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Research Article

A Systematic Analysis of the Role of Artificial Intelligence in Digital Business Transformation

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ABSTRACT

This study explores the transformative impact of artificial intelligence (AI) in shaping the digital business landscape through a bibliometric analysis. The research maps the growth and development of AI-related studies in the digital business domain over the past five years by employing co-citation and co-word analysis methods. Data was sourced from the Scopus database, focusing on peer-reviewed journal publications between 2019 and 2023. The findings reveal a significant increase in AI research across various sectors, highlighting its expanding relevance and potential in driving digital business innovation. The study identifies four primary areas where AI has made notable contributions: digital transformation, human resource management, business and economic strategy, and cross-industry applications. AI is a critical enabler for process automation, predictive analytics, and personalized services, fostering operational efficiency and enhancing competitive advantage. This research underscores AI's role in improving decision-making, optimizing workflows, and creating new business models that align with the demands of the digital era. Through the lens of the People, Process, and Technology (PPT) framework, the study introduces a conceptual model that illustrates how integrating AI successfully requires harmonizing human capital, optimized processes, and advanced technology. The insights from this study provide valuable guidance for academics, industry leaders, and policymakers, offering strategic directions for leveraging AI to drive long-term business growth and innovation in the digital economy.

Keywords: Artificial intelligence, bibliometric analysis, digital business, digital transformation, predictive analytics, service personalization.

INTRODUCTION

Artificial Intelligence (AI) has experienced rapid development over the past few decades, driven by advancements in computing technology, the availability of large-scale data, and the enhancement of machine learning algorithms [1], [2]. AI encompasses various technologies that mimic or surpass human cognitive abilities, including voice recognition, computer vision, natural language processing, and decision-making [3]. These technologies have applications across multiple domains, such as healthcare, education, transportation, and manufacturing. Breakthroughs in deep learning and neural networks have unlocked possibilities previously considered unattainable, positioning AI as one of the most dynamic and exciting areas of research and technological application in the digital era [4], [5].

Despite its growth, the primary focus lies in understanding the economic impact AI can generate. According to the McKinsey Global Institute, AI can boost the global economy by $2.6 trillion to $4.4 trillion annually across 63 use

cases [6]. The United Kingdom's GDP in 2021 was $3.1 trillion, illustrating that AI's contributions could enhance economic outputs by 15–40% [6]. In business settings, AI enhances operational efficiency through automation, predictive analytics, and service personalization [7]. For example, AI improves production efficiency and product quality through real-time monitoring and predictive maintenance in manufacturing [8]. Similarly, in the financial sector, AI optimizes risk management and fraud detection, while in healthcare, it aids in diagnosing diseases and developing personalized treatments [9]. This transformative economic potential has made AI a top priority for governments and organizations worldwide [10].

In the context of digital business, AI serves as a key enabler driving innovation and transformation [11]. Digital companies leverage AI to automate processes, enhance customer engagement [12], and develop innovative products and services [13]. AI-powered chatbots and virtual assistants improve customer service by offering 24/7 support [14], while predictive analytics allow businesses to forecast market trends and consumer behavior. AI also plays a crucial role in optimizing supply chains, from inventory planning to distribution [15]. Consequently, AI boosts operational efficiency [16] and creates new business models that drive competitive advantage and add value [17].

This study aims to provide a structured understanding of the development and application of AI in digital business by systematically mapping the existing body of knowledge. While AI holds vast potential, challenges such as rapid technological changes, integration complexities, and ethical considerations must be addressed [4], [18]. To capture these nuances, this research employs science mapping techniques through systematic analysis, offering insights into the current research landscape and highlighting areas that warrant further exploration [19], [20].

The paper is structured very carefully, starting with Section 1, which provides a comprehensive introduction outlining the context and objectives. Section 2 provides an extensive literature review on digital business and AI, which builds a solid theoretical foundation. Section 3 details the research methodology, followed by a synthesis of the literature's findings in Section 4. Section 5 presents the discussion, while Section 6 discusses the implications of this study. This structure facilitates a nuanced understanding of the subject, guiding readers from theoretical insights to empirical findings and broader impact on future exploration.

LITERATURE REVIEW

a. Digital Business

Digital business integrates digital technologies with traditional business models to generate added value for organizations and customers [21]. The 21st century has witnessed rapid advancements in internet technology, cloud computing, and mobile solutions, fundamentally transforming business operations and customer interactions [22], [23]. Digital transformation involves strategic and operational shifts beyond adopting new technology [24]. Companies that effectively implement digital strategies benefit from enhanced efficiency, expanded market reach, and improved customer experiences [14]. For example, automation of complex processes reduces operational time and cost, while advanced analytics enable more profound insights into consumer behavior, facilitating personalized services [11], [25].

The rise of digital business has driven the emergence of platform-based models, exemplified by Amazon, Alibaba, and Uber, which connect consumers with service providers [21]. These platforms disrupt traditional industries, creating decentralized and dynamic markets [26]. Their success is fueled by network effects—where the platform's value grows as more users engage [27]. Such ecosystems facilitate transactions and generate valuable data, providing companies with insights to refine strategies and develop competitive advantages [28].

However, digital business introduces new challenges, notably in data management and security [29]. As data volumes grow, robust analytics and scalable data systems become essential [30]. Big data analytics and machine learning are pivotal for harnessing this information. Simultaneously, digital dependence heightens cybersecurity risks and data privacy concerns [31]. Companies must adopt holistic strategies integrating technology, business processes, security policies, and workforce training to mitigate cyber threats [32].

Adaptability is critical for digital-era businesses seeking competitiveness [33]. Leveraging technology for innovation and operational efficiency fosters significant advantages [34]. Success also hinges on effective change management, ensuring organizational alignment and stakeholder buy-in for digital initiatives [35].

b. Artificial Intelligence

Artificial Intelligence (AI) is a branch of computer science focused on developing systems capable of human-like tasks such as speech recognition, decision-making, and pattern identification [20]. Recent advancements in machine learning and deep learning have transformed AI from a theoretical concept into practical applications across industries [36]–[38]. Enhanced computational capacity and sophisticated algorithms allow AI to manage complex tasks accurately [39].

AI has emerged as a driver of business innovation and efficiency. In the financial sector, AI aids in fraud detection, risk management, and algorithmic trading [40], reducing costs and increasing productivity [11]. AI also facilitates personalized services, improving customer satisfaction and retention [41]. Retailers use AI to optimize supply chains and deliver tailored product recommendations, while marketers leverage AI for segmentation and more effective campaigns [42].

Despite its benefits, AI adoption presents ethical and social challenges. Algorithmic bias can perpetuate unfair outcomes, emphasizing the need for transparency and accountability in AI development [43]. Automation raises concerns over job displacement, necessitating balanced policies that integrate innovation with workforce protections [8]. Retraining initiatives and regulatory oversight can mitigate adverse impacts and facilitate smoother transitions [6], [44].

Further research is crucial to understanding AI's long-term societal impact [20]. AI holds the potential to promote social inclusion and address global challenges such as climate change and economic inequality. However, effective oversight is vital to prevent potential risks [4]. Policymakers, industry leaders, and academia must collaborate to ensure AI development aligns with ethical standards and sustainability goals [45].

METHODS

This section outlines the methodological framework used to comprehensively analyze research trends and developments in AI and Digital Business. By employing bibliometric techniques, the study aims to systematically map the intellectual landscape and identify key themes, influential works, and emerging areas within the field. The following subsections detail the analytical methods, data collection process, and tools utilized to ensure the accuracy and relevance of the findings.

a. Analysis Method

This study adopts a Bibliometric Analysis approach to map the development and trends in research related to "*Artificial Intelligence*" and "*Digital Business*." This methodology includes two primary types of analysis: *Co-citation Analysis* and *Co-word Analysis*. *Co-citation Analysis* identifies relationships between cited documents, allowing the mapping of intellectual structures and thematic clusters in the literature. Meanwhile, *Co-word Analysis* explores interactions between concepts in publications, revealing dominant topics and trends in AI and digital business research [19].

b. Data Collection

Data was collected through a structured search in the Scopus database, recognized as one of the most comprehensive and reliable academic databases. The search targeted titles, abstracts, and keywords using the terms "*Artificial Intelligence*" or "*AI*" and "*Digital Business*." The study focuses on journal publications from 2019 to 2023 to ensure the inclusion of recent and high-quality research. Conference proceedings and other publications were excluded, aligning with the focus on peer-reviewed journal articles. Data collection was conducted on June 1, 2024, ensuring the analysis is based on the latest and most relevant information.

c. Tools

Data analysis and visualization were performed using VOSviewer, a software designed to map and explore relationships within bibliometric data [46]. VOSviewer enables the creation of network maps that illustrate connections between authors, journals, documents, and keywords based on co-citation and co-word analysis. This tool facilitates the identification of research clusters and visualizes dynamics within specific fields of study [47]. VOSviewer supports intuitive and practical data exploration, allowing researchers to interpret results and gain deeper insights into trends and research structures in AI and digital business.

RESULTS

This section delineates the findings obtained through bibliometric analysis of scholarly research about AI within the digital business domain. The results are systematically structured to elucidate publication trends, authorial contributions, and prominent thematic clusters identified during the analysis. By examining descriptive data, co-citation networks, and co-word occurrences, this section provides a comprehensive overview of the evolving landscape of AI research and its pivotal role in facilitating digital business transformation.

a. Descriptive Analysis

A descriptive analysis of articles collected from the Scopus database reveals key trends in research on AI within digital business contexts. An initial search using specific keywords yielded 4,130 documents. Refining the search to focus on publications from 2019 to 2023 reduced the total to 3,136 papers, highlighting the increasing relevance and interest in AI for digital business in recent years. Fewer than 500 articles were published before 2019, indicating this topic's relative novelty and accelerated research growth after 2019 (Figure 1).

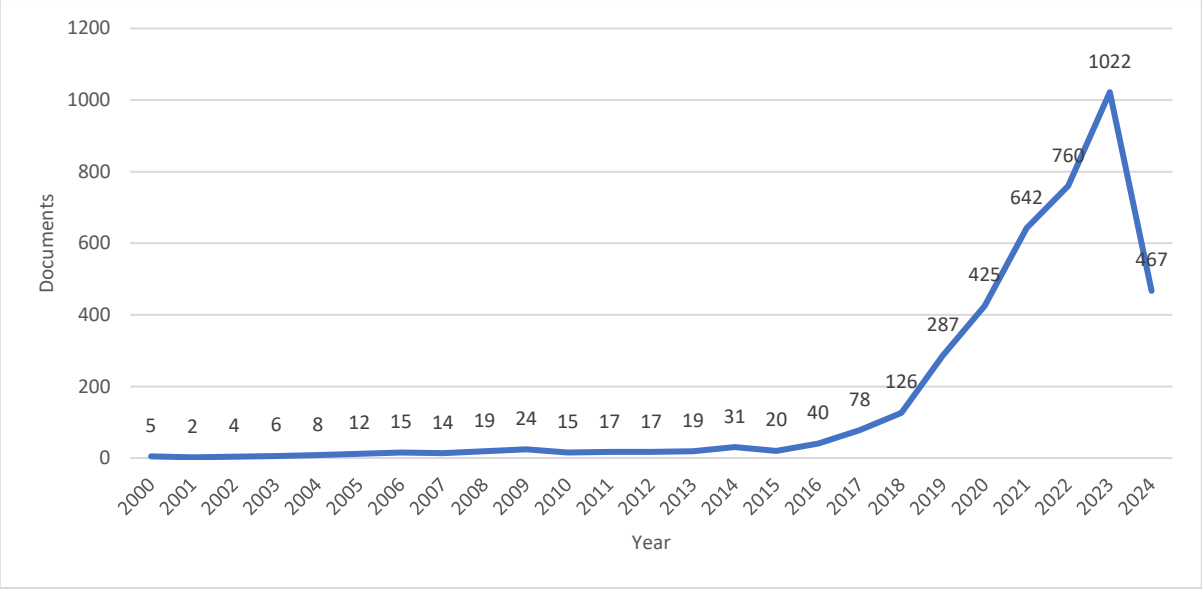

Figure 1: Number of Publications by Year

Geographical distribution analysis (Figure 2) shows that research interest in AI and digital business is global, with significant contributions from developed and developing countries.

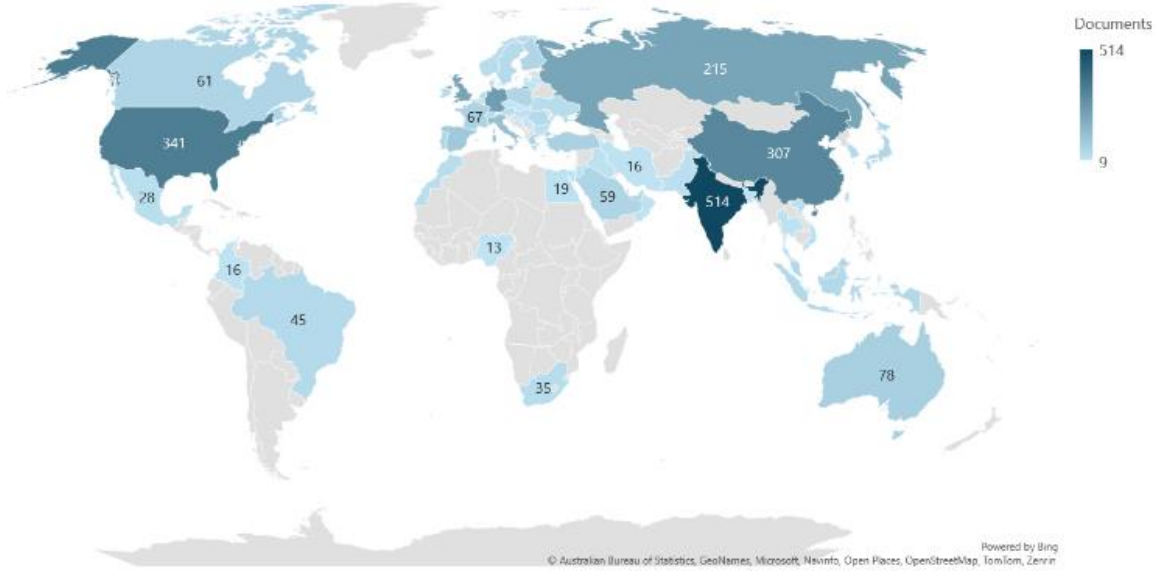

Figure 2: Geographical Distribution of Research

India leads with 514 documents, followed by the United States (341), China (307), Germany (241), the United Kingdom (218), and the Russian Federation (215). This reflects the dominance of Asia and the U.S., while European nations such as Germany and the U.K. also play vital roles. The data suggests widespread global engagement in AI research across Asia, Europe, and North America.

By limiting the analysis to journal publications, 1,113 documents were identified. Journals are often considered the most credible and influential academic publication medium, ensuring high-quality peer-reviewed content.

b. Co-citation Analysis

Co-authorship analysis using VOSviewer reveals collaborative networks among authors, with 7 clusters identified (Figure 3). Prominent authors with high total link strength, such as Wang, Y., signify extensive collaboration and significant contributions to the research field.

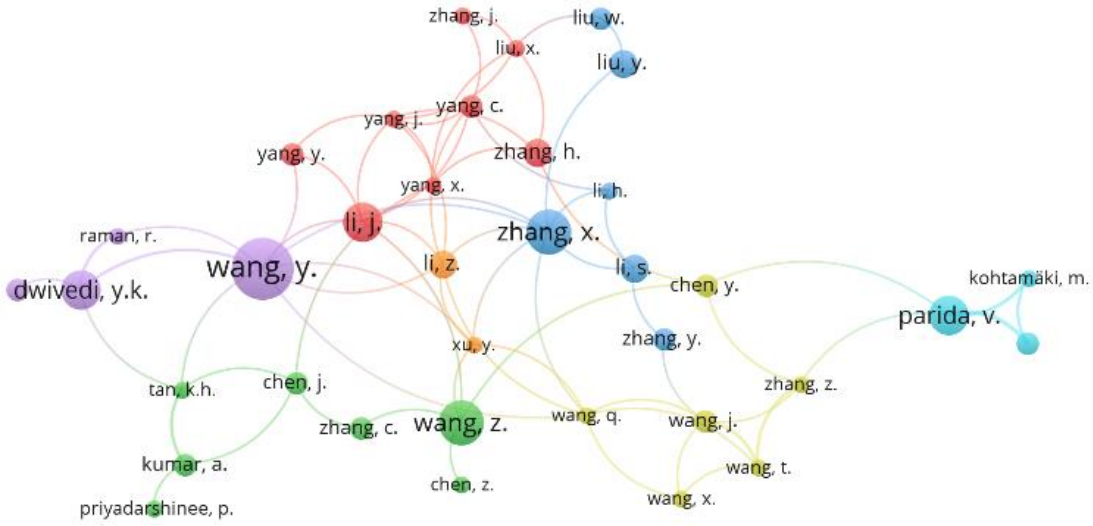

Figure 3: Co-citation Analysis Network

The seven clusters identified are:

- Cluster 1 – Key authors: Li, J.; Yang, C.; Zhang, C. (Focus on *AI applications in digital business*).
- Cluster 2 – Key authors: Chen, J.; Kumar, A.; Wang, Z. (Emphasis on *AI and digital transformation*).
- Cluster 3 – Key authors: Li, H.; Liu, W. (*Practical AI applications in business*).
- Cluster 4 – Key authors: Wang, Q.; Zhang, Z. (*Technical AI integration into digital business*).
- Cluster 5 – Key authors: Dwivedi, Y.K.; Gupta, S. (Focus on *policy and technology management*).
- Cluster 6 – Key authors: Kohtamäki, M.; Parida, V. (*Industry-focused AI applications*).
- Cluster 7 – Key authors: Li, Z.; Xu, Y. (*Smaller but tightly linked cluster focusing on niche AI applications*).

Table 1 highlights the 15 top documents with the highest total link strength.

Table 1: Top Documents by Total Link Strength

No	Author	Documents	Total link strength
1	haleem, a.	3	11
2	javaid, m.	3	11
3	singh, r.p.	3	11
4	suman, r.	3	11

No	Author	Documents	Total link strength
5	wang, y.	11	10
6	parida, v.	7	9
7	zhang, x.	8	8
8	rab, s.	3	8
9	li, j.	7	7
10	li, z.	5	7
11	wang, q.	3	7
12	yang, j.	3	7
13	dwivedi, y.k.	7	6
14	lyytinen, k.	4	6
15	sjödin, d.	4	6

c. Co-word Analysis

Co-occurrence analysis identified 8 clusters, 276 items, 6,965 links, and a total link strength of 13,873 (Table 2). Key terms such as "artificial intelligence" and "digital transformation" (163 occurrences) underscore the focus on AI-driven digital changes. Other frequent terms include "machine learning" (116), "internet of things," "big data," and "industry 4.0," reflecting automation and connectivity trends.

Table 2: Most Frequent Keywords in Co-occurrence Analysis

No	Keyword	Occurrences	Total link strength
1	artificial intelligence	598	2580
2	digital transformation	163	685
3	machine learning	116	720
4	internet of things	102	581
5	digital technology	96	532
6	industry 4.0	95	460
7	big data	89	484
8	decision support systems	86	564
9	blockchain	78	396
10	digital storage	68	429
11	digitalization	66	263
12	human	61	554
13	business model	59	297
14	e-commerce	58	354
15	sustainability	52	293

A visualization of the co-occurrence network (Figure 4) illustrates keyword clustering, with node size and link thickness representing the frequency and strength of keyword connections.

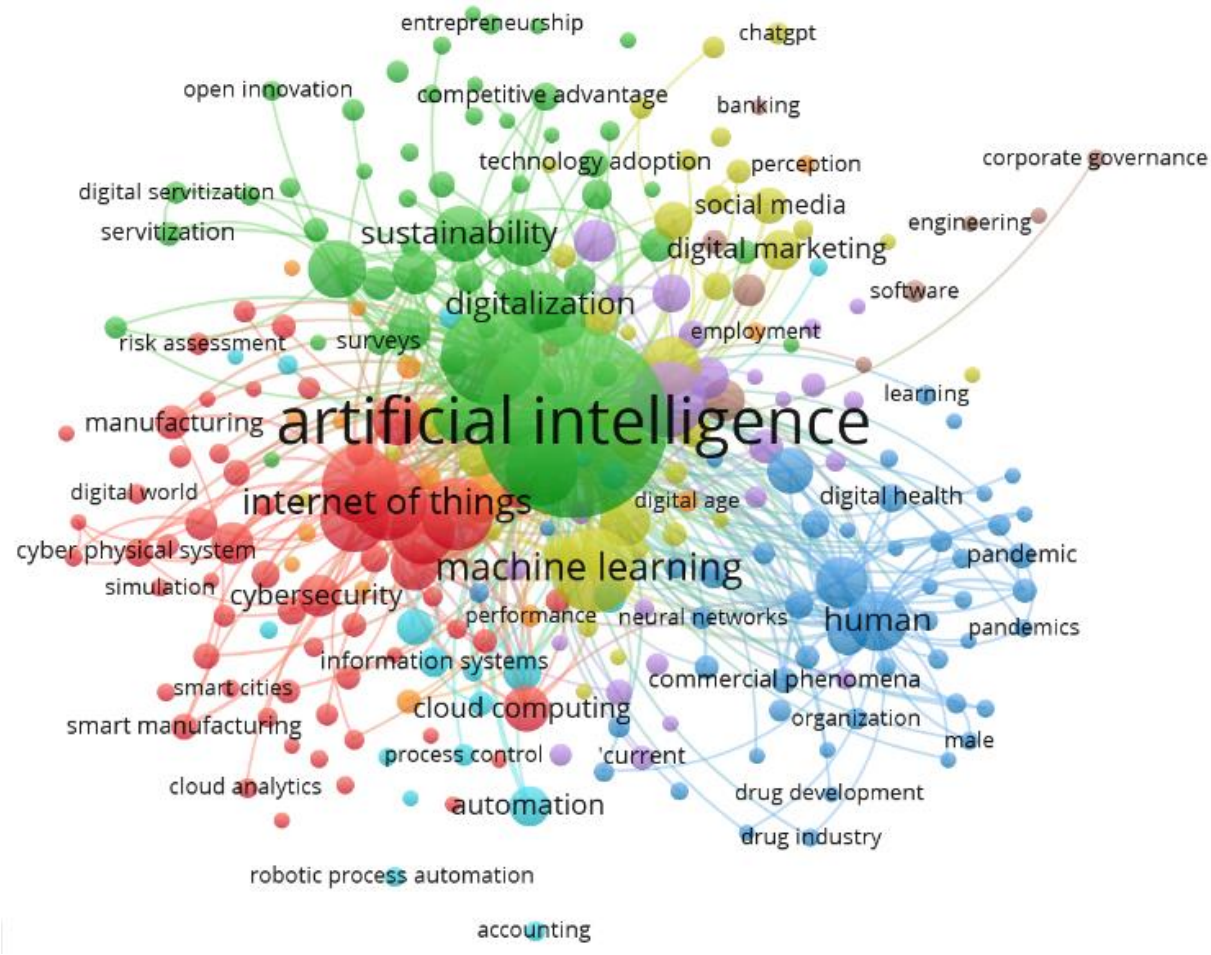

Figure 4: Co-occurrence Analysis Network

Table 3 outlines the thematic focus of each cluster:

- Cluster 1 (Green) – Digital transformation and innovation (e.g., disruptive technology, R&D).
- Cluster 2 (Yellow) – Machine learning, data analysis, and cybersecurity.
- Cluster 3 (Blue) – Business strategy, marketing, and digital entrepreneurship.
- Cluster 4 (Brown) – Finance, fintech, and risk management.
- Cluster 5 (Orange) – Human resource management and leadership.
- Cluster 6 (Dark Blue) – Healthcare and digital health innovation.
- Cluster 7 (Purple) – Agriculture, sustainability, and environmental impacts.
- Cluster 8 (Red) – Industry 4.0, robotics, and manufacturing advancements.

Table 3: Thematic Focus of Co-word Clusters

Cluster	Color	Themes
Cluster 1	Dark green	Technology and Innovation
Cluster 2	Yellow	Data Analytics and Security
Cluster 3	Light blue	Economics and Business
Cluster 4	Brown	Finance and Accounting

Cluster	Color	Themes
Cluster 5	Orange	Human Resource Management
Cluster 6	Dark blue	Health and Medicine
Cluster 7	Purple	Agriculture and Environment
Cluster 8	Red	Industry 4.0 and Manufacturing

These results highlight AI's multifaceted role in driving digital business transformation, reflecting diverse applications across industries and the growing collaboration among global researchers.

DISCUSSION

a. Global Geographical Landscape of AI Research in Digital Business

Research related to artificial intelligence (AI) in digital business geographically reflects several key points demonstrating the global and comprehensive interest in this topic. This analysis underscores how AI research has spread across various countries, reflecting global developments and collaborations [48], [49].

AI research in digital business has evolved into a global topic, attracting the attention of scientists and researchers worldwide [50]. It reflects that AI is a highly valuable technology with great potential to improve efficiency and drive innovation in various aspects of digital business worldwide. Developed countries such as the United States, the UK, Germany, and Italy, as well as Asian nations like India, China, and Japan, show significant contributions in terms of publication numbers. More substantial research infrastructure, greater access to funding, and well-established innovation ecosystems in these countries explain their dominance in this field. The presence of these developed countries at the forefront of AI research and application reflects their position at the cutting edge of technology and its application in digital business.

AI research in digital business is also gaining momentum in developing countries such as India, Brazil, and Indonesia. These countries' presence in research shows that they are building research capacities and recognizing the potential of AI to support economic growth and development [51]. It also reflects the potential to address developing nations' unique challenges through AI-driven innovation.

The wide geographical distribution reflects the diversity of research approaches and perspectives. Each country may have a different research focus depending on local needs and economic conditions. Moreover, this diverse distribution opens up significant opportunities for international collaboration [52]. Such collaborations enrich research with varied perspectives and accelerate technological progress through knowledge and resource exchange between countries.

The active presence of large economic countries such as the United States, China, and India suggests that global economic dynamics influence AI research in digital business. These large countries invest in research and technology development to maintain international competitiveness [53]. It reflects AI's significant role in driving economic innovation and enhancing global competitiveness [54].

Each country adopts and implements AI technology according to local challenges and opportunities. Countries with more advanced digital infrastructures tend to focus on more sophisticated AI applications in business sectors. In contrast, developing countries focus more on AI to address fundamental issues such as operational efficiency and improved public services.

This geographical distribution indicates that AI research in digital business is a dynamic and evolving field driven by contributions from countries with diverse economic, cultural, and technological backgrounds. It highlights the potential for further innovation and development fueled by global collaboration and local adaptation.

b. Areas of AI Research in Digital Business

In general, the findings from the analysis of articles related to AI in the context of digital business encompass four main areas: "*Digital Transformation, Analytics and Data Security*," "*Human Resource Management*," "*Economics and Business*," and "*AI and Digital Business in Various Industries*."

Digital Transformation, Analytics, and Data Security

AI has become a major driver of digital transformation, enabling companies to automate various processes, enhance data-driven decision-making [55], and deliver more personalized and adaptive customer experiences. By leveraging advanced data analytics, companies can identify consumer behavior patterns and provide tailored recommendations. AI systems can analyze data from various sources, such as previous purchases, social media activities, and customer interactions with online services, to propose the most relevant products or services to individual customers [42].

Although digital transformation and data analytics offer substantial potential, data security is becoming increasingly critical. With the growing volume of data used in business operations, threats to data security, such as cyberattacks (*malware, phishing, ransomware*), are on the rise. To address these threats, companies must implement comprehensive security strategies, including data encryption, proactive security monitoring, and compliance with relevant regulations [56].

Using AI in digital transformation, analytics, and data security creates an interconnected system that supports operational efficiency, provides better insights for decision-making, and protects the crucial data involved [57].

Human Resource Management

A significant transformation in Human Resource Management (HRM) has occurred in response to the challenges and opportunities of the technology era. Applying AI in HRM improves employee management efficiency, accuracy, and personalization [17]. Examples include the automation of routine tasks in recruitment processes, where AI can scan thousands of resumes and identify the most suitable candidates based on predefined criteria.

AI can also analyze employee data to support strategic decision-making in workforce management. For instance, AI can analyze employee performance patterns to identify potential declines in productivity or retention, providing insights that allow for preventive action [58]. In the context of leadership, AI can analyze leadership styles that contribute to high performance and employee satisfaction [59].

However, the use of AI in HRM presents challenges related to ethics and fairness, particularly algorithmic bias that may exacerbate discrimination. Therefore, fairness, transparency, and accountability principles must be integrated into AI use in HR management [60].

Economics and Business

In industry and business strategy analysis, AI helps collect and analyze market data quickly and accurately, providing companies with more prosperous and timely insights. Using machine learning algorithms, AI can identify market trends and anticipate shifts in consumer behavior [14]. AI also allows companies to analyze financial data in-depth, predict financial risks and opportunities [61], and plan investments more wisely.

Additionally, digital technologies are also changing the way financial reporting and accounting are carried out, for example, through blockchain, which records transactions that enhance transparency and security [40].

Application of AI and Digital Business in Various Industries

In the healthcare sector, AI applications are transforming diagnosis, treatment, and disease management, such as medical image analysis, for more accurate disease detection [62]. IoT and AI technologies in agriculture help optimize resource usage and reduce environmental impacts [63]. AI is supporting a revolution in production processes and supply chain management in manufacturing, improving production efficiency and flexibility [64], [65].

However, the application of AI also brings significant challenges, such as data protection and the threat of cyberattacks. Therefore, developing robust security strategies and ensuring regulatory compliance is critical to maximizing the benefits of AI in digital business [66].

c. Conceptual Model of AI in Digital Business

The *People, Process, and Technology (PPT)* framework is a management concept used to ensure the successful implementation of change within organizations, especially in the context of digital transformation and the adoption of new technologies [67], [68]. It emphasizes that successful change depends not solely on the technology used but also on the processes adopted and the people involved.

The PPT framework explains how AI can be integrated across this study's four key findings, enabling a more holistic and coordinated business transformation. By focusing on enhancing employee skills (*People*), optimizing and integrating business processes (*Process*), and implementing the right AI technologies (*Technology*), businesses can effectively leverage AI to create a more advanced and competitive digital landscape.

Digital Transformation, Analytics, and Data Security: Technology

"*Digital Transformation, Analytics, and Data Security*" is closely related to the "*Technology*" element in the PPT framework. Digital transformation involves adopting advanced technologies such as cloud computing, the Internet of Things (IoT), and artificial intelligence (AI). These technologies enable companies to automate business processes, improve operational efficiency, and enhance customer experiences. Data analytics, an integral part of digital transformation, uses big data, machine learning, and Business Intelligence (BI) tools to collect, process, and analyze data in real time. It provides deep insights and helps companies make more accurate and timely decisions. Data security is also a critical aspect of digital transformation, where encryption, firewalls, and security monitoring systems are employed to protect sensitive information from cyber threats and data breaches.

Human Resource Management: People

The "*Human Resource Management*" aspect is directly related to the "*People*" element in the PPT framework. HRM encompasses various factors such as recruitment, training, development, and employee retention. In digital transformation, HRM becomes increasingly important because companies must ensure employees possess the right skills to adopt and effectively use new technologies. It includes ongoing training in digital tools, upskilling in data analytics, and cybersecurity awareness. HRM also involves aspects of corporate culture, where companies must foster a work culture that supports innovation and collaboration [13]. By focusing on "*People*," companies can ensure that employees are ready to meet the challenges and opportunities presented by digital transformation.

Economics and Business: Process

The "*Economics and Business*" activities are closely related to the "*Process*" element in the PPT framework. Business processes encompass the series of activities and operations carried out by a company to create value and achieve business objectives. Business processes must be optimized in the digital era to enhance efficiency and productivity. It involves using technology to automate routine tasks, improve workflows, and facilitate better team collaboration. Additionally, efficient business processes can help companies become more responsive to market changes and customer demands. By focusing on "*Process,*" companies can identify and eliminate operational bottlenecks and introduce best practices that support business growth and sustainability.

AI and Digital Business in Various Industries: Implementation

The utilization of "*AI and Digital Business in various industries*" reflects the intersection of all three PPT components—"*People*," "*Process*," and "*Technology*"—which leads to the successful implementation of AI in digital business. Success in deploying AI in digital business depends on how companies integrate these three elements. From the "*People*" perspective, having a skilled and knowledgeable team proficient in AI and ready to adapt to technological changes is crucial. From the "*Process*" perspective, companies must have processes designed to maximize AI's potential, including adequate data collection, processing, and workflows that encourage innovation. From the "*Technology*" perspective, companies must have a strong and secure technological infrastructure and access to advanced AI tools and platforms. When these three PPT elements work synergistically, companies can achieve success in AI implementation, enhancing efficiency, innovation, and competitiveness in the market.

A new element in this model is "*Success in AI Implementation*." The success of AI in digital business is the result of the collaboration between "*People*," "*Process*," and "*Technology*". When these three elements operate harmoniously, companies can succeed in AI deployment. It involves having skilled and knowledgeable teams, business processes optimized to support AI, and robust, secure technological infrastructure. This success can drive efficiency, innovation, and competitiveness in an ever-evolving digital marketplace.

Based on the discussion of how this study's key findings align with the PPT framework, it can be concluded that this study proposes a conceptual model that expands upon the traditional PPT framework. This model introduces a new element focused on the success of AI implementation in digital business, as shown in Figure 5.

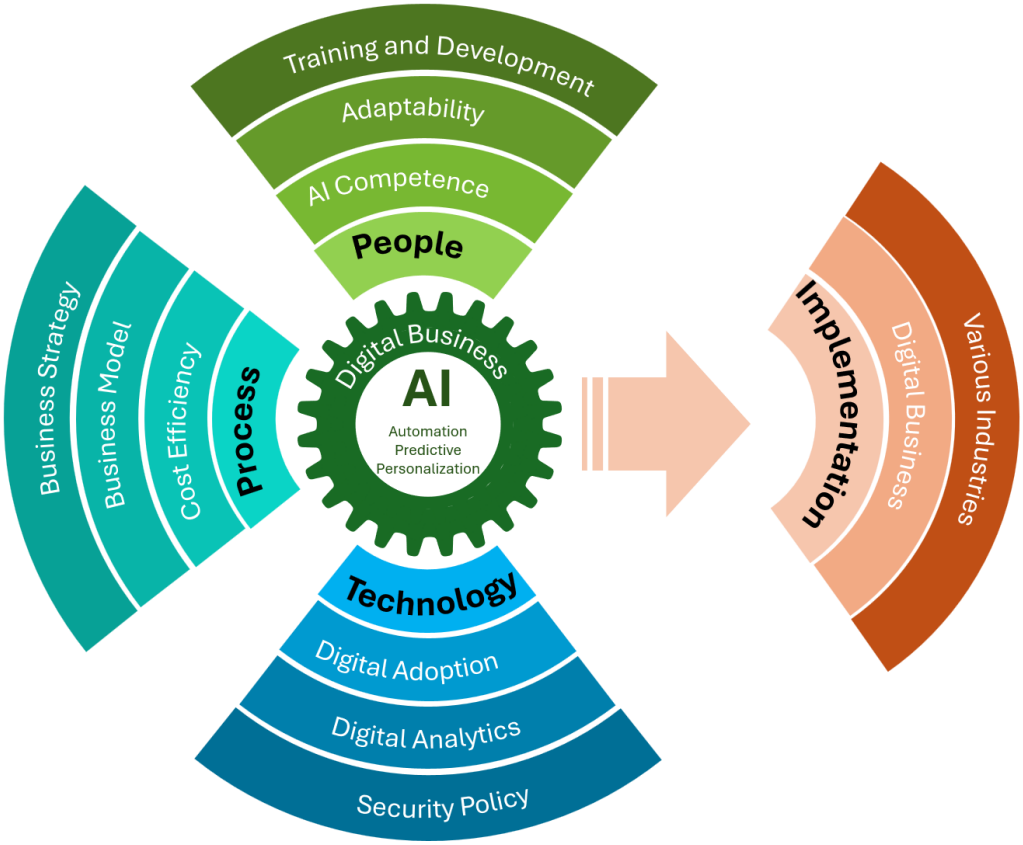

Figure 5: Conceptual Model

The conceptual model developed from this study adds a new dimension to the traditional PPT framework by highlighting the importance of successful AI implementation in digital business. By focusing on "*People*," "*Process*," and "*Technology*" and introducing the element of "*Success in AI Implementation*," this model offers a more comprehensive framework for understanding and managing digital transformation in business. It helps companies adopt new technologies and ensure that these technologies are applied successfully, delivering significant and sustainable value.

CONCLUSION

AI has demonstrated remarkable potential in transforming various industrial sectors through technological innovation and enhanced operational efficiency. From healthcare to digital business, AI has significantly impacted industries by enabling automation, service personalization, and in-depth data analysis. In the economic context, AI's contributions are expected to continue growing, offering substantial opportunities for sustainable development and business expansion. This study reaffirms that AI adoption is not merely a technological shift but a comprehensive business transformation that requires well-planned strategies and continuous adaptation.

The implementation of AI also presents challenges that need to be addressed. Technological instability, rapid advancements, and the complexity of integrating AI with existing systems are among the major concerns faced by many organizations. Additionally, ethical and regulatory challenges, such as data privacy issues and algorithmic bias, require special attention to ensure that AI deployment is not only effective but also responsible. This study highlights the importance of a holistic approach to AI adoption, encompassing technological, operational, ethical, and regulatory aspects to maximize benefits while minimizing risks.

This research has mapped relationships between various scholarly works and identified key emerging themes. The findings provide insights into the direction of AI research while also highlighting areas that require further exploration. Thus, this study contributes not only to the theoretical understanding of AI and digital business but also offers practical guidance for researchers and practitioners in formulating future strategies based on empirical evidence and data-driven insights.

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The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Conflict of Interest:

The authors declare that there is no conflict of interest regarding the publication of this article.

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