggested:

By holding specialized workshops on new processes, the performance and how to use the ERP system to be properly trained members of the organization.

The need to develop knowledge in this area is essential and vital. This is achieved through the development of scientific and training centers and training of specialized and expert personnel in the field of ERP, and these human resources can be used as members of the project team during the implementation process.

Like most interviews, the findings of this study are based on the views, experiences of individuals and environmental conditions of the research and the results can be generalized in similar conditions and environments. In this study, the dynamics of ERP was not considered. It is suggested to use qualitative data analysis software such as Maxuda, Envoy and Atlas T to analyze the data obtained from the interviews. And in future research, researchers will use dynamic modeling that

can analyze the causal relationships and dynamics of ERP over time.

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