

Knowledge Sharing between Theory and Practice: A Bibliometric Analysis of the Saudi Arabian Context

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Abstract

In light of the rapid transformations taking place in the knowledge economy, knowledge exchange has become a fundamental pillar for achieving institutional efficiency, innovation, and national development. Despite growing academic interest in this field, the theoretical and applied progress of knowledge exchange within the Kingdom of Saudi Arabia still requires further research and exploration. This study aims to provide a comprehensive bibliometric analysis of 516 academic outputs published between 2000 and 2025, to map the intellectual infrastructure, thematic shifts, and institutional contributions associated with knowledge exchange research in the Kingdom. Using data from the Lens platform and analysis tools such as Excel and VOSviewer, the study reveals a significant increase in Saudi research output after 2016, which closely coincides with the launch of Saudi Vision 2030. The results highlight the most prominent publishing platforms, key players, and five prominent thematic clusters, including public health, technology integration, education, and economic development. The study also discussed a clear theoretical and applied gap, indicating the limited use of models and frameworks such as social exchange theory, the theory of planned behaviour, and knowledge-based orientation. This study provides an important roadmap for future research through recommendations that enhance the integration of different theories, diversify research methods, and achieve greater alignment of national policies with the requirements of a knowledge economy. The findings contribute to enriching the scientific literature related to knowledge exchange within the regional context of the Kingdom and support national efforts to build a sustainable society based on innovation and knowledge.

Keywords: Knowledge Sharing, Social Exchange Theory, Theory of Planned Behavior, Knowledge-Based View, Bibliometric Analysis, Saudi Arabia.

Introduction

The contemporary organisational environment is characterised by dynamism and a high reliance on the knowledge economy. These characteristics have stimulated a sense among organizations and individuals of the importance of knowledge sharing as a strategic asset that ensures growth and development. Knowledge sharing represents a fundamental activity that contributes to transforming individual expertise into patterns of organized social intelligence (Zamiri & Esmaeili, 2024). Furthermore, it plays a supporting role in core organizational activities that lead to enhanced innovation (Arsawan et al., 2022), improved decision-making (Sudibjo & Prameswari, 2021), and ensuring sustainability achievement (Makhloufi, 2024). According to Hosen et al. (2023), knowledge sharing is subject to a series of psychological and social factors that determine an individual's willingness to engage in voluntary activities to transfer personal experiences and skills to others. Although knowledge sharing has received increasing attention from researchers and

academics, the development of this concept across disciplines has produced a range of theoretical interpretations and practical models that must be considered. The pivotal role of knowledge sharing is more evident in developing economies, such as Saudi Arabia, which launched Vision 2030 to establish the foundations of a sustainable economy based on social solidarity and the development of individual cognitive capabilities as the core for achieving strategic goals (Syaputra & Prasodjo, 2023). However, a comprehensive understanding of the mechanisms of knowledge sharing within these contexts remains vague and requires further exploration.

Previous studies have contributed to deepening the understanding of knowledge sharing, particularly within the contexts of organizational learning, healthcare, and digital transformation. However, there remains a significant gap in exploring the knowledge sharing process in the specific geographical context of the Kingdom of Saudi Arabia, particularly following the launch of Vision 2030. Bibliometric analysis can provide effective solutions to this gap in several aspects. First, this analysis identifies leading theoretical frameworks that form the basis for empirical research on knowledge sharing in the region. Second, it highlights how previous studies have addressed the challenges associated with cultural and technological factors that influence knowledge dissemination and offers proposed mechanisms for overcoming these challenges. Third, it paves the way for exploring new research directions, fostering collaboration among researchers, and expanding the scope of knowledge applications across various sectors. This paves the way for developing academic research and formulating policies based on clear scientific foundations. The absence of this type of analysis exposes research related to knowledge sharing within the Kingdom to the risk of being disconnected from global developments, diminishing its applied value and weakening its theoretical and conceptual coherence. Therefore, incorporating bibliometric analysis is considered an essential step towards bridging knowledge gaps and guiding future research in line with national and international requirements.

Over the past 20 years, the Kingdom has focused significantly on developing higher education, enhancing digital infrastructure, and reforming the public sector—steps that have a direct impact on knowledge exchange. Government initiatives such as the National Industrial Development Program and the Human Capacity Development Program demonstrate a desire to foster a culture of knowledge exchange among governments, academic institutions, and industry. However, the impact of these initiatives on the academic literature remains questionable and unclear. Using a bibliometric approach provides an opportunity to explore the intellectual landscape from a quantitative perspective, identifying key players, high-impact journals, collaborative research networks, and emerging thematic clusters. Furthermore, this approach reflects knowledge gaps in the literature where theoretical and practical connections are often neglected, enabling the development of an evidence-based roadmap that benefits researchers and practitioners alike. Accordingly, this research aims to enhance understanding of how knowledge exchange is conceptualized and implemented, highlighting the gap between theory and practice. It also offers recommendations and future research axes that align with national development priorities and contribute to achieving long-term strategic goals.

Knowledge Sharing Theories

Knowledge sharing is closely linked to knowledge management processes, highlighting its vital role in enhancing the flow of information, skills, and expertise between individuals, even across organizational boundaries. Researchers have examined this concept from multiple perspectives, defining it in terms that reflect its complex and multifaceted nature. According to Azeem et al. (2021), knowledge sharing is a dynamic process in which individuals interact to simultaneously exchange information and ideas. It involves not only sharing existing knowledge but also contributing to the creation of new knowledge,

highlighting the collective and dynamic nature of this activity over time. Having a deep understanding of the complex dynamics of knowledge sharing requires the development of a robust theoretical framework. This framework provides an explanation for the complex ways in which knowledge is created, distributed, and used, both within an organization and across different organizations. Over the years, numerous theoretical frameworks have been developed to define the responsibilities related to knowledge sharing, the activities that facilitate it, and the outcomes that emerge from successful knowledge sharing. This article highlights the most important theoretical frameworks in the field of knowledge sharing.

Social Exchange Theory

Social exchange theory (SET) originated with Homans (1958), who introduced the idea of human interactions based on mutual interests. Later, Blau (1964) expanded this theory, asserting that social exchange is influenced by trust, reciprocity, and obligations. Ahmad et al. (2023) stated that the main principle of social exchange theory is that human interactions are guided by a cost-benefit analysis, whereby individuals engage in relationships if they feel that the expected rewards outweigh the associated costs. Knowledge sharing follows this logic, whereby individuals are more likely to share knowledge when they anticipate benefits such as recognition, career advancement, or mutual information exchange (Liang et al., 2008). Furthermore, the SET emphasises the role of trust in building collaborative relationships, whereby individuals believe that others will not exploit their shared knowledge (Wu et al., 2006). According to Wang et al. (2015), the key components of social exchange theory include (1) rewards, which represent the benefits gained from knowledge sharing; (2) costs, which refer to the time and effort expended in the sharing process; (3) reciprocity, which encourages two-way sharing; and (4) trust, which fosters the willingness to share information.

One of the key contributions of SET is that it explains why individuals choose to share knowledge based on perceived rewards and costs. This theory helps organizations design incentive systems, recognition programs, and trust-building mechanisms to encourage knowledge sharing (Yan et al., 2016). Thomas and Gupta (2021) noted that this theory has been widely applied in knowledge management research to understand the role of reciprocity, motivation, and social relationships in facilitating knowledge transfer. However, a major criticism of social exchange theory is that it overemphasizes economic and rational decision-making, overlooking the fact that some individuals share knowledge due to intrinsic motivation, ethical considerations, or cultural norms rather than anticipated rewards (Stafford & Kuiper, 2021). The theory also assumes that people always calculate the costs and benefits of knowledge sharing, which is not always the case. Furthermore, it does not fully consider power dynamics and organizational hierarchy, which can influence an individual's willingness to share knowledge (Qian & Kan, 2024). Despite its criticisms, social exchange theory remains a valuable framework for designing incentive systems and trust-based knowledge-sharing cultures within organizations.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) was developed by Ajzen (1985) as an extension of the Theory of Reasoned Action (TRA) proposed by Ajzen and Fishbein (1975). While TRA emphasized that human behavior is guided by intentions influenced by attitudes and social norms, TPB added perceived behavioral control as a critical factor, recognizing that individuals also consider whether they can perform a behavior. The TPB suggests that an individual's decision to share knowledge is influenced by three primary factors (Bosnjak et al., 2020). Attitude toward the behavior refers to an individual's assessment of whether knowledge sharing is beneficial or risky. Subjective norms represent the perceived social pressure from peers, supervisors, or the organizational culture to engage in knowledge sharing. Perceived behavioral control reflects an individual's confidence in their ability to share knowledge effectively. Fauzi et al. (2023) asserted that these three components shape

an individual's behavioral intention to share knowledge, which in turn directly influences actual knowledge sharing behavior. The TPB highlights that individuals are more likely to engage in knowledge sharing if they have a positive attitude, feel supported by their environment, and believe they are capable of performing the task.

The TPB contributes significantly to understanding how attitudes, social norms, and perceived behavioral control influence knowledge sharing intentions. It is useful in predicting individual behaviors in organizational settings and provides a structured framework for identifying factors that promote or hinder knowledge sharing initiatives. TPB is particularly relevant in the digital age, where organizations aim to foster collaborative knowledge sharing cultures through technologies (Heuckmann et al., 2019). Despite its usefulness, TPB has been criticized for its heavy focus on individual cognition and failure to consider external environmental factors, such as organizational culture, leadership, and technological infrastructure, which also influence knowledge sharing (French et al., 2005). Another limitation is that actual behavior does not always follow intentions, as unforeseen barriers (such as time constraints and lack of trust) may prevent knowledge sharing despite positive intentions (Moon, 2021). This theory has been instrumental in identifying factors that drive or hinder knowledge sharing. However, its shortcomings lie in its assumption of a direct relationship between intention and behavior and its neglect of unforeseen organizational barriers. However, it remains useful for developing organizational policies and training programs that encourage positive knowledge sharing attitudes.

Knowledge-Based View

The knowledge-based view (KBV) originated as an extension of the resource-based view (RBV), first introduced by Edith Penrose in 1959 and later expanded by Wernerfelt (Penross, 1959). KBV was formally introduced by Grant, who argued that knowledge is an organization's most strategic resource (Grant, 1996). Unlike physical assets, knowledge is a dynamic, renewable resource that contributes to competitive advantage. Therefore, this theory has become fundamental in KM research, explaining how organizations design methods to promote knowledge sharing, learning, and collaboration. The KBV emphasizes that knowledge must be effectively managed through creation, storage, transfer, and application to improve performance (Singh et al., 2021). Knowledge creation involves generating new ideas through research, innovation, and collaboration. Knowledge storage refers to organizing and retaining information for future use. Knowledge transfer focuses on sharing information among individuals, departments, and teams, while knowledge application ensures that stored knowledge is used to improve decision-making and problem-solving. The KBV asserts that organizations that can manage knowledge effectively are more likely to maintain competitive advantages and innovative performance by shaping core competencies (capabilities) resulting from the integration of physical and cognitive resources (Zotoo et al., 2021).

The KBV emphasizes that knowledge is the most important resource for gaining competitive advantage. It has influenced strategic management, innovation, and knowledge management research, guiding organizations in designing effective knowledge-sharing systems, intellectual capital management, and learning-oriented cultures (Nickerson & Zenger, 2004). However, the knowledge-based perspective has been criticized for being too abstract and difficult to implement in practice, as it does not provide clear guidance on how organizations should measure, structure, or manage knowledge resources (Pereira & Bamel, 2021). Furthermore, it assumes that knowledge is always useful and ignores instances where excessive or duplicated knowledge can lead to bureaucratic inefficiencies or information overload, reinforcing the notion that organizations must create, store, transfer, and apply knowledge continuously and efficiently to support sustainable growth (Malmberg & Maskell, 2002).

Knowledge Sharing in Saudi Vision 2030

The launch of Saudi Vision 2030 depicts a historic turning point in the national development process, aiming to transform into a multi-faceted economy based primarily on knowledge and innovation. At the core of this vision is the recognition that human capital and knowledge are essential pillars for achieving sustainable development. In this context, knowledge sharing has become a key pillar for organizational learning, innovation, and enhancing institutional efficiency across various sectors, both public and private. Saudi Vision 2030 sets clear priorities: building a vibrant society, a growing economy, and an ambitious nation. This requires deep investment in the capabilities of individuals and institutions to produce, disseminate, and effectively utilise knowledge to achieve set goals (Moshashai et al., 2020). Strategic programs associated with the vision, such as the Human Capacity Development Program and the National Industrial Development and Logistics Program, in addition to initiatives presented by the Digital Government Authority, reflect a focus on establishing robust mechanisms to support knowledge transfer and promote collaborative learning across various sectors. From this perspective, knowledge exchange is not viewed as a marginal process, but rather as a multi-dimensional strategy that seeks to link human resources, modern technologies, and innovative practices as a basis for stimulating institutional reform and increasing effective performance (Nurunnabi, 2017).

At the organizational level, knowledge sharing is being enabled within the framework of Saudi Vision 2030 initiatives by integrating digital platforms and open data systems with performance measurement frameworks. Government ministries and agencies have been encouraged to adopt mechanisms for knowledge sharing between institutions, particularly in key sectors such as healthcare, education, and energy, where interdisciplinary knowledge flows play a crucial role in enhancing efficiency and stimulating innovation (Albassam, 2019). Additionally, many reform initiatives have established an institutional structure for knowledge sharing through the establishment of Vision Realization Offices (VROs), which coordinate strategy implementation and leverage best practices across government agencies. These offices serve as knowledge brokers, collecting performance data, documenting challenges, and sharing success stories to support integration and development (Alasiri et al., 2025). Despite this progress at the strategic level, some challenges continue to hinder actual knowledge sharing. A clear gap exists between the stated commitment in policies and actual implementation practices, with many organizations facing cultural and structural obstacles, along with limited incentive systems that hinder open knowledge sharing (Mian & Al Lihabi, 2023). Furthermore, despite significant improvements in digital infrastructure, fostering a collaborative culture among employees and managers remains critical to improving the practical use of available tools and ensuring their effectiveness in achieving desired goals (Alenezi, 2022).

On the academic front, the implications of Saudi Vision 2030 have generated a growing wave of research focused on understanding how knowledge sharing can support organizational transformation, foster innovation systems, and develop the Kingdom's workforce. Recent studies have examined the role of digital transformation in improving knowledge flows (Alotaibi, 2021), while other research has highlighted the role of organizational culture and leadership as mediating factors in facilitating knowledge sharing across departments (Kayani & Alzaid, 2025). However, this research field remains largely fragmented, with studies demonstrating clear limitations in addressing multiple sectors and a lack of integration of global theoretical frameworks. There is a pressing need for academic research to align more closely with national transformation goals by focusing on examining factors specific to the Kingdom's cultural and organizational context, as well as identifying barriers to knowledge sharing within these unique environments. By achieving this alignment, researchers can more effectively contribute to strengthening national capacities

and providing robust evidence-based recommendations to support the formulation of future policies and practices.

Methodology

The current research employs a descriptive methodology, utilising qualitative data and bibliometric analysis procedures, to examine the intellectual structure and practical development of knowledge sharing in the context of Saudi Arabia. This type of research focuses on the systematic evaluation of big data derived from research databases to identify influential works, emerging trends, and collaboration patterns (Abdullah et al., 2023). In this research, primary data were obtained from the Lens database, an open-source multidisciplinary database. The Lens database was chosen for its integration with numerous multidisciplinary research databases and its advanced filtering capabilities. Unlike databases such as Scopus, the Lens database offers easy-to-use interfaces and a wide range of research from developing countries, including Saudi Arabia, which efficiently meets research objectives.

Data were obtained through a structured query conducted in July 2025 to collect qualitative data on knowledge sharing in the context of Saudi Arabia. The search focused on the title, abstract, and keyword sections of the targeted literature using four filters, including:

- *Scope:* The search fields included the keywords ("knowledge sharing" OR "knowledge-sharing") AND ("theory" OR "practice") AND ("Saudi Arabia" OR "KSA").
- *Timescale:* The 25-year development of knowledge-sharing literature in Saudi Arabia, from 2000 to 2025.
- *Document types:* Journal articles, books, book chapters, conference proceedings, reports, and dissertations.
- *Language:* English

After applying filters, the archived data in the Lens database was extracted, totalling 593 documents. The extracted data was in CSV format, and the file was cleaned using Microsoft Excel and OpenRefine to ensure uniformity and remove duplicates of keywords with the same meaning, such as "knowledge sharing" and "knowledge-sharing." In total, 516 unique documents were extracted and used in the analysis presented in the research. This proactive step helped ensure the accuracy of the insights derived from the data and improved the analysis of thematic patterns.

The final data for this research was subjected to bibliographic analysis procedures using Microsoft Excel and VOSviewer. The analysis process included evaluating the performance of research institutions and authors using the productivity index. Furthermore, the time series of the productivity index was evaluated to identify time periods in the conceptual development of knowledge sharing in the context of Saudi Arabia. Co-authorship analysis was applied to identify research collaborations between researchers and institutions. Furthermore, keyword correlations were investigated to demonstrate interrelationships and patterns that underlie theories of knowledge sharing in Saudi Arabia.

Three independent experts in the field of knowledge management were consulted to test the review strategy used in the research and ensure the reliability of the methodology. This committee concluded with unified inclusion and exclusion criteria after scientifically discussing all the strategies used. Furthermore, the objectivity of the extracted results was empirically verified using a comparison method with patterns in similar bibliometric studies, along with keyword triangulation compared to recent political literature on Saudi Vision 2030.

Results and Discussion

The results presented in Figure 1 show that journal articles (364) dominated the research landscape in Saudi Arabia. This result reinforces the use of peer-reviewed publishing methods to develop the concept of knowledge sharing to align with theoretical foundations on the one hand and with the reality of the Saudi context on the other. Conference articles (59) are the second most frequent publication. Hence, it can be argued that there are efforts to develop new mechanisms based on experiences in advanced contexts to improve the use of the concept of knowledge sharing more broadly in Saudi Arabia. Book chapters (38) ranked third among other types of publications, confirming the use of the concept of knowledge sharing in a variety of disciplines rather than being limited to administrative and educational fields. Theses ranked fourth, with 32 published in English. This number demonstrates the growing awareness among students in general, and Saudi youth in particular, of the importance of focusing on knowledge stock to achieve Vision 2030. Books ranked fifth, with 14 titles. Despite the importance of this type of publication in shaping the conceptual foundations of knowledge sharing, the number of book publications in this field has remained modest, especially with the development of technological methods that contribute to knowledge dissemination. In conclusion, reports were the fewest publications obtained for this research, with nine reports. This result is attributed to the lack of trained personnel in the monitoring and evaluation process required to prepare reports that compare the performance indicators of Vision 2030 with actual performance indicators.

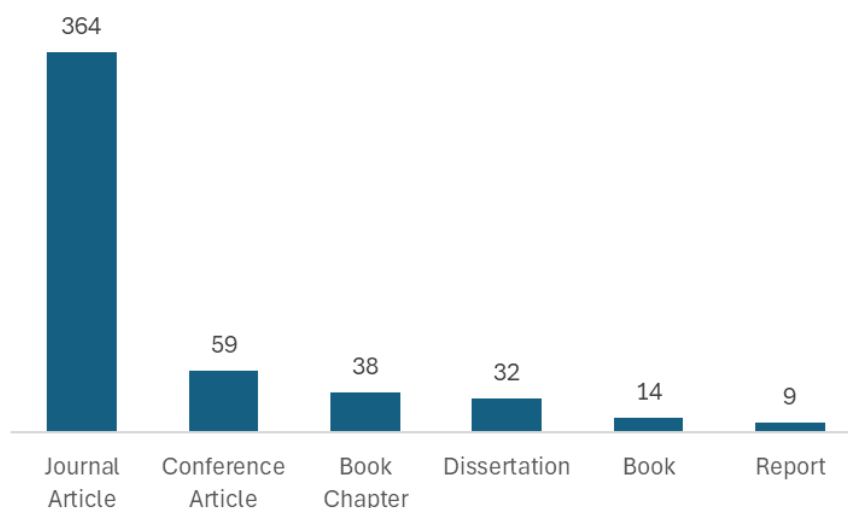


Figure 1. Types of knowledge sharing research included in the analysis

Figure 2 shows the chronological evolution of journal publications related to knowledge sharing in the context of Saudi Arabia between 2000 and 2025. The figure shows the small number of publications before 2017, which can be explained by the concept's emergence and its importance in Saudi Arabia's economic and societal development. Since 2017, with the launch of Vision 2030 in mid-2016, journal publications have been on the rise, with the number of annual publications increasing. This increase can be attributed to the government's serious efforts to achieve Vision 2030 by relying on trained local cadres who possess the necessary experience and knowledge to develop an economy fit for the modern knowledge-based era. Despite the downward trend during the first half of 2025, the data extracted was for July. Therefore, it should be noted that publications in the second half of this year may reverse the trend and continue their upward trend.

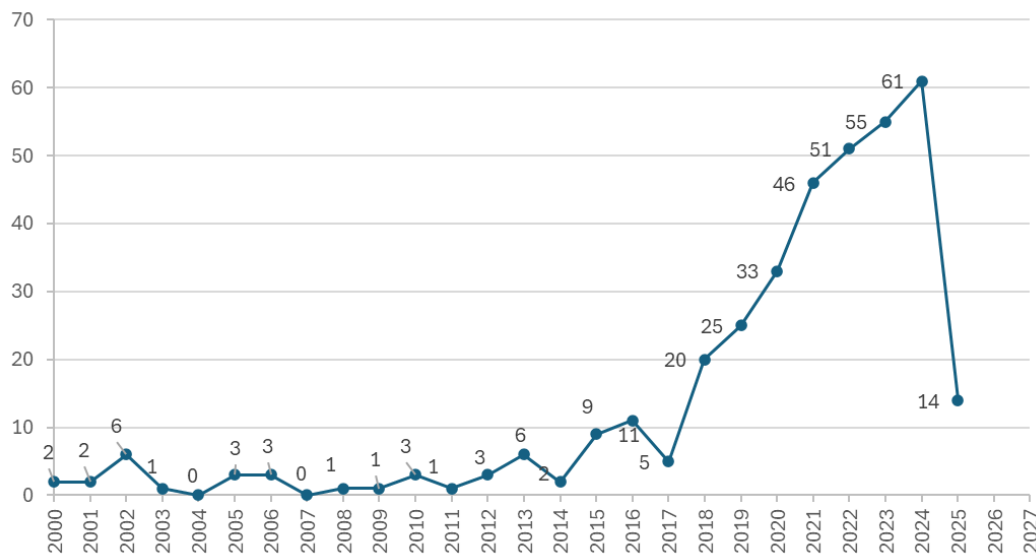


Figure 2. Trend of articles published annually for knowledge sharing in Saudi Arabia

Figure 3 displays the distribution of articles published across journals. The results demonstrate the diversity of academic disciplines that address the concept of knowledge sharing in Saudi Arabia, highlighting the strategic role of this concept across sectors. The journal Sustainability, which published 10 articles, emphasizes the need to integrate knowledge sharing into the sustainable economy called for by Vision 2030. Articles published in journals focused on digital and technological contexts, such as the International Journal of Interactive Mobile Technologies, point to significant investment in modernizing the technological infrastructure aimed at promoting the adoption of the fundamentals of the contemporary knowledge economy. Furthermore, the presence of articles published in Gulf journals, such as the Arab Gulf Journal of Scientific Research and Arabian Journal of Science and Engineering, demonstrates the development of a local knowledge base that contributes to the localisation of knowledge production and its sharing in the local context. Furthermore, articles published in the journals, for example, Social Science Research Network, Curious, PLOS ONE, emphasise the efforts made by researchers to achieve a balance between theoretical frameworks for knowledge sharing and applied practices, including medical fields.

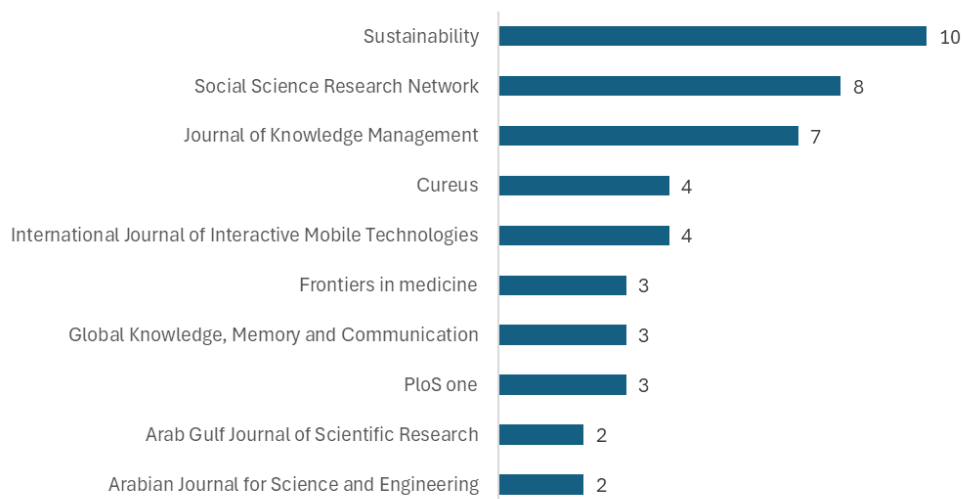


Figure 3. Top journals in which knowledge sharing research has been published

Figure 4 displays a network of ten essential educational institutions in Saudi Arabia that have played a pivotal role in promoting knowledge sharing. This was achieved through the intensification of academic activities by their students and faculty, who focused their efforts on producing and sharing scientific research that addresses this concept within contexts that align with the Kingdom's cultural and social specificity. The contribution of these institutions was not limited to the local aspect; rather, they directly influenced the development of supportive research environments that seek to expand the scope of knowledge in various fields related to Saudi studies.

**Figure 4. The most important Saudi institutions involved in knowledge sharing research**

The institutional analysis in Figure 4 revealed that King Saud University emerged as the largest contributor to knowledge sharing, with a total of 167 publications. This was followed by King Abdulaziz University with 68 publications, and then King Abdullah University of Science and Technology with 42 publications. These figures reflect the dominant trend of large academic institutions and the centralization of research activity within the main academic regions of Riyadh and Jeddah. As for specialized institutions, such as King Saud bin Abdulaziz University for Health Sciences and King Fahd University of Petroleum and Minerals, their investment in specific fields such as healthcare and energy has been evident, reflecting a strategic transfer toward specialisation. On the other hand, the rising participation of regional universities such as Jazan and Al-Baha highlights positive signs of expanding academic engagement at the national level, paving the way for a greater transformation of the Kingdom's research landscape.

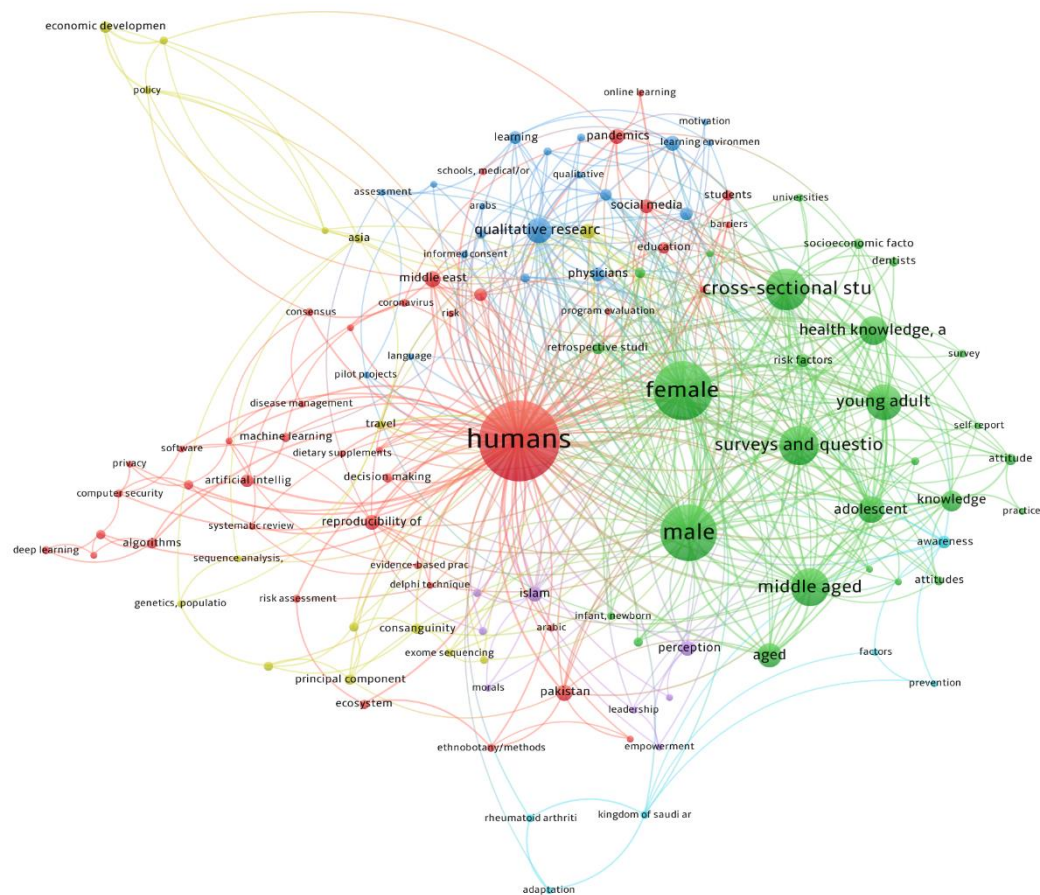


Figure 5. Keyword Analysis of Knowledge Sharing in Saudi Arabia

Figure 5 highlights the keyword co-occurrence network of knowledge sharing research in the Saudi Arabian context. The analysis reveals five main clusters (nodes) representing the main themes associated with this concept within the specific context. The most frequently occurring cluster, the keywords in green, include public health, education, and demographic factors. This finding suggests that knowledge sharing research efforts in Saudi Arabia focus on an educational approach through attitude and practice surveys using cross-sectional designs that help determine the current state of knowledge without delving into temporal influences. Despite their moderate frequency, the cluster of red nodes, which includes keywords such as humans, machine learning, and artificial intelligence, was the second most frequently occurring keyword in the research data. This cluster represents core scientific and methodological terms focused on determining the effectiveness of integrating technological developments into the strategic approach to knowledge sharing in the Saudi Arabian context. Another cluster, in yellow, highlights innovation and development sectors, including ecosystems, decision-making, and economic development. Hence, this research focuses on addressing the socioeconomic aspects related to Vision 2030 by exploiting the potential of knowledge sharing in both micro and macroeconomics. The last group, in blue, shows the regional distribution of the publications under study, confirming that they are in Saudi Arabia, which supports the national contextual alignment of the scientific literature with Vision 2030.

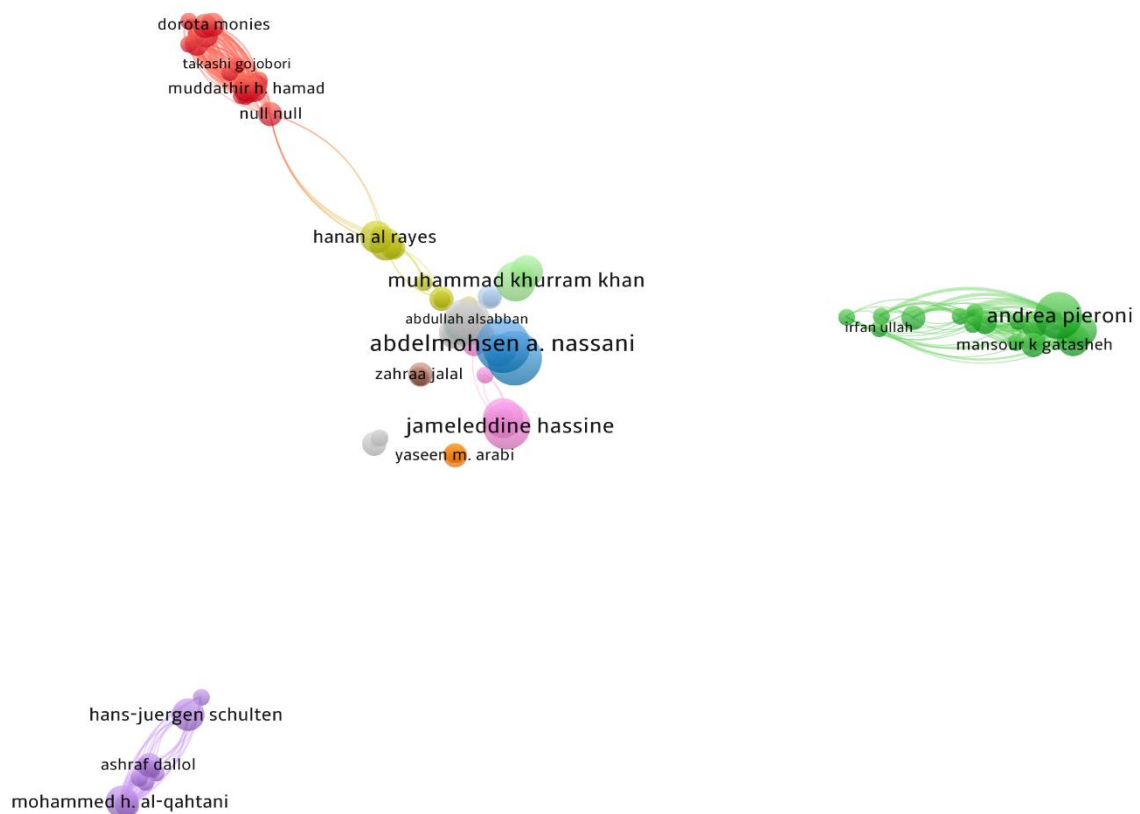


Figure 6. Pioneering researchers in knowledge sharing based on citation analysis

The citation network visualization in Figure 6 highlights the intellectual landscape of knowledge sharing research in the Saudi context. The network is divided into colored clusters that reflect research communities with shared interests or collaborations. The red cluster shows the influence of Dorota Monies, Takashi Gojobori, and Muddathir H. Hamad in the dissemination of biomedical and genomic knowledge. The yellow cluster focuses on cybersecurity and digital knowledge systems, led by Hanan Al Rayes and Muhammad Khurram Khan, in alignment with the digital transformation initiatives of Vision 2030. Abdelmohsen A Nassani and Zahraa Jalal in the blue cluster represent an interest in knowledge management in business and educational institutions to support human capital and organizational learning. The green cluster, bringing together Andrea Pieroni and Mansour K Gatasheh, links ethnographic knowledge with sustainable development. The purple and grey clusters focus on clinical knowledge and healthcare, with researchers such as Hans-Juergen Schulten, Ashraf Dallol, and Mohammed H. Al-Qahtani, a field that has grown in importance in the wake of global health challenges.

Conclusion

This paper explores the development of knowledge exchange theories and practices in Saudi Arabia using a bibliometric methodology to review 516 scholarly articles published between 2000 and mid-2025. The results indicate that the sharing of experience has increasingly migrated from being a marginal academic interest to become central to knowledge-based development in the Kingdom, particularly after the launch of Vision 2030. The bibliometrics illustrate a strong rise in scholarly production after 2016, which coincides with the Kingdom's commitment to digitization, human capital formation, and institutional change. Academic articles dominated the research arena, followed by conference papers and book chapters, indicating the remarkable development of this field

and its multidisciplinary nature. From an institutional perspective, a clear concentration of research activity emerged in major educational institutions such as King Saud University and King Abdulaziz University, with promising contributions from regional universities on the rise. This trend reflects a growing trend toward expanding academic participation to include various regions of the Kingdom, contributing to enhanced research integration at the national level.

Keyword co-occurrence analysis revealed five major research clusters, varying in focus and objectives. The most prominent cluster linked knowledge exchange to the fields of public health, education, and demographics, largely employing survey-based and cross-sectional research designs, reflecting an empirical orientation toward studying individual attitudes, awareness, and behaviors within societal contexts. Meanwhile, emerging clusters increasingly focused on technological topics, including artificial intelligence, machine learning, and digital platforms, demonstrating the strategic connection between knowledge exchange and the rapid developments in Saudi Arabia's digital infrastructure. Furthermore, one cluster focused on innovation, ecosystems, and economic development, reflecting the extension of discussions to the level of public policy and national development rather than being limited to micro-organizational processes. Despite this diversity of topics, the research highlights a significant gap between theory and practice, particularly when considering the adoption of established theoretical frameworks such as social exchange theory, the theory of planned behavior, and the knowledge-based model. This gap indicates a promising opportunity for future studies that are more comprehensive and aligned with local needs and contexts, thus contributing to bridging the gap between theory and practice more effectively.

Further Research Recommendations

Based on the results of the bibliometric analysis, a set of recommendations and future directions are presented to enhance the quality of scientific research and support institutions and policymakers. First, future research is recommended to apply and test theories such as the SECI model, social capital theory, and the theory of planned behavior with greater methodological rigor and precision. This aims to provide a solid and unified conceptual foundation for future empirical studies. Second, researchers are recommended to employ longitudinal methodologies to capture the dynamic and changing nature of knowledge exchange over time, especially when studying the long-term impacts of national initiatives such as Vision 2030. Third, future research should focus particular effort on exploring practical ways to harness modern digital innovations to enhance knowledge transfer mechanisms such as artificial intelligence and machine learning, with a focus on critical sectors such as government, healthcare, and education.

Fourth, academic institutions and government agencies must invest in developing innovative training programs and analytical tools that contribute to building capacities to monitor and evaluate the performance of knowledge exchange processes and ensure their alignment with strategic objectives. Finally, focusing on applied research that informs national policies and evaluates strategic programs is a vital necessity, especially with regard to initiatives linked to Vision 2030. Building institutional links between academic research findings and government performance indicators provides added value and contributes to deepening the role of knowledge exchange studies in guiding public policies and achieving national goals.

References

- Abdullah, K. H., Roslan, M. F., Ishak, N. S., Ilias, M., & Dani, R. (2023). Unearthing hidden research opportunities through bibliometric analysis: a review. *Asian Journal of Research in Education and Social Sciences*, 5(1), 251-262.

- Ahmad, R., Nawaz, M. R., Ishaq, M. I., Khan, M. M., & Ashraf, H. A. (2023). Social exchange theory: Systematic review and future directions. *Frontiers in Psychology*, 13, 1015921.
- Ajzen, I. (1985). *From intentions to actions: A theory of planned behavior*. In Action control: From cognition to behavior (pp. 11-39). Berlin, Heidelberg: Springer Berlin Heidelberg.
- Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological bulletin*, 82(2), 261.
- Alasiri, F., Dąbrowski, M., Rocco, R., & Forgaci, C. (2025). The Impact of Recent Policies on the Transformation of Local Participatory Urban Planning in Saudi Arabia. *Urban Science*, 9(3), 69.
- Albassam, B. A. (2019). Building an effective knowledge management system in Saudi Arabia using the principles of good governance. *Resources Policy*, 64, 101531.
- Alenezi, D. (2022). *Vision 2030: Leadership Styles, Readiness for Transformation and Faculty Satisfaction in Saudi Arabia* (Doctoral dissertation, Doctoral dissertation), The University of Newcastle, Australia.
- Alotaibi, H. (2021). Knowledge positioning and innovation in strategic alignment for SESCO and Saudi Arabias economy based on its 2030 vision. *African Journal of Business Management*, 15(9), 232-241.
- Arsawan, I. W. E., Koval, V., Rajiani, I., Rustiarini, N. W., Supartha, W. G., & Suryantini, N. P. S. (2022). Leveraging knowledge sharing and innovation culture into SMEs sustainable competitive advantage. *International journal of productivity and performance management*, 71(2), 405-428.
- Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Expanding competitive advantage through organizational culture, knowledge sharing and organizational innovation. *Technology in Society*, 66, 101635.
- Blau, P. M. (1964). Justice in social exchange. *Sociological inquiry*, 34(2), 193.
- Bosnjak, M., Ajzen, I., & Schmidt, P. (2020). The theory of planned behavior: Selected recent advances and applications. *Europe's journal of psychology*, 16(3), 352.
- Fauzi, M. A., Nguyen, M., & Malik, A. (2023). Knowledge sharing and theory of planned behavior: a bibliometric analysis. *Journal of Knowledge Management*, 28(2), 293-311.
- French, D. P., Sutton, S., Hennings, S. J., Mitchell, J., Wareham, N. J., Griffin, S., ... & Kinmonth, A. L. (2005). The importance of affective beliefs and attitudes in the theory of planned behavior: predicting intention to increase physical activity 1. *Journal of applied social psychology*, 35(9), 1824-1848.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic management journal*, 17(S2), 109-122.
- Heuckmann, B., Hammann, M., & Asshoff, R. (2019). Advantages and disadvantages of modeling beliefs by single item and scale models in the context of the theory of planned behavior. *Education Sciences*, 9(4), 268.
- Homans, G. C. (1958). Social behavior as exchange. *American journal of sociology*, 63(6), 597-606.
- Hosen, M., Ogbeibu, S., Lim, W. M., Ferraris, A., Munim, Z. H., & Chong, Y. L. (2023). Knowledge sharing behavior among academics: Insights from theory of planned

- behavior, perceived trust and organizational climate. *Journal of Knowledge Management*, 27(6), 1740-1764.
- Kayani, F. N., & Alzaid, O. I. (2025). Small and Medium-Sized Enterprises under the Transformative Vision 2030 of Saudi Arabia. *International Review of Management and Marketing*, 15(3), 46.
- Liang, T. P., Liu, C. C., & Wu, C. H. (2008). *Can social exchange theory explain individual knowledge-sharing behavior? A meta-analysis*. In Proceedings of the Twenty Ninth International Conference on Information Systems (pp. 1-18), Paris.
- Makhloufi, L. (2024). Do knowledge sharing and big data analytics capabilities matter for green absorptive capacity and green entrepreneurship orientation? Implications for green innovation. *Industrial Management & Data Systems*, 124(3), 978-1004.
- Malmberg, A., & Maskell, P. (2002). The elusive concept of localization economies: towards a knowledge-based theory of spatial clustering. *Environment and Planning A: Economy and Space*, 34(3), 429-449.
- Mian, T. S., & Al Lihabi, A. (2023). Impact of knowledge sharing, self efficacy and social media collaborative learning on student engagement: A study of Saudi university students. *Creative Education*, 14(9), 1737-1758.
- Moon, S. J. (2021). Investigating beliefs, attitudes, and intentions regarding green restaurant patronage: An application of the extended theory of planned behavior with moderating effects of gender and age. *International Journal of Hospitality Management*, 92, 102727.
- Moshashai, D., Leber, A. M., & Savage, J. D. (2020). Saudi Arabia plans for its economic future: Vision 2030, the National Transformation Plan and Saudi fiscal reform. *British journal of Middle Eastern studies*, 47(3), 381-401.
- Nickerson, J. A., & Zenger, T. R. (2004). A knowledge-based theory of the firm—The problem-solving perspective. *Organization science*, 15(6), 617-632.
- Nurunnabi, M. (2017). Transformation from an oil-based economy to a knowledge-based economy in Saudi Arabia: the direction of Saudi vision 2030. *Journal of the Knowledge Economy*, 8, 536-564.
- Penross, E. T. (1959). *The Theory of the Growth of the Firm*. Oxford University Press, USA.
- Pereira, V., & Bamel, U. (2021). Extending the resource and knowledge based view: A critical analysis into its theoretical evolution and future research directions. *Journal of Business Research*, 132, 557-570.
- Qian, Y., & Kan, Z. (2024). *Social Exchange Theory*. In The ECPH Encyclopedia of Psychology (pp. 1-2). Singapore: Springer Nature Singapore.
- Singh, S. K., Gupta, S., Busso, D., & Kamboj, S. (2021). Top management knowledge value, knowledge sharing practices, open innovation and organizational performance. *Journal of business research*, 128, 788-798.
- Stafford, L., & Kuiper, K. (2021). *Social exchange theories: Calculating the rewards and costs of personal relationships*. In Engaging theories in interpersonal communication (pp. 379-390). Routledge.
- Sudibjo, N., & Prameswari, R. K. (2021). The effects of knowledge sharing and person–organization fit on the relationship between transformational leadership on innovative work behavior. *Heliyon*, 7(6), e07334.

- Syaputra, F. F., & Prasodjo, H. (2023). Saudi Arabia's Efforts in Implementing Saudi Vision 2030. *Jurnal Public Policy*, 9(1), 70-74.
- Thomas, A., & Gupta, V. (2021). Social capital theory, social exchange theory, social cognitive theory, financial literacy, and the role of knowledge sharing as a moderator in enhancing financial well-being: from bibliometric analysis to a conceptual framework model. *Frontiers in Psychology*, 12, 664638.
- Wang, H. K., Yen, Y. F., & Tseng, J. F. (2015). Knowledge sharing in knowledge workers: The roles of social exchange theory and the theory of planned behavior. *Innovation*, 17(4), 450-465.
- Wu, S., Lin, C. S., & Lin, T. C. (2006). *Exploring knowledge sharing in virtual teams: A social exchange theory perspective*. In Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06) (Vol. 1, pp. 26b-26b). IEEE.
- Yan, Z., Wang, T., Chen, Y., & Zhang, H. (2016). Knowledge sharing in online health communities: A social exchange theory perspective. *Information & management*, 53(5), 643-653.
- Zamiri, M., & Esmaeili, A. (2024). Methods and technologies for supporting knowledge sharing within learning communities: A systematic literature review. *Administrative Sciences*, 14(1), 17.
- Zotoo, I. K., Lu, Z., & Liu, G. (2021). Big data management capabilities and librarians' innovative performance: The role of value perception using the theory of knowledge-based dynamic capability. *The Journal of Academic Librarianship*, 47(2), 102272.