The Impact of Transformational Leadership on People Empowerment; the Mediating Role of Organizational Culture

Shiva Jarihi

(MA) Executive Management, Firoozkooh Islamic Azad University, Iran.

Abstract: *In order to succeed and play an effective role in organizations, organizational managers must, in addition to managerial roles, be able to choose their own leadership styles based on the need for time and facts. With the study of leading organizations, it can be seen that these organizations need leaders who, with the breadth of vision and a full attitude, determine the future of the organization and can guide the culture of the organization towards a suitable and strong culture, and motivate the employees for transformation. Studying the transformational leadership, identifying its dimensions and its components, and applying these superior methods result in saving financial resources, utilizing the greatest potential of human resources, increasing the scientific and practical level of employees and quicker movement towards the development of employees' empowerment. In this article, transformational leadership with empowering employees through the mediating role of organizational culture in Pasargad Bank will be examined. The results show that the use of organizational culture creates a new environment for service organizations, and if it fits into the organization's activities, it can lead to success in providing new services. On the other hand, the use of creative ideas and enhancement of employees' decision-making power in the form of employees' empowerment through transformational leadership can help more success of organizations.*

Keywords: *Transformational Leadership, Empowerment, Organizational Culture, Pasargad Bank, Iran.*

INTRODUCTION

In today's organizations, the importance of leadership has led thinkers and scholars of management to seek out the characteristics and features of successful leaders in organizations and they are always trying to mention the characteristics of a successful leader in organization, following these efforts in recent decades, several theories and leadership schools have been formed in the field of leadership and introduced to the scientific community. In organizational research and theories about organization, the phenomenon of creativity, change and innovation has played a central role.

One of the assumptions of organization's internal performance is that employees' capabilities improve organization's internal processes. These capabilities are influenced by several factors, including organizational culture that is divided into various factors and different aspects, each of which has a different effect on the performance index. In fact, the existence of culture helps the organization to have a clear, defined and understandable set of values of its strategic goal and direction (Huang et al., 2013). Organizational change requires moving from known to unknown, and since the future is uncertain and may have a negative effect on capabilities, values, and abilities of individuals, generally, the members of an organization do not support change unless there are compelling reasons to make them do it. In the same way, organizations strongly tend to invest in the current situation and resist change for future uncertain benefits (Bushra et al.,

2011). Undoubtedly, behavior and style of leadership, taking into account organizational culture and empowerment of employees within the organization as a motivating factor for organizational change, have a great effect on the type of employees' needs and knowledge. The importance of leadership in the process of managing change has been emphasized by the fact that change, based on the definition, needs to create a new system and then institutionalize new approaches. On the other hand, organizations that pay attention to the organizational culture of their employees, implicitly, convey this message to them: employees are important for the organization and the organization pays attention to them, and this increases the commitment of employees to the organization, its goals and the public welfare. All of the employees become interested in his work, through suitable education and training, they become aware of the organization's expectations and try to meet them. On the other hand, successful organizations have a learning background and their success in various stages of organizational development has not been unintentional and incidental. For this reason, in the present era, organizations are successful that, while focusing on organizational culture, all their employees are working to enhance their capability, and the manager's task is to provide the appropriate conditions for this training and empowerment process. In this article, the author explains and evaluates the effect of transformational leadership on empowerment of employees through the mediating role of organizational culture.

The questions we will answer in this article are as follows:

1. What effect does transformational leadership have on empowerment of employees?
2. What effect does transformational leadership have on organizational culture?
3. What effect does organizational culture have on empowerment of employees?
4. What effect does transformational leadership have on empowering employees through the mediating role of organizational culture?

Subject literature

Transformational Leadership

Generally, leaders use two sets of different behaviors to affect their followers: firstly, interactive leadership and, secondly, transformational leadership. Since transformational leaders have a clear vision of the future, they seek to make changes and advance the organization in a direction that realize their imagination (Duarte et al., 2013). Transformational leaders are the ones who inspire their followers and can motivate them and guide them in a way that interests of the organization are provided (Fonseca, A.M. et al, 2014). Evidence and documents suggest that this leadership style (transformational) has a lot of advantages compared to interactive leadership and is more successful in achieving its goals. Transformational leaders, from the point of view of their subordinates, are leaders who always protect them and, by creating bright and attractive perspectives, encourage and persuade their people (Binti and Others, 2017).

Transformational leadership has a positive effect on organizational performance; charisma and charismatic leadership positively modify the relationship between transformational leadership and organizational performance (Williams et al., 2018). The results of Anderson and his colleagues' research as well as Abdul Rahman's research show that the performance of a senior executive in an organization with an emphasis on transformational leadership has a positive and direct effect on organizational innovation by encouraging employees. (Abdelrahman Zuraik, 2018) and (Andersen Jon, 2018). In recent years, much attention has been devoted to the new management model of transformational leadership. Leaders can lead their followers to more than expected performance using behavioral attributes of transformational leadership (Braun et al., 2007). 279: 2013

This term was first used by Danton (1973). Although this term was not known until the classics used it by Braun. Bass and Avolio developed the concept and idea of Braun regarding leadership and created a concept of transformational leadership. Bass and Avolio believed that transformational leadership was formed when

the leader promoted and developed his employees' interests, created awareness and acceptance for the group's mission and purpose, and provoked employees to see beyond their own interests for group interests (Stone, et al. Quoted by Niyazi 2004, 62). In recent years, much attention has been paid to modern management model of transformational leadership. Leaders can lead their followers to performance more than expected by using behavioral characteristics of transformational leadership. Bass acknowledges (1997) his conceptualization of transformational leadership is one of neo-charismatic conceptualizations in the behavioral areas of leadership, including "new leadership", "charisma" theory, "charisma documents" theory and perspective leadership. Bass believes that real transformational leaders motivate the followers to fulfill transcendental goals to go beyond the personal easily obtained interests, and develop and peruse interests in the desired direction of the group, organization or country. Bass defines transformational leadership as a process of creating commitment to goals of the organization and empowering followers to fulfil those goals. In his view, a transformational leader is one who empowers followers, motivates them and encourages individuals to follow collective interests rather than pursuing personal interests. Transformational leadership is a conscious, moral and spiritual process that builds the desired patterns of power relations between leaders and followers in order to achieve collective goals and real transformations consistent with the pattern of social systems, and of course these systems are followed through reliable collaborative plans. The realization of this type of leadership will require significant changes in power relations, transformation of the power hierarchy, and the transition to a horizontal level based on the public equality. On this basis, transformational leadership is a complex and dynamic process in which leaders influence the values, beliefs and goals of followers. These leaders move the organization from present to future, identify the environmental needs and facilitate the changes. In addition, they create a prospect of potential opportunities for employees, and develop commitment to change, improvement of culture and the need to design new strategies for the optimal use of energy and organizational resources among them (Den Hartog, DN, & Dickson, M., 2013) These leaders use optimism, attraction, intelligence and other personal abilities to promote the aspirations of others and enhance individuals and organizations to the highest level of performance. Transformational leaders, in times of crisis and change, design a perspective for creating new ideas and new facilities and often create new strategic directions. Braun sees transformational leadership as a process that leaders and subordinates form the highest levels of ethics, conscience and motivation in each other. Transformational leaders are the ones who inspire their followers, can encourage and guide them in the direction that interests of the organization are provided. Since transformational leaders have a clear vision of the future, they seek to make changes and advance the organization in a way that realizes their imagination. Burns pointed out that transformational leaders have insight and make others challenge and attempt to do exceptional works. According to this theory of leadership, a leader needs to use internal actors to perform the duties of the organization to achieve their desired goals. In this regard, the goal of a transformational leader is to ensure that the path to reaching the goal is clearly understood by the internal actors, as well as by eliminating the potential barriers within the system, they persuade the actors to achieve predetermined goals. These leaders can inspire followers, using the inspirational motivation, to produce new ideas for reaching the organization's perspective. Previous studies describe the characteristics of transformational leaders in this way: warm and sympathetic, good expression skills, intelligence, attention to colleagues and needing power. These leaders are able to inspire followers, have an inspiring capability, obtain the commitment of followers, and can change beliefs, attitudes and goals of individuals and the norms of the organization. Transformational leaders create this feeling in subordinates that they are seen as human beings and help people see issues in a new way. Researchers have suggested that firms and organizations transformational leadership need transformational leadership to improve their performance in changing the business environment in real life (Garcia-Morales et al., 2014). Transformational leadership studies have been conducted in more than 1,000 companies in the United States and more than 12 countries, and a variety of studies have been conducted on the relationship between transformational leadership and organizational performance, employees' behavior, productivity and so on. In

all of these studies, the positive relationship of transformational leadership with individual and organizational results such as performance, satisfaction, commitment, organizational culture, etc. has been affected. Mano et al. (2014), in a study on evaluation of the effects of transformational leadership style and organizational culture, found that transformational leadership has a significant effect on culture of organization. Moreover, organizational culture also has the ability to predict leader's innovation and leader's performance. According to the theory of bass and Avolio, transformational leaders pay a lot of attention to the growth and success of their followers individually. Individual considerations may include providing type of support, encouragement, practice and evolutionary experiences for followers. Garcia and Morales (2008) examined the effect of transformational leadership on organizational innovation and performance, depending on the level of organizational learning in the industrial company. The findings show that there is a positive relationship between transformational leadership and organizational innovation, between transformational leadership and organizational performance, and between organizational innovation and organizational performance (Alarifi, 2011, 8). Transformational leadership is one of the paradigms of leadership in organizational psychology, which has been widely studied. Transformational leadership increases subordinates' satisfaction and their trust in leadership and, in addition, their emotional commitment. Leaders who show transformational behaviors create a set of positive outcomes in the organization. Other researchers have introduced four motivational factors: inspirational, idealistic influence, individual consideration and mental persuasion as the most important behavioral components of transformational leadership. Inspirational motivation is to provide an attractive perspective of the future, use emotional arguments and show optimism and enthusiasm; idealistic influence includes behaviors such as sacrifice for the benefit of the group, determination of a personal pattern and expression of very high ethical standards; individual consideration is to provide support, encouragement and clear instruction for followers, and mental persuasion is behaviors that increase followers' awareness of challenges and problems from a new perspective (Sun et al., 2013). Chang et al. have argued that transformational leadership at the organizational levels, called TFL, has a positive relationship with the performance of each sector separately. Sharing knowledge through transformational leadership at each level of organizational levels acts as an intermediary and moderator to create a positive relationship between transformational management at company level and unit level through empowerment of employees. (Chang Yi-Ying, 2018)

Accordingly, transformational leadership is a complex and dynamic process in which leaders influence values, beliefs and goals of followers. These leaders move the organization from present to future, identify environmental needs and facilitate changes. In addition, they create a perspective of potential opportunities for employees and, among them, develop commitment to change, improvement of culture and the need to design new strategies for the optimal use of energy and organizational resources (Walumbwa, Fild and Others, 2013).

Muhammad Shahid Khan et al. conducted a research in Malaysia focusing on the role of Transformational Leadership (TL) in human capital efficiency with the effect of Knowledge Management Strategy (KM). They acknowledged that transformational leadership has a positive effect on managerial strategies and, in particular, on knowledge management strategies. Findings of the study indicate that the transformational leadership strategy in the organization has a positive effect on the effectiveness of human capital and the empowerment of employees. Malaysia has portrayed 2020 as targeted year to become a developed country that achieving this view will be difficult without the process of human capital development due to transformational management. (Muhammad Shahid Khan, 2018). Other research results have shown that transformational leadership affects employee perceptions through organizational reputation directly and through employee empowerment indirectly. On the other hand, operational leadership has a direct and negative effect on employee perceptions through organizational reputation. Employees who feel more power in terms of perceived competence and decision-making control by empowerment have a more favorable evaluation of organizational reputation (Rita Men et al., 2013).

Psychological empowerment of employees

Today the gap is between nations and societies of knowledge and ignorance. Therefore, the main challenge is the challenge of wise and capable human resource. Human resource is considered as the most important, most expensive and most valuable organizational asset and resource. Human is the only intelligent element that has a main role as the coordinator of organizational factors along all other factors. (Blanchard, 2009). Empowerment seems to be a type of major accepted strategy for continuous improvement and an abbreviation for a variety of ways to apply competencies of individuals in creative and new ways for all aspects of performance in the organization. (Rothermel R., & et al, 2013). Empowerment of employees today is one of the important issues of current (new) organization and management both in the private sector and in the public sector. Empowerment of employees as an important issue in management is a common concept. Because empowerment is one of infrastructural and effective elements of management and organization and this effectiveness is increased when the power is distributed in the organization. Therefore, empowerment of employees is considered as a management technique that can be applied among all organizations as a means to meet needs of the modern jobs of the organization (Chang et al, 2013).

Empowerment can be considered from two perspectives: structural empowerment and psychological empowerment. In the structural approach called mechanical and communicational empowerment, empowerment includes activities that an organization does to share employees with power sources and decisions. This kind of empowerment is the result of a process. In this approach, organization management is responsible for empowering employees and determining the extent, dimensions, and manner of creating and deploying the culture of this process in the employees. In this approach, empowerment has been seen more as a stimulus to people coming from outside. The second approach is empowerment from the psychological point of view, that is, creating an inner sense in individuals so they can independently decide in their work process. In this view, the attitude of individuals to their duties and their role in the organization is considered. Psychological empowerment is creating the conditions necessary to enhance the motivation of individuals to perform their duties by fostering the sense of competence or reducing the sense of disability in them. Researchers have suggested psychological empowerment as a motivational structure that includes four dimensions: meaningfulness, competence, autonomy and effectiveness (Moasa & Horia, 2013).

It can be easily stated that without efficient people, achieving organizational goals is impossible. Hence, human resources play a major role in the growth, dynamism, and development or failure and destruction of organizations. The concept of empowering employees in the 1990s attracted the attention of many academics, researchers and management practitioners. Empowering employees as a theoretical concept has a great influence on organizational effectiveness and organizational management and innovation. Empowered people are at high levels of job satisfaction, organizational commitment and job performance (Panahi, 2011).

Kim et al. have concluded in their studies that employees who have an empowerment strategy ahead named "leader member exchange" and are working with a flexible work plan are more likely to become empowered, and empowered workers and employees provide customers with services in the best way with a higher probability. In addition, the results of Kim et al. show that the effect of flexibility of plans and the "leader member exchange", referred to as "LMX", on the empowerment and effect of empowerment on performance of services among South Korean employees are more prominent than its New Zealander counterpart (Kim & et al, 2017).

Studies by Alazzaz Faisal et al. suggest that there is a positive linear relationship between "employee empowerment factors" and "productivity levels" in the organization. They also showed that there is a positive correlation between organizational factors such as development of resources, participation of employees after empowerment of them and improvement of processes (Alazzaz Faisal, 2015). The findings show that it is possible to use the regulatory and inspection dimensions in organizations both directly and indirectly through employee empowerment and organizational performance, and in the case of strengthening employees' empowerment at different organizational levels, this can be achieved. (Baird Kevin et al, 2018).

In the field of psychology, empowerment refers to people's tendency to experience self-control, self-importance and self-freedom. In sociology, thoughts of empowerment are more referred to right-seeking movements (for example, women's rights and civil rights) in which people struggled to liberate and control their own personal circumstances. In addition, many writings that address social problems through social change are essentially focused on the empowerment of groups, that is, individuals try to increase their access to an empowered situation for social change. (Lawson, 2006).

Thomas and Velthouse (1990) have defined empowerment based on the cognitive variables that determine motivation in employees and believe that empowerment is a multi-dimensional issue and consider it as a process of increasing the internal motivation of job, which includes being effective, competent, meaningful and the right to choose.

Organizational culture

Defining the concept of organizational culture is very difficult. Part of this difficulty derives mainly from the extent and variety of the use of the term "culture". Another part derives from the fact that culture like the famous iceberg, only one tenth of which is out of the water, is hidden from the eyes of the viewer. In other words, although the culture of a group or organization is similar to me (ego, according to Freud), the way of working and interaction of individuals, the organization's culture has broad commonalities with super me (super ego of Freud) (Asadi et al., 1934). Organizational culture is a collection of all signs, customs, concepts, values and behavioral standards that is common between members of a human group and transmitted as a life experience from generation to generation. Organizational culture is defined as a major and important factor in shaping the organizational procedures, integrating organizational capabilities, creating solutions to face problems, and creating barriers or facilitating achievement of organizational goals. Individuals must act in accordance with the organization's cultural expectations and rules so that they can succeed in the organization (Stieger et al., 2014).

Levels of culture: Culture can be categorized in two levels: visible and hidden; its visible level consists of values and artifacts, and its hidden level is formed by beliefs and basic assumptions. In another category, culture is divided into three general levels of basic assumptions, values and artifacts (ibid., 1992, 77).

Beliefs: it is the unconscious mentality of the community, and the deepest cultural layer that is the basis of values and attitudes (Farahi and Movahedi, 1998).

Edward Taylor, the English anthropologist, has used culture and civilization one sense and concept, he considers culture or civilization as a complex set of knowledge, beliefs, morals, rules, customs, and all the abilities and habits that man accepts as a member of society so that culture includes all the technical, mechanical, mental and ethical equipment through which people of a particular period reach their specific goals. Different cultures create different economic systems and have the ability to change the economic and political goals of a society. Since a complete understanding of an economic system and structure is not possible without knowing the cultural basis and principles of the system. Some experts believe that cultural development of expanding human capabilities is considered in the cultural fields and gaining the best interest in increasing the standard of living combined with the technological process, (Whetten, 1995, 12).

The most basic and most fundamental solution is to create change and transformation in culture. Culture is a complex system of thinking, feeling and acting. To change the whole cultural system, change and transformation in in its constituent components are essential. Due to interaction, coloration and proportion among the components of a system, change in one component goes to other components and changes the whole system, what is important is the starting point. When knowledge of the necessity of change is achieved, the way of thinking and attitudes of individuals is also changed, and gradually, behaviors and practices of individuals in the organization are coordinated with new thoughts and knowledge. Zhang has concluded in his studies that identifying organizational culture and continuous change and improvement is one of the key ways to create participation of employees in order to improve productivity in organizations and the technique through which mental discoveries and thought of human capitals to solve the problems can be achieved. By

preparing employees to face changes in the organization, one can create an environment where achieving growth of organizations and development of goals and eventually upgrading the organization is possible. (Zhang, 2018). The culture that dominates each society has surrounded organizational culture and has a complex and interconnected relationship with that. Although organizational culture is fed by it, it is at the same time an independent entity. One should pay attention to this issue that which factors promote the level of culture of a society and can be considered as an effective factor in this regard. Other studies show that among the various dimensions of organizational culture, the dimension of "coordination" and the dimension of "social responsibility" respectively have the most and the least effect among the dimensions of organizational culture on organizations. Also, because of the broadness and complexity of organizational culture and its various definitions, there are significant differences in the organizational culture among different industries (Naqshbandi & et al, 2015).

Research Method

The research method is descriptive - survey. The statistical population of the present study included all employees and experts of Branches of Pasargad Banks in West Tehran. The sample size was determined, using Cochran's formula, 148 people. The sampling method of the research is simple random. The research data were collected using library and field method and the tool used was questionnaire. The reliability of the questionnaires was confirmed by Cronbach's alpha (0.866) and the validity of the tool was confirmed by the content method. The research data were analyzed using PLS software and using statistical, descriptive and inferential tests.

Statistical sample and population

The statistical population of the study consists of all employees and experts in Branches of Pasargad Banks in West Tehran. Based on the investigation, the size of the statistical population is around 240 people. Therefore, using the Cochran formula, the sample size is determined 148 people.

Data collection method and tools

The present paper is a field and applied research. So, for collecting information, two methods were used: "document review" by referring to library resources and taking notes and "field method" developing a questionnaire. The data required by the research are first collected using library resources and databases (secondary sources), and then, using the questionnaire (primary sources), the required data is collected and stored.

The questionnaire consists of three parts. The first part of the questionnaire includes a brief explanation of the questionnaire to provide more clarity to the respondents. The second part of the questionnaire includes personal information (demographic variables such as age, gender and job experience). The third part also includes questions related to research variables (transformational leadership, empowerment and organizational culture). The questionnaire used in this study is divided into 3 parts. The first part is taken from the Standard Transformational Leadership Questionnaire of Bass (2000), which has been used repeatedly in numerous researches. In the second part, empowerment of employees will be measured using the standard questionnaire of Spreitzer (1996) and in the third part, the standard questionnaire of Denison (2000) will be used to evaluate organizational culture. The following tables show how to assign questions of the questionnaires to variables and hypotheses investigated in the research.

Table 1: how to assign questions of the questionnaires to variables of the research

Variable	Number of questions
Transformational leadership	11
Empowerment	7
Organizational culture	16

Conceptual model of the research
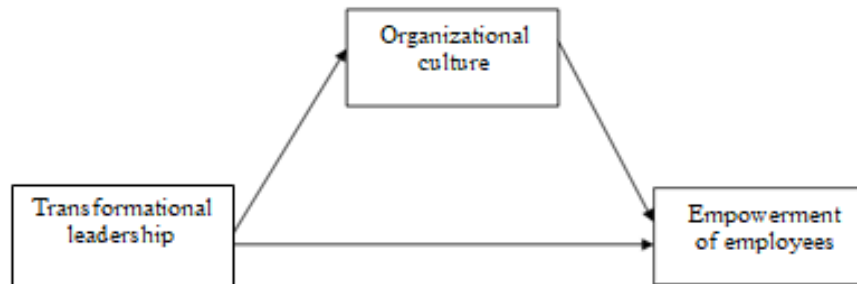
Diagram 1- conceptual model: Kumar et al. (2017)

Analysis of data

Exploratory Factor Analysis

The first step in the exploratory factor analysis process, which is also the first assumption, is to deal with missing data. This data can disturb the process of exploratory factor analysis. It should be taken into account that exploratory factor analysis is the most sensitive statistical technique that pay attention to missing data, and when these data are increased, the findings resulted from that cannot be trusted. Hence, the first assumption is mentioned with the title of "Minimum Missing" (less than 0.05).

In the process of dealing with missing data, two methods were used and the value of 0.2 was considered. In a way that if a particular subject left more than 0.20 of the questions without a response, it was removed from the research process. In this part, no subjects were excluded from the statistical analysis, because none of the subjects had questions with no response more than 0.02. Therefore, the factor analysis assumption called Minimum Missing (0.02) was observed in each subject. This action was applied to all of the questions and their coefficients of ambiguity were determined by reference to non-response. It was determined that all questions had a high coefficient of clarity, so that the coefficient of ambiguity of all questions was less than 0.02. Therefore, in this study, none of the subjects and none of the questions were eliminated because their coefficients of ambiguity were less than 0.02.

The second assumption of exploratory factor analysis refers to adequate sample size. Thus, at this stage, the value of KMO should be considered as an indicator of sampling adequacy. Most experts, in the field of exploratory factor analysis, mentions KMO as the measure of sampling adequacy calculated by three prominent people called Kaiser- Meyer- Olkin calculated and can show sampling adequacy.

If the KMO value is around 0.9, the data is very suitable for factor analysis.

If the KMO value is around 0.8, the data is suitable for factor analysis.

If the KMO value is around 0.7, the data is balanced for the factor analysis.

If the KMO value is around 0.6, the data is moderate for the factor analysis.

If the KMO value is around 0.5 or less, the data is unsuitable (Goldaste et al., 1998).

Table 2 shows the KMO measure for sampling adequacy for the use of factor analysis. Given the high value of the KMO index, the sample number is sufficient and suitable to perform factor analysis.

Table 2: KMO index of factor analysis

	KMO index	Interpretation
Value of statistic	0.849	The sample size is sufficient and suitable.

The third assumption of exploratory factor analysis is known as the normality of multivariate distribution. In multivariate distributions, the characteristic of normality is mentioned in another way and the term sphericity is used. Sphericity, which is also called the normality of the multivariate distribution or the normality of covariance matrixes, does not in itself have any meaning. In the identification of sphericity, the mathematical distribution of chi-square approximation must be emphasized. In cases where the value of sphericity in the chi-square approximation is significant, it can be noted that sphericity has become significant. To determine the corresponding point in the chi-square approximation, the degree of freedom is used, the value of which is closely related to the sample size, but in its calculation, complex mathematical formulas are used that mentioning it is beyond the subject of the present discussion. It is therefore suggested that there are special tests for sphericity, in other words, the interpretation of the value of sphericity is made in the chi-square approximation, and its significance indicates sphericity. Bartlett test, Hartley test, and in rare cases, Lyon test are used to identify and evaluate sphericity, but Bartlett test is one of the most valid tests used to identify sphericity, with emphasis on chi-square approximation in the factor analysis process. Table (3) shows the normality of the multivariate distribution of the research factors.

Table 3: evaluation of the value of sphericity

Sphericity test	Value of chi-square approximation	Degree of freedom	Level of significance	Interpretation
Bartlett test	2052.142	561	0.000	Full sphericity (Multivariate normal distribution is obtained)

The fourth assumption of exploratory factor analysis is to identify the values of the commonalities. So that the correlation of each question with the whole test must be a representation of the internal consistency of questions; that is, each question must have commonality with the whole test. To do this, there are two methods for extracting factor loads:

The first criterion is a practical rule, based on this criterion, those factor loads which are, in terms of absolute value, greater than 0.05 are considered and the rest are eliminated. In this case, the sample size must not be too small (the minimum sample size must be 50). Considering factor analysis on the 34 items derived from the research variables, three factors are identified as the main factors. These three factors, according to the literature review, are named as:

- Transformational leadership
- Organizational culture
- Empowerment of employees

Table 4 shows the results of factor analysis, factors, and items identified for each factor.

Table 4- results of factor analysis, factors, and items identified

| Factors identified	Number of the item
Transformational leadership	Questions Q1 to Q11
Empowerment of employees	Questions Q12 to Q18
Organizational culture	Questions Q19 to Q34

Confirmatory Factor Analysis - Validation of Measuring Models

Before entering the stage of testing the hypotheses and the conceptual model, it is essential to ensure accuracy of the models for measuring the exogenous and endogenous variables. This was done through "confirmatory factor analysis" of the first, second and third times. Confirmatory factor analysis is one of the oldest statistical methods used to investigate the relationship between the latent variables (main variables)

and the observed variables (questionnaire items) and represents the measurement model. This technique, which estimates the parameters and tests hypotheses based on the number of underlying factors among the indicators, is based on a strong empirical and theoretical basis and determines which variables are correlated to which factor (the dimensions of that factor) and also which factor is correlated to which of the factors. The factor analysis is a subset of "construct validity". Factor analysis method is used to identify the underlying variables of a phenomenon or reduce the data set. Factor analysis has two kinds of exploratory factor analysis and confirmatory factor analysis. In the exploratory factor analysis, the researcher seeks to discover the underlying structure of a relatively large set of variables, and the initial assumption is that each variable may have relationship with any factor. In other words, the researcher does not have any initial theory in this method. In the confirmatory factor analysis, the underlying assumption is that each factor has relationship with a certain subset of variables. The minimum requirement for the confirmatory factor analysis is that the researcher has a certain assumption regarding number of the model factors before the analysis, but while the researcher can also incorporate his expectations of the relationships between the variables and the factors in the analysis. In confirmatory factor analyzes, the goal of the researcher is to determine a specific factor structure.

### Construct validity (evaluating diagrams of the research and results of path analysis)

The construct validity is for us to determine whether the data collection tool or method represents the theoretical construct or the underlying theories of the variable under consideration well and has consistency with it. The construct consists of a group of related variables. Construct validity emphasizes that to which extent the test measures the theoretical construct or the desired attribute. This measure requires three basic steps: First, the test constructor must carefully analyze the attribute. Next, s/he must consider how the attribute is related to other variables, and then determine, by test, whether these hypothetical relationships really exist or not.
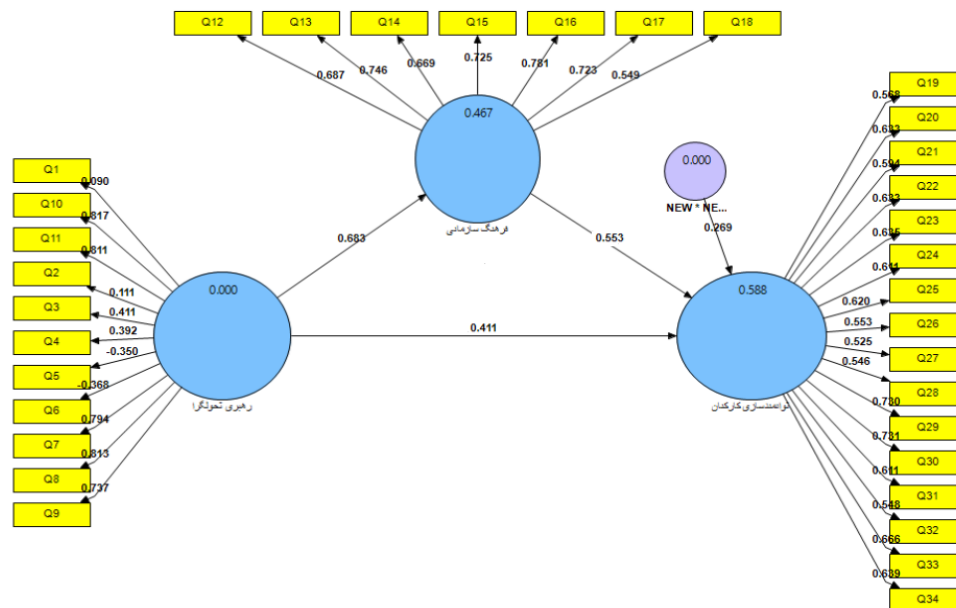
Diagram 2- The research model in the mode of estimating standard coefficients

The above diagram shows the model of confirmatory factor analysis and structural equations in the state of estimating standard coefficients. The variable of organizational communication is exogenous, the variables of communication satisfaction, job satisfaction and organizational commitment are endogenous. In this diagram, numbers or coefficients are divided into two categories. The first category is called "measurement equations", which are the relationships between hidden variables (ellipse) and obvious variables (rectangle). These

equations are called factor loads. The second category is "structural equations", which are relationships between hidden and hidden variables and used to test hypotheses. These coefficients are called path coefficients. Factor loads have been used to analyze construct of the questionnaire and to discover the constituent elements of each construct.
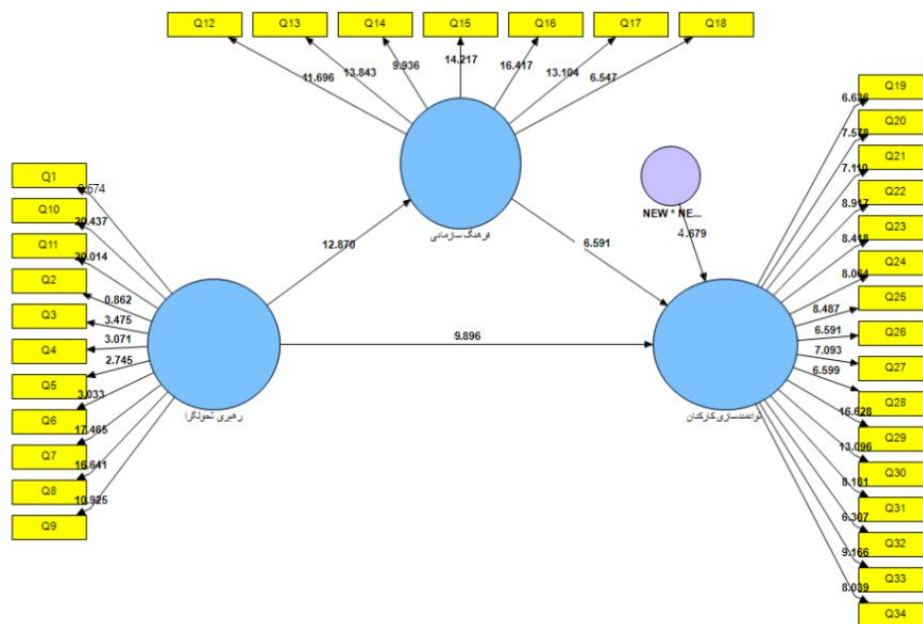
Diagram 3- Research model in absolute value of significance (| T-Value |)

The above diagram shows the model of confirmatory factor analysis and structural equations in absolute value of significance of coefficients (t-value). This model actually tests all measurement equations and structural equations using t statistic. According to this model, all factor loads and path coefficients are significant at 95% confidence level, if the value of their t statistic is greater than 1.96. As it is clear, all factor loads and path coefficients are significant and their t statistic is within the range of significance. The significant coefficients mentioned between the independent and dependent variables of the research have been used to confirm or reject hypotheses that all of them confirm the research hypotheses. According to the results of the factor coefficient table, all components have factor loads greater than 0.4 and are significant. Therefore, none of the questions of the questionnaire is eliminated and all questions have a decisive role in this research and the questionnaire has the necessary validity.

Convergent Validity and Internal Consistency

In order to measure convergent validity, we consider three units that are factor loads, average variance extracted and composite reliability or construct reliability. The average variance extracted is the use of a convergence scale among a set of observed items of a construct. In fact, a percentage of the variance described is among the items. This average variance extracted must be higher than 0.5 to confirm one of the criteria of convergent validity. Composite reliability must be 0.7 or higher, indicating the adequacy of internal consistency. Factor loads, as shown in the diagrams of the standard coefficients, are acceptable, and all factor loads have a coefficient higher than 0.4. To evaluate the convergence validity, the following values are calculated and, if the conditions in table (2) are met, we can claim that construct validity is established.

1. Construct Reliability (CR)
2. Average variance Extracted (AVE)
3. Maximum Shared Squared Variance (MSV)
4. Average Shared Squared Variance (ASV)

Table 5 - indicators of validity, reliability and fitting of the model

Hidden variables	AVE	CR	R²	Cronbach's alpha	$\sqrt{\overline{AVE}}$	$\sqrt{\overline{R^2}}$	GOF
Transformational leadership	0.812	0.920	0.511				
Empowerment	0.612	0.861	0.480		0.732	0.564	0.413
Organizational culture	0.773	0.940	0.702				

The table above shows the validity, reliability, and fitting of the model. Convergent validity has been used in this study in the sense that the indicators of each construct eventually provide a good separation in terms of measurements compared to other constructs of the model. In simple terms, each indicator measures only its own construct and their composition is such that all constructs are well separated from each other. Using the indicator of average variance extracted, it was determined that all the studied constructs had the average variance extracted higher than 0.5. The indicators of composite reliability (CR) and Cronbach's alpha have been used to test the reliability of the questionnaire. All of these coefficients are higher than 0.7, indicating the reliability of the measuring tool.

Indicator of goodness of fit of the model (GOF)

This indicator shows the compromise between quality of the structural model and the measured model and is equal to:

$$GOF = \sqrt{\overline{AVE}} \times \sqrt{\overline{R^2}}$$

(2)

Where, $\overline{AVE}$ and $\overline{R^2}$ are averages of AVE and R². The higher value of GOF indicator than 0.4 shows fit of the model. The value of the fitting indicator is 0.412 and is greater than 0.4, indicating the appropriate fitting of the model. Simply put, the data of this research has appropriate fitting to the factor structure of the research and the theoretical basis of the research, which indicates that the questions are consistent with the theoretical constructs.

Validation of structural models (response to hypotheses)

After validating the measurement models, it is time to examine the structural or internal model of the research. In this section, the structural model validation criteria are also given.

Table 6- the structural model validation criteria

Type of validation	Indicator	Interpretation of the indicator	Source
Model validation	Coefficient of Determination (R²)	The explanatory variance of an endogenous variable measures its total variance by exogenous variables. For this indicator, values greater than 0.670 are strong, greater than 0.333 are medium and less than 0.190 are weak.	Chin (1999) and Ringle (2005)
Model validation	Path Coefficients	The path coefficients between hidden variables must indicate the type of relationship between the two variables based on the algebraic sign, value and significance. The negativity of the coefficient, the inverse relationship and the positivity of the coefficient show direct relationship between the two variables.	Chin (1999)

Table 7- structural equation results for evaluating the research hypotheses

Research hypotheses	Beta	t	Status of hypothesis	Direction of relationship
Transformational leadership ⟶ empowerment of employees	0.411	9.869	Confirmed	+
Transformational leadership ⟶ organizational culture	0.683	12.870	Confirmed	+
Transformational leadership ⟶ organizational culture * empowerment of employees	0.269	4.679	Confirmed	+
Organizational culture ⟶ empowerment of employees	0.553	6.591	Confirmed	+

Based on the results obtained from the structural equation coefficients, the value of t for all parameters (according to the rule of 5% error in the domain of rejection of the null hypothesis for values out of the range 1.96 to -1.96 in each parameter of the model) was estimated out of the range. Therefore, it can be stated that the hypotheses of the researcher are confirmed with 99% confidence. The coefficient of determination also indicates that the independent variable explains what extent of the dependent variable changes.

According to table (7), the first hypothesis regarding the effect of transformational leadership on empowerment of employees is confirmed with respect to the value of the critical coefficient, t-value (9.869), which is in the range [-1.96,1.96]. Since the critical value is in the range [-2.58.2.58], this hypothesis is confirmed.

The second hypothesis regarding the effect of transformational leadership on organizational culture is confirmed with respect to the value of the critical coefficient, the t-value (12.870), which is in the range [-1.96,1.96]. Since the critical value is also in the range [-2.58,2.58], this hypothesis is accepted with a probability of 99%.

The third hypothesis regarding the effect of transformational leadership on empowerment of employees through the mediating role of organizational culture is confirmed with the respect to the value of the critical coefficient, the t-value (4.679), which is out of the range [-1.96,1.96]. Since the critical value is also in the range [-2.58,2.58], this hypothesis is confirmed.

The fourth hypothesis regarding the effect of organizational culture on empowerment of employees is confirmed with the respect to the value of the critical coefficient, the t-value (6.591), which is in the range [-1.96,1.96]. Since the critical value is also in the range [-2.58,2.58], this hypothesis is confirmed with a probability of 99%.

Discussion and Conclusion

The results obtained from the structural equation coefficients of the first hypothesis, the value of t (9.869) for this parameter (according to the rule of 5% error in the domain of the null hypothesis for values out of the range of -1.96 to 1. 1.96 for each parameter of the model) was estimated out of the range. Therefore, it can be stated that the hypothesis of the researcher is confirmed with 95% confidence. However, the value of effect of transformational leadership on is empowerment 0.411. Therefore, this hypothesis is confirmed, and it can be said that transformational leadership has a significant effect on empowerment of employees. This result is consistent with the results of Garcia - Morales et al. (2014), Den Hartog et al. (2013), Walumbwa (2013), Abdelrahman (2018), Andersen (2018) and Chang (2018).

In the inferential analysis of the second hypothesis, it can be admitted that the relationship of transformational leadership with organizational culture, with t of 12.870, is significant, however, the value of the effect of transformational leadership on organizational culture is 0.683. Therefore, this hypothesis is

confirmed. It can be said that transformational leadership has a significant effect on organizational culture. This result is consistent with the results of research by Mano et al. (2014) and Garcia and Morales (2008).

In the inferential analysis of the third hypothesis, one can admit that transformational leadership has relationship with empowerment of employees through organizational culture. However, the value of effect is 0.269, and with a probability of 95%, the researcher's claim, regarding "transformational leadership has relationship with empowerment of employees through organizational culture", is confirmed. As a result, one can state that organizational culture has a significant effect on empowerment of employees. This result is consistent with the results of Garcia and Morales (2008) and Huang et al., 2013, Walumbwa (2013) and Mohammad Shahid Khan (2018).

Considering the inferential analysis of the fourth hypothesis, it can be admitted that the relationship of organizational culture with empowerment, with t of 6.591, is significant. However, the value of relationship of organizational culture on empowerment is 0.553. Therefore, this hypothesis is confirmed like the three previous hypotheses. This result is consistent with the results of research by Huang et al., 2013, Steiger et al. (2014) and Zhang (2018).

Reference

1. Aarum Andersen, Jon. (2018) "Servant leadership and transformational leadership: from comparisons to farewells", Leadership & Organization developmentJournal, https://doi.org/10.1108/LODJ-01-2018-0053.
2. Abdelrahman Zuraik, Louise Kelly, (2018) "The role of CEO transformational leadership and innovation climate in exploration and exploitation", European Journal of Innovation Management, https://doi.org/10.1108/EJIM-10-2017-0142
3. Alarifi , s.(2011). The effects of transformational leadership on followers creativity and organizational innovation in public sector .brunel university west London : brunel business school – doctoral symposium.
4. Alazzaz Faisal , Andrew Whyte, (2015) "Linking employee empowerment with productivity in off-site construction", Engineering, Construction and Architectural Management, Vol. 22 Issue: 1, pp.21-37, https://doi.org/10.1108/ECAM-09-2013-0083
5. Baird Kevin , Sophia Su, Rahat Munir, (2018) "The relationship between the enabling use of controls, employee empowerment, and performance", Personnel Review, Vol. 47 Issue: 1, pp.257-274, https://doi.org/10.1108/PR-12-2016-0324
6. Binti, Ahmad (2017). The Relationship between Transformational leadership characteristic and succession planning program in The Malaysian public sector. International Journal of Asian Social Science.7(1).
7. Blanchard K. H. ,Carlos J.P., Randolph A.;(2009) Empowerment take more than one minute; Barrett-Koehler.Sanfrancisco Publishers. Inc.
8. Braun S., Peus C., Weisweiler S., & Frey D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. The Leadership Quarterly, 24, 1: 270–283.
9. Bushra, F., Usman, A. and Naveed, A. (2011), "Effect of transformational leadership on employees' job satisfaction and organizational commitment in banking sector of Lahore (Pakistan)", International Journal of Business and Social Sciences, Vol. 2 No. 18, pp. 261-267.
10. Chang Yi-Ying , Wei-Chung Chao, Che-Yuan Chang, Hui-Ru Chi, (2018) "Transformational leadership influence on unit performance: Cross-level moderated mediation evidence", Leadership & Organization Development Journal, Vol. 39 Issue: 4, pp.554-571, https://doi.org/10.1108/LODJ-08-2017-0224

11. Chang, L-C. Shih, C-H. Shu-M. (2013) The Mediating Role of Psychological Empowerment on Job Satisfaction and Organizational Commitment for School Health Nurses: A Cross-Sectional Questionnaire Survey,, International Journal of Nursing Studies, 47(4):427-433.

12. Den Hartog, D. N., & Dickson, M. (2013). Leadership and culture. In D. Day & J. Antonakis (Ed.), The nature of leadership (pp. 393-436). Thousand Oaks, CA: Sage Publications Inc.

13. Duarte, C. J. P., Cavazotte, F. S. N. de, & Gobbo, A. M. C. (2013, setembro). Líderes autênticos, trabalho seguro: a influência da liderança sobre o desempenho em segurança. Anais do Encontro Nacional da Associação Nacional de Pós-Graduação e Pesquisa em Administração, Rio de Janeiro, RJ, Brasil, 36.

14. Fonseca, A. M., Porto, J., & Barroso, A. C. (2014). O efeito de valores pessoais nas atitudes perante estilos de liderança. Revista de Administração Mackenzie, 13(3), 122-149. doi: 10.1590/S1678-69712012000300007

15. Garcia-Morales, V. J., Jimenez-Barrionuevo, M. M., & Gutierrez-Gutierrez, L. (2014). Transformational Leadership Influence on Organizational Performance through Organizational Learning and Innovation. Journal of Business Research, 65(7), 1040-1050.

16. Huang, Q.; Liu, H.; Zhong, X. (2013). The impact of transitive memory systems on team performance. Information Technology & People, 26(2), 191 ̊ 212.

17. Khan Muhammad Shahid, Ilham Sentosa, Faryal Salman, (2018) "Exploring the role of transformational leadership in human capital effectiveness: Empirical evidence from the Malaysian healthcare sector", World Journal of Entrepreneurship, Management and Sustainable Development, Vol. 14 Issue: 2, pp.191-204, https://doi.org/10.1108/WJEMSD-10-2017-0075

18. Kim Peter Beomcheol , Gyumin Lee, Jichul Jang, (2017) "Employee empowerment and its contextual determinants and outcome for service workers: A cross-national study", Management Decision, Vol. 55 Issue: 5, pp.1022-1041, https://doi.org/10.1108/MD-02-2016-0089

19. Kumar ,Pradhan Madhusmita Panda Lalatendu Kesari Jena , (2017)," Transformational Leadership and Psychological Empowerment: Mediating Effect of Organizational Culture in Indian Retail Industry ", Journal of Enterprise Information Management, Vol. 30 Iss 1 pp

20. Lawson, Karen (2006). 4 Keys to Employee Empowerment. Lawson Consulting Group, Inc. . Journal of European Industrial Training, 14(5). 21-27.

21. Mano, M. B. T.; Thoyib, A.; Maskie, G.; Djumahir, A. (2014). Effect of information technology on leader innovation and its impact on leader performance. Australian Journal of Basic and Applied Sciences, 8(18), 666 ̊671.

22. Moasa, Horia (2013) Struggling for Organizational Identity: Employee Voice and Silence. Lumen International Conference Logos Universality Mentality Education Novelty.

23. Naqshbandi M Muzamil , Sharan Kaur, Rashmi Sehgal, Indra Devi Subramaniam, (2015) "Organizational culture profile of Malaysian high-tech industries", Asia-Pacific Journal of Business Administration, Vol. 7 Issue: 1, pp.2-19, https://doi.org/10.1108/APJBA-08-2013-0088

24. Ralph Williams Jr, Deana M. Raffo, Leigh Anne Clark, (2018) "Charisma as an attribute of transformational leaders: what about credibility?", Journal of Management Development, Vol. 37 Issue: 6, pp.512-524, https://doi.org/10.1108/JMD-03-2018-0088

25. Rita men Linjuan , Don W. Stacks, (2013) "The impact of leadership style and employee empowerment on perceived organizational reputation", Journal of Communication Management, Vol. 17 Issue: 2, pp.171-192, https://doi.org/10.1108/13632541311318765

26. Rothermel R., & LaMarsh J. (2013). Managing change through employee empowerment. Global Business and Organizational Excellence, 31(2): 17-23.

27. Schein. Edgar H(1992) Organizational Culture and Leadership,. Jossey-Bass Publishers, San Francisco, CA. 418 pages.

28. Spreitzer, G.M., & Mishra, A. (1996). Survivor responsesto downsizing: the mitigating effects of trust andempowerment. Available from Department of Managementand Organization, University of Southern California,Marshall School of Business at http://www. usc. edu/dept/LAS/SC2/pdf/spreitzer. Pdf Accessed: 24th April 2009

29. Stieger, J.; Hammou, K. A.; Galib, M. H. (2014). □An examination of the influence of organizational structure types & management levels on knowledge management practices in organizations□. Journal of Business & Management, 9(6), 43-57.

30. Ston A .Gregory,Russellf .Robert,Patterson Kathleen.(2004). Leadership studies, Difining servant leadership : pp 1-15.

31. Sun L.Y., Zhang Z.J., & Xiong C.Z. (2013). Empowerment and creativity: A cross-level investigation. The Leadership Quarterly, 23: 55–65.

32. Thomas, Kenneth W. & A. Betty Velthouse (1990), Cognitive Element of Emprowment: An Interpretive Model of Intrinsic Task Motivation, academy of Management Journal

33. Walumbwa, Fild and Others (2013). Ethical leadership and group in role performance: the mediating role of group conscientiousness and group voice. The leadership Quarterly. Vol.23.

34. Whetten, David. S & Cameron, Kim, (1995), "Developing Management skills", 3 th edition, New York, NY: Hapercollins publishers.

35. Zhang Zuopeng , (2018) "Organizational culture and knowledge sharing: design of incentives and business processes", Business Process Management Journal, Vol. 24 Issue: 2, pp.384-399, https://doi.org/10.1108/BPMJ-08-2015-0119.