

Transformational Leadership Promotes Innovation: Myth or Reality

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Abstract

Competitive advantage is essential for firm survival in this competitive environment. Innovation is vital to attain competitive advantage over competitors. Leadership plays an important role in affecting innovation. The main objective of this study is to investigate whether it is a myth or a reality that transformational leadership promotes innovation. Transformational leadership is conceptualized using five dimensions: individualized influence (attributed), individualized influence (behavior), inspirational motivation, intellectual stimulation, and individualized consideration. On the other hand, innovation is conceptualized as the firm's propensity to develop new or improved products. The relationship of transformational leadership and innovation is hypothesized as positive association. Cluster sampling technique is used to collect data. The data is collected from 400 manufacturing sector small and medium enterprises (SMEs) of Pakistan. Structural Equation Modeling (SEM) is applied to test the hypothesis. The results of the study demonstrate the existence of a positive significant influence of transformational leadership on innovation.

Keywords: Transformational Leadership, Innovation, SMEs, SEM

INTRODUCTION

Innovation is a vital antecedent in the competitive benefit of a firm (Woodman, Sawyer, & Griffin, 1993). Presently, SMEs are facing competitive environment featured by constant change, decreasing life cycles of products as well as globalization. For SMEs, innovation is necessary for further survival, growth, and competitiveness (Jung, Chow, & Wu, 2003; Tierney, Farmer, & Graen, 1999).

There are several definitions of innovation in the literature which include commonly accepted definition that refers to the proper and successful application of creative thoughts within a firm (Amabile, 1983, 1998; Amabile, Conti, Coon, Lazenby, & Herron, 1996). Therefore, innovation is a concept at the firm level (Oldham & Cummings, 1996).

Is it then a myth that transformational leadership augments innovation? Transformational leaders increase the behavioral hopes of their followers (Bass & Riggio, 2006) and search for followers' personal ideas, which then shift to the stage of goals and needs (Jung, 2001). Researchers have investigated the consequences of transformational leadership on the behavior of followers and firms in previous years (Dvir, Eden, Avolio, & Shamir, 2002; Howell & Avolio, 1993; Lowe, Kroeck, & Sivasubramaniam, 1996). The contradictory results of these researches are the motivation of this study. This article is the updated form of the study which is presented in 2nd International Conference on Innovation and Sustainability in Thailand.

Numerous researches state that transformational leaders authorize or empower their followers (Jung & Sosik, 2002; Jung et al., 2003). This research suggests that intrinsic motivation of workers and their views of the workplace climate, empowerment and innovation, are the primary factors resulting in creativity.

LITERATURE REVIEW

Major existing literature of leadership styles are related to innovation (McDonough, 2000; Van de Ven, 1986). Significant part of that literature helps to prove the myth of transformational leadership is positively related to innovation in firms, organizations, and business ventures (Kanter, 1983) as compared to transactional and laissez-faire styles of leadership (Manz, Bastien, Hostager, & Shapiro, 1989). Managers' views about their roles in the firms significantly affect the ability to foster that leadership style in firms.

Transformational Leadership: Burns (1978) initially defined the concept of 'transforming leadership' as both leaders and followers in advancing themselves to the elevated level of motivation and morality. Bass, (1985) further extended the work of Burns (1978) and introduced the concept of 'transformational leadership'. Bass studied this concept with psychological mechanism point of view and employed the word "transformational" in place of "transforming" as previously used (Burns, 1978). Bass (1985) was curious to study the psychological mechanism at the back of leaders' mind to affect followers or employees to transform their concepts, values, aspirations, perceptions, expectations and assessing the degree as well as leaders' efficacy. Because of sincerity, confidence, loyalty and other qualities, followers or employees exemplify their leader. For this purpose, Bass (1985) conducted a psychometric study by developing and validating a multifactor leadership questionnaire (MLQ). In this questionnaire, he introduced four measures or constructs of transformational leadership: first, idealized influence; second, intellectual stimulation; third, inspirational motivation; and fourth, individual consideration. Later on, Avolio & Bass (2004) refined this questionnaire and divided idealized influence in two parts; idealized influence (attributed) and idealized influence (behavior). Detailed explanations of these five elements are as follows.

First, idealized influence (attributed) is defined as leaders who display ethical and moral behaviors and perform as role models in front of followers or employees. Second, Idealized influence (attributed) is defined as followers who give respect to the leaders with the belief that leaders are defining standards for behaviors that followers could be motivated to imitate. It also includes leader's consistent and distinct understanding of direction and the extent of moral behavior. Bass and Riggio (2006) argued that clarification of future goals leads to leader's increasing commitment to achieve organization's objectives. Third, intellectual stimulation is defined as the extent to which leaders question the followers' basic assumptions, take risks and analyze the feasibility of followers' ideas. It fills the gap of confidence and trust among employees or followers and unlocks the doors of individual creativity among them (Bass, 1985). Leaders employing intellectual stimulation, anticipate that followers learn, experience, and develop themselves inside the groups and teams when they require support from leaders. Fourth, inspirational motivation can be referred to as the degree to which leaders express the vision and mission which appeals to the employees or followers. This appealing vision stimulate the employees or followers to work as it frequently engage elevated standard objectives and difficult tasks with constant encouragement of optimistic approach to attain organizational objectives. Fifth, through individual consideration (attributed) leaders consider the needs and requirements of followers or employees with open communication (Avolio, Bass, & Jung, 1999; Bass, 1985). Individuals and teams demand recognition and respect, hence admiration in their challenging tasks performance for intrinsic motivation. Due to these five unique factors of transformational leadership, various studies have argued it to be a myth.

Innovation: According to Woodman et al. (1993) innovation of firms is the production of important and constructive novel services as well as products in the perspective of firms. As a result, innovation of firms is the propensity of the firm to establish novel or enhanced services/products as well as its victory in delivering those services/products to the market. This perspective is compatible to Damanpour (1991) concept of innovation of product, the novel services and products to the marketplace (OECD, 2004: 64).

Transformational Leadership and Innovation: Transformational leaders increase innovation within the firm and the propensity of firms to innovate. Leaders' inspirational motivation as well as intellectual motivation plays vital role in bringing innovation in firms (Elkins & Keller, 2003). According to Howell and Higgins (1990), transformational leaders encourage creative thoughts within their firms; this performance reveals the winning function of transformational leaders. These leaders have clear vision that stimulate their followers, enhance their enthusiasm to do further than anticipations, and to further take on innovative perspectives in their job. According to Mumford, Scott, Gaddis, and Strange (2002), the consequential sharp stage of stimulation is probable to increase innovation of firms. Numerous experimental researches encourage this positive effect of leaders on innovation (Keller, 1992; Waldman & Atwater, 1994). These researches investigate the association of transformational leadership and innovation generally in research and development divisions and at the stage of project. A research of thirty two Taiwanese firms explored that transformational leadership positively and considerably associates with the innovation of firms as calculated by research and development expenditures with many patents over the last three years (Jung et al., 2003).

Transformational leadership can also have positive effect on the marketplace victory of innovations. Leaders who express a powerful vision of innovation and show an understanding of force as well as self-assurance will strive for marketplace victory of innovation (Jung et al., 2003). Foremost, professional workers may need more than conventional leader performance particularly in research and development settings where quality is the major criteria of performance, but not quantity (Keller, 1992). Consequently, this research is to analyze is it a reality or a myth that transformational leadership promote innovation of firms.

Methodology

Population

According to the Small and Medium Enterprises Development Authority (SMEDA) (2013), there are 2.5 million SMEs in Pakistan. According to Federal Bureau of Statistics, from provincial distribution perspective, 56% SMEs are located in Punjab, 28% in Sindh, 11% in KPK, and other 3% in Baluchistan and Islamabad. On the other hand, according to the Census of Manufacturing Industries (2005-06), there are 72 districts in Pakistan. Major clusters of SMEs are in ten districts namely, Lahore, Faisalabad, Karachi, Multan, Hyderabad, Sialkot, Gujarat, Sheikhpura, Gujranwala, and Quetta; seven districts are from Punjab.

Manufacturing SMEs are divided in different industry based on clusters i.e. textile, leather, surgical, food, and sports. These industries are not city-based.

Sample

Fifty six percent of total SMEs are located in Punjab, province of Pakistan; moreover seven out of ten top SMEs clusters are in Punjab. Thus, manufacturing SMEs is the target of this study. There are 15,159 SMEs registered with SMEDA in Punjab (Table 1). Following the cluster sampling technique as adopted by Khurram Bhutta, Rana, and Asad (2008), SMEs were selected from each cluster according to their percentage in total population. Table-1 also shows the number of SMEs taken from each industry for this study.

Textile is the leading manufacturing sector contribution in the GDP of Pakistan followed by Food and Beverages, and Leather (Economic Survey of Pakistan, 2013). Therefore, this study selected 950 firms (798 from six major industries and 120 from different small industries including carpet weaving, printing, chemical, and fan industries) as sample of the study. Moreover, textile and leather sectors are major manufacturing establishment industries and have substantial contribution in exports and employment. Textile sector contributes in exports and employment up to 24% to 21% respectively, followed by less contribution of food and surgical (metal, machinery, and equipment). Whilst sports sector has a great potential for contributing much more in exports, as shown in recent FIFA World Cup.

Table 1: Samples Distribution

Sr. No.	Industry	%	Firms
1	Textile	21	199
2	Leather/Footwear	14	134
3	Sports	12	114
4	Food & Beverages	19	180
5	Metal	8	76
6	Wood & Furniture	10	95
7	Others	16	152
Total		100	950

The city distribution of selected sample along with number of SMEs registered appears in Table 2. The data of registered SMEs were taken from the Chamber of Commerce listings, Punjab Directory of Industrial Establishments, and Jamal Yellow pages.

Table 2: Demographic Distribution of Sample

Cluster	No. of Firms	%
Lahore	4433	29
Faisalabad	2717	18
Sialkot	1993	13
Gujranwala	2927	19
Multan	1132	8
Gujarat	984	7
Sheikhupura	973	6
Total	15159	100

Data collection procedure

First, questionnaire is translated in Urdu, a national language of Pakistan with parallel meaning to English. SMEs top management, owners, and managers are targeted to fill the questionnaire. Questionnaire along with the description of study and assuring the confidentiality of both identity and results are delivered to the respondents. Finally, four hundred questionnaires were received with 42% response rate which could be fully utilized for analyses whilst those with incomplete information were discarded.

Measurements of Variables

Transformational Leadership

Multifactor Leadership Questionnaire (MLQ Form 5X-short) is used to measure transformational leadership. MLQ developed by Bass (1985) and refined by Avolio and Bass (2004) includes 20 items and ranging from “0=Not at all” to “4=frequent”. Transformational leadership is measured by five constructs; idealized influence-attributed, idealized influence-behavior, inspirational motivation, intellectual stimulation, and individualized consideration. Each construct is measured by four elements. Various researchers have used MLQ in Pakistan (Khan, Rehman, & Fatima, 2009; Nawaz & Bodla, 2010; Ryan & Tipu, 2013; Tipu, Ryan, & Fantazy, 2012) thus it is reliable for the context of Pakistan.

Innovation

Innovation is measured by the instrument which is developed by Zahra (1996). Innovation is measured by five items ranging from “1=Increased Significantly” to “5=Decreased Significantly”.

Results and Discussion

Structural equation modeling (SEM) is used to analyze the hypothesis by employing AMOS. Before analyzing the hypothesis, reliability and validity of every construct is measured (Wulf, Odekerken-Schröder, & Iacobucci, 2001). Reliability is measured by average variance extracted (AVE), construct reliability (CR), and Cronbach’s alpha. Likewise, validity is measured by construct validity (convergent and discriminant validity).

AVE and CR are computed employing CFA on the bases of formulas presented by Fornell and Larcker (1981) which confirm the reliability of the constructs; results are presented in Table-3. Both constructs used in this study have CR above 0.60 and AVE not less than 0.50 as suggested by Bagozzi and Yi (1988), recommending an additional help of constructs’ reliability. The values of Cronbach’s alpha of all constructs are more than 0.70 (Nunnally, 1978) thus confirming the reliability.

CFA is also employed to evaluate constructs validity. Bagozzi (1980) argued that construct validity is important to test a theory. Therefore, construct validity is assessed on the basis of GFI (Hsieh & Hiang, 2004) and discussed in the following section. Convergent validity is assured on the basis of high factor loadings (>0.50) of all factors (Anderson & Gerbing, 1988; Holmes-Smith, Coote, & Cunningham, 2006). Furthermore, AVE outputs give an additional support to convergent validity. Discriminant validity as suggested by Kline (2005) - correlation between factors in the measurement model is not below than 0.85 as reported in Table 3.

Table 3: Instrument Reliability

Variables		FL	AVE	CR	Cronbach's Alpha
TL	1	0.68	0.508	0.912	0.912
	2	0.72			
	3	0.7			
	4	0.67			
	5	0.7			
	6	0.7			
	9	0.69			
	14	0.76			
	15	0.75			
	20	0.75			
INN	21	0.68	0.562	0.773	0.771
	22	0.68			
	23	0.75			
	25	0.6			

Evaluation of Measurement Models (CFA): Phase-1

Following (Hair, Black, Babin, Anderson, & Tatham, 2006), this study uses two phase modeling; first building measurement model prior to structural model (Anderson & Gerbing, 1988) due to two reasons. First, this technique is recognized broadly; second, correct value of items reliability for every construct is carried out in two phases to be distinct from any relation of measurement and structural model (Hair et al., 2006).

Confirmatory factor analysis (CFA) is conducted employing AMOS 18.0. CFA is a statistical method which regards whether the amount of loadings and the factors of measure (indicator) variables on factors conform to anticipations (Kline, 2005). CFA is also argued to be an accurate method which makes easy the factorial properties test of the proposed measurement models, constructs, or measures applied in SEM (Hopwood & Donnellan, 2010; Thompson, 2004). Every measure or construct is individually examined in separate measurement model. Moreover, where the consequences are not found to be reliable with previously specified model was re-specified and reexamined (Hair et al., 2006). For every construct's measurement model it was estimated on the bases of uni-dimensionality, reliability and validity of the construct.

Transformational Leadership

Values for the fit of the model are portrayed in Table 4. Initially, there were 20 items to measure transformational leadership but due to low factor loading and for achieving fitness of the model, 10 items were deleted from the construct. The rest of the 10 items has above 0.5 factor loading, values of GFI, and CFI are 0.934 and 0.949 respectively. RMSEA and normed chi-square values are 0.085 and 3.884 respectively.

Table 4: Goodness-of-Fit Model Transformational Leadership

Transformational Leadership	GFI	CFI	RMSEA	Chi-Square
All items	0.821	0.839	0.112	5.983
Items 7,8,10,11,12,13,16,17,18,19 deleted	0.934	0.949	0.085	3.884

Innovation

Data is collected through five items but for assuring the fitness of measurement model, item number 40 is deleted as presented in Table-5. With the rest of the items (37, 38, 39, and 41), model for innovation fits to the data. Values of GFI, CFI, RMSEA, and chi-square are 0.982, 0.994, 0.055, and 2.194 respectively.

Table 5: Goodness-of-Fit Model Innovation

Innovation	GFI	CFI	RMSEA	chi-square/df
All items 37,38,39,40,41	0.878	0.939	0.134	8.129
Item 40 deleted	0.982	0.994	0.055	2.194

Analysis and Results of Structural Model: Phase-2

As Bollen (1989) argued that SEM helps pathways estimation among dependent (endogenous) variables and independent (exogenous) variables after reporting for measurement error. Normally, exogenous constructs have no single headed arrow indicating toward them. Though, all exogenous constructs require to be correlated while no relationships are assumed (Kline, 2005). In contrast, the endogenous constructs have minimum one single headed arrow guiding them. Single headed arrows denote a causal association or path and the arrows dearth defines that no association has been assumed. The error terms (r) denote because of constructs measurement they show and the parameter (z) defines in the structural model effecting from random errors which have not been clearly modeled. The paths values linking construct with a single headed arrow show standardized regression weights. Furthermore, the values showing on the borders of boxes show variance estimates and the values beside the double headed arrows show correlations.

The hypothesis that transformational leadership has positive association with innovation is analyzed in structural model. Structural model’s analysis is carried out by first analyzing the hypothesized model as portrayed in Figure 1. Results of model fitness are presented in Table 6. The hypothesis is analyzed in this model; results of the hypothesis are presented in Table 7.

Results of structural model (Figure 1) show the fitness of overall model. The values of GFI, CFI, RMSEA, and chi-sq/df show the fitness of model with the data.

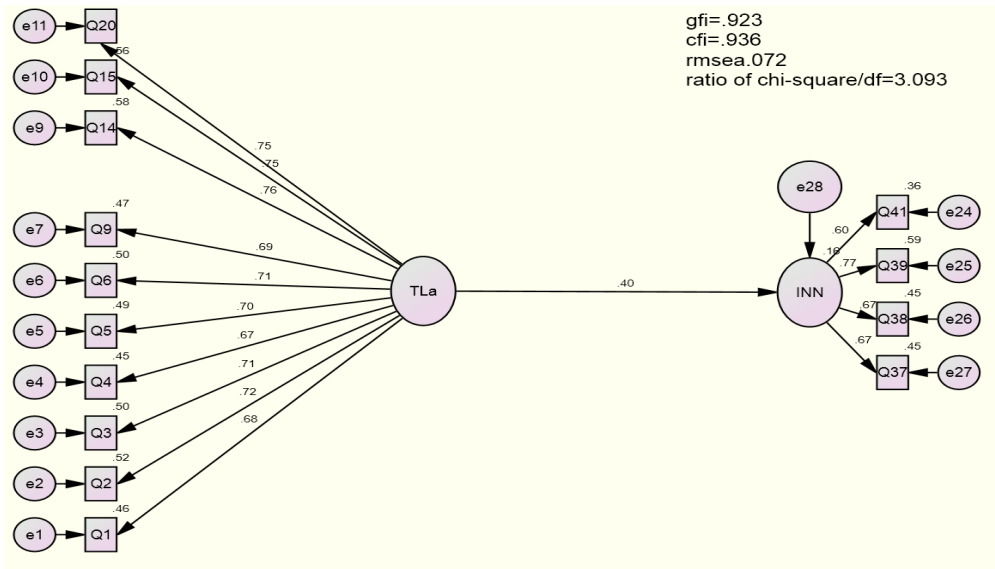


Figure 1: Structural Model

Table 6: Goodness-of-Fit Structural Model

Structural Model	GFI	CFI	RMSEA	ChiSq/df
Combining both variables	0.932	0.936	0.72	3.093

The results demonstrate that hypothesis is accepted at 0.001 therefore proving that it is a reality that transformational leadership promotes innovation. Its coefficient is 0.403 which means that one unit positive change in transformational leadership will lead to 0.403 units' positive change in innovation. García-Morales, Jiménez-Barrionuevo, and Gutiérrez-Gutiérrez (2012) and (Ryan and Tipu (2013)) also found positive effect of transformational leadership on organizational innovation.

Table 7: Hypothesis Testing

Paths	Direct	Result
TL→Innovation	0.403*	Accepted

Level of significance at 0.001

CONCLUSION

This study aims to find out whether transformational leadership promotes innovation or could it be a myth. The results of the study conclude the existence of a positive significant influence of transformational leadership on innovation of a firm. Results are consistent with previous studies like (Gumusluoglu & Ilsev, 2009; Ryan & Tipu, 2013) Further analysis reveals that firms with better level of transformational leadership had higher level of innovation as compared to the firms possessing low level of transformational leadership. Hence, results suggest a focus on transformational leadership to augment the level of innovation. However, it is also important to consider other factors like organizational culture, organizational learning, and its level of human capital to have better influence of transformational leadership on innovation. The study suggests firms to give transformational leadership apex position in

addition to also considering other factors for promoting innovation. Despite consistent results this study did not consider the role of absorptive capacity or knowledge management in the relationship of transformational leadership and innovation. Hence we recommend future studies to fill this gap.

References

- Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of personality and Social Psychology*, 45(2), 357-376.
- Amabile, T. M. (1998). *How to kill creativity*: Harvard Business School Publishing Boston, MA.
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management journal*, 39(5), 1154-1184.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411-423.
- Avolio, B. J., & Bass, B. M. (2004). *MLQ: Multifactor leadership questionnaire*: Mind Garden.
- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership. *Journal of occupational and organizational psychology*, 72(4), 441-462.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science*, 16(1), 74-94.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*: Free Press; Collier Macmillan.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*: Psychology Press.
- Bollen, K. A. (1989). *Structural equations with latent variables*. Series in probability and mathematical statistics: New York, Wiley.
- Burns, J. M. (1978). *Leadership*. NY: Harper & Row.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of management journal*, 34(3), 555-590.
- Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of management journal*, 45(4), 735-744.
- Elkins, T., & Keller, R. T. (2003). Leadership in research and development organizations: A literature review and conceptual framework. *The Leadership Quarterly*, 14(4), 587-606.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- García-Morales, V. J., Jiménez-Barrionuevo, M. M., & Gutiérrez-Gutiérrez, L. (2012). Transformational leadership influence on organizational performance through organizational learning and innovation. *Journal of Business Research*, 65(7), 1040-1050.
- Gumusluoglu, L., & Ilsev, A. (2009). Transformational leadership, creativity, and organizational innovation. *Journal of Business Research*, 62(4), 461-473.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (Vol. 6): Pearson Prentice Hall Upper Saddle River, NJ.
- Holmes-Smith, P., Coote, L., & Cunningham, E. (2006). Structural equation modeling: From the fundamentals to advanced topics. *Melbourne: SREAMS*.
- Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated? *Personality and Social Psychology Review*, 14(3), 332-346.

- Howell, J. M., & 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.
- Howell, J. M., & Higgins, C. A. (1990). Champions of technological innovation. *Administrative Science Quarterly*, 35(2), 317-341.
- Hsieh, Y.-C., & Hiang, S.-T. (2004). A study of the impacts of service quality on relationship quality in search-experience-credence services. *Quality control and applied statistics*, 49(6), 687-688.
- Jung, D. I. (2001). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal*, 13(2), 185-195.
- Jung, D. I., Chow, C., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *The leadership quarterly*, 14(4), 525-544.
- Kanter, R. M. (1983). *The change masters: Binnovation and entrepreneurship in the American corporation*: Touchstone Book.
- Keller, R. T. (1992). Transformational leadership and the performance of research and development project groups. *Journal of Management*, 18(3), 489-501.
- Khan, R., Rehman, A. U., & Fatima, A. (2009). Transformational leadership and organizational innovation: Moderated by organizational size. *African Journal of Business Management*, 3(11), 678-684.
- Khurram S. Bhutta, M., Rana, A. I., & Asad, U. (2008). Owner characteristics and health of SMEs in Pakistan. *Journal of Small Business and Enterprise Development*, 15(1), 130-149.
- Kline, R. B. (2005). *Principles and practice of structural equation modelling* (2nd ed.): New York: The Guilford Press.
- Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly*, 7(3), 385-425.
- Manz, C. C., Bastien, D. T., Hostager, T. J., & Shapiro, G. L. (1989). Leadership and innovation: a longitudinal process view. In A. Van de Ven, H. L. Angle, & M. Poole (Eds.) *Research on the management of innovation: The Minnesota studies*. New York: Harper & Row.
- McDonough, E. F. (2000). Investigation of factors contributing to the success of cross-functional teams. *Journal of product innovation management*, 17(3), 221-235.
- Mumford, M. D., Scott, G. M., Gaddis, B., & Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. *The leadership quarterly*, 13(6), 705-750.
- Nawaz, M. M., & Bodla, M. A. (2010). Comparative study of full range leadership model among faculty members in public and private sector higher education institutes and universities. *International Journal of Business and Management*, 5(4), 208-214.
- Nunnally, J. (1978). *Psychometric Theory* (2nd ed.): New York: McGraw-Hill.
- Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management journal*, 39(3), 607-634.
- Ryan, J. C., & Tipu, S. A. (2013). Leadership effects on innovation propensity: A two-factor full range leadership model. *Journal of Business Research*, 66(10), 2116-2129.
- Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications*: American Psychological Association.
- Tierney, P., Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology*, 52(3), 591-620.

- Tipu, S. A. A., Ryan, J. C., & Fantazy, K. A. (2012). Transformational leadership in Pakistan: An examination of the relationship of transformational leadership to organizational culture and innovation propensity. *Journal of Management & Organization*, 18(04), 461-480.
- Van de Ven, A. H. (1986). Central problems in the management of innovation. *Management science*, 32(5), 590-607.
- Waldman, D. A., & Atwater, L. E. (1994). The nature of effective leadership and championing processes at different levels in a R&D hierarchy. *The Journal of High Technology Management Research*, 5(2), 233-245.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of management review*, 18(2), 293-321.
- Wulf, K. D., Odekerken-Schröder, G., & Iacobucci, D. (2001). Investments in consumer relationships: a cross-country and cross-industry exploration. *Journal of marketing*, 65(4), 33-50.
- Zahra, S. A. (1996). Governance, ownership, and corporate entrepreneurship: The moderating impact of industry technological opportunities. *Academy of management journal*, 39(6), 1713-1735.