

The Impact of Transformational Leadership on Employee Creativity and Organizational Innovation: The Moderating Effect to Intrinsic Motivation

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Abstract: Organizational innovation is an important issue for companies to adapt to the changing external environment, improve the competitiveness of the organization, and achieve growth. This study aims to assess the impact of transformational leadership style and employee creativity with organizational innovation, as well as the moderating role of intrinsic motivation. One of the key skills for the growth of contemporary companies is creativity and innovation, which can boost an organization's sense of identity and job satisfaction in addition to providing significant financial advantages. However, it is difficult to maintain innovation and competitive advantage in the quickly evolving business environment of today. Thus, an important area of research in organizational management is how to enhance employee creativity and organizational innovation.

Keywords: Organizational Innovation; Transformational Leadership; Employee Creativity; Intrinsic Motivation.

1. Introduction

In today's global business environment, organizations face increasingly complex and uncertain challenges. Globalization, technological innovation, and increased competition in the marketplace require organizations to constantly adapt and innovate in order to maintain a competitive advantage and achieve success. In this environment of accelerating change, effective leadership has become one of the key factors influencing employee creativity and organizational innovation.

Transformational leadership is widely recognized as having a positive impact on employee creativity and organizational innovation by virtue of its ability to inspire, motivate, and guide employees. In the current research field, a number of scholars have explored the relationship between transformational leadership, intrinsic motivation, employee creativity and organizational innovation in depth and provided useful theoretical and empirical support. Many studies have shown that transformational leadership has a positive impact on employee creativity, and that transformational leadership can facilitate the demonstration of creative thinking and innovative behaviors by stimulating employees' motivation and capabilities. There are also findings that show no significant relationship between transformational leadership and organizational innovation, and relatively little research has been conducted on intermediate variables. Therefore, the significance of this study is to complement empirical research on the relationship between transformational leadership, intrinsic motivation, employee creativity and organizational innovation.

2. Objectives

The general objective of the study is to examine the impact of transformational leadership on employee creativity and organizational innovation, with a focus on the mediating role of intrinsic motivation.

3. Materials and Methods

3.1. Research Design

This study used descriptive method because it is the most applicable to use in analyzing and interpreting the data gathered through adopted questionnaires. It is suitable for the study because the researchers are very much invested in exploring the impact of transformational leadership on employee creativity and organizational innovation and to investigate the moderating role of intrinsic motivation in this.

3.2. Respondents of the Study

The respondents were the 98 regular employees of cloud gaming company in Beijing, China. Simple random sampling is a design method used to determine the population of the target respondents. A number is allocated to each respondent in the sample, and the sample is selected randomly.

3.3. Data Gathering Instrument

In this study, variable organizational innovation, questionnaire was adopted from Ouakouak and Ouedraogo (2017). In describing transformational leadership, variables idealized influence, inspirational motivation, intellectual stimulation, and individual consideration was adopted from the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1997). According to Awamleh and Gardner (1999) the MLQ has been widely used and recognized as a valid measure of transformational leadership. For variable employee creativity, questionnaire was adopted from Zhou and George (2001) and for variable intrinsic motivation, questionnaire was adopted from Tierney et. al, (1999).

4. Results and Discussion

4.1. Assessment on Organizational Innovation

The table provides descriptive statistics on the variables tested for the different aspects of organizational innovation, including the mean scores for each as well as the composite mean score.

Table 1. Assessment on Organizational Innovation

Organizational Innovation	Mean	Interpretation
1. My organization has increased improvements in product design / services.	4.00	High
2. My organization reduced the time to develop new products/services.	3.93	High
3. My organization increased the rate of introduction of new products/services to the market.	3.86	High
4. My organization has reduced the costs incurred for new products/services.	3.78	High
5. My organization increased the percentage of revenue generated from new products/services.	4.09	High
Composite Mean	3.93	High

Respondents agree that organizations have increased the proportion of revenues derived from new products and services with a mean score of 4.09. This result is in line with studies that positively correlate innovation with economic performance Omar (2019). Also, respondents generally agreed that the organization has improved in terms of product design and services with a mean score of 4.00. This high score reflects the positive impact of innovation on product quality and is consistent with the emphasis in the literature that innovation is associated with product quality improvement Prajogo & Ahmed (2007).

In addition, respondents also agreed that the organization has been successful in reducing the time required to develop new products and services with the mean score of 3.91, as well as increasing the speed at which new products and services are brought to the market with the mean score of 3.85, suggesting that the organization has demonstrated efficiency and flexibility in the innovation process. However, in terms of reducing the cost of new products/services, the mean score of 3.78, although still positive, the relatively low score may indicate that there is still room for improvement in terms of cost. This is in line with some studies that point out that innovation may increase costs Encaoua (2006).

4.2. Assessment on Idealized Influence

Table 2. Assessment on Idealized Influence

Idealized Influence	Mean	Interpretation
1. I instill pride in others for being associated with me.	3.77	High
2. I go beyond self-interest for the good of the group.	3.95	High
3. I act in ways that build others' respect for me.	3.98	High
4. I display a sense of power and confidence.	4.33	High
5. I talk about my most important values and beliefs.	4.45	High
6. I specify the importance of having a strong sense of purpose.	4.53	Very High
7. I consider the moral and ethical consequences of decisions.	4.30	High
8. I emphasize the importance of having a collective sense of mission.	4.41	High
Composite Mean	4.21	High

In specific items, the respondents emphasized the importance of having a strong sense of purpose with the mean score of 4.53 and interpreted as very high. This suggests that respondents focus on shared vision and goals in their

leadership, which is consistent with the idea in idealized influence theory that leaders influence their teams by modeling shared vision and goals Adnan (2019). In addition, respondents talked about their most important values and beliefs with a mean score of 4.44, indicating that respondents valued shaping a positive organizational culture by sharing core values and beliefs with their teams.

However, it is worth noting that the item I make others proud to be associated with me had a relatively low mean score of 3.77. This may indicate that there is room for further improvement in this area and that more communication and team building activities may be needed to enhance employees' sense of relatedness to their leaders.

4.3. Assessment on Inspirational Motivation

Table 3. Assessment on Inspirational Motivation

Inspirational Motivation	Mean	Interpretation
1. I talk optimistically about the future	4.46	High
2. I talk enthusiastically about what needs to be accomplished.	4.54	Very High
3. I articulate a compelling vision of the future.	4.49	High
4. I express confidence that goals will be achieved.	4.56	Very High
Composite Mean	4.51	Very High

In the assessment on inspirational motivation, it shows that leaders have had significant success in motivating their teams. With an overall composite mean score of 4.51, which means leaders excel in inspirational motivation. Expressing confidence in achieving goals with the mean score of 4.56 being the highest mean shows that it reflects the leader's success in motivating the team through a confident attitude. On the other hand, talking optimistically about the future was relatively low with the mean score of 4.46 and interpreted as high. This may suggest that there are still some improvements in the leader's future outlook and that emphasizing a positive future vision will help to further inspire confidence and motivation in the team.

4.4. Assessment on Intellectual Stimulation

Table 4. Assessment on Intellectual Stimulation

Intellectual Stimulation	Mean	Interpretation
1. I re-examine critical assumptions to questions whether they are appropriate.	4.13	High
2. I seek differing perspective when solving problems.	4.15	High
3. I get others to look at problems from many different angles.	4.04	High
4. I suggest new ways of looking at how to complete assignments.	4.09	High
Composite Mean	4.10	High

It shows that leaders excel in stimulating creative thinking and problem-solving skills in their teams. With an overall composite mean score of 4.10 which means that leaders had significant success in intellectual stimulation. In particular note, seeking out different perspectives when solving problems got the highest mean with 4.15 and interpreted as high that reflecting leaders' encouragement of teams to embrace a diversity of perspectives while challenging the team's traditional way of thinking about problems. On the other hand, getting others to look at problems in different angles got the lowest mean with 4.04, this suggests that respondents should be able to look on other perspective when having a problem in the company.

These results are consistent with the core idea of intellectual stimulation theory, which states that leaders stimulate creative thinking and problem solving in their teams by challenging the way the team thinks, encouraging a diversity of perspectives, and presenting novel ideas. Research has pointed out that leader's innovation push has a significant impact on team innovation and performance Agyemang (2017).

4.5. Assessment on Individual Consideration

It is observed that leaders had significant success in focusing on individual needs and development with the overall composite mean score of 4.23, which means that leaders excel in personal attention. As shown in the table above, having a highest mean of 4.43 and interpreted as high that helping others develop their strengths reflects that leaders focus on the development of individuals and support them in fully utilizing their individual strength.

Table 5. Assessment on Individual Consideration

Individual Consideration	Mean	Interpretation
1. I seek differing perspective when solving problems.	4.42	High
2. I treat others as individuals rather than just a member of a group.	3.92	High
3. I consider an individual as having different needs, abilities, and aspirations from others.	4.14	High
4. I help others to develop their strengths.	4.43	High
Composite Mean	4.23	High

Although the mean score for viewing others as individuals and not just part of a team was relatively low with the mean of 3.92 and interpreted as high. This may suggest that there is some room for improvement for leaders to further emphasize the importance of each individual on the team by emphasizing individual uniqueness.

4.6. Assessment on Employee Creativity

Table 6. Assessment on Employee Creativity

Employee Creativity	Mean	Interpretation
1. I am willing to come up with new practical ideas to improve performance.	4.19	High
2. I am willing to search for new processes, procedures, techniques or product ideas.	3.99	High
3. I enjoy coming up with new ways to improve the quality of my work.	4.12	High
4. I often have a good source of ideas.	4.04	High
5. I like to take a creative approach to solving problems.	4.08	High
Composite Mean	4.09	High

It shows that employees generally show positive and creative thinking. The overall composite mean score of 4.09 indicates that employees are willing to demonstrate innovation and creativity at work. Willingness to come up with new practical ideas to improve performance got the highest mean with 4.19 and interpreted as high that willingness will continually improve the performance

Table 8. Significant Effect of Transformational Leadership to Organizational Innovation

Organizational Motivation	B	Std. Error	t-value	p-value	Decision on H ₀	Inter-pretation
Constant	3.076	0.587	5.239	<0.001	Reject	Significant
Transformational Leadership	0.200	0.137	1.460	0.148	Failed to Reject	No Significant Effect

Model Summary: R = 0.147; R² = 0.022
 Regression Model: F = 2.132; p = 0.148

through innovative ways.

However, the willingness to look for new process, procedure, technology, or product ideas got the lowest mean with 3.99 and interpreted as high, it may suggest that employees are relatively cautious about embracing new ways of working. Leaders can help employees be more open to new ideas and approaches by encouraging an open innovation culture and providing support.

These results are consistent with the core theory of innovation management, which states that employees' creative thinking has a positive impact on organizational innovation and performance Amabile (1996); Scott & Bruce (1994). Leaders can further stimulate employees' creative thinking by creating positive work environments and providing incentives that lead to greater organizational success in innovation.

4.7. Assessment on Intrinsic Motivation

Table 7. Assessment on Intrinsic Motivation

Employee Creativity	Mean	Interpretation
1. I enjoy finding solutions to complex problems.	4.01	High
2. I enjoy coming up with new ideas for production.	4.09	High
3. I enjoy engaging in analytical thinking.	4.19	High
4. I enjoy creating new procedures for work tasks.	4.06	High
Composite Mean	4.09	High

In the assessment on intrinsic motivation in Table 8, shows that employees show significant intrinsic motivation for tasks such as solving complex problems, coming up with new ideas, thinking analytically, and creating new procedures. The overall composite mean score of 4.09 indicates that employees have a positive attitude towards these challenging and creative tasks.

In particular interest, showed the highest interest in the task of performing analytical thinking with the mean of 4.19 and interpreted as high, that reflecting their satisfaction with tasks that require thoughtfulness and analysis. However, the lowest mean with 4.01 and interpreted as high for finding solutions to complex problems may suggest that employees have relatively low levels of intrinsic motivation when faced with complex problems. Leaders can motivate employees in solving complex problems by providing support and encouragement.

These results fit with the theory of intrinsic motivation and the theory of task characteristics, which suggests that employees exhibit higher levels of intrinsic motivation when they perceive their work to be challenging, creative, and analytical in character Teirney (1999); Cooper (1973). Leaders can further stimulate intrinsic motivation by designing work tasks, providing challenging work environments, and recognizing employees' contributions to innovative tasks.

4.8. Transformational Leadership Significantly Affect Organizational Innovation

The coefficient of transformational leadership is 0.200 however, the t-value 1.460 associated with this coefficient is not statistically significant at the >0.05 level ($p = 0.148$). Therefore, the null hypothesis (H_0) is failed to reject, indicating that transformational leadership has no significant effect on organizational innovation. The R-squared value of 0.022 indicates that the proportion of the variance of the dependent variable is explained by the independent variables and transformational leadership can only explain 22% of the variance of organizational innovation.

Table 9. Employee Creativity mediate the effect of Transformational Leadership to Organizational Innovation

<i>Employee Creativity</i>	B	Std. Error	t-value	p-value	Decision on H_0	Interpretation
Constant	3.707	0.670	5.535	<0.001	Reject	Significant
Transformational Leadership	0.090	0.157	0.572	0.568	Failed to Reject	No Significant

Model Summary: $R = 0.058$; $R^2 = 0.003$

Regression Model: $F = 0.328$; $p = 0.568$

As the results shown in table 10, the effect of transformational leadership on employee creativity is not significant ($p = 0.568$). Specifically, the coefficient of transformational leadership is 0.090 and the t-value associated with this coefficient is 0.572. Since the p-value is greater than the significance level of 0.05, it is failed to reject the null hypothesis (H_0) that transformational leadership does not have a significant effect on employee creativity. Therefore, it was concluded that hypothesis H_02 , which states

The F-statistic (2.132) tests the overall significance of the regression model. The associated p-value (0.148) is >0.05. Therefore, the null hypothesis for the overall model is failed to reject, indicating that the model is not statistically significant overall.

4.9. Employee Creativity Mediate the Effect of Transformational Leadership to Organizational Innovation

that transformational leadership has a significant positive effect on employee creativity, is not valid.

In the model summary, R (correlation coefficient) is 0.058 and R^2 (coefficient of determination) is 0.003. this suggests that transformational leadership explains only a very small portion of the variance in employee creativity and that the model as a whole has a low fit. The F-value of the regression model is 0.328, which corresponds to a p-value of 0.568, indicating that the overall model is not statistically significant.

Table 10. Employee Creativity mediate the effect of Transformational Leadership to Organizational Innovation

<i>Organizational Innovation</i>	B	Std. Error	t-value	p-value	Decision on H_0	Interpretation
Constant	2.672	0.348	7.670	<0.001	Reject	Significant
Employee Creativity	0.308	0.085	3.635	<0.001	Reject	Significant

Model Summary: $R = 0.348$; $R^2 = 0.121$

Regression Model: $F = 13.216$; $p = <0.001$

As presented in table 11 shows that it can learn that employee creativity has a significant positive impact on organizational innovation. Specifically, the coefficient of employee creativity is 0.308 and the t-value associated with this coefficient is 3.636 with p-value <0.001 level. Since the p-value is less than the set significance level of 0.05, meaning reject the null hypothesis (H_0), therefore, we can conclude that employee creativity has a significant positive impact on organizational innovation, verifying hypothesis H_02 .

In the model summary, the correlation coefficient R is 0.348 and the coefficient of determination R^2 is 0.121, indicating that employee creativity explains 12.1% of the variation in organizational innovation. The F-value of the

regression model is 13.216 with a p-value <0.001, indicating that the overall model is statistically significant.

4.10. Transformational Leadership Significantly Affect the Employee Creativity When Intrinsic Motivation Moderates

It can observe that the coefficient of the interaction term is 0.155, and the t-value associated with this coefficient is 1.650, and the p-value is >0.05 level, so meaning reject the null hypothesis (H_0), that is, transformational leadership significantly affect the employee creativity when intrinsic motivation moderates.

Table 11. Transformational Leadership significantly affect the employee creativity when Intrinsic Motivation moderates

<i>Employee Creativity</i>	B	Std. Error	t-value	p-value	Decision on H_0	Interpretation
Constant	-0.024	0.101	-0.235	0.014	Reject	Significant
Transformational Leadership * Intrinsic Motivation	0.155	0.094	1.650	0.022	Reject	Significant

Model Summary: $R = 0.166$; $R^2 = 0.028$

Regression Model: $F = 2.722$; $p = 0.022$

In the model summary, the correlation coefficient R is 0.166 and the coefficient of determination R^2 is 0.028, indicating that this model explains 2.8% of the variation in employee creativity. The regression model has an F-value of 2.722 and a p-value of 0.022, indicating that the overall model is statistically significant.

The statistical interpretation perspective shows that the moderating effect of intrinsic motivation on the relationship between transformational leadership and employee creativity

is significant. This means that the effect of transformational leadership on employee creativity is more significant among employees with high intrinsic motivation. This finding emphasizes the importance of intrinsic motivation in the relationship between transformational leadership and employee creativity, and is in agreement with academic research, where intrinsic motivation has been found to be one of the important factors in the literature that attracts employees to engage in their work Amabile (1998); Jaussi and

Dionne (2003). Key insights are provided for a deeper understanding of the mechanisms by which leaders influence employee creativity.

4.11.Strategic Plan for Cloud Gaming Company in Beijing, China

The cloud gaming company is a technology-based SME with about 200 employees. The company is committed to developing products related to cloud computing and cloud gaming, but when faced with the challenges of market competition and technological change, it needs to develop an effective strategic plan to promote innovation and sustainable development of the organization.

A strategic plan is designed to help the company meet market challenges and achieve sustainable growth and innovative development. Through an in-depth analysis of industry trends and internal and external environments, it proposed a series of specific strategic initiatives to ensure that the company achieves considerable results over the next five years.

Clearly, the data showed that there are needed strategies to integrate in the process that are sought to improve and enhance the organizational innovation. The proposed strategic plan which aims to address the specific problems in organizational innovation. With this, the researcher formulates such strategies, objectives and plans in addressing the problems and gaps found in the study.

5. Conclusion

Based on the findings, the following conclusions were drawn:

1. It was shown that the level of organizational innovation in the study company is in the upper middle range, and the respondents in general have a positive view of all aspects of organizational innovation, indicating that innovative initiatives have been successful within the company.

2. Employee ratings of leaders in the four areas of idealized influence, motivation, intellectual stimulation, and personal considerations indicate that leaders are of a transformational style.

3. The employee creativity was assessed which the employees showed positive and creative thinking.

4. The level of intrinsic motivation was examined which the employees showed positive attitude towards the challenges and creative tasks.

5. Transformational leadership has no significant effect on organizational innovation.

6. Employee creativity does not mediate the effect of transformational leadership to organizational innovation.

7. Transformational leadership significantly affect the employee creativity when intrinsic motivation moderates.

8. The proposed strategic plan to the cloud gaming company in Beijing, China are sought to improve and enhance the organizational innovation

References

- [1] Aldabbas, H., Pinnington, A.H., & Lahrech, A. (2022). Encouraging more creativity in organizations: the importance of employees' intrinsic motivation and work engagement. *International Journal of Organizational Analysis*.
- [2] Agyemang F G, Boateng H, Dzandu M D. Examining intellectual stimulation, idealised influence and individualised consideration as an antecedent to knowledge sharing: Evidence from Ghana[J]. *Knowledge management and e-learning*, 2017.
- [3] Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, 10, 123-167.
- [4] Amabile T M. How to kill creativity[M]. Boston, MA: Harvard Business School Publishing, 1998.
- [5] Amabile, T. M., Schatzel, E. A., Moneta, G. B., & Kramer, S. J. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *The Leadership Quarterly*, 15(1), 5-32.
- [6] Amabile, T. M., & Kramer, S. J. (2011). *The progress principle: Using small wins to ignite joy, engagement, and creativity at work*. Harvard Business Review Press.
- [7] Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology*, 66(5), 950-967.
- [8] Amabile, T. M. (1996). *Creativity in context: Update to the social psychology of creativity*. Westview Press.
- [9] Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations*. Sage Publications.