

Research Article

Influence of Transformational Leadership on Organizational Innovation in Telecommunication Industry in Pakistan

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Abstract: This study aims to examine the relationship between Transformational leadership and Organizational Innovation. This relationship is mediated through an intervening variable like Employee Creativity. Using the sample of 250 including supervisors and their respective subordinates of Telecommunication industry of Pakistan. This is purely quantitative research and a survey was designed to collect data from supervisors and subordinates to reduce the common method biasness. This study supports the “Transformational theory, LMX theory and Social learning theory” Data was analyzed by using SPSS and AMOS. The results of this study confirms the results of previous studies showing the significant relationship of Transformational leadership style, Employee Creativity and Organizational Innovation with each other, but in previous studies no indication was found about the cause of organizational Innovation through Employee creativity in Telecommunication sector of Pakistan. So the findings of current study have explicit practical considerations for leadership practice, particularly in the situation where both followers and leaders interact with each other.

Keywords: Creativity, innovation, leadership

INTRODUCTION

Success of an organization depends upon its ability to create innovative ideas, new information and innovations because many researchers proved that knowledge is an important and valuable resource of an organization as it embodies creative processes, intangible assets and routines that can't be imitated easily (Birasnav *et al.*, 2011). An emerging concept about creativity is that it's not only required in R and D units but in every day jobs as well, if company wants to be competitive in this dynamic environment (Tierney and Graen, 2008; Shalley and Gilson, 2004). These days creativity is an important part of an organization, because changes occur so rapidly that managers and organizations have no choice but to find new and innovative ways so that they could acclimate with global changes easily. Organizations need fresh and innovative thoughts for their survival, as one of the contemporary demands in organizations is to create new information, ideas and innovations (Hyypia and Parjanen, 2013). However, impact of transformational leadership on creativity of employees and innovation; have received minute attention (Birasnav *et al.*, 2011; Gumusluoglu and Ilsev, 2009; Liu and DeFrank, 2011).

So, organizations need to invoke to fresh thoughts, innovative ideas and ways to preserve their current customers, to prevent themselves from losing market share, to meet needs of customers and to achieve their

targets (Bolanowski, 2008). Now a day's employee creativity and organizational innovation is considered as a competitive arena for products developing organizations and employees are expected to be creative and innovative in addition to their needed education (Kudrowitz, 2010).

If employees are motivated by their leaders, their creativity is enhanced (Zhou and Ren, 2011). Many researchers found a positive relation between Employee Creativity and Transformational Leadership (Eisenbeiss *et al.*, 2008; Wu *et al.*, 2008; Zhang *et al.*, 2011). If employees engage themselves more in creative processes then possibility of creative and innovative outcomes is more there (Zhang and Bartol, 2010). However, some studies in literature exhibit a negative relation between leadership and employee creativity. If leaders adopt the behavior of monitoring and controlling, employee creativity is reduced (Zhou and Ren, 2011).

Eisenbeis and Boerner (2013) Suggested a need of future study on innovation at organizational level that whether creative performance of employees cause employees for implementing creative ideas at organizational level, though this implementation give starting point for innovation (Zhou and George, 2001) and it effect organizational performance in a positive way (Kollmann and Stöckmann, 2014). Telecom technologies are one of the dynamic technologies in world. Their product life cycle is very short, so they

need fast thinkers and transformational leaders to cope up with changes. Transformational leadership has got much attention as a research topic but there is little work on relationship between transformational leadership, employee creativity and organizational innovation (Birasnav *et al.*, 2011; Liu and DeFrank, 2011; Gumusluoglu and Ilsev, 2009). It is expected that current study might prove a worthwhile direction for more investigation in area of transformational leadership, creativity and organizational innovation.

THEORY AND HYPOTHESIS DEVELOPMENT

Transformational leadership and employee creativity: Creativity is the process to create new, innovative and useful ideas (Amabile, 1988). These new ideas are related with business of organization as new goods, or related with organization itself as innovative procedures (Shalley and Gilson, 2004). Literature proves Transformational Leadership as an important element for creativity of employees (Gong *et al.*, 2009; Shin and Zhou, 2003). Transformational Leadership style is linked with a sort of environment that assists in creativity (Sarros *et al.*, 2008).

Previous researches shows creative behavior when leaders show Transformational Leadership behavior (Shin and Zhou, 2003), encourage employees (Frese *et al.*, 1999), leader member exchange relationships (LMX) are developed (Tierney *et al.*, 1999), do developmental evaluation and give timely feedback (Zhou and Oldham, 2001), close monitoring is avoided (Zhou, 2003), increase employee's creative self-efficacy (Tierney and Farmer, 2004). These all studies examined leaders those specific behaviors that they use to boost creativity in employees. Leader Member Exchange theory focuses on the dyadic exchange relationship among the leader and member Graen and Uhl-Bien (1995). The exchange relationship between leader and member has gained considerable research attention and it is suggested to be one of the most important relationships for subordinates (Manzoni and Barsoux, 2002). Leader Member Exchange (LMX) theory provides a useful framework to examine this relationship and is focus of numerous empirical studies (Graen and Uhl-Bien, 1995). Our purpose is to witness the interaction effect of leader's transformational behavior on follower's creativity. Based on literature, researcher proposes:

H1: Transformational leadership is positively related with employee creativity

Transformational leadership and organizational innovation: Innovation processes are not managed hierarchically as innovation depend on knowledge that is exchanged among individuals at their free will, but for Employee Creativity and Organizational Innovation to happen, organizations need leadership and management responsibilities (Drucker, 2007).

Transformational Leadership style is different from traditional leadership, because it put emphasis on change and visualizing (Avolio, 1994) than just to focus on monitoring, control and supervision (Bryman, 1992). Therefore, theory of Transformational Leadership is considered as enhancing innovation (García-Morales *et al.*, 2008).

Transformational leaders support and re enforce the creative and innovative self-concept of followers (Zhang *et al.*, 2011). Employees sharing their vision with leaders are probably more creative and employees having transformational leader are the one who put emphasis on positive outcomes and innovation (Kark and Van Dijk, 2007; Stam *et al.*, 2010).

Social learning theory (Bandura, 1998), prescribes that followers are expected to follow a transformational leader and involve themselves in creative behavior, so ultimately lead toward the organizational innovation.

H2: Transformational leadership is positively related with organizational innovation.

Individual creativity and organizational innovation: Creativity is necessary for an organization's survival and long term development as, according to Amabile (1997) creativity is the base of Organizational Innovation and makes organizations to cope with change. Shalley and Gilson (2004) proposed that creative employees offer useful and new ideas about products, procedures and practices of an organization. He suggested that new ideas of creative employees can be transferred to other people in organization for their use and growth. Subsequently, this individual level creativity becomes cause of Organizational Innovation by developing innovative products. So Employee Creativity positively effect organizational innovation. As, many researchers proved that creativity is to think in innovative way about solving problems and bringing innovations in organizations (Shoghi and Mortazavi, 2012).

Literature suggests that organizational innovation can be achieved by improving employee's creative performance (Laguna *et al.*, 2012). Many researchers focused on relationship between leadership style and creativity, as Redmond *et al.* (1993) examined relationship between behavior of leaders and creativity and motivational effect on creativity was analyzed by Shin and Zhou (2003).

H3: Employee creativity is positively related with organizational innovation.

H4: Employee creativity acts as a mediator between transformational leadership and organizational innovation.

METHODOLOGY

Sample and procedures: All companies were selected from telecommunication sector of Islamabad and

Rawalpindi. Multi-stage sampling technique was used, in which at first stage companies were randomly selected and at second stage employees from these selected companies were selected randomly. Questionnaires were distributed personally among these selected employees. The study sample consisted of 250 employees. Leaders were asked to give views about employee's creativity. Similarly, their followers were also asked to give their views about leadership style of manager and about organizational innovation.

Measures:

Transformational leadership: Independent variable was assessed by MLQ questionnaire given by Bass and Avolio (1995). It was 20 items scale. Researcher used 5 point likert scale with anchor of: 1 = never; 2 = some times; 3 = regularly; 4 = often; 5 = always. Reliability score for the current study was 0.927.

Employee creativity: It is assessed by 8 items adopted from Zhou and George (2001). Five point likert scale is used with anchor of 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Reliability score for this study was 0.865.

Organizational innovation: It is measured through 6 items taken from (García-Morales *et al.*, 2008). It is 5 point likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Reliability score for current study was 0.746.

RESULTS

Data was first entered in SPSS version 16 for analysis. The normality of data, missing value analysis, reliability, correlation and principal component analysis was run on SPSS.

In principal component analysis the value of Kaiser Meyer Olkin measure for employee creativity was 0.813, for transformational leadership 0.909 and for Organizational innovation was 0.740. The Bartlett's test of sphericity (Bartlett, 1954) is significant for all three variables. In principal component analysis the "total variance explained" table showed the presence of one component with eigenvalue greater than 1, explaining total variance of 51.8% for employee creativity, 42.4% for transformational leadership and 58.1% for organizational innovation.

Exploratory factor analysis was performed on SPSS. The result of EFA showed total variance of only 20% so it proved that Herman single factor recorded no indication of common method biasness CMB. This was further confirmed by common latent factor test in AMOS. The results showed 4-5% of shared variance in all latent factors of the data. Hence it confirms that there is no serious threat of CMB for this study (Podsakoff *et al.*, 2003).

Confirmatory factor analysis (Tabachnick and Fidell, 2007) studies the relationship between the latent and observed variables. There are three variables in measurement model of the study. So, firstly CFA was applied on each variable separately and then on the full model. Various model fit indices were used to report the result of Structural Equation Modeling (SEM), such as Chi-square, degree of freedom, Root Mean Square Error of Approximation (RMSEA), Root Mean square Residual (RMR), Comparative Fit Index (CFI), CMIN and PCLOSE. These indexes specify the level of a model to provide better overall fit as compare to an independence model or null model in whom correlations among the observed variables are supposed to be the zero. Moreover, we also analyzed the validity (convergent and discriminant) and reliability of each construct to ensure the overall reliability.

Firstly, CFA was run for the independently for Transformational Leadership, employee creativity and organizational innovation. The initial CFA result for single factor model of Transformational Leadership showed poor fit indices. One way to improve fit indices is to first remove those indicators that have low factor loadings <0.50 (Hair *et al.*, 2010; Kline, 2011), or larger error covariance >2 . Therefore, few items were dropped due to their low factor loadings (i.e., <0.50) and CFA was again run. CFA results for employee creativity showed that all items has acceptable factor loadings for the model fit e.g., >0.50 . CFA results for organizational innovation showed one item with low factor loading, so it was removed. Covariance's were drawn among the errors of the model to get the best values of CMIN, RMR, CFI, RMSEA and PCLOSE for model fit. The CFA result with modification indices showed the reasonable fit to the data and the values of CMIN, RMR, CFI, RMSEA and PCLOSE were within the acceptance range. After conducting CFA on each variable separately CFA was applied on full model. The initial result of CFA demonstrated that measures of all variables together in full measurement model had acceptable model fit to the data set and all values of CMIN, RMR, CFI, RMSEA and PCLOSE lie within the acceptable range after drawing some covariances among errors. Moreover, factor loadings of all indicators of full model also fall within the range of acceptability i.e., <0.50 (Table 1).

The measures with poor reliability or validity can seriously endanger the integrity of the results (Kline, 2011). For all variables of study, $CR > 0.70$ (indicates reliability), $AVE > 0.50$, $CR > AVE$ (indicates convergent validity) and $MSV < AVE$, $ASV < AVE$ (indicates discriminant validity). The results showed that all of these values were within the acceptable range and demonstrate the reliability and validity of the full measurement model (Table 2).

Hence, reliability, convergent validity and discriminant validity all were established for the full

Table 1: Fit indices of CFA for full model

Model	CMIN	RMR	CFI	RMSEA	PCLOSE
Transformational leadership	3.2	0.05	0.93	0.04	0.21
Employee creativity	3.80	0.05	0.95	0.01	0.10
Organizational innovation	3.3	0.03	0.98	0.05	0.19
Full model	2.1	0.06	0.91	0.05	0.23

Table 2: Validity and reliability statistics of the measures

	CR	AVE	MSV	ASV
TL	0.81	0.67	0.68	0.55
EC	0.79	0.65	0.64	0.61
OI	0.82	0.74	0.64	0.67

Table 3: Means, standard deviations and inter correlations among transformational leadership, employee creativity and organizational innovation

		N	Mean	S.D.	1	2	3
1	EC	250	3.72	0.65	1		
2	OI	250	3.61	0.74	0.68**	1	
3	TL	250	3.73	0.62	0.84**	0.74**	1

Table 4: Model fit of structural regression models with and without mediator

Model	Descriptions	Chi-sq	Df	CMIN	RMR	CFI	RMSEA	PCLOE
1	Hypothesized model without mediator (Direct effect)	153	55	2.79	0.07	0.93	0.06	0.11
2	Hypothesized model with mediator e.g., employee creativity (Direct and indirect effect)	451	152	2.9	0.05	0.905	0.05	0.21

measurement model containing measures of all the variables of this study together (Table 3).

Table 1 shows that means of all variables were above 3 that is the midpoint for this study. As the correlation matrix reveals that shows that TL is positively and strongly correlated to EC ($r = 0.84$, $p < 0.01$) TL is also strongly and positively correlated to OI ($r = 0.74$, $p < 0.01$) Hence supporting H1 and H2 which states that TL is positively related to EC and OI. EC is also positively correlated to OI ($r = 0.68$, $p < 0.01$) and this correlation is at moderate level. Hence this correlation is supporting the H3 which states Employee Creativity and Organizational Innovation is related with each other.

Mediation analysis is performed in AMOS (5th Version) using Structural Regression (SR) Model through Structural Equation Modeling (SEM) (Table 4).

Results predicted that Employee Creativity mediates the relationship of Transformational Leadership with Organizational Innovation. I investigated direct and indirect effects described by Preacher and Hayes (2008) using 5000 bootstrapping samples with 95% confidence interval to test mediation of one variable e.g., Employee creativity in relationship of Transformational Leadership with Organizational Innovation. It was found that Transformational Leadership ($B = 0.67$; $p = 0.000$) was positively associated with mediating variable i.e., Employee Creativity. It was found that Transformational Leadership ($B = 0.73$; $p = 0.000$) is positively associated with Organizational Innovation. It was found that Employee creativity ($B = 0.60$; $p = 0.000$) is positively related with Organizational Innovation. It was found that both direct and indirect effect of Transformational Leadership on Organizational

Innovation in presence of mediator (Employee Creativity) is significant and it suggests full mediation for model. Thus this hypothesis is fully supported.

DISCUSSION

Organizations having creative employees generate extra worth and preserve competitive advantage in vibrant type of business environment (Amabile *et al.*, 2005; George, 2007). Moreover, latest studies recommend that factors of work environment as leadership style can affect the employees creative behavior (Amabile *et al.*, 2004; Shalley and Gilson, 2004).

So, this study was conducted with an aim to find the relation between Transformational Leadership, Employee Creativity and Organizational Innovation. First contribution made by this study is the results about relationship between transformational leadership and employee creativity. Findings support the results of past studies (Gong *et al.*, 2009), that show a positive relation between leadership and creativity. Many studies revealed role of transformational (Gumusluoglu and Ilsev, 2009), transactional (Pieterse *et al.*, 2009) and ambidextrous (Rosing *et al.*, 2011) leadership impact on innovation. But this study stresses Transformational Leadership effect on innovation. Finding also showed a positive relation between creativity and innovation and these results are consistent with results of previous studies (Amabile, 1988; Oldham and Cummings, 1996). This result of study is very tempting because it is backing the Transformational Leadership characterization as concerned with generation of capabilities, collective goals and collective decisions

than the traditional leadership style, which concentrates on standardized procedures, production of goods and services and top to down decisions (McDonough, 2000).

Literature proves this argument theoretically as well as practically. Studies in literature do support a positive relation between Organizational Innovation and Transformational Leadership (Gumusluoglu and Ilsev, 2009; Sosik *et al.*, 1998; Jung *et al.*, 2003). Paulsen *et al.* (2013) gave slightly similar justification and examined that how transformational leaders do have an impact on outcomes of R and D teams in being more innovative.

Moreover, Results indicated that TL is positively and significantly related with Employee Creativity. Literature supports this result that a positive relation exists between Employee Creativity and Transformational Leadership. As Shin and Zhou (2003) discussed that creative behavior of employees is enhanced when leaders show Transformational Leadership behavior. Literature proves Transformational Leadership as an important element for creativity of employees (Gong *et al.*, 2009; Shin and Zhou, 2003). Transformational Leadership style is linked with a sort of environment that assists in creativity (Sarros *et al.*, 2008). Employees sharing their vision with leaders are probably more creative and employees having transformational leader are the one who put emphasis on positive outcomes (Kark and Van Dijk, 2007; Stam *et al.*, 2010). So, it can be proposed that such type of leaders stimulate followers by activating the ideal self of them and also making the positive outcomes striking and prominent (Kark and Van Dijk, 2007; Stam *et al.*, 2010). LMX theory explains and supports the relationship between employee creativity and transformational leadership. This theory explains the dyadic, exchange relationships between employees and leaders or managers.

Furthermore, Results indicated that Employee Creativity mediates the relationship between Transformational Leadership and Organizational Innovation. Leaders enhance the creativity of employees by their leadership style and this employee creativity ultimately leads an organization towards innovation. Telecommunication companies need to innovate in this type of dynamic environment. Studies in literature showed that the sources for innovation and achieving the sustainable development and competitive advantage in telecommunication companies are maintained by presence of essential resources, technological capabilities and competencies. Every company should examine and enable all capabilities as well as resources that permit the company to attain a sustainable competitive position in industry. So the companies need an innovative and dynamic vision to improve performance of organizations, generate unique, valuable and hard to imitate capabilities and resources (Irwin *et al.*, 1998). So, it is important that all those

organizations who want to be competitive and progressive in dynamic environment needs to be innovative and have creative employees.

Limitations: This study has some limitations and these limitations can guide for future research. As the respondents were only from telecommunication companies of Rawalpindi and Islamabad so findings of this study cannot be generalized to all the telecommunication sector of Pakistan.

This study sample was limited to Rawalpindi and Islamabad due to constraints of time and money. This study could have been expanded if the researcher had more time and financial support. Organizational Innovation questionnaires were filled by employees only. Managers should also have been asked to fill it. Another limitation was the cross sectional types of study, where the researcher can only examine a specific situation at the time of survey in organization, not complete behavior through time. Causal inferences can be limited by use of cross-sectional data. This study did not study the effect of control variables on creativity and innovation. According to Tierney and Farmer (2011), age, gender, company tenure and education level effect employee creativity as control variables.

Future study: Future study is recommended by using longitudinal data. Innovation in telecommunication companies is very complex as well as necessary because it is affected by personal, environmental and organizational issues. Longitudinal research can calculate innovation with more precision and examine its processes, results and determinants systematically. Future research should be conducted by including the control variables such as age, gender, experience and education. In addition to demographic variables, some other variables can also be included in future study e.g., psychological job complexity (Farmer *et al.*, 2003) and individual team longevity (Eisenbeiß and Boerner, 2013) can have effect on employee's creative performance. This study only examined the Transformational leadership style and ignored the rest. Future research can be conducted to know that which Leadership style effects most Employee Creativity and Organizational Innovation. The results of this study can also be applied to other cultures with some cautiousness and future study for replicating these results in some other cultures can help to verify the validity (Zhou and Su, 2010).

Practical implications: Managers should practice Transformational Leadership behavior in order to boost creativity of employees and Organizational Innovation ultimately. This research revealed that innovation can be enhanced if employees are creative in the telecommunication industry. Leaders should create an environment where employees are encouraged to think

in new ways to embrace change. This study describes significance of TL in increasing innovation at organizational level, creativity at level of employees. So it suggests companies to promote and encourage Transformational Leadership. TL performs an imp role in assisting employees as well as organizations to renew, create and innovate.

As business world of telecommunication industry is confronting competition, employees having skills, experiences and abilities gained from different jobs are valuable assets for companies. Companies should retain and encourage such creative employees for bringing innovation in their products, processes and services.

CONCLUSION

These days Telecommunication technologies are the most dynamic technologies. If any such organization fails to innovate, most probably it will lose its customers. Findings suggest that Transformational Leaders and creative employees help an organization to be more innovative. Hence, organizations are required to create an environment where employees and leaders can exchange views and leaders do motivate all employees. All the hypothesis of this study have been supported.

This study add some more knowledge in literature surrounding Transformational Leadership, creativity and innovation by enlightening the extent to which Organizational Innovation is related with Transformational leadership through the employee creativity as a mediator.

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