International Journal of Emerging Research in Science, Engineering, and Management
Special Issue SI-1 (2026), pp. 270–278
Proceedings of Selected Papers from the
National Conference on Emerging Trends in Commerce and Management
(NCETCM-2K26, 30-31 March 2026)
Organized by Andhra Loyola College, Vijayawada, India
www.ijersem.com eISSN- 3107-9075

Role of Artificial Intelligence in Business Management across Various Sectors

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Abstract: Artificial Intelligence (AI) in Management is rapidly evolving and is significantly transforming the way businesses operate and make decisions. AI is highly effective in handling repetitive and data-driven tasks that are often time-consuming for managers. These tasks include scheduling, data entry, report generation, and basic customer service inquiries. By automating such activities, AI enables managers to allocate more time to strategic initiatives, creative problem-solving, and employee development. Furthermore, Artificial Intelligence plays a pivotal role in helping organizations achieve their objectives by optimizing processes, enhancing customer experiences, and unlocking new growth opportunities. It is fundamentally changing the way organizations address challenges and foster innovation. As AI technology continues to advance, its impact is expanding across various sectors, providing businesses with new strategies to improve efficiency and gain a competitive advantage. This research paper examines the role and implications of Artificial Intelligence in the management of operations across diverse sectors.

Keywords: Artificial Intelligence (AI), Business Management, Various Sectors, AI Technology, AI-Driven Business Transformation.

1 INTRODUCTION

In the modern business environment, Artificial Intelligence (AI) has emerged as a transformative technology influencing managerial practices, operational efficiency, and organizational decision-making across multiple sectors. AI refers to the capability of machines and computer systems to simulate human intelligence through learning, reasoning, problem-solving, and data analysis. Organizations are increasingly integrating AI technologies into their management processes to improve productivity, reduce operational complexity, and support strategic decision-making.

Recent studies highlight that AI is reshaping business models by balancing automation and human augmentation in organizational decision-making processes. In the healthcare sector, AI-enabled systems assist managers in improving service efficiency while supporting human expertise in critical decisions [1]. Similarly, public sector organizations are expanding AI adoption to enhance administrative efficiency, governance, and management practices [2]. AI-driven approaches are also contributing to improved business performance through value co-creation and enhanced service-oriented interactions across different activity sectors [3].

The integration of AI in service delivery has significantly improved customer satisfaction, sustainability performance, and operational effectiveness despite challenges related to implementation and ethics [4]. In manufacturing industries, AI-driven innovation management has shown a positive impact on productivity and technological advancement [5]. Furthermore, generative AI applications are increasingly being utilized in the agricultural business sector to optimize research activities, resource management, and data-driven decision-making [6].

The growing adoption of open-source AI models in public sector agencies demonstrates the increasing importance of flexible and cost-effective AI solutions in organizational management [7]. In the banking and financial sector, technological advancements and AI-supported e-business models are strengthening competitive advantage and improving customer-oriented services [8]. AI-enhanced decision-making systems are also helping businesses analyse large datasets efficiently and optimize operational and marketing strategies [9].

In addition, AI-based training and business application programs are improving entrepreneurial outcomes and supporting inclusive business development [10]. AI technologies are also expanding into critical infrastructure sectors such as power and energy, where issues related to safety, trustworthiness, and policy implementation are becoming increasingly important [11]. Moreover, organizations are adopting AI-integrated business process management frameworks to assess technological maturity and achieve strategic transformation [12].

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Managers often spend considerable time on repetitive activities such as scheduling, report generation, customer support, and data handling. AI technologies help automate these routine tasks, reduce human effort, improve accuracy, and allow managers to focus on innovation, strategic planning, and employee development. As AI technologies continue to evolve, their applications are rapidly expanding across sectors including healthcare, manufacturing, banking, agriculture, public administration, retail, and logistics. Therefore, this study aims to examine the role of Artificial Intelligence in business management across various sectors, focusing on its applications, benefits, challenges, and future scope in improving organizational performance and managerial effectiveness [13]-[14].

2 LITERATURE REVIEW

I. Atkova, M. Jansson, P. Ahokangas, H. Härkönen, T. Rana, and G. Vesty [1] examined the balance between automation and augmentation in AI-enabled decision-making within the healthcare sector. The study emphasized that AI should complement human expertise rather than completely replace managerial involvement. The authors highlighted that AI-supported decision systems improve operational efficiency and healthcare service delivery while maintaining the importance of human judgment. A. Alamäki [2] explored the expansion of AI adoption in public sector organizations from a management perspective. The study discussed how AI technologies are improving governance, administrative efficiency, and organizational decision-making.

It also identified challenges related to organizational culture, employee adaptation, and policy implementation during AI integration. M. S. Moise, I. Gil-Saura, M.-E. Ruiz-Molina, and A. Marín-García [3] investigated the influence of value co-creation and service-oriented strategic interactions on business performance across different sectors. Their findings indicated that technology-enabled collaboration and AI-supported customer engagement significantly improve organizational outcomes and competitive advantage. B. N. Hwang, S. Jitanugoon, and P. Puntha [4] studied the integration of AI in service delivery systems and its impact on business and sustainability performance. The research demonstrated that AI technologies enhance service quality, customer satisfaction, and operational efficiency.

However, the study also noted challenges associated with ethical concerns, implementation costs, and workforce readiness. Z. Xu, Y. Yang, and X. Su [5] analysed AI-driven innovation management in the equipment manufacturing sector. The study provided empirical evidence that AI adoption positively influences total factor productivity, technological innovation, and operational performance. The authors concluded that AI contributes significantly to industrial modernization and competitiveness. M. D. C. Molinari et al. [6] focused on the applications of generative AI in optimizing research activities within the agricultural business sector. The study highlighted the potential of AI tools in improving agricultural data analysis, research efficiency, and resource management, thereby supporting sustainable agricultural development.

N. Robinson [7] examined the adoption of open-source AI models in public sector agencies. The study discussed the strategic considerations involved in selecting AI models, including cost-effectiveness, transparency, trustworthiness, and flexibility. The research emphasized the growing importance of open-source AI solutions in organizational management. A. M. Omar [8] studied the role of e-business value chains and technological advancements in enhancing competitive advantage within the Egyptian banking sector. The findings revealed that AI and digital technologies improve customer service, operational efficiency, and strategic business performance in financial institutions.

Z. N. Jawad and V. B. János [9] conducted a comprehensive review of AI-enhanced decision-making systems in the medication market business. Their study showed that AI-based analytical systems improve decision accuracy, optimize market strategies, and support data-driven business operations. N. Drydakis [10] investigated the relationship between AI business application training and business outcomes among underrepresented entrepreneurs. The study concluded that AI training programs improve entrepreneurial skills, business productivity, and organizational growth opportunities while promoting inclusive economic participation.

K. Alshehri and M. Sayed-Mouchaweh [11] explored the application of generative AI in the power sector with emphasis on methodology, safety, trustworthiness, and policy considerations. The study highlighted that AI technologies can enhance operational efficiency and predictive analysis in energy systems while requiring strong governance and regulatory frameworks. The study emphasized that strategic AI adoption enables organizations to improve process optimization, decision-making capabilities, and long-term business transformation through systematic implementation approaches [12].

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3 OBJECTIVES OF THE STUDY

1. To examine the role of Artificial Intelligence in modern business management practices.
2. To analyse how AI improves organizational decision-making processes through data-driven insights.
3. To study the impact of AI on operational efficiency and productivity in businesses.
4. To identify the applications of AI across various industry sectors such as healthcare, manufacturing, banking, retail, and public administration.
5. To evaluate the contribution of AI in enhancing customer experience and service quality.
6. To understand the role of AI in business process automation and innovation management.
7. To analyse the importance of AI in strategic planning and competitive advantage.
8. To identify the major challenges associated with AI adoption, including ethical, technical, and workforce-related issues.
9. To examine the significance of human–AI collaboration in organizational management.
10. To study the future scope and growth opportunities of AI in business management across different sectors.

4 RESEARCH METHODOLOGY

4.1. Research Design

The present study adopts a descriptive and analytical research design to examine the role of Artificial Intelligence (AI) in business management across various sectors. The descriptive approach is used to understand the existing applications, trends, benefits, and challenges associated with AI adoption in organizations, while the analytical approach helps in evaluating the impact of AI on managerial practices, operational efficiency, and strategic decision-making. The study focuses on analysing the integration of AI technologies in different sectors such as healthcare, manufacturing, banking and finance, retail, agriculture, logistics, and public administration. The research also emphasizes understanding how AI contributes to organizational performance, customer satisfaction, innovation, and competitive advantage.

4.2. Sources of Data Collection

The study is primarily based on secondary data collected from various reliable and authentic sources. Secondary data provides comprehensive insights into the recent developments, applications, and implications of AI in business management. The major sources of data include academic journals, industry reports, company publications, conference proceedings, books, and online databases. In addition, case studies of leading organizations implementing AI technologies were analysed to understand practical applications and real-time business outcomes. Companies such as IBM, Microsoft, Amazon, DHL, Hilton Hotels, and Pfizer were considered for analysing sector-specific AI implementation strategies. The major sources of secondary data used in the study are presented in Table 1.

Table. 1 Sources of Secondary Data Collection

S. No.	Source of Data	Purpose of Data Collection
1	Academic Journals and Research Articles	To understand theoretical concepts and recent research findings related to AI
2	Industry Reports and Case Studies	To analyse industrial applications and sector-wise AI adoption
3	Company Websites and Annual Reports	To examine organizational implementation strategies and business outcomes
4	Conference Proceedings and e-Books	To collect updated information on AI technologies and innovations
5	Government and Policy Reports	To understand regulatory, ethical, and public sector perspectives on AI

As shown in Table 1, multiple secondary data sources were utilized to ensure comprehensive coverage of AI applications and management practices across different sectors.

4.3. Sampling and Case Selection

The study follows purposive sampling for selecting organizations and sectors where AI applications are significantly visible. Leading organizations from technology, healthcare, banking, logistics, manufacturing, and retail sectors were selected based on the extent of AI adoption and availability of published information. The selected case examples provide practical insights into the implementation and effectiveness of AI technologies in real-world business environments.

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4.4. Data Analysis Techniques

The collected data was analysed using qualitative analytical techniques to interpret the role and impact of AI in business management. The analysis mainly focused on identifying patterns, sector-wise applications, operational improvements, and managerial implications associated with AI adoption. The following analytical methods were used in the study:

- **Comparative Analysis:** Used to compare AI applications and management practices across different industry sectors.
- **Thematic Analysis:** Applied to identify major themes such as automation, decision-making, customer experience, innovation, operational efficiency, and human–AI collaboration.
- **Case Analysis:** Used to evaluate the practical implementation of AI technologies in selected organizations and assess their business outcomes.

4.5. Scope of the Study

The study is limited to understanding the role of AI in business management using secondary data sources. It mainly focuses on the applications, benefits, challenges, and future scope of AI across major business sectors. The research does not involve primary data collection such as surveys or interviews, and therefore the findings are based on existing literature, reports, and documented case studies.

5 Role Of Artificial Intelligence In Business Management

- **Enhanced Human-AI Collaboration**: The future lies in humans and AI working together, leveraging each other's strengths. AI will handle data analysis, pattern recognition, and repetitive tasks, while managers will focus on creative problem-solving, strategic decision-making, and tasks requiring emotional intelligence.

- **Hyper-Personalization in Management:** AI will enable managers to personalize their approach to employees, customers, and operations. Imagine AI providing customized coaching and development plans for employees, or tailoring marketing messages to individual customer preferences.

- **Evolving Role of Managers:** The role of managers will likely shift from task management to leadership and strategic thinking. With AI handling routine tasks, managers will have more time to focus on coaching and motivating employees, fostering innovation, and building a strong company culture.

- **Democratization of AI Tools:** AI solutions will become more affordable and user-friendly, making them accessible to businesses of all sizes. This will empower even small and medium-sized enterprises to leverage the power of AI to improve their management practices.

- **Better Decision-Making:** AI systems are capable of analysing large datasets quickly and accurately. This enables managers to identify trends, predict future outcomes, and make informed decisions based on data rather than intuition.

- **Increased Operational Efficiency:** AI improves efficiency by streamlining processes, reducing errors, and speeding up operations. It also helps in minimizing costs and maximizing productivity within organizations.

- **Enhanced Customer Experience:** AI technologies contribute to better customer service by offering personalized recommendations, providing instant support through chatbots, and analysing customer behaviour to meet their expectations effectively.

- **Business Analytics and Intelligence:** AI-powered business analytics tools can use the data set to give insights that can help businesses make decisions. It can predict trends, consumer behaviour, and market trends and give suggestions for improving business strategies.

- **AI in Innovation and Design Processes:** In addition to streamlining the design process for companies, AI also assists with innovation. With the help of AI tools, businesses can recognize market gaps and customer interest points and create new product feature ideas. In combination with AI-powered design simulations, businesses can create products that are more in tune with market needs and consumer preferences.

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- **Fraud Detection and Risk Management:** Due to its capability to analyze a large amount of data and find patterns AI is very useful in identifying fraud. In the financial sector, AI can watch over the transactions and signal something fishy is going on based on the anomalies.

- **Optimized Inventory Management and Supply Chain:** AI helps businesses with demand inventory management predictions. It can predict product demand more accurately by analyzing historical data seasonal trends and external factors. This helps the firms to keep the goods at the optimal level that does not include problems of overstocking or stock outs.

- **Improved Product Management and Design:** AI is changing the product management process by providing the consumer's preferences and market trends. AI can inform product design and feature development by analyzing consumer feedback, purchase behaviour, and social media data.

- **Understanding Consumer Behaviour with AI:** Through the use of artificial intelligence, large sets of consumer data including purchase history, internet usage, and social network interactions can be analysed. This analysis enables the companies to design specific and accurate marketing plans and personalized product suggestions.

6 APPLICATIONS OF AI ACROSS VARIOUS SECTORS

- **Manufacturing:** In the manufacturing sector, AI is used for predictive maintenance, ensuring machinery operates efficiently, and for quality checks through automated inspection systems.

- **Healthcare:** AI plays a vital role in diagnosing diseases, managing patient records, and providing customized treatment plans based on individual health data.

- **Banking and Finance:** In financial services, AI helps detect fraudulent transactions, assess risks, automate customer service, and support trading decisions through advanced algorithms.

- **Retail and E-Commerce:** AI is widely used in retail to personalize shopping experiences, manage inventory effectively, forecast demand, and recommend products to customers.

- **Human Resource Management:** AI assists HR departments in recruitment by screening candidates, analysing employee performance, and suggesting training programs for skill development.

- **Marketing and Sales:** AI supports marketing efforts by analysing customer data, segmenting target audiences, predicting sales trends, and improving advertising strategies.

- **Information Technology**: Perhaps the application used by most people would be the digital assistants on various pieces of technology. If you have a smartphone or laptop, you probably have and use digital assistant software to some degree.

- **Social media:** Social media platforms are another common way people interact with AI. All major social media platforms run off AI-powered algorithms which are designed to serve specific purposes.

- **Aerospace:** You may be familiar with the Mars Rovers NASA has landed over the years. These are programmed to explore, gather samples and send transmissions back to Earth to provide data from Mars that an astronaut would be unable to obtain. Most recently, NASA sent the rover Perseverance to Mars to gather samples and search for signs of ancient life.

- **Hospitality:** Particularly in recent years, the hospitality industry has adopted robots to help complete simple tasks and fill in for worker shortages. These can do things like check-in guests at hotels, mix drinks at cafes, deliver meals to tables in restaurants, and more.

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7 AI Application of Corporates in Practice

- IBM AI is reshaping customer service into a strategic advantage, as customer experience often determines loyalty. It took the AI world by storm with its Watson Assistant. Organizations can tailor Watson to serve as an employee Q&A resource, customer service chatbot and coding assistant for developers, among other roles.

- Microsoft launched Microsoft Copilot in 2023, a generative AI assistant that serves as an integrated AI companion embedded across the entire Microsoft 365 ecosystem.

- Apple's Siri digital assistant, has been around since 2011 when it was integrated into the tech giant's operating system as part of the iPhone 4S launch. Apple describes it as the "most private digital assistant." Siri puts work to help users with things like setting timers and reminders, making phone calls and completing online searches.

- Google develops Gemini, a chatbot and family of models that can generate text, images, videos and code, as well as analyze video and photos and create automations. Since its release, Gemini has been integrated into other products including Meet, Drive and search with its AI Overview feature.

- Amazon's retail uses AI extensively to optimize inventory management, recommend products to users based on purchasing patterns and enhance the efficiency of its fulfilment centres.

- Hilton Hotels integrates AI in the form of "Connie," its robot concierge, to provide guests with personalized recommendations and assistance. The AI-powered system enhances the guest experience by delivering instant, tailored information.

- DHL (Logistics and supply chain) employs AI to optimize routing, warehouse management and package delivery. The company's AI-powered solutions predict demand, reduce operational costs and enhance delivery accuracy.

- Pfizer uses AI in Drug Discovery to analyze vast datasets and accelerate the development of new medications. For example, its AI-driven platforms have identified promising drug candidates faster than traditional methods, helping to combat diseases more efficiently.

- P&G is looking to digitalize and analyze data from its over 100 manufacturing sites. It's developing AI capabilities, such as machine learning and computer vision, to maximize equipment health and availability, assess product quality in real time on the production line, and improve energy and water usage. The consumer-packaged goods maker has focused its early attempts on its paper products and baby care segments with pilots in the United States, India, Japan, and Egypt.

- Twitter uses AI to identify hate speech, fake news and illegal content. In one six-month period, the platform removed nearly 300,000 terrorist accounts that had been identified by AI.

- Instagram is using AI to fight cyberbullying and take down offensive comments.

- Dominos is trialling Star ship Technology's automated delivery robots to deliver pizzas in Germany. These little delivery vehicles, which have a top speed of 10 mph, are proving more cost-effective and efficient for short-distance deliveries around town compared to delivery trucks and cars. Just Eat has begun using the same technology to deliver takeaways in London.

8 Challenges and Future Scope of AI Adoption

Artificial Intelligence (AI) has become an important technological advancement in modern business management. Although AI offers significant benefits such as improved operational efficiency, enhanced decision-making, automation, and customer satisfaction, organizations also face several challenges during its implementation. At the same time, continuous technological advancements indicate a strong future scope for AI across various sectors. One of the major challenges associated with AI adoption is the high initial investment required for infrastructure, software, system integration, and employee training. Small and medium-sized enterprises often face financial constraints in implementing advanced AI technologies.

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In addition, concerns related to data security and privacy have become critical issues, as AI systems rely heavily on large volumes of organizational and customer data. Improper handling of sensitive information may lead to cybersecurity risks and regulatory complications. Another important challenge is the shortage of skilled professionals capable of developing, managing, and operating AI-based systems. Organizations require technically skilled employees with expertise in machine learning, data analytics, and AI applications. Resistance from employees due to fear of job displacement and technological change also affects the successful implementation of AI in organizations.

Furthermore, ethical and regulatory issues such as algorithmic bias, transparency, accountability, and responsible use of AI continue to create challenges for businesses and policymakers. Despite these challenges, the future scope of AI in business management is highly promising. AI technologies are expected to become more affordable, accessible, and user-friendly, enabling organizations of all sizes to adopt AI-driven solutions. Businesses will increasingly rely on predictive analytics and intelligent systems for forecasting, strategic planning, and market analysis.

Human–AI collaboration is also expected to grow, where AI systems will support managers and employees in decision-making rather than completely replacing human involvement.
In the future, decision-making processes are likely to become more data-driven, accurate, and efficient through advanced AI algorithms and real-time analytics. AI applications are expected to expand further into sectors such as healthcare, manufacturing, agriculture, banking, logistics, retail, education, and public administration. Organizations that adopt AI technologies at an early stage are likely to achieve higher productivity, innovation, competitive advantage, and long-term sustainability in the rapidly evolving business environment.

9 FINDINGS, SUGGESTIONS, AND RECOMMENDATIONS

The study identified several important findings regarding the role of Artificial Intelligence (AI) in business management across various sectors. The analysis revealed that AI significantly improves decision-making accuracy by utilizing data-driven insights, predictive analytics, and intelligent algorithms. Organizations implementing AI technologies are able to analyse large volumes of data efficiently, enabling faster and more informed managerial decisions. The study also found that AI enhances operational efficiency by automating repetitive and time-consuming tasks such as scheduling, data processing, customer support, inventory management, and report generation.

This automation reduces human effort, minimizes errors, and increases productivity within organizations. Furthermore, AI contributes to improved customer experience through personalized services, recommendation systems, and AI-powered customer support mechanisms. Another major finding is that organizations adopting AI technologies gain a competitive advantage through innovation, improved service quality, cost optimization, and faster response to market changes. AI adoption was observed to be more prominent in technology-driven and data-intensive sectors such as healthcare, banking, manufacturing, retail, logistics, and information technology.

However, despite the numerous benefits of AI, several challenges continue to exist, including high implementation costs, shortage of skilled professionals, data privacy concerns, and ethical issues related to AI applications.
The study further revealed that human–AI collaboration is more effective than complete automation. AI systems perform efficiently in data analysis, prediction, and routine operations, while human managers contribute strategic thinking, creativity, leadership, and emotional intelligence.

Therefore, organizations should focus on integrating AI technologies in a way that supports and enhances human capabilities rather than replacing them entirely. Based on these findings, several suggestions and recommendations are proposed for organizations planning to adopt AI technologies.

Organizations should invest in employee training and skill development programs to improve AI-related competencies and reduce resistance to technological change. Employees should be equipped with knowledge in areas such as data analytics, machine learning, and AI applications to support effective implementation. Organizations should also ensure strong data security measures and establish ethical AI frameworks to address concerns related to privacy, transparency, and accountability. A gradual and well-planned implementation strategy is recommended to minimize operational disruptions and improve employee acceptance of AI systems. In addition, businesses should encourage human–AI collaboration by using AI technologies to support managerial decision-making and operational processes rather than relying solely on automation. Increased investment in AI infrastructure, research, and technological innovation is also essential for long-term organizational growth and competitiveness.

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10 Conclusion

Artificial Intelligence (AI) has emerged as a transformative technology that is significantly influencing modern business management across various sectors. The study highlights that AI improves organizational performance by automating repetitive tasks, enhancing operational efficiency, and supporting accurate data-driven decision-making. AI technologies also contribute to improved customer experiences through personalization, intelligent support systems, and predictive analytics. Sectors such as healthcare, manufacturing, banking, retail, logistics, and public administration are increasingly adopting AI to gain competitive advantage and improve productivity. Despite its benefits, organizations continue to face challenges related to implementation costs, data privacy, ethical concerns, and shortage of skilled professionals. However, the future scope of AI remains highly promising due to continuous technological advancements and increasing adoption across industries. The study further concludes that effective collaboration between humans and AI systems is essential for achieving sustainable organizational growth. Overall, AI will continue to play a critical role in driving innovation, efficiency, and long-term business success in the future.

Funding Information

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Ethics Statement

This study did not involve human or animal subjects and, therefore, did not require ethical approval.

Statement Of Conflict Of Interests

The authors declare that they have no conflicts of interest related to this study.

References

[1] I. Atkova, M. Jansson, P. Ahokangas, H. Härkönen, T. Rana, and G. Vesty, "Balancing automation and augmentation in AI-enabled decision-making: A business model perspective from healthcare sector," *Technological Forecasting and Social Change*, vol. 229, p. 124711, Apr. 2026, doi: 10.1016/j.techfore.2026.124711.

[2] A. Alamäki, "Expanding AI adoption in public sector organizations: perspectives on management practices," *Transforming Government People Process and Policy*, vol. 20, no. 2, pp. 165–187, Sep. 2025, doi: 10.1108/tg-05-2025-0124.

[3] M. S. Moise, I. Gil-Saura, M.-E. Ruiz-Molina, and A. Marín-García, "Influence of value co-creation and SOSI on business results: the moderating role of the activity sector," *Journal of Business and Industrial Marketing*, vol. 41, no. 5, pp. 661–677, Feb. 2026, doi: 10.1108/jbim-11-2024-0828.

[4] B. N. Hwang, S. Jitanugoon, and P. Puntha, "AI integration in service delivery: enhancing business and sustainability performance amid challenges," *Journal of Services Marketing*, vol. 40, no. 2, pp. 263–281, May 2025, doi: 10.1108/jsm-10-2024-0511.

[5] Z. Xu, Y. Yang, and X. Su, "AI-driven innovation management and total factor productivity: empirical evidence from the equipment manufacturing sector," *Industrial Management & Data Systems*, vol. 126, no. 3, pp. 813–832, Sep. 2025, doi: 10.1108/imds-03-2025-0350.

[6] M. D. C. Molinari *et al.*, "Applications of generative AI for optimizing research in the agricultural business sector," in *Elsevier eBooks*, 2025, pp. 277–285. doi: 10.1016/b978-0-443-33633-1.00017-4.

[7] N. Robinson, "Open to open-source AI? Navigating AI model choice in public sector agencies," *Government Information Quarterly*, vol. 43, no. 2, p. 102133, Mar. 2026, doi: 10.1016/j.giq.2026.102133.

[8] A. M. Omar, "E-business value chain and technological advancements: Driving competitive advantage in the egyptian banking sector," *Social Sciences & Humanities Open*, vol. 13, p. 102682, Mar. 2026, doi: 10.1016/j.ssaho.2026.102682.

[9] Z. N. Jawad and V. B. János, "'A comprehensive review of AI-enhanced decision making: An empirical analysis for optimizing medication market business,'" *Machine Learning With Applications*, vol. 20, p. 100676, May 2025, doi: 10.1016/j.mlwa.2025.100676.

[10] N. Drydakis, "AI business applications training and business outcomes: An inclusive intervention for underrepresented entrepreneurs," *Journal of Strategy & Innovation*, vol. 36, no. 2, p. 200552, Sep. 2025, doi: 10.1016/j.jsinno.2025.200552.

[11] S. Melchior and N.A. Francis Xavier, "Navigating Gig Economy Challenges: Worker Satisfaction and Policy Frameworks in India's Service Sector," *International Journal of Emerging Research in Science Engineering and Management*, vol. 2, no. si1, pp. 263–269, May. 2026, doi: 10.66710/ijersem.v2si1.33.

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[12] O. Ayyoub, S. Hanae, Z. Ahmed, and D. Karim, "Integrating AI and Business Process Management: A Maturity Assessment Framework for Strategic adoption," *Procedia Computer Science*, vol. 278, pp. 264–272, Jan. 2026, doi: 10.1016/j.procs.2026.02.462.

[13] S. M. Syed, A. V. V. S. Subbalakshmi, D. Singh, S. Emani, and R. K. Basava, "Design and analysis of human resources using artificial intelligence," *Journal of Law and Sustainable Development*, vol. 11, no. 9, p. e829, Oct. 2023, doi: 10.55908/sdgs.v11i9.829.

[14] A. Sahana, "Impact of artificial intelligence adoption on employee productivity in SMEs," *International Journal of Emerging Research in Science Engineering and Management*, vol. 1, no. 4, pp. 9–18, Oct. 2025, doi: 10.58482/ijersem.v1i4.2.