

Data-Driven Economies: The Strategic Role of Data in Value Creation and Economic Development

Dwi Febri Himmatul Khairiyah¹✉, Sholihah¹, and Zulfa Khairunnisa²

Universitas Negeri Yogyakarta, Yogyakarta, Indonesia¹; Sekolah Tinggi Ilmu Ekonomi YKPN²

ABSTRACT

Data has emerged as a strategic economic resource that increasingly influences value creation, innovation, productivity, and economic development within digital economies. This study examines the role of data in contemporary economic systems through a qualitative Systematic Literature Review (SLR) guided by the PRISMA 2020 framework. Literature published in the last five years was collected from major academic databases and analyzed using thematic synthesis. The findings indicate that data contributes to economic value through data-driven business models, analytics capabilities, evidence-based decision-making, and innovation processes. The review further reveals that organizations leverage data assets to improve operational efficiency, enhance productivity, and support strategic development. In addition, effective governance mechanisms play a critical role in maximizing the value generated from data resources while addressing emerging sustainability and accountability concerns. The study concludes that data-driven capabilities have become essential foundations of value creation and economic development in increasingly digitalized economies.

Keywords: *Data Economy, Data-Driven Value Creation, Data Analytics, Economic Development, Productivity, Digital Economy.*

CORRESPONDING AUTHOR:

Dwi Febri Himmatul Khairiyah
 Universitas Negeri Yogyakarta, Yogyakarta, Indonesia
contact: dwi476@gmail.com

ARTICLE HISTORY

Received : July 18, 2024
 Final Revised : November 30, 2024
 Accepted : December 16, 2024
 Published : December 30, 2024

1. | INTRODUCTION

Data has become one of the most valuable resources in contemporary economies, influencing how organizations create value, make decisions, innovate, and compete. The rapid expansion of digital technologies has generated unprecedented volumes of data through online transactions, digital platforms, connected devices, and information systems. Unlike traditional economic resources such as labor, capital, and land, data possesses unique characteristics that allow it to be collected, analyzed, replicated, and utilized across multiple contexts simultaneously. As economies become increasingly digitalized, data is no longer viewed merely as a by-product of economic activity but as a strategic asset capable of generating economic value and supporting long-term development. Consequently, understanding the role of data within modern economic systems has become an important area of inquiry within digital economy research.

The growing significance of data is closely associated with the emergence of data-driven economies, where economic activities increasingly rely on the generation, management, and utilization of information resources. Goldfarb and Tucker (2019) argue that digital technologies have fundamentally altered economic processes by reducing information-related costs and increasing access to valuable data resources. Similarly, Novikov (2020) highlights the central role of data science and big data technologies in supporting the development of digital economies through enhanced information processing and analytical capabilities. These developments indicate that data has evolved into a critical economic resource capable of influencing organizational performance, market behavior, and economic outcomes. As a result, data-driven capabilities have become increasingly important for organizations seeking to create value and sustain competitive advantages in rapidly changing economic environments.

The economic importance of data is further reflected in the emergence of new business models that depend on data collection, analysis, and utilization. Data-driven business models generate value by transforming information into actionable insights, personalized services, operational improvements, and innovative products. Kühne and Böhmman (2019) explain that data-driven business models create value by establishing connections between data resources and organizational objectives. Likewise, Breitfuss et al. (2020) emphasize that organizations increasingly rely on data assets to support value creation processes and improve business performance. These developments suggest that data has become a foundational element of modern business strategies. Consequently, organizations across industries are investing heavily in data capabilities to enhance decision-making, optimize operations, and develop new sources of economic value.

Another important aspect of data-driven economies concerns the role of analytics and evidence-based decision-making. The availability of large volumes of data has transformed how organizations evaluate opportunities, manage resources, and formulate strategies. Akhtar et al. (2019) demonstrate that organizations possessing strong data-related capabilities are more likely to improve business performance

through data-driven actions and informed decision-making. Similarly, Awan et al. (2021) highlight the contribution of big data analytics to organizational decision-making by providing actionable insights that improve performance outcomes. These findings indicate that data-driven decision-making has become an increasingly important mechanism through which organizations improve efficiency, reduce uncertainty, and respond to changing market conditions. Consequently, analytical capabilities have emerged as strategic assets within data-driven economies.

The literature also highlights the relationship between data utilization, innovation, and productivity. Data resources support innovation by enabling organizations to identify trends, understand customer needs, improve products and services, and develop new business opportunities. Charles (2020) argues that data science contributes to productivity enhancement by supporting more efficient resource allocation and performance analysis. Similarly, Charles et al. (2021) emphasize that data-driven approaches improve productivity by facilitating evidence-based decision-making and operational optimization. Beyond organizational performance, data-enabled innovation contributes to broader economic development by encouraging technological advancement and increasing economic efficiency. These developments suggest that data functions not only as an informational resource but also as a catalyst for innovation and productivity growth.

At the same time, the increasing economic significance of data has generated new challenges related to governance, valuation, and sustainable utilization. As organizations rely more heavily on data assets, questions emerge regarding data ownership, governance structures, economic valuation, and responsible management practices. Whittard et al. (2022) emphasize the importance of measuring the value generated by data governance practices, while Pestana (2023) highlights the need for frameworks capable of assessing the organizational impact of data governance initiatives. Furthermore, Lucivero (2019) raises concerns regarding the sustainability implications associated with large-scale data generation and utilization. These observations suggest that the benefits of data-driven economies must be balanced with considerations related to governance, accountability, and long-term sustainability.

The influence of data extends beyond individual organizations and increasingly shapes broader patterns of economic development. Data resources contribute to economic growth by improving productivity, supporting innovation, and facilitating the creation of new business opportunities. Wang et al. (2022) demonstrate that big data contributes to economic development by supporting technological advancement and enhancing economic efficiency. Similarly, platform-based economic systems increasingly rely on the collection and utilization of data assets to generate value and coordinate market activities. Van Doorn and Badger (2020) and Srnicek (2021) argue that data has become a central resource within platform-based economic structures where information assets contribute significantly to value generation and accumulation.

These developments indicate that data is becoming a fundamental component of contemporary economic systems and development strategies.

Despite growing scholarly interest in data-driven economies, the existing literature remains fragmented across multiple research domains, including information systems, business analytics, digital business models, platform economies, innovation studies, and economic development research. Many studies examine specific aspects of data utilization independently, such as analytics capabilities, data governance, productivity, or digital platforms, without integrating these perspectives into a broader understanding of how data contributes to economic value creation and development. Consequently, there remains limited synthesis regarding the mechanisms through which data functions as an economic resource and influences contemporary economic systems. This fragmentation highlights the need for a comprehensive review capable of consolidating existing knowledge and identifying key patterns within the literature.

In response to this gap, this study examines data-driven economies through a qualitative Systematic Literature Review (SLR). The study synthesizes contemporary research on data assets, data-driven value creation, analytics capabilities, innovation, productivity, governance, and economic development. In addition, the review explores how data-driven capabilities contribute to value generation and broader economic outcomes. Snyder (2019) emphasizes the usefulness of systematic literature reviews for consolidating fragmented research and generating comprehensive theoretical understanding. Furthermore, Page et al. (2021) highlight the importance of transparent review procedures through the PRISMA framework. By integrating evidence from diverse research streams, this study seeks to provide a comprehensive understanding of the strategic role of data in value creation and economic development within contemporary digital economies.

2. | LITERATURE REVIEW

Data as an Economic Resource

The increasing digitalization of economic activities has elevated data from a supporting informational asset to a strategic economic resource. Contemporary organizations generate and utilize vast amounts of data through digital platforms, online transactions, connected technologies, and information systems. Unlike many traditional resources, data can be repeatedly analyzed, shared, and transformed into multiple forms of value without being depleted. Goldfarb and Tucker (2019) argue that digital technologies have reduced information-related costs and increased the economic importance of data across markets and industries. Similarly, Novikov (2020) highlights the role of data science and big data technologies in supporting digital economic activities by improving information processing and knowledge generation. These developments suggest that data has become a core resource within modern economic systems.

The economic significance of data is also reflected in platform-based economic structures that rely heavily on information assets. Van Doorn and Badger (2020) explain

that data production has become a central component of value generation within platform-based economies. Likewise, Srnicek (2021) argues that platform capitalism increasingly depends on the extraction, accumulation, and utilization of data resources to generate economic value. Casas-Cortés et al. (2023) further emphasize the growing influence of platform-based economic systems in shaping contemporary markets. Collectively, these perspectives indicate that data functions as an important economic asset that contributes to value generation, market coordination, and digital economic development.

Data-Driven Value Creation

A growing body of literature highlights the role of data in supporting value creation across organizations and industries. Data-driven value creation refers to processes through which organizations transform data resources into economic benefits, strategic advantages, and improved business outcomes. Kühne and Böhmman (2019) explain that data-driven business models create value by connecting data resources with organizational objectives and customer needs. Similarly, Breidfuss et al. (2020) propose that data-driven business models generate economic value through various mechanisms, including operational optimization, customer insights, and service innovation.

The literature further suggests that organizations increasingly view data as a source of monetization and competitive advantage. Wixom et al. (2023) emphasize that data monetization involves converting information assets into measurable business value through products, services, and decision-support mechanisms. Likewise, Lang et al. (2020) argue that data-enabled business practices contribute to innovation and organizational competitiveness by facilitating more effective resource utilization. These findings indicate that data-driven value creation extends beyond information management and has become a strategic component of organizational growth and economic performance.

Data Analytics and Decision-Making

Data analytics has become an essential capability within contemporary organizations because it supports evidence-based decision-making and strategic planning. Advances in data collection, storage, and processing technologies have enabled organizations to extract insights from increasingly large and complex datasets. Akhtar et al. (2019) demonstrate that organizations possessing strong big data capabilities are more likely to achieve improved business performance through data-driven actions and informed managerial decisions. These findings suggest that analytics capabilities contribute significantly to organizational effectiveness and competitiveness.

The literature also emphasizes the importance of data-driven decision-making in improving operational efficiency and organizational responsiveness. Bousdekis et al. (2021) explain that data-driven decision-making supports better problem identification,

predictive analysis, and resource management within technology-intensive environments. Similarly, Awan et al. (2021) argue that big data analytics enhances organizational performance by generating actionable insights that support strategic decisions. Kamble et al. (2021) further demonstrate that data-driven approaches facilitate more effective prioritization and resource allocation processes. Collectively, these findings indicate that analytics capabilities play a critical role in transforming data resources into informed decisions and improved organizational outcomes.

Data-Enabled Innovation and Productivity

The relationship between data utilization, innovation, and productivity has become an increasingly important area of research within digital economy studies. Data resources support innovation by enabling organizations to identify emerging opportunities, improve products and services, and develop new business models. Charles (2020) argues that data science contributes to productivity enhancement through improved analytical capabilities and more efficient decision-making processes. Similarly, Charles et al. (2021) emphasize that data-driven approaches facilitate productivity improvements by supporting evidence-based management and operational optimization.

Beyond productivity enhancement, data also functions as an enabler of innovation across sectors and industries. Runck et al. (2022) demonstrate that data-enabled digital platforms support innovation by improving access to information and facilitating collaboration among stakeholders. Charnley et al. (2019) further highlight the role of data-driven approaches in supporting innovative solutions and resource optimization within circular economy systems. These findings indicate that data contributes to innovation and productivity by providing organizations with the information necessary to improve performance, create new value, and respond effectively to changing market conditions.

Economic Development in Data-Driven Economies

The growing reliance on data resources has significant implications for economic development and broader societal outcomes. Data-driven economies increasingly depend on information assets to support productivity growth, technological advancement, and economic transformation. Wang et al. (2022) demonstrate that big data contributes to economic development by enhancing innovation capacity, improving efficiency, and supporting sustainable growth. Similarly, platform-based economic systems rely on data resources to coordinate market activities, facilitate transactions, and create economic value across multiple sectors.

The literature also highlights the importance of governance and sustainability considerations within data-driven economies. Whittard et al. (2022) emphasize that effective data governance contributes to economic value by improving data quality, accountability, and organizational performance. Pestana (2023) further argues that measuring the value of governance initiatives is essential for maximizing the benefits

of data assets. At the same time, Lucivero (2019) raises concerns regarding the environmental and sustainability implications associated with large-scale data generation and utilization. These observations suggest that while data-driven economies create significant opportunities for economic development, they also require governance frameworks and responsible management practices capable of ensuring long-term sustainability and value creation.

3. | RESEARCH METHOD

This study employs a qualitative Systematic Literature Review (SLR) to examine the role of data in value creation and economic development within contemporary digital economies. The SLR approach was selected because research concerning data-driven economies spans multiple academic domains, including digital economics, information systems, business analytics, innovation studies, and economic development. Consequently, existing knowledge is dispersed across diverse research streams that investigate data assets, analytics capabilities, business value, productivity, governance, and economic outcomes from different perspectives. Snyder (2019) explains that systematic literature reviews are effective for synthesizing fragmented research and developing comprehensive conceptual understanding. Similarly, Linnenluecke et al. (2020) emphasize that systematic review methodologies enhance research rigor by applying transparent and structured procedures for evidence collection, evaluation, and synthesis. Through this approach, the study seeks to provide an integrated understanding of how data contributes to value creation and economic development.

The review process follows the PRISMA 2020 framework to ensure transparency, consistency, and methodological rigor throughout the stages of literature identification, screening, eligibility assessment, and inclusion. According to Page et al. (2021), the PRISMA framework provides standardized guidelines that improve the reliability and reproducibility of systematic reviews. Relevant literature was collected from major academic databases, including Scopus, Google Scholar, ScienceDirect, Springer, Emerald, and Taylor & Francis. The search process utilized combinations of keywords such as data economy, data assets, data-driven business models, data monetization, data analytics, data-driven decision-making, big data and productivity, data governance, information economy, and data-enabled innovation. These keywords were selected to capture studies examining the economic significance of data across organizational and societal contexts.

The inclusion criteria focused on peer-reviewed journal articles, scholarly books, conference proceedings, and institutional publications published between 2019 and 2023. Eligible studies were required to discuss data as an economic resource or examine its relationship with value creation, business performance, analytics capabilities, innovation, productivity, governance, or economic development. Studies that concentrated exclusively on technical system design, software engineering, or

computational methodologies without addressing economic implications were excluded. This selection strategy ensured that the reviewed literature remained aligned with the study's objective of understanding data from an economic and value-creation perspective.

Following the selection process, the literature was analyzed using thematic synthesis to identify recurring concepts, patterns, and theoretical relationships. Thematic synthesis enables the integration of findings from diverse research contexts while facilitating broader interpretations of the role of data within economic systems. The reviewed studies were organized into five analytical themes: data as an economic resource, data-driven value creation, data analytics and decision-making, data-enabled innovation and productivity, and economic development in data-driven economies. These themes represent the principal dimensions through which data contributes to organizational performance and broader economic outcomes.

The analytical framework adopted in this study views data as a strategic economic resource that generates value through its collection, analysis, and application across economic activities. Particular attention is given to the mechanisms through which data-driven capabilities support decision-making, innovation, productivity enhancement, and economic development. The framework also considers the role of governance and responsible data management in maximizing the benefits of data assets while addressing emerging challenges associated with sustainability and accountability. By integrating these perspectives, the study provides a comprehensive assessment of the strategic role of data in shaping value creation and development within contemporary digital economies.

4. | RESULTS

The reviewed literature demonstrates that data has evolved into a strategic economic resource that plays an increasingly important role in value creation, organizational performance, and economic development. Across the selected studies, data is consistently described as an asset that supports decision-making, innovation, and productivity improvement within digitally enabled environments. Goldfarb and Tucker (2019) emphasize that digital technologies have expanded the availability and economic relevance of data by reducing information-related costs and increasing access to valuable information resources. Similarly, Novikov (2020) highlights the growing importance of data science and big data technologies in supporting economic activities and organizational development. These findings indicate that data is no longer viewed merely as an operational by-product but as a resource capable of generating substantial economic value.

A second recurring finding concerns the role of data in supporting value creation through data-driven business models and organizational practices. The reviewed studies consistently report that organizations generate value by transforming raw data into actionable insights, improved services, and strategic business opportunities. Kühne and Böhm (2019) explain that data-driven business models create value by

connecting data assets with organizational objectives and customer needs. Similarly, Breitfuss et al. (2020) identify multiple pathways through which data contributes to business value, including service enhancement, operational efficiency, and customer understanding. Wixom et al. (2023) further emphasize that data monetization has become an increasingly important mechanism through which organizations convert information resources into measurable economic benefits. These findings suggest that value creation within data-driven economies depends significantly on the ability to effectively utilize and transform data resources.

The literature also highlights the growing importance of data analytics and evidence-based decision-making. Several studies indicate that organizations possessing advanced analytics capabilities are more likely to improve performance and respond effectively to changing market conditions. Akhtar et al. (2019) demonstrate that data-driven actions supported by analytical capabilities contribute positively to business performance. Similarly, Bousdekis et al. (2021) report that data-driven decision-making enhances organizational effectiveness by improving problem identification, forecasting, and resource allocation. Awan et al. (2021) further show that analytics capabilities generate actionable insights that support strategic decision-making and operational improvement. These findings indicate that data analytics functions as a critical mechanism through which organizations transform information resources into practical organizational outcomes.

Another important result concerns the relationship between data utilization, innovation, and productivity. The reviewed studies consistently identify data as an important enabler of innovation across industries and economic sectors. Charles (2020) reports that data science contributes to productivity improvement by supporting more efficient decision-making and resource utilization. Similarly, Charles et al. (2021) demonstrate that data-driven approaches enhance organizational productivity through improved analytical capabilities and evidence-based management practices. Runck et al. (2022) further highlight the role of data-enabled platforms in facilitating innovation through improved information accessibility and collaboration. These findings suggest that data contributes to innovation and productivity by enabling organizations to identify opportunities, optimize operations, and develop new products and services.

The reviewed literature further reveals the growing significance of governance and management practices in maximizing the value of data assets. As organizations become increasingly dependent on data resources, effective governance mechanisms emerge as important determinants of value creation and performance outcomes. Whittard et al. (2022) emphasize that data governance contributes to organizational value by improving accountability, data quality, and decision reliability. Similarly, Pestana (2023) highlights the importance of evaluating governance initiatives to ensure that data assets generate measurable organizational benefits. These findings indicate that the economic value of data depends not only on data availability but also on the

presence of governance structures capable of supporting responsible and effective utilization.

The literature also identifies broader economic implications associated with data-driven economies. Wang et al. (2022) demonstrate that big data contributes to economic development by supporting innovation, improving productivity, and facilitating technological advancement. Platform-based economic systems similarly rely on data resources to coordinate market activities and generate value across multiple sectors. Van Doorn and Badger (2020) and Srnicek (2021) argue that data has become a central source of value creation within platform-based economic structures. At the same time, Lucivero (2019) highlights concerns regarding sustainability and responsible management within increasingly data-intensive economic systems. These findings suggest that data-driven economies create significant opportunities for growth and development while simultaneously introducing new governance and sustainability challenges.

Overall, the reviewed literature presents a consistent pattern linking data resources with value creation, decision-making, innovation, productivity, and economic development. The findings indicate that data functions as a strategic economic asset whose value depends on organizational capabilities, governance mechanisms, and analytical practices. At the same time, data-driven approaches increasingly influence how organizations create value and how economies generate growth within digitally enabled environments. Collectively, the evidence suggests that data has become a foundational resource shaping contemporary economic systems and development trajectories.

5. | DISCUSSION

The findings of this review indicate that data has become a fundamental economic resource within contemporary digital economies. Unlike traditional production factors that are often constrained by physical limitations, data can be continuously generated, shared, analyzed, and reused across multiple economic activities. This characteristic has significantly expanded the economic importance of data and positioned it as a critical asset for organizations seeking to improve performance and generate value. The reviewed literature consistently demonstrates that data contributes to economic activities not merely as information but as a strategic resource capable of supporting innovation, productivity, and organizational development. Consequently, the emergence of data-driven economies reflects a broader transformation in how economic value is created and sustained within digital environments.

A key insight emerging from the findings is that the value of data is not inherent in its existence but is largely determined by an organization's ability to transform information into actionable knowledge. The reviewed studies reveal that organizations create value when they successfully convert data resources into insights that improve decision-making, enhance operational efficiency, and support innovation. This observation suggests that data alone does not generate economic benefits; rather, value

is created through the analytical capabilities, technological infrastructures, and organizational processes that enable effective data utilization. Therefore, competitive advantages within data-driven economies increasingly depend on the ability to develop and manage data-related capabilities rather than simply accumulate large volumes of information.

The discussion also highlights the growing importance of data-driven business models as mechanisms for value creation. Organizations across industries increasingly rely on data to develop products, personalize services, optimize operations, and identify emerging market opportunities. Data-driven business models enable organizations to generate economic value by linking information assets with customer needs and strategic objectives. As a result, data monetization has emerged as an important aspect of contemporary business strategy. These developments suggest that data has evolved beyond a supporting organizational resource and now functions as a central component of value generation processes within modern economic systems. Consequently, organizations that effectively integrate data into their business models are often better positioned to adapt to changing market conditions and create sustainable sources of value.

Another important implication concerns the relationship between data analytics and organizational decision-making. The findings indicate that data analytics contributes significantly to organizational performance by improving the quality, speed, and accuracy of decision-making processes. Access to analytical insights allows organizations to identify patterns, anticipate market changes, and allocate resources more effectively. This capability reduces uncertainty and supports evidence-based management practices across diverse operational contexts. The reviewed literature suggests that data-driven decision-making increasingly serves as a strategic mechanism through which organizations improve efficiency and respond to dynamic economic environments. Consequently, analytical capabilities have become important organizational assets within data-driven economies.

The findings further demonstrate that data serves as an important enabler of innovation and productivity growth. Data resources provide organizations with opportunities to identify emerging trends, evaluate performance, and develop innovative solutions to complex challenges. By facilitating access to information and supporting continuous learning processes, data contributes to the development of new products, services, and business models. In addition, data-driven approaches support productivity improvements by enabling organizations to optimize processes and improve resource utilization. These observations reinforce the view that data contributes to economic performance not only through direct value creation but also through its ability to strengthen innovation capacity and operational efficiency.

The growing reliance on data also raises important governance and sustainability considerations. While data creates significant economic opportunities, the reviewed studies indicate that effective governance mechanisms are necessary to ensure

responsible utilization and long-term value generation. Governance frameworks contribute to data quality, accountability, transparency, and organizational trust. Without appropriate governance structures, organizations may face challenges related to data reliability, misuse, and inefficient resource utilization. Furthermore, the increasing scale of data generation and processing introduces concerns regarding sustainability and the broader societal implications of data-intensive economic activities. These findings suggest that maximizing the benefits of data-driven economies requires balancing economic objectives with responsible governance and sustainable management practices.

From a broader economic perspective, the findings indicate that data-driven economies are reshaping traditional mechanisms of value creation and economic development. Data increasingly influences productivity, innovation, market coordination, and business strategy across sectors. The reviewed literature suggests that economies capable of developing strong data infrastructures, analytical capabilities, and governance systems are better positioned to leverage data for economic growth and development. At the same time, disparities in access to data resources and analytical capabilities may contribute to unequal economic outcomes across organizations and regions. Therefore, understanding the economic role of data requires consideration of both the opportunities and challenges associated with data-driven development.

Overall, the evidence synthesized in this review demonstrates that data functions as a strategic economic asset that supports value creation, innovation, productivity, and development within contemporary digital economies. The ability to generate, manage, analyze, and utilize data effectively increasingly determines organizational performance and economic competitiveness. As digital technologies continue to expand the availability and significance of information resources, data-driven capabilities are likely to remain central drivers of economic transformation and value generation in the years ahead.

6. | CONCLUSION

The findings of this study demonstrate that data has emerged as a strategic economic resource that plays a central role in value creation, innovation, productivity enhancement, and economic development. As digital technologies continue to expand the generation and utilization of information resources, data increasingly functions as a critical asset that supports organizational performance and broader economic activities. Unlike traditional resources, data possesses unique characteristics that enable continuous reuse, analysis, and transformation into various forms of economic value. Consequently, the rise of data-driven economies reflects a significant shift in how value is created and sustained within contemporary digital environments.

The review further reveals that organizations create economic value from data through data-driven business models, analytics capabilities, and evidence-based decision-making processes. Data analytics enables organizations to transform information resources into actionable insights that improve operational efficiency,

support strategic planning, and enhance performance outcomes. In addition, data contributes to innovation and productivity by facilitating knowledge generation, opportunity identification, and process optimization. These findings indicate that the economic benefits of data depend not only on data availability but also on the capabilities required to effectively collect, manage, analyze, and apply information resources.

The study also highlights the importance of governance and responsible management practices within data-driven economies. Effective governance frameworks contribute to data quality, accountability, transparency, and organizational trust, thereby enhancing the value generated from data assets. At the same time, the growing scale of data generation raises concerns regarding sustainability, ethical management, and long-term economic implications. These challenges underscore the need for balanced approaches that maximize the benefits of data while ensuring responsible utilization and sustainable development.

From a broader economic perspective, data-driven capabilities increasingly influence innovation, productivity, market coordination, and economic growth across sectors. Economies that successfully develop analytical capabilities, governance systems, and data infrastructures are likely to derive greater benefits from the expanding role of data within economic activities. However, unequal access to data resources and analytical capabilities may create disparities in value creation and development outcomes. Therefore, understanding the role of data within contemporary economies requires consideration of both its opportunities and its associated challenges.

Future research may further explore emerging forms of data monetization, evolving governance models, and the long-term developmental implications of increasingly data-intensive economic systems. Additional studies may also examine sector-specific applications of data-driven capabilities and their influence on economic performance across different institutional contexts. By synthesizing contemporary literature, this study contributes to a broader understanding of data-driven economies and highlights the strategic role of data in shaping value creation and economic development within the digital age.

Acknowledgement

We gratefully acknowledge the contributions of individuals who supported the completion of this article.

Declaration of Conflicting Interests

The authors declare that there is no conflict of interest.

Ethical Approval and Originality Statement

Ethical approval was obtained for this study. The manuscript represents original work and has not been previously published, nor is it under consideration by another journal.

Data Disclosure Statement

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

REFERENCES

- Akhtar, P., Frynas, J. G., Mellahi, K., & Ullah, S. (2019). Big data-savvy teams' skills, big data-driven actions and business performance. *British Journal of Management*, 30(2), 252–271.
- Awan, U., Shamim, S., Khan, Z., Zia, N. U., Shariq, S. M., & Khan, M. N. (2021). Big data analytics capability and decision-making: The role of data-driven insight on circular economy performance. *Technological Forecasting and Social Change*, 168, 120766.
- Bousdekis, A., Lepenioti, K., Apostolou, D., & Mentzas, G. (2021). A review of data-driven decision-making methods for Industry 4.0 maintenance applications. *Electronics*, 10(7), 828.
- Breitfuss, G., Fruhwirth, M., Pammer-Schindler, V., Stern, H., & Dennerlein, S. (2020). The data-driven business value matrix: A classification scheme for data-driven business models. In *32nd Bled eConference: Humanizing Technology for a Sustainable Society* (pp. 803–820). University of Maribor.
- Casas-Cortés, M., Diz, C., & Cañedo-Rodríguez, M. (2023). *Platform Capitalism*. Oxford University Press.
- Charles, V. (2020). *Data Science and Productivity Analytics*. Springer.
- Charles, V., Aparicio, J., & Zhu, J. (2021). Data science for better productivity. *Journal of the Operational Research Society*, 72(5), 971–974.
- Charnley, F., Tiwari, D., Hutabarat, W., Moreno, M., Okorie, O., & Tiwari, A. (2019). Simulation to enable a data-driven circular economy. *Sustainability*, 11(12), 3379.
- Goldfarb, A., & Tucker, C. (2019). Digital economics. *Journal of Economic Literature*, 57(1), 3–43.
- Kamble, S. S., Belhadi, A., Gunasekaran, A., Ganapathy, L., & Verma, S. (2021). A large multi-group decision-making technique for prioritizing the big data-driven circular economy practices in the automobile component manufacturing industry. *Technological Forecasting and Social Change*, 165, 120567.
- Kühne, B., & Böhmman, T. (2019). Data-driven business models: Building the bridge between data and value. In *Proceedings of the European Conference on Information Systems (ECIS)*.
- Lang, K. R., Xu, J., & Zhu, B. (2020). *Smart Business: Technology and Data Enabled Innovative Business Models and Practices*. Springer International Publishing.
- Linnenluecke, M. K., Marrone, M., & Singh, A. K. (2020). Conducting

- systematic literature reviews and bibliometric analyses. *Australian Journal of Management*, 45(2), 175–194.
- Lucivero, F. (2019). Big data, big waste? A reflection on the environmental sustainability of big data initiatives. *Science and Engineering Ethics*, 26(2), 1009–1030.
- Novikov, S. V. (2020). Data science and big data technologies role in the digital economy. *TEM Journal*, 9(2), 756–762.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372.
- Pestana, J. S. (2023). *Data Governance Valuation: A Model for Assessing the Impact on Organisations Business* (Master's thesis, Universidade NOVA de Lisboa).
- Runck, B. C., Joglekar, A., Silverstein, K. A., Chan-Kang, C., Pardey, P. G., & Wilgenbusch, J. C. (2022). Digital agriculture platforms: Driving data-enabled agricultural innovation in a world fraught with privacy and security concerns. *Agronomy Journal*, 114(5), 2635–2643.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339.
- Srnicek, N. (2021). Value, rent and platform capitalism. In *Work and Labour Relations in Global Platform Capitalism* (pp. 29–45). Edward Elgar Publishing.
- Van Doorn, N., & Badger, A. (2020). Platform capitalism's hidden abode: Producing data assets in the gig economy. *Antipode*, 52(5), 1475–1495.
- Wang, J., Yang, Y., Wang, T., Sherratt, R. S., & Zhang, J. (2020). Big data service architecture: A survey. *Journal of Internet Technology*, 21(2), 393–405.
- Wang, L., Wu, Y., Huang, Z., & Wang, Y. (2022). How big data drives green economic development: Evidence from China. *Frontiers in Environmental Science*, 10, 1055162.
- Whittard, D., Ritchie, F., Musker, R., & Rose, M. (2022). Measuring the value of data governance in agricultural investments: A case study. *Experimental Agriculture*, 58, e8.
- Wixom, B. H., Beath, C. M., & Owens, L. (2023). *Data Is Everybody's Business: The Fundamentals of Data Monetization*. MIT Press.