



# Oxford International

**Refereed Scientific Journal**

**Third Issue**

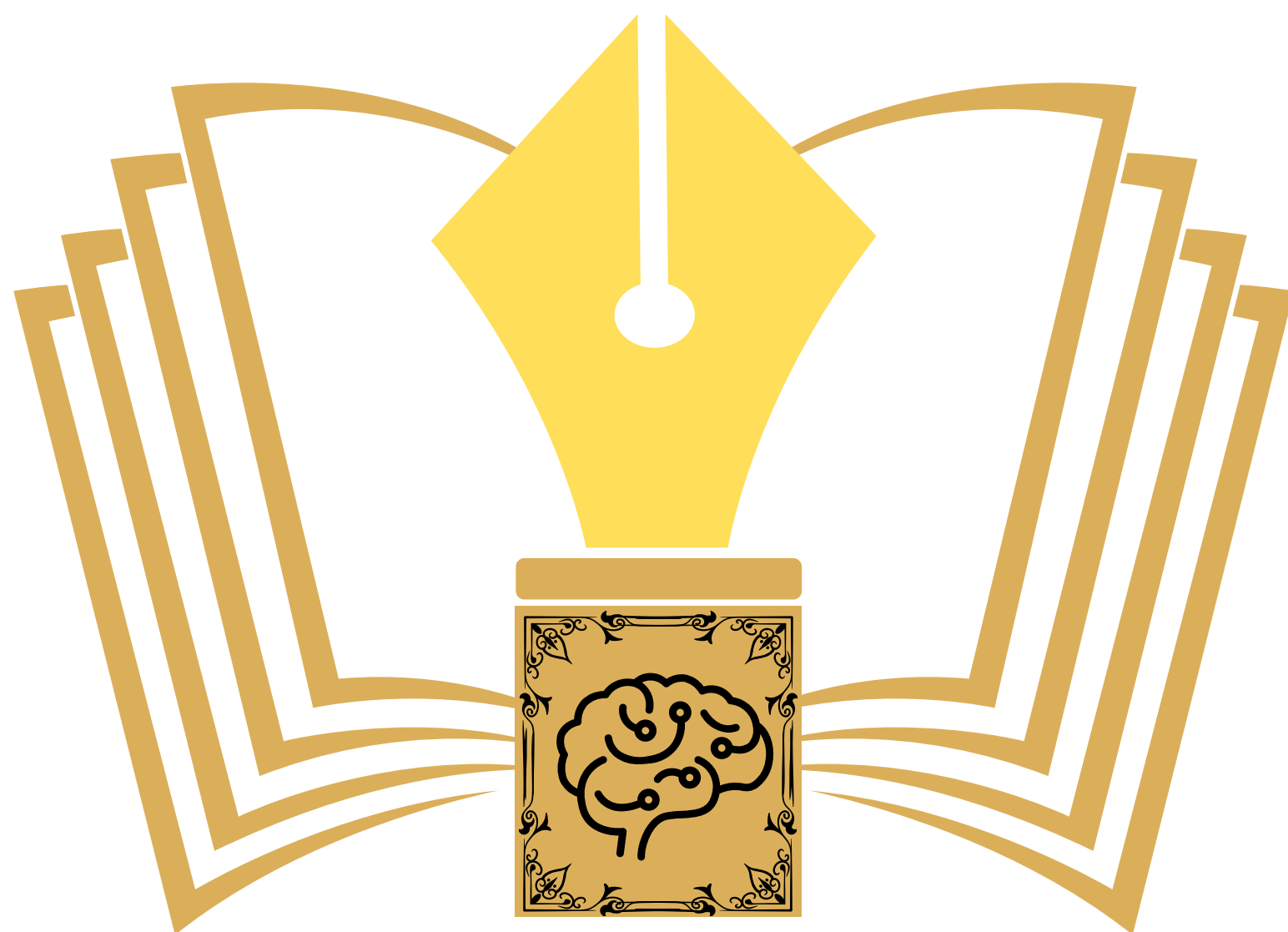
**August - 2025**

**ISSN-3050-7618**

مجلة أكسفورد انترناشونال  
مجلة علمية محكمة

Editor-in-Chief

Dr. Ahmed Hassan Soliman



OXFORD

i n t e r n a t i o n a l

[www.daroxford.net](http://www.daroxford.net)

ISSN-3050-7618

## هيئة المجلة

الاسم	التخصص والعمل	البلد
د. أحمد حاتم الربيعي	أستاذ مساعد في القانون الدولي/ تدريس في كلية القانون - الجامعة المستنصرية	العراق
د. هاني بن علي آل غزوي	دكتوراه في إدارة الأعمال، إدارة الجودة ومدرّب تنمية بشرية - مدرّب دولي معتمد	المملكة العربية السعودية
د. عز الدين الطاهري	أستاذ محاضر مؤهل، رئيس شعبة اللغة الإسبانية وآدابها، كلية الآداب والعلوم الإنسانية، تخصص لسانيات، جامعة محمد الخامس	المغرب
د. خالد محمد كارة	دكتوراه الفقه وأصوله. عضو هيئة التدريس، كلية العلوم والتقنيات الطبية - طرابلس - ليبيا، ومدير إدارة الدراسات والتطوير بالهيئة العامة لشؤون الحج والعمرة	ليبيا
د. رشا رياض حكيم	دكتوراه في القانون الدولي - الجامعة الإسلامية	لبنان
د. خلود عبد الكريم المسعودي	مدرس العلوم السياسية والإدارية والدبلوماسية - الجامعة المستنصرية	العراق
د. أوج عماد صبري العبيدي	معاون قضائي، دكتوراه قانون خاص / مدني - تجاري، جامعة بغداد	العراق
د. حليلة جسام المحمدي	مدرس مساعد اختصاص لغة عربية أدب حديث	العراق
د. ندى عبد اللطيف سرور	دكتوراه في إدارة الأعمال - محاسبة، محاضرة في عدة جامعات، ومدرّبة دولية في الإدارة والمحاسبة وريادة الأعمال، ومشرفة على رسائل الماجستير في الجامعة الأميركية للثقافة والتعليم والجامعة الإسلامية	لبنان
أ.م.د سكينه علي كريم	أستاذ مساعد القانون العام/ الدستوري، كلية التربية الأساسية - جامعة كركوك	العراق
م.م جلال مرضي علاوي	قانون عام - الجامعة العراقية	العراق
ريما باسم الجغبير	ماجستير الدراسات الاستراتيجية - جامعة الحسين بن طلال	الأردن
يقين حمد جنود	ماجستير كلية الآداب والعلوم الإنسانية - الجامعة اللبنانية; محاضر أكاديمي في سلطنة عمان - شاعرة وأديبة وعضو في ملتقى الشعراء العرب	سورية
زينة محمود حمود	ماجستير اللغة العربية - الجامعة اللبنانية كلية الآداب والعلوم الإنسانية	لبنان
ميده أنور عبد الحي	ماجستير علاقات دولية - جامعة دمشق	سورية



# The Impact of Artificial Intelligence on Competitive Advantage: A Strategic Analysis of AI Adoption in Industries

الباحث نور مروان ياسين بشابشه

الجامعة الأمريكية الدولية - قسم إدارة الأعمال

## Abstract:

Artificial Intelligence (AI) has revolutionized competitive forces in various industries by enabling organizations to achieve differentiation, cost leadership, and improved decision-making. The present study conducts a strategic appraisal of AI implementation, analyzing its contribution to competitive advantage in manufacturing, healthcare, retail, and financial sectors. With automation, predictive information, and personalized customer experiences, AI fuels operational efficiency and innovation. Nonetheless, high cost of implementation, ethical issues, and gaps in skills are some of the barriers to adoption. The research utilizes case studies, facts, and strategic tools to identify the transformational ability of AI. Results indicate that companies using AI strategically are able to maintain long-term competitive advantages, as long as they address adoption challenges successfully.

**Keywords:** Artificial Intelligence, Competitive Advantage, Industry Adoption, Strategic Analysis, Automation, Predictive Analytics, Innovation



## 1. Introduction

Artificial Intelligence (AI) is now no longer a future vision restricted to science fiction books or research facilities. It has progressed at breakneck speed to become a force of disruption whose effect on business strategy, operations, and competitiveness will be suffocating. Businesses across all sectors see the increasing necessity of AI to automate operations, enhance decision-making, design new products and services, and interact with customers even more intimately. Thus, AI is no longer a tool but a strategic facilitator which transforms the manner of value creation and harvesting by the companies (Zhao, 2024).

The increased operational efficiency should be seen among the most obvious and significant conveniences of the AI usage. Joining forces with automation, pre-emption of problems, and process optimization, AI is capable of reducing expenses, removing errors, and simplifying things. As an illustration, in the way of production artificial intelligence is used to forecast and eliminate devices malfunctioning prior to expensive breakages. This reduces not only downtime but increases the life cycle of equipment and increases safety as well. AI is used in optimizing supply chain management and logistics in real-time tracking, demand planning and route optimization. FedEx and Amazon use the AI algorithms to operate super-precise and super-fast delivery systems. RPA and AI enable cashless transactions in the field of finance with lowered security rates. What is more is that AI encourages resource use. AI offers efficiency in the energy and utilities sector to eliminate wastage and renewable energy sources in terms of energy consumption patterns and the supply network. Every one of these advantages is directly translated to cost advantage, in particular in price-sensitive industries (Chandra Gonesh, 2023).

AI is innovative as well. It allows the organizations to re define their business models, products and services. Diagnostic programs developed using AI are changing health in medicine by offering better and faster diagnosis where the programs study medical imaging and data that would assist in producing a diagnosis. AI has been introduced by IBM Watson and Google Health that help doctors in making decisions in treatments and even in diagnosing the disease. In creativity, AI art, music and copywriting are creating new domains to pursue creativity, and money. These applications of generative AI (GPT based) are employed to write marketing campaigns, articles, and even to create code, so time-to-market on digital products becomes very short indeed.

R&D processes are further supported by AI since it can simulate experimentation, analyze large volumes of data and identify trends that might not be identified by human analysts. In drug discovery, AI platforms will reduce the number of years and cost of a product undergoing drug development, which is an important factor when encountered by global health crises such as the COVID-19 pandemic. AI-based invention is not limited to products only but also to services and customer experience. Examples of this could be AI-based recommendation models through which Netflix and Spotify personalize their users to encourage interaction and loyalty through post-to-post, customized messaging (Yuanzhu Zhan, 2024).

AI indeed turns the business model to very personalized with generic products. Using natural language processing (NLP) and sentiment analysis, customer preference, customer feedback and customer behavior can in fact be measured in a real-time manner. This means that the businesses will be able to provide more adapted goods and services. Chatbots and virtual assistants based on conversational AI are increasingly becoming commonplace as an aid that may be used to address customer service requests at any given time of day, thereby adding convenience to responsiveness. To illustrate, financial institutions use AI assistants to service clients with their daily operations and online stores implement AI assistants to produce product suggestions and answer questions. In addition, customers can be segmented and their journeys mapped in real-time using AI so companies can personalize its marketing communications and service interactions. It increases customer satisfaction and retention, which are major motivators in a competitive business policy in the modern world. Artificial intelligence can be used to build hospitality capabilities through price modeling during the on-the-go with real-time pricing and personalized guidance of guests. Managed correctly with artificial intelligence systems, and left under control, the customer data is a source of endless improvement. Nevertheless, data privacy and algorithmic bias are the most significant concerns that have to be addressed by businesses to win trust and be supported by the regulators (Aloosi, 2025).

Although strategic advantage of AI is clear, its application in different industries can be different with each having its basket of opportunities and limitations. Such uses of AI include autonomous driving, predictive maintenance and smart manufacturing in the automotive industry. Tesla and BMW are creating smart cars with the help of AI that have the capability to learn and evolve based on individual behavior. AI is used in retail to forecast demand, optimize inventory and recognize stores visually. AI is used by Walmart and Alibaba to optimize both store planning and supply chain activities. Conor McGarrigle (Daojun Yuan Jung Kwan Kim, 2025).



Adaptive learning platforms are designed to change the experience, difficulty level and content of students in real time with the aid of AI within the education environment. Barriers exist. The implementation costs, concerns about data quality, lack of talented personnel, and change resistance to adopting AI might slow the pace of adoption of AI. Moral aspects of job replacement, the clarity of decision-making, and data security should be addressed with the help of appropriate well-governance regimes as well (Jiaqi Yang, 2024).

In order to achieve their potential, companies must put in place institutionalized measures to align AI potential to business goals. One of the most well-known models is the AI Maturity Model assessing aptitude in such key aspects as data basis, people, control, and culture. It is possible to begin with pilot programs of small scale, and then slowly shift towards case-wide usage as the capabilities build up. The other important strategy is the development of an experimenting and cross-functional culture. AI projects will most likely involve the involvement of data specialists, domain experts, and technology experts in IT. Teams can learn quickly and respond by having agile techniques and incremental development supported. In addition, AI can be adopted faster through collaboration with technology vendors and startups. AI vendors like Microsoft Azure, AWS, and Google cloud decrease the barriers to entry by allowing machine learning models and analytics on a scale that can be paid-as-you-go. After all, all AI strategies need to centre around government and ethical control. The formulating of policies on data use, algorithmic transparency, and responsibility makes sure the usage of AI is correct and does not intersect with values and norms in society as well as regulatory requirements (Sayed, 2023).

Artificial intelligence is not just another technical advancement but a strategic necessity by companies that would like to prosper in the digital economy. AIs generate valuable and durable competitive advantages by developing efficiency in operations, innovation and positioning business models above customer demand. To enhance such benefits, there must be a sharp implementation plan, moral awareness, and company transition. Since industries continue to undergo change, AI will be highly embraced in business ventures that would be better placed to survive in the new economy (Raheem Bux Soomro, 2025).

## 1.1 Study Aims

The main ideas behind this study will be (Daojun Yuan, 2025):

- To examine the contribution of AI to develop and maintain competitive advantage within industries.
- To estimate the effect of AI implementation on the efficiency of operations, differentiation, decision-making in the manufacturing, healthcare, retailing, and financial industries.
- To recognize the main issues and obstacles to the implementation of AI and recommend the methods to address them.
- To investigate future dynamics in AI that may be used to position it better in the market.

## 1.2 Significance of the Study

This research would be important because of a number of reasons (Sebastian Krakowski, 2022):

- Strategic Insights: Business leaders seeking to derive strategic insights about the use of AI to gain a competitive edge can utilize it because they can incorporate the concepts of Porter Five Forces and the Resource-Based View.
- Specific Solutions to Different Industries: The emphasis on various industries gives the study the possibility of providing concrete recommendations on the implementation of AI depending on the industry concerned and the challenges affecting them.
- Policy and Ethical Implications: The test reflects the ethical issues and expertise needs, which add to the debate over responsible AI regulation and human development in relation to these topics.
- Future Preparedness: The analysis of new trends prepares the organizations to prepare and be ready to face the future disruptions that will be caused by AI.



## 2. Literature Review

Literature on AI and competitive advantage seems to emphasise the many-faceted outcome of AI. Taking this into consideration, (Porter, 1985) says that cost leadership and differentiation are competitive advantages, and automation and personalization offered by AI can increase them. Resource-Based View (Barney, 1991) argues that AI is a very special and inimitable resource which enhances firm-specific capabilities.

New researches visualize that the adoption of AI can raise the efficiency of operations by 20-30 percent in manufacturing and retail industries (Company., 2023). According to (Davenport, 2018), AI applications can be divided into three categories, namely process automation, cognitive insights, and cognitive engagement that all play a role in enhancing competitive positioning. (Chui, 2023), however, mention such difficulties as ethical issues or lack of skills, which do not facilitate such adoption. This research trades off these findings to develop an analytical approach to strategic influences of AI on industries.

## 3. Methodology

This study will assume a mixed-method approach because it will focus on investigating the aspects of Artificial Intelligence (AI) in its contribution to competitive advantage across various industries in an extensive manner. The research is expected to propose breadth and depth through the application of qualitative and quantitative methods of study. The qualitative element is founded on the case samples of innovative companies which are global leaders in becoming the first users of the AI technologies journals, e.g., General Electric, Amazon, IBM Watson. Locating examples to increase variety in AI applications, including operational and strategic innovation and to expose in practice how AI is used to reinvent business models and create value beyond the current model, is also something that will occur. Case studies allow the contextualised learning related to AI-driven change, which brings into the limelight certain challenges, results, and lessons (Kemp, 2023).

Meanwhile, quantitative study uses industry reports of good reputation like the reports provided by McKinsey & Company and Gartner. The information is used to provide a dispassionate measure of impact that AI has on measurable performance attributes like operational efficiency, cost reductions, enhanced productivity, and revenue generation. Possession of a twofold perspective guarantees the fact that findings are empirically sound and practical (Foukolaei, 2025).

As the means to explain the strategic significance of the gathered information, two popular theoretical perspectives are addressed in this paper, i.e., Resource-Based View (RBV) and Porter Five Forces. Using the Porter theory, it is possible to theorize the processes of AI redescribing competitive forces within the industry and affecting barrier of entry, supplier power, buyer power, threat of substitutes, and competitive rivalry. As the result, AI is treated as a valuable (against useless), rare (against abundant), and inimitable (against imitable) resource that generates sustainable competitive advantage when it is properly included into organization competences within the frames of the RBV framework. (Kordon, 2020).

The sources of evidence to be used during the study are peer-reviewed articles, industry white papers, consulting firm reporting and publicly available industry case studies over the period 2018-2025. The selection of the resources was to provide relevance and current nature of the research results. Four industries were selected based on their strong strategic importance in their capabilities in adoption of AI, technological development and financial input as they have the highest levels of these aspects and thus were identified to be profiled as; manufacturing, healthcare, retail and finance. All these industries are representative of the general business universe where the results achieved on AI as a force multiplier in current competitive strategy can be generalized. (Alvaro Rosa, 2022).

#### 4. AI as a Driver of Competitive Advantage

Artificial Intelligence (AI) gives businesses the ability to gain, as well as maintain competitive advantage through its three strategic levers, which are operational productivity, differentiation, and better decision-making. The levers help to not only streamline the internal operations of the businesses but also add value to the customers and can better handle the dynamic situations in the marketplace. One is that AI is highly efficient as it automates most of the operation, seizes efficiency in the use of resources and reduces wastage in most areas of business operations. Technically, an AI-fueled predictive maintenance software can be deployed in manufacturing to predict mechanical failures due to faulty equipment performance in a US or real-time manner. This active measure helps to reduce unplanned down time by as much as half, which makes it unbelievably cost saving and productivity generating. Moreover, AI-based solutions in the field of logistics, including route optimization and inventory forecast, enable companies to reduce the cost of transportation and experience less bloated supply chains. Secondly, AI assists in differentiation by hyper-personalization and smart service customization.

What will be achieved is the ability of businesses to customize their services according to the needs of a particular client in the manner that it was not before through live analytics and machine learning algorithms. The most visible one is automation of suggestions by artificial intelligence-based recommendation systems on online shops such as Netflix or Amazon. These web sites collect the purchases, ratings of the customers and their history of browsing and base it to suggest them products or materials that are relevant to their own personal interests. This does not only enhance the satisfaction of customers but also results in higher conversion and brand rates of loyalty. Customer differential pricing models, dynamic service delivery, and customised messages also occur in the hospitality and financial services industries due to the use of AI, which generates differentiated competitive positioning. Lastly, AI can streamline tactical and strategy decision-making due to insightful decisions supported by vast quantities of both structured and unstructured data.



Artificial intelligence-enriched sophisticated analytics software, like predictive modeling as well as natural language processing, helps decision-makers identify trends, uncover anomalies and even predicting future states. This will help the organization to anticipate the fluctuation in the market, portfolio optimization as well as strategic investments. As an example, financial institutions are using AI to monitor real-time market information and rebalance asset balance, whereas the retailer is using AI to forecast customer demand and adjusting supply approach. The rate and precision in which insights are generated by the AI eliminate guess-work and allow the organisation to make informed decisions quicker which in this highly dynamic business environment is a necessity. All these direct their place in the core of the strategic value of AI. Among others, through ensuring greater optimality in operation, provision of customer experiences that meet the personal preferences of customers, and provision of intelligent decision-making, AI enables organizations to better perform to deal better with competitors and continuously adapt to change in market circumstances. Over time, AI technologies will only increasingly influence the creation of the competitive strategy, becoming one of the main contributors to business success..

## 5. Industry-Specific Applications of AI

AI's influence varies across industries, as exemplified in the subsequent table:

Table 1 AI Applications Across Key Industries

Industry	AI Applications	Competitive Impact
Manufacturing	Predictive maintenance, robotics	Reduced downtime, cost savings
Healthcare	Diagnostic tools, patient data analytics	Improved outcomes, efficiency
Retail	Recommendation systems, inventory management	Enhanced customer loyalty, reduced waste
Finance	Fraud detection, algorithmic trading	Increased security, higher returns

## 5.1 Manufacturing

Robotics and predictive maintenance tools have changed manufacturing by being AI-powered. As an example, General Electric predicts equipment failures by using AI and saves millions a year.

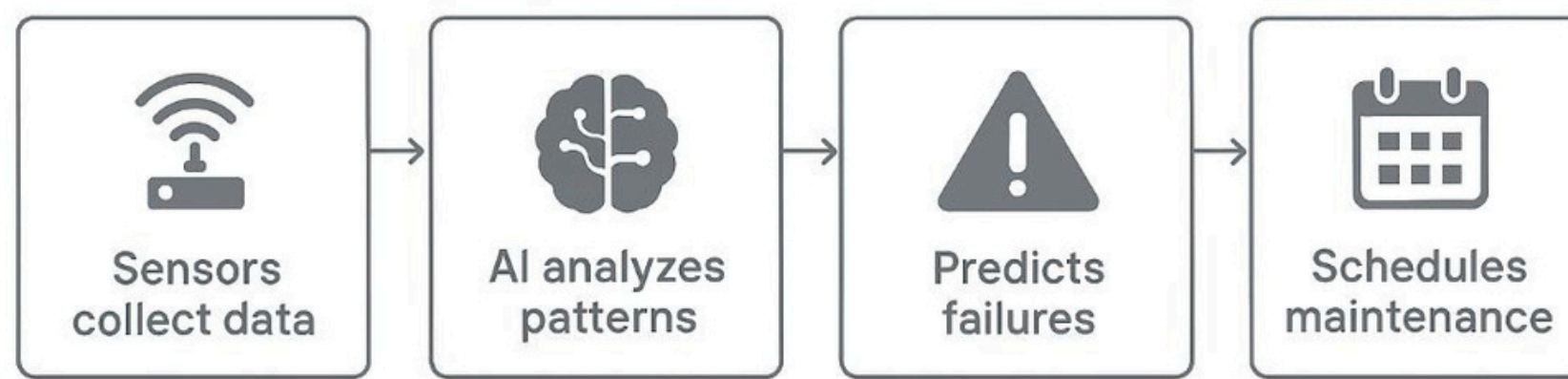


Figure 1 Manufacturing Overall Predictive Maintenance Workflow

Mock Diagram: The sensors get the data in the system, AI recognizes the flow → Forecasts failures in the system, plans maintenance.

## 5.2 Healthcare

Through improved accuracy in health care diagnosis, patient care and clinical support decisions, Artificial Intelligence (AI) is transforming the health care business. The recognition of structured and unstructured medical information under human scale using the help of highly developed machine learning algorithms and natural language processing is possible with the AI systems. IBM Watson Health is one of such classical uses that have been used in the field of oncology to help in the diagnosis of different forms of cancer by the clinician. The system creates evidence-based treatment along with the patient data analysis, the clinical trials, and the medical publications. In some instances of cancer diagnosis, the IBM Watson is 90 percent accurate, and this will go a long way in assisting your doctors arrive to the most favorable treatment decision. The accuracy does not only make results more accurate but minimizes the chance of diagnosis failure.

Another way in which AI can be significant in radiology and imaging to play a role. The same sensitivity exhibited by an expert radiologist can be found through algorithms that are trained by using images with thousands of images to identify abnormalities like a tumor or a fracture. As an example, CNNs have found the early warning signs of breast cancer, pneumonia, and diabetic retinopathy and were more likely to signal the problem to the clinicians at early untraditional stages. In addition to this, AI will be used to enable personalized medicine because it will be able to measure the level at which individual patients are likely to respond differently to various treatments in both clinical and genetic history in order to come up with better, specific care regimens.

Operational terms, AI can enhance the functioning of hospitals, making it possible to predict the rate of admission, the potential of optimal staff utilization, and forecasting the use of resources. The use of AIs proved invaluable to model the course of infection during the COVID-19 pandemic, determine the patients at risk of severe illness, and distribute the vaccine logistics. To add to fairer access to health and offloading health practitioners, virtual health assistants and chatbots allow users 24-hour access and can assist with symptoms checks, booking, and reminders.

Although these developments are occurring, medical AI is hampered by privacy of data, regulatory approval, and clinician confidence. Health data privacy needs sophisticated encryption, available algorithms and it should be tightly guarded ethically. However, with the growth in digital health infrastructure, the incorporation of AI in healthcare delivery has the potential of achieving drastically better clinical outcomes and patient health.

### 5.3 Retail

In the retail sector, AI stands out as a strong factor of business growth on the top line, customer satisfaction, and operational efficiencies. The first ones were Amazon, Alibaba, and Walmart, retail giants that have already used the technology of AI to drive customer behavior prediction, demand mapping, and experience personalisation. One of the most desired applications of AI-based systems does propose products that are based on the history of user browsing, shopping habits and behavior in real-time. The phenomena is called a recommender system. One of the reports given in the commercial worlds indicates that suggestions have placed up to 35 percent supplementary purchases on retail sites such as Amazon that describes the level of AI influence on customer actions.



Besides personalization, the use of AI is also indispensable in the management of stocks and optimization of the supply chain. When using predictive analytics in stores, the demand in stores is predicted effectively, the optimum stock carrying ability is established before time, and the over-stocking and stock-out tendencies are minimized by up to 25%. When predicting consumer behavior, AI models consider other factors in addition to individual history, such as promotions, seasonal factors, and even weather as well. This liberates capital at risk through over stock and keeps it within reach so enhancing customer satisfaction and profit.

Computer vision and automated checkout functionality are also using AI to improve the in-store shopping experiences. The example of Amazon Go stores represents apps supported by AI-enabled cameras and sensors that monitor the movements and choices of the shoppers in order to provide unattended and cashier-free shopping. Customer support is also slowly being integrated into virtual assistants and AI chatbots, and can offer customer support, returns and answer queries 24/7, decreasing the amount of response time and lowering operational expenses.

Targeted marketing and price movement in marketing are created by artificial intelligence. Market trend, competitor prices and activity of users are tested in real-time through algorithmic analysis, and the best pricing strategies and promotion campaigns are offered to be competitive and have the best ratio of conversion. Visual recognition technology also enabled the trend analysis by tracking the social media and fashion websites to predict the consumer sentiment in the future.

Although this is the case, some other challenges persist regarding data governance, algorithmic prejudice, and customer consent. Insight into harvesting and exploitation of data will continue to be critical towards trust. With that said, the future of retail AI is promising, and the current development will lead to even more interactive, responsive, and efficacious shopping and retailing experiences.

international

## 5.4 Finance

Artificial intelligence in finance is redefining the map of risk management, customer interaction and transaction execution. It can be found to be of best use in the detection of fraud. With AI, all the transactional data is immense in its volume and requires real-time anomaly detection to determine that something has occurred, which was not planned and is an act of fraud. Financial institutions, like JPMorgan Chase, track the accounts with the help of machine learning workflows and detect potential outliers and predict suspicious activity within milliseconds. These infrastructures have been associated with minimizing the loss of fraud to the tune of 60% which exponentially enhances the safety of financial transactions using electronics.

Credit scoring and lending underwriting is also possible with the help of AI. Conventional credit scoring utilizes a lot of historic data that are based on the past, but may not mirror the economic activities or prospect of the applicants once they apply. Information that is not traditionally credit relevant, including social media trends, mobile payments and transaction history, may be integrated into AI models to create more informed credit profiles, particularly those consumers who are underserved. That will make financial inclusion possible and more equal and quicker lending decisions.

Asset and investment management utilize AI in portfolio management, sentiment analysis and high-frequency trading. AI is used by hedge funds and trading companies to extract equipment value by interpreting financial statements, news tickers and market mood to make evidence-based investment decisions and estimate the path of stocks. Robo-advisors are an AI-driven solution to portfolio construction and asset rebalancing by using algorithms and they have gained popularity among retail investing customers since they are relatively cheap to use and easy to access..

In consumer banking too, AI does wonders. Virtual assistants by banks through the bank apps can provide answers to questions, transact business and advise the consumer over their spending patterns. The assistants also give a more convenient and personalized service with less of the traditional call center. AI assists the banks with regulations by automating the execution of duties like surveillance of transactions, document verification, and risk management analysis hence cutting its compliance cost.

Similarly, application of AI in finance must be implemented with a close watch as the exercise risks the involvement of model bias, cybersecurity threats, and difficulty in maintaining compliance with regulations. Equality, accountability and transparency must be there when the AI programs are deciding big decisions such as making lending money or reporting fraud. As the banking sector carries forward its digitalization process, AI will remain synonymous as the innovator in the aspect of imparting intelligence, swift and secure financial services.

## 6. Results

- It is analyzed that the use of AI presents a great positive contribution to competitive advantage:
- Efficiency: Companies that have adopted AI-enabled predictive maintenance in the production plants are recording 20–50 percent downtime improvements.
- Increase in revenue: A normal 15–35% increase in sales is observed in retailers who apply AI through the recommendation system.
- Cost Savings: AI applications reduce losses to half or 60 percent when applied by financial institutions to detect fraud.
- Customer Satisfaction: Personalization in retail and healthcare allows a retailer to increase customer retention an average of 10–20%.

Table 2 Quantitative Impact of AI Adoption

Industry	Metric	Impact
Manufacturing	Downtime reduction	20–50%
Healthcare	Diagnostic accuracy	Up to 90%
Retail	Sales increase	15–35%
Finance	Fraud loss reduction	50–60%



## 7. Discussion

The findings highlight how AI can transform. Artificial intelligence in manufacturing minimizes expenses and increases dependability as discussed by Porter in his cost leadership theory. In both retail and in the healthcare, personalization is the stimulus that makes difference, and it brings customer loyal. The adoption is however limited by the high initial costs (costs can rise to 10M in case of enterprise system) and ethical issues surrounding the use of the systems like hiring tool bias. Implementation is also complicated by the so-called skills gap, as 65 percent of companies have AI skills shortages. These discoveries are congruent with Chui et al. (2021) who mention the importance of strategic alignment and sound governance to allow the maximum effect of AI.

## 8. Interference to AI Adoption

- Adoption of AI challenges: Despite the mentioned advantages, the adoption of AI is very problematic:
- Artificial Intelligence Implementation and Maintenance Difficulties: Starting up is a big investment so the cost of an enterprise system is anything between \$1M-\$10M.
- Ethical Concerns: The legal risks and reputational risks are due to factors such as bias in hiring tools caused by algorithms.
- Skills Gap: Two out of every three companies find it difficult to secure skilled applicants to AI jobs.

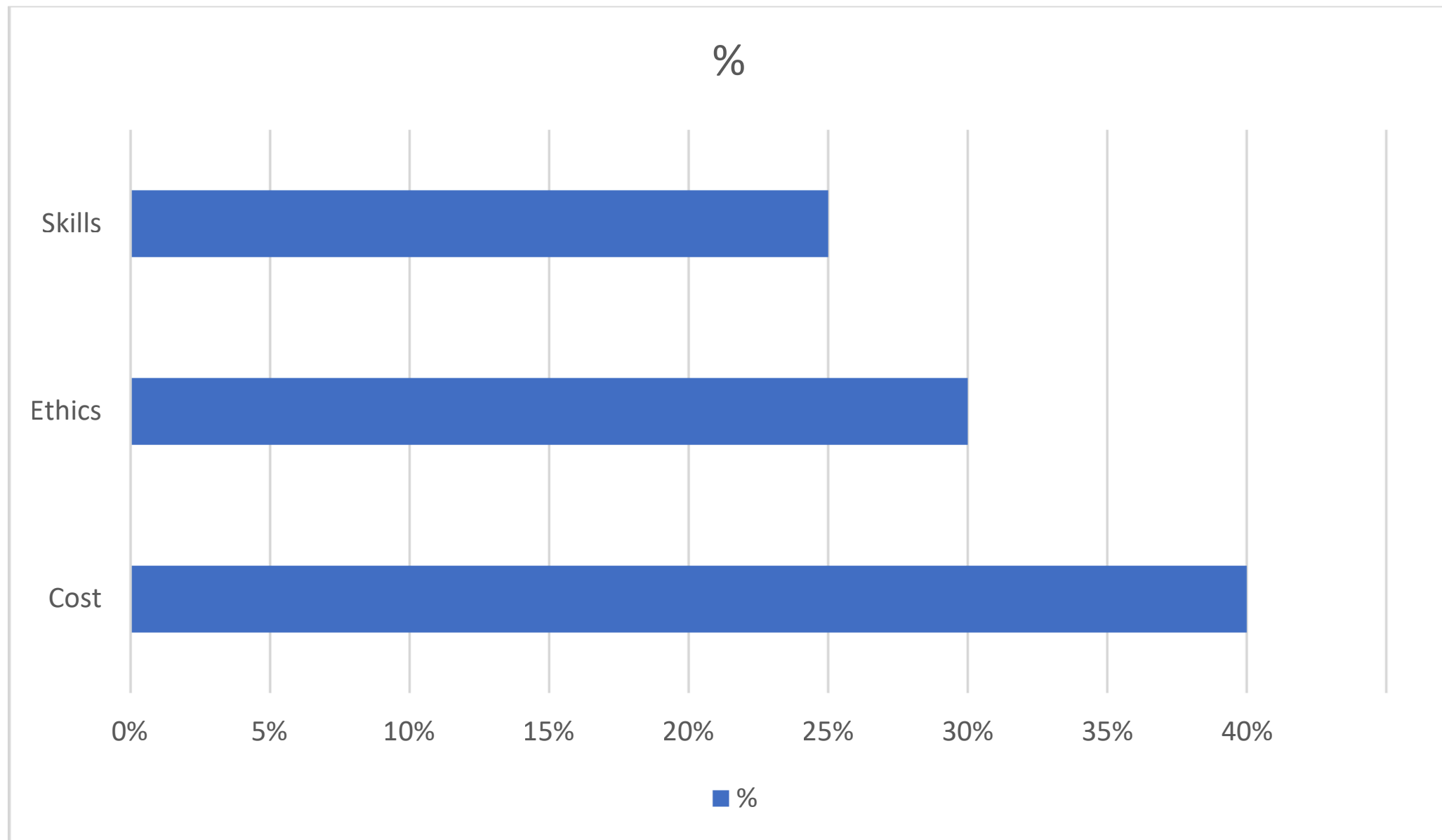


Figure 2 Barriers to AI Adoption

Simulated Bar Chart: Cost (40 percent), Ethics (30 percent), Skills (25 percent)

## 9. The Artificial Intelligence-Based Competitive Edge of the Future

New trends are:

- Edge AI: Calculating data on local reasons latency, which is important in IoT.
- AI Ethics Frameworks: Reproducible guidelines of dealing with bias and transparency.
- Hybrid AI Models: Integrating AI and the knowledge of a human being into making collective decisions in complicated situations.

## 10. Recommendation and Conclusion

AI can play a decisive role in the provision of competitive advantage, playing efficiency, differentiation, and strategic roles. Yet, it is also affected by how it willfully surmounts the adoption barrier and coordinate the AI programs with corporate strategies. Companies that negotiate these difficulties will be able to have long term competitive advantages.

### Recommendations:

- Invest in Training: Train in AI: Resolve the availability gap by creating AI training initiatives to train the employees.
- Ethical Governance: AI ethics should be applied to curb biasness and foster transparency.
- Strategic Alignment: Consider business goals in AI projects through such frameworks as RBV and Porter Five Forces.
- Incremental adaption: The AI can be introduced gradually by carrying out initial pilot projects in costs management.

OXFORD  
international



## References

- Aloosi, S. N. (2025). The Impact of Artificial Intelligence Applications on the Future of Strategic Management and Achieving Sustainable Competitive Advantage. South Asian Research Journal of Business and Management.
- Alvaro Rosa, T. B. (2022). Gaining competitive advantage through artificial intelligence adoption. INDERSCIENCE Online.
- Barney, J. (1991). Firm resources and sustained competitive advantage. . Journal of Management, 17(1), 99–120.
- Chandra Gonesh, G. C. (2023). The Impact of Artificial Intelligence on Business Strategy and Decision-Making Processes. ResearchGate.
- Chui, M. e. (2023). The potential of AI: McKinsey Global Institute Report.
- Company., M. &. (2023). The state of AI in 2023: AI's transformative potential.
- Daojun Yuan Jung Kwan Kim, a. C. (2025). Adoption of Artificial Intelligence and Its Impact on Competitive Advantage: Mediated by Knowledge Management. Journal of Information & Knowledge Management.
- Daojun Yuan, J. K. (2025). Adoption of Artificial Intelligence and Its Impact on Competitive Advantage: Mediated by Knowledge Management. Journal of Information & Knowledge Management.
- Davenport, T. H. (2018). Artificial intelligence for the real world. . Harvard Business Review, 96(1), 108–116.
- Foukolaei, P. Z. (2025). The impact of organizational learning on sustainable competitive advantage about the mediating role of cultural intelligence and artificial intelligence adoption. Journal of Industrial and Systems Engineering.
- Jiaqi Yang, Y. B. (2024). Artificial intelligence adoption in a professional service industry: A multiple case study. Technological Forecasting and Social.
- Kemp, A. (2023). Competitive Advantage Through Artificial Intelligence: Toward a Theory of Situated AI. Academy of Management Review.

Kordon, A. (2020). Applied Artificial Intelligence-Based Systems as Competitive Advantage. IEEE.

Porter, M. E. (1985). Competitive Advantage: Creating and Sustaining Superior Performance. . Free Press.

Raheem Bux Soomro, W. M.-R. (2025). A SEM-ANN analysis to examine impact of artificial intelligence technologies on sustainable performance of SMEs. Scientific Report.

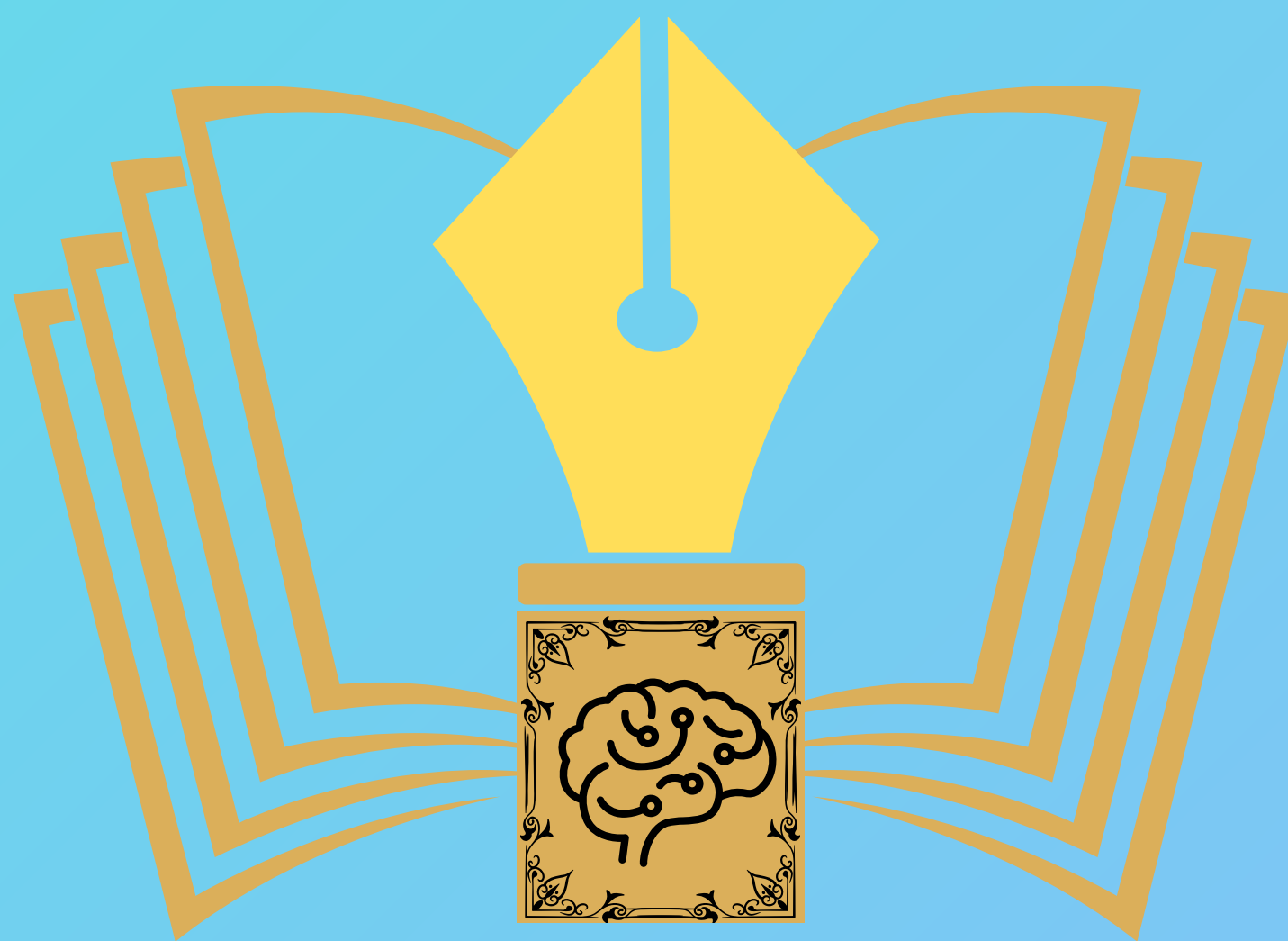
Sayed, R. (2023). Assessing the Influence of Artificial Intelligence on Business Development Strategies: A Sectorial Analysis. law, Business and Sustainability Herald.

Sebastian Krakowski, J. L. (2022). Artificial intelligence and the changing sources of competitive advantage. SMS.

Yuanzhu Zhan, Y. X. (2024). The impact of artificial intelligence adoption for business-to-business marketing on shareholder reaction: A social actor perspective. International Journal of Information Management.

Zhao, X. W. (2024). Research on the Impact of Artificial Intelligence on Corporate Competitive Advantage. Frontiers in Business Economics and Management 17(3):438-443.

OXFORD  
international



**OXFORD**  
international

**Refereed Scientific Journal**

**ISSN-3050-7618**

**2025**

**[www.daroxford.net](http://www.daroxford.net)**