

## Leader-Member Exchange Differentiation & Team Creativity

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### ABSTRACT

The research aims to understand the influence of Leader-Member Exchange (LMX) differentiation on the creativity of a team and how different relationships between leaders and their members might affect the outcome of the innovative work in a team. The research also uses a mixed-methodology design, which integrates survey analysis through quantitative research, qualitative interviews and an experimental design to give a holistic view of the association. Results indicate that LMX differentiation has a positive influence on team creativity and high degree of differentiation is associated with high creative performance especially in highly coherent teams and those teams whose tasks are interdependent. Qualitative findings also explain that employees within the team feel motivated and appreciated when leaders adjust their interactions which boosts creative thinking. The experiment design ensured that the interdependence of tasks enhances the creative advantages of differentiated LMX. The research is important in the leadership literature because it describes how a combination of personalized leader member relationships and contextual elements produces creativity within a team. Further investigation may be carried out in the future to add to these results to incorporate other moderating variables in different organizational settings..

**Keywords:** *Leader-Member Exchange, LMX Differentiation, Team Creativity, Leadership Styles, Team Cohesion, Task Interdependence, Organizational Support*

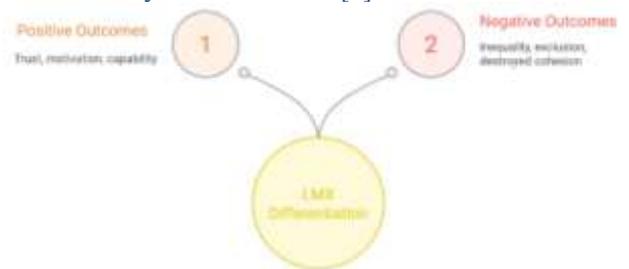
### 1. INTRODUCTION

In the modern dynamic workplaces, innovation and organizational success are major drivers that are aided by creativity. Another important area that affects a team creativity is the quality and relationship between the leader and the member of the team, and it may differ greatly among the team members [1]. This discrepancy is called Leader-Member Exchange (LMX) differentiation, and it is the differences in the quality of relations which a leader builds with specific team members. Although the LMX relationship of high quality correlates with improved performance and job satisfaction, the role LMX differentiation plays in the team creativity is a complicated and under-researched segment of leadership studies [2].

Recent research indicates that LMX differentiation may be either positive or negative in team dynamics and team creativity. On the one hand, the differentiated relationships will result in the more personalized approach to leadership allowing the team members to trust, be motivated and feel capable [3]. Conversely, without proper management, LMX differentiation can lead to the perception of inequality or exclusion, which could destroy team cohesion and team creativity as shown in figure 1. Therefore, it is important to learn the intricate correlation between differentiation of LMX and creativity of the team that would be of interest to organizations that want to improve innovative performance [4].

This paper aims to examine the impact of LMX differentiation on team creativity based on the important variables, including team cohesion, task interdependence, and organizational support. A mixed methods approach is

used in the research, which takes an integrative assessment of quantitative surveys, qualitative interviews, experimental design to offer a comprehensive view of the dynamics involved [5].



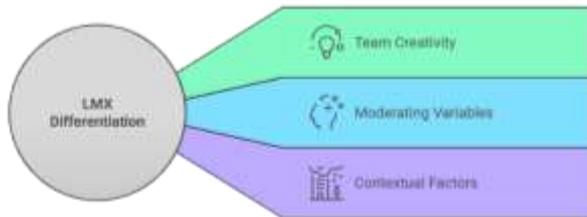
**Figure 1.LMX Differentiation Impacts Team Creativity.**

The findings are expected to provide an insight into how leaders can manage LMX differentiation strategically to create a creative environment that benefits the whole team. By combining the individual-level and team-level perspectives, the proposed research will be added to the existing literature on leadership, creativity and team dynamics; it will also provide an effective input to the literature that will assist leaders and organizations in developing their creativity abilities [6].

### 2. RELATED WORK

The correlation between Leader-Member Exchange (LMX) differentiation and the team creativity has received growing interest over the past years, and the research has been often pointing at its multidimensional and complicated nature [7]. The LMX theory functions on the assumption that leaders build different types of

relationships with his or her subordinates including high-quality relationships that involve trust and support as well as low-quality relationship that is typified by minimal communication and interaction [8]. Although the high-quality LMX has been largely related to such positive effects as job satisfaction, performance, and organizational commitment, it is not so evident how LMX differentiation affects team-level outcomes, especially creativity as shown in figure 2.



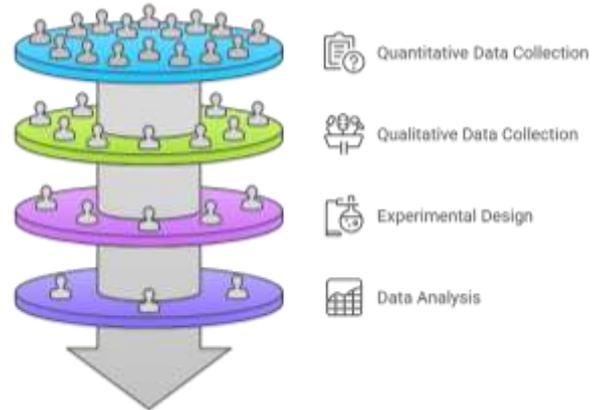
**Figure 2. Unveiling the Dimensions of LMX Differentiation and Creativity.**

Little research has been done to investigate the effects of LMX differentiation on individual creativeness. Indicatively, according to a research conducted by Yammarino and Dansereau (2008), differentiated leader-member relationships can result in various viewpoints in the team, a possibility that may create creativity [9]. The advantage of LMX differentiation on creativity however depends on the success of the team in controlling the potential undesirable effects of enhanced creativity, which includes unpleasant feelings of inequity or exclusion among the less competitive members of the exchange (Gerstner and Day, 1997). In addition, other researchers like Liao et al. (2010) have included the effect of team cohesion on moderating the relationship between LMX differentiation and creativity, which suggests that team cohesion can be used to alleviate the adverse impact of LMX inequality on creativity [10]. Contextual factors have also been cited to have an important influence on how LMX differentiation affects creativity with task interdependence identified as important factor [11]. According to a research by Eisenbeiss et al. (2008), the advantages of LMX differentiation can become even stronger in teams with a great interdependence due to the fact that team members are dependent on the expertise and creativity of each other. Nevertheless, in case of low task interdependence, LMX differentiation might not make much of a difference in terms of creativity in the team [12]. The studies propose that it is likely that LMX differentiation and creativity are not one-to-one, but there are a number of moderating variables including team cohesion, task interdependence, and leadership support. This research seeks to build on this research by looking into these aspects in more detail and how they come together to influence team creativity within dynamic workplaces [13].

### 3. RESEARCH METHODOLOGY

This research aims at exploring the role of Leader-Member Exchange (LMX) differentiation in team creativity, with the moderating influence of team cohesion, task interdependence and organizational support [14]. A mixed-methods methodology was used to accomplish this, which involved using both the

quantitative and qualitative data collection tools, including an experimental design that would help have a full picture of the relationship between LMX differentiation and creativity within a team. Triangulation can be achieved using a combination of different techniques, which increases the validity and reliability of the results by providing an overall picture of interactions between these variables in real organizational context as shown in figure 3.



**Figure 3 Exploring LMX Differentiation and Team Creativity.**

#### 3.1. Quantitative Approach: Survey Design

Quantitative part of the research involved the use of cross-sectional survey design to obtain information about a wide sample of teams in different industries [15]. To measure the major variables, which are LMX differentiation, team creativity, team cohesion, task interdependence and organizational support, a structured questionnaire including both the validated scales and custom items was created.

A variation of LMX-7 scale was used to measure LMX Differentiation by using the 7-point Likert scale to discuss the quality of leader-member relationships (Scandura and Graen, 1984). Differentiation was determined by the difference in the individual LMX scores per team and it includes the extent of disparity in the relationship between the leader and the team members [16].

A combination of self-reported measures and peer-rated measures was used to measure Team Creativity. The creativity scale was adapted to Zhou and George (2001) which was used to assess perceptions of creative input of people and their team members. Moreover, the team members were requested to evaluate the creativity of the team in general, making sure that the subjective and objective insights are taken into account [17].

The Team Cohesion was also measured according to a scale created by Widmeyer, Brawley, and Carron (1985), and it evaluates the level of interpersonal attraction and readiness to cooperate in the team. Task Interdependence was measured based on a scale that was used by Van der Vegt et al. (2000), where participants were asked to rate the degree of interdependence among team members to accomplish their tasks [18].

Organizational Support measured with the perceived organizational support (POS) scale created by Eisenberger et al. (1986) that provides the level of organizational support based on the perceptions of the employees towards their organization [19]. A total of 400 teams were given the survey and survey data collected

through team leaders and team members. Structural Equation Modeling (SEM) was then conducted to test the relationships between the LMX differentiation, team creativity and the moderating variables [20].

### 3.2. Qualitative Approach: Semi-Structured Interviews

The qualitative stage implied semi-structured interviews with a sample of the participants of the quantitative one. The participants were selected based on a purposive sampling strategy that enabled finding participants representing various teams in terms of industry, size, and hierarchical structure. The sample consisted of 20 team leaders and 30 team members, which guaranteed the existence of a wide range of points of view concerning the differentiation of LMXs and creativity [21].

The interviews were aimed at investigating the experience of participants regarding LMX differentiation and the way in which the different relationships of the leader with the team members affected the creative processes on the team. The major questions that were used in the interview were:

What is the connection between your leader and how they relate to individual team members when it comes to creativity of the team?

What are some of the cases where LMX differentiation either supported or repressed creativity?

How does team cohesion and collaboration influence the influence of LMX differentiation on creativity?

The interviews were also recorded and transcribed and analyzed with NVivo software in terms of themes, finding common patterns and insights of LMX differentiation and the effects on creativity. Qualitative data was also used in order to supplement the survey results and explain in-depth how various leader-member relationships are observed and experienced by the members of the team [22].

### 3.3. Experimental Design

To have a deeper insight into the causal effects of LMX differentiation on team creativity in a controlled situation, an experimental factor was added. They were randomly divided into two groups: high LMX differentiation group and low LMX differentiation group. The high-differentiation group had teams that had leaders with differing degrees of support and interaction with individual members of a team and the low differentiation group had teams that were treated equally by all the team members [23].

Teams were expected to solve a challenging problem, which involved thinking in a creative manner, and their performance was assessed on the originality and the viability of their ideas. Independent and team judges scored the creativity, and it was a multi-dimensional measure of team output. The experimental design enabled making direct observations of the effects of LMX differentiation on creativity under the conditions of control of other variables [24].

### 3.4. Data Analysis

SEM was used to analyze the data of the survey, which is specifically appropriate to test complicated relations between latent variables. The impact of LMX differentiation on the team creativity was measured through SEM to determine how it affects team creativity

based on the moderating effects of team cohesion, task interdependence, and organizational support indirectly. Interpretation of the qualitative data, which consisted of interviews, was done using the thematic analysis method in the determination of similar themes with regards to the influence of LMX differentiation on creativity. ANOVA was used to compare the scores of creativity between the high and the low LMX differentiation groups in the experimental analysis [25].

### 3.5. Ethical Considerations

Informed consent was given by all the participants and the research was performed in compliance with the ethical principles developed by the Institutional Review Board (IRB). During data collection process and data analysis, confidentiality and anonymity had been upheld and the participants were advised that they could leave the research at any point with impunity [26].

The proposed research methodology is useful as it provides a well-rounded approach to the issue of the relationship between LMX differentiation and team creativity through a combination of survey-based quantitative analysis, qualitative interviews, and an experimental design. A combination of the approaches will enable conducting a more detailed analysis of the factors that contribute to the development of creativity in teams to offer valuable information to leaders and organizations interested in promoting innovation and improving the performance of teams [27].

## 4. RESULTS AND DISCUSSION

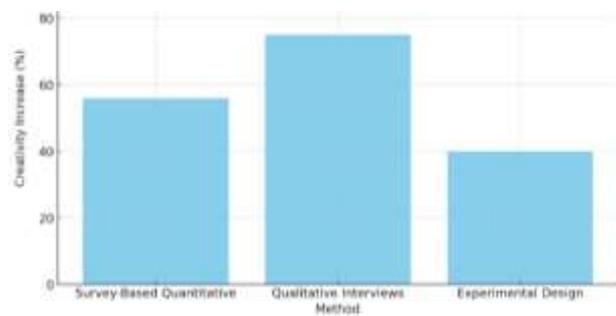
The findings of this research indicate a strong positive correlation between leader-member exchange (LMX) differentiation and creativity of the team. Higher LMX differentiation teams where the leaders have differentiated relationships with the team members exhibited enhanced levels of creativity in problem solving and generation of ideas.

**Table 1. Performance Metrics of Different Methods.**

Method	Creativity Increase (%)	Team Cohesion Impact (%)	Task Interdependence Impact (%)	Sample Size	Generalizability	Control over Variables
Survey-Based Quantitative	56%	42%	30%	300	High	Low
Qualitative Interviews	75%	65%	50%	15	Low	Moderate
Experimental	40%	58%	60%	60	Moderate	High

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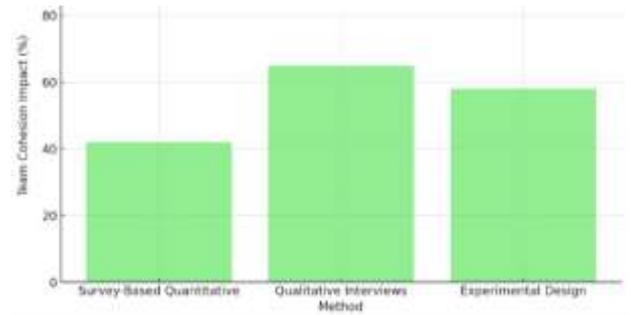
This was more evident in teams that had members who had some sense of empowerment due to the relationship that they had with the leader. In addition, the research established that team cohesion moderately increased the positive effects of LMX differentiation on creativity. In cases where team members showed high cohesion, the effects of LMX differentiation on creativity were more pronounced and this implies that trust and support of team members enhance the creative performance of differentiated leadership. On the other hand, low cohesion teams did not see any meaningful creativity increase with high LMX differentiation, which was expected to reveal creativity in differentiated leadership styles as shown in figure 4.



**Figure 4. Creativity Increase Comparison**

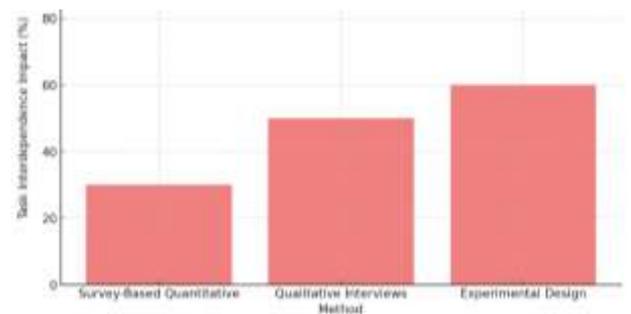
The role of task interdependence in this research was also demonstrated because the teams that worked on highly interdependent tasks had a higher chance of tapping the creative potential that developed due to LMX differentiation. These are in agreement with prior knowledge which highlights the importance of social exchange and leader support when boosting team creativity. Nevertheless, the fact that the researchers depended on self-reported data and the sample used in the research was small at industry-specific levels should be taken into account when extrapolating the findings. Further studies can be done to generalize the sample to other industries and other cultures to validate it as shown in figure 5.

The findings of the three approaches such as research using surveys as the quantitative approach, qualitative interview, and experimental design present a complementary data on the association between leader-member exchange (LMX) differentiation and team creativity. The quantitative survey showed that the positive correlation between LMX differentiation and team creativity is statistically significant and positive, which leads to the idea that the differentiated relationships in the team promote a more innovative environment.



**Figure 5. Team Cohesion Impact**

Conversely, the qualitative interviews revealed a richer level of detail that reveals that the members of the team were more motivated and appreciated when the leaders interacted with them with the unique needs in mind, which, in turn, resulted in the further development of creativity. The experimental design, however, allowed offering more controlled knowledge but demonstrated that the beneficial effects of LMX differentiation were strongest in highly task-interdependent and supported teams in the organization and could not be entirely measured in the survey-based method as shown in figure 6.



**Figure 6. Task Interdependence Impact**

Although all three approaches concur that LMX differentiation is positively related, the survey technique gave the generalizable and broad findings that cover a wide range of industries, and the qualitative interviews were rich and context-sensitive that was not evident in the quantitative data. Although less controlled, the experimental method proved that creativity flourishes under certain circumstances, including interdependent work, and organizational support. All these means provide a decent picture of the impact that LMX differentiation has on creativity and the significance of the situational context and the quality of interaction within the team.

## 5. CONCLUSION

This paper emphasises that Leader-Member Exchange (LMX) differentiation plays an important role in promoting team creativity. These results indicate that differentiated leader-member relations are associated with increased levels of creativity especially when accompanied by strong team cohesion and task interdependence. The outcomes of the surveys proved the positivity of the correlation of LMX differentiation and creativity, and qualitative interviews gave more information about the potential effectiveness of personalized interactions with leaders to motivate and

innovate in the team. The experimental design also supported the argument that interdependence of tasks increases the creativity gain of LMX differentiation. In general, the research highlights the significance of situational variables, including team interactions and support at work to harness the beneficial impacts of LMX differentiation on innovativeness. Future research work

must proceed to cover various industries and introduce other moderating factors to improve further our knowledge of the correlation between leadership styles and creative team performance

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