



## Digital Leadership and Innovation: A Systematic Literature Review of Theoretical Foundations, Research Emphases, and Methodological Approaches

### Kepemimpinan Digital dan Inovasi: Tinjauan Sistematis atas Landasan Teoretis, Fokus Penelitian, dan Pendekatan Metodologis

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#### ABSTRACT

Digital leadership is increasingly recognized as a strategic capability essential for guiding organizations through rapid technological transformation. It is particularly associated with enhanced agility, performance, and the integration of emerging technologies across sectors such as SMEs, manufacturing, education, and public administration. Despite growing interest, existing literature remains fragmented and lacks a coherent synthesis that reflects the multidimensional role of digital leadership across varying organizational and contextual settings. Moreover, limited attention has been given to the mechanisms through which digital leadership drives innovation under diverse ecological, geographic, and structural conditions. To address this gap, we conduct a Systematic Literature Review (SLR) following PRISMA 2020 guidelines and the SPAR-4-SLR framework, analyzing 43 peer-reviewed Scopus-indexed articles published between 2015 and 2025. Through thematic synthesis, bibliometric mapping, and theoretical classification, we identify key patterns, conceptual structures, and research trends. The findings highlight the dominance of Dynamic Capability Theory (DCT) and Resource-Based View (RBV), with survey-based SEM methodologies prevailing. Notable gaps include conceptual ambiguity, methodological uniformity, and limited longitudinal and cross-cultural insights. This review offers a future research agenda grounded in the Theory–Context–Method (TCM) framework, advocating for broader theoretical integration and contextual diversity to better understand digital leadership's role in fostering

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## INTRODUCTION

In the context of accelerating global digital transformation, digital leadership and innovation have emerged as critical focal points for both academic inquiry and practical organizational strategies. The integration of advanced technologies into core business processes has not only altered operational paradigms but has also demanded a fundamental shift in leadership styles to navigate complexity, foster innovation, and ensure long-term sustainability. Digital leaders are now expected to act as catalysts of change, capable of aligning technological opportunities with strategic visions to enhance competitive advantage and organizational performance (Benitez et al., 2022a; Wang et al., 2022). Increasingly, digital leadership is not just seen as a functional managerial role but as a strategic imperative that determines the trajectory of organizational innovation and adaptability.

Recent research highlights that digital leadership capacity significantly affects organizational performance, especially in public and industry-specific sectors. Claassen et al. (Claassen et al., 2021) conducted a pivotal study in the German public sector, demonstrating the direct influence of digital leadership competencies on organizational effectiveness. This finding underscores a growing consensus that the role of digital leaders extends beyond technology adoption into orchestrating innovation ecosystems. Regional and industrial contexts further shape the implementation and outcomes of digital leadership, as seen in studies conducted in China's manufacturing sector by Xiufan and Yunqiao (Xiufan & Yunqiao, 2024) and Tian et al. (Tian et al., 2025), which utilize Dynamic Capabilities Theory (DCT) to explore the strategic role of digital leadership in turbulent environments. Similarly, emerging inquiries into green innovation and organizational sustainability (Hussein et al., 2024; Zada et al., 2025) reflect the expanded scope of digital leadership from technology management to responsible and future-ready governance.

As the body of literature expands, research has transitioned from examining basic technological adoption to exploring the multi-dimensional impacts of digital leadership on innovation. Early work by Claassen et al. (Claassen et al., 2021) concentrated on measuring digital leadership skills, particularly within virtual work environments. This trajectory evolved with studies such as Desmaryani et al. (Desmaryani et al., 2022), which investigated the integration of digital leadership with information system quality and user satisfaction in e-learning, reflecting a more context-specific analysis of performance outcomes. Meanwhile, Borah et al. (Borah et al., 2022) and Sarfraz et al. (Sarfraz et al., 2022) analyzed how digital leadership influences sustainable innovation in SMEs and manufacturing firms, reinforcing its alignment with broader business strategies. Benitez et al. (Benitez et al., 2022a) and Niu et al. (Niu et al., 2022) took this further by linking digital leadership with ESG management and digital platform capabilities, signaling its importance in strategic governance and sustainability.

Recent studies underscore the interweaving of digital leadership with modern innovation paradigms such as open innovation, green innovation, and the circular economy. For instance, Fatima and Masood (Fatima & Masood, 2024) explored the relationship between digital leadership and open innovation, while Tian et al. (Tian et al., 2025), Hussein et al. (Hussein et al., 2024), and Laradi et al. (Laradi et al., 2024) emphasized its influence on green practices. The adoption of sophisticated analytical techniques, like the SEM-Neural Network method used by Memon & Ooi (Memon & Ooi, 2023), also illustrates the increasing methodological rigor applied to study the nuances of responsible innovation under digital leadership. Furthermore, psychological dimensions, such as innovative work behavior and affective commitment (Ahmed et al., 2024; Gao & Gao, 2024), have entered the discourse, emphasizing the holistic nature of digital leadership's impact. These advances

indicate a decisive move toward comprehensive frameworks that account for both structural and behavioral dynamics in digital leadership studies.

Despite significant advancements in the digital leadership literature, systematic reviews continue to reveal fundamental gaps, particularly in definitional clarity and measurement consistency. Lin (Lin, 2024) highlights persistent ambiguity in conceptual structures and characteristics, impeding theoretical coherence and limiting cross-contextual generalizability. Similarly, Sağbaşı and Erdoğan (Sağbaşı & Erdoğan, 2022) observe a lack of consensus in defining digital leadership, with diverse terminologies and frameworks hindering the development of valid and standardized measurement instruments. Mmakau (Mmakau & Sethibe, n.d.) further emphasizes the need to clarify core dimensions to ensure practical relevance in organizational settings. In the same vein, Eberl and Drews (Eberl & Drews, 2021) argue that the literature remains fragmented and lacks a solid theoretical foundation. Collectively, these issues underscore the urgent need for more standardized conceptual and methodological frameworks to enhance comparability and applicability across sectors and regions.

In response to these limitations, state-of-the-art research has adopted more diverse frameworks to examine digital leadership. Niu et al. (Niu et al., 2022) compared digital leadership's effect on innovation across national contexts, particularly in China and South Korea, integrating ESG considerations. Khan et al. (Khan et al., 2024) introduced a dual-study design across China's textile and automotive sectors to analyze how circular economy practices and technological innovation moderate digital leadership outcomes. Majumdarr et al. (Majumdarr et al., 2024) examined the mediating role of internal communication in enhancing individual innovation capabilities through transformational digital leadership, while Asbeetah et al. (Asbeetah et al., 2025) explored knowledge access and innovation performance as mediators in the Turkish manufacturing sector. These studies provide a rich tapestry of insights but also exhibit methodological constraints, such as cross-sectional designs, limited generalizability, and reliance on self-reported data.

Laradi et al. (Laradi et al., 2024) significantly contributed by empirically testing digital leadership as a moderating variable in the relationship between green innovation and sustainable performance. Despite offering novel insights, these studies are often bound by short-term scopes, regional specificity, and lack comprehensive control for ethical and privacy considerations. These shortcomings underline the need for a more integrated and systematic literature review that can synthesize these findings and provide a holistic understanding of digital leadership's role across various organizational and cultural contexts.

Given this backdrop, the current study undertakes a systematic literature review to bridge these research gaps. Specifically, it employs a classification-synthesis-integration framework to capture the multi-dimensional nature of digital leadership and its influence on innovation and performance outcomes. By analyzing how different forms of digital leadership interventions operate within specific contextual configurations and through various mechanisms, the study aims to distill consistent patterns and emergent themes. This approach not only enhances the conceptual clarity of digital leadership but also identifies underexplored research avenues that merit future investigation.

The uniqueness of this study lies in its comprehensive and structured exploration of the complex interplay between digital leadership, innovation, and organizational sustainability. It moves beyond fragmented empirical insights by offering an integrated framework that not only identifies research gaps but also proposes a conceptual model and future research agenda. This is guided by the

Theory–Context–Method (TCM) approach (Paul et al., 2017; Paul & Criado, 2020) which serves as a strategic foundation for advancing scholarly inquiry in this field.

## RESEARCH METHODS

This study adopted a Systematic Literature Review (SLR) approach, structured in accordance with the PRISMA 2020 reporting guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) as proposed by Moher et al. (Moher et al., n.d.). The use of PRISMA was critical in ensuring methodological transparency, reproducibility, and structured documentation across all stages of the review process—identification, screening, eligibility assessment, and inclusion (Panic et al., n.d.; Siddaway et al., n.d.). PRISMA also served as the foundation for integrating the SPAR-4-SLR framework (Paul et al., 2021), ensuring the methodological rigor of both quantitative and qualitative synthesis.

The review focused on scholarly discourse at the intersection of digital leadership and innovation, with particular emphasis on themes such as digital transformation, leadership capability, sustainability, and organizational performance. Literature was retrieved from the Scopus database, selected for its robust indexing quality and coverage of peer-reviewed research. The search query used the keyword phrase Digital Leadership and Innovation targeting article titles, abstracts, and keywords. Filters were applied to include only articles published in scholarly journals from 2015 to 2025 and indexed in Scopus Q1 to Q4. This process yielded 82 initial records.

Screening was conducted in multiple phases, as illustrated in **Figure 1**. Thirteen records were excluded based on journal tier restrictions and two lacked abstracts. No duplicates or automated exclusions were identified, indicating the query's specificity. After screening 67 records, 22 were excluded for thematic misalignment. Of the remaining 45 studies, 11 full texts could not be retrieved. Ultimately, 34 Scopus-based articles were found eligible. Additionally, nine studies were identified through supplementary sources such as grey literature and expert networks, resulting in a final sample of 43 studies for synthesis.

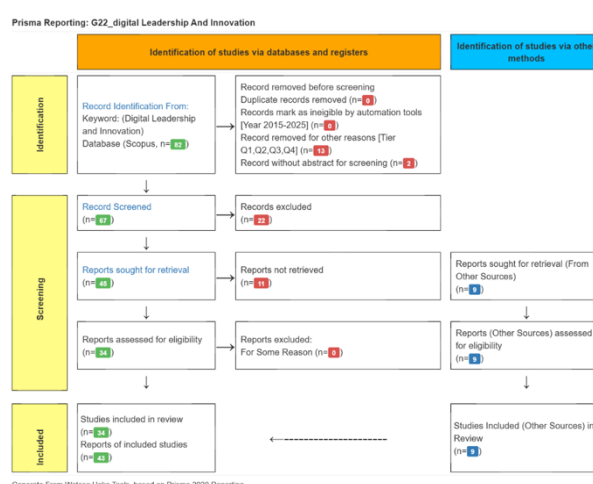


Figure 1. PRISMA reporting

Qualitative synthesis was conducted using the Watase Uake analytical framework, enabling structured variable extraction and thematic clustering. The resulting concept mapping (**Figure 2**) revealed that Digital Leadership was the central construct, frequently associated with innovation capabilities, organizational performance, and transformation. Other recurrent themes included knowledge sharing, green product innovation, and organizational agility—indicating a shift from technical to strategic and sustainability-oriented leadership paradigms.



Figure 2. WordCloud Based on Variable Extraction

Despite the rigor, certain limitations were acknowledged. First, the use of Scopus may have excluded relevant studies from other reputable databases. Second, only English-language publications were included, which could introduce language and cultural bias. Third, variation in how digital leadership is operationalized across studies complicates cross-comparison. Lastly, the dominance of cross-sectional designs limits longitudinal inference.

Nevertheless, this study provides a transparent, replicable, and methodologically robust synthesis of digital leadership and innovation literature. Through the integration of structured trend analysis, thematic exploration, and quality assessment, it contributes both theoretically and practically to understanding how digital leadership shapes innovation in diverse organizational and geographic contexts.

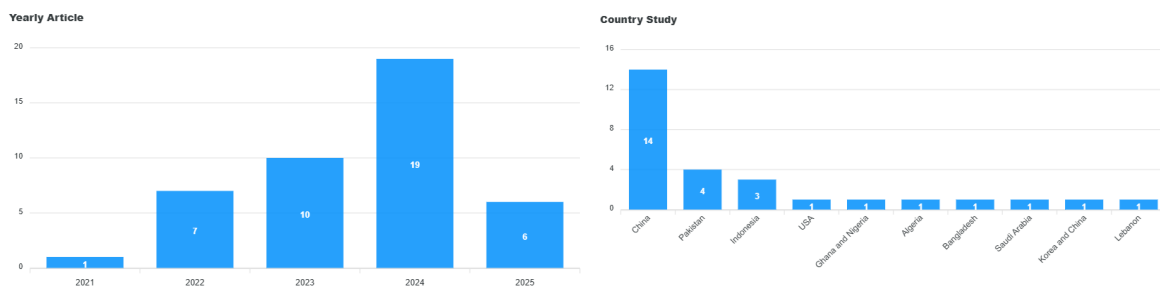
## RESULT AND DISCUSSION

As the primary goal of a systematic literature review is to synthesize and classify existing knowledge (Fisch & Block, 2018), this section presents the development of 43 identified research articles on digital leadership and innovation. The classification includes publication year, country of study, research methodology, leading journals, theoretical foundations, and citation analysis. Subsequently, the section provides a comprehensive overview of the insights gained from the mapping and profiling of these studies. Finally, the article identifies theoretical limitations and analyzes them using the TCM (Theory–Context–Method) framework to propose new directions for future research.

**Year of publication, trends, country study, and author citation**

A bibliometric analysis of the literature on digital leadership and innovation reveals a significant shift in publication and citation trends over the years. As shown in **Figure 3**, the year 2024 recorded the highest number of publications, with a total of 19 articles (Benitez et al., 2022a; Borah et al., 2022; Cai et al., 2024; Chen et al., 2024; Claassen et al., 2021; Memon & Ooi, 2023; Siba Borah et al., 2024; Sun et al., 2024; Tian et al., 2025; Xiufan & Yunqiao, 2024). Despite the increase in publications, citation volume peaked in 2022, reaching 592 citations, as noted in **Table 1**, with Benitez et al. (Benitez et al., 2022a) being the most cited study.

The reviewed studies span various countries, including China, Pakistan, South Korea, Spain, Bulgaria, Indonesia, and others (see **Figure 3**). Among them, China stands out as the leading contributor, both in terms of the number of publications and total citations (Cai et al., 2024; Chen et al., 2024; Gao & Gao, 2024; Khan et al., 2024; Niu et al., 2022; Sahibzada et al., 2025; Shen et al., 2025; Siba Borah et al., 2024; Sun et al., 2024; Tian et al., 2025; Wang et al., 2022; Xiufan & Yunqiao, 2024; Zada et al., 2025).



Figur 3. Year of Publication Trends and Country Study

**Tabel 1. Author Citation**

| No | Author   | Year | Citations |
|----|--|------|-----------|
| 1  | Benitez, Jose; Arenas, Alvaro; Castillo, Ana; Esteves, Jose, Borah, Prasad Siba; Iqbal, Shuja; Akhtar, Shamim, Sarfraz, Muddassar; Ivascu, Larisa; Abdullah, Muhammad Ibrahim; Ozturk, Ilknur; Tariq, Jasim, Niu, SiJian; Park, Byung Il; Jung, Jin Sup, Wang, Tiandong; Lin, Xiaoyue; Sheng, Fan, Muhamad Yopan, Rhenald Kasali, Tengku Ezni Balqiah, Manerep Pasaribu. | 2022 | 237       |
| 2  | Memon, Khalid Rasheed; Ooi, Say Keat, Montasser, Deon; Prijadi, Ruslan; Balqiah, Tengku Ezni, Ramadan, Muhieddine; Bou Zakhem, Najib; Baydoun, Hala; Daouk, Amira; Youssef, Samia; El Fawal, Abir; Elia, Jean; Ashaal, Ahmad.  | 2023 | 57        |

|   |   |      |     |
|---|---|------|-----|
|   | Hussein, Hamada; Albadry, Omaima Munawar; Mathew, Viju; Al-Romeedy, Bassam Samir; Alsetoohy, Omar; Abou Kamar, Mahmoud; Khairy, Hazem Ahmed, Chen, Aixia; Li, Ling; Shahid, Waseem, Al Issa, Hussein-Elhakim; Omar, Mohammed Mispah Said, Cai, Qihai; Wu, Jiahua; Wu, Ting; Chang, Po-Chien; Mardani, Abbas, Mollah, Md. Alamgir;   |      |     |
| 3 | Amin, Mohammad Bin; Debnath, Gouranga Chandra; Hosain, Md. Sajjad; Rahaman, Md. Atikur; Abdullah, Masuk, Faiz, Misbah; Sarwar, Naukhez; Tariq, Adeel; Memon, Mumtaz Ali, Sun, Zhao-Yu; Li, Jia-Min; Li, Bo; He, Xin-Yi, Ahmed, Farooq; Naqshbandi, M. Muzamil; Waheed, Mehwish; Ain, Noor ul, Majumdarr, Shubh; Dasgupta, Shilpee A.; Hassan, Yusuf; Behl, Abhishek; Pereira, Vijay, Fatima, Tasneem; Masood, Afshan. | 2024 | 112 |
| 4 | Tian, Hongna; Han, Jingge; Sun, Meiling; Lv, Xichen.  | 2025 | 15  |

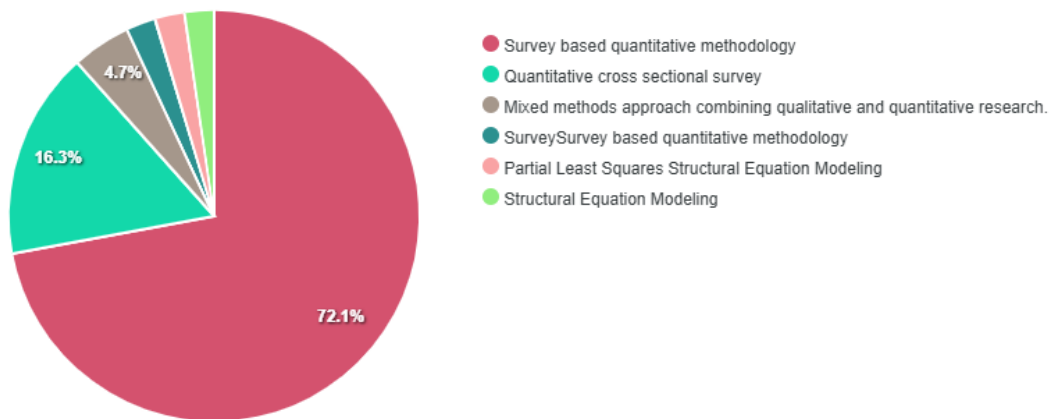
This trend reflects China's substantial interest and investment in technology and innovation. Additionally, digital leadership and innovation research is also gaining momentum in countries such as Pakistan, Indonesia, and Turkey, indicating that these issues are not confined to one nation but represent a global concern. In 2024, the study by Benitez et al. (Benitez et al., 2022a) received the highest number of citations, totaling 237, highlighting its significant impact. This research focused on how rapidly growing small and medium-sized enterprises (SMEs) in Europe leverage IT for business growth. Another highly cited study by Borah et al. (Borah et al., 2022), with 171 citations, examined the sustainable performance of social media-based SMEs.

These findings underscore the critical role of technology implementation and digital leadership in driving innovation and achieving sustainable organizational performance. The observed trends suggest a growing understanding and application of digital leadership and innovation across various industries and national contexts. However, there remains an imbalance between research contributions from developed and developing countries. Furthermore, the challenges surrounding digital leadership and innovation have become increasingly complex in the post-COVID-19 era, which accelerated digitalization and organizational transformation.

Given these developments, the relevance of digital leadership and innovation to future research challenges and opportunities is evident. Technology continues to play a pivotal role in helping organizations remain competitive in dynamic business environments. It is essential for future research to explore how digital leadership fosters innovation and adapts to emerging technologies, and how its benefits can be realized across diverse industrial sectors globally (Benitez et al., 2022a). Therefore, further studies should focus on implementing effective and inclusive digital solutions tailored to various organizational contexts (Claassen et al., 2021). Moreover, long-term impacts of digital transformation and innovation on both organizations and society warrant deeper investigation.

### Methodological Approaches

As shown in **Figure 4**, the majority of studies on digital leadership and innovation adopted survey-based quantitative methodologies. Specifically, 72.1% of the 43 reviewed articles employed survey-based quantitative designs, indicating a strong preference for structured, empirical data collection and statistical hypothesis testing. The second most utilized approach was quantitative cross-sectional surveys, accounting for 16.3% of the studies. Mixed methods, which integrate both quantitative and qualitative techniques, were applied in 4.7% of the articles, while the remaining methods—including Partial Least Squares Structural Equation Modeling (PLS-SEM), Structural Equation Modeling (SEM), and other survey variants—each constituted less than 3% of the total.



Figur 4. Types of methods used

This distribution confirms the methodological dominance of quantitative approaches in the field. Citation analysis reinforces this trend, with Benitez et al. (Benitez et al., 2022b)) receiving the highest number of citations (237), followed by Borah et al. (Borah et al., 2022) with 171 citations. These studies have significantly contributed to understanding the role of digital leadership in various industrial and geographic contexts. Others, such as Niu et al. (Niu et al., 2022) and Sarfraz et al. (Sarfraz et al., 2022), also received notable academic attention, with 53 and 72 citations respectively.

The widespread use of survey-based methodologies suggests their perceived effectiveness in objectively measuring variables and deriving generalizable findings. However, the limited application of qualitative and mixed methods indicates an opportunity for methodological diversification. Future research should consider incorporating qualitative approaches such as case studies and in-depth interviews to capture more nuanced and context-specific insights. Additionally, expanding methodological variety can help address the evolving complexity of digital transformation and leadership, especially in diverse cultural and industrial settings.

### Major publishing journal

According to **Table 2**, the research landscape in digital leadership and innovation is shaped by journals that demonstrate both scholarly productivity and academic impact. Information & Management leads the field with the highest citation count at 237, underscoring its prominent role in disseminating high-impact studies on IT-enabled leadership and organizational performance. Technology in Society follows with 192 citations, reflecting its relevance in capturing the societal implications of technological advancement, particularly within digital transformation contexts. Sustainability, with 159 citations, highlights the growing intersection between digital leadership and sustainable innovation.

Table 2. Major publishing journal

| No | Journal                  | Tier | Total Citations |
|----|--------------------------|------|-----------------|
| 1  | Information & Management | 1    | 237             |
| 2  | Technology in Society    | 1    | 192             |
| 3  | Sustainability           | 1    | 159             |

|    |  |   |    |
|----|--|---|----|
| 4  | Frontiers in Psychology                          | 2 | 47 |
| 5  | Journal of Knowledge Management                  | 1 | 32 |
| 6  | Administrative Sciences                          | 2 | 27 |
| 7  | European Journal of Innovation Management        | 1 | 15 |
| 8  | Heliyon  | 1 | 12 |
| 9  | International Journal of Business                | 4 | 12 |
| 10 | International Journal of Organizational Analysis | 2 | 9  |

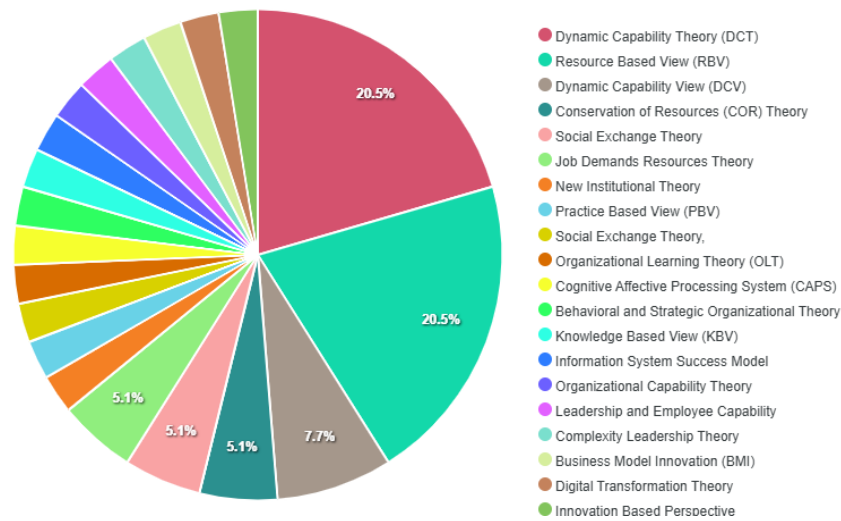
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Other influential outlets include *Frontiers in Psychology* (47 citations), *Journal of Knowledge Management* (32 citations), and *Administrative Sciences* (27 citations), all contributing to multidisciplinary perspectives on leadership, knowledge processes, and organizational behavior. Although journals like the *European Journal of Innovation Management*, *Heliyon*, *International Journal of Business*, and *International Journal of Organizational Analysis* report lower citation counts (ranging from 9 to 15), they remain notable for offering sector-specific or exploratory insights that broaden the scope of the discourse.

Overall, this distribution indicates that Tier 1 journals dominate in both volume and impact, suggesting that high-quality, peer-reviewed outlets are central to advancing the academic understanding of digital leadership and innovation. The combined emphasis on technological, managerial, and societal dimensions across these journals reflects the multidimensional nature of the topic and its critical importance in contemporary organizational research.

### Theory Classification

As illustrated in **Figure 5**, the theoretical landscape of digital leadership and innovation research is predominantly shaped by two major frameworks: Dynamic Capability Theory (DCT) and the Resource-Based View (RBV), each constituting 20.5% of the total theoretical applications across the reviewed studies. DCT, employed in works such as Xiufan and Yunqiao (Chen et al., 2024; Tian et al., 2025; Xi et al., 2025; Xiufan & Yunqiao, 2024), emphasizes the importance of an organization's ability to integrate, build, and reconfigure internal and external competences in response to rapidly changing environments. Its application is particularly salient in studies focusing on digital transformation and green innovation. In parallel, RBV—utilized in studies including Cai et al. (Cai et al., 2024; Siba Borah et al., 2024; Wang et al., 2022)—provides a strategic lens through which firms' unique resource endowments are examined as sources of sustained competitive advantage.



**Figure 5. Theory Classification**

The prominence of DCT and RBV reflects a prevailing scholarly emphasis on organizational adaptability and resource configuration as key enablers of digital leadership efficacy. However, this dominance may also indicate a theoretical saturation that potentially limits novel explanatory pathways. To address this, a broader spectrum of theoretical perspectives has begun to emerge. For example, Dynamic Capability View (DCV) accounts for 7.7% of theoretical usage, offering a nuanced extension of DCT that links dynamic capabilities with organizational learning and competitive renewal. Other mid-tier theories include Job Demands–Resources Theory, Practice-Based View (PBV), and Social Exchange Theory, each representing 5.1% of the reviewed frameworks. These theories contribute behavioral and relational dimensions, capturing how social interaction, employee resources, and work design intersect with digital leadership effectiveness.

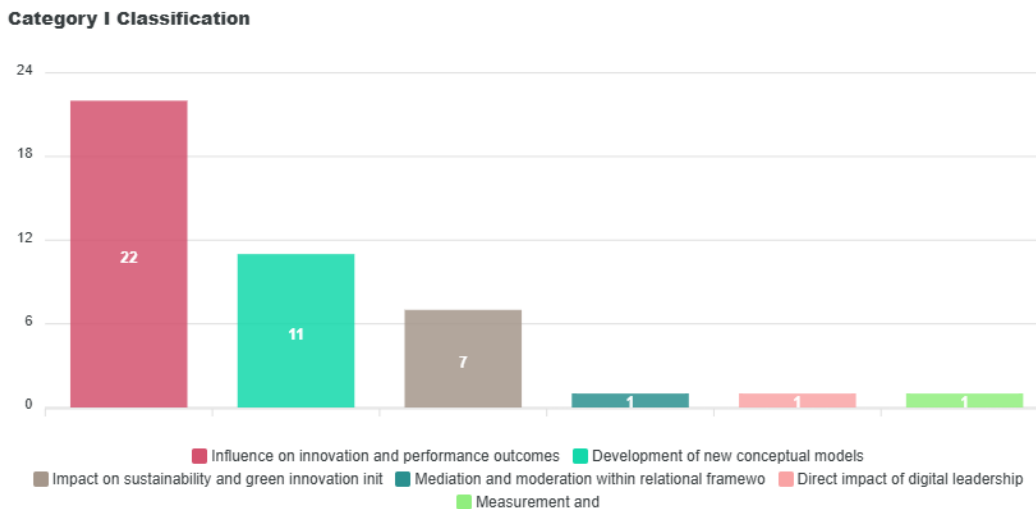
The inclusion of less frequently cited frameworks—such as Cognitive Affective Processing System (CAPS), Organizational Learning Theory (OLT), Complexity Leadership Theory (Majumdar et al., 2024), and Conservation of Resources (COR) Theory (Sumbal et al., 2024)—highlights an emergent effort to enrich conceptual understanding through multi-level and interdisciplinary lenses. These alternative theories introduce novel explanatory mechanisms, such as psychological processing, emergent adaptation, and stress-resource trade-offs, which remain underexplored in current literature.

Taken together, the trend toward theoretical diversification underscores the increasing complexity of digital leadership phenomena in dynamic and uncertain environments. While foundational theories like DCT and RBV remain influential, future research should strive to integrate underutilized theoretical lenses to develop more holistic and context-sensitive models. Doing so will not only enhance explanatory depth but also improve the practical applicability of digital leadership frameworks across diverse sectors and cultural contexts undergoing digital transformation.

**Emphasis of focus research**

As illustrated in **Figure 6**, the majority of studies on digital leadership and innovation focus predominantly on the influence of digital leadership on innovation and performance outcomes, which

accounts for 22 out of 43 articles. This emphasis spans various contexts such as manufacturing firms (Tian et al., 2025), educational institutions (Shen et al., 2025), the textile and automotive sectors (Khan et al., 2024), and public sector supervision (Claassen et al., 2021). These studies consistently highlight how digital leadership contributes to driving innovation and improving organizational performance, reinforcing its strategic importance in navigating complex and dynamic environments.



**Figure 6.** mphasis of focus riset

The second most prominent category is the development of new conceptual models, appearing in 11 studies. These contributions, such as those by Al and Omar (Al Issa & Omar, 2024), Fatima and Masood (Fatima & Masood, 2024), and Xiufan and Yunqiao (Xiufan & Yunqiao, 2024), seek to establish theoretical frameworks that better capture the evolving dynamics of digital leadership, particularly in contexts like banking, IT, and manufacturing. This trend underscores scholarly efforts to advance conceptual understanding beyond empirical generalizations.

Following that, impact on sustainability and green innovation initiatives is classified under 7 studies, including work on SMEs in Lebanon (Ramadan et al., 2023), manufacturing sectors in Pakistan (Sarfraz et al., 2022), and sustainability programs in Indonesia (Laradi et al., 2024). These studies align with the global imperative to integrate sustainability into strategic leadership, and suggest that digital leadership plays a catalytic role in supporting environmentally responsible innovation.

Other classifications—mediation and moderation within relational frameworks, direct impact of digital leadership, and measurement-focused studies—appear less frequently, each represented by only one article. Although limited in number, these studies contribute unique methodological and theoretical insights, and highlight potential directions for diversification in future research.

The distribution of emphasis across these categories reveals three critical themes shaping current scholarship: the measurable impact of digital leadership on innovation and performance, the advancement of conceptual models, and the role of leadership in driving sustainable innovation. These trends also reflect the cross-sectoral nature of current research, spanning industries undergoing rapid digital transformation. Given the accelerating pace of technological advancement and the increasing demand for digital capability across industries, future research should continue to

deepen its investigation into these themes, while also expanding toward underexplored areas such as complex relational mechanisms and cross-cultural contextualization.

The focus area analysis indicates that digital leadership research is converging on three interrelated focal areas—*influence on innovation performance, conceptual development, and environmental sustainability*—establishing a strong foundation for future inquiry (Fatima & Masood, 2024; Khan et al., 2024; Sarfraz et al., 2022; Shen et al., 2025; Tian et al., 2025; Xiufan & Yunqiao, 2024).

## CONCLUSION AND FUTURE RESEARCH

This systematic literature review maps the current state of research on digital leadership and innovation by analyzing 43 peer-reviewed studies. The findings highlight three dominant research themes: the influence of digital leadership on innovation and performance, the development of digital competencies and organizational culture, and its role in driving transformation. Quantitative methods—particularly surveys with SEM—dominate, with Dynamic Capability Theory (DCT) and Resource-Based View (RBV) emerging as the most utilized frameworks. China is the most prominent research hub, though geographic and sectoral imbalances persist.

Highly cited studies (e.g., (Benitez et al., 2022b; Siba Borah et al., 2024)) affirm digital leadership's critical role in enabling innovation, especially in SMEs and digitally evolving sectors. Recent works also expand into sustainability and conceptual model development, indicating a broader scope. However, the literature remains constrained by methodological homogeneity and limited contextual depth.

Furthermore, following the study of (Paul & Criado, 2020), we discussed the scope of potential future research using the Theory–Methodology–Context (TMC) framework.

### Theory

Future research should expand beyond dominant theoretical lenses such as the Dynamic Capability Theory (DCT) and Resource-Based View (RBV), which emphasize adaptability and resource-driven innovation (Siba Borah et al., 2024; Tian et al., 2025). While these remain foundational, there is a critical need to integrate more contextual and multi-layered frameworks—such as Complexity Leadership Theory (Fatima & Masood, 2024; Xiufan & Yunqiao, 2024) - to better capture adaptive leadership dynamics across complex, evolving systems. Additionally, theories such as Stakeholder Theory and Theories of Change should be explored to address broader environmental, ethical, and structural challenges in digital innovation.

### Context

Current research is heavily concentrated in emerging economies with active digitalization efforts, particularly China, Indonesia, and Pakistan (Fatima & Masood, 2024; Xiufan & Yunqiao, 2024). However, critical gaps remain in underrepresented regions such as Sub-Saharan Africa and Latin America, and in sectors such as agriculture, renewable energy, and public health. Future studies should prioritize these underexplored contexts to foster more globally inclusive insights into how digital leadership functions across varying institutional, cultural, and infrastructural conditions.

### Methodology

The dominance of quantitative survey-based methods, especially using Structural Equation Modeling (SEM), has generated statistically robust but often decontextualized findings (Hair, 2017). To

enhance processual and interpretive depth, future research should embrace mixed-methods designs, including in-depth case studies, semi-structured interviews, and longitudinal analyses (Creswell & Creswell, n.d.; Leguina, 2015). Such approaches will enable richer understanding of the subjective, social, and temporal dimensions of digital leadership and innovation practices.

Integrating dynamic, systemic theories with more diverse methodologies and expanding the contextual scope of study will significantly enrich the theoretical and practical contributions of future research. This approach will allow scholars to better understand the interplay between leadership behavior, technological change, and socio-cultural environments. More inclusive, multi-contextual insights are essential for designing adaptive, sustainable digital leadership strategies in an increasingly complex global landscape.

## STUDY LIMITATIONS

This Systematic Literature Review (SLR) acknowledges several limitations. First, access restrictions to certain journals and non-English publications may have led to the exclusion of relevant studies, introducing potential language and publication bias (Benitez et al., 2022b). Second, methodological diversity among reviewed studies—including variations in quantitative, qualitative, and mixed methods—presents challenges in synthesis and generalizability (Sarfraz et al., 2022; Xiufan & Yunqiao, 2024). Sample size limitations and industry-specific focuses further constrain the applicability of findings across broader contexts (Chen et al., 2024; Mollah et al., 2024). Third, the expansive scope of digital leadership and innovation was not fully covered, potentially overlooking the complex interplay between technical, managerial, and strategic aspects (Tian et al., 2025; Wang et al., 2022). Moreover, the rapid evolution of technology risks rendering some findings outdated (Hussein et al., 2024), and the lack of contextual analysis—such as cultural or regulatory differences—limits the interpretability of cross-national comparisons (Fatima & Masood, 2024). Despite these limitations, this SLR provides a valuable foundation for future research directions by highlighting critical gaps and methodological considerations (Shen et al., 2025).

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