ATLANTIS PRESS
Advances in Social Science, Education and Humanities Research, volume 322
2nd International Seminar on Education Research and Social Science (ISERSS 2019)

Transformational Leadership and Individual Creativity: an Integrated Approach of Empowerment as a Mediator

Salem Mohamed A. Mansur
School of Economics and Management
Beihang University, Beijing, China
HTIs, Gasser Ben Ghachir, Libya
salemalmashi2015@yahoo.com

Guozhu Jia
School of Economics and Management
Beihang University, Beijing, China
jiaguozhu@buaa.edu.cn

***Abstract*—the present study aimed to build a theoretical model for the causal relationship between the variables of the study and verifying the validity of the proposed model by examining the direct and indirect impact of transformational leadership (TLS) on individual creativity and whether, integrating of structural and psychological empowerment acts as a mediating strength this relationship. Consequently, to investigate these relationships, a survey was conducted of 429 faculty members from Higher Institutes of Technology in western Libya. The researcher used four measures to measure the variables of the study: TLS, structural empowerment, psychological empowerment, and individual creativity. Accordingly, the results of mediating and path analysis indicated that both structural empowerment and psychological empowerment separately, each playing a partial mediation role in the relationship between TLS and individual creativity. Moreover, the main hypothesis of the model has been tested, whether the integration of structural and psychological empowerment plays the mediating role and promoting the relationship of TLS to individual creativity. The results proved that TLS was strongly associated with individual creativity. In addition, the results also showed that the integrated approach of empowerment mediated and strengthened this relationship further than in the case of mediation via both of structural empowerment or psychological empowerment. In conclusion, this study represented an attempt to investigate TLS and its impact on individual creativity in the higher education institutions in a non-Western country. Also, this study sought to broaden the general understanding of the TLS concept and how its relevance with many other variables, as the individual's creative performance and integrated approach of empowerment.**

Keywords*—Transformational Leadership; Empowerment approaches; Structural Empowerment; Psychological empowerment Individual creativity; higher technical institutes; Libya

I. INTRODUCTION AND BACKGROUND

There is no doubt that the development, organization is a continuous and renewed process in organizations, imposed by the dynamic environment which develops by rapid pace led to creating a competitive atmosphere in the goods and services market. Accordingly, the theories of management, leadership, and behavioral sciences have also evolved to keep pace with this development and adapt with this change. Moreover, the axis of these processes is the human element, which represents at the same time the ends and means. Therefore, the human element is a key component of the organization, if they are dealt with better, which means we have set ourselves on the right path towards excellence and creativity. Nevertheless, it is not easy dealing with human resources issues, it requires understanding and knowledge of human behavior and how to influence and guide them to achieve the organization's goals, which represent their personal goals as an integral part of its goals. Therefore, the leaders have important role in the success or failure of the institutions which they lead through their ability to articulate and convince their subordinates of the institution's objectives, develop and implement strategies to make the institution competitive. In this regard, many studies have confirmed that the TLS is very suitable to play this role; he understands his subordinates well and is able to lead them towards achieving the common goals through his distinctive characteristics that make him a role model among his subordinates. Ordinarily, TLS motivates his subordinates to achieve the organization goals, through four dimensions: (1) idealized influence, refers to the moral influence of the leader's behavior on his subordinates (2) intellectual stimulation, refers to the methods used by the TLS to enhance the creativity of their subordinates by encouraging them to find innovative new solutions to problems without criticizing their mistakes in front of others, (3) individual consideration, refers to the attention and support leader's give their subordinates, (4) inspiring motivation, refers to encouraging and motivating their subordinates to challenge their work assignments and demonstrate their ability[1]. However, TLS may be can enhance his performance and the performance of his subordinates by adopting other mechanisms such as structural empowerment and psychological empowerment, in order to give his subordinates a wider margin of freedom of access to resources, exchange of information, consultation and to make decisions about the performances of their work and sense that they are influential in the organization and have confidence in their ability to accomplish their work and develop their performance. These mechanisms, if adopted by the TLS will enhance their role and make their subordinates more stable both in terms of functional and psychological, thus introducing ideas and propose new solutions to problems and outstanding performance, it's essential steps towards creative performance.

In the context of the direct relationship between TLS and creativity, some studies found a positive relationship by influencing the personal values of subordinates, which led to better performance [2, 3, 4]. On the other hand, it may be possible for TLS improve its performance and enhance its role by using mediation variables such as structural empowerment, psychological empowerment, organizational learning, job satisfaction or other variables. In this study, we will examine the relationship between TLS and individual creativity by integrating structural empowerment and psychological empowerment as a mediator variable. Some previous studies have called the process of integrating both structural empowerment and psychological empowerment as "process empowerment". A number of researchers have called for adoption of this concept of empowerment as an integrated approach to empowerment [5, 6]. Consequently, in line method of Baron & Kenny [7] for mediation analyses, our study hypothesized the following hypotheses:

H1: TSL positively associated with structural empowerment.

H2: TSL positively associated with psychological empowerment.

H3: SE is positively associated with individual creativity.

H4: PSE is positively associated with individual creativity.

H5: TSL is positively associated with individual creativity.

H6: The integrated approach of empowerment mediates the relationship between transformational leadership and individual creativity.

II. METHOD

Four types of reliable questionnaires were used to gather the necessary information related to the constructs of the study, Pass & Avello questionnaire (MLQ), to measure transformational leadership [8], Laschinger questionnaire for structural empowerment [9], Spreitzer questionnaire for psychological empowerment [10], Tierney & Farmer questionnaire for individual creativity [11,12]. All variables in the model were measured using Likert type scale, ranging of five points from 1 (strongly disagree) to 5 (strongly agree).

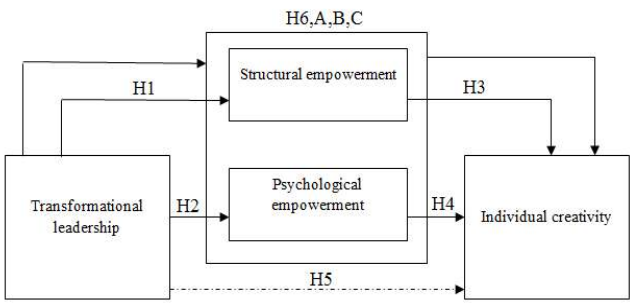

Fig. 1. Conceptual model of the study

The sample included 429 faculty members (57 females and 372 males) from Higher Institutes of Technology in western Libya. The model was tested according to the steps of Baron and Kenny for mediation analysis as well as simple and multiple linear regression have been employed. Figure 1 illustrates the conceptual framework.

III. RESULTS

All statistical analyses were performed using the Statistical Package SPSS, version 23. Table1 presents summaries of descriptive statistics, Cronbach alphas and correlation coefficients of the variables. The results showed that most correlation coefficients did not exceed 80%; this enhances the certainty degree of the variables autonomy and no threat of collinearity and confirming their validity for regression analysis [13]. Moreover, all the variables were significantly positively correlated with each other. Thus, the first condition for the prediction and the initial verification of the proposed causal model has been achieved.

TABLE I. SD, CRONBACH ALPHAS AND CORRELATION MATRIX

Variables	Mean	S .D	1	2	3	4
Transformational leadership. TSL	2.9	.66**	(.94)			
Structural empowerment. SE	3.2	.72**	.556**	(.91)		
Psychological empowerment. PSE	3.0	.65**	.769**	.508**	(.72)	
Individual creativity. IC	3.8	.41**	.507**	.452**	.53**	(.77)
α coefficients are presented on the diagonal in the parentheses. *** < 0.01.						

As we mentioned, the method suggested by Baron and Kenny was followed to test the hypotheses. Regression analysis results for assumptions 1- 4 are displayed in Table 2.

TABLE II. REGRESSION ANALYSIS, H1,H2, H3,H4

Dep. V	Ind.v	β	T	R^2	R^2 adj	F
(SE) Equation 1	***TLS***	.556	13.83	.309	.308	191.35
(PSE) Equation 2	***TLS***	.769	24.87	.592	.591	618.51
(IC) Equation 3	***SE***	.452	10.47	.205	.203	109.80
(IC) Equation 4	***PSE***	.532	12.98	.283	.281	168.48
(Dep. V) Dependent Variable, (Ind. V) Independent Variable. $p < .01$.						

Hypothesis 1 predicted that transformational leadership is positively associated with structural empowerment. We can see that the TLS, is a significant predictor to structural empowerment, *($\beta = .556, p < .01$), $R^2 = 0.399$* which indicates that TLS, has a significant association with structural empowerment. In other words, TLS can explain 39.9% of the total variation in the structural empowerment. Based on these results, hypothesis 1 is supported.

Our second hypothesis predicted that TLS is positively associated with psychological empowerment. The findings show that TLS is a significant predictor of the psychological empowerment, *($\beta = .769, p < .01$), $R^2 = 0.592$*, this means TLs explains 59.2% of the variance in psychological empowerment. Based on this result, hypothesis 2 is supported.

The third hypothesis expected that structural empowerment is positively associated with individual creativity.

The results indicated that structural empowerment significantly and positively affects individual creativity *($\beta = .452, p < .01$)*. Equally important, the $R^2 = 0.205$. This means that the structural empowerment explains 20.5% of the individual creativity variation. Hence, the relationship is confirmed.

Hypothesis four predicted that psychological empowerment is positively associated with individual creativity. The results showed psychological empowerment had a positive and significant influence on individual creativity, *(β = .532, p < .01), R²* = 0.281, this means psychological empowerment explains 28.1% of the variance in individual creativity. Based on the result, hypothesis 4 is supported. Moreover, the results indicated that TLS, directly significantly and positively affects individual creativity *(β = .507, p < .01)*. Equally important, *R²* = 0.257, this means that the TLS explains 25.7% of the individual creativity variation. Thus, hypothesis 5 is supported.

This study developed a conceptual model to suggest that, both structural empowerment and psychological empowerment together act as a mediator to strengthen the relationship between TLS, and creative performance of subordinates. To test the study's model, the current study followed the method steps of Baron and Kenny. The results of first and second hypothesis tests achieved the first condition of mediation, that the independent variable should be related directly to the mediating variables (equations 1, 2).

In the same way, the results of third and fourth hypothesis tests achieved the second condition of mediation, that the mediating variables should be related directly to the dependent variable (equations 3 and 4). Similarly, the results of the fifth hypothesis test achieved the third condition of mediation that, the independent variable should be having direct and significant relationship with the dependent variable (table 3 equation 1).

The last step of the mediation test is conducting the regression analysis test for all model variables (independent variables, mediation, and dependent variable) in the same equation. The mediation test was conducted for examining the effect structural empowerment in the second equation, and psychological empowerment in the third equation, as well as for both together in the fourth equation.

The main purpose of conduct the second and third regression equation was to compare the effect of mediation in these equations with the mediation of the two variables together in the fourth equation, Table 3 shows the results. We can see that, when the mediation variables have been added to the regression equations, the β value of TLS, decreased in equation 2 *(β = .507 P< .01)* to *(β =.369 P< .01),* equation 3 *(β =.507 P< .01)* to *(β=.239 P< .01),* equation 4 from *(β=.507 P< .01)* to *(β =.153 P< .05).*

However, the β value of TLS is still significant. This indicates that all mediation variables, structural empowerment in equation 2, psychological empowerment in equation 3, structural and psychological empowerment together in equation 4 partially mediated the relationship between TLS and individual creativity.

TABLE III. REGRESSION ANALYSIS, H5,H6

Model		B	T	R	R²	R² adj	F
1	***TLS***	.507**	12.142**	.507	.257	.255	147.425**
Equation 2 : Structural empowerment as a mediating							
2	***TLS***	.369**	7.563**	R = .547, R² = .299 , R² adj = .295			
	SE	.247**	5.056**	F = 90.733** ΔR² = .042			
Equation 3: Psychological empowerment as a mediating							
3	***TLS***	39**	.2 3.780**	R = .553 , R² = .306, R² adj = .303			
	PSE	.348**	5.516**	F = 94.007** ΔR² = .050			
Equation 4: Mediation Test for Overall Model							
4	***TLS***	.153*	2.360*	R = .580 , R² = .336, R² adj = .332			
	SE	.211**	4.392**				
	PSE	.307**	4.907**	F = 71.790** ΔR² = .080			
p < .05. **p < .01. Independent (TLS), Dependent Individual Creativity (IC)							

By reference to the study model, Figure 1 we observe four paths; a direct path and three indirect paths, all paths have statistically affected individual creativity. The direct relationship interprets 25.7% of the total variation in individual creativity. However, the indirect path via structural empowerment interprets 29.9% of the total variation in individual creativity. As well as the second indirect path via psychological empowerment interprets 30.6.1% of the total variation in individual creativity. Finally, the third indirect path via both the structural empowerment and psychological empowerment, which represents the primary objective of the study, this mediating has interprets 33.6% of the total variation in individual creativity. Based on these results, the model of the study has been completely supported.

IV. DISCUSSION

The purpose of the study was testing a model of an integrative approach of empowerment that examines the relationship between TLS and individual creativity via the structural empowerment and psychological empowerment.

In the first stage, we tested the basic hypotheses necessary to verify the validity of the model to conduct the mediation test according to [7] method. The results showed the availability of all the conditions of the mediation by supporting the relationship between each of the mediation variables; structural and psychological empowerment with individual creativity as a dependent variable (H, 3, 4).

Our results also supported that TLS has a significant positive influence of mediation variables structural and psychological empowerment (H, 1, 2). Our results also indicate that TLS is associated with a positive relationship with individual creativity. Hence, the findings are consistent with other similar research results [14]. After the conditions of the mediation test were verified. The final step was the examination of the mediation analysis. In the first stage was entered structural empowerment as a mediating in the

relationship between TLS and individual creativity. In the second stage, was entered psychological empowerment as a mediating and in the final stage, structural and psychological empowerment together was entered as a mediating.

The outcome of the regression analysis showed four values of determination coefficient *(R^2)* for four different paths. According to the mediating results illustrated that the direct path explains 25.7% of the variance of individual creativity. This path is weaker than the three indirect paths, because the leaders in the indirect path do not give enough attention to aspects of structural empowerment and psychological state of the subordinates. While the second indirect path identified the relationship TLS with individual creativity via structural empowerment, *(R^2 = .29.9)*, and the third path via psychological empowerment, *(R^2 =.30.6)*. Moreover, the fourth indirect path identified the relationship via structural empowerment and psychological empowerment, *(R^2 =.33.6)*. As well as the Beta value in the three indirect paths were decreased of its value in the direct path, however it remained significant, which meant that empowerment partly mediating the relationship between TLS and the creative performance of subordinates, So the results of this study proved that the integrated approach of empowerment strengthens the relationship between TLS and creative performance of subordinates.

V. CONCLUSION

The current study was designed to examine and test the mediation of an integrated model to enable subordinates between transformational leadership and individual creativity. According to the study's findings, the transformational leader is positively associated with structural and psychological empowerment. Consequently, he directly influences the creative performance of individuals. Not only that, but the transformational leader can enhance his role by pushing his subordinates for more creative work and achieve results that exceed expectations, either through structural empowerment or through psychological empowerment. Accordingly, the results of mediation analysis showed that structural and psychological empowerment is partially mediating the relationship between TLS and individual creativity and that both separately enhance the role of transformational leader to increase the level creativity of their subordinates. Despite, the positive role played by structural or psychological empowerment in enhancing the role of transformational leadership, the integrated approach of empowerment is remaining preferable based on the variation amount which can be explained in the dependent variable. Where, the results showed that an integrated approach of empowerment partially mediating the relationship between transformational leadership and creativity. Therefore, the transformational leadership role can be enhanced when the transformational leader uses both structural and psychological empowerment as a mechanism to support his efforts to achieve creative performance by creating environmental and psychological conditions that motivates his subordinates to think outside the box to find original solutions to the problems of work and thereby achieve creative performance on the individual level, which represents a fundamental step towards organizational innovation.

REFERENCE

[1] Laohavichien, T., Fredendall, L., & Catrell, R. (2009). The effects of transformational and transactional leadership on quality improvement The Quality Management Journal, 16(2), 7-24.

[2] Puccio, Gerard J., Marie Mance, and Mary C. Murdock. Creative leadership: Skills that drive change. Sage Publications, 2010.

[3] Denti, L. and Hemlin, S., 2012. Leadership and innovation in organizations: A systematic review of factors that mediate or moderate the relationship. International Journal of Innovation Management, 16(03), p.1240007.

[4] Carmeli, Abraham, Roy Gelbard, and Roni Reiter-Palmon. "Leadership, creative problem-solving capacity, and creative performance: The importance of knowledge sharing." Human Resource Management 52.1 (2013): 95-121.

[5] Matthews, R. A.,Diaz,W. M.,&Cole, S.G. (2003).The organizational empowerment scale. Personnel Review, 32(3), 297–318.

[6] Francescato, D., & Aber, M. S. (2015). Learning from Organizational theory to Build Organizational Empowerment. Journal of Community Psychology, 43(6), 717-738.

[7] Baron, R.M. and Kenny, D.A., 1986. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), p.1173.

[8] Bass BM, Avolio BJ. MLQ: multifactor leadership questionnaire: technical report, leader form, rater and scoring key for MLQ (Form 5x-short). Redwood City: Mind Garden; 2000.

[9] Laschinger, Heather K. Spence, et al. "Impact of structural and psychological empowerment on job strain in nursing work settings: expanding Kanter's model." Journal of nursing Administration 31.5 (2001): 260-272.

[10] Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. Academy of management Journal, 38(5), 1442 - 1465

[11] Tierney, Pamela, Steven M. Farmer, and George B. Graen. "An examination of leadership and employee creativity: The relevance of traits and relationships." Personnel psychology 52.3 (1999): 591-620.

[12] Hult, G. Tomas M., Robert F. Hurley, and Gary A. Knight. "Innovativeness: Its antecedents and impact on business performance." Industrial marketing management 33.5 (2004): 429-438.

[13] Hair, Joseph F., et al. Multivariate data analysis. Vol. 5. No. 3. Upper Saddle River, NJ: Prentice hall, 1998.

[14] Herrmann, Daniel, and Jrg Felfe. "Moderators of the relationship between leadership style and employee creativity: the role of task novelty and personal initiative." Creativity Research Journal 25.2 (2013): 172-181.