Impact of transformational leadership on employee motivation and performance in supply chain management

Gurvinder Singh
Flomny Menon
Regent College London, UK

Abstract
The study aimed to investigate transformational leadership's influences on employee performance and motivation in supply chain management (SCM). Considering the effectiveness of transformational leadership traits in motivating subordinates in every organization, the purpose of the current research was to criticize how transformational leadership facilitates motivating employees in supply chain workplaces. A mixed approach methodology based on qualitative-interpretive and quantitative-positivism research design was chosen to gather data from the participant's group. A randomly selected sample of 12 top, middle and bottom-level managers from supply chain organisations was chosen as the participants for the qualitative open-ended in-depth interviews and the quantitative survey-based questionnaires.

Interview findings were analysed using thematic analysis. On the other side, statistical analysis of the survey findings reported the impacts of transformational leadership on enhanced employee productivity, employee motivation, employee turnover and supply chain management business. The study found that all the transformational leadership characteristics are necessary to motivate alongside improving operational efficiency among the employees in a supply chain workplace. Overall results concluded that with their Intellectual simulation, Idealised Influence, Inspirational Motivation, Individualized consideration, Contingent Reward, and Expectation Management, transformational leaders and managers ensure employees are motivated to pursue agility and overall performance of supply chain management is improved via brand position in the market. In terms of practical implications, the study recommended that SCM organisations need optimized procurement and allocation of resources at different processes to leverage on impacts of transformational leadership.

Introduction
Today’s business environment is a dynamic one and the globalised economy has made the concept of supply chain management an integral and extremely important one for managing other aspects of business operational tasks. Customer satisfaction, operating and production efficiency, and sustainable competitive achievement are based on the process followed by the respective global organisation for managing the supply chain. Following the statement of Purwanto et al. (2021), in terms of getting an effective supply chain management strategy, each organisation imposed the requirements of not only the process of streamlining all the core actions but also the infusion of advanced technologies along with component leadership to guide and inspire the employees towards achievement of the organisational goals. About the adaptation of effective leadership styles, it is transformational leadership, which has been found in different previous studies to be one of the most effective ones for having its ability to optimise employee motivation and performance in the context of managing supply chain management. It has been seen in different previous studies that the management and integration of effective leadership have already been idealised and recognised as crucial factors in organisational success. In addition to this, it has been further observed while reviewing the previous research studies that by exploring the impact of transformational leadership, it can be tress that how organisational professionals can get the ability to optimise the effectiveness of the traditional practice of their leadership traits. This will further help to create a work environment that will
make the professionals, especially leaders, enable to foster employee productivity with great efficiency and motivation in the practised work culture.

Leadership trait that is based on transformational ones has already been classified as particular leadership trait that influences the interest of business operators and marketers to promote more efficiency to attain their cooperative targets. As per the statement of Chan et al. (2019), transformational leadership highlights the crucial of leadership-oriented to inspire creativity and innovation among subordinates. On the other hand, as argued by Ahmed and Al Amiri (2022), the attitude of the organisation depends on the production of anything fresh for the market and the target audience shares a close relationship with the organisational innovation. This innovation requires the support of a flexible work culture where the employees and the leaders can think outside of the box.

In terms of that, the idealisation of influence and inspirational motivation are the aspects that are significantly influenced by organisational innovation. In addition, the process of organisational innovation includes the entire resource management upholding the internal and external ones that further relate the cooperation aspects related to supply chain management as well (Purwanto et al. 2021). However, in different cases, depending on the requirement of the management of supply chain issues and the other ones confronted in business management, the application of transformational leadership is identified as the most needed one. To support such kind of situational equipment this study has focused to explore the impact of transformational leadership on managing employee motivation and management of SC at the same time.

Literature review

Thematic discussion on the research topic is achieved in this section by analysing several research papers from scholarly resources. Critical analysis of several research papers helped to determine more information related to the research topic where previously conducted research papers have described the research topic well. Different authors’ opinions have been criticised in exploring how rewards, feedback, compensations, appraisals, and leadership roles motivate employees to perform better in supply chain management (SCM) tasks.

A medication model as the social loafing at the workplace

The fundamental factor of using transformational leadership in the workplace is its ability to deliver job security to employees and motivate them to work beyond their expectations. According to Khan et al. (2020), work performance has an optimistic and influential connection with transformational leadership. The same leadership role helps employees to overcome social loafing and burnout due to working constantly. On the other hand, Bednall et al. (2018), state that different mechanisms appear at high and low grades of transformational leadership to encourage creative behaviour in the workplace. Thus, it has been found that the “Information and Communication Technology” (ICT) exchange has an essential role in explaining the influence of transformational leadership on creative conduct and has concentrated on constructs such as team cohesion and learning. Moreover, in practice, transformational leadership is one of the most influencing elements, which improves the worker’s proficiency to negotiate with all kinds of possibilities. Leaders supply supportive possibilities to workers to preserve optimum mental health via emotional encouragement and even improve their confidence in the workplace. Based on the statement of Arda and Yıldız, (2019), it has been found that intrinsic inspiration depresses “social loafing” as it does not occur circumstantially; however, it also appears with a worker in the inherent provocation. Additionally, in traditional transformational leadership, employees are guided and motivated with mindfulness by articulating a concept that escalates workers’ carefulness and consciousness of the importance of the employer’s values, objectives, and developing performances (Jensen and Bro, 2018). Therefore, the level of the employees’ performance can be improved with the execution of transformational leadership’s role with the attributes that motivate to suppress the work pressure and social dilemmas. Moreover, supply chain-oriented tasks deliver extensive workloads that lead to creating social loafing that can be controlled with effective leadership approaches. Additionally, social loafing is standard procedure witnessed in every organisational background, across different demographics and in different occupations and cultures, and it is possible to achieve this by organisations with the executing trained transformational leaders at the workplace.
Transformational leadership and an innovative workforce are interconnected factors

An innovative culture is fostered throughout teams and organisations by transformational leaders. Transformational leaders encourage and push their followers to think beyond the box, accept change, and develop original ideas. Pradhan and Jena, (2019), state that transactional is a traditional leadership style that cannot compete in current dynamic business atmospheres. Today’s alliances require courageous leaders to adopt transformations and motivate their followers to think innovatively. Transformational leaders increase the intrinsic encouragement of their followers and motivate them to question the situation while executing things in the working spaces. Moreover, Yue et al. (2019), highlight that transformational leaders accomplish open communication as valuable working resources to stimulate employees’ positive perspectives toward the transformation. Additionally, empirical evidence denotes that transformational leadership employs job satisfaction of their followers by enhancing commitment, performance, and loyalty towards the company. Transformational leaders foster an environment where cooperation, transparency, and trust are valued, so providing a secure setting for creativity to develop.

A variety of internal and external stakeholders are involved in SC operations, including partners, suppliers, and customers. Strong interpersonal skills and encouragement of teamwork and relationship-building throughout the SC network are attributes of transformational leaders. According to Ul-Hameed et al. (2019), these days, SC analysis, management, and development are evolving increasingly significantly. It is noticeable that different strategies for SCM are available to improvise the work procedure.

Higher levels of transformational leadership often support innovative behaviours via the condition of inspiration, vision, intellectual stimulation, and individualised consideration. Bastari and Ali, (2020), illustrate that innovative leaders will resume examining methods to create a more inclusive and diverse workforce that sustains creativity and innovation. Leaders will require to indicate insight, integrity, agility, and courage to both construct the respect of their supporters and create an organisational culture improved by a diverse crew.

Transformational leaders provide their followers with the autonomy, tools, and support they need to experiment with and apply novel ideas. They promote a culture that appreciates and rewards creativity and promotes a learner's attitude. Transformational leaders encourage their people to embrace innovation and strive for continual improvement by setting an excellent example and modelling innovative behaviours. As opined by Ojha et al. (2018), the overall environmental performance of partners associated with the supply chain (SC) needs improvisation by adapting to environmental changes. Therefore, SC business learning assists in illustrating transformational leadership’s influence on the ambidextrous changes in the supply chain. Consequently, it's possible to achieve only when transformational leaders can concentrate on developing employees’ ability to cooperate with a team orientation and analyse employees’ learning behaviours in the workspace of an SC unit.

Requirements of transformational leaders in a supply chain business environment

Supply chain environments frequently change quickly and are dynamic. The ability to modify strategies and plans in reaction to shifting market conditions, consumer needs, and technological breakthroughs is a quality that transformational leaders should possess. According to Burawat, (2019), organisations are searching for new strategies to find out new ways to raise productivity, profit, and quality to get the attention of SC workers. Therefore, businesses are searching for new suppliers and distributors to concentrate on lean manufacturing. Successful execution of lean conception is possible by appreciating the benefits of the lean strategy with the deployment of transformational leaders to perform a fundamental role to obtain lean status. Prabhu and Srivastava, (2023), state that on the functional side, SMEs face obstacles in effectively managing the SC. SMEs often failed to execute appropriate SC strategies as they sense it as a customer effort of authority, the anxiety of losing interaction with other buyers, and a positivism lack toward the right “SC philosophy”. Transformational leaders require a strong sense of the direction that the SCM industry is going.

Supply chain business transformational executives should promote a continuous improvement culture. The above-attached image describes how transformational leaders are impacting employees’ satisfaction regarding what the business is producing (Schiuma et al. 2022). To improve the general efficacy and effectiveness of the supply chain, they should inspire their employees to find inefficiencies, streamline
procedures, and put creative solutions into practice. Risks to supply chains include interruptions in logistics, supplier dependence, and market volatility. Technology use is becoming more crucial to supply chain management. The ability to use emerging technologies, such as automation, data analytics, and artificial intelligence, to enhance supply chain operations and decision-making procedures is a must for transformational leaders. Transformational leaders can empower their team members by assigning responsibilities, granting autonomy, and encouraging a culture of learning and development. They ought to make investments in the development of their workers’ abilities so that they can take on new challenges and help the business succeed.

**Impacts of transformational leader's role to connect with stakeholders to manage SC work procedure**

Multiple stakeholders are involved in supply chain operations, including internal such as suppliers, customers, and partners and external such as manufacturing, logistics, and other parties. Risks to supply chains include disruptions in transportation, supplier dependence, and market volatility. To maintain business continuity, transformational leaders must be able to recognise and evaluate risks, create backup plans, and manage unforeseen difficulties. According to Vasileva et al. (2021), Laissez-faire leaders are apathetic to the actions of their supporters and colleagues. Leaders who utilise a laissez-faire style are oftentimes considered passive. Laissez-faire leadership can satisfy an organisation when leaders and supporters are both equally encouraged, motivated and acquainted in their domains. Contradictorily, Hiebl and Pielsticker, (2023), have argued that transformational leaders concentrate to develop an infrastructure that shows more useful insights into the information-sharing system between suppliers and buyers in the SCM network. Therefore, it has been found that, although autocratic and laissez-faire are contemporary leadership styles; however, transformational leaders can innovatively meet workplace requirements.

**Theoretical framework**

Leadership approaches in the workplace and their relationship with employee motivation have constructed the conceptual framework of this study. The following ‘Theoretical Framework’ [Refer Figure 1] describes how transactional leadership practices are connected with employee performance in SCM-oriented workplaces where business management relies on leadership approaches.

**Figure 1: Theoretical Framework (Source: Author)**

The above image describes both dependent and independent variables used in the study to evaluate how the transactional leadership style motivates employees to perform with their best capabilities to show in workplace development in the supply chain management industry.
Methodology
This study attempted to investigate and comprehend the elements affecting employees’ behaviour in terms of motivation and performance concerning impacts of the transformational leadership. Using Saunders, Lewis, & Thornhill, (2019) research onion, both qualitative and quantitative methodologies together, it was possible to fully comprehend customer behaviour. While the quantitative data gained through surveys allowed the generalisation of findings to a wider audience, the qualitative data acquired via interviews will offer deep and nuanced insights. The study conducted interviews with 12 managerial-level employees from the chosen supply chain organisation and the same sample size was used to conduct a questionnaire-based survey to assess their findings objectively for different variables like transformational leadership, employees’ motivation and performance effectiveness. The sample participants were chosen from top, middle and bottom management through random sampling. The survey instrument was designed using 10 semi-structured and 5 structured questions. On the other hand, the deductive method was used to evaluate current theories and theories drawn from the literature. Hence, it can be defined that the primary data collection has been decided to be executed through the conduction of both the interview and survey.

Results and Findings
Quantitative analysis of the survey findings was conducted using multiple constructs and indicators. Table 1 indicates that both the constructs of the model, Transformational leadership characteristics and supply chain have successfully met all the criteria of the convergent validity with the measure of internal consistency reliability i.e., Cronbach’s alpha ≥ 0.80, Composite Reliability ≥ 0.70, and Average Variance Extracted (AVE) ≥ 0.50.

<table>
<thead>
<tr>
<th>Construct Reliability and Validity for The Model</th>
<th>Cronbach's Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational Leadership Characteristics</td>
<td>0.83</td>
<td>0.82</td>
<td>0.82</td>
<td>0.62</td>
</tr>
<tr>
<td>Leadership-Employee Relationship</td>
<td>0.80</td>
<td>0.80</td>
<td>0.81</td>
<td>0.60</td>
</tr>
<tr>
<td>Supply Chain Performance</td>
<td>0.65</td>
<td>0.79</td>
<td>0.76</td>
<td>0.57</td>
</tr>
</tbody>
</table>

Furthermore, Table 2 below shows that all the indicators of the leadership characteristics construct have successfully met all the criteria of convergent validity. The values of Cronbach’s alpha were within the acceptable range i.e., ≥ 0.80 depicting that all the constructs in the model collectively are consistently measuring the same characteristics. Additionally, as shown from the values of Composite Reliability that all were within the acceptable range i.e., ≥ 0.70 for the points of the model. The Table also indicated values for the AVE within the acceptable range i.e., ≥ 0.50 that explain the model’s axes.

<table>
<thead>
<tr>
<th>Construct Reliability and Validity for Leadership Characteristics Construct</th>
<th>Cronbach's Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual stimulation</td>
<td>0.85</td>
<td>0.87</td>
<td>0.88</td>
<td>0.65</td>
</tr>
<tr>
<td>Idealised Influence</td>
<td>0.81</td>
<td>0.80</td>
<td>0.82</td>
<td>0.60</td>
</tr>
<tr>
<td>Inspirational Motivation</td>
<td>0.80</td>
<td>0.72</td>
<td>0.75</td>
<td>0.53</td>
</tr>
<tr>
<td>Individualized consideration</td>
<td>0.91</td>
<td>0.90</td>
<td>0.89</td>
<td>0.71</td>
</tr>
<tr>
<td>Contingent Reward</td>
<td>0.80</td>
<td>0.82</td>
<td>0.83</td>
<td>0.65</td>
</tr>
<tr>
<td>Expectation Management</td>
<td>0.81</td>
<td>0.78</td>
<td>0.80</td>
<td>0.55</td>
</tr>
</tbody>
</table>

Likewise, Table 3 below shows that all the indicators of the supply chain construct have successfully met all the criteria of convergent validity. The values of Cronbach’s alpha were within the questionable range i.e., ≤ 0.80 depicting that all the constructs in the model collectively are not consistently measuring the same characteristics. However, as shown from the values of Composite Reliability that all were within the acceptable range i.e., ≥ 0.70 for the points of the model. The Table also indicated values for the AVE within the acceptable range i.e., ≥ 0.50 that explain the model’s axes. These values confirmed the model fit for further analysis.
Likewise, Table 4 below shows that all the indicators of the Leadership-Employee Relationship construct have successfully met all the criteria of convergent validity. It can be depicted that like the supply chain construct, the values of Cronbach’s alpha in this construct were within the questionable range i.e., ≤ 0.80 depicting that all the constructs in the model collectively are not consistently measuring the same characteristics. However, as shown from the values of Composite Reliability that all were within the acceptable range i.e., ≥ 0.70 for the points of the model. The Table also indicated values for the AVE within the acceptable range i.e., ≥ 0.50 that explain the model’s axes. These values confirmed the model fit for further analysis.

<table>
<thead>
<tr>
<th>Construct Reliability and Validity for Leadership-Employee Relationship</th>
<th>Cronbach's Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees Productivity</td>
<td>0.64</td>
<td>0.75</td>
<td>0.71</td>
<td>0.59</td>
</tr>
<tr>
<td>Employees Motivation</td>
<td>0.68</td>
<td>0.82</td>
<td>0.79</td>
<td>0.61</td>
</tr>
<tr>
<td>Employees Turnover</td>
<td>0.69</td>
<td>0.87</td>
<td>0.82</td>
<td>0.52</td>
</tr>
</tbody>
</table>

The Fornell-Larcker Cross Loadings criterion was also evaluated to show how well model axes overlapped to determine differential validity. Table 5 below shows that each of the three constructs has a strong correlation within its axis and a weak correlation with other axes.

<table>
<thead>
<tr>
<th>Fornell-Larcker Criterion</th>
<th>Leadership characteristics</th>
<th>Leadership-Employee Relationship</th>
<th>Supply Chain Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational Leadership Characteristics</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership-Employee Relationship</td>
<td>0.21</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>Supply Chain Performance</td>
<td>0.32</td>
<td>0.05</td>
<td>0.72</td>
</tr>
</tbody>
</table>

Moreover, the explanatory power of the model was calculated as shown in Table 6 below using Model Fit Summary using R Square that indicated high explanatory power for the independent variable i.e., transformational leadership characteristics R Square = 0.58. With R-Square in the high category > 0.36, the model state that about 58% of the variations in the dependent variable i.e., supply chain is explained by the independent variable of transformational leadership. Similarly, for another dependent variable i.e., Leadership-Employee Relationship, the R Square indicated high explanatory power for the independent variable (0.47 or 47%).

<table>
<thead>
<tr>
<th>Model Fit</th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational Leadership Characteristics</td>
<td>0.58</td>
<td>0.49</td>
</tr>
<tr>
<td>Leadership-Employee Relationship</td>
<td>0.47</td>
<td>0.38</td>
</tr>
</tbody>
</table>

Lastly, Table 7 below highlights that regression analysis was conducted for testing the survey findings identifying the relationship between the dependent and independent research variables. Table 7 indicates the effect of Transformational Leadership Characteristics -> Supply Chain performance as positive and significant with a P value (0.01) less than alpha (0.05) and the effect of transformational leadership characteristics -> Leadership-Employee Relationship as positive and significant with a P value (0.01) less than alpha (0.05).
Furthermore, the findings of the interviews conducted with the top, middle and bottom level managers have also substantiated significant effects of transformational leadership on employees’ motivation and performance of the supply chain management businesses. All the 12 managers have concluded that transformational leadership is the way to go in the supply chain as supply chain management businesses often experience significant challenges related to employees’ motivation leading to increased turnover for staff managers. They did confirm that with implementation of transformational leadership characteristics, specifically idealized influence, inspirational motivation, contingent reward and expectation management, the transformational leaders of the supply chain management businesses are in better position to address the employees related challenges that is increased absenteeism, increased turnover, reduced employees productivity and simultaneously declining brand positioning among the competitors in the market.

Discussion

Previous statistical analysis has approved the literature identifying the positive relationship of transformational leadership characteristics on the supply chain management performance, via improved leaders and employees’ relationships. The data collected has shown a positive and significant relationship between transformational leadership characteristics and supply chain management. However, the collective set of transformational leadership characteristics (influence of intellectual stimulation, idealized influence, inspirational motivation, individualized consideration, contingent reward, and expectation management) is what is needed to drive positive effects on the employees’ motivation and their productivity affecting the performance of the supply chain management business overall. The model [Refer to Figure 2 below] given below has indicated that all the transformational leadership characteristics provide a way towards effective brand positioning (0.55), employee motivation (0.72), employee productivity (0.68), and employee turnover (0.58).

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Sample Mean</th>
<th>Standard Deviation</th>
<th>T Statistics</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership characteristics &gt; Supply Chain Management</td>
<td>0.58</td>
<td>0.512</td>
<td>0.07</td>
<td>7.44</td>
</tr>
<tr>
<td>Leadership characteristics &gt; Leadership-Employee Relationship</td>
<td>0.47</td>
<td>0.422</td>
<td>0.05</td>
<td>6.31</td>
</tr>
</tbody>
</table>

Figure 2: Theoretical Framework with Results (Source: Author)

The model indicates that a transformational leader has the potential to drive high employee motivation and productivity necessary for achieving a high-performance-based supply chain business. These results are consistent with the existing literature highlighting the significance of the transformational leadership role in not only helping the employees, but all the other stakeholders associated with the brand to manage supply chain procedures (Burawat, 2019). By innovatively meeting workplace requirements. Motivated and productive employees, transformational leaders leverage the opportunity to invest in the development of
workers’ abilities necessary to deal with the risk to the supply chain such as inefficiencies, non-streamlined procedures, and an effective solution (Schiuma et al. 2022). Likewise, the current research has also substantiated the potential of transformational leadership in driving SC philosophy (Prabhu and Srivastava, 2023). To sum up, findings show that the relationship is direct between transformational leadership, employees and leaders’ relationship and supply chain management.

Conclusion
In exploring the impacts of transformational leadership characteristics on managing employees’ motivation and management of SC at the same time, the study has concluded a positive and significant relationship between dependent and independent research variables. Based on the analysis of the business nature, employees’ expectations, risks, procedures and requirements of the management of supply chain issues, the application of transformational leadership is identified as the most needed one. The current study has concluded that Transformational leadership has the potential to positively affect the supply chain management process as well as employees’ motivation at the same time.

Research Implications
To leverage the benefits of transformational leadership, supply chain management organizations can benefit significantly by emphasizing leadership training programs that develop and cultivate these transformational leadership traits among managers too and not only in the top leadership such as Chief Executive Officer (CEO). Further research could be conducted to explore the effectiveness of various training methods and techniques in fostering these leadership characteristics. This will allow the employees and managers everyone to increase their understanding of the specific aspects of transformational leadership that contribute most significantly to employee motivation and explore the link between these motivation drivers (transformational leadership characteristics) and employee job satisfaction, productivity, and retention. The training will also assist in learning about the role of expectation management, i.e., how leaders effectively set, communicate, and meet expectations for fostering trust and reducing uncertainty in the workplace.

Future Research Recommendations
In addition, future researchers are suggested to dive deeper into quantifying the impact of transformational leadership on supply chain performance metrics, such as efficiency, effectiveness, cost reduction, and employee satisfaction in different contexts and different countries. Likewise, comparative studies are needed for comparing supply chains led by transformational leaders with those under different leadership styles. Such comparison will further strengthen the effectiveness of transformational leadership for improved supply chain outcomes.

References


