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# Analyzing the Influence of Maturity of Organization on Organizational Agility in Industrial Companies. Case of Study: Fakour Industrial Company

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## Abstract

In recent years, the international job market has completely turned into a competitive one. This process involves high agility in the organization. To get this agility, the organization should get into this direction and go on this process, and to do this, we need individual maturity, procedural maturity and organizational maturity. The purpose of this research is to analyzing the influence of maturity of organization on organizational agility in industrial companies. To do this research Fakour industrial company has been selected. The sample volume has been determined 130 individuals by using sampling model in a limited society (Cochran Formula). The tool for gathering the needed data is researcher's questionnaire with 0.943 total reliability and formal validity. The results indicate, first the model has been a suitable one on predicting the influence of maturity of organization and its dimensions on organizational agility. Second, the result indicates the maturity of organization, individual maturity, procedural maturity and organizational maturity have a direct and positive effect on organizational agility.

**Keywords:** Individual Maturity, Procedural Maturity, Organizational Maturity, Organizational Agility

## Introduction

The differences and the lack of information on the environment are the features of the information and communication era. Only changes are continuous. The organization these days should function in a dynamic environment with internal and external changes. They should adapt to the changing environment, and take advantage of these changes as their assets. In addition to this, customers have demanded different productions in a short time (Maskell, 2001). New organizations find this hard to satisfy their needs. It seems that in the complex world today instabilities, unpredictability, traditional, traditional designs, have affected organizations. These factual items have made organizations to get outstanding agility to continue their life. On the other hand, globalization has made increasing competitive situations among the companies and organizations in the free markets (Vindoh, Sundararaj, & Devadasan, 2010). Agility reinforces the companies to get success in the environment which

is full of continuous changes which are definitely unpredictable. An agile organization can easily change itself and its concentration; make varieties and innovations in its productions. These processes accelerate the organization to get its goals. In this way, the organization will get over competitions promptly. The organization, in this way, will be flexible, and quickly reacts to the risks and gets high insights about the market. In order for the organization to get agility, and to maintain it, its need to work on the individual agility and the organizational agility. Organizational agility, here, means to establish the process of differences and varieties on the individuals, structures, cultural affairs and production. Also, organizations need to make adaptabilities acceptable inside and outside their environments. Recognizing the indexes of maturity of organization and determine the effect of maturity of organization on organizational agility help the following items:

1. Assigning the level of maturity of organization in company.
2. Helping strategic planners to set suitable strategies based on the level of maturity of organization.
3. Assigning functional programs to improve the level of individual, procedural and organizational maturity.
4. Setting up similarities on individual, procedural and organizational maturity.
5. Assigning the organizational agility levels in Fakour industrial company.
6. Familiarity of the managers with the types of maturity on organization.
7. Offering approaches to improve the maturity of organization on Fakour industrial company.

Considering the above matters and the importance of this subject in this study, analyzing the influence of maturity of organization on organizational agility has been done in Fakour industrial organizations.

### ***Maturity of Organization***

Single-dimensioned maturity of organization doesn't make any success but it's necessary that organizational maturity is formed in different dimensions because maturity needs a complete movement and planning. Well-balanced movement guarantees organization's stable and balanced development from one side and causes a harmonies and multidimensional maturity on the other side. Multidimensional maturity in organization levels the agility way and causes organization to become successful in agility.

### ***Individual Maturity***

Individual maturity is the foundational feature for all other maturities. Its start from the mental abilities and continues to the differentiation of ideas. In this maturity the personnel's knowledge should change. This process is done through formal and informal education. Individual maturity causes to make self-qualifications in the personnel (Soltani, Nejad & Bozorgzad, 2011). Individual maturity has four emotional, intellectual, social and professional maturity dimensions.

### ***Procedural Maturity***

This maturity is the power of agility to update structures, procedures or approaches and enables the organizations to adapt to the situation (Khatibian, Pour & Jafari, 2010). In order for the individual maturity to turn into functions and productions and to create maturity, it needs mature structures. Sometimes inappropriate structures avoid flowing mental variations. So, we need to make parallelism in the organizational structures and procedures.

Procedural maturity has seven dimensions which are: defining procedures, designing procedures, evaluation procedures, continuous improving of procedures, and agility of procedures, owners and administrators of procedures, rules and systems supporting procedures.

### ***Organizational Maturity***

The mature and honor of the organizations consist of the attempt to plan a kind of variety to help the members to do the duties they are entitled to in a better way (Khatibian, Pour & Jafari, 2010). Organizational maturity is an item which enables organizations to be stable and get over their competitions by involving knowledge, techniques and other management correct approaches. Organizational maturity has seven dimensions: organizational leadership, organization's culture, skills of organization's employees, organization's systems and orders, organizational changing, organizational learning and organizational structure (Jorge, 2011).

### ***Organizational Agility***

The term "agility" in dictionary means the ability of fast movement, quick and easy movement and the ability of quick thinking with a wise way (Hornby, 2000). When there is worry and anguish in a problem, agility is the key of solving it. Considering that agility concept is new and there is no definition being confirmed by all. In the chart number one there is a group of definitions and key concepts for the organizational agility (Gunasekaran & Yusuf, 2002).

Table 1. Definitions and key concepts for the organizational agility

Writer	Definition
Dever and Miles (1995)	The ability to function in a competitive environment based on the continuous changes.
Adamides and Mc Grath Booth (1996)	Flexibility and more responding, production based on responses.
Gunasekaran and Yusuf (2002)	The ability to do the activities in the increasing competitive and unpredictable environment.

### Research Hypothesis

1. Maturity of organization influence on organizational agility on Fakour industrial company.
2. Individual maturity influence on organizational agility on Fakour industrial company.
3. Procedural maturity influence on organizational agility on Fakour industrial company.
4. Organizational maturity influence on organizational agility on Fakour industrial company.

### Literature Review

Worley and Lawler (2010) worked on an article called “organizational agility and designing, different aspects of agility and its effect on operation”. In their study, they evaluated 161 executive managers, 42 assistants and 98 managers of Akmi Air and Space. Also they evaluated four dimensions effective on agility which are stable strategy, adaptable designs, leadership and common identify and finally, they concluded that the capabilities of value making affect organizational operation (Worley & Lawler, 2010)

McCormack et al (2009) did a research called “a global research about the key of reference points in business procedural maturity”. The aim of this study has been reporting the results of research to the priority of maturity factors or the key of reference points in realizing the efforts of business procedural maturity. In this study, the reference points have been identified from different aspects by using different methods and developing some of common conclusions by using all methods applied in this study and the result indicates that these points help answering these questions: where am I in this maturity way? And what is the next step?

Van Assen et al (2005) had a study called “evaluating maturity and the effectiveness of organizational operation measuring systems”. The purpose of this study was describing and showing a device to evaluate maturity and effectiveness of organizational operation measuring systems. For this purpose, evaluating tool has been applied by using two Balkom’s model and EFQM models, according to the organizational transcendence framework. The results show that the supposed tool could be used to evaluate exclusively and exactly the operation measuring systems.

### Methodology of Research

From its purpose aspect, the present study is considered as an applied research and from the way of gathering data it’s a descriptive research from field studies branch. The researcher’s questionnaire device has been used to gather the needed information. This questionnaire has a five degree range of Likert from 1 (very low) to 5 (very high) including 47 questions in two parts, organizational maturity and organizational agility. In this study, the

formal validity method was used to confirm the validity of questionnaire. To determine the reliability of the questionnaire, its internal adaptation was obtained for different factors of the questionnaire by the help of SPSS software and Cronbach's alpha index (as it is shown in Table 2).

Table 2. Cronbach's Alpha

Factors Questionnaire	Individual Maturity	Procedural Maturity	Organizational Maturity	Organizational agility	Total factor
Cronbach's alpha	0/736	0/876	0/883	0/883	0/943

The statistical society of study is the employers working in Fakour Industrial Company in 1391. The society volume is 650 individuals. Considering that the questions of the questionnaire are multi-value types with distance scale and limited society size, Cochran formula has been used to determine the sample volume. At first, 30 questionnaires were spread and then gather among the organization's employees randomly and after calculating the standard deviation of the first sample, determining the sample volume was performed. The standard deviation value for first sample was calculated 0.637. Also the parameter value (d) has been supposed 0.1 and considering that the statistical society is 650 individuals, the sample volume has been calculated 130 individuals by using the following formula in 95% certainty level.

A summary of the tools and procedures in analyzing data shown in table number 3.

Table 3. Tools and procedures in analyzing data

Methods	Indices and statistical tests	Function	Statistical software
Descriptive statistics	Percentages, frequencies	Sample descriptive research	SPSS
Perceptive statistics	Structural equation modeling	Test of hypothesis	AMOS

### Data Analysis

Demographic characteristics and other items corresponding to the sample under study are shown in Table (4).

Table 4. Abundances and frequencies of participants

Demographic Variables	Categories	Abundance	Frequency
Sex	Female	2	%1/5
	Male	128	%98/5
Age	20-25	11	%8/5
	26-30	55	%42/3
	31-35	38	%29/2
	36-40	18	%13/8
	41-45	4	%3/1
	46-50	1	%0/8
	51-60	3	%2/3
Education Degree	Diploma	7	%5/4
	Associate degree	5	%3/8
	B.S.	73	%56/2
	M.S.	45	%34/6
	Ph.D.	0	%0
Job Background	0-5	71	%54/6
	6-10	27	%20/8
	11-15	22	%16/9
	16-20	5	%3/8
	21-25	3	%2/3
	26-30	2	%1/5
Type of activity	Staff	30	%23/1
	Operating	42	%32/3
	Researching	58	%44/6
Job Background	Manager	28	%21/5
	Expert	82	%63/1
	Employee	20	%15/4

**Evaluations and the model tests in measuring hidden variables**

In this part, we get familiar with four models of analyzing data. The purpose is to talk about the model tests in measuring hidden variables; here we observe three indices called absolute fit indices, comparative fit indices and parsimonious fit indices.

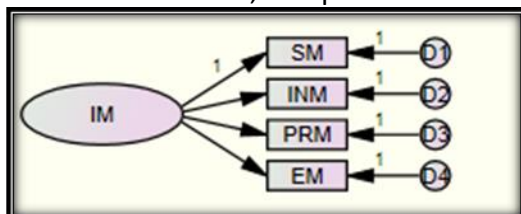


Figure 1. Model to evaluate the individual maturity

Table 5. Indices measurement model individual maturity

Fit indices	Important indices	Deciding	Conclusion
absolute fit indices	CMIN =17/643 , P-value = 0/224	higher than 0/05	model was confirmed
comparative fit indices	TLI = 0/985 , CFI = 0/990	higher than 0/9	model was confirmed
parsimonious fit indices	RMSEA = 0/045	Lower than 0/05	model was confirmed
	CMIN/DF = 1/260	Between 1 and 5	
	PCFI = 0/660 , PNFI = 0/635	higher than 0/5	

Based on the above table, the model to evaluate the individual maturity is located on a suitable situation, so it is accepted.

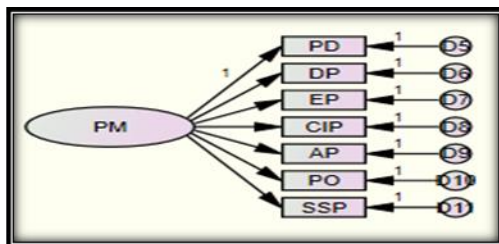


Figure 2. Model to evaluate the procedural maturity

Table 6. Indices measurement model procedural maturity

Fit indices	Important indices	Deciding	Conclusion
absolute fit indices	CMIN =17/643 , P-value = 0/224	higher than 0/05	model was confirmed
comparative fit indices	TLI = 0/985 , CFI = 0/990	higher than 0/9	model was confirmed
parsimonious fit indices	RMSEA = 0/045	Lower than 0/05	model was confirmed
	CMIN/DF = 1/260	Between 1 and 5	
	PCFI = 0/660 , PNFI = 0/635	higher than 0/5	

Based on the above table, the model to evaluate the procedural maturity is located on a suitable situation, so it is accepted.

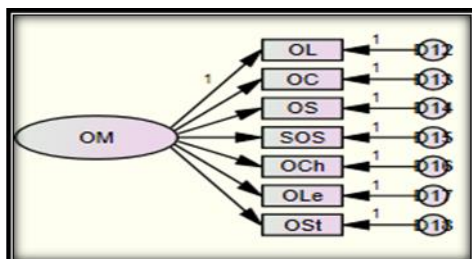


Figure 3. Model to evaluate the organizational maturity



Table 7. Indices measurement model organizational maturity

Fit indices	Important indices	Deciding	Conclusion
absolute fit indices	CMIN =17/643 , P-value = 0/224	higher than 0/05	model was not verified
comparative fit indices	TLI = 0/985 , CFI = 0/990	higher than 0/9	model was not verified
parsimonious fit indices	RMSEA = 0/045	Lower than 0/05	model was not verified
	CMIN/DF = 1/260	Between 1 and 5	
	PCFI = 0/660 , PNFI = 0/635	higher than 0/5	

The survey in the index about the organizational maturity shows that it needs some improvement. We think that by similarity between two features among skills of organization's employees and organizational learning, similarity of the variables for the two systems and the varieties and differences of the company, we can improve the indices. So, the measuring model which has been improved has changed like the picture number 4.

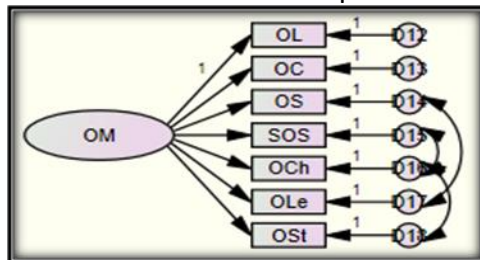


Figure 4. Modified model to evaluate the organizational maturity

Table 8. Indices measurement modified model organizational maturity

Fit indices	Important indices	Deciding	Conclusion
absolute fit indices	CMIN =17/643 , P-value = 0/224	higher than 0/05	model was confirmed
comparative fit indices	TLI = 0/985 , CFI = 0/990	higher than 0/9	model was confirmed
parsimonious fit indices	RMSEA = 0/045	Lower than 0/05	model was confirmed
	CMIN/DF = 1/260	Between 1 and 5	
	PCFI = 0/660 , PNFI = 0/635	higher than 0/5	

Based on the above table, the model to evaluate the organizational maturity is located on a suitable situation, so it is accepted.

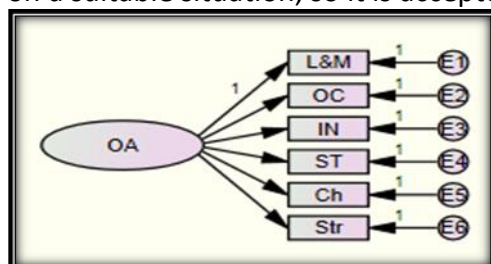


Figure 5. Model to evaluate the organizational agility

Table 9. Indices measurement model organizational agility

Fit indices	Important indices	Deciding	Conclusion
absolute fit indices	CMIN =17/643 , P-value = 0/224	higher than 0/05	model was confirmed
comparative fit indices	TLI = 0/985 , CFI = 0/990	higher than 0/9	model was confirmed
parsimonious fit indices	RMSEA = 0/045	Lower than 0/05	model was not verified
	CMIN/DF = 1/260	Between 1 and 5	
	PCFI = 0/660 , PNFI = 0/635	higher than 0/5	

The survey in the index about the organizational agility shows that it needs some improvement. We think that it needs improvement. So, in order to make it possible to improve, we observed the indices in external software and figured that by simulating the variables, we can improve the indices considerably. In this way, the measuring model which has been improved based on figure 6 has changed.

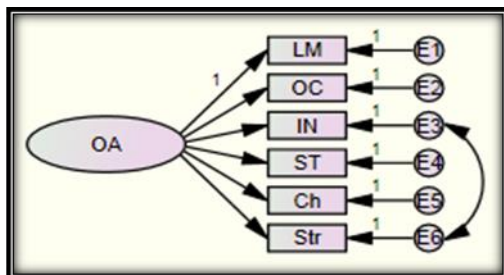


Figure 6. Modified model to evaluate the organizational agility

Table 10. Indices measurement modified model organizational maturity

Fit indices	Important indices	Deciding	Conclusion
absolute fit indices	CMIN =17/643 , P-value = 0/224	higher than 0/05	model was confirmed
comparative fit indices	TLI = 0/985 , CFI = 0/990	higher than 0/9	model was confirmed
parsimonious fit indices	RMSEA = 0/045	Lower than 0/05	model was confirmed
	CMIN/DF = 1/260	Between 1 and 5	
	PCFI = 0/660 , PNFI = 0/635	higher than 0/5	

Based on the above table, the model to evaluate the organizational agility is located on a suitable situation, so it is accepted.

**Analysis of the Whole Model**

In this part, three groups of indices have been evaluated to test the whole model. The measures related to these indices for the first research model have been shown in the following table.

Table 11. Indices measurement initial model

Fit indices	Important indices	Deciding	Conclusion
absolute fit indices	CMIN =17/643 , P-value = 0/224	higher than 0/05	model was not verified
comparative fit indices	TLI = 0/985 , CFI = 0/990	higher than 0/9	model was not verified
parsimonious fit indices	RMSEA = 0/045	Lower than 0/05	model was not verified
	CMIN/DF = 1/260	Between 1 and 5	
	PCFI = 0/660 , PNFI = 0/635	higher than 0/5	

By surveying the indices, the model needs improvement.

**Analysis of the Model Details**

After the analysis, we figured that the model is not acceptable and it needs improvement. So, we tried to make it acceptable by improving the model through stabilizing some other parameters. So the final model of the research will be ultimately like the figure number 7. The indices in the final model are observable considering the first model. As it was shown in the table number 12.

Fit indices	Initial model	Final model
CMIN	614/402	486/796
CMIN/DF	2/528	2/264
TLI	0/712	0/901
CFI	0/746	0/924
PNFI	0/569	0/600
PCFI	0/657	0/678
RMSEA	0/089	0/048

Based on the values in the final model, we accept it to be in the statistical community.

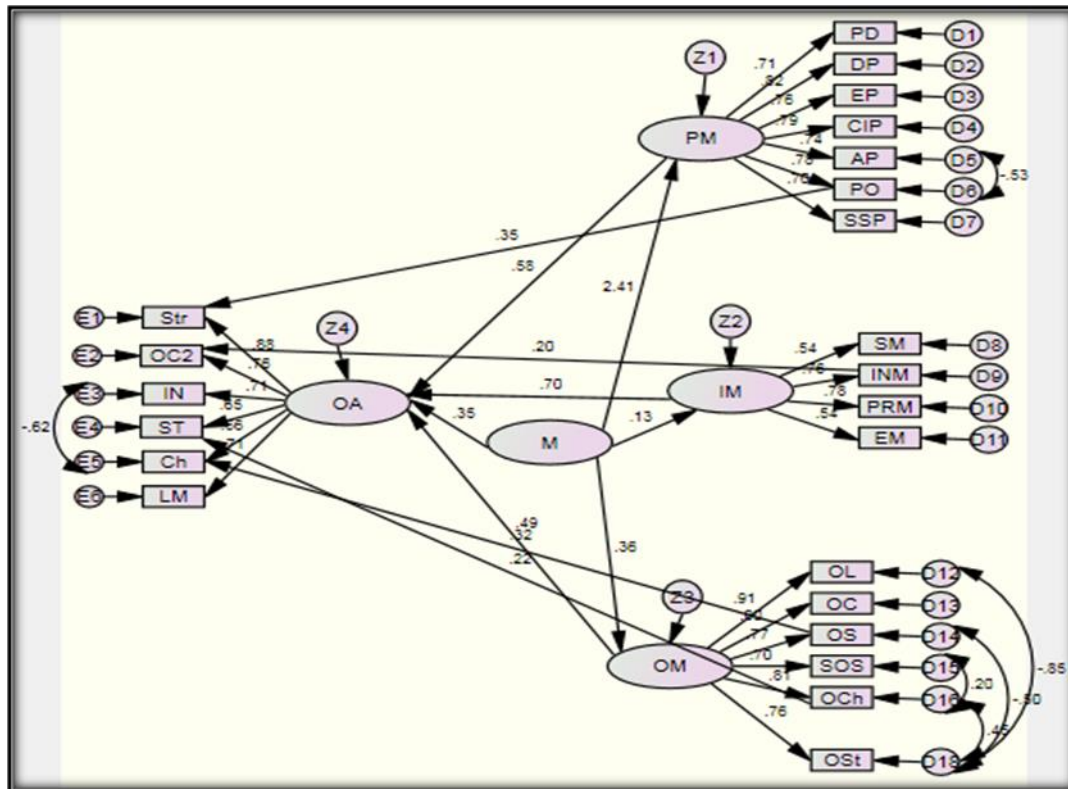


Figure 7. Final model

In the figure number 7, the whole standards for regression weights are consisting of agent loads or multiplications which are effective. Based on these values, the effect of all the dimensions in the organization are all positive on organizational agility. Also the effect of the organizational maturity on the organizational agility is positive. Also, the final model shows that the owners and administrators of procedures of the variables on the organizational structure have a direct positive effect, and that the intellectual maturity effect on the organizational culture is positive and direct. The skills of organization's employees are positively effective on change and learning. In addition to this effect, the variety and the change in the organization is positively effective and direct on strategy setting.

### Testing Research Hypotheses

- H1: Maturity of organization influence on organizational agility on Fakour industrial company.
  - $H_0$ : Maturity of organization has no influence on the organizational agility.
  - $H_1$ : Maturity of organization has influence on the organizational agility.

Based on the final model, maturity of organization has directly positive influence on the organizational agility. In fact, a unit of change in maturity of organization causes 0/346 units to the organizational agility.

- H2: Individual maturity influence on organizational agility on Fakour industrial company.
  - $H_0$ : Individual maturity has no influence on the organizational agility.
  - $H_1$ : Individual maturity has influence on the organizational agility.

Based on the final model, individual maturity has directly positive influence on the organizational agility. In fact, a unit of change in individual maturity causes 0/704 units to the organizational agility.

H3: procedural maturity influence on organizational agility on Fakour industrial company.

$H_0$  : Procedural maturity has no influence on the organizational agility.

$H_1$  : Procedural maturity has influence on the organizational agility.

Based on the final model, procedural maturity has directly positive influence on the organizational agility. In fact, a unit of change in procedural maturity causes 0/581 units to the organizational agility.

H4: organizational maturity influence on organizational agility on Fakour industrial company.

$H_0$  : Organizational maturity has no influence on the organizational agility.

$H_1$  : Organizational maturity has influence on the organizational agility.

Based on the final model, organizational maturity has directly positive influence on the organizational agility. In fact, a unit of change in organizational maturity causes 0/491 units to the organizational agility.

## Results

The result taken show that the individual maturity has a highly direct effect on the organizational agility. In fact, one unit of change in the individual maturity will cause 0/704 units of change in the organizational agility. In other words, personnel individual maturity, starting from imaginations and abstracts, and being completed by the attitudes and beliefs, make qualifications on self-functions with the quotients of 0/704 on the organizational agility with the certainty of 95 percentages.

Also, we know that procedural maturity has got direct effect on the organizational agility. So, one unit of change on procedural maturity will cause 0/581 unit of change on organizational agility. In other words, maturity in the structures and procedures, which can make agility in approaches and procedures, and based on that, can increase the adaptability in the organization with the quotients of 0/581 on the organizational agility, will definitely make 95 percentages in the organization.

The result taken show that the organizational maturity has a highly direct effect on the organizational agility. In fact, one unit of change in the individual maturity will cause 0/491 units of change in the organizational agility. In other words, making changes in the organization, in order to help the members to do better job, has got the quotient of 0/491 on the organizational agility with the certainty of 95 percentages.

## Suggestions

1. In case of individual maturity, and in order to develop the intellectual maturity, the suggestion is to create thinking rooms in Fakour industrial company. These rooms cause more cooperation and consultations among the personnel to create innovations, and also make more creativity among the partners. They also, make improvements for educational goals and vocational needs and psychological, inter relationship skills. These skills are offered to increase emotional maturity among the colleagues.
2. About the procedural maturity, the suggestion is to create a systematic design for the procedures. In order to develop the organizational agility, it is suggested to delete added worthless activities. About the similarity of the procedures, it is suggested to define a controlling system. About the procedure defining, it is suggested to redefine the procedures, and to delete added, worthless activities.

3. About the organizational maturity, it is suggested that we organize necessary education or trainings to strengthen the organizational culture.

It is suggested that we perform a clear definition or description about the duties and responsibilities of the personnel by the management or the leadership in the companies. The company should spend more time about the personnel's requests. Also, it is suggested that the company speed up answering or responding changes in the organizational environment. It is also suggested that we increase decision making power among the personnel by using the necessary trainings and using necessary information among personnel. It is needed to create a relationship network among the personnel to make an effective general connection.

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