Effect of Transformational Leadership on the Creativity of Employees: An Empirical Investigation

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Abstract—Considering the accelerated pace of developments and advancements in the current era, organizations which have innovative, change-oriented managers and leaders with a long-term vision are more likely to survive the competitive environment. Undoubtedly, leadership behavior and style considering creativity and innovativeness of employees within the organization as an incentive of organizational change considerably influence employee needs and knowledge. The purpose of this study is to determine the effect of transformational leadership involving idealized influence, intellectual stimulation, inspirational motivation and individualized considerations on organizational creativity of employees in the Maskan Bank in Tehran. This study is an applied research using descriptive data analysis. Data is collected by questionnaires. Correlation is used to analyze the hypotheses. The studied population includes all managers and employees of the Maskan Bank in Tehran Province. Using Cochrán formula, 127 employees are selected as a sample. Validity and reliability of the questionnaire are calculated by using expert opinion and Cronbach Alpha. The normal distribution of variables is determined by using Kolmogorov-Smirnov test and confirmatory factor analysis; hypotheses are tested by using linear structured relationships. All hypotheses are confirmed; that is, transformational leadership as a whole and each of its dimensions, such as idealized influence, intellectual stimulation, individualized consideration and inspirational motivation have a significant and positive effect on creativity of Maskan Bank employees.

Keywords—Transformational Leadership; creativity; idealized influence; intellectual stimulation; individualized consideration; motivational inspiration

I. INTRODUCTION

Modern organizations are facing changing dynamic environments; in these circumstances, those organizations which are consistent with developments in modern society, predict future changes and direct these changes for favorable developments for a better future are more likely to be successful and efficient [1]. Continuous change within organizations requires a change in individuals who underlie a business [2]. Undoubtedly, leadership behavior and style considering the creativity of employees within the organization as an incentive of organizational change considerably influence employee needs and knowledge. Leadership has been emphasized in change management process by the fact that change, by definition, needs a new system to institutionalize new approaches [3]. In fact, leadership in organizations plays an important role in shaping creativity, attitude and responsiveness of employees to organizational change and acceptance of innovations. Therefore, individualized consideration of attitude, creativity and organizational changes, which implies to the degree of attention and support to each subordinate, is an important dimension of transformational leadership. Bank is a competitive financial organization in which managers particularly focus on surpassing the competitors. Therefore, identification and deployment of transformational leaders in the banking system highly motivates employees to achieve organizational goals. Considering the important role of transformational leadership on organizational creativity, this study determines the effect of transformational leadership (idealized influence, intellectual stimulation, inspirational motivation and individualized consideration) on organizational creativity of Maskan Bank employees in Tehran.

II. THEORETICAL BACKGROUND AND LITERATURE REVIEW

Quiescent leadership cannot survive for long. Obviously, traditional leadership will not survive in the Third Millennium. The world will need transformational leaders. Transformational leadership allows companies to compete in a turbulent and unpredictable environment and improve their performance. To transform the organization into a creative and innovative organization, proper local procedures, strategies and models are required to accelerate environmental changes; organizations are required to adapt to these changes to survive in this competitive environment. Organizations require creativity and innovation for this reconstruction. Leadership style is one of the factors effective on creativity of employees, directly and indirectly. In general, recent studies on leadership theories can be categorized in six main schools including leadership qualities, behavior or leadership style, contingency, leadership competencies, emotional intelligence and charismatic or inspirational leadership. There are many definitions of leadership. Some describe leadership as an influence on people to perform their duties willingly. Others define leadership as an influence on subordinates [4]. In another definition, leadership is the process of guidance and influence on activities of the
group and members of the organization [5]. There is a consensus that leadership is an effective process which helps groups and individuals approach to set goals [6]. Leadership style refers to how the leader uses his power and influence. Power bases are position and personal [7]. Transformational leadership transforms the society through words and actions and considerably influences its followers [8]. With the respect and trust of followers or by expressing a vision beyond the current mission, transformational leadership informs personnel of the goals, directs people from individual thinking to group thinking and motivates them to make efforts for the public interest [9]. The main behaviors which characterize transformational leadership include idealized influence, inspirational motivation, intellectual stimulation and individualized considerations. The first dimension of transformational leadership is charisma or idealized influence, describing the leaders who act as strong models. They are deeply revered by followers, they are reliable and they direct followers to fulfill the vision and mission [10].

Inspirational motivation is to motivate and raise the motivation of followers by appealing to their emotions. Inspirational motivation emphasizes on emotion and inner motivations rather than daily interactions of the leader and followers. Intellectual stimulation is to stimulate followers by the leadership to discover new solutions and new thinking for solving organizational problems by the followers. Individualized consideration is to consider individual differences of followers, communicate with them and stimulate them by assigning responsibilities for learning and experiencing. People are supported by leaders and leaders demonstrate concerns for their personal feelings and needs [8]. Another variable which needs to be addressed is creativity. Many definitions have been proposed for creativity; some consider creativity and innovation equivalent to adaptation and change. Some others consider creativity and innovation as something beyond change and adaptation [11, 12]. Creativity refers to new valuable achievements based on an idea which exists in all people more or less [13]. Creative organizations share some qualities including complete and intensive competition, culture, access to management, respect for people, community service, teamwork, permanent and long-term relationships of employees with these organizations and change acceptance of managers [14]. Creativity involves following procedures: 1) attraction: the first step is to attract to a subject which often requires new data; 2) inspiration: this phase happens very fast and it is difficult to consider; that is, one is unaware of the change before it happens, and in some cases, it is associated with an idea or solution after investigations with the raw material; 3) experiment: the formed idea is tested to determine whether it is beneficial and productive; 4) refinement: practicality of the idea is evaluated (the third and fourth phases are time-consuming, as Edison said ‘Genius is one percent inspiration and ninety-nine percent perspiration’); 5) sales: the final phase of creativity is sales which can neutralize most creativities; this phase must occur first within the organization; authorized people should buy or adopt the idea, commit to it and present to outsider customers. Transformational leadership was introduced in the leadership literature by Burns as a new leadership model which pays more attention to the start of changes among subordinates and transforms personal values and organizational culture of subordinates [15].

Transformational leadership has been studied by many researchers under different topics [16-19]. Generally, these studies have described behaviors and characteristics of transformational leaders as warmth and empathy, need for power, eloquence and good articulation skills, intelligence and caring for others. These leaders are able to motivate followers, inspire them, gain commitment of their followers and change beliefs, attitudes and goals of people and organizational norms. Transformational leaders let their subordinates to feel that they are seen as human beings and help people see issues in a new way. In [20], the authors evaluated the role of transformational leadership on tendency for organizational creativity. Their results show that creativity, as a competitive advantage, is one of the most important factors of organizational success. In this regard, employee creativity can emerge as an important competitive advantage in the light of transformational leadership. The main objective of this study is to examine the relationship between transformational leadership and creativity of employees (teachers). In [21], the authors experimentally studied the effects of transactional and transformational leaderships on creativity of groups. In this study, participants in both real and nominal groups performed a brainstorming task. Evaluation of their performance in terms of eloquence and fluency and flexibility showed that nominal participants in transformational leadership outperformed their real peers in transactional leadership.

III. MATERIALS AND METHODS

In general, this study determines whether dimensions of transformational leadership including: 1) idealized influence; 2) motivational inspiration; 3) intellectual stimulation and 4) individualized considerations have a significant effect on organizational creativity. Hence, the conceptual model and hypotheses are as follows.

![Conceptual model](image-url)

Fig. 1. Conceptual model

Hypotheses are formed based on the conceptual model, as follows:
Hypothesis 1: transformational leadership has a significant positive effect on creativity of Maskan Bank employees.

Hypothesis 1.1: idealized influence has a significant positive effect on creativity of Maskan Bank employees.

Hypothesis 1.2: intellectual stimulation has a significant positive effect on creativity of Maskan Bank employees.

Hypothesis 1.3: inspirational motivation has a significant positive effect on creativity of Maskan Bank employees.

Hypothesis 1.4: individualized considerations has a significant positive effect on creativity of Maskan Bank employees.

This study is an applied research using descriptive data analysis. Data is collected by questionnaires. Correlation is used to analyze hypotheses. Archival studies are used to develop the theoretical model and extract literature. To collect data, field studies (questionnaire) are used in order to test the hypotheses. The questionnaire used is a 5-point Likert scale based on which hypotheses are tested. To ensure validity of the questionnaire, qualitative methods, including expertise of professors and theories of experts, are used and similar questionnaires, articles and textbooks are reviewed to make necessary modifications in the questionnaire. To determine reliability of the questionnaire, Cronbach's alpha is calculated by the SPSS software. The studied population includes 500 managers and employees of Maskan Bank in Tehran. The Cochran formula is used to determine the sample size (217); the samples are selected by simple random sampling. Descriptive and analytic statistics (modeling and SEM) are used to analyze the data. Normal distribution of variables is determined by using Kolmogorov-Smirnov test. The results of this test are listed in Table II. According to Table II, test distribution is normal. As the results show, sig>0.05. Based on the central limit theorem, SPSS confirms normal distribution of variables; thus, the null hypothesis, which implies that variables are normal, is confirmed.

### TABLE I. CONVERGENT VALIDITY AND RELIABILITY

<table>
<thead>
<tr>
<th>Latent variables</th>
<th>Combined reliability (CR&gt; 0.7)</th>
<th>Average variance extracted (AVE&gt; 0.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized influence</td>
<td>0.941</td>
<td>0.801</td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>0.898</td>
<td>0.689</td>
</tr>
<tr>
<td>Individualized considerations</td>
<td>0.853</td>
<td>0.660</td>
</tr>
<tr>
<td>Inspirational motivation</td>
<td>0.811</td>
<td>0.519</td>
</tr>
<tr>
<td>Creativity</td>
<td>0.785</td>
<td>0.620</td>
</tr>
</tbody>
</table>

### IV. RESULTS

#### A. Normal distribution of variables

One way to determine normal distribution of variables is to use Kolmogorov-Smirnov test. The results of this test are listed in Table II. According to Table II, test distribution is normal. As the results show, sig>0.05. Based on the central limit theorem, SPSS confirms normal distribution of variables; thus, the null hypothesis, which implies that variables are normal, is confirmed.

### B. Measurement Model for Dimensions of Transformational Leadership

Figure 2 shows the measurement model of the independent variable (transformational leadership) with standardized estimates. As the figure shows, membership of all the factors examined in this variable is confirmed. Figure 2 shows factor loadings with standard estimate of the effect of each variable in explaining variance of the variable. In other words, factor loading indicates correlation of each observer variable (question) with the latent variable. For example, factor loading of the idealized influence is 0.76 in the first question. Measurement model of transformational leadership is calculated by using significant factor analysis. Given that sig <-1.96 or sig >1.96, all the coefficients obtained are significant.

![Fig. 2. Measurement model of transformational leadership using standard CFA](image)

### C. Measurement Model for Employee Creativity

Figure 3 shows measurement model of the dependent variable (employee creativity) with standard estimate. As the figure shows, membership of all the factors examined in this variable is confirmed. Figure 3 shows factor loadings with standard estimate of the effect of each variable in explaining variance of the variable. For example, factor loading of employee creativity is 0.37 in the first question. Measurement model of employee creativity is calculated by using significant factor analysis. Given that sig <-1.96 or sig >1.96, all the coefficients obtained are significant.
D. Hypothesis Testing

Structural analysis of hypothesis 1 shown in Figures 4 and 5 indicates that transformational leadership has a significant positive effect on creativity of Maskan Bank employees (sig = 5.43).

E. Hypothesis Testing by Linear Structured Relations

Once the measurement models are determined, hypotheses are tested by structural equation modeling (SEM) to evaluate the conceptual model and ensure the presence or absence of a causal relationship between variables and fit of the observed data to the conceptual model. The results are reflected in Figures 6 and 7. Testing hypotheses by SEM, the software output indicate that the structural model is well fitted for testing hypotheses. Moreover, $\chi^2/df < 3$ which is optimal; RMSEA = 0.065 which indicates that the structural model is well fitted. In other words, the observed data match the conceptual model to a large extent. The calculated NFI, IFI, RFI, NNFI and CFI are higher than 91%, which indicate high fit of the model.
Fit indices confirm the fit of the model.

There is a positive relationship between idealized influence and employee creativity. This is consistent with [25]. Therefore, one unit of variation in idealized influence will be followed by 0.67 unit of variation in employee creativity. This is consistent with [25]. Therefore, idealized influence on employee creativity is equal to 0.67, it can be concluded that one unit of variation in idealized influence has a significant positive effect on creativity of Maskan Bank employees. According to results, sig=9.51; since sig>1.96, hypothesis 1.1 is confirmed. Furthermore, since sig is positive, this effect is direct and one unit of variation in intellectual stimulation will be followed by 0.83 unit of variation in employee creativity. This is consistent with [20, 26]. Their results show that employee creativity, as an important competitive advantage, can emerge in the light of intellectual stimulation. This is also consistent with [21]. The third sub-hypothesis claims that individualized consideration has a significant positive effect on creativity of Maskan Bank employees. According to results, sig=3.40; since sig>1.96, hypothesis 1.3 is confirmed. Furthermore, since sig is positive, this effect is direct and one unit of variation in individualized consideration will be followed by 0.90 unit of variation in employee creativity. This is consistent with [25]. Their results show that the significant effect of individualized considerations on employee creativity can provide a competitive advantage for the organization and ultimately improve organizational performance. The fourth sub-hypothesis claims that inspirational motivation has a significant positive effect on creativity of Maskan Bank employees. According to results, sig=2.14; since sig>1.96, hypothesis 1.4 is confirmed and one unit of variation in inspirational motivation will be followed by 0.83 unit of variation in employee creativity. This is consistent with [20, 26]. Their results indicate significant effect of inspirational motivation on employee creativity. Finally, transformational leadership can predict employee creativity. This is also consistent with [27].

### F. Results of Statistical Analysis

Results of LISREL (Figure 8) show that $\chi^2/df < 3$ and other fit indices confirm the fit of the model.

![Graph](image)

**Chi-Square=993.17, df=209, P-value=0.00004, RMSEA=0.038**

**Fig. 8.** Output of the conceptual model testing

### V. DISCUSSION

The main hypothesis of this study claims that transformational leadership has a significant positive effect on the creativity of Maskan Bank employees. As statistical analysis shows, sig = 5.43; since sig > 1.96, hypothesis 1 is confirmed. This is consistent with [20, 24]. They showed a positive relationship between transformational leadership and employee creativity, and strength of this relationship is subject to coordination with the leader and existence of an innovative atmosphere. The first sub-hypothesis claims that idealized influence has a significant positive effect on creativity of Maskan Bank employees. According to results, sig=8.10; since sig>1.96, hypothesis 1.1 is confirmed. Furthermore, since sig is positive, this effect is direct. As the size of the effect of idealized influence on employee creativity is equal to 0.67, it can be concluded that one unit of variation in idealized influence will be followed by 0.67 unit of variation in employee creativity. This is consistent with [25]. Therefore, there is a positive relationship between idealized influence and creativity of employees. This relationship is stronger when the leaders are supportive of employees and support their tasks and work.

The second sub-hypothesis claims that intellectual stimulation has a significant positive effect on creativity of Maskan Bank employees. According to results, sig=9.51; since sig>1.96, hypothesis 1.2 is confirmed. Furthermore, since sig is positive, this effect is direct and one unit of variation in intellectual stimulation will be followed by 0.83 unit of variation in employee creativity. This is consistent with [20, 26]. Their results show that employee creativity, as an important competitive advantage, can emerge in the light of intellectual stimulation. This is also consistent with [21].

### VI. CONCLUSIONS AND REMARKS

Managers are recommended to utilize the characteristics of transformational leadership and provide employees with the opportunity to present their suggestions, ideas and new solutions for new banking services, new markets, and increasing sales and motivate creativity among organizational members by encouraging ideas of creative people. In addition, leaders can create an environment to facilitate production and implementation of creative knowledge and encourage learning and creative ideas. Planning is also recommended to adapt the tools needed for expected processes of transformational leadership. To play a more effective role, transformational leadership should improve the infrastructures required for creative processes:

- by emphasizing vision and mission and empowering people, management should encourage employees to act based on information and support changes for employee creativity.
- by creating vision, leaders let followers to commit to the goals, establish relationships between employees and let them fulfill their deepest demands and achieve their goals.
- by establishing trust and respect, leaders should encourage followers to learn internal and external information and consider moral consequences of their creative decisions.

<table>
<thead>
<tr>
<th>Fit index</th>
<th>Optimal value</th>
<th>Model value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2/df$</td>
<td>&lt; 3.00</td>
<td>1.36</td>
<td>Well fitted</td>
</tr>
<tr>
<td>GFI (Goodness of Fit Index)</td>
<td>&gt; 0.90</td>
<td>0.95</td>
<td>Well fitted</td>
</tr>
<tr>
<td>AGFI (Adjusted Goodness of Fit Index)</td>
<td>&gt; 0.90</td>
<td>0.91</td>
<td>Well fitted</td>
</tr>
<tr>
<td>RMFI (Root Mean square Residual)</td>
<td>&gt; 0.90</td>
<td>0.22</td>
<td>Well fitted</td>
</tr>
<tr>
<td>NFI (Normed Fit Index)</td>
<td>&gt; 0.90</td>
<td>0.91</td>
<td>Well fitted</td>
</tr>
<tr>
<td>NNFI (Non-Normed Fit Index)</td>
<td>&gt; 0.90</td>
<td>0.93</td>
<td>Well fitted</td>
</tr>
<tr>
<td>IFI (Incremental Fit Index)</td>
<td>&gt; 0.90</td>
<td>0.94</td>
<td>Well fitted</td>
</tr>
<tr>
<td>CFI (Comparative Fit Index)</td>
<td>&gt; 0.90</td>
<td>0.94</td>
<td>Well fitted</td>
</tr>
<tr>
<td>RMSEA (Root Mean Square Error of Approximation)</td>
<td>&lt; 0.08</td>
<td>0.038</td>
<td>Well fitted</td>
</tr>
</tbody>
</table>

**TABLE III. FIT INDICES OF THE CONCEPTUAL MODEL**
Bank managers should use the tools and technologies required for employee creativity as an opportunity to improve their capabilities (however, this requires modern technologies); moreover, a clear vision of how to encourage creative ideas among employees can also develop effective leadership and knowledge management within the organization. It is recommended to encourage new solutions by rewarding fresh and innovative ideas. Moreover, delegation of authority and empowerment of employees can be effective. Employees should be trained to evaluate organizational problems from different angles; for this purpose, emphasis is required on creative motivation techniques, such as brainstorming. Finally, intellectual stimulation of employees can lead to creativity and innovative solutions. It is recommended to consider needs of employees and provide opportunities for their promotion to higher levels of personal development by determining the level of people to participate in training courses. It is also recommended to use proper techniques and practices to motivate employees to participate in these courses. It is recommended to prepare a workshop for implementing scientific knowledge of employees and provide the tools required to implement creative ideas. A clear vision of how to transfer and exchange creative ideas among employees can develop effective leadership and knowledge management within the organization. Thus, managers can communicate with employees to understand and meet their needs in order to develop their creative capabilities and increase commitment and effectiveness of employees. Management should be aware of the Pygmalion effect in the sense that high expectations and assignment of challenging responsibilities to employees will improve their performance. It is essential to involve employees in developing the future vision, mission and strategies in order to attract more participation in achieving the goals and encourage creative and optimistic thinking about the future.

In addition to the above, managers can consider the following suggestions to improve the effect of employee creativity on organizational performance: Management should provide an environment in which people accept change. Members of the organization must believe that this change will be beneficial to them and the organization. Usually, this belief appears when members participate in decision making. Management should promote new beliefs. Managers should show respect for new ideas. For this purpose, management should show interest in suggestions of subordinates and implement promising ideas. Management should allow members to interact. An open creative atmosphere is promoted when people and members of different groups are allowed to communicate with each other more closely. This interaction will lead to the exchange of useful information, feedback and new perspectives about organizational problems between members.

Transformational leadership can influence employees and present new methods to achieve different tasks; this leads to an increase in creativity and innovation. Management should set specific goals and allow members to achieve them. Members require purpose and direction to show their creativity. Management should eliminate limitations in creativity of members. Management also should control the time and money spent on new ideas. Management should value creative and hard-working people. Creative people have a very strong motivation. Hence, they never stop trying and working hard. However, they are also human and should be encouraged in this way and be rewarded properly for their good work. By encouraging creative people, management should appreciate their work.

REFERENCES


