The Effect of Transformational Leadership Style and Organizational Innovation on Financial Performance of Software Companies

Fatemeh Onagh, Hossein Azimi* Department of Management, University of Zanjan, Zanjan, Iran

Abstract— The need for an appropriate leadership style that can regulate and improve the organization's culture in order to advance the organization's goals is vital to the success of the organization. New developments in leadership theories have moved from charismatic leadership theories to neo-charismatic and transformational leadership theories. This study was carried out aimed to investigate the effect of transformational leadership style and organizational innovation on sustainable performance. The research method was descriptive survey. The data collection tool was a standard questionnaire. The statistical population of this study was 5 software companies in Karaj and Tehran. The questionnaires were distributed randomly among 317 persons of statistical samples. The conceptual model of the research was fitted using the structural equation model in PLS software. Research findings have shown that transformational leadership has an impact on financial performance, functional readiness and organizational innovation.

Index Terms— Transformational Leadership, Organizational Innovation, Financial Performance, Functional Readiness, Software Companies

1 Introduction

he rapid growth of technology will increase the need for **L** companies to continuous improving and innovation. In particular, technology-oriented companies need to be more creative and innovative than ever before to survive, compete, grow and advance (Jong et al., 2003; Tierney et al., 1999). Companies with more innovations have better performance in dealing with environmental changes, and development of capabilities and creating powerful economies (Drucker, 1985). Leadership style, especially Transformational leadership, is one of the factors influencing the innovation and adaptability of an organization to change (Moghadam and Abbasnejad, 2015; Yaghubi et al., 2015; Birasnav et al., 2013). Transformational leadership theories emphasize the feelings, values and the importance of leadership in creating creativity in employees. The employees are a valuable resource in the company, a source in which the transformational leader assumes responsibilities and promotes the development of personnel and organization, especially at times of change (Garcia Morales et al., 2008). There are various definitions of creativity and innovation in different refrences. 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 (Ambalay, 1983, 1998; Ababal et al., 1996). Therefore, creativity is at the individual level, while innovation is at the organizational level (Oldham & Cummings, 1996).

In this study, dynamic capabilities theory and leadership theory has been used to examine the role of leadership style in improving organizational performance. The vision of dynamic capabilities explains how such companies gain competitive advantage and maintain it (Teece et al., 2005). In a changing environment that one of its characteristics is wide range of sources of innovation and production, a sustainable advantage requires some kind of dynamic capabilities that can hardly be impeded (Khashei, 2014).

Since software companies are among the organizations that need more innovation and creativity than other organizations, the study has focused on software manufacturing companies. The condition for the survival and dynamism in the software manufacturing industry is extensive competition. Also, the software industry has a unique nature, so there is almost no mass production or factory production in this industry; as a result, the most important part of software projects is research and development. Therefore, the hardware costs of this industry are lower than other industries, and as a result, the value added in this industry is high. On the other hand, the features such as needless of the cost and shipping time to other places that are possible due to the development of computer networks have made the software industry much more important. This dynamic, sophisticated and competitive industry is perfectly suited to research on transformational leadership which has been shown to have a particular effect in this kind of environment. Therefore, considering the importance of innovation and the determinant role of leadership in innovation, the purpose of this research is to investigate the relationship between transformational leadership style and creativity and innovation in software companies. The statistical population of this research is all employees of five information technology companies located in Alborz and Tehran provinces, with rankings 1, 2 and 3 from the High Council of Informatics, and considering transformational leadership as a dynamic capability

[•] Fatemeh Onagh, MA of Islamic Human Resource Management, Department of Management, University of Zanjan, Zanjan, Iran.

Hossein Azimi, Ph.D., Corresponding Author, Assistant Professor, Department of Management, University of Zanjan, Zanjan, Iran.

has responded to the question: What is the relationship between transformational leadership, organizational innovation, and organizational efficiency?

2 REVIEW OF THEORETICAL LITERATURE

2.1 Transformational Leadership (TL)

The characteristics of the leader, such as the need for change, the subtle knowledge of the situation, may lead to changes in the method of arrangement or use of resources (Ambrosini et al., 2009; Easterby -Smith et al., 2009; Newey and Zahra, 2009). When transformational leaders think about problems in new ways, they question operational assumptions, communicate with a clear vision, empower employees, inspire competently, and strengthen cooperation among team members, they realizes perception, learning, integration, and coordination (Robert E. Overstreet et al., 2013). Several studies have shown a significant relationship between transformational leadership and organizational desirable outcomes (Ismail Esmailipour, 1395; Howell and Avolio, 1993; Ilies et al., 2006; Kavanagh and Ashkanasy, 2006; Lee et al., 2011; Herman T. et al., 2013; Chang et al., 2014; March L. To et al., 2015;). But less research has studied leadership style as a dynamic capability for innovation and organizational efficiency.

Financial performance is one of the consequences that have been made in the transformational literature. It has also been observed that transformational leadership influences employees' perceptions of financial status of the company compared with its industrial counterparts (Zhu et al., 2005). Therefore, one hypothesis can be stated as follows:

Hypothesis 1: Transformational leadership has a positive relationship with financial performance.

According to Bass and Avolio (2002), transformational leaders have paid a lot of attention to the growth and success of their followers individually. The transformational leader confidently and optimistically makes confidence in his followers, emphasizes values through symbolic behaviors, and provides practical examples and empowers followers to pave the way for insight. The transformational leader will encourage followers to cooperate and promoting confidence of them (Eskandari, Mojtaba 2014); raising their followers' self-esteem and creating a positive mood in them increases their efforts (Eliss et al., 2006). These leaders encourage people to do things at a higher level, which will improve their organizational performance (Boerner et al., 2007; Tabli et al., 2012). Therefore, the following hypothesis is proposed in this study:

Hypothesis 2: Transformational Leadership (TL) has a positive relationship with functional readiness.

Making change is an important aspect of the transformational leadership style, which makes it an ideal leadership style to promote innovation (Eskandari, 2014; Bass and Riggio, 2006; Pieterse et al., 2010). The implementation of organizational change ultimately depends on the support of dependent staff (Bartunek et al., 2006; Herold et al., 2007). In many cases, leaders encourage them to be supported by people (Ergenelia et al., 2007). In fact, research has shown that the role of top leader in acquiring, changing, integrating, re-assembling, and delivering resources is vital to organizational innovation

(Eisenhardt, Martin, 2000; Narayanan et al., 2009). Since transformational leaders tend to innovate, they create incentives for their followers (Torabi et al., 2014). Therefore, in this study, the following hypothesis is proposed:

Hypothesis 3: Transformational leadership has a positive relationship with organizational innovation.

2.2 Organizational Innovation

In one definition, innovation is the implementation of creative ideas in an organization (Amabile, 1998; Ambalell et al., 1996). Organizational innovation is the organization's desire to deviate from conventional practices through the creation or adoption of new products, processes, or systems. Organizational innovation positively affects organizational performance. More important, identifying the effect of this form of leadership on organizational innovation is as important as identifying its impact on employee creativity (Garcia Morales et al., 2012). In addition to profitability, financial performance includes monetary criteria such as return on investment, return on sales and operating rates. Functional readiness is distinct but at the same time related to financial performance (Wu, Jung, 2010). Due to the relationships between these structures, the following hypotheses can be considered:

Hypothesis 4: Organizational innovation has a positive relationship with functional readiness.

Hypothesis 5: Organizational innovation has a positive relationship with financial performance.

2.3 Organizational Performance

Organizational performance can be defined as "A comparison between the values of the method developed by the organization with the value that the owners expect to receive from the organization." Considering this, organizational performance can be measured according to the results of human resource management or based on financial indicators of the organization (Allameh et al., 2016). In this study, organizational performance is measured as two distinct but related structures: Functional readiness and financial performance. Functional readiness reflects the ability of the organization to provide efficient and effective customer service. In addition to profitability, financial performance includes monetary criteria such as return on investment, return on sales and operating rates. Functional readiness is distinct and at the same time related to financial performance (Wu and Jang, 2010). Therefore, because of the mentioned relations, the following hypothesis was pro-

Hypothesis 6: Functional readiness has a positive relationship with financial performance.

2.4 Conceptual Model of Research

According to theoretical literature and the history of studies, and according to the hypotheses proposed, the conceptual model of the research is depicted in below sections.

3 METHODOLOGY

This study is considered as an applied research in terms of objective and is a survey study in terms of data collection method. The statistical population of this research is the em-

ployees of software companies in the Alborz and Tehran provinces with rankes 1, 2, and 3 of the High Council of Informatics in the field of production and support of customer order software. According to preliminary sampling by means of pretest, to measure the reliability and validity of the tool and determine the variance deviation, the sample size of 317 of the 5 software companies in Karaj and Tehran were answered stratified randomly into questionnaires. Based on the results of the research, it was found that, in terms of demographic characteristics, 56.7% of the employees were female and 51.1% were married. In terms of age, 58.5% were between the ages of 25 and 30. In terms of education, 98.7% were university students. About 79.4% of people 3 years of age and older worked in the organization, and 78.2% of those who were 4 years of age and older worked their current position. While 90% were experts and 10% were managers. In the end, in revenue, 57.4% had income from 1 to 2 million and the rest were 2 to 4 million tomans. In sum, it seems that statistical samples are well selected according to the target population and the results of the research can be cited.

The data collection tool is a standardized questionnaire that has been validated but due to localization in this research, its validity and reliability have been confirmed again. To analyze the convergent validity in the PLS model, Average variance extracted (AVE) is analyzed. This indicator indicates the variance level that a structure derives from its markers. The value of the criterion for the acceptance level of the AVE is 0.4. All AVE values for structures are more than 0.4 and one is close to 0.4, which indicates a reasonable limit for the convergent validity of the questionnaire.

Cronbach's alpha coefficient of all variables in this study was 0.847 which was higher than the minimum standard value (0.7) and showed that the measurements have a high reliability. The number of measures designed to measure each variable and the combined reliability coefficient are presented. Bagozzi and Yi have stated standard above 0.6 for the Composite Reliability (CR). All values (CR) are more than 0.6, so the measurement model has a good combination of reliability.

Also, the reliability measurement of each of the markers of the latent variables in the PLS model is determined by the load factor of the indicator. The value of each load factor should be greater than or equal to 0.5. All values of the measurements related with the latent variable are higher than 0.5. Therefore, it can be said that the measurement model has adequate reliability in the field of indicators of the latent variables. t-value values are also shown for indicators. These values are usually introduced as validity parameters related with confirmatory factor analysis, because the relationships between indicators and latent variables have already been identified. As you can see, all values are out of (-1.96, 1.96) and the research tool enjoys a proper validity.

4 RESULTS AND DISCUSSION

In this research, the Structural Equation Modeling (SEM) and Partial least Squares (PLS) method are used to test the hypothesis and fitness of the model. The results of the data analysis are presented. All hypotheses were confirmed. Based on the path coefficient, if the probability value (p-value) is less than 0.05 and the significance number is greater than 1.96, it can be concluded that this path coefficient is significant at the level of 0.05; otherwise, the hypothesis is rejected.

In order to investigate the cross-validation of the model, the CV-Communality, and the index of CV-Redundancy was used. The CV-Communality index measures the quality of the measurement model. The CV-Redundancy index considers the measurement model to measure the quality of the structural model for each endogenous block. The positive values of this index indicate the appropriate and acceptable quality of the measurement and structural model. The values of each of the indicators are provided to the independent and dependent variables. As you can see, the indicators are positive and larger than zero and the model has a good validity.

Transformational leaders create a dynamic organizational perspective that often makes necessary a change in cultural values to reflect more innovation. The transformational leadership also seeks to establish a relationship between individual and collective interests to enable the subordinate to work for transcendental purposes. One of the important factors leading to extensive research in leadership is the attractiveness of the concept of transformational leadership. Perhaps this attraction stems from the notion that leaders achieve their goals through the influence of their followers, and among them, the emotions and feelings of the leader and followers play a decisive role; since it does not matter the leaders are beginning to do "what". Their success depends on how to do this by creating a new method or stimulating the teams for how they do it, but if they fail in this basic task, "controlling emotions in the right direction", none of the work they have done, can't be sufficiently effective. This research studies the impact of leadership style and organizational innovation on sustainable performance and combines several factors such as transformational leadership, organizational innovation, functional readiness and financial performance.

In relation to the hypothesis 1, transformational leadership has a significant effect on financial performance, which is consistent with the results of studies by Talley et al. (2012) and Narayanan et al. (2009). Also, because the standardized coefficient between two variables is a negative value of 0.154, it can be stated that transformational leadership explains 15.4 percent of the variations of financial performance variable directly. The reason for this is that the transformational leadership affects employee perceptions of the financial position of the company compared with its industrial counterparts.

In relation to the hypothesis 2, transformational leadership has a significant effect on functional readiness, which is consistent with Boss & Avowl (2002) and Bourner et al. (2007). Also, because the standardized coefficient between the two variables is a positive value of 0.157, it can be stated that transformational leadership directly explains 15.7% of the variations of functional readiness variable directly. The reason for this can be that the transformational leader confidently and optimisticly creates confidence in his followers, and with symbolic behaviors emphasizes on values, and provides practical examples and empowering followers to pave the way for insight. The transformational leader will encourage followers to work to-

gether and promote self-esteem of them.

In relation to the hypothesis 3, transformational leadership has a significant effect on organizational innovation, which is consistent with the research by Peters et al. (2010). Also, because the standardized coefficient between two variables is a positive amount of 462.0, it can be stated that transformational leadership explains 46.2% of the changes in the organizational innovation variable directly. The reason for this can be that transformational leadership tried to improve the status quo by looking the future and can be a factor in encouraging employees to provide innovative and innovative ways.

In relation to the hypothesis 4, organizational innovation has a significant effect on functional readiness, which is consistent with Gumsouloglu and Ileso's research (2007). Also, due to the fact that the standardized coefficient between two variables is a positive value of 0.431, it can be stated that organizational innovation explains directly 43.1% of changes in functional readiness variable. This can be due to the fact that thinking in innovative ways and providing new ideas leads to the readiness of employees to face environmental changes.

In relation to hypothesis 5, organizational innovation has a significant effect on financial performance, which is consistent with Gumsouloglu and Ileso's research (2007). Also, because the standardized coefficient between two variables is negative value of 0.182, it can be stated that organizational innovation explains 18.2% of variables of financial performance variable directly. The reason for this can be that thinking in innovative ways and offering risky new ideas and the company may be subject to costs in financial terms.

In relation to hypothesis 6, functional readiness has a significant effect on financial performance, which is consistent with Wu and Jang's (2010) research. Also, because the standardized coefficient between two variables is a positive value of 0.552, it can be stated that functional readiness explains 55.2% of the changes in the variable of financial performance directly. The reason for this can be that the employees' previous readiness to deal with different environmental conditions in the provision of services can lead to the injection of large revenues into the company.

5 Conclusions, Perspectives, Useful Suggestions and Future Studies

- (1) According to the results, it is suggested that managers pay attention to the implementation of the transformational leadership style and the importance of the effect of organizational innovation on functional readiness for achieving the desired financial performance.
- (2) According to the findings of this research, it is suggested that managers stimulate their followers by empowering them. They should know that this mechanism dramatically increases the creativity of their employees.
- (3) Given the fact that the presence of transformational leadership influences the desirable performance of the employees and financial performance of the organization, it is suggested to provide in-service training for managers in line with training of activities related to the transformational manager.

- (4) Since the present research showed that organizational innovation is effective on financial performance of the company, it is suggested that incentive schemes should be considered for the flourishing of innovation in organization and creativity in individuals.
- (5) Considering that 98.7% of the employees in the software companies have academic education, it is suggested that in universities, courses to be taught on how to innovate in the organization and creativity in individuals.

In order to achieve better results, it is suggested that future studies take into account the following:

- (a) The population studied in this study was the employees of the companies located in the provinces of Tehran and Alborz. Therefore, due to structural and cultural differences, it is suggested that similar research be done in other provinces.
- (b) To test the accuracy of the research results, it is suggested that future studies be repeated in other organizations and industries in order to compare the results of these studies taking into account different conditions.
- (c) It is recommended that future research further develop the present research model by adding other independent variables such as employee creativity, or modifying variables such as the impact of group activities and conflicts on organizational innovation, and dependent variables such as employee satisfaction.
- (d) It is suggested that similar research be done with increasing number of samples and in different intervals on the same samples.
- (e) It is suggested that the relationship between organizational structure and organizational innovation be investigated.
- (f) It is suggested that the amount of work experience of experts with the financial performance of the organization be investigated.
- (g) It is suggested that environmental factors such as methods of encouragement and punishment and receiving feedback from personnel be investigated in future research.

REFERENCES

- Eskandari, Mojtaba (2014), Analysis and critique of Transformational Leadership Theory, Two Islam and Management Scientific-Specialist Journals, Volume 3, No 5, Spring and Summer, pp. 123-145.
- [2] Esmaeilpour, Behzad and EsmailiPour, Hashem (2016), The Role and Consequences of Transformational Leadership in New Organizations, International Conference on Modern Management at Horizon 1404, Tehran, Islamic State Research Institute, Islamic Azad University, Tehran East Branch.
- [3] Taboli, Hamid and Tirgar, Hedayatollah Mozaffari, Leila and Mortazavi, Hamid and Mehrabifar, Fatemeh (2012), The Relationship between Transformational Leadership Style and Creativity of Employees in Government Organizations of Neyriz, Innovation and Creativity in Humanities, Summer, Volume 2, No. 1, pp. 1-25.
- [4] Torabi, Seyyedeh Arzou and Torabi, Seyyed Amir and Valizadeh Dastjerd, Habib (2014), The Effect of Transformational Leadership on Creativity and Innovation of Organizational Employees, Second International Conference on Challenges and Solutions Management, Shiraz, Hamayesh Negar National Conference Center.
- [5] Khasheei, Vahid and Mazlomi, Nader and Esmaeilzadeh, Marzieh (2014), The Effect of Organizational Resources and Dynamic Resources on the Per-

- formance of Knowledge-based Companies, Ministry of Science, Research and Technology, Allameh Tabatabaei University, Faculty of Management and Accounting.
- [6] Allameh, Seyyed Mohsen and Asgari, Nourbakhsh and Khazaeipour, Javad (2016), The Effect of Organizational Culture on Organizational Performance: Emphasizing the Role of Knowledge Sharing and Organizational Agility with Balanced Scorecard Approach, Organizational Culture Management, Volume 14, Number 3, Summer, Pages 453-474.
- [7] Moghadam, Ali and Abbasnejad, Mohammad Hosein (2015), Studying and determining the relationship between leadership style, organizational climate and innovation from the viewpoints of faculty members of Amin Police University. Journal of Resource Management in Police Force, Volume 2, No. 3, pp. 36-23.
- [8] Yaghobi, Nourmohammad and Shokoohi, Javad and Raeesi Shahroii, Hafsha and Seyedi, Farzaneh (2015), The Effect of Leadership Styles on Organizational Performance with Organizational Learning and Innovation Mediation, Transformation Management Research Journal, Volume 7, No. 14, pp. 27-40.
- [9] Amabile TM .(1983), The social psychology of creativity. New York: Springer-Verlag.
- [10] Amabile TM. (1988), How to kill creativity. Harvard Business Review, 76(5):77-87.
- [11] Amabile TM. Conti R, Coon H, Lazenby J, Herron M. (1996), Assessing the work environment for creativity. Academy of Management journal; 39(5):1154-84.
- [12] Ambrosini, V. and Bowman, C. (2009), What are dynamic capabilities and are they a useful construct in strategic management? International Journal of Management Reviews, 11(1): 29-49.
- [13] Bartunek, J.M., D.M. Rousseau, J. Rudolph, J. DePalma. (2006), On the receiving end: Sensemaking, emotion, and assessments of an organizational change initiated by others. Acad. Management Rev. 42(2) 182-206.
- [14] Bass, B.M. and Riggio, R.E. (2006), Transformational Leadership, Lawrence Erlbaum Associates Inc, Mahwah, NJ.
- [15] Boerner, S., Eisenbeiss, S.A. and Griesser, D. (2007), Follower behavior and organizational performance: the impact of transformational leaders, Journal of Leadership and Organizational Studies, 13(3), 15-26.
- [16] Chung-Jen Wang, Huei-Ting Tsai, Ming-Tien Tsai. (2014), Linking transformational leadership and employee creativity in the hospitality industry: The influences of creative role identity, creative self-efficacy, and job complexity, Volume 40, 79-89.
- [17] Drucker PF. (1985), Innovation and entrepreneurship: practice and principles. New York: Harper and Row, Publishers.
- [18] Easterby-Smith, M., Lyles, M.A. and Peteraf, M.A. (2009), Dynamic capabilities: current debates and future directions, British Journal of Management, 20(S1): S1-S8.
- [19] Eisenhardt, K.M. and Martin, J.A. (2000), Dynamic capabilities: what are they? Strategic Management Journal, 21(10,11):1105-1121.
- [20] Ergenelia, A., Goharb, R. & Temirbekovac, Z. (2007), Transformational Leadership: Its Relationship to Culture Value.
- [21] García Morales VJ, Matías Reche F, Hurtado Torres N. (2008), Influence of transformational leadership on organizational innovation and performance depending on the level of organizational learning in the pharmaceutical sector. Journal of Organizational Change Management b;21(2):188–212.
- [22] Herman H.M. Tse, Xu Huang, Wing Lam. (2013), Why does transformational leadership matter for employee turnover? A multi-foci social exchange perspective, Volume 24, Issue 5, 763-776.
- [23] Herold, D.M., D.B. Fedor, S.D. Caldwell. (2007), Beyond change management: A multilevel investigation of contextual and personal influences on employees' commitment to change. J. Appl. Psych. 92(4): 942-951.

- [24] Howell, J.M. and Avolio, B.J. (1993), Transformational leadership, transactional leadership, locus of control, and support for innovation: key predictors of consolidated-business-unit performance, Journal of Applied Psychology, 78(6): 891-902.
- [25] Ilies, R., Judge, T. and Wagner, D. (2006), Making sense of motivational leadership: the trail from transformational leaders to motivated followers, Journal of Leadership and Organizational Studies, 13(1): 1-22.
- [26] Jung DI, Chow C, Wu A. (2003), The role of transformational leadership in enhancing organizational innovation: hypotheses and some preliminary findings. Leadership Quarterly; 14:525-44.
- [27] Kavanagh, M.H. and Ashkanasy, N.M. (2006), The impact of leadership and change management strategy on organizational culture and individual acceptance of change during a merger, British Journal of Management, 17(S1): S81-S103.
- [28] Lee, P.K.C., Cheng, T.C., Yeung, A.C.L. and Lai, K. (2011), An empirical studyof transformational leadership, team performance and service quality in retail banks, Omega, 39(6): 690-701.
- [29] Birasnav, M. Albufalasa, M. Bader Y. (2013), The role of transformational leadership and knowledge management processes on predicting product and process innovation: An empirical study developed in Kingdom of Bahrain.
- [30] March L. To, Herman H.M. Tse, Neal M. Ashkanasy. (2015), A multilevel model of transformational leadership, affect, and creative process behavior in work teams, 26(4): 543-556.
- [31] Narayanan, V., Colwell, K. and Douglas, F.L. (2009), Building organizational and scientific platforms in the pharmaceutical industry: a process perspective on the development of dynamic capabilities, British Journal of Management, 20(S1): S25-S40.
- [32] Newey, L.R. and Zahra, S.A. (2009), The evolving firm: how dynamic and operating capabilities interact to enable entrepreneurship, British Journal of Management, 20(S1): S81-S100.
- [33] Oldham GR, Cummings A. (1996), Employee creativity: personal and contextual factors at work. Academy of Management Journal;39(3):607-34.
- [34] Pieterse, A.N., Van Knippenberg, D., Schippers, M. and Stam, D. (2010), Transformational and transactional leadership and innovative behavior: the moderating role of psychological empowerment, Journal of Organizational Behavior, 31(4): 609-623.
- [35] Robert E. Overstreet Joe B. Hanna Terry A. Byrd Casey G. Cegielski Benjamin T. Hazen, (2013), Leadership style and organizational innovativeness drive motor carriers toward sustained performance, The International Journal of Logistics Management, 24(2): 247 – 270.
- [36] Teece, D.J., Pisano, G. and Shuen, A. (2005), Dynamic capabilities and strategic management, Strategic Management Journal, 18(7): 509-533.
- [37] Tierney P, Farmer SM, Grean GB. (1999), An examination of leadership and employee creativity: the relevance of traits and relationships. Personnel Psychology; 52:91-620.
- [38] Zhu, W., Chew, I.K.H. and Spangler, W.D. (2005), CEO transformational leadership and organizational outcomes: the mediating role of human-capitalenhancing human resource management, The Leadership Quarterly, 16(1): 39-52.