Online-Journals.org

iJIM International Journal of Interactive Mobile Technologies

iJIM | eISSN: 1865-7923 | Vol. 20 No. 7 (2026) | OPEN ACCESS

https://doi.org/10.3991/ijim.v20i07.61107

SPECIAL FOCUS PAPER

AI-Augmented Mobile and Data-Driven Decision Making in Business: Mapping Global Research Trends for Decent Work, Economic Growth, and Innovation

Valentine Kirimi Muriira[1], Asokan Vasudevan[1] (✉), Khan Sarfaraz Ali[1], Nandini Prasad K S[2], Ndimurugero Ngirabakunzi Spéciose[3], Ganesan P.[4]

[1]INTI International University, Nilai, Malaysia

[2]Dayananda Sagar Academy of Technology and Management, Bangalore, India

[3]University of Rwanda, Kigali, Rwanda

[4]Kalasalingam Academy of Research and Education, Krishnankoil, India

asokan.vasudevan@newinti.edu.my

ABSTRACT

The paper on scientometric analysis contains the study about artificial intelligence (AI)-improved mobile and data-driven business decision-making and its impact on the Sustainable Development Goals (SDG 8: Decent Work and Economic Growth, and SDG 9: Innovation and Infrastructure). It is based on 2,443 articles in Scopus (2010–2025) and combines the metrics of performance, co-citation networks, and co-occurrence mapping of keywords to understand the intellectual basis and the research hotspots. The results show that the number of publications has been increasing since 2016, a sign of increasing application of AI and mobile systems in industry decision support. Based on the co-citation analysis, it identifies four intellectual clusters, including big data and analytics, smart cities, knowledge systems, and IoT infrastructures. The keyword analysis targets the cross-sectoral application of AI in business, healthcare, and digital governance. Since AI-guided mobile systems will enable making real-time, predictive, and inclusive decisions, the problems of data bias, ethical leadership, and digital disparities persist. The research creates awareness of the socio-technical systems theory and the theory of affordance, with the need for future research that combines interdisciplinary insights and explores Global South contexts and the actual application of AI-based decisions.

KEYWORDS

artificial intelligence (AI), mobile decision-making, data-driven business, sustainable development goals, scientometric analysis

1 INTRODUCTION

The intersection of artificial intelligence (AI), mobile technologies, and data analytics has had a long-lasting impact on the way businesses decide in the digital age. As being agile and responsive is the need of the digital age, mobile systems

Muriira, V. K., Vasudevan, A., Ali, K. S., Nandini Prasad, K. S., Spéciose, N. N., Ganesan, P. (2026). AI-Augmented Mobile and Data-Driven Decision Making in Business: Mapping Global Research Trends for Decent Work, Economic Growth, and Innovation. *International Journal of Interactive Mobile Technologies (iJIM)*, 20(7), pp. 123–137. https://doi.org/10.3991/ijim.v20i07.61107

This article is an extended version of a paper presented at SUSYNCON2025, held at Manipal Academy of Higher Education, Bengaluru, India, November 27 and 28, 2025. Article submitted 2026-02-06. Final acceptance 2026-02-23.

AI-tuned provide real-time insights and customized decision support services to companies, such as those capable of making decisions based on evidence instead of requiring intuition to execute strategies. Today, AI has been established as one of the essential enablers of sustainable business, making business processes more efficient, streamlining business processes, and becoming more efficient among Americans [1]. At the same time, mobile computing users have gained in that it is able to introduce more user-centric decision-making (through AI) targets into both adaptive systems and user-friendly interfaces, in addition to providing live data access [2].

The effects of this technological breakthrough in the sectors of economic growth and entrepreneurship are far-reaching. The rise and development of gig economies, digital markets, and decentralized labor systems is facilitated by AI-based mobile applications and is facilitating access to income and labor flexibility, which can now be directed and expanded, particularly in areas where it is in demand, specifically, in mechanical labor [1]. Moreover, AI-based mobile systems inside smart cities and digitally linked industrial sectors optimize logistics, labor organization, and service tailoring, and this fact has a direct positive impact on innovation and inclusive rise [2]. Mobile and AI technologies are still in their maturity, yet they are already highly enhancing the level of decision-making in firms and are transformative in creating a work environment that is more sustainable and encourages entrepreneurial ecosystems.

Although artificial intelligence-based, mobile, and data-driven decision-making systems have attracted incremental interest, existing literature is characterized by a lack of interdisciplinary coverage across the information systems, management, computer science, economics, and sustainability studies disciplinary silos. Such fragmentation is one of the issues with digital transformation research, in which developments in AI and mobile analytics are typically engaged with separately, as opposed to a single theoretical frame [3]. Though the pieces of evidence of individual research are vast and significant, including on mobile-supported decision analytics or AI-driven enterprise tools, there is no coherent integration that would trace the intellectual, conceptual, and thematic development of the broadly expanding field [4].

The lack of synthesis prevents scholars and practitioners from spotting the fundamentals of theories, cross-domain connections, and new frontiers. Additionally, cross-sectoral issues like algorithmic management, mobile workforce systems, and AI governance tend to develop in parallel courses and therefore cause conceptual silos, as opposed to converging [5]. The increased number of publications also complicates even more the idea of identifying knowledge structures underlying writings without applying systematic mapping tools such as Ho co-citation or keyword co-occurrence analysis [5]–[7].

Since the topic of mobile and AI-aided decision systems is cross-disciplinary in scope (and especially as far as Sustainable Development Goals [SDGs] are concerned), the need to synthesize it in a structured form is not only timely but also justified. The mapping of the intellectual and conceptual territory of this field will be necessary to determine the theoretical underpinnings, development of themes, and gaps in research. This has been echoed in more recent reviews that have requested multi-perspective analyses that involve innovation, digital infrastructure, entrepreneurship, and ethical AI systems [8, 9]. To cover these gaps, this paper conducts a scientometric review of the literature on the topic of AI-augmented mobile and data-driven decision-making in business. The idea is to create a synthesized picture of all the global research trends that are in accordance with SDG 8 (Decent Work and Economic Growth) as well as SDG 9 (Innovation and Infrastructure). The research questions to be answered in this study are as follows:

1. **RQ1:** What are the major trends and growth patterns in the literature on mobile, AI-augmented, and data-driven decision-making for economic development?

2. **RQ2:** What are the core intellectual foundations and clusters in this knowledge domain?
3. **RQ3:** How have conceptual and thematic focuses evolved over time?

These questions aim to build a structured and multi-layered understanding of the field's development, drawing on scientometric tools and performance indicators.

The remainder of this paper is organized into five main sections. Section 2 details the methodology, including data collection from Scopus, cleaning strategies, and the scientometric techniques used. Section 3 presents the findings from trend analysis, co-citation networks, and keyword mapping. Section 4 relates theoretical and practical implications of the findings with implications for the knowledge and innovation ecosystems. Lastly, Section 5 is the conclusion wherein important insights, limitations of the research, and future research directions are given.

2 MATERIALS AND METHODS

2.1 Data source and retrieval strategy

The presented research has used the scientometric approach, relying on bibliometric records obtained with the help of the Scopus database, which is renowned for being a widespread academic index. The search query combined terms related to mobile technologies, data-driven decision-making, and business transformation, such as TITLE-ABS-KEY ("mobile technology" OR "mobile applications" OR "mobile business" OR "mobile commerce" OR "m-commerce" OR "mobile computing" OR "mobile decision making" OR ICT OR "information and communication technology"). AND TITLE-ABS-KEY ("data-driven decision making" OR "data analytics" OR "business analytics" OR "big data" OR "data science" OR "decision support systems" OR "artificial intelligence" OR "AI" OR "machine learning") AND TITLE-ABS-KEY (business OR management OR enterprise OR organization OR firm OR "digital transformation"). The initial search yielded 7,905 documents. Applying inclusion filters—document type (articles), language (English), source type (journals), and time range (2010–2025)—narrowed the corpus to **2,443** relevant publications. The final dataset was exported in CSV format for analysis in VOSviewer, as recommended in current bibliometric studies using Scopus [6] and Biblioshiny [7]. Scopus is used with the thesaurus file to extract the documents in a clean format of .csv and a critical step of ensuring consistency in the name of an author, institutional affiliation, and other variants of the keywords.

2.2 Analytical techniques

In this work, the three main bibliometric methods were used:

Trend Analysis (Performance Analysis): Performance of Scholars metrics, including annual publication strategies, citation strategies, leading journals, countries, and institutions, was calculated to define scholarly performance. New indices become the benchmarks of intellectual productivity and are customary in the bibliometric reviews [9].

Co-Citation Analysis (Intellectual Structure): Co-citation networks of authors, sources, and references were made to uncover those knowledge bases and intellectual clusters that are influential. This method was performed with the help of VOSviewer, which is one of the approved tools to create visual bibliometric mapping [7].

Keyword Co-Occurrence Analysis (Conceptual Structure): It is the concept that helped explore the themes of the research and topical trends, segmenting frequently used similar keywords. They were analyzed using an overlay visualization to assess the change in the themes over the periods. The following visualization depicts novel horizons and gaps in research that affect the current state [10].

3 RESULTS AND DISCUSSION

3.1 Trend analysis: Annual publications (2010–2025)

The volume of research on mobile, AI-augmented, and data-driven decision-making in business contexts has shown a robust upward trajectory over the past 15 years, as shown in Figure 1. From just 15 documents in 2010, scholarly output gradually increased through the 2010s, reaching 74 documents by 2015. This insignificant increase represents the initial stage when mobile technologies, as well as AI tools, were just appearing in organizations. Another interesting inflection point was between 2016 and 2020, during which, eleven years compared to 80 in 2016, 262 were produced annually in the span of 2016 to 2020, as machine learning (ML) tools and mobile-first enterprise solutions became a mainstream aspect of business [11]. The field grew exponentially between 2020 and 2024, with the number of publications reaching a record-breaking 349 in 2024. This burst is indicative of the growing rate of adoption of AI and mobile platforms in business decision-making, specifically because of pandemic-related attempts at digital transformation. Some of the drivers of this boom are greater investment in digital infrastructure, the use of enterprise AI, and the spread of mobile decision-support systems in most industries. The recorded drop to 301 publications in 2025 may simply be due to the data collection endpoint of the month of August 2025, but not a full calendar year. Such a partial-year capture has been identified as one of the methodological shortcomings of other bibliometric studies, too [10]. This continuous surge in the number of publications between the years 2010 and 2025, as illustrated in Figure 1, proves that the field is maturing and gaining prominence in academic exploration as well as business change practices. The following currents outline the relevance of such a scientometric synthesis in tracking the growth of subject matter, intellectual, and territorial zones of intellectual inquiry activity in this expanding field of interdisciplinary inquiry [7].

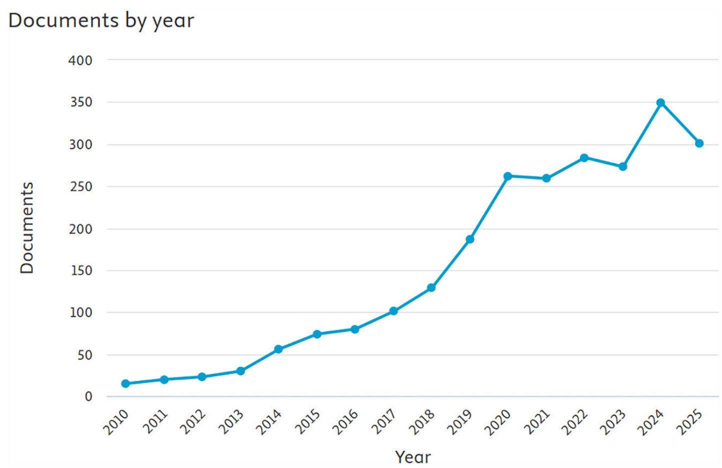

Fig. 1. Trend of publications on mobile and data-driven decision-making for SDG 8 (2010–2025)

Source: Analyzed by authors.

3.2 Co-citation network and intellectual structure

Co-citation is a bibliometric method of indicating the intellectual organization of a scientific discipline through the occurrence of co-citation of two documents. The minimum citation threshold was established at 4 in this study, which narrowed the number of references cited from 17,941 to 66. The most relevant ones made it possible to identify clusters and map the foundational literature thematically [11], which introduced the basis of IoT-enabled structures to support real-time decision-making, and [12], which extended the idea of smart cities that combine technology, sustainability, and governance, can be considered seminal. The other useful sources are [13] on the topic of big data in the smarter city and [14] on business intelligence, which serve as the theoretical foundations of enterprise analytics. These sources (refer to Table 1) represent an intersection between computer science, urban technology, and management information systems (IS) and the role of digital systems in changing decision environments [15].

Table 1. Top 10 most cited references in the co-citation analysis

Rank	Cited Reference	Citations	Total Link Strength
1	[12]	14	6
2	[13]	13	16
3	[14]	11	19
4	[15]	10	2
5	[16]	9	6
6	[17]	9	3
7	[18]	7	4
8	[19]	7	2
9	[20]	7	1
10	[21]	6	13

Source: Compiled by authors.

The co-citation clustering method with a VOSviewer identified four key intellectual clusters in the fast-changing discipline (see Figure 2). Cluster 1 (Red) revolves around big data and analytics, with emphasis on works that form the foundation of decision-making changes in terms of volume, velocity, and variety of data. Cluster 2 (Green) deals with smart cities and urban technologies with a focus on digital governance and infrastructure. Cluster 3 (Blue) involves knowledge systems and innovations in the sector, such as smart tourism and organizational learning. Cluster 4 (Yellow) has IoT and enabling technology in sensor-based, mobile integrative decision environments. These groups underscore the fact that this area is interdisciplinary and requires integrated frameworks that cut across the technical, organizational, and societal dimensions [22], [23].

Cluster 1: Big data & analytics (red cluster). The first and the largest intellectual community is that of big data and analytics, which offers the technology and theoretical basis of the decision-making of businesses based on a dataset. The main developments (including but not exclusive to [15]) characterize the passage between data warehousing and business intelligence and predictive analytics and how prestructured and unstructured data can be used to make strategic decisions. There are also important and critical questions concerning the social and epistemological aspects of big data that [18] pose regarding the blind trust of algorithm-based decisions. Pioneer data-architecture concepts (i.e., the landmark 3 V's of volume, velocity, and variety) remain influential on scaled AI methods. The fact that a report was included about how big data can contribute to the economy reflects the shift of analytics from a niche affair towards mainstream economic empowerment [23]. Collectively, this bunch highlights the descriptive, predictive, and prescriptive analytics transformation, which is a new era in enterprise intelligence.

Cluster 2: Smart cities according to urban technology (green cluster). The second group is based on the paradigm of the smart city, where digital decision systems overlap with city infrastructure and sustainability programs. [13] present a proper definition of smart cities and the performance indicators to include in urban planning, incorporating such aspects as IoT, data platforms, and citizen involvement in the city planning. Similarly, [21] extracts significant differences between smart and sustainable cities and addresses environmental and socio-political aspects of urbanization. Critical infrastructural literature also falls within this stream, e.g., [24], [25], where the use of real-time data streams in assisting more adaptive and efficient city-level management is addressed. The focus in this case is on system-level integration of the transportation, energy, communication, and governance systems based on the integration of digital decision support technologies. These readings hint at how urban contexts can be used as living laboratories to research mobile and algorithm-aided decisions at scale, frequently in accordance with SDG 11 (Sustainable Cities and Communities).

Cluster 3: Knowledge systems & smart initiatives (blue cluster). This cluster connects **knowledge management**, **organizational learning**, and **sector-specific smart initiatives**. A seminal contribution by [26] lays the theoretical foundation for understanding how organizations capture, structure, and apply knowledge through decision support systems. The integration of digital knowledge platforms in sectors like tourism [27] and public administration [28] shows the adaptability of smart decision systems across different economic and social domains. This cluster emphasizes **sectoral applications** of digital decision-making, including case studies such as **Barcelona's smart city model** and developments in e-governance and smart tourism. The unifying theme is the **conversion of data into actionable knowledge**, empowering organizations to make informed decisions through systems that blend analytics, human judgment, and contextual insights. This cluster thus provides a bridge between technological capability and practical implementation in the real world.

Fig. 2. Co-citation mapping

Source: VOSviewer.

Cluster 4: Internet of Things (IoT) & enabling technologies (yellow cluster). The last group is that of IoT and its contribution as a technical foundation of the mobile and AI-enabled decision systems. The pioneering study by [16]–[22] provides an in-depth survey regarding the IoT protocols, communication model, and their connection with data platforms. These papers explain the fact that sensor networks and real-time data capture enable context-aware and place-based decision-making, especially in supply chain management, healthcare, and mobility services. Similar works by [29]–[34] accentuate the use of IoT in smart city infrastructure with embedded systems and data flow into centralized analytics. This cluster represents the lowest-level technological stack, which comprises the sensors, connectivity, and cloud stack that enable mobile and AI-enhanced decisions in real-time, responsive, and scalable ways. It forms a fundamental component of the industry (Industry 4.0) and service sector transformation, particularly in areas that are aiming at developing digital infrastructure as part of SDG 9 (Industry, Innovation, and Infrastructure).

Table 2 shows the summary table of the four co-citation clusters, including their thematic focus, contributions, implications for decision research, and representative documents.

Table 2. Summary table: Thematic clusters from co-citation analysis

Cluster	Theme	Key Contributions	Implication for Decision Research	Representative Documents
1 (Red)	Big Data & Analytics	Foundational theories on business intelligence, the 3Vs of big data, and socio-technical critique	Anchors decision models in high-volume, high-velocity environments	[13], [14], [18]
2 (Green)	Smart Cities & Urban Tech	City infrastructure, urban informatics, sustainability vs. smartness	Applies decision systems in governance and urban planning	[12], [21], [24], [25]
3 (Blue)	Knowledge Systems	Knowledge management systems, digital ecosystems, smart initiatives in sectors like tourism & governance	Highlights knowledge capture & reuse in digital decision contexts	[26], [27], [28], [29].
4 (Yellow)	IoT & Infrastructure	Core IoT technologies, protocols, fog computing, and enabling infrastructure for smart systems	Supports the technical architecture of mobile/AI decision support	[11], [17], [30]

Source: Compiled by authors.

3.3 Keyword co-occurrence and conceptual structure

VOSviewer was used to complete a keyword co-occurrence analysis and examine the conceptual space of AI-augmented and mobile data-driven decision-making studies. The analysis indicated trends in the most common keywords that were co-occurring, with the central areas of focus and new concepts. As shown in Table 3, the most frequently occurring keywords, which appeared at least 49 times, were used, which reduced to a total of 59 out of 15,062 keywords that were mapped into thematic clusters because of their co-occurrence. According to the visualization (Figure 3), three main clusters are shown. Cluster 1 (Red) is dedicated to digital technology, AI, and smart cities. Cluster 2 (Green) focuses on telemedicine, digital health systems, and mobile apps. Cluster 3 (Blue) focuses on clinical trials and demographics of patients. Such clusters represent the multi-sectoral influence of AI and mobile decision systems, which is broad, including business, healthcare, and socio-technical research. The most frequent keywords are human (543 times), mobile applications (526), and artificial intelligence (517), which are the conceptual cornerstones of the research, which are depicted in Figure 3.

Table 3. Top 10 keywords by occurrences

Rank	Keyword	Occurrences	Total Link Strength
1	humans	543	4323
2	article	472	3936
3	mobile applications	526	3535
4	artificial intelligence	517	2308
5	female	215	2276
6	male	203	2178
7	adult	196	2079
8	machine learning	358	1482
9	controlled study	156	1603
10	big data	337	1030

Source: Compiled by authors.

Cluster 1: Digital technology & data science (red cluster). This group is the technological basis of AI-enhanced decision-making, which is supported by big data, ML, and cloud computing. Research is devoted to the transformation of the decision support systems into the systems of data-driven predictive models rather than intuitively based ones and increasing the efficiency and agility [31], [32]. IoT convergence enables the real-time data gathering within such sectors of business and healthcare [33]. Mobile computing and digital transformation also enable organizations to make wise choices using mobile applications and clouds [34]. Smart cities demonstrate the use of AI and IoT in the management of cities [35]. The combination of AI, IoT, and cloud computing leads to scalability and efficiency [36].

Cluster 2: Digital health systems and tools (green cluster). The area of this cluster concentrates on the use of AI and mobile technologies in healthcare with a particular emphasis on mobile health (mHealth), telemedicine, and clinical decision support systems (CDSS) as supplements to patient care. The use of AI-based solutions and mobile devices has improved the process of diagnostics, monitoring patients, and access to healthcare, especially in underserved regions [37], [38]. Predictive analytics are AI-based tools, as they can enhance clinical decision-making based on real-time data [23]. These inventions correspond to SDG 3 (Good Health and Well-being), enhancing the individual care and lowering expenditures in healthcare [38], [39]. With the future of AI development, it will keep on empowering healthcare systems, reducing disparities, and encouraging inclusive care [40].

Cluster 3: Systems research and patient demographics (blue cluster). The third group indicates the importance of the demographic segmentation of digital health tool evaluation and evidence-based methods. Such keywords as randomized controlled trial, controlled study, and quality of life underline that efficient clinical studies should be conducted to prove the usage of AI in healthcare [37]. Clinical trials will help to make sure that AI-driven health solutions are safe and effective. The demographics, such as age, sex, and medical issues, are essential in creating personalized AI devices in healthcare so that more effective treatments are achieved [33]. This aids in precision medicine, where AI examines information about the patient to achieve the best treatment results [23].

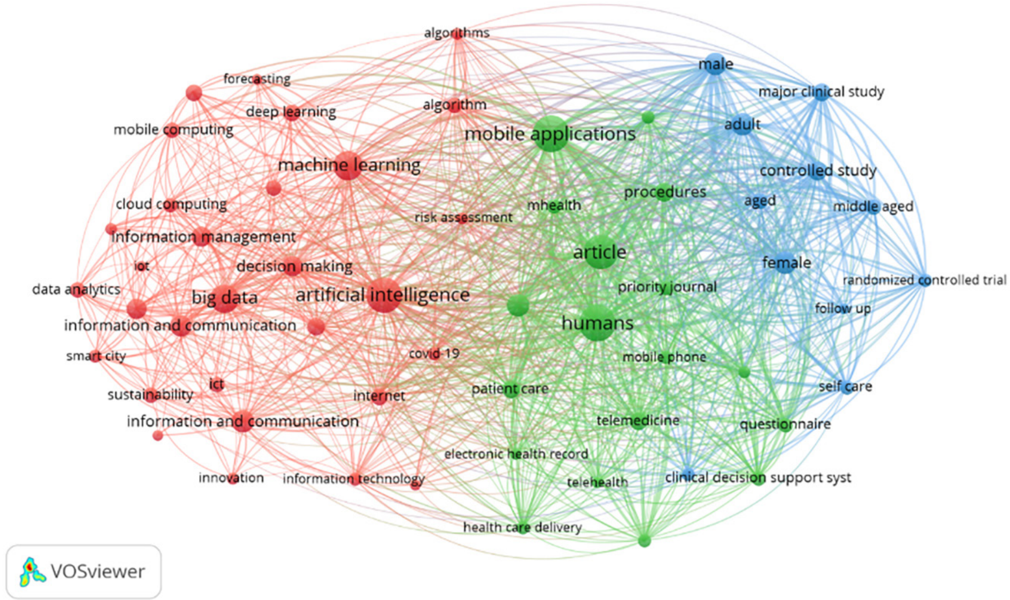

Fig. 3. Coward analysis

Source: VOSviewer.

Table 4 summarizes the most critically relevant themes, contribution keywords, and implications for decision research in three primary clusters: Digital Technology and Data Sciences, Digital Health Systems and Tools, and Clinical Research and Patient Demographics. It emphasizes interdisciplinary characteristics of AI-enhanced decision-making in the business and health sectors, as well as the changing role of mobile technologies and AI in the promotion of innovations, efficiency, and personal solutions.

Table 4. Summary of the coward analysis themes and representative keywords

Cluster	Theme	Representative Keywords	Key Contributions	Implication for Decision Research
Digital Technology & Data Science (Red Cluster)	Big Data, AI, Machine Learning, Cloud Computing, IoT, Smart Cities	Artificial Intelligence, Big Data, Cloud Computing, IoT, Decision Support Systems, Machine Learning, Deep Learning, Smart City, Technology, Risk Assessment	Transformation from intuition-based to data-driven decision-making, Integration of AI with IoT for real-time decision-making in smart cities and other sectors	Anchors decision models in high-volume, high-velocity environments, facilitates real-time decision-making, Optimizes operations and strategic decisions in businesses and cities
Digital Health Systems & Tools (Green Cluster)	Mobile Health (mHealth), Clinical Decision Support Systems (CDSS), Telemedicine, AI in Healthcare	Clinical Decision Support System, mHealth, Mobile Applications, Electronic Health Records, Telemedicine, Patient Care, Health Personnel, Smartphone	Integration of AI and mobile technologies in healthcare systems, significant advancements in diagnostics, monitoring, and patient care, and contribution to SDG 3 (Good Health and Well-being)	Enhances decision-making in healthcare, improves patient care and treatment through AI-driven tools, and addresses healthcare accessibility and affordability in underserved areas
Clinical Research & Patient Demographics (Blue Cluster)	Clinical Research Methodology, Demographic Factors, Personalized Healthcare, Randomized Controlled Trials	Randomized Controlled Trial, Controlled Study, Quality of Life, Aged, Adult, Female, Male, Middle Aged, Follow-Up, Self-Care	Use of clinical research and demographic data to validate AI in healthcare, focusing on personalized AI tools based on demographic segmentation and precision medicine	Validates the effectiveness of AI-driven healthcare solutions, ensures precision medicine through demographic data integration, and improves targeted healthcare delivery

Source: Compiled by authors.

3.4 Future frontiers and emerging hotspots

With the development of AI, new trends are being formulated in the areas of decision-making, like Generative AI and intelligent workplaces. Generative AI, or generating content or solutions, is taking center stage in areas from business strategy to the creative industries [41]. The technology improves the process of decision-making as it offers new information, especially within AI-powered collective decision-making systems, which assist in overcoming cognitive bias and enhancing consensus formation [42]. At the same time, intelligent offices are becoming more popular, and AI-supported applications such as chatbots and virtual assistants are used to streamline the work process and be innovative [43]. Project management is also becoming smarter with the use of AI, resulting in the optimization of the resources and decisions [44]. In the education sector, AI is changing the teaching profession with individualized learning and smart grading tools to improve student engagement and educational performance [45]. With the development of such technologies, AI governance will become essential to achieve transparency and ethics, with explainable AI (XAI) being prioritized to hold decision-making in account [46], [47].

4 DISCUSSION

The use of AI in decision-making has become very popular in various fields, but the studies in this field are very sparse and incontiguous. This paper will examine the ways in which AI (especially in mobile technologies and predictive analytics) will change the way decisions are made, which will provide real-time data processing that will result in more efficient operations. A transformation from intuition-driven to data-driven decision-making will be a paradigm shift in the decision-making process of organizations because AI will allow making decisions faster and more informed [31], [48]. This change will give organizations strategic agility and improve employee participation.

Artificial intelligence is closely related to predictive analytics, the minimization of human biases, and the optimal use of data in such areas as healthcare, finance, and supply chain management. AI tools improve the decision-making process by delivering insights in real time and aiding data-driven decisions, which ultimately can help increase the strategic alignment with the business objectives. Nevertheless, these are not without difficulties, especially concerning the privacy of data, the lack of expertise, and the necessity of morally sound AI systems. These issues should be taken care of so that AI can be adopted responsibly, especially in the sectors where AI systems are becoming more significant in the management of complicated duties [49].

Moreover, the application of AI in decision-making implies the significance of the interdisciplinary approach. With a combination of IS, management, and sustainability insights, this study identifies that AI is not only beneficial for technical efficiency. Social, ethical, and environmental advantages are also provided by AI in terms of sustainable business practice. The interdisciplinary combination is crucial to organizations that are interested in deploying AI technologies that would meet both operational and societal interests [50]–[55].

The aspect of mobile technology that is part of AI adoption also facilitates business innovation, whereby organizations have the opportunity to remain ahead of the constantly changing market. Regardless of these advancements, the issues related to the adoption of AI, including problems with data integration and the threat of displacing the workforce, are still important to future research. AI automation and the consideration of human-centered methods should be viewed as the balancing aspect of the organization to ensure that business operations do not breach ethical standards [49].

5 CONCLUSION

This paper highlights the radical nature of AI in decision-making, specifically in mobile applications and predictive analytics. AI has transformed the business strategies by facilitating real-time decision-making, operational effectiveness, and data-based insights. The potential of AI in streamlining decision-making, decreasing human bias, and influencing innovation has been observed in the healthcare sector, finance sector, and supply chain management. Nevertheless, data privacy issues, ethical AI, and employee adaptation are challenges that need to be addressed [50], [51]. Although the role of AI keeps expanding, there is a need to conduct new studies to understand how AI affects emerging areas such as the Global South and the use of AI in a dynamic business environment. Experimental applications of AI are the directions to be pursued by future research to assess the practical efficiency of these technologies in various fields.

6 REFERENCES

[1] I. Irwansyah, R. M. Panjaitan, K. V. Minanlarat, and J. Adityawan, "Corporate communication innovation: The role of mobile technology and AI in improving public connectivity," *Advances in Social Humanities Research*, vol. 2, no. 12, pp. 1405–1414, 2024. https://doi.org/10.46799/adv.v2i12.324

[2] R. C. Castanyer, S. Mart'inez-Fern'andez, and X. Franch, "Which design decisions in AI-enabled mobile applications contribute to greener AI?" *arXiv preprint arXiv:2109.15284*, 2021. https://doi.org/10.48550/arXiv.2109.15284

[3] A. Alshahrani, A. Griva, D. Dennehy, and M. Mäntymäki, "Artificial intelligence and decision-making in government functions: Opportunities, challenges and future research," *Transform. Gov. People Process Policy*, vol. 18, no. 4, pp. 678–698, 2024. https://doi.org/10.1108/TG-06-2024-0131

[4] V. Upadhya, "Analytical exploration of integration of AI in information systems," *Interantional J. Sci. Res. Eng. Manag.*, vol. 8, no. 3, pp. 1–5, 2024. https://doi.org/10.55041/IJSREM29867

[5] S. Mandvikar and D. M. Dave, "Augmented intelligence: Human-AI collaboration in the era of digital transformation," *Int. J. Eng. Appl. Sci. Technol.*, vol. 8, no. 6, pp. 24–43, 2023. https://doi.org/10.33564/IJEAST.2023.v08i06.003

[6] M. Khoshroo and M. Talari, "Scientific mapping of digital transformation strategy research studies in the Industry 4.0: A bibliometric analysis," *Nankai Bus. Rev. Int.*, vol. 14, no. 1, pp. 3–34, 2023. https://doi.org/10.1108/NBRI-03-2022-0021

[7] H. Özyürek, S. Babaçoğlu, M. Polat, and U. Turen, "Mapping the field of digital nomadism: A bibliometric analysis using VOSviewer and R," *Eurasia Proc. Sci. Technol. Eng. Math.*, vol. 27, pp. 263–280, 2024. https://doi.org/10.55549/epstem.1518797

[8] J. M. Saiz-Alvarez, "Innovation management: A bibliometric analysis of 50 years of research using VOSviewer® and Scopus," *World*, vol. 5, no. 4, pp. 901–928, 2024. https://doi.org/10.3390/world5040046

[9] J. S. Reddy, R. Sharma, and A. K. Gupta, "Trends and future directions of accreditations in higher education: Bibliometric analysis," *Prabandhan Indian J. Manag.*, vol. 16, no. 6, pp. 39–59, 2023. https://doi.org/10.17010/pijom/2023/v16i6/172863

[10] R. A. Gunadi and B. Robandi, "Mapping the intersection of ethics, AI, and higher education: A bibliometric approach," *JPPI (Jurnal Penelitian Pendidikan Indonesia)*, vol. 11, no. 1, p. 43, 2025. https://doi.org/10.29210/020254242

[11] L. Atzori, A. Iera, and G. Morabito, "The Internet of Things: A survey," *Comput. Netw.*, vol. 54, no. 15, pp. 2787–2805, 2010. https://doi.org/10.1016/j.comnet.2010.05.010

[12] V. Albino, U. Berardi, and R. M. Dangelico, "Smart cities: Definitions, dimensions, performance, and initiatives," *J. Urban Technol.*, vol. 22, no. 1, pp. 3–21, 2015. https://doi.org/10.1080/10630732.2014.942092

[13] E. Al Nuaimi, H. Al Neyadi, N. Mohamed, and J. Al-Jaroodi, "Applications of big data to smart cities," *J. Internet Serv. Appl.*, vol. 6, no. 1, 2015. https://doi.org/10.1186/s13174-015-0041-5

[14] H. Chen, R. H. L. Chiang, and V. C. Storey, "Business intelligence and analytics: From big data to big impact," *MIS Quarterly*, vol. 36, no. 4, pp. 1165–1188, 2012. https://doi.org/10.2307/41703503

[15] R. Dwivedi, S. Nerur, and V. Balijepally, "Exploring artificial intelligence and big data scholarship in information systems: A citation, bibliographic coupling, and co-word analysis," *Int. J. Inf. Manag. Data Insights*, vol. 3, no. 2, p. 100185, 2023. https://doi.org/10.1016/j.jjimei.2023.100185

[16] Ö. H. Kuzu and D. Özilhan, "The effect of employee relationships and knowledge sharing on employees' performance: An empirical research on service industry," *Procedia – Soc. Behav. Sci.*, vol. 109, pp. 1370–1374, 2014. https://doi.org/10.1016/j.sbspro.2013.12.639

[17] A. Al-Fuqaha, M. Guizani, M. Mohammadi, M. Aledhari, and M. Ayyash, "Internet of Things: A survey on enabling technologies, protocols, and applications," *IEEE Commun. Surv. Tutor.*, vol. 17, no. 4, pp. 2347–2376, 2015. https://doi.org/10.1109/COMST.2015.2444095

[18] D. Boyd and K. Crawford, "Critical questions for big data: Provocations for a cultural, technological, and scholarly phenomenon," *Inf. Commun. Soc.*, vol. 15, no. 5, pp. 662–679, 2012. https://doi.org/10.1080/1369118X.2012.678878

[19] J. Manyika *et al.*, "Big data: The next frontier for innovation, competition, and productivity," McKinsey Global Institute, 2011. [Online]. Available: https://www.mckinsey.com/capabilities/quantumblack/our-insights/big-data-the-next-frontier-for-innovation [Accessed: Feb. 16, 2026].

[20] E. Brynjolfsson and A. McAfee, "Big data: The management revolution," 2012. [Online]. Available: http://digamo.free.fr/brynmacafee2.pdf [Accessed: Feb. 16, 2026].

[21] H. Ahvenniemi, A. Huovila, I. Pinto-Seppä, and M. Airaksinen, "What are the differences between sustainable and smart cities?" *Cities*, vol. 60, pp. 234–245, 2017. https://doi.org/10.1016/j.cities.2016.09.009

[22] J. A. Bhaskara and A. Nurmandi, "Role of artificial intelligence in the smart city: A bibliometric review," in *HCI International 2022 – Late Breaking Posters*, in Communications in Computer and Information Science, vol. 1655, C. Stephanidis, M. Antona, S. Ntoa, and G. Salvendy, Eds., Cham: Springer Nature Switzerland, 2022, pp. 589–596. https://doi.org/10.1007/978-3-031-19682-9_74

[23] R. P. Efendi, I. Qolbi, S. Z. A. Afandi, I. Kusumasari, and R. Nugroho, "The role of artificial intelligence in decision making: Improving e-commerce business efficiency and innovation," *Jurnal Bisnis dan Komunikasi Digital*, vol. 2, no. 2, p. 10, 2025. https://doi.org/10.47134/jbkd.v2i2.3479

[24] M. Batty *et al.*, "Smart cities of the future," *European Physical Journal Special Topics*, vol. 214, no. 1, pp. 481–518, 2012. https://doi.org/10.1140/epjst/e2012-01703-3

[25] A. Caragliu, C. Del Bo, and P. Nijkamp, "Smart cities in Europe," *Journal of Urban Technology*, vol. 18, no. 2, pp. 65–82, 2011. https://doi.org/10.1080/10630732.2011.601117

[26] M. Alavi and D. E. Leidner, "Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues," *MIS Quarterly*, vol. 25, no. 1, pp. 107–136, 2001. https://doi.org/10.2307/3250961

[27] D. Buhalis and R. Law, "Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research," *Tour. Manag.*, vol. 29, no. 4, pp. 609–623, 2008. https://doi.org/10.1016/j.tourman.2008.01.005

[28] T. Bakıcı, E. Almirall, and J. Wareham, "A smart city initiative: The case of Barcelona," *J. Knowl. Econ.*, vol. 4, no. 2, pp. 135–148, 2013. https://doi.org/10.1007/s13132-012-0084-9

[29] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qual. Res. Psychol.*, vol. 3, no. 2, pp. 77–101, 2006. https://doi.org/10.1191/1478088706qp063oa

[30] A. Zanella, N. Bui, A. Castellani, L. Vangelista, and M. Zorzi, "Internet of Things for smart cities," *IEEE Internet Things J.*, vol. 1, no. 1, pp. 22–32, 2014. https://doi.org/10.1109/JIOT.2014.2306328

[31] G. B. Omotoye, O. P. Oyeyemi, B. G. Bello, A. J. Kess-Momoh, and A. I. Daraojimba, "Impact of augmented analytics in U.S. business decision-making: A comprehensive review: Investigating the integration of AI in analytics and its implications for businesses," *Socio Econ. Policy Stud.*, vol. 4, no. 1, pp. 52–59, 2023. https://doi.org/10.26480/seps.01.2024.52.59

[32] P. Ukhalkar, M. Bhate, S. Hingane, and S. Hingane, "Augmented analytics: Modern business intelligence and data analytics," in *7th International Conference on Computing, Communication, Control and Automation (ICCUBEA)*, 2023, pp. 1–6. https://doi.org/10.1109/ICCUBEA58933.2023.10392077

[33] N. Alghamdi and H. Al-Baity, "Augmented analytics driven by AI: A digital transformation beyond business intelligence," *Sensors*, vol. 22, no. 20, p. 8071, 2022. https://doi.org/10.3390/s22208071

[34] A. Joshi, "Augmented analytics: Leveraging AI and machine learning for enhanced data insights," *Journal of Artificial Intelligence & Cloud Computing*, vol. 2, no. 2, pp. 1–6, 2023. https://doi.org/10.47363/JAICC/2023(2)341

[35] A. Bousdekis *et al.*, "Human-AI collaboration in quality control with augmented manufacturing analytics," in *Advances in Production Management Systems: Artificial Intelligence for Sustainable and Resilient Production Systems*, in IFIP Advances in Information and Communication Technology, 2021, pp. 303–310. https://doi.org/10.1007/978-3-030-85910-7_32

[36] N. Prat, "Augmented analytics," *Business & Information Systems Engineering*, vol. 61, no. 3, pp. 375–380, 2019. https://doi.org/10.1007/s12599-019-00589-0

[37] K. Mullangi *et al.*, "AI-augmented decision-making in management using quantum networks," *Asian Business Review*, vol. 13, no. 2, pp. 73–86, 2023. https://doi.org/10.18034/abr.v13i2.718

[38] M. N. O. Sadiku, T. J. Ashaolu, A. Ajayi-Majebi, and S. M. Musa, "Augmented intelligence," *International Journal of Scientific Advances*, vol. 2, no. 5, pp. 772–775, 2021. https://doi.org/10.51542/ijscia.v2i5.17

[39] O. Badmus, S. A. Rajput, J. B. Arogundade, and M. Williams, "AI-driven business analytics and decision making," *World Journal of Advanced Research and Reviews*, vol. 24, no. 1, pp. 616–633, 2024. https://doi.org/10.30574/wjarr.2024.24.1.3093

[40] A. B. Szentirmai, "Universally designed augmented reality as interface for artificial intelligence assisted decision-making in everyday life scenarios," in *Universal Design 2024: Shaping a Sustainable, Equitable and Resilient Future for All*, K. S. Fuglerud et al., Eds., Amsterdam, The Netherlands: IOS Press, 2024, pp. 469–476. https://doi.org/10.3233/SHTI241043

[41] A. A. Yusuf *et al.*, "Emerging trends and innovations in artificial intelligence and data science technologies," *Journal of e-Science Letters*, vol. 5, no. 1, pp. 20–25, 2024. https://doi.org/10.51470/eSL.2024.5.1.20

[42] A. Khan, "The intersection of artificial intelligence and international trade laws: Challenges and opportunities," *IIUM Law Journal*, vol. 32, no. 1, pp. 103–152, 2024. https://doi.org/10.31436/iiumlj.v32i1.912

[43] A. Prasanth, D. J. Vadakkan, P. Surendran, and B. Thomas, "Role of artificial intelligence and business decision making," *International Journal of Advanced Computer Science and Applications (IJACSA)*, vol. 14, no. 6, 2023. https://doi.org/10.14569/IJACSA.2023.01406103

[44] D. Vergara, A. Del Bosque, G. Lampropoulos, and P. Fernández-Arias, "Trends and applications of artificial intelligence in project management," *Electronics*, vol. 14, no. 4, p. 800, 2025. https://doi.org/10.3390/electronics14040800

[45] V. P. Misra, P. K. Mishra, and A. Sharma, "Artificial intelligence in education – Emerging trends, thematic analysis & application in lifelong learning," in *2023 IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE)*, Nadi, Fiji, 2023. https://doi.org/10.1109/CSDE59766.2023.10487664

[46] M. E. Balbaa and M. Abdurashidova, "The impact of artificial intelligence in decision making: A comprehensive review," *EPRA International Journal of Economics, Business and Management Studies*, vol. 11, no. 2, pp. 27–38, 2024. https://doi.org/10.36713/epra15747

[47] J. C. Andrews, "The future of AI and emerging trends," *International Scientific Journal of Engineering and Management*, vol. 4, no. 3, pp. 1–7, 2025. https://doi.org/10.55041/ISJEM02439

[48] M. Thapliyal and N. J. Ahuja, "Underpinning implications of instructional strategies on assistive technology for learning disability: A meta-synthesis review," *Disability and Rehabilitation: Assistive Technology*, vol. 18, no. 4, pp. 423–431, 2023. https://doi.org/10.1080/17483107.2020.1864669

[49] A. Chinnaraju, "AI-driven strategic decision-making on innovation: Scalable, ethical approaches and AI agents for startups," *World Journal of Advanced Research and Reviews*, vol. 25, no. 2, pp. 2219–2248, 2025. https://doi.org/10.30574/wjarr.2025.25.2.0575

[50] A. Zhou, "Causal effects of affordance change on communication behavior: Empirical evidence from organizational and leadership social media use," *Telematics and Informatics*, vol. 59, p. 101549, 2021. https://doi.org/10.1016/j.tele.2020.101549

[51] H.-F. Chung, "Betting on (un)certain futures: Sociotechnical imaginaries of AI and varieties of techno-developmentalism in Asia," *Information, Communication & Society*, vol. 29, no. 3, pp. 909–926, 2025. https://doi.org/10.1080/1369118X.2025.2535427

[52] A. Daios, N. Kladovasilakis, A. Kelemis, and I. Kostavelis, "AI applications in supply chain management: A survey," *Applied Sciences*, vol. 15, no. 5, p. 2775, 2025. https://doi.org/10.3390/app15052775

[53] A. Naim, A. Panda, S. R. Sahoo, R. Singh, and S. L. Hota, "Sustainable futures: Exploring the power of mobile technologies in eco-friendly product promotion," *International Journal of Interactive Mobile Technologies (iJIM)*, vol. 19, no. 14, pp. 33–41, 2025. https://doi.org/10.3991/ijim.v19i14.56957

[54] A. Kumar, G. S. Bapat, K. Tiwari, T. Hashem, and A. Dev Rroy, "How mobile e-commerce is revolutionizing marketing strategies for indian MSMEs," *International Journal of Interactive Mobile Technologies (iJIM)*, vol. 19, no. 14, pp. 82–92, 2025. https://doi.org/10.3991/ijim.v19i14.56851

[55] H. Singh, R. Aggarwal, P. Garg, and D. Aggarwal, "AI and ESG performance: An empirical study of the high-tech sector," *Prabandhan: Indian Journal of Management*, vol. 18, no. 6, p. 8, 2025. https://doi.org/10.17010/pijom/2025/v18i6/174487

7 AUTHORS

Valentine Kirimi Muriira is currently serving as a faculty member of Education and Liberal Arts at INTI International University, Malaysia. He has published research studies on generative AI and educational assessment (E-mail: i24026474@student.newinti.edu.my).

Asokan Vasudevan is currently a faculty member in Business and Communications at INTI International University, Malaysia. His research interests relate to employee satisfaction, transformational leadership, and turnover intentions among Gen Y (E-mail: asokan.vasudevan@newinti.edu.my).

Khan Sarfaraz Ali is currently serving as a faculty member of Business and Communications at INTI International University, Malaysia. He has more than two decades of experience as an academic, HR professional, management player, and training specialist. He is a reviewer in reputed journals, including the *International Journal of Trade & Global Market*, *Psychology Research and Behavior Management*, and the *International Journal of Management, Accounting and Economics* (E-mail: khan.sarfarazali@newinti.edu.my).

Nandini Prasad K S is currently serving in the Department of Information Science and Engineering, Dayananda Sagar Academy of Technology and Management, Bangalore, India. She has extensively researched supervised machine learning types and their applications (E-mail: dean-fa@dsatm.edu.in).

Ndimurugero Ngirabakunzi Spéciose is currently serving in the College of Business and Economics, University of Rwanda (E-mail: sndimurugero@ur.ac.rw).

Ganesan P. is serving in the Kalasalingam Academy of Research and Education, India. His recent research papers relate to green supply chain management practices, organic food purchase intention, and the impact of e-commerce reverse logistics on cost control (E-mail: deankbs@klu.ac.in).