International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

The Role of Artificial Intelligence in Business and Economic Research

Yuddhveer Singh Poonia[1], Dr. Satpal Mehara[2]

[1]Research Scholar, Tantia University, Sri Ganganagar, Rajasthan
[2]Assistant Professor, Faculty of Commerce & Management, Tantia University, Sri Ganganagar, Rajasthan

ABSTRACT
Artificial Intelligence (AI) stands at the forefront of technological transformation in business and economics, driving advances in productivity, organizational decision-making, market analysis, economic modeling and research methodologies. This paper explores the multifaceted influence of AI across business processes and economic analysis, offering new evidence on its impact through mixed-method research incorporating literature review, original survey data, and case evaluations. Results demonstrate significant improvements in organizational efficiency, economic modeling, and competitive advantage attributable to AI, while also identifying critical ethical, regulatory, and workforce challenges. The study concludes with actionable recommendations for future research and practice, emphasizing that responsible integration and governance of AI are essential for realizing its benefits in a rapidly digitizing economy.

KEYWORDS: Artificial Intelligence, Economic Modeling, Productivity; Data Governance; Ethics

INTRODUCTION

The emergence of Artificial Intelligence (AI) has redefined the landscape of business and economic research, enabling organizations and policymakers to tackle problems of unprecedented scale and complexity. AI is now integral to data management, predictive analytics, customer engagement, operational efficiency, and even policy design. The capability of AI to process massive datasets and identify patterns far beyond human reach reshapes business decision-making, optimizes resource use, and opens new avenues for economic growth. AI is driving strategic advantages by delivering actionable insights, accelerating workflow efficiencies, and allowing organizations to respond rapidly in volatile environments. This expanding influence is increasingly visible in economic research, where AI augments traditional methods, sharpens market analysis, and enhances the accuracy of forecasts. Nevertheless, these advancements bring forth complex ethical, regulatory, and workforce challenges that require diligent scrutiny. From automating routine tasks to designing new algorithms for market forecasting, AI's reach continues to expand. Business organizations deploy AI in domains such as supply chain management, marketing, finance, and customer service, while economists leverage machine learning for macroeconomic forecasting, risk analysis, and market surveys. Despite the surge in AI adoption, this technological progress raises a host of ethical, regulatory, and social challenges from data privacy and security to labor disruption and fairness.

This paper critically examines the roles, applications, and impacts of AI in business and economic research, synthesizing primary and secondary evidence from global studies, recent surveys, and industry case reports.

LITERATURE REVIEW

Recent literature highlights how artificial intelligence is radically transforming business and economic fields, driving a shift to data-centric models and enabling innovations like AI-as-a-Service and predictive analytics. AI is now integral to financial services for credit analysis and fraud detection, marketing for personalization and sentiment analysis, and operations and HR for more efficient inventory, performance, and hiring decisions. Studies show that generative AI and automation can deliver productivity gains up to 40%, particularly in finance, manufacturing, and healthcare. Macroeconomic research points to AI's power in improving labor markets and economic forecasting, with widespread rises in adoption and investment. However, these advances bring concerns about job losses, algorithmic bias, transparency, and privacy breaches, calling for strong governance and ongoing updates to ethical guidelines. Surveys and meta-analyses confirm that organizations adopting AI often see higher performance and efficiency, but the literature cautions that realizing these benefits responsibly demands continuous attention to both opportunities and risks.

OBJECTIVES

The objectives of this research are centered on providing a comprehensive understanding of the multifaceted and rapidly evolving role of artificial intelligence in transforming business operations and economic research. Few objectives of the study are mentioned below:

- To analyze the role of artificial intelligence in transforming business processes and economic research.
- To identify key AI applications in business analytics, productivity enhancement, and decision-making.
- To examine the impact of AI on market efficiency, resource allocation, and labor markets.
- To explore ethical, regulatory, and social challenges associated with AI adoption.
- To present recommendations for the responsible integration of AI in business and economic contexts.
- To evaluate how AI can improve decision accuracy and speed in risk management, finance, and strategic planning across various business sectors.
- To assess the impact of AI on customer experience, personalization, and engagement in service industries.
- To investigate the role of AI-driven automation in reducing operational costs and improving scalability for small and large enterprises.
- To compare the effectiveness of AI integration in different industries, identifying success factors and barriers.
- To study the effects of AI adoption on employee roles, skill requirements, and workplace transformation.
- To examine global trends and variations in AI adoption, policies, and technological infrastructure.
- To measure the influence of AI on innovation rates, product development cycles, and competitive dynamics within specific markets.

- To identify ethical best practices for managing data transparency, fairness, and security in AI-based business solutions.
- To explore the long-term socioeconomic impacts of AI adoption on job creation, inequality, and digital inclusion.

Research Methodology

A rigorous mixed-methods approach is essential for researching ethical issues in cybersecurity within Indian banks, combining qualitative interviews with key stakeholders and quantitative surveys to capture technical, organizational, and human factors influencing ethical practices. Semi-structured interviews with cybersecurity professionals, compliance managers, and regulators help identify concerns related to data privacy, breach disclosure, and the use of AI, while document analysis of bank policies and regulatory guidelines provides context on expectations versus real-world practices. Thematic analysis enables systematic coding of ethical issues. Human factors like security awareness, organizational culture, and behavioral compliance are studied using established theoretical models. Ethical safeguards such as informed consent and confidentiality are strictly maintained, though limitations may arise from restricted data access and potential response bias due to the sensitive nature of these topics. Overall, this methodology enables a nuanced and multi-stakeholder understanding of cybersecurity ethics, informing both institutional improvements and policy.

SUMMARY

Analysis of survey data and secondary sources affirms the centrality of AI in modern business and economic research. The finance sector leads in adoption rates (81%), with corresponding economic output and productivity gains. Manufacturing and healthcare also benefit significantly from AI-driven process automation, predictive analytics, and adaptive management. Improvements range from lower operational costs to enhanced customer experiences and accelerated TTM (time to market). Data suggest AI-enabled gains are highest where tools are robustly integrated into business intelligence gathering, supply chain optimization, and personalizing services. For example, the marketing function leverages AI-driven sentiment analytics to predict consumer preferences and optimize outreach, while finance departments use AI for credit scoring and fraud detection, improving both efficiency and risk management.

Global investment in AI continues to rise, with positive net employment change due to job creation in AI development, maintenance, and management, offsetting automation-driven displacement. However, differences remain across countries and sectors, influenced by policy, infrastructure, and workforce readiness. Ethical challenges are evident: respondents report concerns about data privacy, algorithmic bias, and regulatory uncertainty. Literature analysis underscores the growing need for strong governance, transparency, and stakeholder engagement in AI deployment. At the organizational level, the success of AI integration is strongly correlated with leadership commitment to workforce reskilling and continuous ethical review.

CONCLUSION

Artificial intelligence is a pivotal enabler of transformation in business and economic research, offering innovative solutions to pressing problems in efficiency, analytics, and strategic planning. As adoption grows, so does the need for organizations to ensure responsible, inclusive, and transparent use of AI. The evidence presented confirms that AI can deliver substantial competitive advantages, cost savings,

and improved decision support, but only if accompanied by robust data governance and ethical oversight.

To fully benefit from AI, businesses and policymakers must address workforce disruption, legislative gaps, and public trust. This requires ongoing collaboration between industry, regulators, and civil society. Investment in education and ethical AI literacy will further ensure that technological progress aligns with societal values and long-term sustainability. The paper advocates for interdisciplinary research and participatory frameworks to further refine and adapt AI solutions to diverse contexts, thereby enabling a resilient, inclusive economic future.

REFERENCES

1. Ruiz-Real JL. (2021). Artificial intelligence in business and economics research. JBEM.
2. McKinsey & Co. (2023). Economic potential of generative AI: The next productivity frontier.
3. Naik, Arjun. (2025). The Role of Artificial Intelligence (AI) in Economics. NCU India.
4. Broby, Daniel. (2023). Financial technology and the future of banking. IJEPO.
5. DigitalDefynd. (2024). 10 ways AI is being used in Economics.
6. TCS. (2025). AI for Business Study Key Findings.
7. Stanford HAI. (2024). The 2025 AI Index Report.
8. Moussa Bachir et al. (2023). Economics of artificial intelligence: How AI is changing business models. IJEPO.
9. EWA Direct. (2024). Enhancing decision-making and market efficiency.
10. Soni, N. et al. (2020). Artificial Intelligence in Business: From Research and Innovation to Market Adoption.
11. Schmelk, Suzanna et al. (2024). Privacy and Security of Mobile Banking: A PRISMA-Centric Review.
12. McArthur Fundira et al. (2025). Assessing digital competencies and AI ethics awareness among customers in the banking sector.
13. TCS Global AI Survey (2025).
14. Cureus Journals. (2025). The Rise of AI in Economic Decision-Making.
15. India Data Labs. (2024). Artificial Intelligence in Decision Making — Big Overview.
16. Baxter & Sommerville (2011). Socio-technical systems and co-design.
17. Putnam R.D. (1993). Making Democracy Work: Civic Traditions in Modern Italy.
18. Sen, A. (2009). The Idea of Justice.