Progress on Multidisciplinary Scientific Research and Innovation
"Volume 1, Issue 1, Year 2024"
website: https://www.c5k.com

Research Article

Navigating the AI Revolution in Business Management: New Strategies and Innovations

Mustakim Bin Aziz
Department of Business Administration, Westcliff University, Irvine, CA 92614, USA
**Corresponding Author: emon1246@gmail.com*

ARTICLE INFO

Article history:
02 Jul 2024 (Received)
10 Aug 2024 (Accepted)
18 Aug 2024 (Published Online)

Keywords:
Artificial Intelligence (AI), Business Management, Business strategies, AI revolution, Business matrix.

ABSTRACT

Artificial Intelligence (AI) has changed a paradigm shift in business management, presenting unprecedented opportunities for innovation and strategic enhancement. This research explores the transformative impact of AI technologies on contemporary business practices. This paper presents, how AI reshapes decision-making processes, optimizes operational efficiency, and fuels innovative strategies to maintain competitive advantage in a rapidly evolving market. Through case studies and a comprehensive analysis of industry applications, the research identifies key AI-driven tools and methods that revolutionize various aspects of business management, including supply chain optimization, customer relationship management, and predictive analytics. The study also examines the challenges and ethical considerations associated with AI integration, providing insights into best practices for successful implementation. By synthesizing theoretical frameworks with practical examples, this study aims to provide a holistic understanding of the dynamic interplay between AI and business management. It emphasizes the need for businesses to adapt to this technological revolution and outlines strategic recommendations for using AI to drive sustainable growth and innovation. By synthesizing theoretical frameworks with practical examples, this thesis aims to offer a holistic understanding of the dynamic interplay between AI and business management. It underscores the necessity for businesses to adapt to this technological revolution and outlines strategic recommendations for leveraging AI to drive sustainable growth and innovation.

DOI: https://doi.org/10.103/xxx @ 2024 Progress on Multidisciplinary Scientific Research and Innovation (PMSRI), C5K Research Publication

1. Introduction

Artificial intelligence (AI) has rapidly integrated into the consumer environment, improving and simplifying everyday life. Its impact on business management is multifaceted, starting from client interactions and extending to behind-the-scenes operations. AI is revolutionizing routine business functions by streamlining data management, and processes and optimizing operations. Industries are using AI algorithms for deep data analysis, helping organizations manage their data efficiently Human resources departments and staffing agencies use AI through resumes to match top candidates to job opportunities through advanced keyword functionality and comprehensive data analysis (Costa-Climent et al., 2024). The healthcare sector also benefits from AI, with organizations using it to supplement medical education and training. AI-powered digital assistants assist doctors by scanning medical information and evaluating treatment options, increasing the accuracy and efficiency of medical practice. The combination of robotic process automation and AI, known as hyper-automation, automates numerous tasks, significantly improving employee productivity(Reim et al., 2020). Estimates from PWC indicate that by 2030, the integration of AI into business management could contribute a staggering $15.7 trillion to the global economy. This economic impact stems from AI's ability to increase efficiency and profitability across various business operations (Mishra & Pani, 2021).

AI technology performs complex tasks traditionally associated with human intelligence, such as observation, learning, planning, and decision-making. By automating processes, optimizing operations, and providing deep insights through data analysis, AI is fundamentally transforming business practices. This transformation increases accuracy, improves customer experience, and creates new revenue opportunities (Sjödin et al., 2023). The widespread use of AI in business management spans several important areas. In predictive analytics, AI processes historical data to predict trends, supporting strategic decision-making and risk management. AI-driven process automation increases operational efficiency, allowing human resources to focus on more complex tasks. In customer analytics, AI tools analyze consumer data to gain

*Corresponding author: emon1246@gmail.com (Mustakim Bin Aziz)

Cite: Mustakim Bin Aziz (2024). Navigating the AI Revolution in Business Management: New Strategies and Innovations. *Progress on Multidisciplinary Scientific Research and Innovation,* 1(1), pp. 27-35.

valuable insights, which are needed to tailor marketing strategies and enhance the customer experience. AI plays an important role in security monitoring, continuous scanning for anomalies and threats, and providing proactive cyber security solutions (Najem et al., 2024).

Thus, AI has not only changed the way to generate and use information for decision-making. AI has also revolutionized the ways of doing business influencing trade and management practices in several sectors that offer increasingly competitive and sustainable products or services (Nitin Liladhar et al., 2024). Additionally, AI optimizes work performance by analyzing workflows, identifying skill gaps and suggesting relevant training programs, thereby increasing productivity and job satisfaction. Artificial intelligence (AI) is increasingly integral to the modern digital landscape, and its impact on marketing and advertising is considerable. AI's impact ranges from the clever and humorous Siri to self-driving cars like Tesla and even Google's AI mastering video games within hours. These examples highlight the transformative impact of AI in various industries (Füller et al., 2022).

AI applications include identifying trends in data to reduce market risk, enhancing customer service through virtual assistants, and analyzing large volumes of documents to identify compliance issues. Only recently have companies begun to truly understand and anticipate AI and robotics's potential for the business world (Allioui & Mourdi, 2023). AI facilitates self-learning systems through tools such as data mining, pattern recognition, and natural language processing. This makes AI highly scalable, leading to significant cost savings. Additionally, AI's consistency and rule-based programs help reduce business errors. Continuous improvement and the ability to process documents open many business opportunities. AI technologies include natural language processing, speech recognition, machine learning, robotics, and computer vision (Allioui & Mourdi, 2023; Füller et al., 2022). This technology offers various opportunities for businesses. Machine learning, an approach to achieving AI, includes deep learning, which focuses on algorithms inspired by the structure and function of the human brain (Lanteri, 2021).

Marketing like many other domains, has been significantly impacted by AI and this impact is expected to increase. For example, robots can replace salespeople, and websites can automatically update and reformat based on eye-tracking data. AI is poised to revolutionize marketing, research transfer, and emerging trends the rapid advancement of AI will transform the marketing landscape in academic, research and business contexts, creating a major challenge for organizations to adapt. Companies need to continuously train their employees to keep up with new technologies. Working with AI is no longer science fiction but a necessary reality for survival. Marketing professionals must enhance and adapt their skills to work alongside AI and robots in preparation for the near future.

2. Literature Review

Digitalization holds the potential to revolutionize industrial activity across firms and ecosystems, unlocking new sources of innovation, efficiency, growth, and sustainability. Artificial intelligence (AI) is radically changing the corporate landscape with its applications spanning numerous domains. AI is the process of making machines intelligent, according to DeepMind creator Demise Hassabis. This definition is widely accepted in the academic and technological community (Bilgram & Laarmann, 2023). Artificial Intelligence (AI) comprises multiple subfields, such as machine learning and deep learning, and its practical applications are becoming pervasive in daily life. These applications, which use advanced data processing techniques to exhibit intelligent behaviour, span from voice recognition, virtual assistants, and image identification systems to search engine recommendations (Fenwick et al., 2018). As the 20th century unfolded, technological advancements continued to shape the landscape of business management. The proliferation of electricity, telecommunications, and transportation networks facilitated global trade and spurred the growth of multinationals. The diversity of AI is highlighted by Guruduth Banavar, a former IBM leader in AI research, who defines AI as a collection of diverse technologies intended to mimic human intellect. Due to its diverse nature, artificial intelligence (AI) has advanced several industries, most notably digital marketing, where its data-driven strategy allows for highly focused and successful marketing efforts. With its ability to leverage massive volumes of digital data to optimize lead generation, market research, social media management, and user experience personalization, artificial intelligence (AI) has a particularly big impact on marketing (Okunlaya et al., 2022).

Custom AI systems and vendor-provided solutions are two categories into which AI technologies in marketing can be divided. Solutions from vendors, frequently offered as Software-as-a-Service (SaaS), give users access to ready-to-use tools for customer relationship management, analytics, and other features. Tailored AI systems are designed to meet particular business requirements and can be built in-house or through external partnerships, guaranteeing their efficacy and relevance (Mishra & Tripathi, 2021). Predictive analytics, natural language processing, and automated task management are just a few of the features that big businesses like IBM and Salesforce have added to their main products, IBM Watson Campaign Automation and Salesforce Einstein. Paul Roetzer of the Marketing Artificial Intelligence Institute created the 5Ps of Marketing AI, which offer a tactical framework for incorporating AI into marketing procedures. Personalized email marketing, better website design,

improved search engine optimization, digital advertising optimization, lead creation, and social media analysis are a few of these. The fact that AI can do and evaluate A/B testing emphasizes even more how crucial a function it plays in advancing accuracy and efficiency in contemporary marketing tactics (Perifanis & Kitsios, 2023).

AI applications are not limited to marketing; they are used in many other industries. Artificial intelligence (AI) greatly improves transaction security by evaluating creditworthiness and spotting fraudulent activity instantly. Virtual Customer Assistants (VCAs) in customer service employ voice recognition technology to handle simple questions on their own and refer more complicated problems to human agents. The quality and efficiency of services are enhanced by this hybrid strategy (Popkova & Gulzat, 2020). With applications in cardiology, neurology, embryology, and intricate internal organ procedures, artificial intelligence (AI) supports medical education, training, and clinical decision-making. AI helps heavy industries by lowering the risks involved with human operation and maintenance and facilitating the safe and efficient operation of massive machines. Heuristic search algorithms are used by telecom corporations to handle workforce scheduling; BT Group's 20,000 engineer scheduling program is one example of this (Paschen et al., 2020). AI is programmed to carry out creative tasks, including composition, performance, music theory, and sound processing that are typically completed by trained artists. AI now plays a bigger part in antivirus detection, using sophisticated algorithms to find and remove threats. AI is capable of answering a wide range of questions, as shown by educational technologies like ChatGPT, which improves learning outcomes. This thorough analysis emphasizes how AI is revolutionizing several industries and how it may improve productivity, accuracy, and creativity. The global economic environment is predicted to change as AI technologies improve and become more integrated into different company processes (Caruso, 2018).

Several studies have highlighted how important AI is to the development of innovative circular business models. By reducing resource leakage, artificial intelligence (AI) may greatly increase production and efficiency, resulting in more circular supply chains. AI provides two crucial features for businesses in the industrial sector: automation and augmentation. Automation employs AI to handle repetitive jobs, increasing efficiency and cutting costs, whereas augmentation uses AI to increase human decision-making and productivity (Goralski & Tan, 2020). These features serve as the cornerstone for the creation and commercialization of circular business models (CBMs), which empower businesses to devise clever solutions that maximize resource utilization and improve operational effectiveness. Though additional research is required to fully grasp the capabilities of AI-enabled CBMs, the potential of AI in these areas is encouraging. The body of research on CBMs already in existence can provide insightful information about using AI to promote circularity. The effects of AI on the objectives of the circular economy and sustainability have recently attracted scholarly interest (Fiorentino et al., 2020).

In order to lower resource inputs and waste emissions, CBMs are business models that cycle, expand, intensify, and dematerialize material and energy loops. AI can help these strategies in a number of ways. Cycling is the process of repurposing, recycling, remanufacturing, and renovating resources inside a system. By seeing trends, predicting material flows, and enhancing end-of-life plans, AI can improve this. Lengthening the life of a product through prolonged usage services, maintenance, repair, and durable design is known as extending resource loops (Makridakis, 2017).

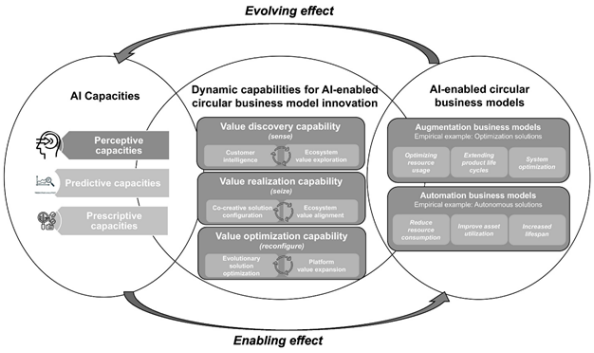

Fig. 1. A framework for AI-enabled circular business model innovation (Makridakis, 2017).

Our framework further details the evolutionary process of AI commercialization by specifying interdependent enabling and evolving effects (arrows in Fig. 1) (Makridakis, 2017). AI can greatly increase the lifespan of products by enabling predictive maintenance and optimized usage. By implementing strategies such as the sharing economy, product utilization can be maximized by intensifying resource cycles. AI can improve product design and real-time data analysis to increase product utilization. Dematerialization replaces hardware with software and services to deliver product functionalities (Makridakis, 2017). AI improves resource optimization, which increases the software's potential. Although these tactics are frequently treated as separate business models in the literature, integrating these approaches could have the greatest potential for sustainability. AI can improve circularity and sustainability by tackling systemic inefficiencies that have long existed. Detailed insights into AI-enabled CBMs in industrial settings are, however, lacking. Advanced AI-enabled business models, including fleet management, optimization, outcome-based solutions, and autonomous solutions, are described empirically in the literature on digital servitization (Filatotchev et al., 2020). Nevertheless, there is still much to learn about fusing digital servitization with the ideas of the circular economy. This study intends to fill this research gap by examining the effects of artificial intelligence and

circular methods, thereby expanding the body of knowledge on digital servitization. It will specifically examine the potential of AI-enabled CBMs as well as the skills, procedures, and practices required for their successful commercialization (Radu, 2021).

Artificial intelligence (AI) has applications in many different corporate processes and operations. One of the main areas where AI has a big impact is marketing. Artificial Intelligence is changing the marketing environment, and a full revolution is anticipated soon. Even though marketing is one of the main applications of AI today and early adopters are attempting to reap the benefits of it, there is a dearth of literature that combines the two fields (Kitsara, 2022). A research drew attention to the paucity of research on artificial intelligence (AI) and marketing in the literature. Another study has reported that there are fewer than 50 papers pertaining to marketing and artificial intelligence in business-related journals on Scopus. Even if there are now more papers in Scopus on this subject, there are still fewer than 100. Because there is now a study gap and the potential to integrate AI to improve marketing decision-making, there is a need for additional studies to illustrate the influence of AI on marketing (Sewpersadh, 2023).

This objective requires a detailed examination of the ways in which AI technologies impact various business processes. The study will outline how artificial intelligence (AI) alters business strategies, increases effectiveness, improves decision-making processes, and strengthens customer relationships. and improves the organization's overall performance. Establishing practical guidelines for incorporating AI technologies into the workplace is also the aim of this objective. It will go through adoption strategies, best practices, and answers to the ethical, technical, and human resource problems that come up when implementing AI in the workplace.

3. Research Methodology

The study aims to explore the impact and potential of Artificial Intelligence (AI) in business operations using a mixed-methods approach. Online surveys were conducted to gather data on perceptions and experiences with AI among consumers and business professionals, aiming to assess current understanding and awareness of AI technologies, its impact on business operations, efficiency, and decision-making processes, and identify expectations and concerns regarding the future role of AI in business management. In-depth interviews were conducted with key stakeholders from the business and technology sectors, including AI experts, business executives, IT managers, and marketing professionals, to gain deeper insights into the strategic implementation of AI in business operations, understand the challenges and opportunities associated with AI adoption, and gather expert opinions on best practices for integrating AI technologies into business processes.

A series of case studies was developed to illustrate the practical applications of AI in various business contexts, focusing on companies that have successfully integrated AI into their operations, the impact of AI on specific business functions such as marketing, customer service, supply chain management, and product development, and lessons learned from the challenges faced during AI implementation and how they were addressed. Predictive analytics and simulation models were utilized to further understand the potential future impact of AI on business management. Historical data from businesses that have implemented AI will be analyzed to forecast future trends and behaviors in AI adoption and identify optimal strategies for different business contexts. Advanced statistical techniques and machine learning algorithms will be employed to build these models, providing actionable insights for business leaders looking to leverage AI.

Ethical and human resource considerations were also examined, considering data privacy, bias, accountability, changes in job roles, required skills, and training needs, and strategies for managing the human aspects of AI integration. This mixed-methods approach will provide a holistic view of the AI revolution in business management, offering valuable strategies and innovations for effective AI integration. Fig. 2 is the source of research samples.

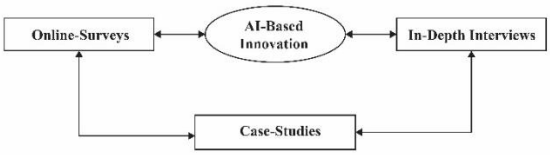

Fig. 2. Sample collection procedure.

From interviews and surveys 50 samples were collected. It was then analyzed qualitatively to extract information. Fig. 3 shows the in depth flowchart for research procedure.

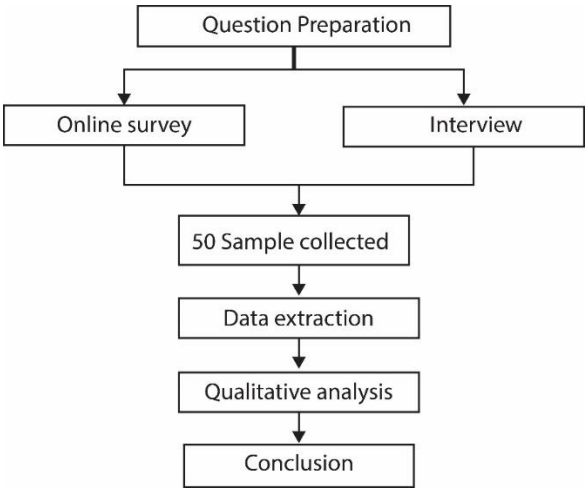

Fig. 3. Flowchart of research procedure.

4. Results and Discussions

Companies are increasingly incorporating AI and machine learning (ML) into their business models to enhance productivity and gain a competitive edge. With the rapid rise of AI applications, understanding the options and starting a digital transformation is crucial for businesses to meet the changing needs and expectations of customers. To succeed in AI projects, businesses must have the right talent on board, as having the right talent is often overlooked. Business models are the vehicle through which companies create and deliver value to customers, employees, and partners. Companies must navigate the interplay between AI tools and customer expectations to deliver the highest-quality customer value proposition (CVP). This requires a new way of operating based on continuously evolving and understanding customer value.

Employing the right people is crucial for a company to create an environment where innovation will thrive. A diverse leadership team can result in a more innovative organization that is 70% more likely to capture new markets. Workplace diversity is the key driver to innovation, and AI is not a replacement for human talent. High-performing team members are up to 800% more productive than average employees, and replacing just 20% of average-ability talent with high-performing talent can lead to project completion in one year, allowing companies to reach the market faster than competitors.

4.1. Positive and Negative Impact of AI in Business Management

Artificial Intelligence (AI) is revolutionizing business management by automating repetitive tasks, streamlining procedures, and evaluating vast amounts of data. AI also offers predictive analytics, enabling businesses to anticipate future patterns and make proactive decisions. It also saves costs by streamlining processes and eliminating the need for manual labor. AI also enhances customer experience by providing 24/7 customer service through chatbots and virtual assistants. AI promotes creativity by enabling the creation of new products and services, such as subscription-based and AI-as-a-Service (AIaaS), and plays a critical role in risk management through pattern identification and anomaly detection. AI-enabled predictive maintenance reduces maintenance costs and downtime.

However, integrating AI into corporate management has several disadvantages. One is the potential for job loss due to automation, and the need for workforce retraining or upskilling. Additionally, AI raises ethical questions, such as bias perpetuation in training data and accountability concerns. Data security and privacy are also crucial considerations, as AI systems require large data sets, pose security vulnerabilities, and require substantial financial investment. Over-reliance on technology can lead to diminished human judgment and critical thinking abilities, and AI systems may malfunction, disrupting company processes. The regulatory environment surrounding AI continues to change, making compliance with ethical guidelines and data protection rules challenging.

4.2. Comparison of Key Metrics before and after AI Implementation

The following graph presents a comparison of key performance metrics in businesses before and after AI implementation. The metrics include productivity, cost efficiency, customer satisfaction, and innovation rate. The data is derived from a sample of companies across different sectors that have integrated AI technologies over the past five years.

Table 1. .Key Metrics of AI

Metric	Before AI Implementation	After AI Implementation
Productivity	75%	90%
Cost Efficiency	70%	85%
Customer Satisfaction	80%	88%
Innovation Rate	60%	80%

Table 1 is the statistics of different key matrix before and after AI implementation in business management. Fig. 4 is a comparative graph for the revolution of AI in business.

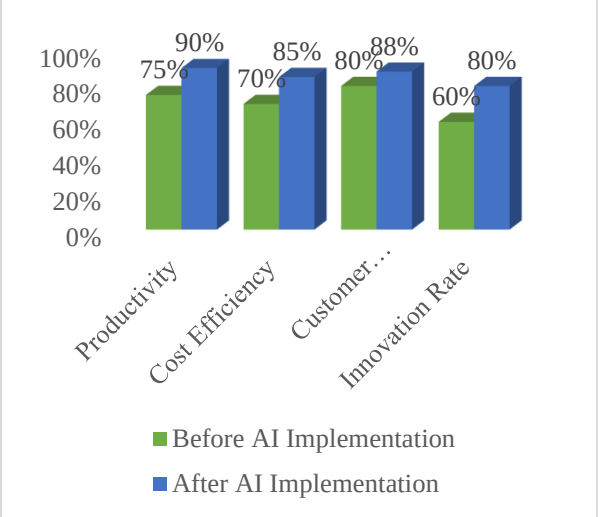

Fig. 4. Comparative graph for AI revolution in different matrices.

The productivity and cost efficiency increases with the AI implementation. It increases from 70s to 90s which helps a middle and small size business financially. The innovation rate with AI has drastically increased. It went from 60% to 80%. So is customer satisfaction, it also

increased about 8% which is huge for a freshly opened business.

4.3. Successful Techniques for Employing AI in Businesses

- **Getting a Competitive Edge:** Businesses that implement AI well and early on can have a big advantage over rivals. AI helps businesses remain ahead of the curve by identifying specialized markets, streamlining processes, and quickly responding to shifts in the market. Improved Risk Management: AI evaluates big datasets to anticipate and reduce possible dangers. Accurate risk assessment is essential to stability and growth in industries like insurance and banking, thus this capacity is very helpful in these areas. Increasing Worker Productivity: AI can boost productivity by offering cutting-edge tools and useful insights. By automating repetitive processes and providing data-driven direction, productivity can be increased overall by allowing people to concentrate on strategic and creative work.

- **Navigating Ethical and Regulatory Challenges:** Ensuring data privacy, removing algorithmic bias, and upholding responsibility are just a few of the ethical and regulatory challenges that must be addressed when deploying AI. Businesses need to create strong rules and procedures to uphold the public's trust and adhere to legal requirements. Creative Business Models: AI makes it possible to create creative business models like AI-as-a-Service, predictive maintenance, and subscription services. Businesses can increase the diversity of their services and open up new revenue sources by adopting these new models. Through the use of these tactics, organizations may leverage AI technology to propel growth, boost productivity, and sustain a competitive advantage in a dynamic market environment.

- **Navigating Ethical and Regulatory Challenges:** The deployment of AI involves addressing ethical and regulatory issues, such as ensuring data privacy, eliminating algorithmic bias, and maintaining accountability. Companies must develop robust policies and practices to maintain public trust and comply with regulations. Innovating Business Models: AI opens the door to innovative business models including subscription services, predictive maintenance and AI-as-a-Service. Embracing these new model can help companies diversify their offerings and tap into new revenue streams. By implementing these strategies, businesses can effectively use AI technology to drive growth, increase efficiency, and maintain a competitive edge in an evolving market landscape.

4.4. Challenges in Implementing AI Technologies in the Workplace

Ethical Considerations: One of the primary challenges in implementing AI is addressing ethical concerns. As AI systems become more autonomous, issues related to privacy, bias, and accountability arise. Ensuring that AI operates fairly and responsibly is an important priority. Job Disruption: AI-driven automation could significantly change the market. While this may eliminate some routine tasks, it creates new roles and demands new skill sets. Actively upskilling and reskilling the workforce is essential to mitigate job displacement and adapt to these changes. Data Security and Privacy: AI systems rely on large amounts of data, which raises concerns about the security and privacy of large amounts of sensitive information. Securing data and ensuring its ethical use is vital to maintaining trust in AI technology. Lack of transparency: Understanding the decision-making processes of complex AI algorithms can be challenging due to their opacity. This lack of transparency can lead to concerns about bias, especially in important areas such as criminal justice and health care.

4.5. Artificial Intelligence's Potential:

- **Increased Productivity and Efficiency:** By automating repetitive tasks, AI allows workers to focus on more complex and creative work. It streamlines workflow, improves accuracy, and increases overall efficiency, enabling organizations to achieve higher productivity.

- **Improved decision-making:** AI systems can analyze large amounts of data and provide valuable insights. This capability supports data-driven decision-making, improving performance and outcomes for both organizations and individuals.

Addressing these challenges is critical to successfully integrating AI technologies into the workplace, ensuring they deliver on their potential while maintaining ethical standards and public trust.

4.6. Augmentation Business Models

Augmentation business models use AI technology to enhance existing business processes and create new opportunities for growth and innovation. Here are some key aspects of the growth business model:

- **Improved customer experience:** AI can provide personalized and seamless customer experience by analyzing customer data and preferences. For example, AI-powered chatbots and virtual assistants can provide real-time support and recommendations, improving customer satisfaction and loyalty.

- **Optimized Operations:** AI tools can streamline and optimize various operational processes. Predictive analytics can predict demand, optimize inventory management, and reduce waste. Machine

learning algorithms can improve supply chain efficiency by identifying potential disruptions and suggesting proactive measures.

- **Innovative Products and Services:** AI enables the development of innovative products and services that were not possible before. For example, AI-driven diagnostics in healthcare can provide more accurate and faster results, while predictive maintenance in manufacturing can reduce downtime and extend equipment lifespan.
- **Data-driven decision-making:** AI systems can analyze vast amounts of data to provide actionable insights, helping businesses make informed decisions. This can lead to better strategic planning, more effective marketing campaigns, and improved financial management.
- **Workforce Augmentation:** AI can augment the capabilities of the workforce by automating routine tasks and providing advanced tools for complex problem-solving. This allows employees to focus on higher-value activities, fostering creativity and innovation.
- **Scalable Solutions:** AI technologies offer scalable solutions that can grow with the business. Cloud-based AI services can be easily integrated and scaled according to the company's needs, providing flexibility and reducing upfront costs.
- **Sustainability and Efficiency:** AI can contribute to sustainability efforts by optimizing energy usage, reducing waste, and improving resource management. AI-driven solutions can help businesses operate more efficiently and reduce their environmental footprint.

By incorporating AI into their business models, companies can enhance their existing operations and explore new avenues for growth and innovation, leading to increased competitiveness and long-term success.

4.7. Managerial Implications

AI and circularity are key to fostering more sustainable industries. Manufacturing sector managers engaged in digital supervision should harness this potential through a number of strategic recommendations:

- **Recognise AI Capacity:** Managers need to appreciate AI's diverse capabilities- perceptive, predictive, and prescriptive. These AI capabilities enable continuous data analysis, decision-making, and resource optimization, which form the basis of AI capabilities enable continuous data analysis, decision-making and resource optimization, which form the basis of AI-enabled Circular Business Models (CBMs). Using these capabilities, managers can drive sustainable industrial practices through more efficient and informed operations.
- **Develop Dynamic Capabilities:** Develop dynamic capabilities: To accelerate the commercialization of AI-enables CBMs, industrial organizations should focus on developing dynamic capabilities. These include value discovery, value realization, and value optimization, which are crucial throughout the commercialization process. These capabilities allow firms to adapt to market demands and customer needs, ensuring the successful implementation and evolution of CBM.
- **Collaborate with Ecosystem Partners:** The transition to a circular economy requires collaboration beyond individual companies. Managers should establish routines that involve extensive exploration and integration of customers and ecosystem partners. It is essential to co-create AI-enabled offerings with these stakeholders in an iterative. Given the uncertainties surrounding AI solutions, balancing incentives, roles, and data sharing among multiple actors is crucial for achieving practical sustainability.
- **Embrace Circular Effects of AI-enabled Business Models:** AI-driven business models present opportunities to increase resource utilization and contribute to the circular economy by focusing on optimization and autonomous solutions. Managers should focus on reducing. Reusing and recycling material and energy resources. By optimizing customer operations and improving resource efficiency, managers can significantly increase the value-creation potential of digital technologies and services.
- **Integrate Circular Thinking into Strategic Decisions:** Managers involved in digital servitization should incorporate circular economy principles into their strategic decision-making processes and business models. This involves aligning business strategies with circular economy principles, focusing on sustainability, and ensuring operations contribute to reducing environmental impact.

By implementing these managerial strategies, organizations can effectively use AI and circularity to create sustainable business models, increase resource efficiency, and increase long-term industry sustainability.

5. Conclusion

AI is revolutionizing business management by streamlining data management, optimizing operations, and providing deep insights through data analysis. By 2030, AI could contribute $15.7 trillion to the global economy, as it increases efficiency and profitability across various business operations. AI plays a crucial role in predictive analytics, process automation, customer analytics, and security monitoring. It also plays a significant role in marketing and advertising,

with applications such as identifying trends, enhancing customer service, and analyzing large volumes of documents. As AI continues to advance, businesses must continuously train their employees to adapt and work alongside AI and robots. This study investigates the effects of artificial intelligence (AI) on business, focusing on its potential to transform various sectors. AI, driven by scientific knowledge and technological advancements, has shown numerous benefits in the corporate world, including increased productivity, reduced costs and time, reduced human error, expedited decision-making, accurate customer preference prediction, and enhanced sales. The study also suggests that AI can help solve the skills gap in the labor market. However, the adoption of AI in business is influenced by factors such as technological maturity, competitive pressures, and advancements in automation and robotics. The main advantages of using AI include higher conversion rates, efficient marketing strategies, and improved customer service. However, integrating AI presents significant challenges, such as technical compatibility and data management. The study emphasizes the importance of having an appropriate information infrastructure and addressing privacy and security issues while using AI. AI has been shown to enhance corporate performance by developing effective marketing and sales plans. However, businesses must weigh the advantages and disadvantages of incorporating AI into their daily operations to fully realize its benefits. Emerging technologies will have a significant impact on corporate management in the future, and further research is needed to understand their impact on employment trends, job security, and the future of work. Additionally, it is crucial to analyze the ethical implications of emerging technologies, including data protection and privacy. Future research should focus on developing frameworks that can profitably steer businesses and navigate these shifts.

References

Allioui, H., & Mourdi, Y. (2023). Unleashing the Potential of AI: Investigating Cutting-Edge Technologies That Are Transforming Businesses. *International Journal of Computer Engineering and Data Science (IJCEDS)*, *3*(2), 1-12. https://ijceds.com/ijceds/article/view/59

Bilgram, V., & Laarmann, F. (2023). Accelerating Innovation With Generative AI: AI-Augmented Digital Prototyping and Innovation Methods. *IEEE Engineering Management Review*, *51*(2), 18-25. https://doi.org/10.1109/EMR.2023.3272799

Caruso, L. (2018). Digital innovation and the fourth industrial revolution: epochal social changes? *AI & SOCIETY*, *33*(3), 379-392. https://doi.org/https://doi.org/10.1007/s00146-017-0736-1

Costa-Climent, R., Haftor, D. M., & Staniewski, M. W. (2024). Intelligent Transformation: Navigating the AI Revolution in Business and Technology. In M. T. Del Val Núñez, A. Yela Aránega, & D. Ribeiro-Soriano (Eds.), *Artificial Intelligence and Business Transformation: Impact in HR Management, Innovation and Technology Challenges* (pp. 19-40). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-58704-7_2

Fenwick, M., Vermeulen, E. P. M., & Corrales, M. (2018). Business and Regulatory Responses to Artificial Intelligence: Dynamic Regulation, Innovation Ecosystems and the Strategic Management of Disruptive Technology. In M. Corrales, M. Fenwick, & N. Forgó (Eds.), *Robotics, AI and the Future of Law* (pp. 81-103). Springer Singapore. https://doi.org/10.1007/978-981-13-2874-9_4

Filatotchev, I., Aguilera, R. V., & Wright, M. (2020). From Governance of Innovation to Innovations in Governance. *Academy of Management Perspectives*, *34*(2), 173-181. https://doi.org/https://org.doi/10.5465/amp.2017.0011

Fiorentino, R., Grimaldi, F., Lamboglia, R., & Merendino, A. (2020). How smart technologies can support sustainable business models: insights from an air navigation service provider. *Management Decision*, *58*(8), 1715-1736. https://doi.org/https://doi.org/10.1108/MD-09-2019-1327

Füller, J., Hutter, K., Wahl, J., Bilgram, V., & Tekic, Z. (2022). How AI revolutionizes innovation management – Perceptions and implementation preferences of AI-based innovators. *Technological Forecasting and Social Change*, *178*, 121598. https://doi.org/https://doi.org/10.1016/j.techfore.2022.121598

Goralski, M. A., & Tan, T. K. (2020). Artificial intelligence and sustainable development. *The International Journal of Management Education*, *18*(1), 100330. https://doi.org/https://doi.org/10.1016/j.ijme.2019.100330

Kitsara, I. (2022). Artificial Intelligence and the Digital Divide: From an Innovation Perspective. In A. Bounfour (Ed.), *Platforms and Artificial Intelligence : The Next Generation of Competences* (pp. 245-265). Springer International Publishing. https://doi.org/https://doi.org/10.1007/978-3-030-90192-9_12

Lanteri, A. (2021). Strategic drivers for the fourth industrial revolution. *Thunderbird International Business Review*, *63*(3), 273-283. https://doi.org/https://doi.org/10.1002/tie.22196

Makridakis, S. (2017). The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. *Futures*, *90*, 46-60. https://doi.org/https://doi.org/10.1016/j.futures.2017.03.006

Mishra, A. N., & Pani, A. K. (2021). Business value appropriation roadmap for artificial intelligence. *VINE Journal of Information and Knowledge Management Systems*, *51*(3), 353-368. https://doi.org/10.1108/VJIKMS-07-2019-0107

Mishra, S., & Tripathi, A. R. (2021). AI business model: an integrative business approach. *Journal of Innovation and Entrepreneurship*, *10*(1), 18. https://doi.org/10.1186/s13731-021-00157-5

Najem, N. R., Salman, M. K., Mohammed, M., & Madhi, Z. J. (2024). Navigating Digital Transformation Strategies for Sustaining Competitive Advantage in the AI Era. *Journal of Ecohumanism*, *3*(5), 927-948. https://doi.org/10.62754/joe.v3i5.3947

Nitin Liladhar, R., Mallikarjuna, P., Saurabh, P. C., & Jayesh, R. (2024). Artificial Intelligence, Machine Learning, and Deep Learning for Advanced Business Strategies: A Review. *Partners Universal International Innovation*

Journal, *2*(3), 147-171. https://doi.org/10.5281/zenodo.12208298

Okunlaya, R. O., Syed Abdullah, N., & Alias, R. A. (2022). Artificial intelligence (AI) library services innovative conceptual framework for the digital transformation of university education. *Library Hi Tech*, *40*(6), 1869-1892. https://doi.org/10.1108/LHT-07-2021-0242

Paschen, U., Pitt, C., & Kietzmann, J. (2020). Artificial intelligence: Building blocks and an innovation typology. *Business Horizons*, *63*(2), 147-155. https://doi.org/https://doi.org/10.1016/j.bushor.2019.10.004

Perifanis, N.-A., & Kitsios, F. (2023). Investigating the Influence of Artificial Intelligence on Business Value in the Digital Era of Strategy: A Literature Review. *Information*, *14*(2).

Popkova, E. G., & Gulzat, K. (2020, 2020//). Technological Revolution in the 21st Century: Digital Society vs. Artificial Intelligence. The 21st Century from the Positions of Modern Science: Intellectual, Digital and Innovative Aspects, Cham.

Radu, R. (2021). Steering the governance of artificial intelligence: national strategies in perspective. *Policy and Society*, *40*(2), 178-193. https://doi.org/https://doi.org/10.1080/14494035.2021.1929728

Reim, W., Åström, J., & Eriksson, O. (2020). Implementation of Artificial Intelligence (AI): A Roadmap for Business Model Innovation. *AI*, *1*(2), 180-191.

Sewpersadh, N. S. (2023). Disruptive business value models in the digital era. *Journal of Innovation and Entrepreneurship*, *12*(1), 2. https://doi.org/https://doi.org/10.1186/s13731-022-00252-1

Sjödin, D., Parida, V., & Kohtamäki, M. (2023). Artificial intelligence enabling circular business model innovation in digital servitization: Conceptualizing dynamic capabilities, AI capacities, business models and effects. *Technological Forecasting and Social Change*, *197*. https://doi.org/10.1016/j.techfore.2023.122903