

Management economics and strategic decision making in the digital age

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Abstract

Purpose: Digital technology reshapes economics and management by enabling faster, data-driven strategic decisions. Companies must adapt to complex market dynamics with innovative, efficient systems. The integration of economics, management, and strategic decision-making strengthens organizational resilience, competitiveness, and sustainability in navigating the challenges of the modern digital era.

Research Methodology: Through a managerial economics theoretical approach and case studies of digital companies, this study demonstrates that data- and technology-driven decision-making can improve operational efficiency, innovation, and company competitiveness.

Results: This research shows that digital technology significantly influences managerial economics and strategic decisions. Data has become a key strategic asset guiding organizational direction. Companies that utilize big data analytics, artificial intelligence, and ERP systems gain stronger competitive advantages and make faster, more accurate decisions in the digital era.

Conclusions: In the digital era, economic management relies heavily on technology and data for strategic decisions. Speed, accuracy, and adaptability determine success. Organizations that integrate digital innovation become more competitive, efficient, and responsive to market change. Thus, digital literacy and transformational leadership are essential in modern management.

Limitations: This study has limitations, including a narrow focus on digitalized companies, which may not represent all MSMEs. The descriptive use of secondary data cannot fully explain causal relationships. Rapid technological change also challenges the study's relevance, as evolving trends may quickly reduce the accuracy of its findings.

Contribution: This research offers guidance for managers in integrating information technology to enhance decision effectiveness and competitiveness. It also provides a foundation for future studies exploring how digital transformation influences decision-making across different industrial sectors.

Keywords: *Decision Making, Managerial Economics, Metodology, Strategy in the Digital Era*

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1. Introduction

The development of digital technology has brought fundamental changes to various aspects of life, including business and management. The digital era forces companies to adapt rapidly to remain competitive in an increasingly dynamic and complex market environment. In this context, managerial economics plays a crucial role as an analytical foundation for making appropriate and effective strategic decisions (Rosyada, Al Fatih, Sutanto, & Antika, 2024).

Management economics is a branch of economics that focuses on applying economic theory to corporate decision-making processes to optimally achieve business goals. It serves as a bridge between abstract economic concepts and practical business practices, enabling managers to evaluate various alternatives and choose the most efficient and profitable actions. In the digital age, strategic decision-making is not based solely on intuition and experience but must be supported by accurate data and information as well as comprehensive analysis (Adnyana, 2021). The increasing complexity of market dynamics, rapid technological advancements, and vast amounts of real-time data available require managers to utilize digital tools such as data analytics, forecasting models, and simulation software to make informed decisions. Consequently, management economics plays a crucial role in helping businesses adapt to a fast-changing environment, optimize resource allocation, and maintain their competitiveness in both domestic and global markets.

Digital transformation, which involves the integration of digital technologies into all aspects of business operations, presents significant challenges and valuable opportunities for managers in developing and implementing effective business strategies. On the one hand, managers must navigate the complexities that come with adopting new technologies, such as restructuring organizational processes, upskilling employees, managing cybersecurity risks, and ensuring the interoperability of digital systems. These challenges often require a shift in mindset, role redefinition, and continuous adaptation to rapidly changing digital tools and platforms.

Conversely, digital transformation opens up new opportunities to enhance operational efficiency, improve customer experiences, personalize marketing efforts, access real-time data for decision-making, and expand into digital markets that were previously unreachable through traditional business models. This allows businesses to innovate faster, respond to market changes more agilely, and build competitive advantages through technology-driven solutions such as artificial intelligence, cloud computing, big data analytics, and automation.

For strategic leaders and decision-makers, this duality of challenge and opportunity demands a proactive approach, where digital transformation is not viewed merely as a technological upgrade but as a comprehensive strategic endeavor that reshapes the company's value proposition, business processes, and customer engagement strategies. Therefore, managers must possess both the vision to harness digital capabilities and analytical skills to mitigate risks, ensuring that digital transformation aligns with the company's long-term goals and market demands. Changing consumption patterns, the emergence of new business models, and increasingly fierce competition demand rapid and accurate decision-making based on digital technologies. Therefore, a deep understanding of management economics concepts and decision-making strategies is crucial for optimizing company performance in the digital era (Widiana, 2020).

In this context, strategic decision-making becomes increasingly challenging because companies must consider various interrelated and dynamic external and internal factors. The complexity of the modern business environment requires decision-makers to not only rely on traditional business indicators but also analyze a constantly shifting landscape influenced by technological, economic, social, and political changes. Externally, market uncertainty driven by fluctuating economic conditions, global events, supply chain disruptions, and rapidly evolving regulatory frameworks can significantly affect business stability and profitability. Companies must be agile in responding to these external shocks while maintaining a long-term strategic direction.

Management economics serves as a crucial analytical tool that helps managers understand the relationship between costs, production, and profits to make optimal decisions. However, in the digital era, the decision-making process no longer relies solely on classical economic theory but must also utilize technologies such as big data, artificial intelligence, and management information systems to process information more accurately and in real time (Izal, Wijaya, & Utama, 2025). However, many companies face challenges in integrating management economics concepts with digital technology for strategic decision-making. A lack of understanding of how technology is applied to management

processes and an inability to interpret data effectively can lead to inappropriate decisions, resulting in losses and missed business opportunities (Ritonga & Firdaus, 2024).

The novelty of research in Economics, Management, and Strategic Decision-Making in the Digital Era lies in an integrative approach that combines data-driven economic analysis, digital managerial innovation, and intelligent strategic decision-making models that are adaptive to technological developments. In the economic context, this novelty emerges through the use of digital technologies, such as big data analytics, blockchain, and artificial intelligence, which are transforming value creation, market efficiency, and resource distribution. This approach not only strengthens the effectiveness of economic policies but also increases inclusiveness and transparency in digital economic activities in the region.

From a management perspective, this novelty lies in the transformation of organizational management paradigms toward digital-driven management, where planning, monitoring, and evaluation processes are supported by integrated information technology. This new management model emphasizes flexibility, cross-platform collaboration, and strengthening digital leadership capacity to address market disruptions and uncertainties. In strategic decision-making, this novelty lies in the use of intelligent algorithms and real-time data-driven decision support systems, which enable organizations to make decisions more quickly, objectively, and adaptively in response to changes in the business environment. The integration of predictive technology and strategic analytics creates added value in developing evidence-based organizational strategies, not just managerial intuition alone.

Overall, the novelty of this study confirms a paradigm shift from conventional approaches to digital and data-driven approaches in economics, management, and strategic decision-making. This is a significant contribution to the development of modern management theory and practice in addressing the complexities and challenges of the global digital transformation. Thus, the study of management economics and strategic decision-making in the digital era is highly relevant to help companies face challenges and exploit existing opportunities effectively and efficiently in the future.

2. Literature review

Fahad, Nindya, Kristiyanto, and Maliki (2024) in their article entitled *Strategic Management in the Digital Age: Challenges and Opportunities for Organizations*, which produces management economics and strategic decision-making in the digital age, show a fundamental transformation in managerial practices and organizational strategies due to the development of information technology. The literature review shows that strategic management is the key to navigating the complexity of modern business, which is characterized by rapid technological change, globalization, and dynamic consumer expectations (Fahad et al., 2024). Thus, the reviewed literature underlines that the success of managerial strategies in the digital era is highly dependent on technological integration, human resource capabilities, and organizational adaptability in the face of a constantly changing business environment.

Chorli and Kazemi (2023), article entitled *Strategic Management in the Digital Age: A Review of Decision-Making Frameworks* show the development of digital technology has led to significant transformations in the practice of economic management and strategic decision-making. A literature review shows that the traditional strategic management framework is now being challenged by the need for flexibility, speed, and high-tech integration in the decision-making process (Chorli & Kazemi, 2023). Some of the challenges in implementing digital strategies are the mismatch between business intelligence needs and data processing capacity, limited technological infrastructure in developing countries, and psychological barriers, such as cognitive bias in decision-making.

Diana Escandon-Barbosa (2025), article *Driving success: Leveraging strategic decision-making and digital technology for sustainable performance*. *Journal of Open Innovation: Technology, Market, and Complexity* vol 11, conclusion Furthermore, strategic activities are a key success factor in achieving sustainability across different types of organizations, especially with Born Globals. Finally, this study contributes to the academic debate by integrating the concepts of Diffusion of Innovation Theory, Unified Theory of Acceptance and Use of Technology, and Dynamic Ambidexterity Theory into the

analysis. From an applied perspective, this study highlights the importance of integrating decision-making processes, implementing digital technologies, and their impact on firm performance, especially in firms serving international markets.

Trianung, Sundari, Kurniawan, Setiawan, and Aisyah (2024) article, *Education Management: Decision-Making Strategies in Technology Integration*, makes a significant contribution to enriching our understanding of technology-based educational management strategies in the digital age. Although it has methodological limitations, it provides an applicable and relevant framework for educational institutions to design adaptive, participatory, and sustainable technology integration strategies (Trianung et al., 2024).

The novelty of research on Economics, Management, and Strategic Decision-Making in the Digital Era lies in its integrative approach, which conceptually and practically unites the dimensions of the digital economy, strategic management, and technology-based decision-making processes. A literature review of several previous studies found that they focused on sectoral aspects and had not developed many synergistic models that combine all three within a comprehensive analytical framework. This research lies in the multidisciplinary synthesis of digital economic theory, adaptive strategic management, and data-driven decision-making systems, which provides a new framework for understanding organizational and economic transformation in the digital era in a more holistic and measurable way.

3. Methodology

This study adopts a qualitative descriptive approach to examine how the principles of management economics are applied in organizational strategic decision-making in the digital era (Nefianto, 2025). The primary objective of this study is to describe, explore, and analyze the managerial processes, strategic considerations, and economic reasoning used by organizations when navigating digital transformation. This approach enables researchers to capture the complexity of real-world decision-making and understand how managers interpret economic information, utilize digital technologies, and respond to rapidly evolving market dynamics.

The use of a qualitative descriptive method is considered appropriate because this study emphasizes the need to understand managerial behavior, strategic patterns, and organizational processes in their natural context. According to Akbar, Abdurahman, Nursanto, and Hartati (2025), qualitative analysis is particularly relevant in digital-era research, where decision-making is influenced by technological integration, data-driven insights and organizational adaptability. Through open-ended exploration, this method allows for a richer understanding of how companies employ management economics principles to achieve efficiency, competitiveness and innovation. Overall, this methodological approach supports a comprehensive and nuanced interpretation of how digital transformation shapes strategic decisions, providing valuable insights for future research and managerial practices.

4. Results and discussions

4.1. Introduction to Management Economics in the Digital Era

The rapid development of information and communication technology has significantly impacted the world of business and economics. We are entering the digital era, where almost every aspect of life and economic activity is influenced by digital technology, from financial transactions and marketing to management decision-making. In this context, management economics plays a crucial role as an analytical basis for supporting effective and efficient business decision-making (Rizal et al., 2023).

Managerial economics is the application of economic theory and quantitative analysis tools to the decision-making processes of corporate managers. The goal is to optimally allocate resources, maximize profit, and achieve operational efficiency. In the digital age, the challenges managers face are becoming increasingly complex owing to rapid market changes, the emergence of new technologies, and rising consumer expectations (Kraus et al., 2022).

Digitalization has become a mantra for business organizations to create excellence and exploit opportunities in the market. This is especially true given Indonesia's consumer population, which is dominated by Generation Z and millennials, who have positive attitudes toward technology and actively engage in digital technology use. From a consumer perspective, the adoption of digital technology has given rise to various new consumption patterns and changed consumer expectations for the products and services they require. Meanwhile, from a producer perspective, the adoption of digital technology offers a variety of benefits while also creating new challenges in running a business (Rachinger, Rauter, Müller, Vorraber, & Schirgi, 2019).

The rapidly evolving era of digitalization has businesses worldwide facing new challenges and unlimited opportunities. Digitalization refers not only to the adoption of digital tools and technologies but also to a profound transformation in the way organizations operate, deliver value and engage with their stakeholders. It has fundamentally altered traditional business paradigms by enabling automation, enhancing data-driven decision-making, and increasing connectivity on an unprecedented scale.

Digitalization has transformed the way we work, communicate, and interact with the world around us. Remote work, virtual collaboration, cloud computing, and artificial intelligence are no longer futuristic concepts but everyday realities that redefine business operations and workforce management. Communication has become faster, more direct, and increasingly reliant on digital platforms, ranging from instant messaging and video conferencing to real-time project management tools, thus fostering greater transparency and agility within organizations.

In the realm of business, digitalization has become a vital element in addressing the challenges of increasingly intense global competition. As markets become more saturated and customer expectations rise, businesses are compelled to differentiate themselves not only through products and services but also through customer experience, operational efficiency, and technological innovation. Digital tools enable companies to streamline their supply chains, personalize their marketing strategies, anticipate market trends, and optimize internal processes in ways that were previously unattainable.

Moreover, digitalization opens up new market opportunities by removing geographical barriers, allowing even small- and medium-sized enterprises to reach global audiences through e-commerce platforms, social media, and digital advertising. It empowers businesses to create new revenue streams, experiment with innovative business models such as freemium, subscription-based, or platform-driven models, and respond swiftly to shifting consumer demands. In conclusion, digitalization is no longer an optional strategy but a fundamental necessity for survival and growth in the global economy. Companies that embrace digital transformation proactively, invest in the right technologies, and cultivate a digital-first mindset are better positioned to innovate, compete, and thrive in the ever-changing digital landscape.

Digitalization in the business world can be understood as the application of digital technology to all aspects of business operations, including production, marketing, distribution, and management. Digitalization has transformed the way companies operate, interact with customers, and manage their resources. In this context, digitalization is not only about the use of technology, but also about fundamental changes in business culture and processes (Verhoef et al., 2021).

The emergence of business-based platforms, coupled with the rapid development of Internet technology, has transformed the conventional business paradigm. This platform-based business model indirectly leverages data and Internet network technology to create new rules for creating value and delivering results for all parties involved in the ecosystem. This platform business model has helped many businesses scale without significant investment while simultaneously increasing customer value by leveraging network effects. The rapid growth of platform ecosystems has disrupted several industries (Kusuma, Afifah, Ruba, & Utama, 2023).

The scope of digital management is broad and varies depending on the field of application. In the context of digital marketing, it encompasses the use of digital technology to promote products or

services and reach a wider audience. Digital marketing allows companies to use data to target audiences based on factors such as sex, age, location, interests, and education. Companies can also retarget potential visitors who are already familiar with their brand using different methods and messages for each audience. The scope of digital marketing technology is constantly evolving, and companies are staying current by adding online components to their physical stores or by combining various digital marketing strategies to create an online presence (Miradji et al., 2025).

According to Acatrinei, Apostol, Barbu, Chivu, and Orzan (2025), digital marketing enhances customer engagement and enables personalized communication through automation and artificial intelligence tools. Furthermore, Ijomah, Idemudia, Eyo-Udo, and Anjorin (2024) emphasized that digital platforms allow small and medium enterprises (SMEs) to compete with larger companies by leveraging cost-effective tools such as social media, email marketing, and search engine optimization. The digital era has brought a number of fundamental changes in the way companies operate and compete (Astuti, Sayudin, & Muharam, 2023). Some prominent characteristics of the digital economy include:

1. Access to big data: Companies now have access to vast amounts of customer, market, and operational data, which, if managed properly, can become a source of competitive advantages.
2. Speed of technological innovation: Innovation cycles are shortening, requiring companies to continuously adapt to stay relevant.
3. Digitalization of business processes: Many business processes are now automated or digitally operated, from logistics and production to customer services.
4. Platform economy: The emergence of platform-based business models, such as marketplaces and the sharing economy, is creating a market structure unlike any other.

In the digital era, the economic approach to management has evolved. Managerial decisions are no longer based solely on intuition or experience but increasingly rely on data analysis, economic models, and information technology. For example, when determining product prices, companies not only consider costs and margins but also analyze consumer behavior data and market conditions in real time (Chorli & Kazemi, 2023).

Furthermore, principles such as marginal analysis, supply and demand theory, and cost and production theory remain relevant but are now integrated with digital tools such as analytical dashboards, machine learning, and AI-based simulations. Strategic decisions, such as business expansion, new product launches, or digital innovation, now require collaboration between economic managers, data analysts, and technology developers (Luthfiyah et al., 2024).

Thus, an introduction to management economics in the digital age not only discusses the basic economic concepts used in management but also explores how these concepts are applied and adapted within the context of a fast-paced and dynamic digital environment. Traditional economic principles, such as supply and demand, opportunity cost, marginal analysis, and profit maximization, remain relevant; however, they must now be reinterpreted in light of digital innovation, technological disruption, and real-time data availability. The digital age introduces new variables into economic decision-making, ranging from digital consumer behavior, platform economies, and network externalities to algorithmic pricing, data monetization, and virtual markets.

The Insight Concept on Economics and Management in the Digital Age highlights the tension between modern economic principles and information technology-based managerial approaches. The digital era has transformed the structure and dynamics of the global economy through the emergence of a data-driven economy, automation, and digital business models that emphasize efficiency, innovation and connectivity. In an economic context, digital transformation has given rise to new phenomena such as the platform, creative, and sharing economies, shifting society's production, distribution, and consumption patterns toward more inclusive and dynamic ones.

From a management perspective, the digital era demands that organizations adapt through transformations in strategy, structure, and work culture. Managerial approaches now focus not only on control and efficiency but also on the ability to innovate, speed decision-making, and use digital

technology to support more adaptive management processes. Digital leadership and technology-based human resource management are key aspects of maintaining organizational competitiveness amid technological disruption and rapid changes in the business environment.

Thematically, economics and management in the digital era create a new paradigm for understanding the relationship between technology, economic value, and organizational strategy. The two complement each other: the digital economy provides a systemic framework for value creation and growth, whereas digital management provides adaptive mechanisms for resource management, innovation, and decision-making. Thus, this contextual insight emphasizes that success in the digital era is determined not only by the economy's ability to innovate but also by management's effectiveness in harmoniously integrating technology, people, and strategy toward organizational goals.

4.2. The Role of Management Economics in the Digital Era

Amidst the digital transformation sweeping across nearly every industrial sector, the role of management economics has become increasingly strategic and complex in nature. As a branch of economics that focuses on the application of economic theory and analytical tools to managerial decision-making, management economics must adapt to the new dynamics brought about by digital technology. The digital era is changing not only the way companies operate but also the way they think about strategy, pricing, resource management, and understanding market behavior (Ritonga & Firdaus, 2024).

One of the key contributions of managerial economics in the digital age is its ability to help managers make data-driven decisions. With the advancement of big data and analytics technology, companies can now access and analyze large amounts of data quickly and accurately. Economic principles, such as marginal analysis, supply and demand theory, and cost budgeting, can now be applied using software and management information systems (Kusuma et al., 2023).

Management economics also drives operational efficiency, which is increasingly enhanced through digitalization. Production, distribution, and customer service processes can be optimized using automation, the Internet of Things (IoT), and enterprise resource planning (ERP) systems. Cost and productivity theory in management economics is used to analyze the trade-offs between technology investments and long-term cost savings (Octavia, Heriberta, & Sriyudha, 2024).

Competition in the digital era is increasingly intense and geographically unbounded. Management economics provides a framework for companies to analyze digital market structures, whether they are perfectly competitive, monopolistic, or digital-platform monopolies. The use of game theory is relevant for understanding competitors' strategies and anticipating their actions. Furthermore, the concepts of customer value and long-term strategic decision-making are at the heart of maintaining a competitive position amidst digital disruption (Alfira, Anshori, & Andriani, 2023).

Digital-era management integration enables companies to automate their business processes. This leads to greater efficiency, reduced costs, and shorter response times to changes in the market. Digital-era management also involves customers in product development and marketing processes. Companies can use social media and collaborative platforms to listen to customer feedback and respond promptly. Strategic partnerships are becoming increasingly important for digital-era management integration (Purnomo, 2024). Companies collaborate with partners to develop innovative solutions and achieve their shared goals. Integrating digital management requires a shift in the organizational culture. Companies must become more responsive to change, more open to innovation, and encourage collaboration across departments.

Skilled human resources are key to successful digital management integration in the construction industry. Companies must invest time and resources in training and developing their employees to understand the technologies and tools used in digital management. The integration of digital management also contributes to sustainability. With better data, companies can manage their resources more efficiently and reduce their environmental impacts (Widiana, 2020). Companies must integrate

digital-era management to remain competitive, manage data effectively, and respond quickly to market changes. Data plays a key role in digital-era management by helping companies understand customers, market trends, and operational efficiency (Laelasari, Fasa, & Susanto, 2024).

The Role of Economics and Management in the Digital Age highlights how these two fields function synergistically in shaping the development direction of organizations, society, and the global economic system amid rapid technological transformation. In the economic context, the digital era has presented a paradigm shift from a conventional economy to one based on technology, information, and innovation. The role of economics in this era is not limited to resource management but also includes value creation through the digitalization of production, distribution, and consumption processes. The digital, creative, and sharing economies demonstrate that technology is a key driver of inclusive, efficient, and sustainable economic growth.

Management plays a central role in directing and optimizing the use of digital technology to improve organizational performance. Management in the digital age functions as a controller of strategy, innovation, and human resources, based on digital competencies. Digital leadership, organizational transformation, and data-driven decision-making are crucial for ensuring organizational success in the face of disruptive changes. Through the application of digital management principles, organizations can create flexible work structures, strengthen their competitiveness, and improve the quality of their services to the public or consumers.

The role of economics and management in the digital age illustrates the close relationship between the macro and micro dimensions in developing a modern system oriented towards efficiency and innovation. Economics provides the framework for values and policy direction for digital development, while management serves as the operational instrument that translates this vision into strategic and measurable action. Thus, the role of economics and management in the digital era is not only as a driver of growth but also as a key foundation for creating adaptive, competitive, and sustainable governance in the global digital ecosystem.

According to the author, the role of management economics in the digital era is increasingly vital and cannot be ignored. Amid rapid technological disruption, companies can no longer rely solely on intuition or experience for decision-making. A more structured and scientific approach is needed, one of which is the application of the principles of management economics. Technologies such as big data, artificial intelligence, and automation should not be viewed merely as operational tools but also as a foundation for developing sustainable business strategies.

The author believes that management economics can bridge the gap between classical economic theory and the practical needs of the digital business environment. By integrating economic analysis with accurate digital data, managers can be more confident in determining the company's direction, assessing risks, and allocating resources efficiently. Therefore, in the author's view, management economics is not merely a supporting discipline but has become a core element in the digital transformation process and strategic decision-making in the modern era.

4.3. Strategic Decision Making in the Digital Age

Decision-making is crucial for both individual and business activities. Decision-making involves choosing between two or more alternatives. While decision-making leads to the achievement of goals, it also carries a certain amount of risk if the decision is inappropriate. G.R. Terry defines decision-making as a choice based on specific criteria among two or more possible alternatives (Ashari, Ladaina, & Hartini, 2024). In other words, decision-making is not a passive or impulsive process but rather a deliberate and systematic effort that requires managers to carefully assess various possible courses of action before selecting the one that best aligns with organizational goals.

According to George, effective decision-making involves a high level of cognitive engagement, where managers must gather relevant information, identify problems or opportunities, analyze potential outcomes, and weigh the costs and benefits associated with each alternative. This process often begins

with problem identification, wherein managers recognize a gap between the current state and desired objectives. Once the problem is clearly defined, they move on to developing alternatives, considering multiple strategies or solutions that could be pursued. Each alternative is then evaluated using quantitative and qualitative criteria, including financial impact, feasibility, risk level, time frame, and alignment with the organization's values and long-term vision.

Claude S. George Jr. emphasizes that this evaluative stage is critical, as it helps managers avoid hasty decisions based on incomplete information or personal biases. Instead, by engaging in thoughtful analysis, managers are more likely to arrive at rational, objective, and well-informed choices that support the organization's overall effectiveness. In the context of modern management, especially in the digital age, George's perspective remains highly relevant. The abundance of data and the speed of change require managers to be more analytical and disciplined in their approach to decision-making. They must be able to integrate traditional decision-making principles with modern tools, such as data analytics, forecasting models, and digital simulations, to improve the accuracy and relevance of their choices. Ultimately, by viewing decision-making as a structured, thoughtful, and intentional process, as Claude S. George Jr. describes, managers are better equipped to lead organizations through complexity and uncertainty, ensuring that each decision contributes meaningfully to organizational success.

Decision-making in various situations involves several important aspects that influence leaders' decisions. Complex and ambiguous situations often make it difficult for leaders to determine the truth or choose the best option, requiring them to consider various alternatives and their potential consequences. When faced with a dilemma, the decision made can have detrimental consequences for the organization; therefore, it is important to involve team members and choose the option with the least negative risk (Ramadhana, Sukmana, N, & Kusumasari, 2024).

Various techniques, such as participatory, Delphi, and brainstorming methods, can be applied to support the decision-making process by gathering different information and perspectives. Furthermore, leaders must be able to adapt to rapidly changing environments, ensuring that decisions are flexible and responsive to the dynamics that arise in the environment. Human factors, such as understanding team dynamics and communication skills, also play a crucial role, as leaders need to explain the rationale behind decisions in a way that is easily understood to gain support from their team members. Overall, decision-making in various situations requires a systematic approach that considers the complexity of the situation, risks, techniques used, adaptation to change, and human factors to achieve optimal results within the organization (Ashari et al., 2024).

A leader may face complex decision-making even under conditions of certainty because the various influencing variables are assumed to be known without questions. However, in real life, not everything is known with certainty. Nevertheless, decision-making under conditions of certainty can be complex; therefore, this academic work will be easier to explain if we begin with the topic of decision-making under conditions of certainty (to be known), namely, conditions of certainty (Lee & Coricelli, 2020; Pasolong, 2023).

Collaboration is key in the digital age. Companies must build partnerships with startups, technology companies, educational institutions, and other digital ecosystems. These partnerships can accelerate innovation, reduce research costs, and expand their market reach. A strategic partnership is a long-term collaborative relationship between two or more organizations that agree to work together to achieve mutually beneficial business goals. This partnership goes beyond transactions or typical vendor-client relationships. It involves a significant level of integration, sharing resources, risks, and responsibilities to achieve greater results than either party could achieve alone (Miradji et al., 2025).

In the digital era, strategic decision-making is determined not only by market acumen but also by the ability to manage data and technology effectively. This process is now faster, more dynamic, and multidisciplinary. Companies that can combine the power of data, technology, and human resources in strategic decision-making will be better prepared to face future challenges. Therefore, developing digital capacity at all levels of an organization is an absolute necessity in today's era of digital

transformation. The author believes that strategic decision-making in the digital era is no longer an option but a necessity. Rapid changes in technology, consumer behavior, and business models force organizations to become more agile and responsive. In this context, decisions that previously required weeks can now be made in a matter of days or even hours without sacrificing quality and strategic direction.

5. Conclusions

5.1. Conclusion

In the digital era, characterized by technological advancements, data transformation, and rapid market disruption, the role of managerial economics and strategic decision-making has become increasingly important. Managerial economics serves as an analytical framework that helps managers understand market behavior, allocate resources efficiently, and make rational and measured decisions. Meanwhile, the strategic decision-making process has evolved to become more dynamic, data-driven, and heavily influenced by digital technologies such as artificial intelligence, big data and management information systems.

An organization's success in facing the challenges and opportunities of the digital era is largely determined by its ability to integrate managerial economics principles with the effective use of digital technology and its capacity to build and maintain an organizational culture that can quickly adapt to change. In today's fast-paced, technology-driven business environment, organizations are constantly being pushed to make decisions faster, with greater accuracy, and under increasingly complex circumstances. This requires more than just knowledge of economics or access to advanced digital tools; it requires a strategic synthesis of both.

Managerial economics provides a framework for understanding resource allocation, cost structures, market behavior, pricing strategies, and decision making under conditions of uncertainty. These principles are essential for rationalizing business decisions and optimizing their outcomes. However, economic theory alone is insufficient. In the digital era, organizations must pair this theoretical foundation with digital capabilities, such as big data analytics, cloud computing, artificial intelligence, machine learning, and real-time business intelligence systems. These tools empower decision-makers to process vast amounts of data, detect trends and patterns, simulate outcomes, and forecast future market conditions more accurately than ever before.

5.2. Implications

The implications of economic integration, management, and strategic decision-making in the digital era emphasize the need for increased digital capacity, cross-sector collaboration, and policies that are responsive to technological dynamics. This forms the foundation for creating resilient, innovative, and sustainability-oriented economic and organizational systems amid increasingly complex global competition.

References

- Acatrinei, C., Apostol, I. G., Barbu, L. N., Chivu, R.-G., & Orzan, M.-C. (2025). Artificial Intelligence in Digital Marketing: Enhancing Consumer Engagement and Supporting Sustainable Behavior Through Social and Mobile Networks. *Sustainability*, 17(14), 1-16. doi:<https://doi.org/10.3390/su17146638>
- Adnyana, I. M. (2021). *Ekonomi Manajerial*. Jakarta Selatan: Lembaga Penerbitan Universitas Nasional (LPU-UNAS).
- Akbar, R. S., Abdurahman, A., Nursanto, G. A., & Hartati, B. (2025). Digitalization, Organizational Change, and Human Resource Management at the Immigration Polytechnic. *Annals of Human Resource Management Research*, 5(3), 1-12. doi:<https://doi.org/10.35912/ahrmr.v5i3.2838>
- Alfira, S., Anshori, M., & Andriani, N. (2023). The Influence of the Digital Era on Corporate Strategic Decisions: A Literature Review. *Jurnal Ilmiah Manajemen Kesatuan (JIMKES)*, 11(3), 1255-1262.

- Ashari, D., Ladaina, M. S., & Hartini, T. (2024). Peran Big Data dalam Pengambilan Keputusan Strategis Perusahaan. *EKOMAN: Jurnal Ekonomi, Bisnis dan Manajemen*, 2(3), 401-422.
- Astuti, A. W., Sayudin, S., & Muharam, A. (2023). Perkembangan Bisnis di Era Digital. *Jurnal Multidisiplin Indonesia*, 2(9), 2787-2792. doi:<https://doi.org/10.58344/jmi.v2i9.554>
- Chorli, A., & Kazemi, S. (2023). Strategic Management in the Digital Age: A Review of Decision-Making Frameworks. *International Journal of Innovation Management and Organizational Behavior (IJIMOB)*, 3(2), 21-32. doi:<https://doi.org/10.61838/kman.ijimob.3.2.4>
- Fahad, A. M., Nindya, V., Kristiyanto, I., & Maliki, B. I. (2024). Strategic Management in the Digital Age: Challenges and Opportunities for Organizations. *YUME: Journal of Management*, 7(1), 800-811. doi:<https://doi.org/10.37531/yum.v7i1.6476>
- Ijomah, T. I., Idemudia, C., Eyo-Udo, N. L., & Anjorin, K. F. (2024). Innovative Digital Marketing Strategies for SMEs: Driving Competitive Advantage and Sustainable Growth. *International Journal of Management & Entrepreneurship Research*, 6(7), 2173-2188. doi:<https://doi.org/10.51594/ijmer.v6i7.1265>
- Izal, F. S. P., Wijaya, T., & Utama, A. (2025). Pemasaran Digital dalam Perspektif Akademis: Studi Bibliometrik Literatur Global. *Studi Akuntansi, Keuangan, dan Manajemen*, 5(2), 457-567. doi:<https://doi.org/10.35912/sakman.v5i2.5245>
- Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2022). Digital Transformation in Business and Management Research: An Overview of the Current Status Quo. *International journal of information management*, 63, 1-18. doi:<https://doi.org/10.1016/j.ijinfomgt.2021.102466>
- Kusuma, I. A., Afifah, F. D. N., Ruba, M. G., & Utama, Y. Y. (2023). Analisis Manajemen Digital dalam Mengoptimalkan Kinerja Bisnis. *Proceedings of Islamic Economics, Business, and Philanthropy*, 2(1), 11-23.
- Laelasari, A., Fasa, M. I., & Susanto, I. (2024). Peran Digitalisasi dalam Strategi Pengambilan Keputusan Menjadi Nasabah Bank Syariah Indonesia. *Jurnal Intelek Dan Cendekiawan Nusantara*, 1(5), 7188-7201.
- Lee, D., & Coricelli, G. (2020). An Empirical Test of the Role of Value Certainty in Decision Making. *Frontiers in Psychology*, 11, 1-12. doi:<https://doi.org/10.3389/fpsyg.2020.574473>
- Luthfiyah, N., Putry, W., Putri, N., Kansa, A., Hidayat, R., & Ikaningtyas, M. (2024). Perencanaan dan Strategi Bisnis yang Efektif dalam Era Digital Menghadapi Tantangan Bisnis Modern. *Jurnal Perubahan Ekonomi*, 8(3), 42-50.
- Miradji, M. A., Adi, B., Wida, A., Gunita, G., Syah, E. D., & Mar'atus, N. (2025). Kunci Sukses dalam Manajemen Strategi di Era Digital. *Pajak dan Manajemen Keuangan*, 2(3), 13-31. doi:<https://doi.org/10.61132/pajamkeu.v2i3.1154>
- Nefianto, T. (2025). Strategi Transformasi Digital Untuk Penguatan Manajemen Organisasi. *Jurnal Sosial Teknologi*, 5(10), 4026-4031. doi:<https://doi.org/10.59188/jurnalsostech.v5i10.32469>
- Octavia, A., Heriberta, H., & Sriyudha, Y. (2024). A Study of Jambi Batik Artisans in Innovation and Strategic Decision-Making to Influence the Development and Resilience of the Jambi Batik Industry. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, 8(2), 760-772. doi:<https://doi.org/10.22437/jiituj.v8i2.38037>
- Pasolong, H. (2023). *Teori Pengambilan Keputusan*. Bandung: Penerbit Alfabeta.
- Purnomo, B. R. (2024). *Manajemen Di Era Digital: Perspektif Keuangan-Inovasi dan UMKM*. Yogyakarta: UGM Press.
- Rachinger, M., Rauter, R., Müller, C., Vorraber, W., & Schirgi, E. (2019). Digitalization and its Influence on Business Model Innovation. *Journal of Manufacturing Technology Management*, 30(8), 1143-1160. doi:<https://doi.org/10.1108/JMTM-01-2018-0020>
- Ramadhana, S., Sukmana, C., N, R. H., & Kusumasari, I. (2024). Pengambilan Keputusan Berbasis Data di Era Digital. *Triwikrama: Jurnal Ilmu Sosial*, 5(4), 111-120. doi:<https://doi.org/10.6578/triwikrama.v5i4.6687>
- Ritonga, R. K., & Firdaus, R. (2024). Pentingnya Sistem Informasi Manajemen dalam Era Digital. *Jurnal Intelek Dan Cendekiawan Nusantara*, 1(3), 4353-4358.
- Rizal, A., Kahfi, S. N., Abdurrahman, A., Wulandono, W., Tono, T., & Prasetyono, H. (2023). Manajemen Perubahan di Era Digital: Tantangan dan Peluang Bagi Adaptasi Organisasi. *BULLET: Jurnal Multidisiplin Ilmu*, 2(4), 933-941.

- Rosyada, A., Al Fatih, M., Sutanto, N. E. D., & Antika, G. R. (2024). Implementasi Ekonomi Manajerial pada Perusahaan Manufaktur. *JB: Jurnal Bahasa Indonesia*, 2(1), 49-55. doi:<https://doi.org/10.59966/jbi.v2i1.960>
- Trianung, T., Sundari, W., Kurniawan, A., Setiawan, N. A., & Aisyah, J. (2024). Education Management: Decision-Making Strategies in Technology Integration in the Digital Age. *AL-ISHLAH: Jurnal Pendidikan*, 16(2), 2032-2044. doi:<https://doi.org/10.35445/alishlah.v16i2.5141>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital Transformation: A Multidisciplinary Reflection and Research Agenda. *Journal of Business Research*, 122, 889-901. doi:<https://doi.org/10.1016/j.jbusres.2019.09.022>
- Widiana, M. E. (2020). *Buku Ajar Pengantar Manajemen*. Jawa Tengah: Penerbit CV. Pena Persada.