



TRANSFORMATIONAL LEADERSHIP AND ORGANIZATIONAL EFFECTIVENESS: A SYSTEMATIC REVIEW OF MEDIATORS, MODERATORS, AND SECTORAL VARIATIONS

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ABSTRACT

Although the positive impact of Transformational Leadership (TL) on Organizational Effectiveness (OE) is widely acknowledged, there remains a lack of understanding regarding the specific factors and conditions that optimize this relationship. This study addresses this gap by systematically reviewing 23 empirical studies across various sectors—including education, healthcare, banking, manufacturing, and hospitality—to identify the critical mediating and moderating processes that influence the TL-OE relationship. The findings show that TL impacts OE through varied mediating and moderating factors across sectors. Key mediators—including organizational commitment, job satisfaction, organizational culture, innovative behavior, and psychological empowerment—enhance the relationship between TL and OE. In addition, organizational structure, job demands, and knowledge sharing act as critical moderators, shaping the strength of this relationship. Each sector—education, healthcare, banking, manufacturing, and hospitality—presents unique contextual and operational characteristics that affect the effectiveness of TL, highlighting specific needs and challenges in implementing TL to enhance OE. These findings provide valuable guidance for organizational leaders, suggesting that customized TL approaches aligned with sector-specific characteristics and demands are important to optimizing OE.

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1. INTRODUCTION

In recent decades, Transformational Leadership (TL) has emerged as a critical concept in organizational studies, recognized for its ability to inspire, motivate, and transform

employees to surpass their performance expectations, thereby enhancing overall Organizational Effectiveness (OE). The foundation of TL lies in its emphasis on charisma, inspirational motivation, intellectual stimulation, and individual consideration (Bass & Avolio, 1994). These leadership attributes are believed to align employees' personal goals with organizational objectives, promoting higher levels of commitment, innovation, and job satisfaction, all of which are crucial for achieving OE (M. Ali et al., 2020; Allen et al., 2017; Katou et al., 2022).

Empirical studies have explored the relationship between TL and OE (Bilgiler et al., 2022; Burawat, 2019; Hilton et al., 2023; Katou, 2015; Muzondiwa et al., 2022; Nabi et al., 2023; Nguyen et al., 2023; Patiar & Wang, 2016; Tayal et al., 2022; Top et al., 2015). These studies consistently show a positive relationship between TL and OE, demonstrating that TL plays a significant role in improving OE. However, the existing literature approaches this relationship broadly, primarily focusing on establishing that a relationship exists rather than exploring the deeper factors that explain how TL influences OE. Specifically, the processes that shape the TL-OE relationship, such as the roles of mediating and moderating factors, remain insufficiently explored. Understanding these elements is essential for a comprehensive insight into the TL-OE relationship.

Furthermore, existing research has ignored the potential influence of sectoral variations on the effectiveness of TL in enhancing OE (Bilgiler et al., 2022; Tayal et al., 2022; Top et al., 2015). This highlights the need for a comprehensive approach that draws together empirical evidence from different contexts to identify the key mediators and moderators shaping the TL-OE relationship. Addressing this gap will provide valuable insights for optimizing TL practices across various organizational settings, allowing for more impactful leadership strategies.

This study seeks to address these gaps by conducting a systematic literature review (SLR) of empirical research on the relationship between TL and OE published between 2013 and December 2023. The primary objectives of this study are to identify the mediators that clarify the relationship between TL and OE, thereby explaining the processes through which TL influences OE. Additionally, this study aims to determine the moderators that impact the strength of TL's effect on OE, providing insights into the conditions that may strengthen or weaken the effectiveness of TL. Moreover, this study aims to examine sectoral variations in TL implementation and investigate how contextual factors within each sector shape the effectiveness of TL in enhancing OE.

To achieve these objectives, the study is guided by the following research questions:

- What are the mediators that explain the relationship between TL and OE?
- What are the moderators that influence the strength of TL's impact on OE?
- How do sectoral variations impact the effectiveness of TL in enhancing OE, and what specific factors need to be considered to achieve optimal OE in each sector?

The following section presents a literature review on the topic, followed by a detailed outline of the design and methodology of the Systematic Literature Review (SLR). An in-depth analysis of the findings from a comparative study is then provided, exploring how mediators and moderators influence the relationship between TL and OE and how this relationship varies across different sectors and contexts. The conclusion elaborates on these findings, offering recommendations for future research

and highlighting critical gaps in the literature that require further investigation, particularly regarding the roles of mediators and moderators in influencing the TL-OE relationship.

2. LITERATURE REVIEW

2.1. Transformational leadership

Transformational Leadership (TL) refers to a leadership style where leaders inspire and motivate their followers to surpass their expectations and work towards achieving broader organizational goals. Unlike transactional leadership, which is primarily based on exchanges and rewards, TL engages followers emotionally and intellectually, motivating them to align personal ambitions with organizational objectives. TL is characterized by leaders who act as role models, promote innovation, promote a sense of shared purpose, and provide personalized support to employees (Abdulrab et al., 2020; Ali et al., 2020). Bass & Avolio, 1994 define this leadership approach as having four key dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

Idealized influence refers to leaders who act as role models for their followers by demonstrating high ethical standards, integrity, and confidence. Transformational leaders with idealized influence command respect and admiration from their followers, inspiring loyalty and dedication. These leaders are often seen as visionary and can build strong, trust-based relationships within the organization. Katou (2015) and Rao & Kareem Abdul (2015) note that idealized influence is essential for promoting an environment where employees feel secure in their leaders' decisions, thereby promoting organizational commitment and performance. This dimension is particularly significant in the healthcare and education sectors, where trust and ethical leadership are dominant (Mohammed & AL-Abrow, 2023; Top et al., 2015).

Inspirational motivation, another critical dimension of TL, involves leaders articulating a convincing vision that aligns individual employees' goals with the organization's broader objectives. Leaders inspire and energize their followers by expressing optimism about the future and setting high standards. Kim & Shin (2019) and Nguyen et al. (2023) highlight that leaders who successfully demonstrate inspirational motivation are able to align employees' aspirations with the organizational vision, promoting a sense of purpose and driving engagement. This dimension is crucial for maintaining employee morale, especially during times of organizational change or uncertainty (Ali et al., 2020; Allen et al., 2017).

Intellectual stimulation, the third dimension, promotes innovation and creativity by challenging followers to think critically and question existing assumptions. Transformational leaders promote environments where new ideas are welcomed, and employees are motivated to explore creative solutions to organizational challenges. Feng et al. (2016) and Jang (2017) emphasize the importance of intellectual stimulation in dynamic sectors such as research and development (R&D), where innovation is vital for maintaining competitiveness. Leaders who promote intellectual stimulation enable organizations to remain adaptive and responsive to changes in their external environment (Feng et al., 2016; Jang, 2017).

The final dimension, individualized consideration, focuses on employees' personal development. Transformational leaders recognize each individual's unique needs and aspirations and provide mentorship and support fitted to their personal

growth. This dimension significantly contributes to job satisfaction and employee retention, particularly in sectors where personal development is vital to employee comfort and productivity, such as healthcare and education (Allen et al., 2017; Top et al., 2015). Leaders who practice individualized consideration help their employees reach their full potential, thereby enhancing their loyalty and commitment to the organization.

2.2. Organizational effectiveness

Organizational Effectiveness (OE) is a comprehensive and multidimensional concept that refers to an organization's ability to achieve its goals, satisfy stakeholders' expectations, and ensure long-term sustainability. Unlike organizational performance, which focuses primarily on financial outcomes such as profitability and revenue growth, OE encompasses a broader range of factors, including employee satisfaction, innovation, operational efficiency, customer satisfaction, and long-term sustainability. Dhoopar et al. (2023) and Mesu et al. (2015) argue that OE not only reflects the achievement of an organization's immediate objectives but also its ability to adapt in a constantly changing environment. It involves fulfilling the organization's mission while meeting the needs of employees, customers, shareholders, and the wider community. Singh et al. (2016) further emphasizes that OE is best understood as a multidimensional construct that reflects the overall success of an organization through a combination of several key dimensions.

A central factor in OE is employee engagement and job satisfaction. Highly engaged employees are more likely to contribute meaningfully to organizational goals, demonstrate higher productivity, and show more significant commitment. Burawat, (2019) and Top et al. (2015) found that organizations led by TL tend to cultivate higher levels of employee engagement, which, in turn, correlates directly with enhanced OE. Similarly, (Maharani & Sudiro, 2017) observed that organizational citizenship behavior—referring to employees' voluntary and proactive behaviors beyond their formal job responsibilities—is crucial in enhancing OE, mainly when driven by TL styles.

In the contemporary business environment, an organization's ability to innovate and adapt to new challenges is essential to its effectiveness. Innovation and adaptability are critical in sectors facing rapid technological change and evolving customer demands. Feng et al. (2016) and Jang (2017) highlight that organizations with a culture of innovation, often promoted by TL, are more effective at maintaining a competitive advantage. By creating an environment that promotes creativity and experimentation, organizations can better respond to shifts in market conditions, technological advancements, and customer preferences, which ultimately enhances their long-term effectiveness.

Operational efficiency is another significant dimension of OE, focusing on the organization's ability to utilize resources efficiently to maximize productivity while minimizing waste. In industries such as manufacturing, operational efficiency is linked to lean manufacturing and continuous improvement, which enable organizations to streamline processes, reduce costs, and increase overall productivity (Burawat, 2019). This emphasis on operational efficiency often leads to superior organizational outcomes, particularly in sectors where resource optimization is critical to competitiveness.

In addition to operational efficiency, knowledge sharing and organizational learning are vital contributors to OE, particularly in knowledge-intensive industries such as education, research and development, and healthcare. Kim & Park (2020) stresses that organizations that promote a culture of knowledge-sharing and collaborative learning are better positioned to achieve their goals. TL has been shown to significantly enhance knowledge-sharing practices, facilitating the free exchange of ideas and insights among employees, ultimately leading to improved organizational outcomes and continuous innovation.

Customer and stakeholder satisfaction are also vital to OE. Organizations that meet or surpass the expectations of their external stakeholders, including customers, suppliers, and investors, are more likely to experience sustained success. Katou et al. (2022) highlights that organizations with high stakeholder satisfaction demonstrate superior effectiveness, as they can balance short-term financial goals with long-term sustainability. This dimension of OE is critical in-service industries, where customer satisfaction directly influences business success and long-term growth.

Another critical dimension of OE is the organization's focus on sustainability, both financially and environmentally. Alblooshi et al. (2020) argues that organizations prioritizing sustainability are better positioned to navigate the challenges of highly competitive industries, such as technology, where continuous innovation and long-term strategic planning are essential for survival. By integrating sustainability into their operational and strategic frameworks, organizations ensure that they are meeting their current goals and securing their long-term viability in an increasingly resource-conscious global market.

3. RESEARCH DESIGN

This study employs the Systematic Literature Review (SLR) methodology to systematically explore existing research on the relationship between TL and OE. The SLR method is widely recognized in contemporary research for its structured process, which includes systematically searching, evaluating, and interpreting relevant primary literature on a given topic (Ismail et al., 2021). By adopting this approach, researchers can compile, assess, and combine findings from multiple studies, offering a more comprehensive and organized understanding of the complex relationship between TL and OE. The SLR method helps identify critical insights from previous research. It facilitates an effective comparison and contrast of results across various studies, providing a clearer and more structured perspective on the topic.

In conducting the SLR, the study applies the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, as shown in Figure 1. PRISMA is widely used to ensure a systematic and transparent review process, encompassing four main stages: identification, screening, eligibility, and data abstraction and analysis (Ismail et al., 2021). Each stage is essential for filtering and organizing the selection of studies, thereby enhancing the reliability and clarity of the findings.

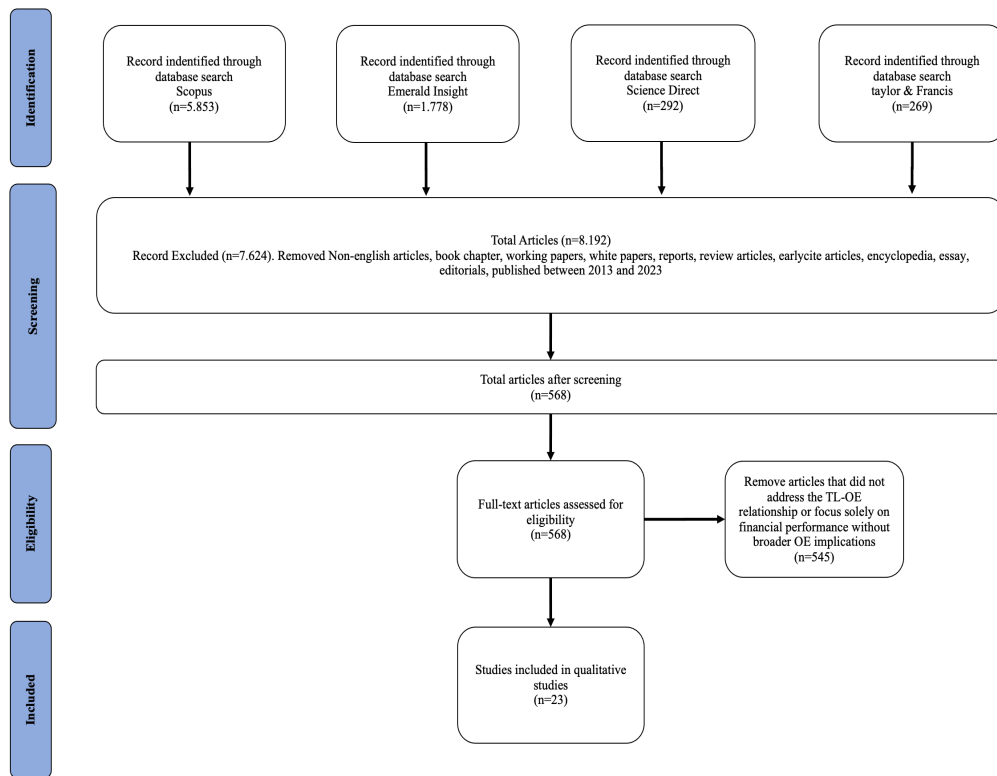


Figure 1: The flowchart of the PRISMA approach used in the SLR study

3.1 Identification

The identification stage of the SLR method involves determining relevant keywords that will guide the search for scholarly materials (Ismail et al., 2021). These keywords are used to develop search strings for the search functions within digital libraries. The primary search string targets key sections of articles—titles, keywords, and abstracts—to ensure relevance. Boolean operators, such as AND and OR, are incorporated to refine the search, and combinations of these operators are utilized as needed to expand or narrow the results (Faisal Abrar et al., 2020). The final search string used was: (transformational leadership) AND ((organizational effectiveness) OR (organizational performance) OR (organizational success)).

In this study, four primary digital libraries were selected for the identification process due to their reputation and extensive coverage of high-quality academic publications: Scopus (<http://www.scopus.com>), Science Direct (<http://www.sciencedirect.com>), Emerald Insight (<http://www.emeraldinsight.com>), and Taylor & Francis (<https://www.tandfonline.com>). Utilizing a constructed search string, the initial search across these platforms resulted in a collection of 8,192 articles relevant to the research topic.

3.2 Screening

Following the initial identification stage in the SLR process, the screening stage involves evaluating all articles identified through the search string across four databases. This phase is essential for narrowing down the selection of publications based on specific inclusion and exclusion criteria, ensuring that only studies with strong relevance are considered for the final review (Moher et al., 2009).

This study applied the inclusion criteria in stages to simplify the selection process. First, a publication timeline was established from 2013 to December 2023 to focus on recent literature that reflects current developments in the field. Second, only journal articles were included, while other types of publications—such as book chapters, working papers, white papers or reports—were excluded. This ensures that the selected literature meets research standards. Third, language was set as a criterion; only articles published in English were included to avoid translation issues that could potentially distort or misinterpret the original findings. After initially applying these criteria, the screening process yielded 6,575 articles.

3.3 Eligibility

The eligibility stage in this study focuses on refining the selection of studies that specifically explore the relationship between TL and OE, focusing on publications offering quantitative or qualitative analyses of mediating and moderating factors within the TL-OE relationship. This stage involves a detailed, manual review process, following specific criteria set by the authors to ensure the studies align with the research goals (Ismail et al., 2021). The initially collected articles are carefully examined during eligibility assessment, with studies not meeting the inclusion standards excluded. Ultimately, 87 articles are selected based on their relevance to TL and OE.

3.4 Data abstraction and analysis

In the data abstraction and analysis, the remaining 23 articles are carefully reviewed and analyzed to address the research objectives of this study. Each study is examined in detail to identify relevant themes, particularly focusing on mediators and moderators within the TL-OE framework. This detailed examination helps clarify the mechanisms through which TL influences OE while emphasizing factors that either strengthen or moderate this relationship. During this phase, special attention is given to sectoral variations, as each sector presents unique characteristics that influence the TL-OE relationship. An integrated approach is employed to achieve a comprehensive analysis, bringing together studies with various research methodologies, including qualitative, quantitative, and mixed methods. This approach enables a detailed integration of findings, offering insights from multiple perspectives on how mediators, moderators, and sectoral contexts interact to shape the TL-OE relationship.

4. GENERAL FINDINGS

The general findings from the analysis of the selected primary studies highlight several critical elements, including publication years, study types, research methodologies, data collection methods, research participants, and measurement approaches. The analysis covers studies published between 2013 and December 2023. As shown in Figure 2, the highest concentration of studies occurred in 2022 and 2023, indicating a growing interest in the academic community toward understanding the relationship between TL and OE. This upward trend indicates the increasing relevance of TL in contemporary organizational settings and the deepening interest in exploring the specific process that influences how TL impacts OE across different industries. Additionally, the rise in publications around 2022 and 2023 reflects the post-pandemic organizational landscape, where leadership has played a crucial role in navigating crises and maintaining resilience. Many organizations have had to rethink their

leadership strategies to deal with uncertainty, manage remote workforces, and maintain employee morale in the face of disruptions.

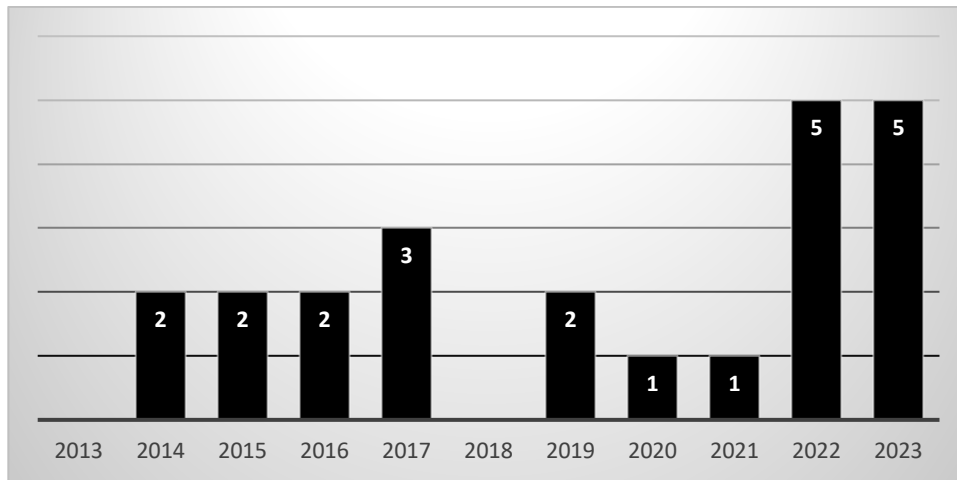


Figure 2: Distribution of primary studies by year

The analysis of studies on the relationship between TL and OE shows that this topic has been explored across a wide range of academic journals. These journals cover areas such as leadership, organizational behavior, human resources, business management, and sector-specific areas like healthcare, education, and hospitality. This diverse collection of publications highlights TL's broad applicability and importance in improving OE across various industries. The fact that TL-OE research is featured in various journals reflects the widespread recognition of TL as a leadership approach that can be adapted to different organizational contexts.

Table 1: List of source of primary studies

Number of Studies	Source
1	Leadership & Organization Development Journal
1	Journal of Educational and Social Research
1	International Journal of Economic Research
1	International Journal of Business and Social Science
1	Journal of Small Business Management
1	Journal of Business Research
1	Journal of Accounting and Organizational Change
1	Journal of Cleaner Production
2	Journal of Manufacturing Technology Management
1	Journal of Museum Management and Curatorship
1	International Journal of Productivity and Performance Management
1	International Journal of Contemporary Hospitality Management
1	VINE Journal of Information and Knowledge Management Systems
1	The International Journal of Human Resource Management
1	Public Personnel Management

1	European Management Journal
1	Journal of Leadership Studies
1	International Journal of Human Resource Management
1	Journal of Organizational Change Management
1	Journal of Financial Services Marketing
1	International Journal of Organizational Analysis
1	Journal of Knowledge Management

The studies utilized both quantitative and qualitative methodologies. Quantitative research typically involves surveys and statistical analysis to measure the impact of TL on OE, with a common dependency on established scales like the Multifactor Leadership Questionnaire (MLQ) for assessing TL. Structural Equation Modeling (SEM) and regression analysis are frequently employed to explore the relationships between variables. At the same time, qualitative studies often use case studies, interviews, and focus groups to gain deeper insights into the relationship of TL within organizations. Some studies also utilize mixed-methods approaches, combining quantitative data from surveys with qualitative insights from interviews or case studies, offering a more comprehensive understanding of how TL functions across various contexts.

Most studies adopt a cross-sectional research design, providing a brief overview of the TL-OE relationship at a specific moment. However, a few studies utilize longitudinal designs to track changes and developments. The research covers several critical sectors: education, healthcare, banking and financial services, manufacturing, and hospitality. The education and healthcare sectors are particularly well-represented, with many studies examining how TL influences factors like employee engagement, job satisfaction, and organizational adaptability in these service-oriented contexts. In contrast, banking and financial services studies often focus on TL's role in fostering innovation and performance improvement, highlighting the sector-specific outcomes that TL can drive.

Geographically, the studies cover many regions, with a significant concentration in Asia (e.g., China, South Korea, India, and Indonesia), Europe, and North America. This geographical diversity indicates that cultural and contextual factors are crucial in shaping the TL-OE relationship, with diverse variations across different regions. The research commonly involves employees and middle-to-senior management as participants, often sourced from various industries. In sectors like healthcare and education, participants typically include teachers, nurses, and administrators, offering valuable insights into how TL is experienced by staff in service-oriented fields.

5. FINDINGS

5.1 The role of transformational leadership in organizational effectiveness

Transformational Leadership (TL) has been widely recognized as one of the most effective leadership approaches in enhancing Organizational Effectiveness (OE) across various industries. The 23 reviewed documents demonstrate that TL influences OE by effectively inspiring, motivating, and empowering employees to achieve organizational goals.

Based on the reviewed studies, transformational leaders are identified as agents of change who establish a clear and compelling vision for the organization, thereby promoting employees' commitment to organizational objectives. For example, Ali et al. (2020) highlighted how TL enhances OE through personal relationships between leaders and subordinates (*guanxi*) in China. Transformational leaders drive employee performance and facilitate innovation, change, and adaptation in rapidly changing organizational environments (Maharani & Sudiro, 2017; Masa'deh et al., 2016)

Futhermore, Bilgiler et al. (2022) underscored the critical role of TL in the education sector in Indonesia, where transformational leaders increase employee engagement and commitment, leading to improved effectiveness and organizational performance. This is particularly important in educational organizations that frequently face policy changes and the need for quick adaptation.

Kim & Park (2020) emphasized that transformational leaders can promote a supportive organizational climate that enhances organizational learning and knowledge sharing in South Korea, contributing significantly to OE. Similarly, Fan et al. (2023) showed that TL improves public service organizational performance in China by building affective and cognitive trust between leaders and subordinates.

Although the positive role of TL on OE is clear, this relationship is often mediated and moderated by various organizational, individual, and contextual factors. These mediators and moderators are crucial in determining how TL influences OE.

5.2 The mediating roles in the TL-OE relationship

Based on the studies reviewed, several key mediating variables emerge as crucial in explaining the TL-OE relationship. These mediators include organizational commitment, job satisfaction, organizational culture, innovative behavior, and psychological empowerment.

5.2.1 Organizational commitment

Bilgiler et al. (2022) highlight the crucial role of organizational commitment as a critical mediator in the TL-OE relationship. Their study shows that transformational leaders significantly enhance employee commitment by creating an environment where personal goals are aligned with organizational objectives. As a result, employees who are deeply committed to the organization's mission are more willing to surpass their expected roles, driving greater productivity and OE. This elevated level of commitment becomes a core mechanism through which transformational leaders achieve enhanced OE, as committed employees not only improve their performance but also collectively contribute to the organization's success.

Similarly, Patiar & Wang (2016) found that organizational commitment mediates the relationship between TL and both financial and non-financial performance. Leaders who engage employees personally—by offering support, recognition, and clear communication—promote deeper emotional attachment and loyalty. This engagement, combined with a convincing organizational vision articulated by the leader, strengthens the bond between employees and the organization. Consequently, employees are motivated to achieve organizational goals and improve customer service, efficiency, and overall operational performance.

Transformational leaders, through their ability to inspire, motivate, and promote a shared vision, improve a strong sense of commitment among employees. This commitment creates an emotional and psychological bond between employees and

the organization and directly translates into enhanced performance and OE. When employees feel connected to the organization's goals and values, they are more motivated to go beyond their formal responsibilities, demonstrating higher levels of engagement, productivity, and loyalty (Bilgiler et al., 2022; Patiar & Wang, 2016). This sense of belonging and dedication to organizational objectives is crucial in driving long-term success, as it promotes a motivated and adaptable workforce that contributes to sustainable growth and OE (B. O. Ali, 2018; Hilton et al., 2023).

A comparative analysis of organizational commitment as a mediator reveals that it has a strong mediating effect on the relationship between TL and OE in people-centred sectors such as education and hospitality (Bilgiler et al., 2022; Patiar & Wang, 2016). This indicates that organizational commitment is a vital link through which TL positively impacts OE in these sectors. Leaders can adopt practical strategies to build strong organizational commitment, including creating a collaborative work environment, providing professional development opportunities, and acknowledging employee contributions that align with organizational objectives. Additionally, implementing reward programs, maintaining open lines of communication, and clearly defining organizational goals can strengthen commitment, thereby improving overall OE.

5.2.2 Job satisfaction

Hilton et al. (2023) identified job satisfaction as a crucial mediator between TL and OE. Leaders who provide a clear vision, engage employees in meaningful work and promote a supportive work environment significantly enhance job satisfaction. This increase in satisfaction, in turn, improves OE, as employees who are satisfied with their work are more likely to perform better and contribute to the organization's overall success. Transformational leaders create work environments that are supportive, engaging, and motivating, which leads to higher levels of employee satisfaction. Employees who feel satisfied with their jobs tend to be more productive, collaborative, and motivated to contribute positively to the OE.

Maharani & Sudiro (2017) highlighted that job satisfaction, when combined with organizational commitment, is an essential mediator in the relationship between TL and organizational citizenship behaviour, directly contributing to OE. Satisfied employees are more willing to engage in extra-role behaviours that improve organizational functioning, such as helping colleagues, taking on additional responsibilities, and going beyond their formal job descriptions. These behaviours promote a collaborative work environment and directly impact the organization's ability to achieve its goals.

Job satisfaction is a mediator that translates TL into tangible organizational outcomes. Employees who are satisfied with their work environment and leadership are more likely to exhibit behaviours that drive organizational success, such as higher productivity, increased loyalty, and a greater willingness to contribute to team efforts and innovation. This alignment of individual satisfaction with organizational goals not only improves immediate performance but also helps sustain long-term OE by promoting a committed and motivated workforce (M. Ali et al., 2020; Patiar & Wang, 2016).

A comparative analysis of job satisfaction as a mediator reveals that it has a strong mediating effect on the relationship between TL and OE in high-stress, service-oriented sectors such as banking (Hilton et al., 2023). In the sectors where work is

both high-stress and customer-centric, job satisfaction is essential. Transformational leaders who actively enhance job satisfaction contribute to a more-strong and engaged workforce, which is vital for achieving service excellence and maintaining customer trust (Hilton et al., 2023). On the other hand, in sectors like manufacturing, where work tends to be process-driven and routine, job satisfaction may play a more moderate role in mediating the impact of TL on OE.

In practice, leaders in high-stress, customer-focused sectors should prioritize building supportive and rewarding environments to help manage stress levels and promote high-quality customer service. Effective strategies include establishing clear career progression paths, supporting open communication, and providing regular feedback and recognition to enhance employee satisfaction. These initiatives can significantly increase job satisfaction, leading to stronger OE.

5.2.3 Organizational culture

Organizational culture is a critical mediating factor that significantly shapes how TL influences OE. Transformational leaders often actively reshape or reinforce the organizational culture by promoting values of innovation, collaboration, and adaptability. These cultural transformations mediate the relationship between TL and OE by creating an environment where employees are more engaged, motivated, and aligned with the organization's strategic goals. Through developing a positive and supportive culture, transformational leaders enable organizations to respond more effectively to internal and external challenges.

Nguyen et al. (2023) found that organizational culture mediates the TL-OE relationship by promoting a culture of continuous improvement and innovation. Transformational leaders who emphasize collaboration, adaptability, and a focus on improvement create a culture that empowers employees to contribute meaningfully to organizational objectives, leading to enhanced performance and OE. This empowered culture promotes creativity and accountability, which are essential for maintaining competitiveness in rapidly changing industries.

Muzondiwa et al. (2022) highlight that transformational leaders who promote inclusivity and innovation improve a work culture where employees are more deeply engaged with their tasks and responsibilities. By motivating employees to take ownership of their roles within a supportive environment, transformational leaders help shape a culture that drives better organizational outcomes.

Based on the reviewed studies, organizational culture has a strong mediating role in the relationship between TL and OE in sectors where continuous improvement and process innovation are fundamental, such as manufacturing and education (Nguyen et al., 2023). Leaders in these sectors should focus on developing a culture that emphasizes continuous improvement and actively involves employees in problem-solving and innovation. Effective strategies include creating cross-functional teams, implementing continuous feedback systems to enhance processes, and stimulating open communication channels that promote adaptability and growth.

5.2.4 Employee innovative behaviour

Employee innovative behaviour plays a crucial mediating role in the relationship between TL and OE, particularly in sectors that demand constant innovation and creativity, such as banking, technology, and research and development (R&D). Transformational leaders are important in promoting an environment where

employees are motivated to think creatively, take calculated risks, and pursue new ideas, all essential for driving innovation and enhancing OE. Through this process, innovative behaviour becomes the critical mechanism that bridges TL with improved organizational outcomes.

Tayal et al. (2022) reveal how innovative behaviour mediates the relationship between TL and OE. Transformational leaders inspire employees to think beyond conventional solutions and support their creative efforts, creating a culture that values innovation and rewards creativity. This organizational culture, shaped by leadership, provides employees with the psychological safety and motivation to experiment with new ideas and approaches. As a result, generating innovative solutions directly contributes to enhanced OE by improving the organization's adaptability, competitiveness, and overall performance.

Mohammed & AL-Abrow (2023) highlight the importance of shared leadership in promoting employee innovative behaviour, which ultimately leads to improved OE. By promoting a collaborative environment where leadership responsibilities are distributed among team members, transformational leaders empower employees to take ownership of their roles and contribute actively to the organization's success. This distributed leadership model enables employees to feel more engaged in the innovation process, thereby creating a culture of continuous improvement and adaptability. Shared leadership not only promotes engagement but also strengthens the collective innovative capabilities of the organization, making the workforce feel empowered and capable. This leads to sustained success in competitive environments.

A comparative analysis of employee innovative behaviour as a mediator reveals that its effect is strong in high-innovation sectors such as banking, technology, and R&D (Mohammed & AL-Abrow, 2023; Tayal et al., 2022). This indicates that in industries where adaptability and creativity are vital, employee innovative behaviour is a key factor in translating TL into tangible improvements in OE.

Leaders in these innovation-driven sectors should focus on developing an environment that actively supports and rewards creativity. Practical strategies include implementing reward systems for creative solutions, establishing cross-departmental innovation teams, and promoting psychological safety to minimize fear of failure. Such initiatives empower employees to challenge conventional norms and explore new approaches, ultimately strengthening OE. To further enhance innovative behaviour, leaders can promote team autonomy, encourage open communication, and support distributed decision-making, creating a culture where employees feel empowered to innovate. Leaders are also confident to invest in training programs that support creativity, establish innovation labs or pilot projects, and create collaborative spaces to facilitate idea-sharing across teams.

5.2.5 Psychological empowerment

Kim & Shin (2019) found the significant role of psychological empowerment in mediating the TL-OE relationship. Their research highlights that transformational leader, through their inspiration, motivation, clear goal-setting, and support, enhance employees' sense of ownership over their work. Empowered employees feel more motivated to align their personal objectives with those of the organization, leading to higher levels of commitment and improved performance. The study also emphasizes that psychological empowerment is particularly effective in decentralized organizations, where employees are given more autonomy and responsibility. In these

contexts, transformational leaders who delegate authority and trust employees to make decisions enable individuals to feel more engaged and accountable for organizational outcomes, thus enhancing OE.

Transformational leaders enhance psychological empowerment by promoting a work environment where employees feel a bigger sense of autonomy, competence, and control over their tasks. This empowerment is essential for individual and organizational performance, as it directly influences employees' motivation, engagement, and commitment to achieving organizational goals. When employees perceive themselves as capable and in control of their work, they are more likely to take initiative, accept challenges, and contribute to the organization's success.

Psychological empowerment acts as a mechanism through which TL drives OE by increasing employee motivation and engagement and their commitment to the organization's objectives. Empowered employees are more likely to show behaviours that contribute to the organization's overall success, such as taking initiative, collaborating with others, and motivated for continuous improvement (Kim & Shin, 2019). This empowerment allows employees to leverage their skills and creativity to address challenges and innovate, which is particularly valuable in dynamic and competitive industries.

Furthermore, psychological empowerment reinforces employees' intrinsic motivation, aligning their personal growth with organizational success. Transformational leaders support employee development and recognize their contributions, making employees feel more competent and valued. This leads to a positive feedback circle of increased effort and higher organizational performance. This sense of empowerment ensures that employees remain engaged, committed, and productive, all of which are essential for sustaining long-term OE (Kim & Shin, 2019).

A comparative analysis of psychological empowerment as a mediator reveals that it has a strong mediating effect on the relationship between TL and OE in sectors where employee autonomy is closely linked to performance, such as technology and consulting (Kim & Shin, 2019). In these contexts, transformational leaders who delegate authority and build trust empower employees to feel more engaged and accountable for organizational outcomes, thereby enhancing OE. Practical strategies to foster psychological empowerment include providing employees with opportunities for skill development, delegating meaningful responsibilities, and promoting independent problem-solving. This approach not only increases individual motivation and creativity but also strengthens the organization's ability to adapt to rapid changes in the industry.

5.3 The moderating roles in the TL-OE relationship

Studies have identified various moderating factors that influence the relationship between TL and OE. These moderating factors either strengthen or weaken the impact of TL on OE, depending on specific organizational or contextual conditions. By understanding the role of these moderators, organizations can better understand how TL practices may need to be adjusted or customized to different environments for optimal effectiveness. Based on the studies reviewed, crucial moderating factors include organizational structure, job demands, and knowledge sharing.

5.3.1 Organizational structure

Kim & Shin (2019) highlight that organizational structure is crucial in determining how TL can enhance OE. The degree of centralization or decentralization within an organization significantly shapes how TL impacts performance and employee engagement. In decentralized organizations, where employees are granted greater autonomy and decision-making authority, TL has a much stronger and more positive effect on OE. This is because decentralized structures support a more flexible environment, allowing leaders to delegate authority, promote innovation, and motivate employees to take ownership of their tasks. These structures create space for transformational leaders to empower employees, leading to increased engagement, creativity, and commitment to organizational goals. By facilitating innovation and shared responsibility, decentralized environments enable transformational leaders to capitalize on their leadership approach fully, ultimately driving individual and organizational performance.

On the contrary, in highly centralized organizations, the positive effects of TL are often limited by inflexible hierarchies, limited autonomy, and top-down decision-making processes. In these environments, transformational leaders face challenges in empowering employees, as the structure restricts employees' ability to engage meaningfully with leadership initiatives. Centralized structures typically feature more inflexible roles and responsibilities, leaving little room for the flexible, participatory approaches that are characteristic of TL. The lack of autonomy in these environments limits employees' capacity to innovate or take initiative, reducing the potential for transformational leaders to influence OE significantly. This suggests that in centralized organizations, TL's effectiveness may be reduced by structural restrictions, limiting its impact on enhancing employee motivation and driving organizational change (Kim & Shin, 2019).

This moderating effect of organizational structure indicates that for TL to achieve its full potential, organizations must develop a structure that supports flexibility and employee empowerment. Decentralized structures promote participatory decision-making and distribute responsibility more regularly, providing productive ground for TL to grow well. In such environments, employees are more likely to engage actively with leadership, contribute innovative ideas, and take ownership of their work. This alignment between organizational structure and leadership style creates a powerful synergy that enhances OE through higher employee engagement, increased innovation, and improved performance (Katou et al., 2022; Kim & Shin, 2019). In practice, organizational leaders must be aware of the structural designs of their organizations and ensure that the structure complements the leadership style to maximize the benefits of TL. Organizations can create a conducive environment for transformational leaders to inspire, motivate, and drive sustainable OE by developing decentralized structures that align with TL principles.

5.3.2 Job demands

Job demands play a crucial moderating role in the relationship between TL and OE. In organizations where job demands are very high, the positive effects of TL on OE are often weakened (Katou, 2015). This occurs because employees in high-pressure environments may feel overwhelmed by the volume and intensity of their workload, which reduces their ability to engage fully with leadership initiatives or take advantage of the opportunities for growth and development that transformational

leaders typically provide. In these situations, employees may be more focused on meeting immediate demands rather than responding to the long-term vision and motivational strategies presented by transformational leaders, thereby weakening the potential impact of TL on overall OE.

On the contrary, in environments where job demands are maintained at a moderate level, the influence of TL on OE is often strengthened (Katou, 2015). Under these conditions, employees have the necessary psychological and physical resources to respond positively to transformational leaders' empowering and motivational behaviors. In moderate-stress environments, employees can engage with leadership initiatives, take advantage of transformational leaders' autonomy and responsibility, and apply creative problem-solving to their tasks. This not only makes TL more effective at boosting employee engagement, commitment, and performance, but also opens up opportunities for professional development, innovation, and collaboration. These are critical aspects of TL that can be fully realized under moderate job demands, promoting a sense of optimism and growth among employees (Katou, 2015)

This finding emphasizes the importance of leaders being aware of the demands placed on their employees. It is the responsibility of transformational leaders to ensure that workloads are manageable and that employees are not overburdened by unreasonable job demands. By carefully balancing work expectations, leaders can create an environment in which TL prospers, leading to higher levels of employee motivation, innovation, and overall OE. Katou et al. (2022) suggest that leaders should monitor job demands and make adjustments to prevent employees from experiencing burnout, ensuring that the positive effects of TL can be fully realized.

In practice, TL can serve as a powerful tool for achieving OE if leaders promote a supportive and empowering workplace culture that enhances employee well-being and organizational outcomes. Practical strategies may include setting realistic performance expectations, providing resources to manage workloads effectively, and offering regular feedback and support. By ensuring a balanced work environment, leaders can strengthen the positive impact of TL, creating sustainable improvements in OE.

5.3.3 Knowledge sharing

Knowledge sharing is a crucial moderator in the relationship between TL and OE, specifically in knowledge-driven sectors such as banking, technology, and healthcare. In these industries, where innovation and adaptability are critical, the ability of employees to share knowledge and collaborate across teams strengthens the impact of TL on OE. Tayal et al. (2022) found that knowledge sharing enhances the effects of TL by promoting a culture of open communication, learning, and collective problem-solving. Transformational leaders, by promoting these practices, create an environment where employees feel motivated to exchange ideas, share expertise, and engage in continuous learning. This collaborative culture drives innovation and enhances the organization's ability to adapt to changes in the market, enabling quicker responses to emerging challenges and opportunities.

When knowledge sharing is actively developed, transformational leaders are more successful in developing an innovative workforce prepared to generate new ideas and implement creative solutions. The open exchange of knowledge enables employees to learn from each other's experiences, reducing knowledge barriers and facilitating the exchange of ideas across different departments. This leads to improved

problem-solving capabilities and promotes a culture of innovation that is essential for maintaining a competitive advantage in rapidly changing industries. As employees collaborate and learn from one another, they become more engaged and motivated, further contributing to improved OE (Tayal et al., 2022).

Leaders can take specific actions to facilitate knowledge-sharing and collaboration across teams. For example, implementing cross-functional meetings, establishing shared digital platforms for collaboration, and developing open feedback channels are practical strategies that help integrate knowledge sharing into the organizational culture. By aligning TL with a strong knowledge-sharing environment, transformational leaders create a workspace where employees feel empowered to innovate, collaborate on problem-solving, and adapt to the complexities of their industry. This alignment ensures that the organization remains agile, innovative, and competitive.

5.4 Sectoral variations in the TL-OE relationship

The relationship between TL and OE can vary significantly depending on the sectoral context. These variations are shaped by the unique characteristics, demands, and challenges present in different industries. The 23 studies reviewed show significant sectoral differences in the TL-OE relationship, particularly in the education, healthcare, banking, manufacturing, and hospitality sectors. Each sector presents specific factors that either strengthen or weaken the effectiveness of TL in driving OE, emphasizing the importance of contextual adaptability in leadership strategies.

5.4.1 Education sector

Several sector-specific factors shape the effectiveness of TL in enhancing OE within the education sector. In the education sector, TL's impact on OE largely depends on the leader's ability to promote commitment and create a supportive culture that aligns with educational objectives. Bilgiler et al. (2022) found that within the education sector, TL significantly enhances OE by promoting organizational commitment among teachers and staff, supporting alignment between employees' personal goals and the institution's mission. This alignment translates into measurable outcomes such as increased productivity, improved teaching quality, and higher engagement in school activities, which are critical for educational effectiveness.

Additionally, Muzondiwa et al. (2022) found that TL is effective in education when leaders promote a culture of innovation and inclusivity, empowering staff and educators to take ownership of their roles. This supportive culture not only improves creativity in teaching methods but also enhances administrative efficiency, leading to stronger OE by ensuring that educational goals are consistently met. For example, innovative teaching practices promoted by TL have been shown to increase student engagement and satisfaction, contributing to the institution's reputation and effectiveness. This emphasizes that for TL to optimize OE in the education sector, leaders should prioritize inclusivity and innovation values in their approach.

However, unique challenges in the education sector—such as its traditionally hierarchical and structured nature—can sometimes restrict the full impact of TL. The rigid structures within many educational institutions may limit employees' freedom to innovate, thus reducing TL's potential effectiveness on OE. As a result, while TL positively influences OE, these structural barriers can restrict its impact. This suggests that for TL to reach its full potential in the education sector, it is essential to address

these limitations by reducing hierarchical barriers, supporting open communication, and creating a more flexible environment. By focusing on these specific factors, transformational leaders can maximize OE, achieving sustained improvements that align with the unique demands and goals of the education sector.

5.4.2 Healthcare sector

The effectiveness of TL in enhancing OE in the healthcare sector is shaped by the sector's unique requirements for collaboration, adaptability, and continuous innovation. The TL-OE relationship in healthcare depends on the leader's ability to improve teamwork, enhance communication, and maintain a focus on patient-centred care. Top et al. (2015) found that TL has a stronger impact in private healthcare institutions than in public ones. This variation is due to the structural differences between these types of institutions. Private hospitals generally operate with more flexibility and autonomy, allowing leaders to implement TL practices that support innovation, simplify processes, and improve patient care more effectively. In contrast, public healthcare institutions often face bureaucratic limitations and resource restrictions, which can delay the implementation of TL-based initiatives.

Therefore, to strengthen TL's impact on OE in healthcare, leaders must adapt their strategies to align with the specific characteristics of private and public healthcare institutions. In private healthcare settings, leaders can utilize the flexibility in these structures to promote innovation and patient-centred practices, promoting environments that support high levels of employee engagement and adaptability. Effective measures include establishing interdisciplinary teams, implementing feedback systems to address patient needs proactively, and providing targeted training that emphasizes patient-centred care and sustainability.

In public healthcare, where resource limitations and more rigid structures may restrict the full effect of TL, leaders can focus on achievable improvements within these limitations, such as enhancing communication channels and prioritizing teamwork within established systems. Strategies to improve OE in these settings include building solid internal networks that facilitate communication and collaboration, empowering staff within defined roles, and implementing gradual innovations that align with regulatory standards.

5.4.3 Banking and financial services sector

In the banking sector, where intense competition, strict regulations, and fast technological changes are common, the relationship between TL and OE is influenced by the organization's ability to innovate and share knowledge. Tayal et al. (2022) found that TL can increase OE in the banking sector by supporting knowledge-sharing practices and inspiring employees to adopt creative solutions that address customer needs. Leaders in this sector must promote fresh ideas, adopt new technologies, and support the development of customer-focused products, which help the bank stay competitive in a fast-changing financial landscape.

However, the strict regulatory environment in the banking sector can decrease the impact of TL on OE. Nguyen et al. (2023) found that in the banking sector, the positive effect of TL on OE may be reduced because compliance requirements limit the flexibility needed for innovation. These findings indicate that strict regulations can restrict TL's effectiveness by reducing space for creative approaches. To address these challenges, leaders can adapt TL strategies such as emphasizing compliance-focused

innovations and using knowledge-sharing practices to create systems that simplify regulatory processes and enhance operational efficiency.

5.4.4 Manufacturing sector

The manufacturing sector, particularly in lean manufacturing environments, presents a unique context for the TL-OE relationship. Burawat (2019) found that in the manufacturing sector the impact of TL on OE is strongly influenced by the emphasis on process efficiency, quality improvement, and waste reduction. TL plays a crucial role in this sector by promoting continuous improvement and supporting employees to engage in problem-solving that enhances both product quality and operational efficiency (Burawat, 2019). In practice, transformational leaders in manufacturing should focus on integrating lean principles into daily operations, supporting employees to think creatively within existing guidelines, and creating an environment where ideas for improving processes are welcomed and valued.

However, the process-focused nature of manufacturing and the emphasis on strict production standards may reduce the potential for creativity driven by TL. Katou (2015) noted that while TL positively influences OE by building fairness, trust, and employee commitment, the structured nature of manufacturing processes can restrict the flexibility needed for broader innovation. As a result, TL's effectiveness in this sector may be influenced by the operational needs for consistency and standardization, which can limit the application of creative solutions.

Consequently, to achieve optimal OE in the manufacturing sector, leaders need to balance TL practices with the sector's operational demands. For instance, while supporting innovation, leaders should also emphasize adherence to production standards to ensure quality and efficiency. Practical strategies include establishing structured evaluation cycles for continuous improvement, empowering employees to make gradual changes that align with lean objectives, and promoting a culture of trust where employees feel their ideas are valued within the boundaries of operational standards.

5.4.5 Hospitality sector

In the hospitality sector, where customer service has a direct impact on financial results and customer loyalty, job satisfaction plays a significant role in mediating the relationship between TL and OE (Hilton et al., 2023; Patiar & Wang, 2016). However, the high turnover ratio and seasonal staffing changes in this industry can weaken the long-term influence of TL, as frequent employee changes make it challenging to maintain a consistent leadership impact. These findings suggest that for TL to be effective in hospitality, it is crucial to consider factors like employee turnover and the sector's seasonal nature.

Practical actions for enhancing TL effectiveness in this sector include establishing structured onboarding programs, offering regular training opportunities, and creating a supportive work environment that increases commitment even within a changing workforce. Additionally, leaders should develop flexible, customer-oriented cultures that accommodate seasonal fluctuations without sacrificing service quality.

6. CONCLUSION

This study comprehensively explores how TL influences OE by examining the critical mediating and moderating factors that shape this relationship across various sectors. The findings highlight that mediator such as organizational commitment, job satisfaction, organizational culture, innovative behaviour, and psychological empowerment play essential roles in shaping the TL-OE relationship, with their effects varying according to sector-specific demands and characteristics. Additionally, moderating factors—such as organizational structure, job demands, and knowledge sharing—further impact the strength of TL's effect on OE, underscoring the need for leaders to adapt their practices to their particular sector's context.

However, several limitations should be acknowledged. This study relies on a systematic literature review, which limits its ability to capture the detailed, real-time aspects of the TL-OE relationship across rapidly changing sectors. Additionally, the data analyzed in the reviewed studies cover various organizational settings, which may limit the generalizability of findings across all industries or cultural contexts. Future research would benefit from longitudinal, cross-sectional studies examining TL's long-term impact in specific industries to provide a more thorough understanding of these relationships. Additionally, future research should focus on quantifying the effect of each mediator and moderator on the TL-OE relationship to determine which factors hold the most substantial influence across sectors.

For practitioners, this study highlights the importance of adapting TL practices to align with sector-specific needs. For example, leaders in high-stress, customer-oriented sectors such as banking could prioritize job satisfaction by promoting supportive and rewarding work environments. In sectors where employee autonomy is crucial, like technology, developing psychological empowerment by granting employees bigger control and responsibility can drive engagement and innovation.

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