Investigating the Relationship between Structural Empowerment and Resistance to Change in Iran Air

Mojtaba Rezaei Shahmirzady

Abstract--- *Development of the air transportation industry in the world is one of the most important components of development and growth in developed and developing countries. According to experts, Air Transportation Industry of Iran has structural problems and it is necessary to reform the traditional structure and reduce government ownership. Iran Air, the Airline of the Islamic Republic of Iran, as the oldest aviation organization of Iran is not an exception in this regard and reforming its structure to survive is inevitable. Thus, the aim of this study was to investigate the relationship between structural empowerment and resistance to change in Iran Air. The present research method is a non-experimental survey. It is also considered as an applied and correlational research in terms of objective. The statistical population is composed of middle managers of Iran Air Company. To achieve the needed data, questionnaire-based methods, library studies, and references. The used questionnaires were standard and their reliability were confirmed by industry professors and experts. According to the statistical population, 190 questionnaires were distributed and finally 160 questionnaires were completed and analyzed. To test the hypotheses of this research, structural equations modeling based on variance or partial least squares (PLS) method was used. The research results show that there is generally a negative correlation between structural empowerment and resistance to change.*

Keywords--- *Structural Empowerment, Resistance to Change, Iran Air.*

I. INTRODUCTION

The growing expansion and development of air transportation industry in the world has a special place in the cultural, social, economic and technological development programs of countries (Sadegh Amalnik, 2011). Nowadays, only air transportation industries provide a transportation network at global level, and the importance of this industry is due to its great impact on trade growth and the spread of tourism in the world. It brings economic growth for countries and accelerates transportation of human beings and goods around the world (Abdelghani, 2010). The importance of this industry is so high that the world's economic thinkers believe that if the underdeveloped countries do not pay attention to this industry at the beginning of the 21st century, the growth and development of these countries will be minimized. Recent attention paid by the Iranian government to this industry promises great changes in the Iranian aviation industry, which, of course, will require airlines to make many changes.

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Statement of problem

Since Iran's air transportation industry has structural problems (Zarabi, Mohammadi & Saghaei, 2006) and there is an emphasis on the need to reform the traditional structure and reduce government ownership in the transportation industry (Rezaei Arjrudi, 2004), the Airline of the Islamic Republic of Iran (Iran Air), is not an exception in this regard. With arrival of new airplanes purchased after JCPOA agreements, it has been forced to make fundamental changes and it requires planned change management. Lack of empowerment indicates a barrier in accepting changes related to quality improvement (Muntlin, Carlsson and Gunningberg, 2010). Resistance to change is challenging for all organizations and impose much costs (Rosenberg and Mosca, 2011). Despite more than sixty years of research in change management, organizational change has not been implemented successfully yet (Decker et al., 2012). The failure rate of change is more than fifty percent, and many organizational leaders attribute this failure to resistance to change (Ford and Ford, 2010). Management interaction is essential for success. Many managers with many years of experience still resist against the change (Oreg and Berson, 2011). Manager plays vital role in change, but successful managers need empowerment and progress, but these elements have been overlooked in most organizations' change management programs (Nayahangan, Little & Shevels, 2011).

II. THEORETICAL FRAMEWORK:

Resistance to change

In the 1940s, Kurt Lewin, a social psychologist, first proposed the idea of managing and eliminating resistance to changes in organizations. His early work focused on aspects of individual behavior that needed to be considered so that organizational change to be effective (Lewin, 1947). Individuals naturally resist to change to defend the current situation, especially when they feel their security or situation is at risk. The goal of resist to change is protecting individuals from the real or imaginary effects of change (Jafarpour, 2010). In 1950, Alvin Zander published a study in this field called resistance to change (Analysis and Prevention). Her paper made a preliminary distinction between signs of resistance such as hostility or poor effort, and the underlying causes for this behavior.As resistance to change is a relatively new concept, there is no universally accepted definition for it and various scholars have offered several definitions for it. Alvin Zander, one of the first researchers in this field, defines resistance to change as behavior that aims to protect individuals from real or imaginary effects (Zander, 1950). Zaltman and Duncan (1977) define resistance to change as follows: Any trend that aims to support the current situation and resistance to any pressure that wants to change the current situation (Oreg, 2003). Piderit argues that resistance to change must be broader. He states that review of past empirical research reveals that there are three different important emphases on conceptualizing resistance: as a cognitive state, as an emotional state and as a behavior. Piderit argues that although these conceptualizations match to some extent, they differ in a number of cases. Finding a way to bring these different approaches closer together should deepen our understanding of how employees are resilient to changes in the organization. Each of these three conceptualizations of change as a behavior, a feeling, or a belief provides an important part of the experience of resistance to change. Thus, any definition that focuses on one point of view and ignores the other is incomplete (Piderit, 2000).

Empowerment

As human beings are not just workers in today's organizations and only their mechanical energy is not considered, organizations have achieved a great belief, that is, belief in human, to maintain and develop their success. Hence, not only should managers have leadership skills, but employees should also learn ways to lead themselves (Roy and Sheena, 2005). Studies have shown that managers' effectiveness will increase with sharing power. The real power of a manager is to give

it to people who are in a better position to use it. By giving their power, the commitment and creativity will be created in them (Conger and Kanungo, 2002). Studies suggest that people need self-sufficiency. Empowering of employees will increase their self-sufficiency, since in the light of the power gained, they will be able to improve their effectiveness, use their creativity and choose how to do things (Liza and Stephen, 2003; Kayl, 2005). The goal of empowerment is to facilitate the achievement of organizational goals. In any case, any increase in power should not lead to an increase in conflict between managers and employees (Mohammadi, 2001).

Review of literature

In their analytical research, Taheri and Kalantari (2015) have examined empowerment of employees without distinguishing its structural or psychological types to reduce resistance to change and consider empowerment effective in reducing resistance to change, especially by training employees. Barzabad, Yazdi Feizabadi, and Rasouli Moghadam (2015) investigated the correlation between psychological empowerment with organizational atmosphere and organizational silence and confirmed the direct impact of it. In a descriptive exploratory research on the establishment of change management in nursing and midwifery schools, Khachian, Pasargadi, Manouchehri, Akbarzadeh (2014) stated that the organization needs to communicate effectively when dealing with environmental changes and in this regard, communication management should be used for change, which leads to a new way of thinking about change in the organization. In a study on employees' behavioral patterns versus change, Kameli, Bakhtiari Asl, Lotfi Arbatan and Pour Faraj (2013) investigated the causal correlation between developmental change, transitional change, and transformational change by accepting change, resistance against the change and indifference of the employees towards change. The results revealed that transformative changes had a positive and significant correlation with the resistance of the employees against the change (Kameli et al., 2013).

In their research on the relationship between participatory management and resistance to change in physical education teachers, Farahani, Asadi and Aghajani (2010) examined the causal relationship between the level of participation of physical education teachers and their resistance to change and confirmed the significant and negative correlation between them. In foreign research, Rita Elizabeth (2014) confirmed the significant and negative causal correlation between structural empowerment and resistance to change in US healthcare organizations. In foreign research, no other similar case was found to assess the structural empowerment and resistance to change quantitatively, but researchers such as Mattieu, Gilson, and Rudy (2006) reported a significant correlation between structural empowerment and team members' shared understanding of power and responsibility. Also, in a study conducted by Mostefalader and Ahmad Salman al-Suliti (2015), the relationship between structural empowerment and efficiency was assessed.

III. RESEARCH METHODOLOGY:

The present study is an applied research in terms of objective, descriptive and non-experimental (field and survey) in terms of nature, and correlational in terms of method. In the present study, two library and field methods were used. The present research method is considered as non-experimental and survey method. The statistical population of this research included the middle managers of Iran Air company with over 190 people. In the present study, random sampling method was used. The number of statistical population was 190 people. Cochran's formula was used to determine the sample size. The sample size was determined at 127 people using Cochran's formula and considering 95% reliability coefficient. In this study, structural empowerment questionnaire and resistance to change questionnaire were used. A total of 190 questionnaires were distributed, and finally 160 questionnaires were completed and analyzed that was more than the required sample size. Also, to measure the validity of the questionnaire, the content and construct validities were used. To

assess the content validity of the questionnaire, in addition to using theoretical foundations and library studies, the opinions of the expertise of professors and experts were used. Their reforms were applied on the questionnaire after discussing with each other. To determine the reliability of the measurement tool, composite reliability method and Cronbach's alpha were used.

To test the hypotheses of this research, the structural equations modeling based on partial least squares (PLS) method was used.

Research hypotheses
The main hypothesis

There is a significant relationship between structural empowerment of managers and their resistance to change.

Sub-hypotheses of the research

1- There is a significant relationship between access to managers' opportunities and their resistance to change.

2- There is a significant relationship between access to managers' information and their resistance to change.

3- There is a significant relationship between access to managers' support and their resistance to change.

4- There is a significant relationship between access to managers' resources and their resistance to change.

5-There is a significant relationship between managers' job activity and their resistance to change.

6- There is a significant relationship between managers' organizational relationships and their resistance to change.

7-There is a significant relationship between general empowerment of managers and their resistance to change.

IV. RESULTS

Examining the normal distribution of variables

Kolmogorov-Smirnov test was used to examine the normal distribution of data of a variable. H0 and H1 hypotheses are presented in this way:

Distribution of the desired variable is normal (H0)

Distribution of the desired variable is not normal (H1)

The results of this test are shown in Table 1.

Table 1- Results of testing the normality of the research variables

	Variable	Test statistic	Critical value	Difference of means	95% confidence interval	
					Lower bound	Upper bound
Main variable	Structural empowerment	0.721	0.677	0.089	-0.053	0.050
Components of Structural Empowerment Questionnaire	Access to opportunity	1.118	0.164	0.088	-0.085	0.087
	Access to information	1.264	0.082	0.100	-0.126	0.102
	Access to support	1.227	0.098	0.097	-0.070	0.139
	Access to resources	1.147	0.144	0.091	-0.077	0.054
	Job activities	1.579	0.014	0.125	-0.089	0.086
	Organizational relationships	1.325	0.060	0.104	-0.141	0.153
	General empowerment	1.664	0.008	0.056	-0.126	0.072
Main variable	Resistance to change	1.123	0.161	0.089	-0.043	0.089

	Normal search procedure	1.395	0.041	0.110	-0.083	0.110
Components of Resistance to Change Questionnaire	Emotional reaction to imposed change	0.610	0.760	0.060	-0.060	0.055
	Short-term focus	1.464	0.027	0.116	-0.068	0.116
	Cognitive strength	0.953	0.324	0.075	-0.047	0.075

The results of the table indicate that among the components of structural empowerment, only two components of job activities and general empowerment, and among the components of resistance to change, two components of normal search and short-term focus do not follow normal distribution, because the test statistical value is less than 5% for them and H1 hypothesis is confirmed and the distribution of other variables is normal because the critical value or sig value is more than 5% and the zero hypothesis is confirmed for them. According to the results of Kolmogorov-Smirnov test and also according to the study sample size, to test the research hypotheses, structural equation method based on partial least squares approach is used, which is suitable for data with non-normal distribution. In this regard, smart-pls software was used.

Inferential statistics

Research hypotheses test

Main research hypothesis test

To test the main research hypothesis, the model was first drawn based on the main hypothesis and then was examined.
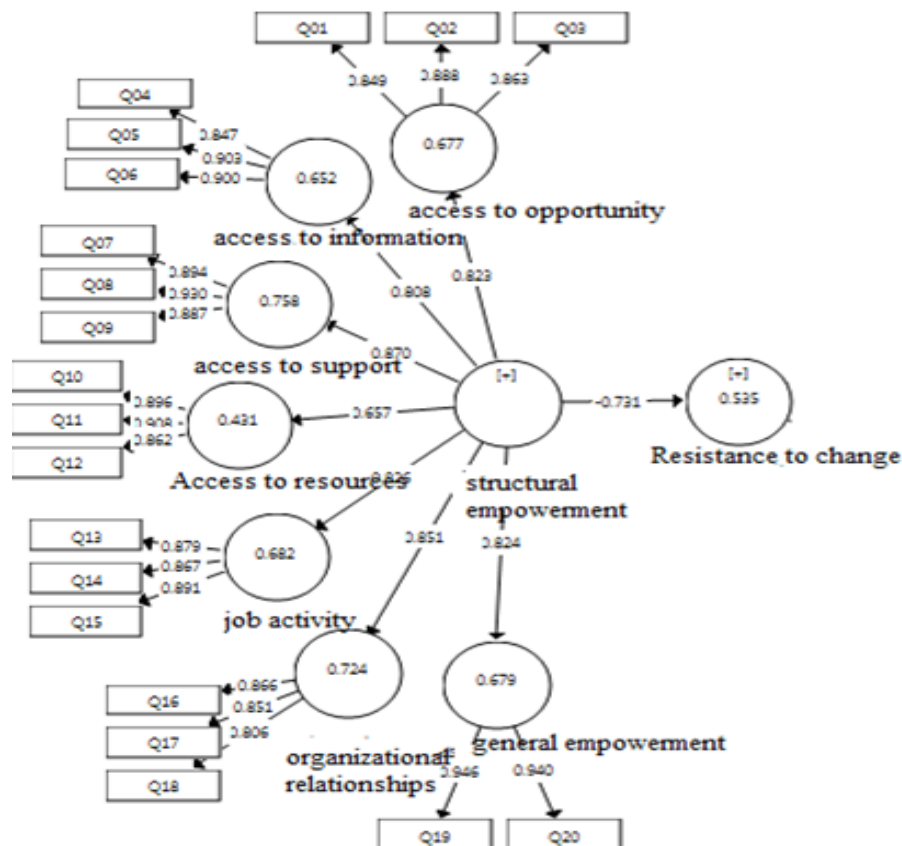
Figure 1-main hypothesis model: the relationship between structural empowerment and resistance to change in factor load state

As can be seen in Figure 1, the path coefficient is calculated to be -0.731, which indicates that there is an inverse relationship between structural empowerment and resistance to change. After testing the measurement model, the structural part of the model was measured. For this purpose, the share of main criteria: 1-coefficient of determination index (R2), 2- Significance of path coefficients (beta) and 3- redundancy were used. As can be seen in Figure 1, the coefficient of determination for resistance to change was calculated at 0.535, which indicates that about 54% of the changes in resistance to change are determined by the structural empowerment variable.
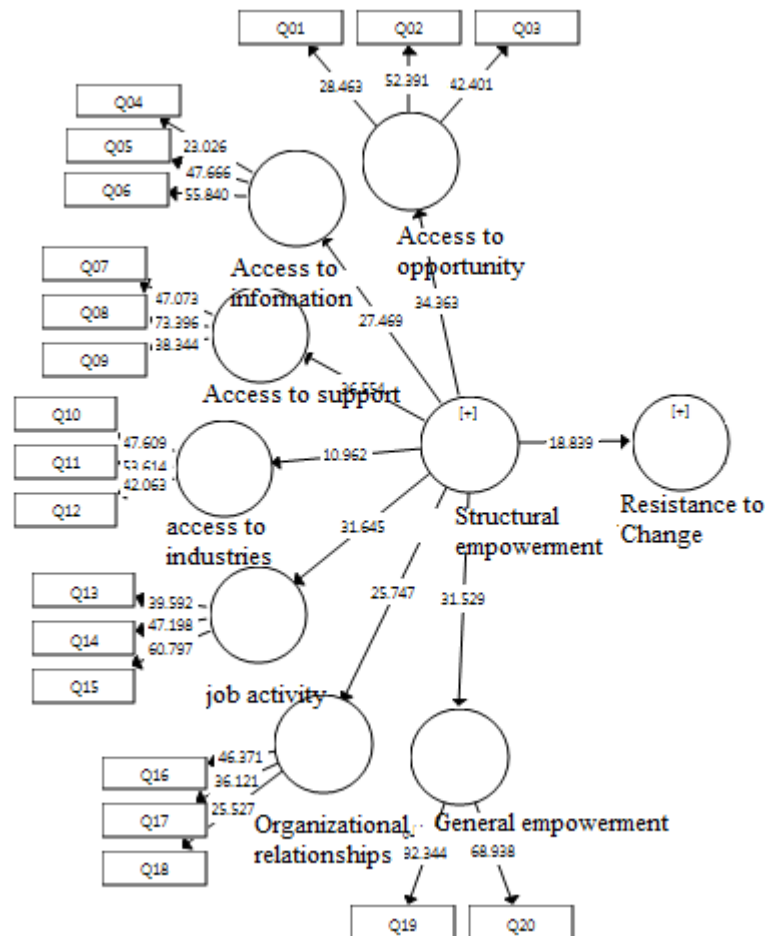
Figure 2- Mosdel of relationship between structural empowerment and resistance to change in the state of significance of path coefficients

According to the results of Figure 2, the value of this coefficient for the main hypothesis of the research is 18.839, and since the significance level (sig) for this statistic (t) is less than 0.05, it can be concluded that statistic t is significant at 95% confidence level. Hence, the main research hypothesis is confirmed (Table 2).

Table 2- results for testing the main research hypothesis

| Hypothesis number	Test effect path	Sample mean	SD	Statistic (t)	sig	result
Main hypothesis	resistance to <- Structural empowerment change	-0.734	0.039	18.839	0.000	Hypothesis is confirmed

The CV Red Index was also used to assess the quality of the structural model. According to the value of this index (Q^2) in Table 3, it can be concluded that the model has the desired quality and has the ability to predict.

Table 3- Results of testing quality of structural model with redundancy index (CV Red)

| Q2 criteria $Q^2(=1\text{-SSE/SSO})$	Sum of squared errors	Sum of squared observations	
0.250	1679	2240	Resistance to change

Testing research sub-hypotheses

To test the sub-hypotheses of the research, the model was first drawn based on the sub-hypotheses and then was examined.
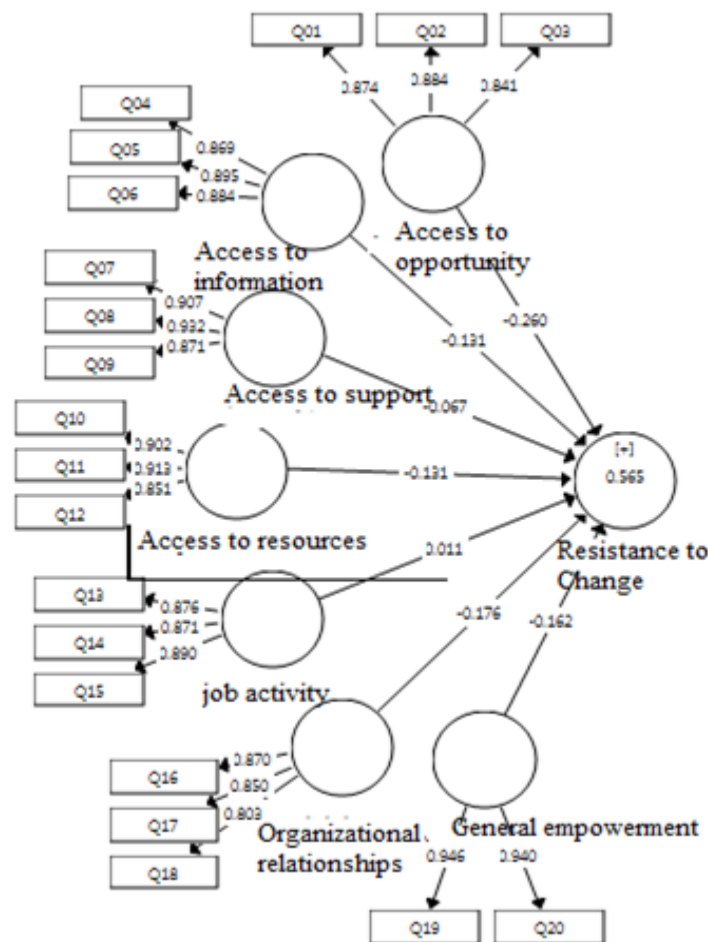
Figure 3- Model of research sub-hypotheses for the relationship between structural empowerment and resistance to change in the state of factor load

As shown in Figure 3, the factor load for all items is more than 0.4 and there is no need to delete the factors and modify the model. Also, examining of the path coefficients (correlation coefficients) shows that there is an inverse
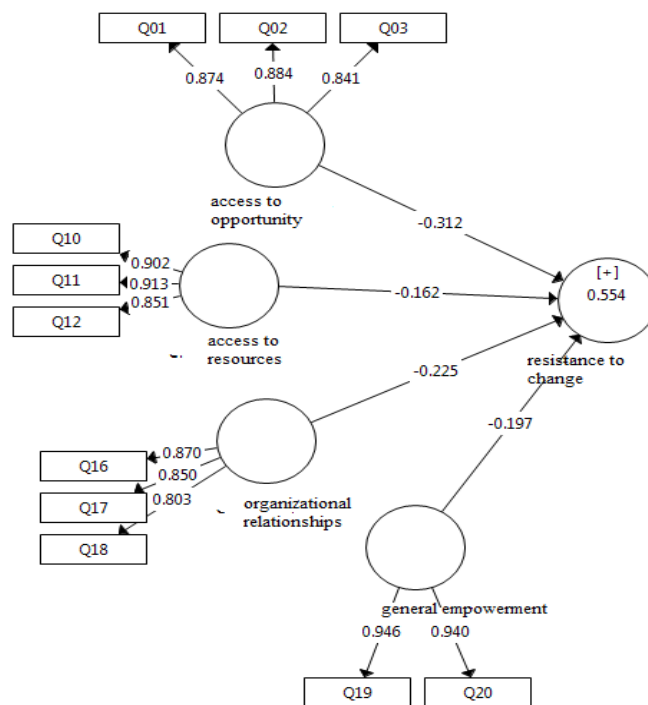
relationship between the variables of access to opportunity, access to information, access to support, organizational relations and general empowerment and resistance to change the relationship and there is a direct relationship between the variable of job activity and resistance to change. In the next step, in order to examine the significance of these relationships, three criteria were used: 1- coefficient of determination index (R2), 2- Significance of path coefficients (beta) and 3- redundancy index
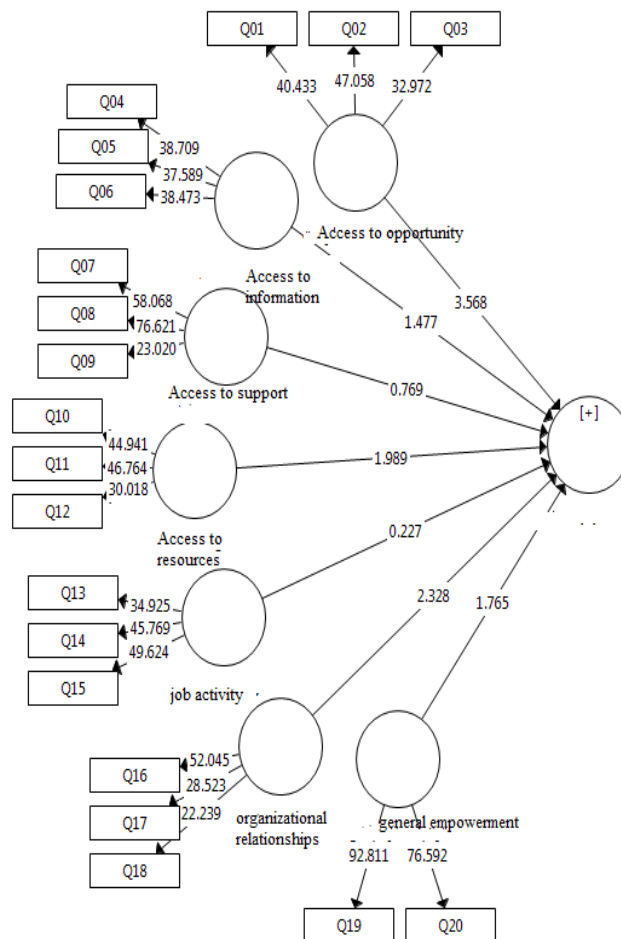
Figure 4- Model of research sub-hypothesis: The relationship between structural empowerment and resistance to change in significance state

The coefficient of determination for resistance to change was calculated at 0.565. Examining the results of the model in the significant state of path coefficients shows that among the structural empowerment variables, the four variables of access to information, access to support, job activity and general empowerment do not have a significant relationship with resistance to change, because the statistic t value is less than 1.96 at the 95% confidence level, so the variables were removed from the model and the model was evaluated at each stage.

Figure 5- modified model of research sub-hypotheses in the state of factor load

After excluding three variables of access to information, access to support and job activity, and examining the factor loads and significance of relationships, the results showed that the four variables of access to opportunity, access to resources, organizational relationships and general empowerment are inversely correlated with resistance to change. As the coefficients of significant relationship (t statistic) in all paths are more than 1.96, these relationships are significant.
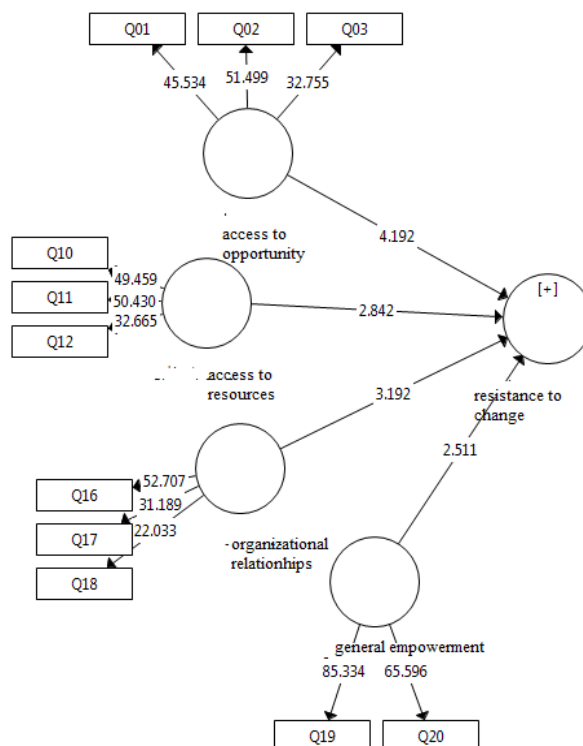
Figure 6- modified model of research sub-hypotheses in the significance state

Table 4-Test results of assessing sub-hypotheses of research modified model

Number of sub-hypothesis	Test effect path	Mean sample	SD	Statistic t	sig	result
1	Access to opportunity <- resistance to change	-0.314	0.074	4.192	0.000	Hypothesis is confirmed
2	Access to information <- resistance to change	-0.136	0.089	1.477	0.141	Hypothesis is rejected
3	Access to support <- resistance to change	-0.117	0.087	0.769	0.443	Hypothesis is rejected
4	Access to resources <- resistance to change	-0.166	0.057	2.842	0.005	Hypothesis is confirmed
5	Job activity <- resistance to change	0.060	0.047	0.227	0.821	Hypothesis is rejected
6	Organizational relationship <- resistance to change	-0.235	0.071	3.192	0.002	Hypothesis is confirmed
7	General empowerment <- resistance to change	-0.190	0.078	2.511	0.013	Hypothesis is confirmed

To examine the quality of the structural model, the redundancy index (CV Red) was also used. According to the value of this index (Q2) in Table 5, it can be concluded that the model has the desired quality and has the ability to predict.

Table 5- Results of testing structural model quality with redundancy index (CV Red)

Q2 criterion $Q^2(=1-SSE/SSO)$	Sum of squared errors SSE	Sum of squared observations SSO	
0.285	224.793	314.184	Resistance to change

V. DISCUSSION AND CONCLUSION

One of the major problems of Iran Air is lack of effective communication between its different departments. In other words, different departments of Iran Air Organization operate as an island. The existence of effective and correct communication has always been one of the important factors in success. Without an effective communication system, managers and other employees will not able to fulfill their duties. In this study, demographic items that included gender, age, employment history, education and type of employment were examined as secondary hypotheses. Among them, only the significant relationship between education level and resistance to change was confirmed and it was concluded that with increasing level of education, people resistance to change decreases. The results of examining the factor load and significance of the relationship between the two variables of structural empowerment and resistance to change indicate the existence of a significant and inverse relationship between these two variables, meaning that with increasing structural empowerment in middle managers, their resistance to change decreases.

The results of examining the factor loads and significance of the relationship between the two variables of access to opportunity and resistance to change indicate the existence of a significant and inverse relationship between these two variables. Also, the results of examining the factor loads and significance of the relationship between the two variables of access to information and resistance to change indicate that there is no significant relationship between these two

variables. The results of examining the factor loads and significance of the relationship between the two variables of access to support and resistance to change indicate that there is no significant relationship between these two variables. The results of examining the factor loads and significance of the relationship between the two variables of access to resources and resistance to change indicate a significant and inverse relationship between these two variables. The results of examining the factor loads and significance of the relationship between the two variables of job activities and resistance to change indicate lack of a relationship between these two variables. The results of examining the factor loads and significance of the relationship between the two variables of organizational relationship and resistance to change indicate a significant and inverse relationship between these two variables. The measurement of the general empowerment of middle managers and their resistance to change was examined as a validation index that results of examining the factor loads and significance of the relationship between the two variables of general empowerment and resistance to change indicate a significant and inverse relationship between these two variables. The results of this study are consistent with those of the studies conducted by Taheri and Kalantari (2015), Maleki, Gohari and Ghorbanian (2012), and Rita Elizabeth (2014).

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