

Knowledge Management, Green Innovation and Business Performance: A Bibliometric and Content Review

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<https://doi.org/10.34190/ejkm.24.3.4902>

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Abstract: This article reviews research on knowledge management, green innovation and business performance and responds to a fragmented literature in which the three concepts have developed mainly through bilateral streams. Drawing on the resource-based view, knowledge-based view, absorptive capacity theory and natural-resource-based view, the review interprets knowledge management as a strategic knowledge capability, green innovation as a possible bridge through which knowledge is translated into environmentally oriented action, and business performance as a multidimensional outcome. Bibliographic records were retrieved from the Web of Science Core Collection for 2016-2025 and restricted to English-language journal articles. Four parallel searches identified 211 records on knowledge management - green innovation, 1,431 on knowledge management - business performance and 1,007 on green innovation - business performance, while an independent integrated query identified 60 records addressing all three domains. The 60-record dataset was analysed in VOSviewer for country, publication-source, cited-source and author-keyword patterns and was interpreted through structured content synthesis. The integrated domain remains dispersed across countries, journals and themes. China, Spain and Pakistan are the most visible author-affiliation countries; the Journal of Knowledge Management, Business Process Management Journal and Business Strategy and the Environment are prominent publication sources; and knowledge management, green innovation, sustainability and firm performance form the thematic core. Three research streams are identified: knowledge management as a basis for innovation and organisational capability, green innovation as a source of performance and sustainability outcomes, and an emerging integrated knowledge management - green innovation - business performance stream. Evidence for the complete pathway remains heterogeneous, so green innovation is interpreted as a plausible, context-dependent bridge rather than a universal mediator. The study contrasts the large bilateral literatures with the smaller integrated domain and connects bibliometric patterns with conceptual flows and performance-measurement issues. The review is limited to Web of Science, English-language journal articles and a 2016-2025 window with partial 2025 coverage; its conceptual synthesis is author-developed and does not test causal relationships.

Keywords: Knowledge management processes, Green innovation, Multidimensional business performance, Knowledge-to-performance pathway, Bibliometric analysis, Content synthesis

1. Introduction

1.1 Background and Conceptual Context

In contemporary competitive environments, knowledge management (KM) has become a central basis for firms' innovation capacity and strategic renewal. Using the resource-based view (RBV) and the knowledge-based view (KBV) as the theoretical basis, firms may achieve stronger outcomes when they can organise, integrate and use valuable knowledge in firm-specific ways that are difficult for rivals to imitate (Barney, 1991; Nonaka and Takeuchi, 1995; Grant, 1996). In parallel with the strategic importance of knowledge, firms are increasingly subject to regulatory, stakeholder and market pressures related to environmental sustainability. These pressures position green innovation (GI) as a critical pathway through which firms pursue both environmental responsiveness and competitive improvement. Chen et al. (2006) describe GI as product and process innovation related to reduced energy use, pollution control, recycling practices, environmentally oriented product design and environmental management. Prior research further suggests that GI may create business value through cost reduction, reputational benefits, market expansion and productivity improvement (Chen, Lai and Wen, 2006; Dangelico, 2016; Xie, Huo and Zou, 2019; Singh et al., 2020; Rehman et al., 2024).

Business performance (BP) should be interpreted in this study as a multidimensional outcome rather than as a narrow financial indicator. Financial results such as profitability, growth or market performance remain important, but they often represent the later consequences of knowledge and innovation activities. In the KM–GI–BP relationship, the effects of KM and GI may appear first in non-financial dimensions, including innovation capability, operational quality, organisational reputation, stakeholder confidence and environmental improvement, before being translated into financial outcomes (Kaplan and Norton, 1996; Richard et al., 2009).

1.2 Research Problem and Questions

Although research on KM, GI and BP has expanded, the connections among these three areas remain incomplete. A large part of the literature investigates pairwise links, particularly KM–BP, KM–GI or GI–BP, while fewer studies explain how the three constructs operate together within an integrated analytical framework. This limitation matters because KM is unlikely to generate business value only through a simple direct path. Rather, KM may help firms accumulate and apply the knowledge needed to design greener products, improve production processes and implement environmental practices; these GI outcomes may subsequently support both financial and non-financial performance (Abbas and Sağsan, 2019; Shahzad et al., 2020; Nasir et al., 2024; Rehman et al., 2024).

Existing empirical studies provide initial support for this indirect logic, although the evidence remains scattered. Abbas and Sağsan (2019) indicate that KM is associated with both GI and corporate sustainable development, suggesting that knowledge-related capabilities can contribute to sustainability-oriented outcomes. Shahzad et al. (2020) further show that knowledge acquisition, dissemination and application support GI, and that GI serves as a partial mediator between KM processes and corporate sustainable performance. More recent studies have refined this argument by examining more specific KM mechanisms, including KM enablers, KM processes and the distinction between green product and process innovation (Cegarra-Navarro, Di Chiacchio and Cubillas-Para, 2024; Rehman et al., 2024; Shehzad et al., 2024).

In response to this fragmentation, this study uses bibliometric analysis together with content synthesis. The bibliometric stage identifies publication patterns, influential sources, country-level contributions and keyword structures, whereas content synthesis is used to interpret the theoretical foundations, research streams and unresolved gaps behind these patterns (Tranfield, Denyer and Smart, 2003; Van Eck and Waltman, 2010; Snyder, 2019; Donthu et al., 2021). This mixed review strategy is suitable for the KM–GI–BP domain because the field is still an emerging intersection rather than a mature and fully consolidated body of literature.

Bibliographic records were retrieved from the Web of Science Core Collection, covering English-language journal articles published between 2016 and 2025. The search results show that the bilateral streams are much larger than the integrated stream: 211 articles address KM–GI, 1,431 articles address KM–BP and 1,007 articles address GI–BP. However, only 60 articles simultaneously address KM, GI and BP. This sharp reduction indicates that although the three constructs are well developed individually and in pairwise relationships, the integrated KM–GI–BP field remains underdeveloped.

Four research questions guide the analysis:

RQ1. How are the bilateral and integrated KM-GI-BP research streams represented during 2016-2025?

RQ2. What are the main publication sources, countries and keyword structures in the KM–GI–BP research domain?

RQ3. What major research streams and theoretical foundations characterise the integrated KM-GI-BP literature?

RQ4. What research gaps and future directions can be proposed for developing an integrated KM–GI–BP research agenda?

To answer these questions, Section 2 reviews the three constructs and their theoretical foundations; Section 3 explains the search and analytical procedures; Section 4 reports the bibliometric and content-synthesis results; Section 5 discusses conceptual flows, gaps, implications and limitations; and Section 6 presents concluding comments and future research.

2. Literature Review

2.1 Knowledge Management

This review conceptualises KM as a firm-level capability through which organisations acquire, develop, share, store and apply knowledge to support innovation and performance outcomes. From the KBV, knowledge is not simply an input possessed by firms, but a strategic resource that supports learning, coordination and capability development (Nonaka and Takeuchi, 1995; Grant, 1996). KM processes and systems therefore play an important role in organising dispersed knowledge and converting it into organisational actions and outcomes (Alavi and Leidner, 2001; Gold, Malhotra and Segars, 2001).

Within green transformation, the relevance of KM becomes more specific because firms must combine technological, environmental and managerial knowledge to support sustainability-oriented innovation. Prior

studies suggest that KM practices can strengthen firms' capacity to pursue GI and broader sustainable outcomes (Abbas and Sağsan, 2019; Shahzad et al., 2020; Shehzad et al., 2024).

Accordingly, KM is positioned in this review as a foundational knowledge capability. Its contribution to BP is not limited to a direct performance effect; rather, KM may also shape performance indirectly by enabling firms to develop and implement GI (Shahzad et al., 2020; Nasir et al., 2024; Rehman et al., 2024; Zairbani and Kumar, 2025).

2.2 Green Innovation

This study defines GI as product or process innovation that supports organisational objectives while reducing environmental harm (Chen, Lai and Wen, 2006; Dangelico, 2016; Cheah et al., 2024). Rather than being limited to compliance, GI reflects firms' ability to redesign products, production methods and managerial practices to support ecological and organisational objectives. Chen, Lai and Wen (2006) include energy saving, pollution prevention, waste recycling, green product design and environmental management within this domain.

Green product innovation concerns the design or improvement of products with reduced environmental impacts, whereas green process innovation concerns cleaner and more efficient production and operational methods (Chen, Lai and Wen, 2006; Dangelico, 2016; Xie, Huo and Zou, 2019). From a strategic perspective, GI may be driven by regulatory pressure, market demand, cost reduction and competitive motives, and may generate outcomes such as cost savings, reputational improvement, market benefits and enhanced performance (Dangelico, 2016; Singh et al., 2020; Rehman et al., 2024).

Within the KM-GI-BP framework, GI is examined as a possible mechanism through which knowledge capabilities may be converted into performance-related outcomes. Selected empirical studies report mediation effects, particularly for sustainable performance, but the broader pathway remains context dependent and requires further testing (Shahzad et al., 2020; Nasir et al., 2024; Zairbani and Kumar, 2025).

2.3 Business Performance

BP is treated in this study as a multidimensional outcome that reflects both financial and non-financial results. Profitability, sales growth and market outcomes remain important, but they cannot fully reflect the value created by knowledge-based and innovation-oriented activities. In many cases, KM and GI may first improve non-financial outcomes, such as innovation capability, operational quality, organisational reputation and stakeholder relationships, before these improvements are reflected in financial performance (Kaplan and Norton, 1996; Richard et al., 2009).

In the context of GI, performance also needs to be understood beyond short-term economic results. GI may contribute to environmental, economic and social dimensions of performance by improving resource efficiency, reducing environmental impacts and strengthening organisational legitimacy (Hart, 1995; Shahzad et al., 2020; Rehman et al., 2024).

Accordingly, BP is positioned in this review as a broad performance construct shaped by both KM and GI capabilities (Richard et al., 2009; Shahzad et al., 2020; Cheah et al., 2024; Appiah et al., 2025). This interpretation allows the KM-GI-BP relationship to be examined not only in terms of financial outcomes, but also in terms of non-financial and sustainability-oriented performance.

2.4 Theoretical Foundations

The KM-GI-BP relationship requires an integrated theoretical lens because it connects three issues: the strategic value of knowledge, the conversion of knowledge into GI and the performance implications of GI. For this reason, the present study draws on the RBV, KBV, absorptive capacity theory and natural-resource-based view (NRBV) to frame the logic of the KM-GI-BP relationship.

RBV suggests that superior firm outcomes depend not only on resource ownership but also on the effective deployment of resources with strategic value, limited imitability and weak substitutability (Barney, 1991). KBV narrows this argument by emphasising knowledge as a core resource that enables firms to learn, coordinate activities and innovate (Nonaka and Takeuchi, 1995; Grant, 1996). From this view, KM should be understood less as an administrative activity and more as a managerial capability for organising knowledge and using it to support innovation and performance outcomes (Nonaka and Takeuchi, 1995; Grant, 1996; Gold, Malhotra and Segars, 2001; Andreeva and Kianto, 2011).

Absorptive capacity theory helps explain the process through which KM may be translated into GI. GI often depends on firms' ability to recognize, assimilate and apply knowledge from multiple sources, such as customers, suppliers, environmental regulations, clean technologies and market changes (Cohen and Levinthal, 1990; Zahra and George, 2002; Shahzad et al., 2020; Cegarra-Navarro, Di Chiacchio and Cubillas-Para, 2024; Nasir et al., 2024). In this logic, KM contributes to GI by strengthening the firm's capacity to absorb and use environmentally relevant knowledge. This argument is supported by empirical studies showing that KM practices are positively associated with GI and corporate sustainable development (Abbas and Sağsan, 2019). Shahzad et al. (2020) further demonstrate that knowledge acquisition, dissemination and application promote GI, which subsequently improves corporate sustainable performance and partially mediates the KM–BP relationship.

NRBV complements this explanation by clarifying why GI can create strategic value beyond environmental compliance. From this perspective, firms may build competitive advantage when they develop environmental capabilities related to pollution prevention, product stewardship and sustainable development (Hart, 1995; Chen, Lai and Wen, 2006; Dangelico, 2016). This view is consistent with evidence that green product innovation and green process innovation are positively related to corporate competitive advantage (Chen, Lai and Wen, 2006). Dangelico (2016) also suggests that green product innovation can generate business outcomes such as cost savings, competitive benefits, market opportunities, reputation improvement and productivity gains.

Overall, these perspectives explain complementary stages of the KM–GI–BP relationship. RBV and KBV clarify why KM can be regarded as a strategic knowledge capability; absorptive capacity theory explains how firms recognise, assimilate and apply environmentally relevant knowledge; and NRBV explains why GI may create competitive and sustainability-oriented value. This integrated logic supports examining GI as a possible bridge between KM and broader BP, not as an automatically established mediator in every context (Shahzad et al., 2020; Nasir et al., 2024; Rehman et al., 2024; Zairbani and Kumar, 2025).

3. Research Methodology

3.1 Research Design

The study adopts a review design in which bibliometric mapping and content synthesis are used as complementary analytical stages. The bibliometric analysis is employed to describe the structural features of the KM–GI–BP domain, including publication outlets, country contributions, cited sources and keyword co-occurrence. This stage is useful for identifying how an emerging research area is organised and where its main intellectual connections are located (Van Eck and Waltman, 2010; Donthu et al., 2021).

The content synthesis provides an interpretive layer by examining the theoretical foundations, research streams and unresolved issues reflected in the mapped literature (Tranfield, Denyer and Smart, 2003; Snyder, 2019). It complements the bibliometric mapping but is not presented as a systematic full-text quality appraisal or meta-analysis.

3.2 Data Source and Search Strategy

Bibliographic records were downloaded from the Web of Science Core Collection on 7 September 2025. The search was restricted to English-language journal articles published during 2016–2025 to examine the contemporary development of this emerging intersection within a consistent ten-year window. Because retrieval occurred in September, coverage for 2025 is partial. The Topic field was used because it searches titles, abstracts, author keywords and Keywords Plus.

The search strategy was developed from three core concept groups: knowledge management, green innovation and business performance. Synonymous or closely related terms within each concept group were connected with OR, while the three concept groups were connected with AND. Three pairwise searches were conducted to capture the surrounding KM–GI, KM–BP and GI–BP streams. A final integrated search was then conducted to identify articles that simultaneously addressed KM, GI and BP.

The search strings were as follows:

Knowledge management and green innovation (KM–GI):

TS = ("knowledge acquisition" OR "knowledge storage" OR "knowledge creation" OR "knowledge sharing" OR "knowledge application" OR "knowledge management") AND TS = ("green product innovation" OR "green process innovation" OR "green innovation")

Knowledge management and business performance (KM–BP):

TS = ("knowledge acquisition" OR "knowledge storage" OR "knowledge creation" OR "knowledge sharing" OR "knowledge application" OR "knowledge management") AND TS = ("business performance" OR "firm performance" OR "organization performance" OR "corporation performance" OR "financial performance" OR "non-financial performance")

Green innovation and business performance (GI-BP):

TS = ("green product innovation" OR "green process innovation" OR "green innovation") AND TS = ("business performance" OR "firm performance" OR "organization performance" OR "corporation performance" OR "financial performance" OR "non-financial performance")

Integrated search on knowledge management, green innovation and business performance (KM-GI-BP):

TS = ("knowledge acquisition" OR "knowledge storage" OR "knowledge creation" OR "knowledge sharing" OR "knowledge application" OR "knowledge management") AND TS = ("green product innovation" OR "green process innovation" OR "green innovation") AND TS = ("business performance" OR "firm performance" OR "organization performance" OR "corporation performance" OR "financial performance" OR "non-financial performance")

3.3 Data Identification and Processing

This study used a structured parallel-query procedure rather than a sequential screening design. The three pairwise searches describe the surrounding KM-GI, KM-BP and GI-BP streams, whereas the integrated search independently identifies records in which all three concept groups occur.

The pairwise searches returned 211 records for KM-GI, 1,431 for KM-BP and 1,007 for GI-BP. These datasets were retained as contextual evidence of the surrounding bilateral literatures. The integrated query returned 60 records, which formed the core dataset for bibliometric analysis and content synthesis. Inclusion indicates a bibliographic intersection and does not mean that every record empirically tests the complete KM-GI-BP pathway.

The 60 records were checked by unique Web of Science accession number and for completeness of author, title, source, year, abstract, author-keyword and DOI fields. No duplicates were identified. Minor keyword variants were standardised only where they were clearly equivalent, while the original export was preserved as an audit trail. Appendix A lists the 60 records by author, title, journal and publication year.

Table 1 summarises the four search datasets, their filtering criteria, record counts and analytical roles.

Table 1: Search strategy and analytical role of the datasets

Dataset Type	Query Focus	Filtering Criteria	Number of records	Role in the Study
Context dataset	KM-GI	WoS; 2016–2025; Article; English	211	Contextual comparison of the KM-GI stream
Context dataset	KM-BP	WoS; 2016–2025; Article; English	1,431	Contextual comparison of the KM-BP stream
Context dataset	GI-BP	WoS; 2016–2025; Article; English	1,007	Contextual comparison of the GI-BP stream
Core dataset	KM-GI-BP	WoS; 2016–2025; Article; English	60	VOSviewer mapping and structured content synthesis

Note: All searches used the Web of Science Topic field and were restricted to English-language journal articles published during 2016–2025. The pairwise totals are contextual comparisons, not sequential screening stages. Source: Authors' compilation from Web of Science data retrieved on 7 September 2025.

Table 1 distinguishes the three contextual pairwise datasets from the independently retrieved 60-record core dataset. This design supports comparison of the surrounding literatures without implying that the pairwise totals were screened down to 60 records.

Figure 1 illustrates the data identification and analytical workflow, from the four parallel searches to the verification and analysis of the 60-record core dataset.

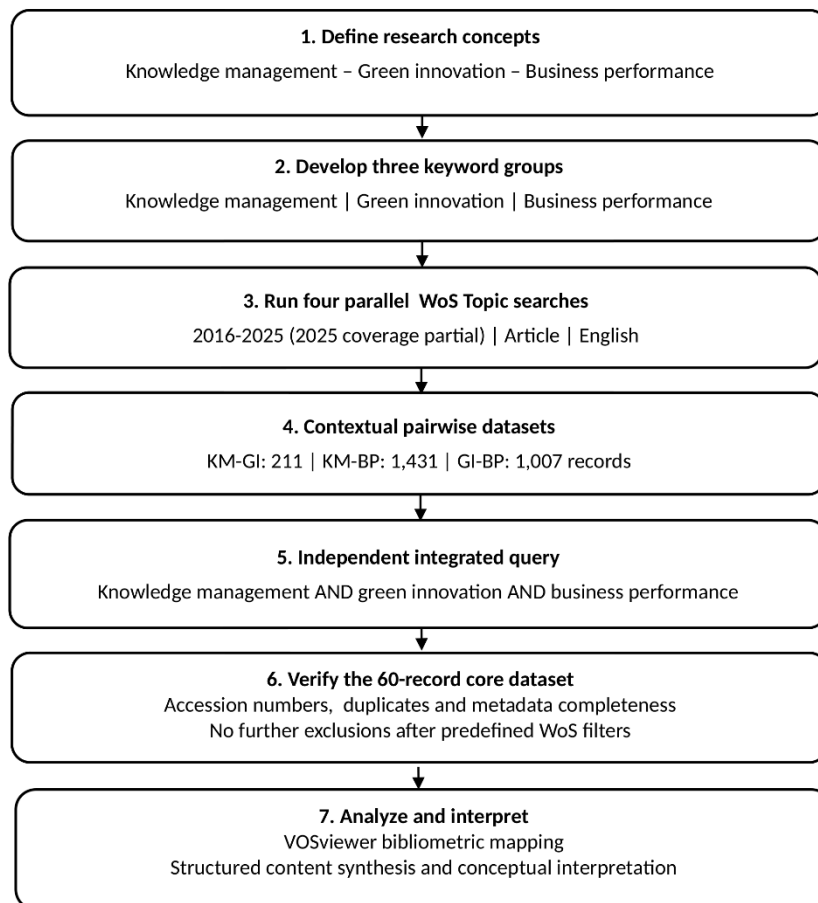


Figure 1: PRISMA-style data identification and analytical workflow

Figure 1 presents a PRISMA-style workflow adapted to the four parallel queries. It distinguishes the contextual pairwise datasets from the integrated 60-record dataset and records the subsequent verification, bibliometric mapping and content-synthesis stages.

The workflow defines a transparent and reproducible bibliometric dataset. It does not include study-quality scoring, effect-size synthesis or meta-analysis.

3.4 Bibliometric Analysis

The 60-record core dataset was analysed using VOSviewer 1.6.20. The analysis covered author-affiliation countries, publication sources, cited sources and author-keyword co-occurrence. The leading countries and publication sources were reported by document count; country results therefore indicate scholarly affiliation rather than the empirical settings of the studies.

For cited-source analysis, a minimum threshold of 50 citations was applied; 18 sources met the threshold and the ten most cited were reported. For keyword mapping, co-occurrence was selected as the type of analysis, author keywords as the unit of analysis and full counting as the counting method. Of 214 author keywords, 42 met the minimum occurrence threshold of two and were retained in the network, overlay and density visualisations.

3.5 Content Synthesis

The network, overlay and density maps were interpreted jointly. The network map identified relationships among knowledge-related concepts, GI and performance outcomes; the overlay map supported relative temporal interpretation; and the density map distinguished stronger and weaker thematic concentrations.

To add interpretive depth to the bibliometric mapping, the titles, abstracts, author keywords and bibliographic information of the 60 records were examined using a structured analytical frame covering research objective, theoretical perspective, research context, method, focal variables, performance domain and reported

relationships. Representative studies were then used to interpret the conceptual connections indicated by the bibliometric patterns. The three research streams were developed through repeated comparison between the mapped patterns and the substantive focus of the records. They are interpretive and non-mutually exclusive analytical groupings rather than algorithmically generated clusters or the output of a systematic full-text quality appraisal. The synthesis also distinguished studies reporting mediation evidence from those examining only individual relationships within the KM–GI–BP sequence.

4. Results

4.1 Descriptive Overview of the Dataset

The search results show a clear imbalance across the three related research streams. The KM–BP stream is the largest, with 1,431 articles, followed by the GI–BP stream with 1,007 articles and the KM–GI stream with 211 articles. However, when KM, GI and BP are combined in one integrated search, only 60 articles are identified.

This sharp reduction indicates that the literature remains fragmented. KM, GI and BP have developed strongly as individual or pairwise research areas, but relatively few studies examine the three concepts within a single analytical framework. The 60-article core dataset therefore represents a focused but still emerging body of research at the intersection of KM, GI and BP.

Within this core dataset, the articles were published across 36 journals and involved authors from 28 countries. This distribution shows that the KM–GI–BP relationship is interdisciplinary and international.

4.2 Country Distribution

The country analysis, based on author affiliations, shows an uneven distribution of scholarly participation. China leads the network with 28 publications, 1,353 citations and a total link strength of 21, indicating high productivity, visibility and connectedness in the dataset.

Spain ranks second with 9 publications and 414 citations, followed by Pakistan with 8 publications and 1,013 citations. Pakistan's higher citation count despite fewer publications illustrates that publication volume, citation impact and network strength capture different dimensions and should not be treated as equivalent measures of research quality.

Table 2 reports the ten leading countries by publication count, together with their citation counts and total link strength.

Table 2: Top ten countries in KM–GI–BP research

Rank	Country	Publications	Citations	Total Link Strength
1	China	28	1,353	21
2	Spain	9	414	2
3	Pakistan	8	1,013	11
4	India	5	96	4
5	Malaysia	4	102	9
6	France	3	521	3
7	Indonesia	3	70	5
8	Italy	3	326	4
9	Thailand	3	91	6
10	United Arab Emirates	3	86	4

Source: Authors' analysis based on Web of Science data, 2016–2025, using VOSviewer.

Asian and emerging-economy affiliations are prominent among the leading contributors. This pattern indicates where scholarship is being produced, but it should not be interpreted as the geographical distribution of the empirical samples examined in the articles.

Vietnam is not among the leading author-affiliation countries, although recent evidence has begun to examine how KM and green organisational factors support GI and sustainable performance (Huynh, Nguyen and Vo,

2024). This supports further research in underrepresented emerging-economy and environmentally sensitive contexts.

4.3 Journal Distribution

The 60 articles in the core dataset were published across 36 journals, indicating that the KM–GI–BP domain is not confined to a single disciplinary outlet. The Journal of Knowledge Management is the leading journal, with 6 publications and 913 citations, showing the central role of KM scholarship in shaping this research intersection.

Other important outlets include Business Process Management Journal and Business Strategy and the Environment, each with 4 publications. These journals represent two complementary orientations: one emphasizes organisational processes and managerial capabilities, while the other focuses on environmental strategy and sustainability. Additional outlets such as Journal of Cleaner Production, Sustainability and Technological Forecasting and Social Change show that the field also draws from cleaner production, innovation management and sustainable business research.

Table 3 presents the ten leading publication sources in the core dataset, ranked by number of publications.

Table 3: Top ten publication sources in KM–GI–BP research

Rank	Journal	Publications	Citations	Total Link Strength
1	Journal of Knowledge Management	6	913	43
2	Business Process Management Journal	4	75	19
3	Business Strategy and the Environment	4	168	13
4	Sustainability	4	42	5
5	Journal of Cleaner Production	3	510	20
6	International Journal of Organizational Analysis	3	82	3
7	Technological Forecasting and Social Change	2	466	16
8	Environmental Science and Pollution Research	2	39	8
9	European Journal of Innovation Management	2	27	10
10	IEEE Transactions on Engineering Management	2	59	1

Source: Authors' analysis based on Web of Science data, 2016–2025, using VOSviewer.

The journal distribution suggests that KM–GI–BP research is interdisciplinary but still dispersed. This dispersion supports the need for a more integrated framework that can connect KM, GI and BP across different research traditions.

4.4 Influential Cited Sources

The cited-source analysis provides insight into the intellectual base of the KM–GI–BP field. Journal of Cleaner Production is the most cited source, with 465 citations and the highest total link strength. This indicates the strong influence of cleaner production, environmental innovation and sustainability research on the development of the field.

Business Strategy and the Environment ranks second, followed by Sustainability, Journal of Knowledge Management and Journal of Business Research. The presence of journals such as Strategic Management Journal, Journal of Business Ethics, Technological Forecasting and Social Change, Corporate Social Responsibility and Environmental Management and Research Policy shows that the intellectual base of the field combines strategy, innovation, ethics, sustainability and KM.

Table 4 reports the ten most cited journals, including their citation counts and total link strength.

Table 4: Top ten cited journals in KM–GI–BP research

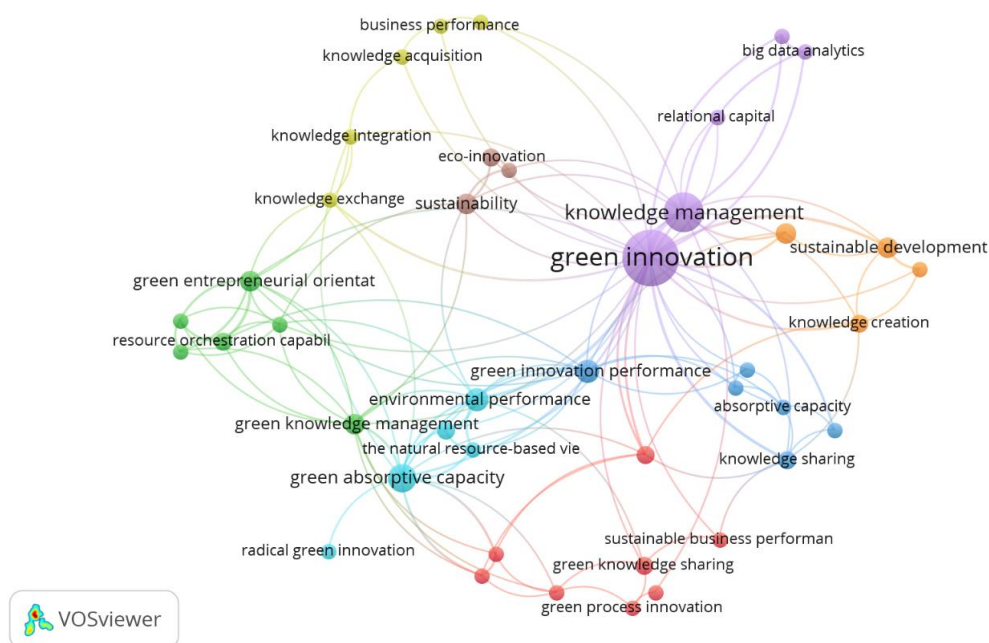
Rank	Journal	Citations	Total Link Strength
1	Journal of Cleaner Production	465	17,438
2	Business Strategy and the Environment	259	11,465
3	Sustainability	184	8,297
4	Journal of Knowledge Management	169	6,568
5	Journal of Business Research	163	6,784
6	Strategic Management Journal	158	6,867
7	Journal of Business Ethics	151	5,998
8	Technological Forecasting and Social Change	139	6,283
9	Corporate Social Responsibility and Environmental Management	113	5,011
10	Research Policy	81	2,968

Source: Authors' analysis based on Web of Science data, 2016–2025, using VOSviewer.

The most cited sources are not identical to the most frequent publication outlets. Journal of Cleaner Production and Business Strategy and the Environment strongly shape the citation base, whereas the Journal of Knowledge Management connects KM scholarship with GI and sustainability-oriented performance. This separation between publication frequency and cited influence reinforces the interdisciplinary but dispersed character of the domain.

4.5 Bibliometric Mapping Analysis

Keyword co-occurrence analysis was used to identify how the main themes in the KM–GI–BP literature are connected. The analysis produced three visual outputs in VOSviewer: network, overlay and density maps. Figure 2 presents the keyword co-occurrence network, showing the relationships among the main concepts in the KM–GI–BP literature.



Source: Authors' analysis based on Web of Science data, 2016–2025, using VOSviewer.

Figure 2: Keyword co-occurrence network in KM–GI–BP research

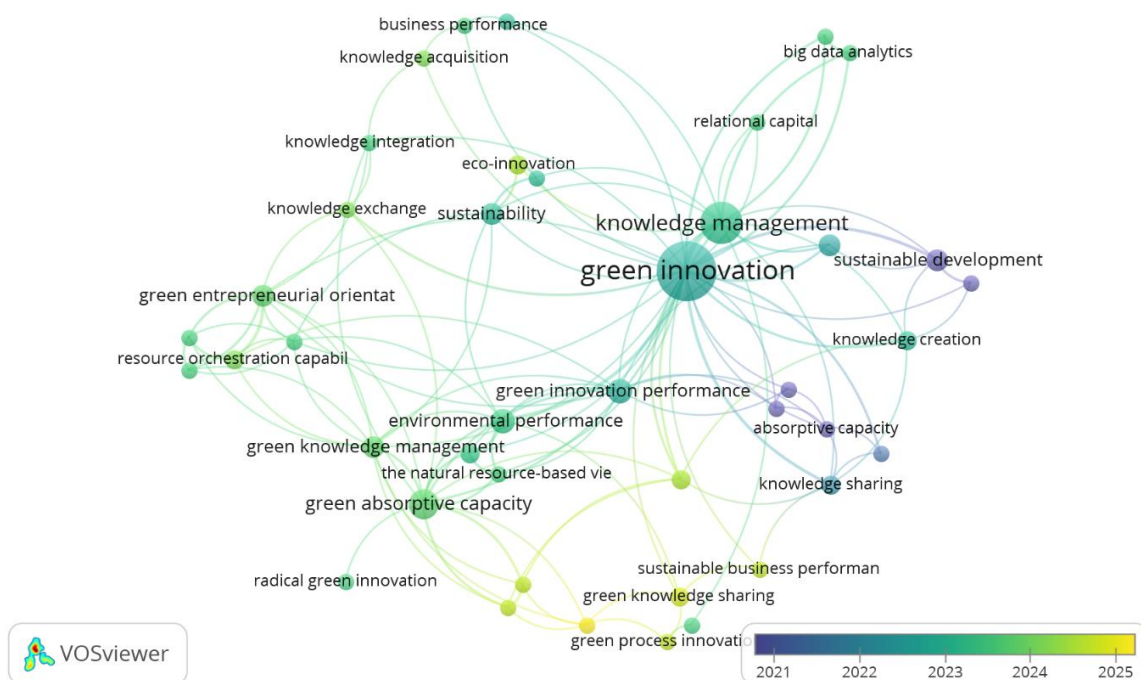
The keyword network indicates that the KM–GI–BP domain is structured around several interrelated themes, although their integration remains incomplete. Keywords such as “knowledge management,” “green innovation,” “innovation,” “firm performance” and “sustainability” occupy central positions, indicating that the domain is built around three main pillars: knowledge resources, green innovation capability and performance outcomes.

The first thematic pattern is associated with KM and innovation. Terms such as “knowledge management,” “knowledge sharing” and “knowledge creation” indicate that knowledge is frequently treated as a foundational element of innovation capability. However, this pattern does not always specify the green or environmental nature of innovation, suggesting that part of the KM literature still treats innovation in broad terms.

The second pattern is centred on GI and sustainability. Keywords such as “green innovation,” “sustainability,” “environmental performance” and “eco-innovation” show that GI is primarily associated with environmental strategy and sustainability-oriented outcomes. Nevertheless, the connection between GI and specific KM processes remains less explicit.

The third pattern focuses on performance outcomes. Keywords such as “firm performance,” “business performance” and “organizational performance” indicate that performance is generally interpreted as an outcome of managerial and innovation-related capabilities. Yet the keyword structure suggests that financial and non-financial performance indicators are not consistently distinguished.

Figure 3 provides an overlay visualisation of the keyword network, indicating the relative timing of research attention across the main themes.

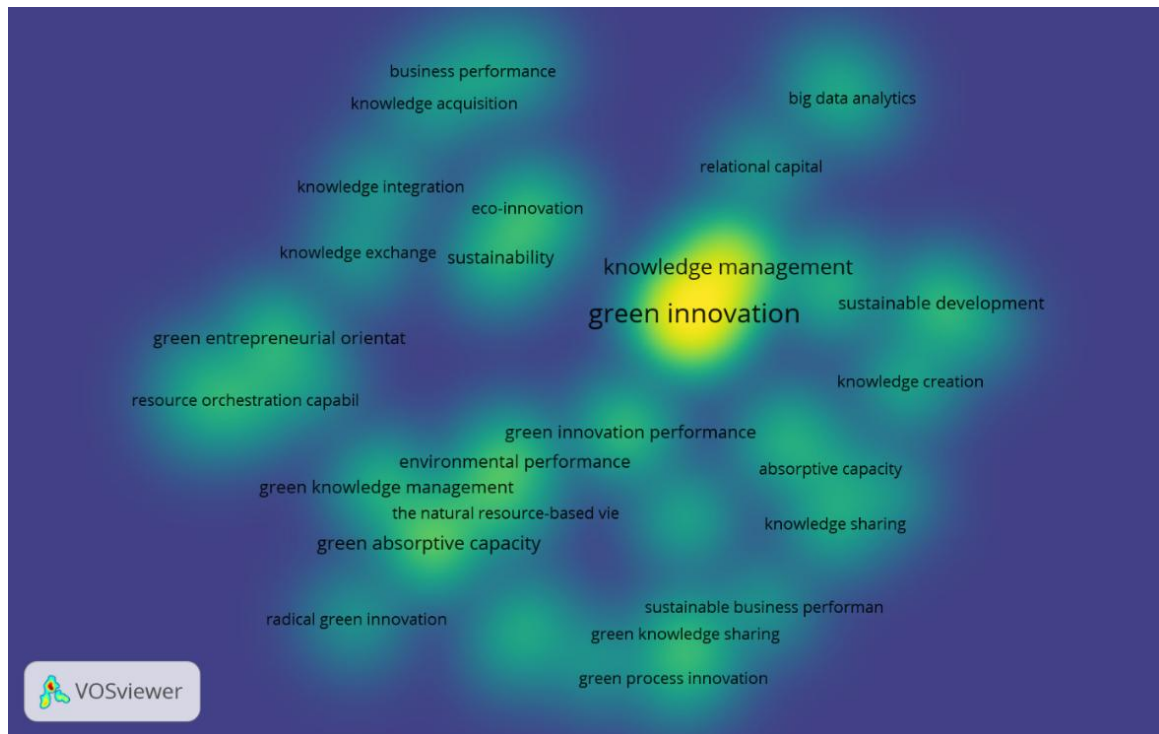


Source: Authors’ analysis based on Web of Science data, 2016–2025, using VOSviewer.

Figure 3: Overlay visualization of keyword co-occurrence

The overlay visualization indicates a gradual shift in research attention. Earlier studies were more closely associated with KM and innovation in general, while more recent studies show stronger attention to GI, sustainability and environmental performance. This pattern suggests that GI has emerged as a newer thematic extension of earlier KM and innovation research.

Figure 4 presents the keyword density visualisation, showing where research themes are more or less concentrated within the network.



Source: Authors' analysis based on Web of Science data, 2016–2025, using VOSviewer.

Figure 4: Density visualization of keyword co-occurrence

The density visualization shows that the most concentrated areas are located around “knowledge management,” “green innovation” and “firm performance.” These dense areas represent the established thematic core of the field. In contrast, weaker density around terms related to mediation, moderation and integrated mechanisms indicates that the explanatory logic connecting KM, GI and BP remains underdeveloped.

Table 5 brings together the main thematic patterns interpreted from the keyword co-occurrence maps, along with their academic interpretations and associated research gaps.

Table 5: Higher-order thematic patterns interpreted from keyword co-occurrence analysis

Thematic pattern	Core Keywords	Academic Interpretation	Research Gap
Knowledge mobilisation	Knowledge management, innovation, knowledge sharing, knowledge creation	KM is positioned as a knowledge base for innovation, but the transition from generic innovation to environmentally oriented innovation is under-specified.	Identify which KM processes mobilise environmental knowledge and under what organisational conditions.
Green innovation formation	Green innovation, sustainability, environmental performance, eco-innovation	GI is associated mainly with sustainability and environmental outcomes, while its knowledge antecedents are less explicit.	Explain how KM capabilities support GI rather than treating GI as an isolated environmental response.
Performance realisation	Business performance, firm performance, organisational performance	BP is a heterogeneous outcome domain spanning financial, operational, environmental and sustainability measures.	Report the performance domain, data source and time horizon more consistently.
Integrated KM–GI–BP pathway	Knowledge management - green innovation - business performance	The joint presence of KM, GI and BP suggests an emerging pathway rather than a mature causal model.	Test GI as a possible mediator and assess boundary conditions without assuming universal effects.

Source: Authors' conceptual interpretation of Web of Science author-keyword maps generated using VOSviewer, 2016–2025.

These patterns are author-developed interpretations of the keyword relationships shown in the VOSviewer maps; they should not be understood as algorithmically generated or mutually exclusive clusters.

Overall, the keyword analysis shows that the field has moved from general KM–innovation research toward a more sustainability-oriented agenda. However, the integrated KM–GI–BP relationship remains only partially developed. The bibliometric maps therefore support the central argument of this review: KM, GI and BP are connected, but their theoretical and empirical integration is still incomplete.

4.6 Major Research Streams

Based on the bibliometric results and the structured content synthesis of the 60 core records, three major research streams can be identified.

The first stream examines KM as a driver of innovation and organisational capability (Shahzad et al., 2020; Cegarra-Navarro, Di Chiacchio and Cubillas-Para, 2024; Shehzad et al., 2024). Across this stream, knowledge creation, acquisition, sharing and application are commonly associated with firms' capacity to recognise opportunities and implement innovation. However, many studies discuss innovation broadly and do not explain which KM processes mobilise environmentally relevant knowledge.

The second stream focuses on GI as a source of performance and sustainability outcomes (Xie, Huo and Zou, 2019; Singh et al., 2020; Cheah et al., 2024; Appiah et al., 2025). This stream shows that GI may improve firm outcomes by reducing resource use, enhancing environmental reputation, supporting compliance, improving operational efficiency and strengthening market differentiation. However, the performance effects of GI are not always interpreted consistently because studies use different measures of BP, ranging from financial performance to sustainable, environmental and organizational performance.

The third stream examines the integrated KM–GI–BP relationship (Abbas and Sağsan, 2019; Shahzad et al., 2020; Nasir et al., 2024; Rehman et al., 2024). It links KM to the knowledge needed for environmentally oriented innovation and connects GI with financial and non-financial outcomes. Shahzad et al. (2020) explicitly report partial mediation, whereas other studies examine individual links or specific contexts. The complete pathway is therefore plausible but not uniformly established across the 60 records.

The evidential structure of the literature is therefore uneven. Evidence is more established for the component relationships linking KM with GI and linking GI with different performance outcomes than for the complete KM–GI–BP sequence. Studies reporting mediation provide important support for the integrated logic, but they represent selected empirical configurations rather than a uniform finding across the core dataset. Moreover, the reported outcomes frequently concern sustainable, environmental or broader organisational performance, meaning that the pathway to conventional financial performance remains less clearly specified.

Taken together, the three streams show movement from isolated bilateral links towards an integrated explanation. The unresolved question is how KM is converted into GI, how GI is associated with different BP domains and which contextual conditions strengthen or weaken these links.

5. Discussion

5.1 Interpretation of Findings

From a KM perspective, the findings suggest that KM should be understood beyond a routine managerial activity or a simple direct predictor of performance. Instead, KM functions as a core knowledge capability through which firms acquire, create, share and apply environmental, technological and market knowledge (Grant, 1996; Gold, Malhotra and Segars, 2001; Shehzad et al., 2024). GI may then function as a knowledge-translation mechanism through which environmental, technological and market knowledge is embedded in products, processes and organisational routines.

The findings show that KM, GI and BP have developed as related but only partially integrated research areas. The large number of bilateral studies compared with the much smaller integrated dataset indicates that the field has not yet fully explained how knowledge resources, GI and BP operate within one coherent framework.

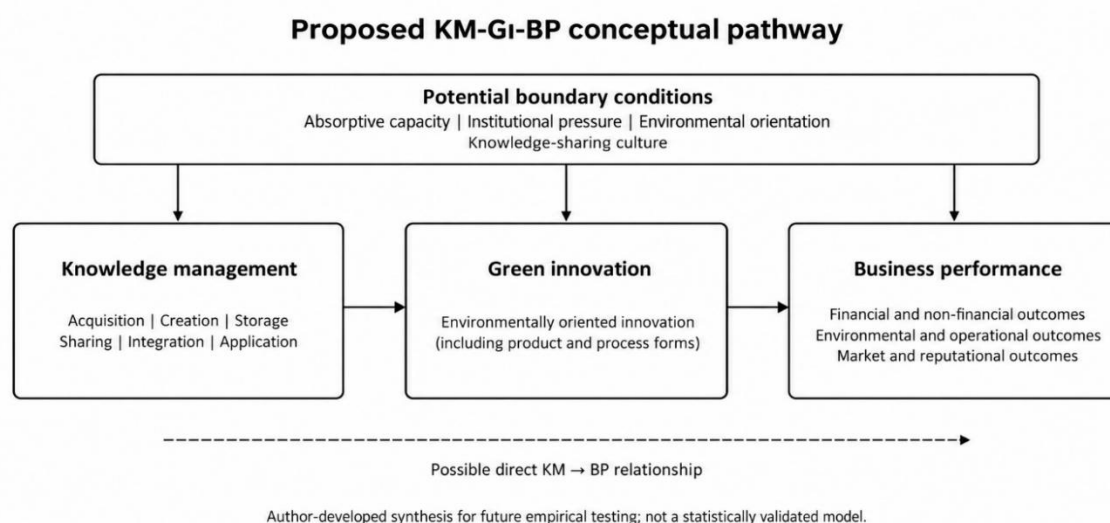
This fragmentation is both thematic and theoretical. KM studies tend to rely on KBV and organisational capability perspectives, GI studies draw more strongly from environmental strategy and NRBV, while BP studies vary between financial, organisational and sustainability-oriented measurement.

A key interpretation of this review is that GI can serve as a possible bridge between KM and BP (Abbas and Sağsan, 2019; Shahzad et al., 2020; Nasir et al., 2024; Zairbani and Kumar, 2025). KM enables firms to generate,

acquire, exchange and apply knowledge, but knowledge alone does not automatically generate performance. GI may embody that knowledge in products, processes and routines, while BP captures the resulting financial, operational, environmental and reputational outcomes. The evidence is heterogeneous: selected studies test mediation, but others address only part of the sequence.

Figure 5 summarises this author-developed interpretation. RBV and KBV explain the strategic role of KM, absorptive capacity theory explains the use of external and internal environmental knowledge, and NRBV explains why GI may create competitive and sustainability-oriented value. Potential boundary conditions include absorptive capacity, institutional pressure, environmental orientation and knowledge-sharing culture. The model is proposed for future empirical testing and is not a statistically validated representation of all 60 records.

Absorptive capacity is positioned at two related analytical levels in this framework. At the theoretical level, absorptive capacity theory explains how firms recognise, assimilate and apply environmentally relevant knowledge. At the empirical level, differences in firms' absorptive capacity may also condition the strength of the relationship between KM and GI. Accordingly, the framework uses absorptive capacity as both an explanatory lens and a potential boundary condition, without assuming that these roles have already been empirically validated across the reviewed literature.



Source: Authors' conceptual synthesis.

Figure 5: Proposed KM–GI–BP conceptual pathway

The focus also differs from related bibliometric reviews. Chopra et al. (2021) map the broader literature on KM for business sustainability, while Sabando-Vera et al. (2025) examine GI in SMEs. The present review concentrates specifically on the KM–GI–BP intersection and uses the larger bilateral datasets to contextualise the smaller integrated domain. Its contribution lies in tracing the conceptual connections and evidential limits at this intersection rather than remapping KM or GI separately.

5.2 Research Gaps

The first gap concerns theoretical integration. RBV, KBV, absorptive capacity theory and NRBV are often applied separately, leaving the transition from knowledge capability to GI and from GI to differentiated BP outcomes under-explained. Their complementary use can clarify distinct stages of the proposed pathway without implying that one model has already been validated across the field.

The second gap concerns mechanisms and boundary conditions. Direct relationships remain more common than integrated mediation and moderation models. GI should therefore be tested as a possible mediator, while absorptive capacity, institutional pressure, environmental orientation and knowledge-sharing culture may explain when the pathway is stronger or weaker.

The third gap concerns performance measurement. Studies variously use financial, organisational, environmental or sustainable performance (Venkatraman and Ramanujam, 1986; Kaplan and Norton, 1996; Richard et al., 2009). This heterogeneity limits comparison and can obscure whether the benefits of KM and GI

appear first in operational, reputational or environmental outcomes before financial results. Future studies should state the performance domain, data source and time horizon explicitly.

The fourth gap concerns research context. More evidence is needed from developing economies, SMEs and environmentally sensitive industries, where resource constraints and institutional pressures may alter how KM, GI and BP are connected (Huynh, Nguyen and Vo, 2024; Nasir et al., 2024; Appiah et al., 2025).

5.3 Academic Implications

These gaps yield three academic implications. First, the KM-GI-BP relationship is better treated as an integrated but context-dependent sequence than as disconnected bilateral effects. Second, GI can be understood as a knowledge-based innovation outcome, linking KM research more directly with environmental strategy. Third, BP should be measured multidimensionally so that operational, environmental, market and reputational outcomes are not obscured by an exclusive focus on short-term financial indicators.

5.4 Limitations

Several limitations should be acknowledged. The dataset is limited to the Web of Science Core Collection, English-language journal articles and the 2016-2025 period; coverage for 2025 is partial. Relevant studies indexed elsewhere, written in other languages or using alternative terms may therefore be omitted.

Bibliometric mapping cannot fully evaluate the theoretical depth, methodological quality or contextual richness of individual studies. The structured content synthesis adds interpretation, but the three streams and Figure 5 remain author-developed and involve judgement.

Finally, the review does not test causal relationships. The proposed role of GI as a bridge is a research proposition supported by selected evidence, not a universal conclusion across the 60 records.

6. Concluding Comments

6.1 Conclusion and Contribution

This study reviewed KM, GI and BP through bibliometric analysis and structured content synthesis. The pairwise literatures are substantially larger than the 60-record integrated domain, confirming that research has developed mainly through bilateral relationships. The integrated field is interdisciplinary and geographically dispersed, with KM, GI, sustainability and firm performance forming its thematic core.

The study contributes in three ways. First, it clarifies the imbalance between the bilateral and integrated literatures. Second, it connects bibliometric patterns with a structured interpretation of three research streams. Third, it proposes a cautious knowledge-to-innovation-to-performance pathway in which GI may bridge KM and multidimensional BP, while explicitly separating selected mediation evidence from the authors' broader conceptual synthesis.

The findings therefore do not establish one universal causal model. Instead, they provide a focused basis for empirical research on the mechanisms, performance domains and contextual conditions that shape the KM-GI-BP relationship.

6.2 Future Research Agenda

Future research should move beyond confirming direct relationships and examine how knowledge resources are translated into GI and BP. The priorities are theoretical integration, mediation and moderation, consistent performance measurement and underexplored contexts.

First, studies should combine RBV, KBV, absorptive capacity theory and NRBV to explain complementary stages of the pathway. Such integration should specify the theoretical role assigned to KM, GI and BP rather than simply listing multiple theories.

Second, GI should be tested as a possible mediator, together with boundary conditions such as absorptive capacity, institutional pressure, environmental orientation and knowledge-sharing culture. Longitudinal and multi-source designs would help address temporal ordering and common-method concerns.

Third, researchers should distinguish financial, operational, environmental and market-related BP and report the source and time horizon of each measure. This would improve comparison across studies and clarify whether non-financial outcomes precede financial returns.

Fourth, research should extend to developing and transition economies, SMEs and environmentally sensitive industries. Comparative and mixed-method studies can examine how institutional and resource constraints change the KM-GI-BP relationship.

Table 6 summarises the proposed future research agenda, linking the identified gaps to theoretical perspectives, research questions and suggested methodological approaches.

Table 6: Future research agenda

Research Gap	Research Direction	Theoretical Perspective	Suggested Methods
Lack of theoretical integration	Combine RBV, KBV, ACT and NRBV with clearly assigned roles	RBV, KBV, ACT, NRBV	Conceptual modelling; SEM/PLS-SEM
Limited mediation evidence	Test GI as a possible mediator rather than assume a universal mechanism	KBV, ACT, NRBV	Longitudinal or multi-source mediation analysis
Under-specified boundary conditions	Examine absorptive capacity, institutional pressure, environmental orientation and knowledge-sharing culture	ACT, NRBV	Moderated mediation; multi-group analysis
Limited emerging contexts	Extend to SMEs and environmentally sensitive industries	NRBV, KBV	Comparative surveys; mixed methods
Inconsistent BP measurement	Integrate financial and non-financial domains and report source/time horizon	RBV, KBV	Scale validation; CFA/SEM

Note: RBV = resource-based view; KBV = knowledge-based view; ACT = absorptive capacity theory; NRBV = natural-resource-based view; SEM = structural equation modelling; PLS-SEM = partial least squares structural equation modelling; CFA = confirmatory factor analysis; SMEs = small and medium-sized enterprises.

A dedicated systematic literature review of the 60 records and subsequent studies, including formal quality appraisal and deeper full-text coding, would be a valuable extension.

Ethics Statement: This study analysed bibliographic metadata retrieved from the Web of Science Core Collection and did not involve human participants or the collection of private or sensitive personal data. Ethical approval and informed consent were therefore not required.

AI Statement: ChatGPT (OpenAI) was used solely to support English-language editing, including grammar, syntax and sentence structure, in selected passages of the Abstract, Introduction, Methodology, Discussion and Conclusions. It was not used to compile the bibliographic dataset or conduct the VOSviewer analyses. The authors reviewed and independently verified the final wording, data, analyses, interpretations and citations and take full responsibility for the manuscript.

Conflict of Interest: The authors declare that they have no competing financial or non-financial interests in relation to this study.

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Appendix A: Articles Included in the Integrated KM–GI–BP Dataset

No.	Article title	Authors	Journal	Year
1	Green knowledge management and organizational green culture: an interaction for organizational green innovation and green performance DOI: 10.1108/JKM-03-2022-0156	Abbas, Jawad; Khan, Shumaila Mazhar	<i>JOURNAL OF KNOWLEDGE MANAGEMENT</i>	2023
2	Does Green Entrepreneurship Orientation Affect to Marketing Performance? DOI: 10.47750/QAS/24.195.34	Agusdin; Herman, Lalu Edy; Athar, Handry Sudiarta; Furkan, Lalu M.	<i>QUALITY-ACCESS TO SUCCESS</i>	2023
3	How does supply chain knowledge enhance green innovation? The mediation mechanisms of corporate reputation and non-supply chain learning DOI: 10.1108/JBIM-04-2021-0192	Agyabeng-Mensah, Yaw; Afum, Ebenezer; Acquah, Innocent Senyo Kwasi; Baah, Charles	<i>JOURNAL OF BUSINESS & INDUSTRIAL MARKETING</i>	2023
4	Analyzing the Impact of the Knowledge Management Process on the Banking Sector Performance: By Using the Partial Least Square Method DOI: 10.1002/kpm.1793	Al-Muayad, Khalil M. A.; Chen, Youzhen	<i>KNOWLEDGE AND PROCESS MANAGEMENT</i>	2025
5	Unpacking the Complexity of Corporate Sustainability: Green Innovation's Mediating Role in Risk Management and Performance DOI: 10.3390/ijfs12030078	Al-Nimer, Munther	<i>INTERNATIONAL JOURNAL OF FINANCIAL STUDIES</i>	2024
6	Absorptive capacity and relationship learning mechanisms as complementary drivers of green innovation performance DOI: 10.1108/JKM-07-2017-0310	Albort-Morant, Gema; Leal-Rodriguez, Antonio L.; De Marchi, Valentina	<i>JOURNAL OF KNOWLEDGE MANAGEMENT</i>	2018
7	Big Data Analytics and Organizational Performance: Mediating Roles of Green Innovation and Knowledge Management in Telecommunications DOI: 10.3390/su16187887	Aljehani, Sultan Bader; Abdo, Khalid Waleed; Alam, Mohammad Nurul; Aloufi, Esam Mohammed	<i>SUSTAINABILITY</i>	2024
8	Corporate social responsibility and sustainability practices: mediating effect of green innovation and moderating effect of knowledge management in the manufacturing sector DOI: 10.1108/IJOA-02-2023-3627	Alketbi, Moza Saeed; Ahmad, Syed Zamberi	<i>INTERNATIONAL JOURNAL OF ORGANIZATIONAL ANALYSIS</i>	2024
9	Navigating the Impact of Green Innovation, Technological Linkages, and Knowledge Management on Sustainable Performance of SMEs DOI: 10.1007/s10843-024-00371-8	Aslam, Muhammad; Ahmad, Bilal; Rasheed, Tuba	<i>JOURNAL OF INTERNATIONAL ENTREPRENEURS HIP</i>	2025

No.	Article title	Authors	Journal	Year
10	Examining the role of ambidextrous green innovation and green competitive advantage in stimulating sustainable performance: The moderating role of green absorptive capacity DOI: 10.1177/21582440241294160	Baquero, Asier	<i>SAGE OPEN</i>	2024
11	Linking green entrepreneurial orientation and ambidextrous green innovation to stimulate green performance: a moderated mediation approach DOI: 10.1108/BPMJ-09-2023-0703	Baquero, Asier	<i>BUSINESS PROCESS MANAGEMENT JOURNAL</i>	2024
12	Organizational factors, ambidextrous innovation, absorptive capacity, and a firm's green competitive advantage DOI: 10.1108/MD-04-2024-0789	Baquero, Asier	<i>MANAGEMENT DECISION</i>	2025
13	Is training a green innovation driver? The mediating role of knowledge acquisition DOI: 10.1108/JKM-10-2022-0818	Barba-Aragon, Maria Isabel; Jimenez-Jimenez, Daniel	<i>JOURNAL OF KNOWLEDGE MANAGEMENT</i>	2024
14	External knowledge sources, green innovation and performance DOI: 10.1016/j.techfore.2017.09.017	Ben Arfi, Wissal; Hikkerova, Lubica; Sahut, Jean-Michel	<i>TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE</i>	2018
15	Cross-Border Mergers and Acquisitions and CSR Performance: Evidence from China DOI: 10.1007/s10551-021-05025-6	Chen, Xiaomeng; Liang, Xiao; Wu, Hai	<i>JOURNAL OF BUSINESS ETHICS</i>	2023
16	Simmelian ties for SMEs' green-innovation improvement in manufacturing industries: mediating and moderating effects DOI: 10.1108/EJIM-08-2022-0433	Cheng, Xinsheng; Xu, Yingjie; Li, Fengshu	<i>EUROPEAN JOURNAL OF INNOVATION MANAGEMENT</i>	2024
17	Past, present, and future of knowledge management for business sustainability DOI: 10.1016/j.jclepro.2021.129592	Chopra, Meenu; Saini, Neha; Kumar, Satish; Varma, Arup; Mangla, Sachin Kumar; Lim, Weng Marc	<i>JOURNAL OF CLEANER PRODUCTION</i>	2021
18	Dynamic Knowledge Management Capabilities for Successful Product Eco-Innovation DOI: 10.1002/bse.4354	Conesa, Jose Rabal; Jimenez, Daniel; Jimenez, Costa, Micaela Martinez	<i>BUSINESS STRATEGY AND THE ENVIRONMENT</i>	2025
19	COOPERATION NETWORKS AND ORGANIZATIONAL FACTORS ON SUSTAINABLE INNOVATION DOI: 10.23925/2179-3565.2020v11i1p109-135	Correio, Eyup Calik; Correio, Fazleena Badurdeen; Correio, Alperen Bal	<i>RISUS-JOURNAL ON INNOVATION AND SUSTAINABILITY</i>	2020
20	Impact of Patent Quality on Firm Performance: A Case of Indian Pharmaceutical Industry DOI: 10.1142/S0219877020500546	Danish, Mohd Shadab; Sharma, Ruchi; Dhanora, Madan	<i>INTERNATIONAL JOURNAL OF INNOVATION AND TECHNOLOGY MANAGEMENT</i>	2021

No.	Article title	Authors	Journal	Year
21	The impact of environmental management accounting on environmental and financial performance: empirical evidence from Bangladesh DOI: 10.1108/JAOC-11-2021-0157	Deb, Bishawjit Chandra; Rahman, Md Mominur; Rahman, Muhammad Shajib	<i>JOURNAL OF ACCOUNTING AND ORGANIZATIONAL CHANGE</i>	2023
22	The moderating effect of corporate environmental responsibility on relational capital and green innovation: evidence from a knowledge-driven context DOI: 10.1108/JIC-04-2022-0101	Duan, Yunlong; Liu, Hanxiao; Yang, Meng; Chin, Tachia; Peng, Lijuan; Russo, Giuseppe; Dezi, Luca	<i>JOURNAL OF INTELLECTUAL CAPITAL</i>	2023
23	Policy orientation, knowledge dynamic ability and green innovation: A mediation model based on China provincial panel data DOI: 10.18045/zbefri.2021.1.9	Fang, Li; Sheng, Zhang	<i>ZBORNİK RADOVA EKONOMSKOG FAKULTETA U RIJECI- PROCEEDINGS OF RIJEKA FACULTY OF ECONOMICS</i>	2021
24	External Knowledge Acquisition and Green Innovation in Chinese Firms: Unveiling the Impact of Green Dynamic Capabilities DOI: 10.1177/21582440231185093	Guo, Ying	<i>SAGE OPEN</i>	2023
25	Knowledge management practices and green innovation in SMES: the role of environmental awareness towards environmental sustainability DOI: 10.1108/IJOA-03-2021-2671	Hasan Polas, Mohammad Rashed; Tabash, Mosab, I; Bhattacharjee, Amitab; Antonio Davila, Guillermo	<i>INTERNATIONAL JOURNAL OF ORGANIZATIONAL ANALYSIS</i>	2023
26	Does leadership and management support facilitate green knowledge acquisition and green innovation: a moderated mediation approach DOI: 10.1108/BPMJ-12-2022-0639	Idrees, Hisham; Xu, Jin; Ralison, Ny AvotraAndrianarivo Andriandafiarisoa; Kadyrova, Maysa	<i>BUSINESS PROCESS MANAGEMENT JOURNAL</i>	2023
27	Green entrepreneurial orientation and knowledge creation process as enablers of green innovation performance: the moderating role of resource orchestration capability DOI: 10.1108/EJIM-02-2023-0143	Idrees, Hisham; Xu, Jin; Ralison, Ny Avotra Andrianarivo Andriandafiarisoa	<i>EUROPEAN JOURNAL OF INNOVATION MANAGEMENT</i>	2025
28	Green synergy: unveiling the nexus of green supply chain practices, training and innovation for sustainable manufacturing DOI: 10.1108/K-02-2024-0483	Javed, Asma; Li, Qian; Ejaz, Sarmad; Basit, Abdul; Hasan, Shermeen; Zita, Julia Fodor; Hossain, Md Billal	<i>KYBERNETES</i>	2024
29	How to convert green supply chain integration efforts into green innovation: A perspective of knowledge-based view DOI: 10.1002/sd.2062	Kong, Ting; Feng, Taiwen; Huang, Yufei; Cai, Junya	<i>SUSTAINABLE DEVELOPMENT</i>	2020
30	The effects of organizational learning on innovation and performance of venture capital-backed firms: the moderating effect of syndication DOI: 10.1108/BPMJ-10-2022-0480	Laachach, Abderrahim; Ettahri, Younes	<i>BUSINESS PROCESS MANAGEMENT JOURNAL</i>	2023

No.	Article title	Authors	Journal	Year
31	IT and relationship learning in networks as drivers of green innovation and customer capital: evidence from the automobile sector DOI: 10.1108/JKM-05-2015-0203	Leal-Millan, Antonio; Luis Roldan, Jose; Leal-Rodriguez, Antonio L.; Ortega-Gutierrez, Jaime	<i>JOURNAL OF KNOWLEDGE MANAGEMENT</i>	2016
32	Impact of stakeholder pressure on green innovation: a moderated mediation model DOI: 10.1080/09640568.2023.2284124	Ma, Yuan; Chen, Baohua	<i>JOURNAL OF ENVIRONMENTAL PLANNING AND MANAGEMENT</i>	2025
33	Understanding the Impact of Big Data Analytics and Knowledge Management on Green Innovation Practices and Organizational Performance: The Moderating Effect of Government Support DOI: 10.3390/su15118456	Makhloufi, Lahcene; Vasa, Laszlo; Rosak-Szyrocka, Joanna; Djermani, Farouk	<i>SUSTAINABILITY</i>	2023
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