



Original Article

ARTIFICIAL INTELLIGENCE IN TRADE AND COMMERCE: ADVANTAGES AND DISADVANTAGES

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Abstract:

Artificial Intelligence (AI) has emerged as a powerful technological force transforming global trade and commerce. AI has greatly increased productivity, accuracy, and competitiveness in commercial operations by facilitating automation, data analysis, and intelligent decision-making. AI applications are increasingly impacting cross-border trade, from supply chain management and logistics to international marketing and trade financing. AI does, however, come with a number of drawbacks, including high implementation costs, employment displacement, data security risks, and ethical dilemmas. This study uses secondary data sources to examine the main benefits and drawbacks of artificial intelligence in trade and business.

Keywords: *Artificial Intelligence, Global Trade, Commerce, Automation, Advantages, Disadvantages.*

Introduction:

Trade and commerce have changed significantly in the current era of digitalization and globalization. Business operations have always been greatly influenced by technological developments, and one of the most significant inventions of the twenty-first century is artificial intelligence. The ability of computers and computer systems to carry out tasks like learning, reasoning, problem-solving, and decision-making that often require human intelligence is known as artificial intelligence.

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Production scheduling, demand forecasting, logistics management, marketing, financing, and customer service are just a few of the complex procedures involved in international trade and

commerce. AI technologies such as machine learning, big data analytics, chatbots, and automation tools are increasingly being used to simplify and improve these processes. AI is being



used by financial institutions, e-commerce platforms, logistics firms, and multinational organizations to obtain a competitive edge in global marketplaces.

Adoption of AI in trade and business is not without difficulties, though, despite its many advantages. Concerns about cyber security, employment, data privacy, and uneven access to technology are growing in importance. Studying the advantages and disadvantages of artificial intelligence in trade and business is crucial.

Objectives of the Study:

The main objectives of this research paper are:

1. To understand the concept of Artificial Intelligence.
2. To analyze the advantages of Artificial Intelligence in trade and commerce.
3. To examine the disadvantages and challenges of AI in trade and commerce.

Research Methodology:

This study is based on secondary data. The required information has been collected from:

Online Research journals, Books on Artificial Intelligence and Commerce Reports of World Trade Organization (WTO), World Bank publications, Government and business websites, Newspapers and magazines which are online available.

Concept of Artificial Intelligence:

The goal of the computer science field of artificial intelligence is to develop machines that can carry out tasks that typically call for human intelligence. AI systems are able to learn from data, spot trends, and gradually get better. The following AI technologies are frequently employed in trade and commerce: Machine Learning, Natural Language Processing, Predictive Analytics, Robotic

Process Automation, Chatbots and Virtual Assistants. These technologies help businesses make better decisions, reduce costs, and improve efficiency.

Advantages of Artificial Intelligence in Trade and Commerce:

1. **Enhanced Productivity and Efficiency:** AI can enhance speed of work and accuracy than manual work. Every office has daily work like data entry, processing work orders, maintain the record of inventory AI can help to make automatically. Because of AI the final results has increased and wastage of time is decreased. Employees can concentrate on innovative and important work. Humans has limitation they can be tired but AI can work continuously.
2. **Decrease in Operational Expenses:** AI lowers expenses by automating labor-intensive procedures. It reduces human error, which frequently results in monetary losses. Costs associated with storage and waste are decreased by effective inventory management. AI reduces gasoline and logistics costs by optimizing transportation routes. Staffing expenditures are decreased by automated customer service. Predictive maintenance lowers the cost of equipment repairs. Additionally, AI saves time, which indirectly lowers expenses. Significant savings result from minor operational improvements. Profitability rises as expenses are reduced. AI is therefore crucial to cutting costs.
3. **Accurate Demand Forecasting:** AI examines market trends and past sales data. Compared to conventional techniques, it forecasts client demand more precisely. Precise forecasting facilitates effective production planning for businesses. It stops both excessive and



insufficient output. Companies can better control their inventory. Changes in seasonal demand are easily predictable. Stock shortages and waste are decreased as a result. Effective shipment planning benefits exporters. Profitability is increased by accurate forecasting. AI thus facilitates efficient demand planning.

4. **Better Management of the Supply Chain:**

Supply chain is essential part of every business. Companies need to track delivery of products from manufacturers to customers. AI keeps proper record and track them up to proper delivery. AI can improve the coordination between distributors and suppliers. AI can suggest budget friendly routes for delivery and also can give advance information about perils.

5. **Making Decisions More Quickly and Effectively:**

AI swiftly processes massive volumes of data. For commercial decisions, it offers precise insights. Managers are able to react quickly to developments in the market. AI lessens reliance on conjecture. Data-driven and trustworthy decisions are made. It is possible to prevent making risky trade judgments. AI assists in weighing several options. It helps with strategic planning. Making judgments more quickly gives you a competitive edge. AI thereby enhances the quality of decision-making.

6. **Improved Client Experience:**

Personalized customer service is made possible by AI. Chatbots offer round-the-clock client service. Instant answers are provided for inquiries. AI is aware of consumer behavior and preferences. It suggests appropriate goods and services. Multilingual assistance benefits clients worldwide. Customer satisfaction rises with quicker service. Relationships with

devoted customers are developed. Complaints are promptly addressed. AI thereby improves the consumer experience.

7. **Decrease in Human Errors:**

Errors are common in manual operations. AI completes duties accurately. There are less errors in data entry, billing, and documentation. In international trade, this is essential. AI guarantees adherence to trade laws. Financial losses are decreased with fewer mistakes. The caliber of the work increases. Trade partners are more trusting of one another. AI increases dependability. AI reduces human mistake as a result.

8. **Enhanced Risk Control:**

AI detects possible trade hazards in advance. It examines market movements and financial data. It is possible to forecast changes in exchange rates. Credit risks are appropriately evaluated. AI finds trade finance fraud. Disruptions to the supply chain are predictable. Companies are able to take precautions. Exposure to risk is decreased. Trade activities become safer. AI thereby improves risk management.

9. **Growth in Digital Trade and E-Commerce:**

AI facilitates the growth of international e-commerce. It enhances product suggestions. Strategies for pricing become dynamic. AI successfully identifies online fraud. Real-time analysis of customer behavior is done. Delivery systems accelerate. Digital trade across borders is growing. Global markets are accessible to small merchants. Online platforms become more effective. AI thus encourages the expansion of digital trade.

Disadvantages of Artificial Intelligence in Trade and Commerce:

1. **High Initial Investment:** A significant initial expenditure is needed for artificial



intelligence systems. Companies need to invest in data systems, hardware, and software. AI tools also require skilled individuals to operate. Small and medium-sized businesses might not be able to afford this expense. The cost of infrastructure development rises. Recurring costs are increased by renovations and maintenance. It could take some time to see a return on investment. For tiny merchants, financial risk rises. Widespread adoption is thus constrained. Thus, one of AI's main drawbacks is its high cost.

2. **Unemployment and Job Displacement:** Many repetitive chores are automated by AI. Machines may take the place of human labor. Jobs in customer service, logistics, and clerical work are most impacted. In some industries, unemployment rises. Employees may experience job insecurity. Mismatch in skills becomes a major problem. Time and money are needed for re-skilling. There could be a rise in social inequality. Employee opposition also increases. As a result, AI creates problems for employment.
3. **Issues with Training and Skill Gaps:** Advanced technical abilities are needed for AI. Many employees don't have the necessary knowledge. Training courses are costly. Developing nations struggle with a lack of qualified workers. Adoption becomes uneven and sluggish. Businesses rely on a small number of professionals. Employee training is a challenge for small firms. At first, productivity can decline. Inequality is caused by skill gaps. Therefore, a big disadvantage is a lack of abilities.
4. **Data Privacy and Cyber Security Risks:** Data is crucial to AI systems. Digital storage is used for sensitive trade and consumer data.

Data breaches are becoming more likely. Trade operations may be disrupted by cyberattacks. It is possible for private company information to be abused. Privacy issues are brought up by cross-border data sharing. Vulnerability is increased by inadequate security measures. There could be legal repercussions. Trade partners may become less trusting of one another. Data security is therefore a major problem.

5. **An excessive reliance on technology:** Over-reliance on AI diminishes human participation. Human inventiveness and judgment may deteriorate. Making decisions grows reliant on machines. Operations may cease in the event of a system failure. Workers become less adept at solving problems. Decision-making becomes less flexible. Unexpected circumstances might not be managed effectively. There could be a decline in innovation. There is less human control. As a result, relying too much on AI is dangerous.
6. **Fairness and Ethical Bias Concerns:** AI programs pick up knowledge from past data. Biased data leads to unequal outcomes. There may be discrimination against specific groups or areas. Trade decisions might not be transparent. Accountability becomes ambiguous. Assigning ethical obligation is challenging. Decisions made automatically could undermine trust. Fairness in international trade may be impacted. Social justice issues come up. Ethical prejudice is therefore a significant drawback.
7. **Regulatory and Legal Obstacles:** There are no consistent international regulations governing the use of AI. Countries have different legal systems. There could be more trade disputes. It's unclear who is responsible



for AI mistakes. Compliance gets complicated. Legal uncertainty affects businesses. Regulations governing AI across borders are inadequate. Adoption is slowed by policy gaps. Enforcement is challenging. AI use is thus limited by legal challenges.

8. **Countries' Digital Divide:** AI being adopted more quickly in developed nations. Infrastructure is lacking in developing nations. Access to technology is not equal. Small economies don't keep up. Trade disparity rises. The advantages of AI are not dispersed equally. Competition on a global scale becomes unjust. The economic divide grows. Local companies have difficulties. The digital divide is therefore a significant drawback.
9. **Technical Failures and System Errors:** Technical problems could cause AI systems to malfunction. Operations can be disrupted by software flaws. Delays are caused by system failures. There could be monetary losses. Risk is increased by reliance on technology. It takes time to recover. Managing emergencies is challenging. The trust of customers could be impacted. There is a decline in business continuity. Technical failure is therefore a serious issue.
10. **Opposition to Change:** Workers worry that AI will cause them to lose their jobs. Employees oppose technological advancements. Fear is the result of ignorance. Implementation presents obstacles for management. Adoption is slowed by training resistance. Organizational culture could be negatively impacted. AI is avoided by small dealers. Gains in productivity first slow down. Managing change becomes challenging. Adoption of AI is thus constrained by aversion to change.

Findings of the Study:

1. According to the report, by automating time-consuming and repetitive business processes, artificial intelligence greatly increases trade and commerce productivity and efficiency.
2. By precisely and swiftly evaluating vast amounts of trade, market, and consumer data, artificial intelligence (AI) significantly contributes to better decision-making.
3. By enhancing demand forecasting, inventory control, logistics planning, and delivery systems, artificial intelligence (AI) has improved supply chain management.
4. By limiting human error, cutting labor expenses, and improving resource usage, artificial intelligence has helped to lower trade and commerce costs.
5. Through individualized services, prompt responses, and round-the-clock worldwide support, the application of AI in customer service has increased client satisfaction.
6. By assisting with fraud detection, credit evaluation, and the identification of operational and financial hazards, artificial intelligence has improved risk management in international trade.
7. According to the survey, a significant obstacle to the adoption of AI is its high implementation costs, particularly for small organizations and firms in developing nations.
8. Two significant societal issues brought on by automation and the growing application of AI in commercial activities are job displacement and skill mismatch.
9. AI-driven trade systems continue to raise significant concerns about data privacy, cyber security threats, and moral dilemmas



pertaining to algorithm bias and transparency.

10. The study concludes that while developing nations struggle because of the digital divide, rich nations and big businesses gain more from the use of AI.

Suggestions:

1. Governments should promote AI education and skill development.
2. Small and medium enterprises should be supported through subsidies and training.
3. Strong data protection laws should be implemented.
4. Ethical guidelines should be developed for AI usage.
5. Human–AI collaboration should be encouraged instead of complete automation.

Conclusion:

By increasing productivity, cutting expenses, and refining decision-making procedures, artificial intelligence is revolutionizing trade and business. The expansion of international trade has been greatly aided by its applications in supply chain management, logistics, marketing, and finance. However, it is impossible to overlook the difficulties with employment, data security, ethical issues, and uneven access. The sustainable growth of trade and commerce in the AI-driven era requires a balanced strategy that incorporates human talents, ethical standards, and supportive regulations with technical advancement.

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