

Elevating performance: A systematic review of transformational leadership and knowledge management in the Saudi oil & gas sector

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Abstract

Purpose: This study evaluates the intricate relationships among knowledge management, worker performance, and transformative leadership in the Saudi oil and gas industry.

Design/methodology/approach: The investigation employed three distinct datasets, yielding a composite of 201 entries. Following the removal of 132 duplicate entries, a total of 69 distinct records were subjected to thorough content analysis, serving as the foundation for this comprehensive study.

Findings: An important theme that arose from the analysis was the importance of transformative leadership, which enabled the creation of an organisational culture marked by the sharing of knowledge, collaborative working, and the invention of innovative ideas.

Research limitations/implications: This study highlights the significance of tackling challenges such as the loss of information over time, the movement of workers between jobs, and the transfer of unspoken knowledge. Furthermore, it indicates that additional empirical investigation is required to validate and investigate these connections within the particular framework of the Saudi oil and gas industry.

Practical implications: The study emphasises the capacity of transformative leadership to create a favourable atmosphere for knowledge management and improve worker performance in the Saudi oil and gas industry.

Originality/value: To shed light on the complex dynamics, this review pulls from a number of theoretical frameworks, such as transformational leadership theory, social exchange theory, and the knowledge-based perspective of the organisation. By analysing the Saudi oil and gas business through these frameworks, we can gain significant insights into how it operates. The study could also help with diversification and knowledge-based business advancements, which are important goals of Saudi Arabia's Vision 2030.

Keywords: Transformational Leadership, Knowledge Management, Employee Performance, Saudi Arabia, Oil and gas Industry, Organizational Effectiveness

Introduction

The oil and gas industry in Saudi Arabia plays a crucial role in the country's Gross Domestic Product (GDP), greatly influencing its economic structure (Algarini, 2020). In recent years, the industry has faced various obstacles and opportunities that have greatly influenced its

operations and overall success. Bradshaw, Graaf, and Connolly (2019) emphasise the apprehensions over the unpredictable fluctuations in worldwide oil prices, geopolitical conflicts, and the urgent requirement for viable and environmentally friendly energy alternatives (Soni, 2022). The aforementioned circumstances have compelled oil and gas companies in Saudi Arabia to modify their strategies and investigate inventive methods to enhance performance and sustain competitiveness (Ferrer & Santa, 2017; Sharifkhani, et al., 2016). Attracting foreign investment and promoting economic growth are crucial aspects of the industry's operation (Alodadi & Benhin, 2015). The growth of industries such as petrochemicals, refining, and energy-intensive manufacturing has played a crucial role in generating employment opportunities and promoting economic diversification (Saxena, et al., 2020; Hasanov et al., 2021). The implementation of innovative methods and cutting-edge technology has facilitated the development of a highly qualified workforce and the widespread sharing of experience across many fields (Madkhali & Sithole, 2023). In this environment, knowledge management has gained increased attention due to its focus on the efficient acquisition, generation, dissemination, and use of knowledge inside organisations (Baslom & Tong, 2019). Nevertheless, there is still a deficiency of research investigating the impact of transformational leadership on knowledge management strategies (KMS) and employee performance, particularly in the Saudi Arabian oil and gas sector. Effective knowledge management is of utmost importance in the oil and gas industry due to its highly specialised and intricate characteristics (Abusweilem & Abualoush, 2019; Latif et al., 2020). It improves how efficiently operations are carried out, reduces the chances of problems occurring, encourages new ideas and solutions, and helps make well-informed decisions by making it easier to get and use specialised information at different stages of operation.

Although there have been noteworthy developments, the business is confronted with substantial obstacles, such as the unpredictable fluctuations in international energy prices and the worldwide transition towards clean and renewable energy sources. To overcome these issues, it is necessary to implement knowledge management strategies in order to enhance organisational performance (Grant, 2013; Mohammadpoor & Torabi, 2020; Howell & Hall-Merenda, 1999). Transformational leadership, which involves motivating followers to strive for both personal and group objectives, is crucial for enhancing organisational success (Bakker et al., 2022; Becker et al., 2021; Dahlander & O'Mahony, 2011). The leaders in this particular approach actively nurture trust, stimulate creativity, and promote individual development among their followers (Khan et al., 2020). Transformational leadership facilitates the attainment of organisational goals and also promotes psychological empowerment among employees (Steinmann et al., 2018; Al Kurdi et al., 2020). It is essential to comprehend the relationship between transformational leadership and organisational performance in order to develop effective leadership strategies and improve staff satisfaction (Eliyana et al., 2019; Drolet et al., 2022). Transformational leaders create a work climate that encourages high performance, cooperation, and employee engagement (Amiri et al., 2020). They ensure that the aims of the organisation are in line with the demands of the employees (Walumbwa et al., 2018; Weiss, et al., 2018; Lin et al., 2020; Tian et al., 2020). Essentially, the success of the oil and gas business in Saudi Arabia depends on the implementation of good knowledge management methods and transformative leadership. These factors work together to promote innovation, improve performance, and guarantee long-term sustainability in response to changing market conditions and regulatory demands (García-Morales et al., 2008; Lee et al., 2019).

Overview of the Saudi Arabian oil and gas industry

The historical development of Saudi Arabia's oil and gas industry has had a profound impact, influencing both the country's economy and the global energy scene. The identification of

extensive oil deposits in the early 20th century, particularly through the excavation of Dammam No. 7 in 1938, signalled the commencement of extensive oil extraction and Saudi Arabia's rise as a significant participant in the energy industry (Fattouh & Sen, 2016). The subsequent efforts to nationalise, such as the creation of Saudi Aramco as a government-owned enterprise in the 1970s, focused on asserting the nation's strategic dominance over its energy resources (Algarini, 2020). Saudi Arabia's trajectory has established it as a prominent global oil producer, wielding substantial influence over energy dynamics. The oil and gas industry plays a crucial role in Saudi Arabia's economy, making a substantial contribution to the Gross Domestic Product (GDP) and government revenue (Ramanigopal, 2012). Being a member of OPEC strengthens Saudi Arabia's position in influencing global oil pricing and market dynamics. In addition, the industry offers job prospects for Saudi citizens, hence enhancing the socio-economic structure of the kingdom (Fattouh & Sen, 2016).

Saudi Arabia's prominent role in the global oil production arena is reinforced by its significant reserves, which are expected to be at 259 billion barrels, and its remarkable production capacity (EIA, 2021). Saudi Arabia remains a significant participant in the global energy market, contributing to national economic growth, with a daily crude oil production above 12.4 million barrels (EIA, 2021).

Methodology

The literature highlights the interconnectedness of leadership styles, knowledge management, and employee performance, focusing on factors such as motivation, knowledge sharing, collaboration, and creativity. Utilising the Scopus, WoS, and Google Scholar databases, this study specifically examines transformative leadership within the Saudi context (Singh et al., 2021; Chertow et al., 2021). A rigorous screening process, conducted from 2000 to May 2022, eliminates non-English items and duplicates, guaranteeing the relevancy and strength of the data. The search is guided by specific terms such as "transformational leadership," "employee performance," and "Saudi Arabia," and the search comprehensiveness is improved by using the TITLE-ABS-KEY index. The prioritisation filter and subsequent screening steps are used to refine the dataset, which is stored in Excel for analysis (Singh et al., 2021; Chertow et al., 2021). The eligibility criteria are consistent across datasets, ensuring the integrity of the methodology. Table 1 outlines the screening criteria, which helps in the systematic selection of data.

Table 1 Screening criteria used in the study

Criteria	Explanation
Timeframe	From 2000 to May 2022, this study aims to document and analyze contemporary advancements while disregarding obsolete data.
Language	This study aims to guarantee linguistic consistency and enhance accessibility in the English language.
Relevance to Study Focus	The terms "transformational leadership" and "leadership" are used in titles, abstracts, or keywords.
Exclusion of Duplicate Records	The eradication of redundant records during each stage of data collecting.
Eligibility Criteria for Search Terms	The critical terms encompassed in the discourse are "transformational leadership," "leadership," "employee performance," "oil and gas industry," and "Saudi Arabia."

Database Selection	The primary utilization of Scopus is complemented by the inclusion of Web of Science (WoS) and Google Scholar to ensure full coverage.
Screening Protocol-Based Prioritization Filter	The utilization of a protocol-based filter to prioritize pertinent publications.
Manual Verification	Manually verifying data is employed to limit the possibility of errors.
Exclusion Criteria	Removing items that do not match specific criteria, lack significance, or contain critical remarks.
Comprehensive Content Analysis	Thorough content examination of the final 69 selected papers to address research objectives.

Data Screening and Extraction

The COVID-19 pandemic has caused a notable change in scholarly research focus, with a clear trend towards studying its effects on leadership, remote work, and other relevant areas. This shift in attention has the potential to marginalise research on transformational leadership, which is likely influenced by how resources are allocated and the goals of institutions (Fig 1). A decline in scholarly productivity for a particular topic does not necessarily imply a prolonged absence of interest, but rather may be a result of cyclical patterns inherent in academic study.

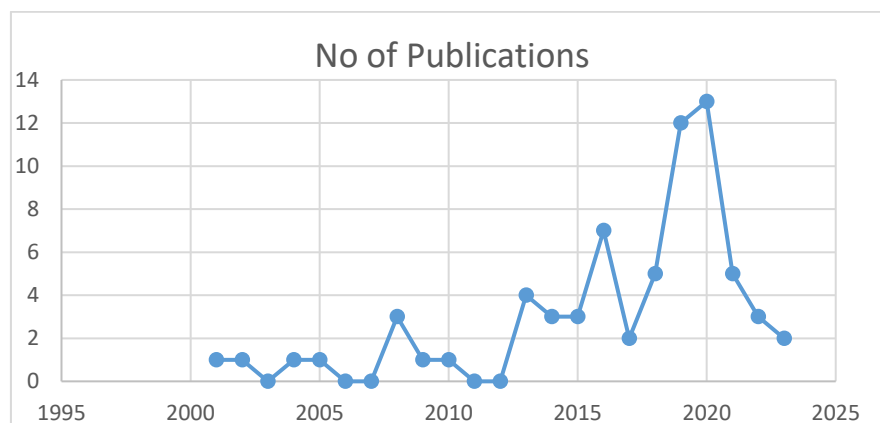


Figure 1. Graphical distribution of related publications (Year-wise)

Research interests are fluid and might be rekindled by emerging advancements or renewed enthusiasm in the future. In addition, geopolitical and economic issues have a substantial impact on the research priorities in Saudi Arabia's energy sector, as seen in Figure 2. The economic interests of China, Pakistan, and Iran in Saudi Arabia's oil and gas sector have led to increased scholarly attention in this area. The significant oil imports from Saudi Arabia by China, as well as the economic connections formed by Pakistan and Iran, operate as incentives for the rise of academic papers on Saudi Arabia's energy industry.

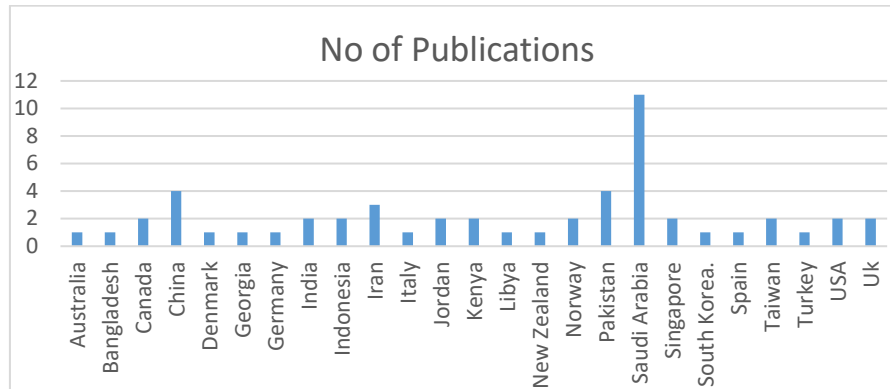


Figure 2. Graphical distribution of related publications (Country-wise)

The intricate geopolitical interdependencies between Saudi Arabia and Iran may give precedence to research in the energy industry. Mutual agreements and collaborations enhance the flow of knowledge and promote research efforts. The accessibility of statistics data regarding Saudi Arabia's energy sector differs among nations, driven by economic or diplomatic relationships. The research orientation of a nation is greatly influenced by government policies and priorities. Countries that provide financial support are more likely to have a higher amount of academic publications. The research goals of countries, such as Saudi Arabia, are significantly influenced by the dynamics of the global energy market. Furthermore, the existence of academic journals, conferences, and platforms specifically focused on the oil and gas industry enhances the strong publication infrastructure that supports research in this discipline. The complicated relationship between geopolitical circumstances, economic interests, and scholarly aspirations highlights the intricate research agendas within Saudi Arabia's energy sector. Meanwhile, the COVID-19 epidemic is causing a shift in scholarly concentration across many areas.

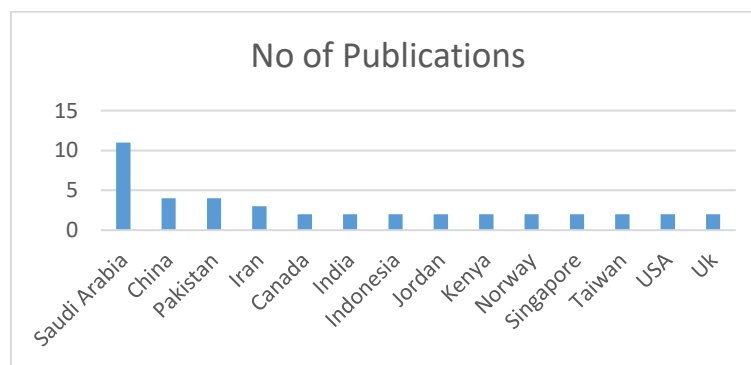


Figure 3. Graphical distribution of related publications (Top 15 countries)

Figure 3 illustrates the Saudi Arabian government's focus on transformational leadership to achieve sustainable growth, economic diversification, and global competitiveness. The driving forces behind this concentration are leadership development, the implementation of Vision 2030 (Oueidat, 2023), adaptability, and the identification of evolving leadership needs. This requires making changes to leadership styles in response to increasing demands (Holliday, 2007). Enhancing government performance and facilitating public sector changes is achieved by identifying developing leadership needs.

Conceptualization of Knowledge Management

Knowledge is a crucial resource for both individuals and organisations, which is obtained through the combination of experience, education, and the effective use of information (Amsler, 2018; Odour, 2018). It includes practical expertise, comprehension, and perspectives that facilitate intelligent operation (Odiri, 2014). Tacit knowledge is based on experience and is challenging to formalise, while explicit knowledge is documented and can be easily shared (Perez-Soltero et al., 2008). Tacit knowledge is found in persons and organisations, and it is sometimes difficult to capture and express (Hencezel, 2000). Recognising and utilising implicit information can improve the competitive advantage of an organisation (Uriarte, 2008). Explicit knowledge, unlike implicit knowledge, may be conveyed and documented in a systematic manner (Hencezel, 2008). Knowledge acquisition is a process that involves gaining knowledge through different methods, including personal experience, perception, and formal learning (Mikalauskiene & Atkociuniene, 2019). This process contributes to the development of both practical and theoretical understanding (Dayan & Evans, 2006). There are various categories of knowledge, such as domain knowledge, which refers to knowledge related to particular domains, and dispersed knowledge, which is fractured and spread across numerous sources (Chen et al., 2016; Omotaya, 2015). The transmission of encoded knowledge through symbols and documents enhances the ability to anticipate and understand patterns of behaviour inside an organisation (Altay & Laborite, 2014). Organisational learning and knowledge management are closely connected and play a crucial role in improving competitiveness and achieving a competitive edge (Odour, 2018). Timely documenting of learning processes is essential for the achievement of organisational success (Odour, 2018). Therefore, knowledge is a complex and versatile asset that is obtained via both practical experience and formal education. It plays a vital role in the operation of organisations. Tacit and explicit knowledge have separate functions, with tacit knowledge sometimes difficult to collect but valuable for enhancing organisational competitiveness. Various forms of knowledge, such as domain-specific and widely spread knowledge, have a role in enhancing organisational comprehension and efficiency. Efficient knowledge management is crucial for organisational learning and competitiveness, highlighting the significance of documenting learning processes.

Importance of Knowledge Management

Ramanigopal (2012) demonstrated the substantial impact of knowledge management on decision-making in the oil and gas industry, particularly in influencing investment decisions for difficult offshore drilling projects. Grant (2013) emphasised the significance of a knowledge management system in optimising maintenance and inspection choices for an oil and gas industry. The studies conducted by Leavitt, Raybourn, and Hubert (2021) and Johnson and Smith (2020) emphasise the crucial significance of knowledge management in enhancing efficiency and production in the industry. The instance of PetroDrill International serves as an example, where the implementation of a complete knowledge management system resulted in decreased delays, controlled expenses, and improved operational effectiveness (Leavitt et al., 2021; Johnson & Smith, 2020; Faraj et al., 2015; Huffaker, 2010). In addition, Duran (2016) highlighted the significance of transformative leadership in enhancing student learning outcomes within educational environments. The study found that transformative leadership, which involves establishing chances for professional learning and promoting meaningful relationships, has a beneficial effect on student academic attainment. Leaders were advised to give priority to the distribution of knowledge, build strong relationships, and ensure that practices are in line with organisational goals (Duran, 2016). These studies highlight the important role of knowledge management in decision-making in the oil and gas industry, as well as the ability of leadership to improve student learning outcomes. Both areas emphasise

the significance of prioritising the spread of knowledge, promoting cooperation, and aligning actions with organisational goals.

Knowledge Management in the Oil & Gas Industry

The scholarly literature on knowledge management in the oil and gas industry focuses on identifying and analysing the difficulties, approaches, and advantages associated with this field. Challenges encompass the depletion of knowledge due to an ageing workforce and the necessity to acquire and transmit implicit knowledge (Rahmani & Ranezani, 2016; Ramanigopal, 2012). Grant (2013) highlights the need of establishing cultures and platforms that facilitate the sharing of information, such as communities of practice, intranets, and social collaboration tools (Manzoor et al., 2019). The incorporation of digital technologies, such as data analytics and artificial intelligence, facilitates the effective acquisition of knowledge and enhances the process of decision-making (Choi et al., 2010; Rainie et al., 2017). Bashouri and Duncan (2014) emphasise the significance of knowledge-sharing platforms. Strategic workforce planning, competency frameworks, and training programmes play a vital role in facilitating knowledge transfer and ensuring continuity (Joia & Silva, 2020). Engaging in collaboration with external stakeholders enables the flow of knowledge and promotes innovation (Ramanigopal, 2012). BP's "Connect" system is a successful case study that has improved knowledge sharing and operational efficiency (Collison & Parcell, 2001; Staples & Webster, 2008; Weijermars & Al-Shehri, 2022).

Key challenges and opportunities in knowledge management within the industry

The oil and gas business encounters both difficulties and prospects in the field of knowledge management. The research cites obstacles such as distrust, insufficient systems, and the loss of expertise due to employee turnover (Lueng & Lau, 2007). Efficient dissemination of knowledge is essential in this ever changing industry to foster innovation and maintain competitiveness (Kılıç & Uludağ, 2021). Trust is crucial for fostering collaboration among employees (Li, 2005). Academic sources highlight the significance of knowledge management in maximising operational efficiency, minimising expenses, and improving decision-making (Olawoyin et al., 2020; Yasin & Khalid, 2021). Utilising technology via knowledge management systems and data analytics facilitates the retrieval of information and provides immediate decision support in real-time (Khan et al., 2020). Strategic alliances promote cooperative exchange of knowledge, resulting in progress across the entire business (Bhandari et al., 2021). These findings emphasise the importance of knowledge management in promoting performance, innovation, and long-term growth in the oil and gas industry.

Practices and Strategies for effective knowledge management in the oil and gas sector

The literature highlights essential measures for efficient knowledge management in the oil and gas industry. Promoting transparency, cooperation, and ongoing education cultivates a culture of sharing knowledge (Solsona-Puig, 2019; Olawoyin et al., 2020; Poturak, et al., 2020). Systematic methods of acquiring and documenting information, combined with the use of technology such as knowledge management systems and data analytics tools, help in the process of finding and retrieving knowledge (Hampden-Turner et al., 1997; Yasin & Khalid, 2021; Khan et al., 2020). Structured methods of transferring knowledge, including as mentoring programmes and succession planning, help reduce the loss of knowledge (Yasin & Khalid, 2021; Elhuni & Ahmad, 2017). Engaging with external stakeholders and demonstrating strong leadership can significantly improve knowledge management processes (Bhandari et al., 2021; Olawoyin et al., 2020).

Transformational Leadership and Its Impact on Knowledge Management

Leadership styles have a significant impact on the way organisations handle knowledge. Transformational leadership, renowned for its ability to inspire and motivate employees, promotes innovation and ongoing learning, hence promoting successful knowledge management (Purvanova & Bono, 2009; Becerra-Fernandez & Sabherwal, 2014; Kwan, 2019). The situational leadership theory proposes the adjustment of leadership styles based on the different degrees of expertise within teams. This approach encourages customised guidance and support to facilitate effective knowledge exchange and cooperation (Cabrera & Cabrera, 2005; Thompson & Glaso, 2018; Imam & Zaheer, 2021). Distributed leadership promotes the idea of shared responsibility and accountability for knowledge processes, which is in line with the collaborative nature of knowledge management (Järvenpää, 2007; Lin et al., 2020; Liu et al., 2020; García Torres, 2019; Givens, 2008). Servant leadership places a high importance on meeting the needs of followers and promoting trust and collaboration. It also focuses on improving knowledge sharing and team development (Heyler & Martin, 2018). Authentic leadership promotes openness and trustworthiness, establishing a secure atmosphere for sharing knowledge and working together (Li et al., 2005; Leroy et al., 2015). The theories of complexity and adaptive leadership highlight the importance of embracing complexity, promoting experimentation, and supporting adaptation in order to effectively meet the challenges of managing dynamic knowledge (Uhl-Bien & Marion, 2009; Heifetz et al., 2009; Dahlgaard et al., 2019). By utilising these theories, organisations may create a conducive atmosphere for knowledge management, which in turn promotes innovation and provides a competitive edge (Le et al., 2019) (Table 2).

Table 2. Leadership theories, models, and their key features

Leadership Theory or Model	Key Features	Relationship to Knowledge Management
Transformational Leadership	Encourages employees to exceed expectations and fulfil their potential. Promotes innovation and unified vision. Encourages lifelong learning.	Positively impacts knowledge-sharing and collaboration, fostering organizational support. Visionary and inspiring leadership boosts knowledge creation and innovation. Helps implement knowledge management methods. Promotes personal and organizational growth.
Situational Leadership	Tailor's leadership to situations and followers.	Respect team members' skills and experience, modifying leadership to promote knowledge exchange and cooperation. Needs complicated knowledge domain experts as leaders.
Distributed Leadership	Team members lead. Promotes knowledge production, sharing, and application by common ownership.	Encourages knowledge management group ownership and accountability. Follows knowledge management's development, application, and sharing principles.
Servant Leadership	Serves and meets followers' requirements.	Encourages comprehensive development to promote individual and collective achievement. Increases teamwork by making information

	Team development is prioritized. Encourages trust and cooperation.	sharing safe. Allows employees to share skills.
Authentic Leadership	Exhibits sincerity and openness, qualities that inspire confidence.	Makes employees feel safe sharing their knowledge, ideas, and experiences, increasing knowledge sharing and collaboration.
Complexity Leadership	Supports complexity, experimentation, and adaptation. Supports self-organizing knowledge networks.	Recognizes the complex and dynamic nature of knowledge management. Encourages experimentation, adaptation, and the emergence of self-organizing knowledge networks.
Adaptive Leadership	Adapts and leads effectively in times of change and uncertainty. Encourages learning, experimentation, and knowledge creation.	Encourages learning, experimentation, and knowledge creation to address evolving challenges and leverage opportunities in the dynamic knowledge environment.

Transformational leadership and its relationship to knowledge management

Several recent studies examine the influence of transformative leadership on knowledge management, utilising diverse source (Carton et al., 2014). Manik (2016) discovered that transformational leaders cultivate a conducive environment for the exchange of knowledge and cooperation, which is essential for successful knowledge management. Mohammadi and Boroumand (2016) observe the constructive impact of these leaders on employees' knowledge-sharing behaviours, as they serve as exemplary figures who prioritise and promote sharing. Furthermore, transformational leadership fosters the generation of knowledge and promotes innovation (Afsar & Umrani 2020). Leaders stimulate innovation and question established methods, promoting the development of new information and the growth of the organisation. Mahmood et al. (2019) emphasise their contribution to the implementation of knowledge management systems, offering assistance, resources, and direction. García-Morales and Lloréns-Montes (2008) and Liao and Wu (2009) highlight the importance of transformational leaders in facilitating organisational learning and fostering a culture of ongoing learning. The results clearly demonstrate that transformational leadership has a substantial role in fostering a favourable atmosphere for knowledge exchange, innovation, and overall organisational performance.

Employee performance and its measurement in the oil and gas industry

Employee performance in the oil and gas business involves a range of activities and outputs, including as operational efficiency, adherence to safety regulations, and financial outcomes. These are evaluated using key performance indicators (KPIs) (Elhuni & Ahmad, 2017; Sarstedt & Mooi, 2019). Evaluation approaches integrate quantifiable data such as production numbers with subjective evaluations derived from supervisor assessments and peer comments (Haas & Yorio, 2016). Nevertheless, the industry has difficulties as a result of its intricate nature, distant geographical locations, and heterogeneous workforce (Larmer et al., 2015). Adapting to the changing nature of operations requires flexibility, taking into account elements such as cultural differences and language limitations. By addressing these problems, it is possible to assure a precise evaluation of the influence of leadership on employee performance. This also helps in

creating performance evaluation systems that are successful and in line with the objectives of the organisation (Elhuni & Ahmad, 2017). This summary serves as a basis for additional investigation into the correlation between leadership styles and employee performance.

The impact of transformational leadership on employee motivation and engagement

Transformational leadership motivates employees by presenting a captivating vision, encouraging internal drive and dedication (Susilo, 2018). This approach increases job happiness, engagement, and organisational commitment (Steinmann et al., 2018). Transactional leaders, in contrast, prioritise establishing explicit objectives and implementing a system of rewards or disciplinary measures to incentivize achievement (Susilo, 2018).

Transformational Leadership and its influence on knowledge sharing, collaboration, and innovation

This section examines the influence of leadership styles on information sharing, collaboration, and innovation within the oil and gas business. The text emphasises the positive impact of transformational leadership on these areas, while also addressing the drawbacks of authoritarian leadership.

The role of leadership in enhancing employee learning and development

This section examines the impact of leadership on employee learning and development in the oil and gas business. The text explores the influence of various leadership styles on learning chances and the establishment of a nurturing atmosphere (Table 3). It highlights the importance of leadership in promoting ongoing learning and professional development. Research has demonstrated that transformational leadership has a beneficial impact on staff performance, knowledge management, cooperation, creativity, and learning and development in the industry.

Table 3. Overview of the correlation between transformational leadership and multiple facets of employee performance

Dimensions of Employee Performance and Development	Relationship to Transformational Leadership
Employee Motivation and Engagement	By motivating, articulating a compelling vision, providing individualized support, and being a role model, transformational leadership boosts employee motivation and engagement. This boosts purpose, intrinsic motivation, job satisfaction, commitment, and engagement.
Knowledge Sharing and Collaboration	Transformational leadership creates a supportive work atmosphere that encourages knowledge-sharing and cooperation. Transformational CEOs inspire staff to work towards the company's goals, improving teamwork and information sharing.
Innovation	Intellectual stimulation, inspiring vision, and role models from transformational leaders stimulate creativity. This inspires employees to innovate and challenge conventions. It fosters creativity in the company.
Learning and Development	Transformational leadership promotes employee learning and growth by providing support, development, and ongoing

	learning. This leadership style encourages professional development and industry adaptation.
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Empirical Studies Examining the relationship between Transformational leadership and knowledge management in the Oil and gas industry

A number of empirical studies have investigated leadership styles and knowledge management in the oil and gas industry. Amiri (2020) discovered a direct correlation between transformative leadership and knowledge sharing inside a multinational organisation. Adnan et al. (2020) found that transformational leadership has a significant effect on both organisational performance and innovation. Arif and Akram (2018) and Arif (2014) emphasised the significance of transformative leadership in promoting a culture of knowledge-sharing and innovation in Pakistan. Birasnav et al. (2013) demonstrated the impact of transformational leadership on both product and process innovation by examining its relationship with knowledge management. In their study, Collison and Parcell (2001) provided evidence of the efficacy of knowledge-sharing platforms in improving organisational learning and performance within the oil and gas sector, using BP as a case study.

Exploration of transformational leadership in the Saudi context and its impact on knowledge management

The cultural values of Saudi Arabia align closely with transformational leadership, since it encourages loyalty, respect, and the development of strong interpersonal relationships (Khan & Varshney, 2013). Nevertheless, differences in cultural factors present difficulties in maintaining consistent leadership behaviour (Khan & Varshney, 2013). Nevertheless, organisations acknowledge the significance of knowledge management in order to maintain competitiveness and foster innovation (Khaled, 2019). The implementation of knowledge management encounters obstacles such as cultural subtleties and limitations in resources (Fernandez & Rainey, 2013). Transformational leadership creates a favourable atmosphere for exchanging knowledge, which improves the overall performance of the organisation (Asgarnezhad Nouri et al., 2016). Amsler (2018) illustrated the enhancement of decision-making and problem-solving through the implementation of knowledge management. However, there is a need for additional investigation into the precise connection between transformative leadership, knowledge management, and performance in Saudi Arabia (Amsler, 2018). Fattouh & Sen (2016) advocated for customising leadership and knowledge management approaches to Saudi Arabia's distinct contextual elements, such as cultural values and governmental legislation, taking into account their universal impact on effectiveness.

Relevance of the study to Vision 2030 and the diversification efforts in Saudi Arabia

The significance of this study rests in its investigation of the correlation between leadership styles, knowledge management, and employee performance, closely coinciding with the objectives of Vision 2030. Organisations can cultivate innovation and grow human capital by comprehending the influence of leadership on knowledge management (Fattouh & Sen, 2016). The findings of this study can provide valuable information for policymakers and industry leaders to establish effective methods for improving leadership practices and maximising knowledge management efforts (Fattouh & Sen, 2016). Afandi and Ansari (2021) highlight the crucial role of good leadership in promoting Vision 2030, whereas Almosa & Zaraf (2019) underscore the significance of leadership in spearheading knowledge management projects.

Current practices and challenges in knowledge management within the industry

Knowledge management is crucial in the oil and gas sector due to its knowledge-intensive nature and role in driving innovation and efficiency (Ramanigopal, 2012; (Pellegrini et al., 2020). Challenges include knowledge loss from an aging workforce (Massingham, 2014) and workforce mobility hindering collaboration (Sindakis et al., 2015). To address these, digital platforms enable seamless communication (Sindakis et al., 2015), and robust strategies ensure knowledge continuity (Massingham, 2014). Additionally, keeping pace with technological advancements requires effective knowledge management practices (Grant, 2013). To understand Saudi Arabia's specific challenges, exploring literature and empirical studies is essential (Massingham, 2014; Sindakis et al., 2015; Grant, 2013). This exploration will inform a relevant theoretical framework and methodology for addressing these challenges in the Saudi Arabian context. Table 4 briefly summarises the research gaps extracted from the available literature so far with reference to the research questions and objectives of the study.

Table 4. Research gaps and further fields of exploration

Research Gap	Research Question	Objective
Limited Exploration of Leadership Styles	It is necessary to conduct a more extensive investigation of diverse leadership styles and their distinct influence on knowledge management techniques and employee performance within the Saudi Arabian oil and gas sector.	The objective of this study is to examine the correlation between transformational leadership and knowledge management techniques within the specific context of the oil and gas industry in Saudi Arabia.
Insufficient Examination of Knowledge Management Impact	The current body of literature exhibits a dearth of comprehensive exploration of the direct impact of knowledge management on the improvement of employee performance within the oil and gas industry in Saudi Arabia.	This study examines the effects of knowledge management systems on employee performance in the industry.
Neglect of the Intersectionality of Leadership Styles	The current scholarly literature lacks sufficient exploration of the intersectionality between leadership styles and knowledge management strategies and their impact on organizational success within Saudi Arabian oil and gas businesses.	This study aims to analyze the synergistic impact of leadership styles and knowledge management systems on the overall effectiveness of organizations.
Limited Focus on Industry-Specific Challenges	Insufficient scholarly attention has been devoted to investigating the distinct challenges and opportunities encountered by the Saudi Arabian oil and gas industry in relation to leadership, knowledge management, and employee performance.	This study aims to examine and evaluate the industry-specific variables that impact the efficacy of leadership and knowledge management within the oil and gas business.
Underemphasized Examination of Employee Perspectives	The current body of literature lacks sufficient emphasis on the perceptions and responses of employees towards various leadership styles and knowledge management systems and	This study investigates the influence of leadership and knowledge management on employee attitudes and well-being.

	the subsequent impact on their well-being within the Saudi Arabian oil and gas industry.	
Limited Integration of Global Trends in Clean Energy	The previous research lacks significant integration of the impact of the worldwide trend towards clean and renewable energy sources on leadership styles, knowledge management, and employee performance within the Saudi Arabian oil and gas business.	This study aims to evaluate the adaptation techniques implemented by oil and gas firms operating in Saudi Arabia in light of the global transition towards renewable energy sources.

Conclusion

The literature research elucidates the pivotal significance of transformational leadership in facilitating efficacious knowledge management techniques and augmenting employee performance within the Saudi oil and gas sector. Transformational leadership is a prominent technique that effectively cultivates a culture characterized by exchanging knowledge, collaborative efforts, and generating innovative ideas. The results underscore the significance of tackling obstacles associated with the erosion of knowledge, the movement of employees, and the transfer of tacit knowledge. The examination of connections can be enhanced by utilizing many theoretical frameworks, including transformational leadership theory, social exchange theory, and the knowledge-based view of the company. These frameworks offer essential perspectives and insights for comprehending these relationships. The study's pertinence to Saudi Arabia's Vision 2030 highlights its capacity to contribute to the diversification endeavors and advancing sectors based on knowledge. Additional empirical investigation is required to authenticate and investigate these associations within the particular framework of the Saudi Arabian oil and gas sector. This literature review establishes the groundwork for future empirical investigation, elucidating the importance of proficient leadership and knowledge management strategies in influencing the success of organizations.

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