Investigating the Relationship between Transformational Leadership and Organizational Innovation in Payame Noor University of Tehran Province

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ABSTRACT

The purpose of the present study is to investigate the relationship between transformational leadership and organizational innovation in Payame Noor University of Tehran. In order to collect transformational leadership data Bass and Avolio questionnaire was used and to collect organizational innovation data a researcher-made questionnaire was used. The reliability of researcher-made questionnaire was calculated to be 0.90% and 86% respectively by Cronbach's alpha coefficient. To analyze the data, Pearson correlation test and stepwise regression were used. The results of Pearson correlation test indicated that there is a positive and significant relationship between transformational leadership and all its dimensions with organizational innovation. The results of structural equation modeling have been collected based on 231 questionnaires and indicate a relationship between transformational leadership and Organizational Innovation. Finally, the results of the research will be discussed and some recommendations will be made to improve the innovation capability of society organizations.

Introduction

In the contemporary era, organizations are rapidly encountering dynamic and changing environments. Therefore, in order to survive and stay in the pit of competition, they have to adapt themselves to changes. An organization will be successful that can coordinate with the changes, can predict future changes, can foresee the future so as to make the required and desired changes and accordingly make a better and more successful future perspective, and can lead these changes to make a better future (Mirkamali and Choopani, 2011). Therefore, the organizations need a specific leadership to create changes and innovations. Among the different leadership styles (transformative, serving, collaborative, charismatic, and authoritarian), transformational and serving leadership has attracted the attention of researchers and scholars. According to Burns transformational leadership leads the people to modify themselves. These leaders motivate their subordinates to do their best. Bass defines transformational leader as a person that makes positive relationship with his subordinates so as to enhance the performance of the staff and the organization, and encourages them to go beyond personal needs and work in line with the group's and organization's benefit.

Transformational Leadership

Transformational leadership was first used by Downton in 1973; however, this term was relatively unknown until used by Burns in the Classics era. Transformational leadership theory was first used by Burns (1978) to distinguish between those leaders that have strong and motivational relationship with their subordinated, and those who are widely focused on exchanging and interacting to produce results. Congo specified nine common components in the main theories of transformational and Charismatic leadership.

The full range of leadership introduces four elements of transformational leadership:

A. Individualized Consideration: the degree to which the leader attends to each follower's needs, acts as a mentor or coach to the follower and listens to the follower's concerns and needs. The leader gives empathy and support, keeps communication open and places challenges before the followers. This also encompasses the need for respect and celebrates the individual contribution that each follower can make to the team. The followers have a will and aspirations for self development and have intrinsic motivation for their tasks.

B. Intellectual Stimulation: The degree, to which the leader challenges assumptions, takes risks and solicits followers' ideas. Leaders with this style stimulate and encourage creativity in their followers. They nurture and develop people who think independently. For such a leader, learning is a value and unexpected situations are seen as opportunities to learn. The followers ask questions, think deeply about things and figure out better ways to execute their tasks.

C. Inspirational Motivation: the degree to which the leader articulates a vision that is appealing and inspiring to followers. Leaders with inspirational motivation challenge followers with high standards, communicate optimism about future goals, and provide meaning for the task at hand. Followers need to have a strong sense of purpose if they are to be motivated to act. Purpose and meaning provide the energy that drives a group forward. The visionary aspects of leadership are supported by communication skills that make the vision understandable, precise, powerful and engaging.

The followers are willing to invest more effort in their tasks; they are encouraged and optimistic about the future and believe in their abilities.

D. Idealized Influence: Provides a role model for high ethical behavior, instills pride, gains respect and trust. As a development tool, transformational leadership has spread already in all sectors of western societies, including governmental organizations.

Transformational Leadership is primarily about the intangibles required to motivate others in the organization to make changes that optimize their performance. It is holistic and relies on stimulating the intrinsic motivations of the followers. As such, transformational leadership requires an uncommon balance of diverse skills, knowledge, and experience that relatively few people have. A transformational leader must: Create and communicate a compelling vision for the future that inspires large numbers of people to function at higher levels than previously imagined; Hire a team that has just the right combination of skills and knowledge; Manage this team with a delicate balance between drive and support; Continue to achieve transactional excellence while the transformation is in process (Seidman & Mc Cauley, 2011).

Prospect/outlook:

Successful leaders determine some clear goals that the organizations can achieve in the future. The process of developing a vision involves the active investigation of weaknesses of status quo and finding things that the subordinates hope and desire to achieve. Perhaps the leaders are not the main source of vision, but have a major role in developing and expressing it for the subordinates.

Inspiring: successful leaders encourage yearning and optimism to achieve common goals, and make the subordinated aware of the importance and value of these goals.

Role modeling:

Successful leaders are determined and resolute in their behaviors and show high standards of ethical and spiritual behaviors. The followers are known by such leaders and want to compete with them.

Mental encouragement:

Successful leaders encourage the followers to question the assumptions, reconstruct the problem, and seek new approaches. They also motivate the followers to show and solve the organizational and group issues and problems. Here creativity is also encouraged.

Meaning production:

Successful leaders involve the followers in changing the meaning of success and organizational events. They help the followers to feel the new challenges and complicated issues.

Paying attention to higher level needs:

Successful leaders emphasis on the internal rewards in the work; but do not pay much attention to its external aspects. They also emphasis on the significant, ethical and brave aspects of the work, they pay a special heed to the needs of each individual subordinate and provide the ground and enough support for their learning and prosperity.

Empowerment:

The relationship between the leaders and the followers is a mutual one. Before using controlling strategies to manage the followers, these leaders develop the followers' capabilities to make right decisions and take the right actions so as to facilitate the fulfillment of collective objectives.

High expectation: Successful leaders challenge the followers to meet the high standers of performance and to try to achieve the ideal goals. They dedicate themselves to these high expectations and trust the individuals' and groups' abilities in meeting these expectations.

Developing collective personality:

Successful leaders encourage the followers to overlook the personal interest for the benefit and interest of the group. They link personal concepts of followers to collective objectives and visions; such that organizational activities are not separate from personal achievements (Mac cavly, 2004). In novel leadership school which began in the 1990s, transformational model suggested by Bass, challenged organizations that were located in a seriously changing and volatile business situation. But, this model intended to divide leader/manager. This division led to more suspicion in the distinction between leader and manager. Here this difference is related to beginning and implementing changes in an organization. In fact, the followers of this school claim that leadership should only be attended in the changing and transforming area (Higges, 2003). Transformational leaders are those who have a deep and significant influence on their followers, those who inspire and lead their followers toward specific goals and objectives through determining the roles, requirements and duties for each follower.

Organizational innovation:

Organizational creation is fundamental to the process of innovation (Van de Van et al 1999). Innovation constitutes part of the system that produces it. The system is itself 'organization' or 'organizing', to put it in Weick's (1979) term. The ability of an organization to innovate is a pre-condition for the successful utilization of inventive resources and new technologies. Conversely, the introduction of new technology often presents complex opportunities and challenges for organizations, leading to changes in managerial practices and the emergence of new organizational forms. Organizational and technological innovations are intertwined.

Schumpeter (1950) saw organizational changes, alongside new products and processes, as well as new markets as factors of 'creative destruction'. In a general sense, the term 'organizational innovation' refers to the creation or adoption of an idea or behavior new to the organization (Daft 1978; Damanpour and Evan 1984; Damanpour 1996). The existing literature on organizational innovation is indeed very diverse and not well integrated into a coherent theoretical framework. The phenomenon of 'organizational innovation' is subject to different interpretations within the different strands of literature. The literature can be broadly classified into three different streams, each with a different focus and a set of different questions which it addresses.

Conventional research on organizational innovativeness has explored the determinants of an organization's propensity to innovate. Although researchers have analysed the influence of individual, organizational and environmental variables (Kimberley and Evanisko 1981; Baldridge and Burnham 1975), most of the research has focused on organizational structure (Wolfe 1994). Within the field of organizational design theories, there has been a long tradition of investigating the links between environment, structures and organizational performance. Several studies have shown how certain organizational structures facilitate the creation of new products and processes, especially in relation to fast changing environments. The work of micro-economists in the field of strategy also emphasizes the superiority of certain

organizational forms within particular types of business strategies and product markets (Teece 1998).

Theoretically, research on organizational innovation opens new perspectives on a number of interesting issues that have surfaced recently, including the issues of societal evolution and institutional change, the dynamics of knowledge societies (Hage & Powers 1992), and the integration of macro and micro levels of analysis. Beyond sociology, organizational innovation can make important contributions to several important arenas of new research in economics. The most obvious one is research on national systems of innovation (Lundvall 1992, Nelson 1993), but it is equally relevant to endogenous theories of economic growth (Romer 1990, Solow 1992)more generally.

With the ever-increasing growth of transformations in the contemporary world, the process of continuous transformation is one of the major trends of human life. Hence, companies and organizations that want to create or maintain competitive advantage have to be flexible and accept changes. In such an era, innovation has become the main backbone of organizations. The nature of the global economy has changed with the acceleration of innovation. Innovation has made changes possible through the rapid expansion of technology, shorter life cycles for products and increasing the development of new products. Today, Organizations are successful and can survive in a highly competitive world that has the ability to cope with and adapt to the made changes and are able to constantly implement new thoughts and ideas in the organization.

Using theoretical counter-arguments and examples from previous research, our framework provides another angle from which to view the adoption process as a not-so rational and linear process in the hands of both internal and external actors. Organization could be affected by institutional factors or influenced by external actors. Research on the role of external actors is also needed. Furthermore, we still know too little about the process of OI to give clear advice to managers. It would be interesting to pursue research in order to understand why some firms succeed in adopting OI while others failed. While the success or the failure of innovation is often evaluated in terms of performance, it is important to note that performance consequences of OI cannot be truly analysed before its sustained implementation (Klein & Sorra, 1996). So, we suggest that research on OI adoption process could focus on the success in terms of sustainable use of the new managerial and working practices by the internal actors, before evaluating the OI consequences on performance.

The concept of innovation has attracted the attention of a large number of researchers. According to De Jong, this concept was first introduced by Schumpeter in 1934. It is introduced as a process of creating new brands, products, services, and processes and the impact of this process on economic development. Since then, various scholars have described this concept differently to survive the organization for a longer period of time; innovation is considered to be a very important factor in organizations as well.

Conger and Kanango (1998) defines innovation as the process of collecting any new and useful idea to solve the problem, and believes that innovation involves forming an idea, accepting it, and implementing it.

Barrage et al. Argue that innovation as the creation of new knowledge and business ideas, aims to facilitate new products, improve domestic business processes and structure and push the market towards products and services.

Generally, Innovation is the formation of ideas, acceptance and implementation of new ideas in processes, products and services and is the inclination to change through the use of new technologies, resources, skills and new management systems. Innovation is an important factor in the success and competitive advantage of organizations and powerful economies. Today, almost all organizations face a dynamic environment that has features such as rapid technological change, reduced product life cycle and globalization. Organizations (especially technology-based organizations) need to be more creative and innovative than ever to survive, compete, grow and progress. There are various definitions of resource innovation. One of the most widely used definitions is that creativity is the creation of new and useful ideas and innovation is the implementation of creative ideas in an organization. Therefore, creativity is at the individual level, while innovation is at the organizational level (Bass and Avolio, 2001).

Research hypotheses:

The main hypothesis:

- There is a significant relationship between Transformational Leadership and Organizational Innovation in Payame Noor University of Tehran.

Sub Hypotheses:

- There is a meaningful relationship between the Idealized Influence (transformational leadership component) and organizational innovation in Payame Noor University of Tehran.

- There is a meaningful relationship between the inspirational motivation (transformational leadership component) and organizational innovation in Payame Noor University of Tehran.

- There is a meaningful relationship between intellectual stimulation (transformational leadership component) and organizational innovation in Payame Noor University of Tehran

- There is a meaningful relationship between Individualized Consideration(transformational leadership component) and organizational innovation in Payame Noor University of Tehran.

Methodology

Since the purpose of the present study is to investigate the relationship between transformation leadership and organizational innovation in Payame Noor University of Tehran province, the type of research method in this research is descriptive-survey which is a branch of field study. It should be noted that in this type of research method, data collection techniques (questionnaire, interview, document review) are used to collect data from the statistical sample. The researcher attended the research site to collect data in person and ultimately to test the hypotheses that had been provided based on evidence and information. The generalization of the results to all the population of the study is the final steps in this type of research.

Findings

Hypothesis1. There is a significant relationship between transformational leadership and organizational innovation in Payame Noor University of Tehran.

To test the above hypothesis and to calculate the correlation between the two variables of transformational leadership and organizational innovation, Pearson correlation coefficient was used. According to the results of this test, shown in the table (1), the correlation coefficient between these two variables is ($r = 0.12$); therefore, there is a direct relation between these

two variables; in other words, by increasing the level of transformational leadership, Organizational innovation is also increased. In behavioral sciences, regardless of its sign, this correlation coefficient is usually considered as a low correlation coefficient. Given that Sig> 0.05 (P> 0.05) it can be said with 95% level of confidence that the relationship between these two variables is not significant; therefore transformational leadership cannot be a good predictor of organizational innovation and using regression equation is not suitable for it.

Table 1. Pearson correlation coefficient between transformational leadership and organizational innovation.

transformational leadership	predictor variable	Criterion variable
0.12	Pearson correlation coefficient	organizational innovation
0.08	significance) sig (two tail	

Sub-Hypothesis1. There is a significant relationship between Idealized Influence (transformational leadership component) and organizational innovation in Payame Noor University of Tehran.

To test the above hypothesis and to calculate the correlation between the two variables of Idealized Influence and organizational innovation, Pearson correlation coefficient was used. According to the results of this test, shown in the table (2), the correlation coefficient between these two variables is (r = 0.12); therefore, there is a direct relation between these two variables; in other words, by increasing the level of transformational leadership, Organizational innovation is also increased. In behavioral sciences, regardless of its sign, this correlation coefficient is usually considered as a low correlation coefficient. Given that Sig> 0.05 (P> 0.05) it can be said with 95% level of confidence that the relationship between these two variables is not significant; therefore Idealized Influence cannot be a good predictor of organizational innovation and using regression equation is not suitable for it.

Table 2.Pearson correlation coefficient between Idealized Influence and organizational innovation.

Idealized Influence	predictor variable	Criterion variable
0.090	Pearson correlation coefficient	organizational innovation
0.173	significance) sig - (two tail	

Sub-Hypothesis2. There is a significant relationship between inspirational motivation (transformational leadership component) and organizational innovation in Payame Noor University of Tehran.

To test the above hypothesis and to calculate the correlation between the two variables of inspirational motivation and organizational innovation, Pearson correlation coefficient was used. According to the results of this test, shown in the table (3), the correlation coefficient between these two variables is (r = 0.2); therefore, there is a direct relation between these two variables; in other words, by increasing the level of inspirational motivation, Organizational innovation is also increased. In behavioral sciences, regardless of its sign, this correlation coefficient is usually considered as a low correlation coefficient. Given that Sig> 0.01 (P> 0.01) it can be said with 95% level of confidence that the relationship between these two variables is significant; therefore inspirational motivation can be a good predictor of organizational innovation and regression equation is used for these two variables.

Table 3.Pearson correlation coefficient between inspirational motivation and organizational innovation.

inspirational motivation	Criterion variable	
0.201	Pearson correlation coefficient	organizational innovation
0.002	significance) sig- (two tail	

In the ANOVA table the acceptability of the model is examined. based on this table, regression and remaining sum of squares do not have significant difference with each other, which shows that some changes in organizational innovation are shown by inspirational motivationation and the level of significance of the F statistic is less than 0.01 (P <0.01), Which means that the change shown by the model is not based on chance.

Based on regression results that can be seen in the following tables, the regression equation for predicting organizational innovation using inspirational motivation is as follows:

The accuracy of organizational innovation prediction is (Beta = 0.2), (p = 0.001, p = 0.98 = (229) t). Approximately 4% (r2 = 0.04) of the changes in organizational innovation has been calculated through inspirational motivation. Sub-Hypothesis3. There is a significant relationship between intellectual stimulation (transformational leadership

Table 4. ANOVA table.

Significance level	F statistic	Mean square	Degree of freedom	Sum of squares	model
0.002	9.606	4.025	1	4.025	regression
		.419	229	95.958	remainder
			230	99.983	total

Table 5. the summary of regression model between inspirational motivation on and organizational innovation.

Estimated standard error	adjusted coefficient of Determination	coefficient of Determination t (R2)	Correlation coefficient (R)	model
0.64733	0.036	0.040	0.201	1

Table 6. Results of linear regression analysis of two variables inspirational motivation on and organizational innovation.

Significance level	F statistic	Standard coefficients	Standard coefficients-non		model	
		Beta coefficient(B)	Standard error	B		
0.000	9.857	0.201	0.225	2.222	static	1
0.002	3.099		0.057	0.176	Inspirational motivation⅃	

Table 7. Pearson correlation coefficient between intellectual stimulation and organizational innovation

	Criterion variable	predictor variable
-0.046	Pearson correlation coefficient	organizational innovation
0.487	significance) sig - (two tail	

component) and organizational innovation in Payame Noor University of Tehran.

To test the above hypothesis and to calculate the correlation between the two variables of intellectual stimulation and organizational innovation, Pearson correlation coefficient was used. According to the results of this test, shown in the table (6), the correlation coefficient between these two variables is (r = -0.05); therefore, there is a reverse relation between these two variables; in other words, by increasing the level of mental persuasion, Organizational innovation is decreased. In behavioral sciences, regardless of its sign, this correlation coefficient is usually considered as a low correlation coefficient. Given that Sig> 0.05 (P> 0.05) it can be said with 95% level of confidence that the relationship between these two variables is not significant; therefore intellectual stimulation cannot be a good predictor of organizational innovation and using regression equation is not suitable for it.

Table 8. Pearson correlation coefficient between Individualized Consideration and organizational innovation.

	Criterion variable	
0.111	Pearson correlation coefficient	organizational
0.091	(significance) sig	innovation

Discussion and conclusion

In this research, the relationship between transformational leadership and organizational innovation in Payame Noor University of Tehran province was theoretically explained and then tested. The purpose of this research was to investigate the effect of each of these variables and their components on organizational innovation. The results of correlation analysis and path analysis revealed that there is a positive and significant relationship between transformational leadership (idealized influence, inspirational motivation, intellectual stimulation and individualized considerations) and organizational innovation (hypothesis 1). To test this hypothesis (calculating the correlation between transformational leadership and organizational innovation), Pearson correlation coefficient was used. Given the results of this test, the correlation coefficient between these two variables is (r =0 .12). Therefore, there is a direct relationship between these two variables, that is, generally, by increasing the level of transformational leadership, organizational innovation is also increased. In other words, transformational leadership can increase the tendency to innovation in the organization. This result is consistent with the findings of Khan et al study done among 269 Pakistani telecommunication company executives. However, in Khan et al research, the size of the organization played a significant mediating role in all dimensions of innovation (except Idealized Influence dimension), but in this research, all organizational dimensions affect organizational innovation. Similarly, the results of this research is consistent with Makouy findings (2010), which states that trustworthy leaders can create an environment that supports and develops innovation, and inspires and motivates the employees to create innovative ideas. The results of this study is also consistent with Garcia and Morales (2006) findings Which states that transformative leaders can inspire and motivate high-level needs and these leaders are guides that provide a common perspective about organizational innovation. Organizational managers should consider ethical and religious implications of the decisions and examine the underlying propositions carefully to ensure of their suitability.

It is suggested that the Managers of organizations propose new ways of approaching jobs to their employees and Talk seriously about the work and actions that are to be taken.

It is suggested to managers that by supporting new exciting opportunities and promoting the ability of the employees understand the problems and overcome them. The manager must consider the needs of each member as a member of the group and meet the needs, Encourage their abilities and competencies to communicate with them.

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