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Mapping Organizational Performance Using Digital Technologies

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Abstract. The present article studies the importance of new technologies connected with today's business environment. From small businesses to corporations, companies are adapting to new high-tech solutions to increase efficiency, productivity, and customer engagement. The increasing use of artificial intelligence, automation, and other digital media is changing the way businesses are conducted. One of the most significant advantages of technology in business is efficiency. Process automation and the use of advanced software can help companies to reduce costs and to optimize their operations. Technology can also improve the quality of products and services through the use of digital testing and quality control tools. Technological innovations such as artificial intelligence, blockchain, and the Internet of Things have made process automation possible and given companies new ways to manage their operations and expand their businesses. The authors highlighted the latest literature related to the analyzed fields, and at the same time, VOSviewer was used as a reinforcement and literature' tool for the chosen keywords.

Keywords: digital transformation, automation, cloud computing, AI, data analytics, business performance.

Introduction

Cloud computing, automation, AI, and data analytics play significant roles in the digital transformation of businesses, working together and driving innovation to achieve this crucial business goal and ensuring organizational performance. It is about integrating digital technology into all business areas, inherently changing how it delivers value to customers and how it operates. It also involves leveraging technology to enhance customer experiences, update processes, and innovate business models. Digital transformation contributes to businesses by reducing costs, increasing agility, helping to better cope with risks, enhancing competitive advantage and effectiveness, and enhancing marketing impact, to mention only the most important ones (Pînzaru, Zbuchea, & Vițelar, 2019; Goel et al., 2020; Leão & da Silva, 2021; Kraus et al., 2022; Lamarre et al., 2023; Mishra, 2023; Rahman, Bag, Gupta, & Sivarajah, 2023). Some professionals point out that the impact of digital transformation and new technologies is more significant in the operational (Guo & Xu, 2021) and marketing (Masoud & Basahel, 2023) fields than their impact in the financial field.

Digital business transformation is closely connected and often harmonized with automation, cloud computing, AI, and data analytics, contributing to cost savings and improved

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efficiency (Soni et al., 2020; Goel et al., 2020). Cloud computing relates to delivering computing services (including databases, storage, servers, analytics, networking, and software) over the internet to provide faster innovation, economies of scale, and flexible resources. It eliminates the need for companies to invest in and manage physical infrastructure, permitting them to access resources scale up or down and on-demand (Rahman et al., 2023; Bodendorf et al., 2023). Automation demands the use of technology to perform activities with minimal human mediation. It also focuses on reducing errors, improving efficiency, and freeing human resources for creative purposes and strategic facts. Automation can range from simple repetitive tasks to complex machine learning and artificial intelligence processes (Rahman et al., 2023). Cloud computing is an enabler of digital transformation and a facilitator of automation. Integration with automation is a critical component of digital transformation, and cloud computing offers the proper infrastructure and tools to implement automation effectively. Data analytics involving data collection, analysis, and interpretation contributes to gaining valuable and timely insights that support better decision-making. It also allows predicting future trends, facilitating spotting and valorizing opportunities (Bodendorf et al., 2023). Artificial intelligence, the new kid on the block, is also valuable in extracting data, automating decision-making, and enhancing the benefits of data analytics and automation (Goel et al., 2020).

Therefore, mapping the relationships between automation, data analysis, AI, cloud computing technologies, and digital transformation is essential not only for better grasping the state of the art in this theoretical domain but also for contributing to supporting strategic planning, allocation of resources, optimizing processes, and decision-making for businesses. By understanding how these technologies relate and interact, companies could enhance the value of their digital transformation efforts and be effective in an increasingly digital world. The present bibliometric investigation uses an additional lens, namely the business performance, to better diagnose the effectiveness of all these approaches.

Literature review

Adoption of cloud technologies

In the ever-evolving business landscape, the winds of change blow with the force of innovation, reshaping traditional business models and paving the way for new paradigms. Two prominent forces driving this transformative wave are the adoption of cloud technologies and the integration of data analytics and artificial intelligence (AI) (Gandomi et al., 2023). These pillars redefine the operational dynamics of organizations and serve as catalysts for business model innovation, opening new vistas of efficiency, agility, and value creation (Wooding, 2022).

At the forefront of this transformative journey is the adoption of cloud technologies. Beyond a technological shift, embracing the cloud represents a fundamental rethinking of how businesses structure and deliver their services. The cloud is not merely a repository for data; it is an enabler of scalability, flexibility, and accessibility that transcends the limitations of traditional on-premise infrastructure.

As organizations increasingly transition to cloud environments in tandem with their digital transformation initiatives, the literature explores the unique challenges cloud computing poses. Rittinghouse and Ransome (2017) delve into the intricacies of securing data in the cloud, highlighting the necessity for robust encryption, stringent access controls, and continuous monitoring to mitigate risks inherent in shared infrastructure. The cloud enables businesses to scale their operations, from expanding storage to deploying new applications, easily aligning with

the demands of the digital landscape. This scalability is a strategic lever, allowing businesses to swiftly respond to market dynamics and ensure infrastructure evolves alongside growth (Wooding, 2022).

The cloud enables flexible and accessible work environments, which is crucial in remote work, facilitating collaboration and real-time data sharing from anywhere. This shift represents a fundamental change in work structures, emphasizing cooperation and connectivity. Additionally, the cloud offers cost efficiency through pay-as-you-go models, reducing upfront investments and maintenance costs while providing financial flexibility for strategic resource allocation and growth-focused investments (Golightly et al., 2022).

Parallel to the cloud revolution is integrating data analytics and artificial intelligence, reshaping how organizations derive insights, make decisions, and create value. The vast volumes of data generated in the digital age hold immense potential, but unlocking that potential requires advanced analytical tools and intelligent systems (Teece, 2018).

The positive relevance of could applications determined massive investments into it, as illustrated in Figure 1.

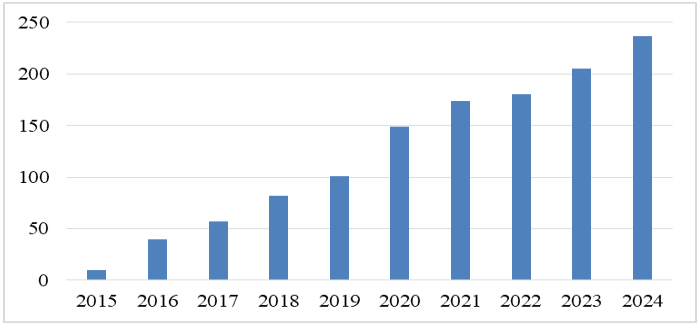

Figure 1. Public cloud application services/software as a service (SaaS) end-user spending worldwide from 2015 to 2024, in billions USD

Source: Authors' representation after L.S.Vailshery, 15th of February 2024, Statista.

In the dynamic evolution of contemporary business landscapes, combining cloud technologies and integrating data analytics and artificial intelligence (AI) herald a transformative era that transcends mere technological advancements. Beyond being technological enablers, these pillars represent a paradigm shift, redefining how organizations operate, strategize, and innovate. As businesses navigate this uncharted terrain, integrating these innovations becomes a narrative of reinvention, resilience, and the pursuit of new horizons. The adoption of cloud technologies, once considered a technological shift, has evolved into a strategic imperative that reshapes the fundamental fabric of organizational structures. With their capacity for remote access, real-time collaboration, and seamless data sharing, cloud technologies become foundational elements for fostering a productive virtual workspace.

Moreover, the financial dynamics of cloud adoption usher in a new era of cost efficiency. Traditional on-premise infrastructure entails significant upfront investments and ongoing maintenance costs. In contrast, cloud-based models operate on a pay-as-you-go principle, where organizations pay for the resources they utilize. This financial flexibility is more than a cost-saving measure; it becomes a strategic tool that allows businesses to allocate resources judiciously, invest in innovation, and pivot swiftly in response to market dynamics (Teece, 2018). The sheer volume of data generated in the digital age holds immense potential, and organizations

leveraging advanced analytical tools find themselves at the forefront of informed decision-making and value creation (Davenport & Westerman, 2018). This scalability is not merely a technological feature; it emerges as a strategic imperative that enables businesses to synchronize their technological capabilities with the ever-changing rhythms of the digital ecosystem (Davenport & Westerman, 2018). Cloud technologies, enabling remote access, real-time collaboration, and seamless data sharing, forge the foundation for a dynamic virtual workspace. This shift is not just about adapting to remote work; it signifies a paradigm where work is liberated from physical constraints, fostering a culture of collaboration that transcends geographical boundaries. (Davenport & Westerman, 2018; Antonmio, 2020).

Automation of processes

Digital transformation has become a cornerstone for companies aiming to enhance their overall performance, significantly impacting efficiency and productivity. One of the critical facets driving this transformation is the automation of processes, revolutionizing how businesses operate and deliver value. The integration of automation technologies marks a paradigm shift in organizational workflows. Companies streamline routine tasks by deploying robotic process automation (RPA) and intelligent automation solutions, freeing human resources for more strategic and creative endeavors. This, in turn, leads to heightened operational efficiency and increased productivity across various departments (Amarudin, Ferdiana, & Widyawan, 2020).

Automation streamlines operations by reducing manual errors, freeing up employees for more value-added tasks, and optimizing resource allocation. This speed and precision in processes enable businesses to adapt to market demands swiftly, fostering agility and responsiveness, which are crucial in dynamic industries. Moreover, automation enhances collaboration and communication within and between teams, breaking down silos and promoting interconnectedness. Additionally, automation extends its benefits to customer-facing processes, improving customer relationship management systems and ensuring personalized and timely services, ultimately enhancing customer satisfaction and loyalty (Gupta, 2018; Vaz, 2021; Rogers, 2023;).

The transformative power of automation transcends industry boundaries. In manufacturing, for instance, smart factories leverage automation to optimize production lines, reduce downtime, and enhance output quality. In the financial sector, automated algorithms streamline transaction processing and risk management, contributing to more accurate and efficient financial operations. Moreover, the benefits of automation extend to supply chain management, where real-time tracking and automated inventory control systems lead to improved logistics and reduced costs. This optimizes resource utilization and contributes to sustainability goals by minimizing waste and energy consumption (Amarudin, Ferdiana, & Widyawan, 2020).

The profound impact of automation on companies' performance goes beyond mere operational efficiency. It catalyzes organizational evolution, fostering a culture of innovation and adaptability. As businesses navigate the complex landscape of the digital era, the integration of automation becomes instrumental in driving sustainable growth and competitive advantage.

In the realm of human resources, automation transforms traditional hiring processes. Intelligent recruitment tools powered by artificial intelligence (AI) analyze resumes, assess candidate suitability, and even conduct initial interviews. This accelerates the hiring cycle and ensures a more data-driven and objective selection process, contributing to the acquisition of top-tier talent. Employee onboarding and training processes are also revolutionized through automation. Interactive learning modules, virtual reality simulations, and automated performance

tracking systems enable companies to upskill and reskill their workforce efficiently. This continuous learning approach aligns employee skills with evolving job requirements, fostering a dynamic and adaptable workforce (Amarudin, Ferdiana, & Widyawan, 2020). The collaborative nature of modern workplaces is further amplified by automation in project management and team collaboration tools. Integrated platforms facilitate real-time communication, file sharing, and project tracking, enhancing collaboration among remote and dispersed teams. This fosters a culture of transparency and accelerates project delivery timelines. At the heart of this transformation lies a profound shift in the nature of work itself. As mundane and repetitive tasks are automated, the workforce is liberated to engage in higher-order, creative, and strategic endeavors. This redefinition of roles demands a recalibration of skill sets. Employees are no longer mere executors of routine tasks but become orchestrators of automated systems, requiring a symbiotic relationship between human intuition and machine precision (Cheng, 2016).

Furthermore, the strategic impact of automation extends to data-driven decision-making. Automation tools collect, process, and analyze vast amounts of data in real-time, providing actionable insights for strategic planning. Companies can leverage predictive analytics to forecast market trends, identify emerging opportunities, and mitigate potential risks, enabling informed decision-making at every organizational level (Porter et al., 2021).

In the financial landscape, automation enhances compliance and risk management. Regulatory changes are seamlessly incorporated into automated systems, ensuring adherence to evolving compliance standards. Risk assessment models powered by automation identify potential threats and vulnerabilities, allowing organizations to proactively address and mitigate risks and safeguard financial assets and reputation.

Figure 2 shows the increasing trend of the global automation industry, which proves its increased relevance in today's businesses.

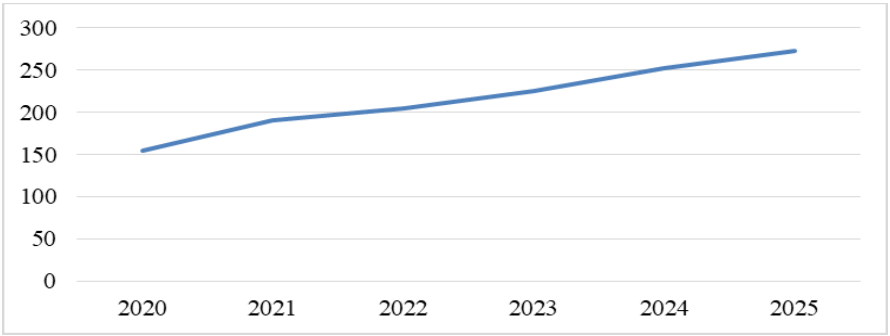

Figure 2. Size of the global industrial automation market from 2020 to 2025, in billion USD
Source: Adapted from M. Placek, April 4, 2023, Statista.

Automation processes are relevant for marketing and sales, enriching the customer journey with data-driven campaigns, personalized interactions, and automated lead nurturing, fostering a customer-centric approach. Customer relationship management systems, supported by automation, enable companies to build lasting relationships, anticipate needs, and offer tailored solutions. At the same time, e-commerce platforms leverage automation for order processing, inventory management, and personalized shopping experiences. AI-powered chatbots streamline customer support, providing instant responses and freeing human agents for complex queries, contributing to a seamless and efficient customer experience that enhances loyalty and advocacy (Carcary et al., 2013).

The transformative impact of automation presents challenges, particularly regarding job displacement and data privacy, necessitating the adoption of ethical AI frameworks and responsible automation practices (Zaoui & Souissi, 2020). Automation enhances efficiency and reshapes organizational structures, cultures, and operational paradigms, requiring companies to foster an environment that embraces change, cultivates a learning mindset, and encourages innovation. Strategic implications extend to data-driven decision-making, where automation augments strategic planning by anticipating market shifts, identifying opportunities, and mitigating risks in real-time. At the same time, financial operations experience a paradigm shift with automated tasks such as invoicing and financial reporting, transforming financial management into a data-driven and agile discipline.

As industries evolve in the digital landscape, the convergence of automation with emerging technologies like the Internet of Things (IoT) is reshaping their trajectory. This integration brings forth smart factories, connected healthcare ecosystems, and streamlined supply chains, particularly impacting manufacturing, healthcare, and logistics sectors. Automation's journey intertwines with broader digital transformation narratives, emphasizing continuous adaptation for companies to harness its full potential. This ongoing integration marks a profound shift beyond process optimization, fundamentally redefining work, organizational culture, and strategic decision-making within modern organizations (Armano & Murgia, 2020).

Data analytics supporting business performance

The previous sections of the paper show that cloud computing, automation, AI, and data analytics are integral components driving digital transformation in businesses, working synergistically to innovate and ensure organizational performance. Data analytics, encompassing data collection, analysis, and interpretation, provides timely insights for informed decision-making and future trend prediction, facilitating opportunity identification and valorization. AI complements data analytics by automating decision-making and extracting data, enhancing their benefits. This integration reshapes how organizations derive insights, make decisions, and create value, representing a transformative era in business dynamics that goes beyond mere technological advancements, redefining operations, strategies, and innovation approaches.

As in previous digital technologies, data analytics might contribute significantly to the success of marketing strategies, thus contributing to business development. Businesses can gain valuable customer satisfaction through data analytics by enhancing and personalizing campaigns (Esposito, Mikhailov, & Delphine, 2022). It can also contribute to predicting future trends, permitting optimization of strategies, and measuring the results of the implemented campaigns.

Data analytics enhances business performance by empowering companies to assess their operations and pinpoint areas of improvement and risks. Therefore, it harnesses valuable data to navigate future growth opportunities and overcome challenges (Sun, Strang, & Firmin, 2017). It converts unprocessed data into valuable insights, improving decision-making within businesses and organizations (Jaggia et al., 2020). Companies can make informed decisions by analyzing present challenges, forecasting future trends, developing predictive models, and refining business processes by examining historical or real-time data. Business analytics not only influences performance but also leads to technological and process innovation and overall improvements in product and service quality (Hussinki, 2022).

Artificial intelligence drives business development

Digital transformation is connected to artificial intelligence in several ways. For companies, it is no longer a matter of whether or not to implement technology in their actual activities but how to change their path of approaching and doing when conforming with digital (Pinzaru et al., 2019). What makes AI a key indorser to a smarter world lies in the capability of AI to detail reasoning models in resolving intricate questions and responding to complex problems; this results in the enterprise's so-called cognitive computing systems. These systems have the necessary fundamentals to work with the scale of storage and computing power, as well as diverse and big labeled/structured and unlabeled/unstructured data, and also, smart ubiquitous software: algorithms, computing power, storage, natural language, accessibility, machine learning and indefinite data' amounts (Oswald & Kleinemeier, 2017).

AI's advancement is the center of improved performance, the evolution of Industry 4.0, and all other technologies. Enough evidence has been released in the literature to show that AI technology offers new chances to guide significant transformation in the overall economic system and businesses. The benefits of AI at the business level include quick visualization and analytics, the quick unveiling of patterns in big data, the delivery of meticulous insights, improved product design, and many others (Shen & Zhang, 2024; European Commission, 2022). These benefits are expected to introduce increased profit, new levels of service, expansion of businesses, cost structures, and improved efficiency (Soni et al., 2020).

There are three sections to be mentioned regarding the benefits of AI and Cloud Computing, shaping the overall organizational performance for better revenue and productivity: reduced overall costs, big data management and analytics, smart automation, and improved productivity (Sriram, 2022).

According to the research by Giuggioli and Pellegrini (2021), AI allows businesses to create new ways. In the "decision-making" stage, AI enables companies to make better forecasts and, therefore, have better conclusions for the final decisions. Third, in the "performance" stage, AI allows businesses to improve their company's performance. In the "education and research" stage, AI closes the gap between entrepreneurship research and practice by speeding up the entire process. AI improves cloud computing, data analytics, and automation processes, considerably increasing business performance.

Methodology

The methodology is reinforced by a VOSviewer analysis. The main goal of this study is to investigate how automation, cloud computing, data analytics, and artificial intelligence intersect with each other in the current literature and how these findings contribute to the broader digital transformation and business performance. A bibliometric analysis was conducted to identify the core themes, trends, and gaps in research.

Two major academic databases, Scopus and Web of Science, were systematically searched to collect relevant literature. The search criteria were designed to capture a broad spectrum of research focusing on integrating and applying automation, cloud computing, data analytics, and artificial intelligence. For each database, search strings were used as follows:

- Scopus Database: TITLE-ABS-KEY ("automation") AND TITLE-ABS-KEY ("cloud computing") AND TITLE-ABS-KEY ("data analytics") AND TITLE-ABS-KEY ("artificial intelligence")
- Web of Science Database: "automation" (Topic) and "cloud computing" (Topic) and "data analytics" (Topic) and "artificial intelligence" (Topic)

The initial search resulted in 61 records from Scopus and 28 records from Web of Science. After retrieving the data, all the identified records were imported into Zotero, a reference management software. This step was taken to combine further, review, handle, and de-duplicate the data. As a result, a final dataset of 72 unique items was created for analysis. The combined dataset was analyzed using VOSviewer, a tool for constructing and visualizing bibliometric networks. This software has made a bibliometric map based on keyword co-occurrence to understand the research landscape and identify the predominant themes.

To improve the accuracy of this bibliometric analysis, the terms were standardized using a thesaurus file, and the variants of the same or closely related concepts were merged. The following modifications were applied:

"internet of things (iot)" and "iot" were standardized to "internet of things"

"cloud-computing" was standardized to "cloud computing"

"augmented reality" and "virtual reality" were both categorized under "extended reality (XR)"

"advanced analytics" was standardized to "big data analytics."

After refining the dataset and applying term standardization, the initial search terms (artificial intelligence, data analytics, cloud computing, automation) have been excluded to avoid redundancy and bias in thematic analysis. The final analysis was conducted on 11 emergent keywords, revealing the core areas of focus and emerging trends within the literature.

Bibliometric analysis. Results and discussions

A bibliometric map, represented in Figure 3, has been created using VOSviewer. It provides a visual representation of keyword co-occurrence across the collected literature. The map shows that the current research landscape is centered around data-centric technologies, significantly influencing theoretical exploration and practical application within businesses and industries. As the digital era advances, the interconnections between the keywords highlight the multifaceted nature of technological evolution, emphasizing the integration of various domains to harness the full potential of digital transformation.

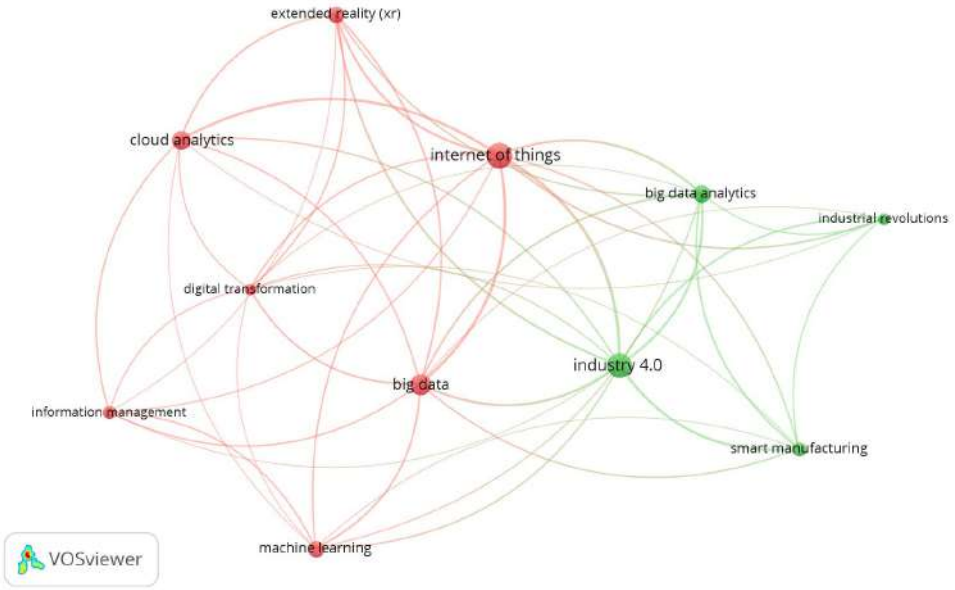

Figure 3. VOSviewer bibliometric map

Source: screenshot from VOSviewer.

The bibliometric map organizes the 11 keywords into two distinct clusters, the red cluster and the green cluster, indicating the concentration of research themes within the dataset. These clusters are differentiated not only by their content but also by their interlinkages, as evidenced by the total link strength.

The red cluster is the larger cluster, with seven items, emphasizing the broader application and theoretical aspects of emerging technologies:

- **Big Data**: central to this cluster, indicates a high prevalence of research focused on large-scale data processing and analysis within business and technology.
- **Cloud Analytics**: represents the combination of cloud computing capabilities with data analytics, showcasing the importance of scalable and flexible data analysis solutions.
- **Digital Transformation**: points to the broader implications of technology on transforming business processes and models.
- **Extended Reality (XR)**: suggests an intersection with immersive technologies, such as AR and VR, indicating research interest in their application in enhancing business operations.
- **Information Management**: the inclusion of this term denotes the significance of managing data and information effectively in the era of digital transformation.
- **Internet of Things**: indicates the connectivity of devices and their role in generating real-time data for analytics and automation.
- **Machine Learning**: reflects the growing focus on predictive analytics and artificial intelligence in automating decision-making processes.

The red cluster represents a significant macro-theme focused on integrating digital technologies in business and management frameworks to improve and measure business performance. This cluster combines theoretical and applied research in fields that shape modern businesses. The use of terms like "big data," "cloud analytics," and "machine learning" highlights the importance of advanced data analytics in driving business intelligence and innovation. Also, including "digital transformation" and "information management," it emphasizes the impact of technology on business strategies and operations, highlighting the need for robust management of the increasing volume of data. The term "extended reality (XR)" indicates the exploration of immersive technologies that redefine customer and employee experiences. At the same time, the "Internet of Things" reflects the interconnected nature of modern devices that leverage real-time data to enhance efficiency and responsiveness. Collectively, these keywords suggest that the fusion of technologies is fundamentally reshaping how businesses operate, compete, and deliver value in a digital-centric world.

The green cluster, comprised of 4 items, is focused on the industrial application of the technologies from the red cluster:

- **Big Data Analytics**: it is highly related to the term "big data" in the red cluster, and it serves as a bridge between technology and its practical applications in various sectors.
- **Industrial Revolutions**: this term refers to the Fourth Industrial Revolution, driven by data connectivity, AI, robotics, and digital technologies.
- **Industry 4.0**: aligns closely with 'Industrial Revolutions', underlining the transformational impact of technology on manufacturing and industry.
- **Smart Manufacturing**: represents the practical application of data analytics and automation in modernizing manufacturing processes.

The green cluster emphasizes the technological revolution in industrial settings and points towards integrating digital technologies in manufacturing and production. This cluster focuses on

the practical implementation of advanced data analytics and automation in the industrial sector and indicates the Fourth Industrial Revolution. The terms "industrial revolutions" and "industry 4.0" refer to the shift from traditional manufacturing to smart technologies such as AI, cyber-physical systems, and IoT. Using "big data analytics" is essential in optimizing manufacturing processes and improving production efficiencies. The concept of "smart manufacturing" further refines this focus and illustrates the application of these technologies in creating more intelligent, adaptable, and efficient manufacturing systems. Altogether, the green cluster encapsulates the transformative effects of digital technologies in industry and highlights a strategic shift towards interconnected, automated, and highly efficient industrial ecosystems that promise to redefine manufacturing paradigms and economic structures globally.

The analysis shows significant connections between the clusters, with “big data analytics” as a central node. This suggests that data-driven technology is pivotal in both theoretical and practical domains. This concept plays a crucial role in connecting various research areas, highlighting the significance of data in utilizing and comprehending technology efficiently. The total link strength of 154 indicates robust connections between the keywords, underlining a significant degree of interdisciplinary research activity and the integrative nature of the studies.

The map displays a significant potential for future research into the impact of advanced technology, such as big data and the Internet of Things, on company operations and performance. There is ample room to explore how these tools can help companies make informed decisions quickly and improve processes, from the assembly line to the boardroom. This is especially true in industries that are becoming more modern and actively apply in practice concepts like smart manufacturing or IoT, where technology is revolutionizing how things are produced and businesses are run. Understanding these changes is crucial for companies that want to stay ahead of the curve and make the most of these new technologies. From a business performance perspective, we can observe in the VOSviewer figure that all the terms are linked indirectly with it. However, the highlight would be primarily on industry 4.0, industrial revolutions, information management, and smart manufacturing terms. On a broader spectrum, future research needs to examine the collective influence of these technologies on economic and social structures and explore the implications for workforce development and ethical considerations in the deployment of technology.

Conclusion

The bibliometric analysis using VOSviewer emphasizes the interdependency between the researched terms. It shows that their adoption would result in companies’ success and growth. The literature in the field is focused on two main lines of investigation. One refers to understanding the relationships between digital transformation and various digital technologies. Another one is more practical-oriented, addressing industrial applications.

Digital transformation fosters efficiency by integrating cloud computing, automation, AI, and data analytics to innovate and adapt in the digital era. AI-driven insights and automation are crucial elements of digital transformation, helping businesses optimize operations and make data-driven decisions. Data analytics implies the process of interpreting, analyzing, and understanding actionable insights from data to support decision-making and conduct business outcomes. In the context of digital transformation, data analytics helps businesses uncover patterns, trends, and interconnections within their data, improving operational efficiency, better strategic planning, and enhanced consumer engagement. By exploiting data analytics, businesses can identify growth opportunities, gain a competitive edge in their respective industries, and mitigate risks. Business

performance refers to the extent to which an institution accomplishes its strategic objectives and delivers value to the stakeholders. Integrating digital technologies such as cloud computing, automation, AI, and data analytics into business processes can notably impact performance key indicators such as profitability, productivity, customer satisfaction, and market share. By adequately exploiting these technologies, businesses can optimize performance, maintain a competitive advantage, and drive innovation in today's rapidly evolving digital landscape. To conclude, digital transformation acts as the overarching framework surrounding cloud computing, automation, AI, and data analytics. It drives efficiency in business performance by helping organizations innovate, adapt, and thrive in the digital economy.

The study highlights some research gaps that future investigations might address. An approach that considers a broader interdisciplinary framework might contribute to a better understanding of the investigated phenomena and identify more effective approaches. Previous studies have focused on the positive aspects of digital technologies and transformation. A better understanding of the associated challenges might support more sustainable implementation and development of these technologies. Also, ethical dimensions might be explored more, considering the avoidance of problematic strategies and outcomes.

Future research could also focus on sustainability and the long-term effects of digital transformation. Reliable predictions and a thorough understanding of future scenarios might contribute to enhanced benefits, increased profitability, and a more significant contribution to sustainable development. In this framework, investigating societal implications in detail is advisable.

The perspective of SMEs tends to be ignored by current literature in the field. Insights into this field would contribute to completing the picture of digital transformation and adoption of digital technologies; it would contribute to a better understanding of the ecosystem dynamics and future trends in the economy and society. It could support spotting the complex economic impact of these evolutions and generate helpful policy implications for all types of organizations.

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