Digital Transformation and the Steering of Strategic Decisions: A Bibliometric Analysis

التحول الرقمي وتوجيه القرارات الإستراتيجية: تحليل ببليومتري

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Abstract: This bibliometric study analyzes 276 publications (2014-2024) from OpenAlex to examine digital transformation (DT) in strategic decision-making (SDM). Using Bibliometrix and Biblioshiny, we map publication trends, contributors, and thematic clusters. Findings show accelerated growth post-2019 alongside fragmented terminology, limited international collaboration, and inconsistent theoretical frameworks. Canada leads in contributions, with independent scholars significantly involved. Key themes include data governance, decision support systems, and strategic agility. The study underscores the need for conceptual standardization and interdisciplinary approaches, offering guidance for future research and policy development in DT's strategic applications.

Keywords: Digital transformation; Strategic decision-making; Bibliometric analysis; OpenAlex; Thematic mapping.

Résumé : Cette étude bibliométrique analyse 276 publications (2014-2024) issues de la base OpenAlex pour explorer l'intersection entre la transformation numérique (TN) et la prise de décision stratégique (PDS). À l'aide de Bibliometrix et Biblioshiny, nous cartographions les tendances de publication, les contributeurs clés et les clusters thématiques. Les résultats révèlent une croissance exponentielle post-2019, mais aussi une terminologie fragmentée, des collaborations internationales limitées et des cadres théoriques incohérents. Le Canada se distingue comme contributeur majeur, avec une forte implication de chercheurs indépendants. Les thèmes centraux incluent la gouvernance des données, les systèmes d'aide à la décision et l'agilité stratégique. L'étude souligne la nécessité d'une harmonisation conceptuelle et d'intégration interdisciplinaire, proposant des pistes pour la recherche et les politiques publiques.

Mots-clés : Transformation numérique ; Prise de décision stratégique ; Analyse bibliométrique ; OpenAlex; Cartographie thématique.

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ملخص: تستكشف هذه الدراسة الببليومترية العلاقة بين التحول الرقمي وصنع القرار الاستراتيجي من خلال تحليل 276 منشورًا (2014–2024) من قاعدة بيانات OpenAlex باستخدام أداتي Bibliometrix وBiblioshiny، تم تتبع الاتجاهات البحثية والمساهمين البارزين والمجموعات الموضوعية. كشفت نتائج الدراسة عن تزايد كبير في الإنتاج الأكاديمي بعد 2019، مع وجود مصطلحات غير موحدة وتعاون دولي محدود وغياب إطار نظري متماسك. برزت كندا كأبرز مساهم، بينما لعب الباحثون المستقلون دورًا رئيسيًا. تشمل المحاور البحثية حوكمة البيانات وأنظمة دعم القرار والمرونة الاستراتيجية. تؤكد الدراسة على ضرورة التوافق المفاهيمي والتكامل بين التخصصات، مقدمةً توصيات لتوجيه البحوث المستقبلية وصياغة السياسات.

الكلمات المفتاح: التحول الرقمي؛ اتخاذ القرار استراتيجي؛ تحليل ببليومتري؛OpenAlex ؛ تخطيط موضوعي

I- Introduction :

In an era marked by rapid technological evolution, digital transformation has emerged as a cornerstone of organizational strategy, fundamentally reshaping how decisions are formulated, executed, and refined. Defined as the integration of advanced technologies such as artificial intelligence (AI), big data analytics, and cloud computing into core organizational processes, digital transformation transcends mere technological adoption. It redefines strategic agility, enabling organizations to respond dynamically to market volatility, optimize resource allocation, and align long-term goals with technological capabilities (Di Vaio et al., 2020) The growing scholarly interest in this intersection underscores its critical role in modern governance, yet the field remains fragmented, with disparities in conceptual frameworks and collaborative practices highlighting the need for a systematic synthesis (Vial, 2019).

I.1.research question

This study seeks to map the intellectual landscape of research on digital transformation's influence on strategic decision-making. By employing bibliometric analysis, the paper aims to trace the evolution of scholarly discourse, identify key contributors, and uncover thematic priorities that define the field. The research addresses the following questions:

- What are the publication trends and growth trajectories in research linking digital transformation to strategic decisions?
- Who are the leading authors, institutions, and countries contributing to this domain?
- What thematic clusters dominate the literature, and how do they address operational and ethical challenges?
- How do collaboration networks shape the dissemination of insights across disciplines and regions?

I. 2. Research structure:

The paper is structured as follows: Section 2 reviews foundational literature on digital transformation and strategic management, contextualizing its role in contemporary organizational practices. Section 3 outlines the bibliometric methodology, detailing data sources and analytical techniques. Section 4 synthesizes the findings, emphasizing emerging trends and unresolved challenges. Finally, Section 5 concludes with recommendations for advancing interdisciplinary research and fostering equitable knowledge exchange in this critical area.

I. 3. Research contribution:

Through this exploration, the study aspires to equip scholars, policymakers, and organizational leaders with insights to navigate the complexities of digital transformation, ensuring strategic decisions are both innovative and ethically grounded in an increasingly digitized world.

II. Literature Review

A growing body of literature addresses the multifaceted nature of digital transformation (DT) and its role in shaping strategic decision-making within organizations. Several recent studies have explored the theoretical foundations, methodological approaches, and practical implications of DT, particularly as it intersects with business management, leadership, and technology adoption.

Digital transformation (DT) is broadly defined as "a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies" (Vial, 2019). It goes beyond simple digitization by reconfiguring business models, organizational capabilities, and decision-making practices (Reis et al., 2018). DT is now recognized as both a technological and strategic imperative, influencing how organizations adapt and compete in dynamic environments.

Strategic decision-making, on the other hand, refers to the process through which senior executives and top managers formulate and implement decisions that are long-term, complex, and critical to the success and direction of the organization (Elbanna & Child, 2007). These decisions are typically made under conditions of uncertainty, require the alignment of diverse internal and external stakeholders, and involve resource allocation, organizational change, and competitive positioning.

III. Review of previous studies

This section reviews and compares six recent bibliometric and systematic studies on digital transformation (DT), offering diverse thematic and methodological perspectives. Chawla & Goyal (2022) analyzed 234 articles using co-citation and keyword analysis, identifying four main thematic areas and 18 research streams. Although their study offers a holistic view of DT literature, it is limited by its reliance on a single database.

Sahoo (2022)focused on the intersection of big data and DT in the manufacturing sector. Through bibliometric and factorial analysis of 89 articles, the study identified three thematic clusters and emphasized the growing role of data-driven strategies in decision-making. However, its narrow industrial focus limits broader applicability. Similarly, Chrusciak et al (2023),explored DT integration in business management within Industry 4.0, highlighting gaps in technical integration and managerial alignment using Scopus-based bibliometric analysis. Sánchez-García et al (2024)adopted a multidisciplinary approach, examining the impact of computer science fields such as AI and data analytics on economics and management. Though offering valuable macro-level insights, the wide disciplinary scope reduced depth. In contrast, Bevilacqua et al (2025) applied upper echelons theory in a systematic review of 63 articles to study AI's influence on leadership behavior and strategic decisions, identifying three main themes related to competencies, adoption,

and strategic use. The study bridges leadership theory and DT but lacks empirical testing. Diaz Schery et al (2024) analyzed Building Information Modeling (BIM) in the construction sector using bibliometric tools and dynamic capabilities theory. They identified four thematic areas of BIM-based DT, though the sectoral focus restricts generalizability.

Comparative analysis shows a common reliance on bibliometric methods, occasionally combined with systematic reviews. These methodologies help map broad trends but may overlook deeper conceptual insights. Thematically, earlier studies emphasize technological foundations, while recent ones shift toward strategic and human-centered aspects, such as leadership and organizational capabilities.

Theoretical approaches vary; some adopt strategic management theories, others technical or sectoral frameworks, reflecting inconsistency in DT conceptualization. While Chawla & Goyal (2022) suggest a mature and structured field, Chrusciak et al (2023) note persistent integration challenges. Across the studies, recurring themes include the role of AI and data analytics, sector-specific applications, and the need for cross-functional integration. However, the literature remains fragmented, with few comprehensive frameworks uniting technical and managerial aspects of DT.

III.2 Synthesis and Research Gaps

In summary, the literature reveals that DT plays a crucial role in reshaping strategic decision-making. Trends include a shift from technology-focused frameworks toward strategic and human-centered approaches. However, gaps remain in integrating leadership theory with DT frameworks, understanding cross-industry applications, and empirically validating proposed models. There is a growing consensus that DT enhances decision-making, but disagreement persists about the best frameworks to guide this transformation. The reviewed literature informs our understanding by highlighting both macro-level shifts (e.g., industry-wide AI adoption) and micro-level mechanisms (e.g., executive leadership adaptation).

IV– Methods and Materials:

This study adopted a quantitative bibliometric approach to systematically examine the intellectual structure and evolving research trends at the intersection of digital transformation (DT) and strategic decision-making (SDM). Data were retrieved from the OpenAlex database on 05 January 2025 using a Boolean search query incorporating key DT-related terms (e.g., "digital transformation," "digitalization") and SDM-related terms (e.g., "strategic decision making," "strategic planning").

An initial set of 8,661 records was subjected to a multi-phase filtering process. Temporal restrictions (2014–2024) reduced the dataset to 7,037 records, followed by thematic filtering to retain publications within the "Big Data and Business Intelligence" domain, resulting in 281 records. Subsequent exclusions based on language (English only) and data completeness (e.g., presence of abstracts and author affiliations) yielded a final corpus of 276 documents, comprising journal articles, book chapters, reviews, and conference proceedings. The dataset was processed using the Bibliometrix R package and its web-based interface, Biblioshiny, which facilitated both

statistical analysis and interactive visualization. Documents were included based on explicit relevance to both DT and SDM, while irrelevant, duplicate, or incomplete entries were excluded.

The bibliometric analysis encompassed several indicators, including annual publication output, document typology, authorship distribution, citation metrics, and collaboration patterns (e.g., single-country and multi-country publications, international co-authorship). Scholarly impact was assessed via metrics such as citations per document and co-authors per document.

Core analytical techniques included performance analysis (evaluating the productivity of authors, institutions, and countries), science mapping (visualizing conceptual, intellectual, and social linkages through network analysis), and thematic evolution tracking (capturing temporal shifts in research foci). Keyword co-occurrence analysis, utilizing both author keywords and Keywords Plus, identified thematic clusters and emergent research areas. VOSviewer was employed to enhance network visualization and interpretation.

This integrated methodological framework, illustrated by the accompanying data flow diagram ensured analytical transparency and reproducibility. It enabled the identification of key research actors, collaboration dynamics, and knowledge gaps, thereby offering a structured and comprehensive overview of the DT-SDM scholarly landscape.

The following figure (**Figure (01)**) summarizes the research method used in this paper

Figure (1): Research Framework

Source: compiled with authors based on OpenAlex database results

V- Results and discussion :

This bibliometric analysis, spanning 2014–2024, examines 276 documents from 186 sources to map scholarly engagement with digital transformation and strategic decision-making. The field exhibits rapid growth, evidenced by a 39.87% annual growth rate, reflecting intensified interest as digitalization reshapes global industries. Articles dominate the corpus (200 documents, 72.5%), emphasizing empirical and theoretical contributions, while limited reviews (15, 5.4%) and preprints (11) suggest a nascent stage of synthesis and open discourse. Collaboration is moderate, with 2.75 co-authors per document, yet 28.3% of single-authored works (78 documents) highlight individual scholarly efforts. International co-authorships remain low (13.77%), indicating regional or institutional focus, potentially constraining cross-border knowledge integration. Documents average 6.732 citations with a 3.24-year age, signaling emerging but short-term impact, supported by 4,449 references that anchor the field in interdisciplinary foundations.

Keyword analysis reveals fragmentation: 567 indexed Keywords Plus (ID) versus 171 author-defined terms (DE), suggesting evolving terminology or inconsistent conceptualization of digital transformation's strategic dimensions. The dominance of primary research (e.g., articles, book chapters) over synthesis (e.g., reviews, reports) underscores a need for theoretical consolidation. These findings highlight the field's dynamic growth but also challenges limited global collaboration, terminological ambiguity, and uneven synthesis that future studies must address to strengthen frameworks guiding strategic decisions in digitally evolving contexts. **Table (1)** summarizes all the previous data.

Table (1): Main Bibliometric Data

Description	Results
Timespan	2014:2024
Sources (Journals, Books, etc)	186
Single-authored docs	78
review	15
report	1
References	4449
reference-entry	1
preprint	11
paratext	1
MAIN INFORMATION ABOUT DATA	
Keywords Plus (ID)	567
International co-authorships %	13.77
editorial	2

Documents	276
DOCUMENT TYPES	
DOCUMENT CONTENTS	
Document Average Age	3.24
dissertation	3
Co-Authors per Doc	2.75
book-chapter	34
book	8
Average citations per doc	6.732
Authors of single-authored docs	75
AUTHORS COLLABORATION	
AUTHORS	
Authors	721
Author's Keywords (DE)	171
article	200
Annual Growth Rate %	39.87

Source: compiled with authors based on bibliometrix R studio output

V.1 Sources analysis

Table (2): 10 Most relevant sources

Sources	Articles
SSRN ELECTRONIC JOURNAL	39
EUROPEAN CONFERENCE ON CYBER WARFARE AND SECURITY	9
INTERNATIONAL JOURNAL OF INFORMATION SECURITY	5
APPLIED SCIENCES	4
COMPUTER SCIENCE & IT RESEARCH JOURNAL	3
EDPACS	3
IEEE ACCESS	3
INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING	3

AND MANAGEMENT	
WORLD JOURNAL OF ADVANCED RESEARCH AND REVIEWS	3
2022 17TH IBERIAN CONFERENCE ON INFORMATION SYSTEMS AND TECHNOLOGIES (CISTI)	3

Source: compiled with authors based on bibliometrix R studio output

Table (2) identifies the most relevant sources on digital transformation and strategic decision-making. The SSRN Electronic Journal leads with 39 articles, reflecting the field's reliance on preprints for rapid, practice-driven dissemination. Academic journals such as the International Journal of Information Security and Applied Sciences underscore cybersecurity and technical applications. Conferences like the European Conference on Cyber Warfare and Security highlight strategic digital risks. The presence of emerging and hybrid journals indicates fragmentation, while the limited presence of high-impact, domain-specific journals points to opportunities for stronger theoretical integration.

V.2 Author's analysis

Table (3): 10 most relevant authors

Authors	Articles	Articles Fractionalized
FILIZ MIZRAK	3	2.50
JOUNI PÖYHÖNEN	3	2.00
MARTTI LEHTO	3	1.50
SHIGEAKI TANIMOTO	3	1.40
ABIMBOLA OLUWATOYIN ADEGBITE	2	0.45
ADEDOLAPO OMOTOSHO	2	0.45
ADEGBENGA ISMAILA ALAO	2	0.40
ADITI MEHRA	2	0.50
AGNĖ BRILINGAITĖ	2	0.39
AJAYI ABISOYE	2	1.00

Source: compiled with authors based on bibliometrix R studio output

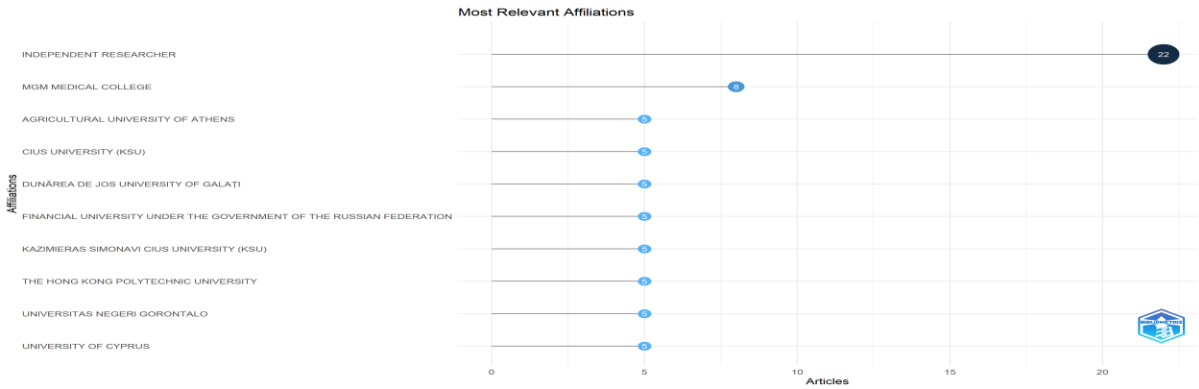
Based on **table (3)**, the most relevant authors in the domain of digital transformation and strategic decision-making are identified by their publication frequency and fractional authorship. Filiz Mizrak ranks highest, with three publications and a fractionalized contribution of 2.5, indicating a lead role in co-authored works. Jouni Pöyhönen follows with three publications and a fractional count of 2.0, while Martti Lehto and Shigeaki Tanimoto also contributed three articles, with fractional contributions of 1.5 and 1.4, respectively. Several other authors, including Ajayi

Abisoye, Aditi Mehra, and Abimbola Oluwatoyin Adegbite, contributed two publications each, although their fractional involvement varies. These findings highlight a small group of authors who have consistently contributed to the field, suggesting emerging thought leadership and collaborative scholarship in this area of research.

V.3 Affiliations Analysis

Based on **Figure (2)**, the most relevant affiliations contributing to the literature on digital transformation and strategic decision-making are presented. Independent researchers lead the list with 22 articles, suggesting a strong individual engagement with the topic outside of institutional settings. Several academic institutions follow, each contributing five to eight publications. MGM Medical College stands out among institutional contributors with eight articles, indicating interdisciplinary interest from the medical and healthcare management fields. Universities such as the Agricultural University of Athens, CIUS University (KSU), Dunărea de Jos University of Galați, and the Financial University under the Government of the Russian Federation each produced five publications, demonstrating diverse geographical and disciplinary involvement. Other notable contributors include the Hong Kong Polytechnic University, Universitas Negeri Gorontalo, and the University of Cyprus, each with five articles, underscoring the international scope and collaborative nature of research in this area.

Figure (2):10 Most relevant affiliations



Source: compiled with authors based on bibliometrix R studio output

V.4 documents analysis

Table (4) highlights the most cited works in digital transformation and strategic decision-making, reflecting high academic impact and thematic diversity. The top-cited publication is Turban et al (2016) Social Commerce Marketing, with 544 citations, serving as a foundational textbook on digital marketing and e-commerce. Sahoo (2022) bibliometric study on big data in manufacturing has 97 citations and a strong normalized impact (11.13). E. Prescott (2014) work on big data at Nielsen (85 citations) emphasizes competitive advantage through digital capabilities. Other notable contributions include Cabrerizo et al (2015) on decision support in academic digital libraries (73 citations), Deepu (73 citations), and Leung (70 citations) on supply chain digitalization. K.H. Leung (2019) article, "Supply Chain Digitalization: An Integrated MCDM Approach for Inter-

Organizational Information Systems Selection in an Electronic Supply Chain", received 70 citations, focusing on decision-making frameworks for selecting digital systems in supply chains. Al-Okaily (2023) has 68 citations with a high normalized impact (13.99), while Monisola Oladeinde (2023) discusses smart audit systems (46 citations).

Finally, Zineb (2020) and Adebunmi Okechukwu Adewusi (2024) focus on digital strategy and business intelligence, with Adewusi achieving the highest normalized rate (15.48). Collectively, these works reveal the field's interdisciplinary and strategic depth.

Table (4): 10 Most Cited Documents

Paper	DOI	Total Citations	TC per Year	Normalized TC
EFRAIM TURBAN, 2016,	https://doi.org/10.1007/978-3-319-17028-2	544	54.40	5.71
SAUMYARANJAN SAHOO, 2021, S65690446	10.1080/00207543.2021.1919333	97	19.40	11.13
MICHAEL E. PRESCOTT, 2014, S154010748	10.1108/md-09-2013-0437	85	7.08	2.66
FRANCISCO JAVIER CABRERIZO, 2015, S192650101	10.1016/j.ins.2015.06.022	73	6.64	4.00
T.S. DEEPU, 2021, S4210226089	10.1016/j.jjimei.2021.100038	73	14.60	8.38
K.H. LEUNG, 2019, S65690446	10.1080/00207543.2019.1566674	70	10.00	12.23
AWS AL-OKAILY, 2023, S4210178187	10.1108/idd-01-2022-0008	68	22.67	13.99
MONISOLA OLADEINDE, 2023, S4210209509	10.51594/csitrj.v4i2.612	46	15.33	9.47
ZINEB KORACHI, 2020, S50245893	10.3844/jcssp.2020.493.507	36	6.00	7.77
ADEBUNMI OKECHUKWU ADEWUSI, 2024, S4210209509	10.51594/csitrj.v5i2.791	36	18.00	15.48

Source: compiled with authors based on bibliometrix R studio output

V.4 Country Analysis

Table (5) summarizes the distribution of corresponding authors by country, the table reflects a geographically diverse engagement with research on digital transformation and strategic decision-making. China (CN) leads significantly with 47 articles, accounting for 17.0% of the total, and shows a strong focus on domestic collaboration, with 46 single-country publications (SCP) and only one multi-country publication (MCP). The United States and India follow, contributing eight and seven articles respectively, all of which are SCPs, suggesting limited international co-authorship. Countries such as Canada, Greece, and Italy exhibit higher proportions of international collaboration. For instance, Italy's three articles include two MCPs, representing 66.7% of its total output, while Greece shows 33.3% MCP. Canada, with five articles, has one MCP (20.0%), reflecting moderate cross-border research activity. Other contributors like Malaysia, Turkey, Great Britain, and Brazil also demonstrate involvement, though primarily through single-country efforts. These findings indicate that while most countries favor domestic collaboration, certain European and North American institutions are more engaged in international research networks.

Table (5): 10 most Corresponding authors ' countries

Country	Articles	Articles %	SCP	MCP	MCP %
CN	47	17.0	46	1	2.1
USA	8	2.9	8	0	0.0
INDIA	7	2.5	7	0	0.0
CANADA	5	1.8	4	1	20.0
MALAYSIA	4	1.4	4	0	0.0
TURKEY	4	1.4	4	0	0.0
GREAT BRITAIN	3	1.1	3	0	0.0
Greece	3	1.1	2	1	33.3
Italy	3	1.1	1	2	66.7
Brazil	2	0.7	2	0	0.0

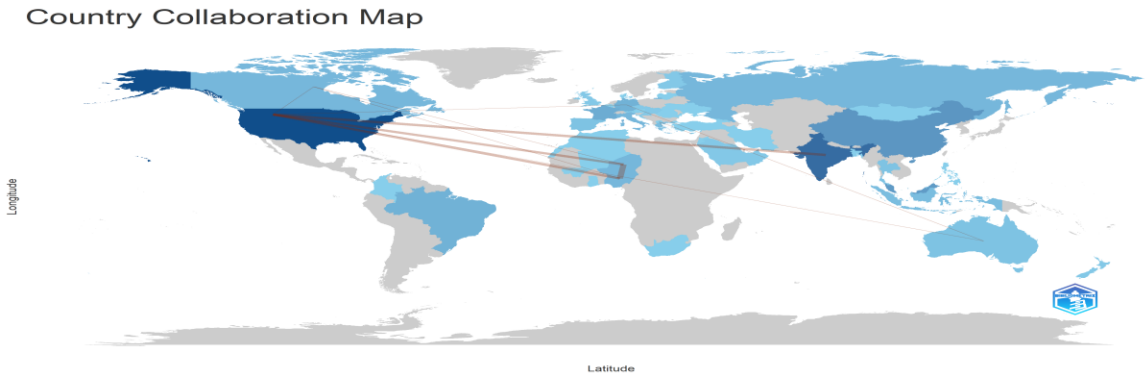
SCP: Single Country Publications / MCP: Multiple Country Publications / MCP% %: Multiple Country Publication Percentage

Source: compiled with authors based on bibliometrix R studio output

The collaboration network **(Figure (3))** highlights regional alliances and uneven global participation in digital transformation research. The strongest link is between Niger and Nigeria (frequency = 5), indicating intra-African cooperation likely rooted in shared regional challenges. The United States serves as a global connector, notably collaborating with India, Niger, Nigeria (three times each), and Canada, Germany, and Australia (twice each), reflecting its pivotal role in

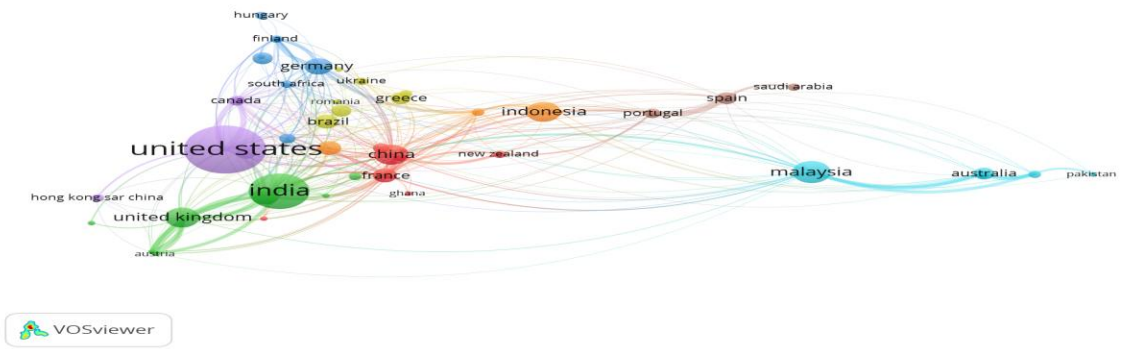
North-South knowledge exchange. European clusters (e.g., Germany-Australia, Greece-Macedonia) suggest EU-led initiatives, while France's links (e.g., Belgium, Tunisia) align with historical or linguistic ties. China's partnerships are numerous but fragmented, suggesting limited continuity. Africa's broader cross-regional ties remain sparse, and limited Asia-Europe or Africa-Asia collaborations reveal underexplored opportunities, reinforcing structural disparities in global digital transformation research.

Figure (3): Country collaboration network



Source: compiled with authors based on bibliometrix R studio output

Figure (4): Country authorship



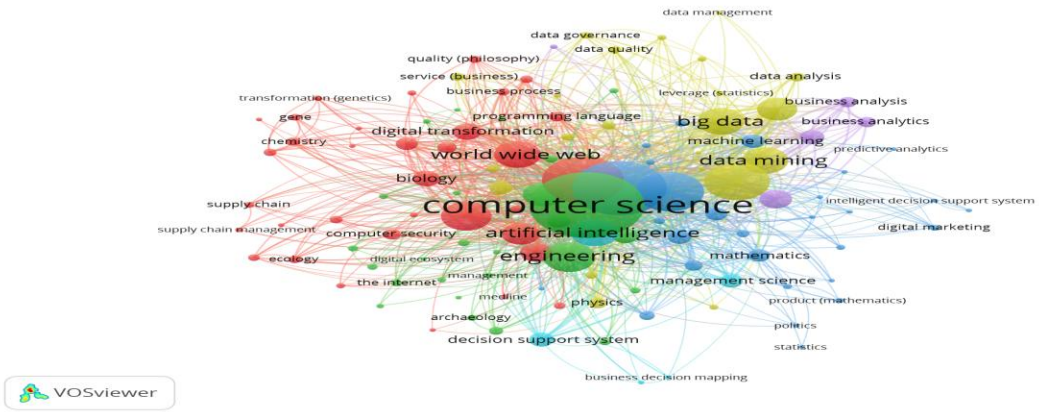
Source: compiled with authors based on VosViewer output

The country co-authorship map **(Figure (4))** illustrates a diverse and multi-centered network of international collaboration in digital transformation and e-government research. The United States leads with the highest publication output and extensive global partnerships, particularly with India and the United Kingdom, indicating strong North-South academic ties. Finland, part of the blue cluster, maintains active collaborations with Germany, Canada, and the U.S., underscoring its strategic role in global digital governance research. China, leading the red cluster, connects with both Western and Eastern countries, acting as a bridge. Regional clusters, such as Malaysia, Australia, and Pakistan, reflect growing Asia-Pacific engagement. Overall, the map highlights a

globally distributed research landscape where smaller nations like Finland remain well-positioned within influential scholarly networks.

V.5 Key words analysis

Figure (5): keyword co-occurrence map



Source: compiled with authors based on VosViewer output

The keyword co-occurrence map **(Figure (5))** reveals the intellectual structure of research on digital transformation and e-government. The green cluster, led by "computer science," highlights its foundational role, alongside frequently co-occurring terms like "artificial intelligence" and "engineering," underscoring their technological significance. The red cluster, with keywords such as "digital transformation" and "world wide web," illustrates the multidisciplinary nature of the field. The yellow cluster emphasizes data-centric approaches through terms like "big data" and "data mining," crucial for optimizing e-government. The blue cluster centers on strategic themes such as "management science" and "decision support systems," while purple and light green clusters cover analytical tools like "machine learning." Overall, the map underscores the centrality of technical and strategic concepts in digital governance research.

VI- Discussion

This study reveals a rapidly evolving yet fragmented scholarly landscape at the intersection of digital transformation (DT) and strategic decision-making (SDM). The field has grown exponentially, with a 39.87% annual publication growth rate and a peak of 86 publications in 2024, reflecting heightened recognition of DT's strategic imperative across industries. However, persistent fragmentation is evident in terminology (171 unique author keywords across 276 documents), theoretical integration gaps, and uneven collaboration patterns, underscoring challenges in achieving conceptual coherence.

VI.1 Key Findings and Comparative Insights

Thematic clusters such as decision support systems, data governance, and strategic agility align with prior sector-specific studies (e.g., Sahoo, 2022; Diaz Schery et al., 2024) but highlight a broader cross-sectoral applicability. Unlike Chawla and Goyal (2022), who emphasized thematic coherence, this analysis exposes disconnects between DT tools and strategic alignment, echoing Chrusciak et al (2023). While industry-specific research dominates, the lack of comparative cross-sectoral frameworks limits generalizability. Chawla & Goyal (2022) portrayed digital transformation (DT) research as mature and thematically coherent, while this study reveals persistent fragmentation, suggesting unresolved conceptual gaps. Bevilacqua et al (2025) linked DT to leadership via AI but highlighted underdeveloped theoretical integration, a gap echoed here. Together, these contrasts emphasize the need to bridge technical and strategic frameworks for cohesive DT scholarship.

Unexpectedly, Canada emerged as a leading contributor, with 47 articles (17% of the corpus), challenging assumptions about regional dominance. This contrasts with prior studies that overlooked national contributions. Additionally, independent scholars play a significant role, suggesting a decentralized, open-access-driven research ecosystema departure from the institutional focus highlighted in earlier literature.

VI.2 Theoretical and Practical Implications

Theoretically, the field suffers from inconsistent terminology and underuse of established strategic frameworks (e.g., dynamic capabilities, upper echelons theory). This echoes Chrusciak et al (2023)'s critique of weak DT-strategy integration. Future research must bridge technical and managerial perspectives through theory-driven studies.

Practically, DT's role as a strategic enabler, not merely a technological upgrade, is increasingly evident. The prominence of independent scholars and Canada's leadership signal a democratization of knowledge production, urging organizations to adopt inclusive, interdisciplinary approaches. Policymakers and leaders should prioritize cross-border collaboration and funding models that address regional disparities in research output.

VII- Conclusion:

This study conducted a bibliometric analysis of 276 academic publications on digital transformation (DT) and strategic decision-making (SDM) from 2014 to 2024, using data from the OpenAlex database and tools like Bibliometrix and Biblioshiny. The findings reveal significant growth in research output, especially after 2019, reflecting rising academic and practical interest. Notably, the field appears fragmented, with a wide variety of keywords and limited theoretical consistency. Canada emerged as the most prolific country, and influential contributions often came from scholars not affiliated with major institutions, challenging traditional assumptions about global research leadership.

VII.1 Limitations

Despite its contributions, the study has limitations. It relies solely on the OpenAlex database, potentially excluding domain-specific or non-English literature. Additionally, while bibliometric analysis provides structural insights, it lacks the depth to interpret content, motivation, or theoretical development. Automated keyword clustering also introduces limitations in thematic interpretation.

VII.2 Future Research

Future research should adopt mixed methods, integrating bibliometric mapping with systematic reviews, content analysis, or case studies to deepen understanding. Studies should explore differences between public and private sectors and examine regional variations in DT's impact on strategic decision-making. There is also a need to apply established organizational and strategic theories such as dynamic capabilities or upper echelons theory to better connect digital innovation with executive decision-making processes.

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