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# Artificial intelligence: A vector of innovation and transformation in the commercial and financial spheres

**Latifa Salima KHODHEIR \***

University of Mohamed Ben Ahmed Oran 2, [khodheirlatifa@gmail.com](mailto:khodheirlatifa@gmail.com)

**Abstract**--Artificial Intelligence (AI) is deeply reshaping the commercial and financial sectors, introducing groundbreaking innovations while raising significant ethical and regulatory challenges. In the field of commerce, AI enhances service personalization and resource management. In finance, it is transforming trading strategies, risk analysis, and fraud detection. However, these advances also raise key concerns regarding algorithmic transparency, bias control, and employment implications. This article aims to examine the disruptive role of AI in these strategic areas, with a particular focus on ethical challenges and the regulatory perspectives essential for a responsible and sustainable adoption.

**Keywords**-- Artificial Intelligence, Innovation, Commerce, Finance.

**Jel Classification Codes** : O33, G17, L81

## 1. INTRODUCTION

In the digital era, artificial intelligence (AI) stands out as a pivotal force driving profound transformations across the global economy (Mzakkour, 2020). Once confined to the realm of science fiction or niche technological applications, AI has rapidly permeated virtually all sectors, reshaping production processes, exchange mechanisms, and decision-making paradigms Brynjolfsson & (A. Benko, 2009) . Among the sectors most visibly impacted, commerce and finance present particularly fertile grounds for AI-driven innovation, owing to their inherent data-rich environments and the critical role of real-time analysis and customer interaction (Russell S. &, 2020).

In the commercial sphere, AI technologies enable unprecedented levels of personalization in customer experience, optimize supply chain management, and automate complex sales and marketing processes. For instance, recommendation algorithms employed by e-commerce giants like Amazon enhance consumer engagement by anticipating preferences based on extensive behavioral data. Meanwhile, in finance, AI applications revolutionize risk assessment, algorithmic

trading, fraud detection, and client service automation, fundamentally altering how financial institutions operate and compete (Souheila, 2025).

Despite these promising advancements, the deployment of AI raises crucial ethical and practical questions : To what extent should AI be entrusted with decision-making ? How can transparency be ensured in increasingly opaque algorithmic systems ? What are the implications for labor markets and social equity ? This article seeks to critically examine the disruptive role of AI in commerce and finance, balancing its transformative potential against the attendant challenges of ethics, regulation, and social impact. Through illustrative examples and a multidisciplinary lens, it aims to provide a comprehensive overview of AI's evolving landscape within these vital economic sectors.

## **2. THEORETICAL BACKGROUND: ARTIFICIAL INTELLIGENCE IN FINANCE**

### **2.1. Definition and Scope of Artificial Intelligence**

Artificial Intelligence (AI) is a multidisciplinary field of computer science that aims to create systems capable of performing tasks that typically require human intelligence (Ashta, 2021). These tasks include reasoning, learning, problem-solving, perception, and language understanding (Russell S. J., 2020). In the context of finance, AI encompasses a wide range of technologies designed to enhance decision-making, automate processes, and improve predictive accuracy.

Over the past two decades, the scope of AI has significantly expanded, integrating advanced computational models such as machine learning (ML), deep learning (DL), and natural language processing (NLP). These technologies allow systems to learn from data and improve their performance without being explicitly programmed (COUTENCEAU, 2010).

### **2.2. Core Objectives of AI in Financial Contexts**

In the financial sector, AI pursues several fundamental objectives:

- Automation of repetitive tasks, such as transaction processing and data reconciliation.
- Risk assessment and fraud detection, through real-time data analysis and pattern recognition.
- Enhanced customer service, using intelligent chatbots and virtual assistants.
- Predictive modeling, for portfolio optimization, market trend forecasting, and credit scoring.
- Operational efficiency, by reducing human error and improving processing speeds.

### **2.3. Main Components of AI Applied to Finance**

AI in finance is not a monolithic entity but a combination of several subfields, each bringing a specific value:

- Machine Learning (ML): Algorithms that identify patterns and make decisions based on historical data. Widely used in algorithmic trading, credit risk modeling, and robo-advisory systems.
- Deep Learning (DL): A subset of ML, based on artificial neural networks, capable of handling vast amounts of unstructured data such as audio, video, or texts. It is particularly effective in fraud detection and sentiment

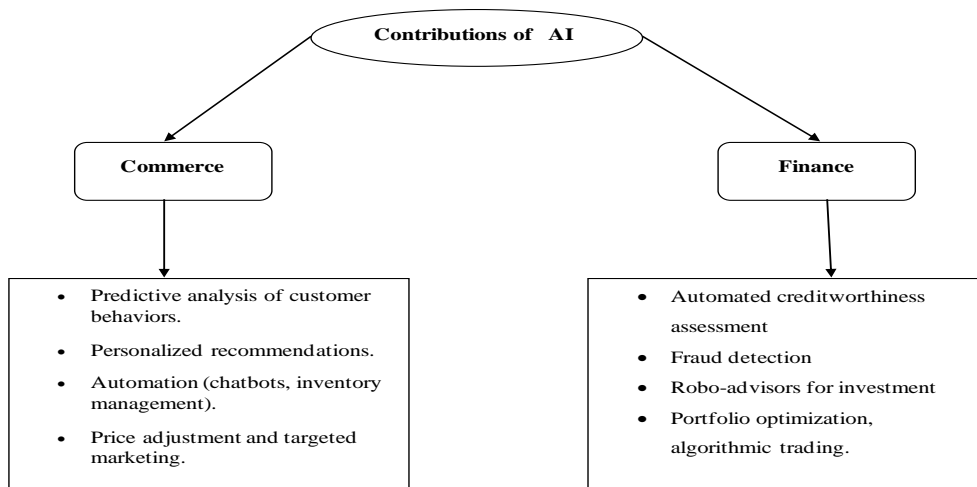
analysis (Chen, 2014).

- Natural Language Processing (NLP): A technique used to process and analyze human language. In finance, NLP is used for analyzing financial news, social media, earnings calls, and regulatory reports (Goodfellow, 2016).
- Expert Systems and Knowledge-Based Agents: Systems that simulate human expertise to provide recommendations or decisions in specific domains, such as tax planning or regulatory compliance (Brynjolfsson, 2017).

## 2.4 The Role of Artificial Intelligence in Commercial and Financial Spheres

Artificial Intelligence (AI) plays a transformative role in both commercial and financial sectors by acting as a catalyst for innovation and disruption. In commerce, AI enhances customer experiences through personalized recommendations, automated customer service via chatbots, and optimized supply chain management (Umamaheswari, 2023). These improvements lead to greater efficiency, cost reduction, and increased revenue generation (Dawood, 2021). In the financial industry, AI revolutionizes risk assessment, fraud detection, and algorithmic trading by processing vast amounts of data with speed and precision unattainable by humans. Moreover, AI-powered predictive analytics enable financial institutions to make informed decisions and tailor products to customer needs, fostering a more responsive and resilient financial ecosystem. Overall, AI serves not only as a tool for automation but as a strategic enabler of competitive advantage, reshaping traditional business models and opening new avenues for growth (Agrawal, 2018).

**Diagram 1.** The Role of AI in the Transformation of the Commercial and Financial Sectors



**Source:** Author's own.

## 2.4. Historical Evolution and Current Trends

The integration of AI into finance began in the late 1980s with expert systems used for loan approvals and credit scoring. The 2008 financial crisis accelerated

the adoption of data-driven solutions due to the need for better risk management tools (Farida, 2020).

Today, AI has reached a maturity stage where it is not only supporting traditional financial services but also reshaping them. FinTech companies are leveraging AI to disrupt the conventional models, offering agile, customized, and accessible services. In parallel, large financial institutions are investing heavily in AI-driven infrastructure to remain competitive (Haiech, 2020).

### **2.5. Strategic Importance of AI in Financial Innovation**

AI has become a strategic asset for financial innovation, enabling the development of new products and services, such as decentralized finance (DeFi), algorithmic wealth management, and smart contracts. By enhancing decision-making capabilities and reducing human bias, AI fosters more robust and adaptive financial systems.

Moreover, the integration of AI with other technologies such as blockchain, IoT sensors, and cloud computing creates powerful synergies, particularly in areas like real-time risk monitoring and regulatory technology (RegTech) (Bostrom, 2014).

## **3. ARTIFICIAL INTELLIGENCE IN SERVICE OF COMMERCIAL TRANSFORMATION**

Artificial intelligence (AI) has become a cornerstone in the ongoing digital revolution reshaping the commercial sector. Its influence extends beyond mere automation ; AI drives fundamental shifts in how businesses understand and interact with consumers, optimize operations, and innovate service delivery.

### **3.1. Towards Enhanced Personalization of Customer Experience**

One of the most transformative impacts of AI in commerce is the ability to deliver hyper-personalized customer experiences. Leveraging large-scale data analytics and machine learning, companies can analyze complex datasets comprising past purchases, browsing behaviors, demographic information, and even real-time social media activity. This rich data ecosystem enables the creation of dynamic consumer profiles that evolve continuously with new inputs.

For instance, Amazon's recommendation engine reported to generate up to 35% of its revenue (McKinsey, 2020) uses sophisticated collaborative filtering and natural language processing algorithms to suggest products tailored to individual tastes and purchase histories. Similarly, Netflix's AI-driven content recommendations have been instrumental in retaining subscribers, contributing to a 75% increase in user engagement (Gomez-Uribe & Hunt, 2016).

Such personalization enhances customer satisfaction and loyalty by reducing search costs and making interactions more relevant and efficient. Yet, this also raises challenges regarding data privacy and algorithmic transparency. Questions emerge around the ethics of profiling, potential exclusion of certain demographics, and the unintended reinforcement of consumer biases.

### **3.2. Logistics Optimization and Intelligent Inventory Management**

AI powered logistics is another critical dimension of commercial transformation. Supply chains, historically fraught with inefficiencies and bottlenecks, are becoming increasingly agile through the integration of predictive analytics, IoT sensors, and autonomous robotics.

Retail giants like Walmart have implemented AI systems capable of forecasting demand with remarkable precision, adjusting inventory levels dynamically to reduce overstock and stockouts. Studies indicate that AI-driven inventory management can reduce warehousing costs by up to 25% and improve fulfillment speed by 20% (DHL, 2021).

In warehouses, AI-powered robots, such as Amazon Robotics' Kiva systems, streamline order picking and packing, enhancing accuracy and throughput while lowering human error rates. These innovations are especially crucial during peak seasons where operational scalability can determine competitive advantage.

### **3.3. Transformation of Physical Stores : Towards the "Phygital"**

Despite the rapid expansion of e-commerce, physical retail remains vital, evolving into hybrid "phygital" spaces where digital technologies augment the in-store shopping experience. AI enables seamless integration of online convenience with tangible, sensory experiences.

Examples include facial recognition technology to personalize in-store greetings and offers, virtual fitting rooms using augmented reality to visualize products on customers, and interactive digital mirrors that provide real-time fashion advice. Sephora's "Virtual Artist" app has boosted customer engagement by 50%, allowing shoppers to experiment with makeup virtually before purchase (Accenture, 2019).

These tools not only elevate the customer journey but also generate valuable behavioral data, fueling further AI-driven insights and tailored marketing strategies.

### **3.4. Ethical and Social Issues of the Widespread Adoption of Commercial AI**

The extensive deployment of AI in commerce inevitably raises significant ethical and social concerns. Foremost among these is privacy. The aggressive collection and use of personal data often without full consumer awareness pose risks related to consent, data security, and misuse. The European Union's GDPR (General Data Protection Regulation) exemplifies regulatory efforts to balance innovation with individual rights, though enforcement remains challenging.

Furthermore, AI systems may perpetuate or amplify existing biases present in training data, resulting in discriminatory outcomes in pricing, credit offers, or product visibility. Transparency in algorithm design and decision-making processes is critical to build consumer trust and ensure fairness.

Finally, automation threatens traditional retail jobs. While AI can relieve workers from repetitive tasks, it also demands rapid reskilling and may lead to job displacement. Studies by the McKinsey Global Institute (2019) estimate that up to 30% of retail jobs could be automated by 2030, highlighting the urgency for

proactive labor policies and workforce adaptation programs (Davenport, 2018).

#### **4. ARTIFICIAL INTELLIGENCE: ENGINE OF TRANSFORMATION IN THE FINANCIAL SECTOR**

Artificial intelligence (AI) has become an indispensable force driving innovation and disruption within the financial sector. The adoption of AI technologies in banking, investment management, risk analysis, and fraud detection is reshaping traditional paradigms and opening new frontiers for financial services (Magdy, 2021). This section explores in depth how AI is transforming key financial processes, its benefits, challenges, and the ethical considerations that accompany this shift (Kshetri, 2018).

##### **4.1. Revolutionizing Risk Management and Investment Strategies**

One of the earliest and most impactful applications of AI in finance lies in risk management and investment portfolio optimization. Traditional financial risk assessment relied heavily on human expertise and static models, often limited by their inability to process large, diverse data sources quickly. AI, particularly through machine learning (ML) and deep learning algorithms, now enables real-time analysis of vast datasets, including historical market trends, economic indicators, geopolitical events, and even alternative data sources such as social media sentiment or satellite imagery (Gupta, 2023).

For instance, JPMorgan Chase reported that their AI-powered LOXM trading algorithm executes trades more efficiently than human traders, reducing market impact costs by up to 15% (Co., 2025). Similarly, BlackRock's Aladdin platform uses AI to assess risk exposures across trillions of dollars in assets, providing asset managers with sophisticated scenario analyses that were previously impossible at this scale).

These AI tools enhance predictive accuracy and decision-making speed, allowing financial institutions to adapt swiftly to volatile market conditions (Hassan A. , 2021). However, the dependence on AI raises concerns about systemic risk. Flash crashes such as the infamous May 6, 2010 event where the Dow Jones dropped nearly 1,000 points in minutes highlight how algorithmic trading can exacerbate market instability (Kirilenko, 2017). Thus, regulators are increasingly focused on monitoring AI-driven market activities to mitigate such risks (Bogojevic, 2021).

##### **4.2. Enhancing Fraud Detection and Security Protocols**

In financial services, trust is paramount. AI-driven fraud detection systems have revolutionized the capacity to identify and prevent fraudulent transactions. Machine learning models analyze patterns across millions of transactions to detect anomalies indicative of fraud with impressive accuracy and speed (Bredt, S, 2019).

For example, Mastercard leverages AI to analyze over 25 billion transactions annually, utilizing pattern recognition and behavioral biometrics to flag suspicious activities almost instantaneously (Mastercard, 2024). AI also supports multi-factor authentication systems incorporating facial recognition, voice biometrics, and fingerprint scanning, which have reduced account takeovers by 30% year-over-year across major banks (Tobias, 2024).

Nevertheless, while AI bolsters security, it also raises privacy concerns. The extensive data collection required for these systems often includes sensitive personal information, demanding robust data protection frameworks to prevent misuse or breaches (Bredt, Artificial Intelligence (AI) in the Financial Sector: Potential and Public Strategies, 2019).

#### **4.3. Democratizing Finance through Inclusivity and Personalization**

AI's role in democratizing financial access is particularly noteworthy. Fintech companies and platforms now utilize AI to provide personalized financial services to underserved populations traditionally excluded from mainstream banking.

By analyzing alternative credit data such as mobile phone usage, payment history on utilities, or social network information, AI enables micro-lending and credit scoring models that accurately assess creditworthiness for individuals without formal credit histories. (Dakalbab, 2024). For example, Tala, a fintech operating in emerging markets, has issued over \$1 billion in microloans through AI-powered credit evaluation, significantly expanding financial inclusion in regions like East Africa and Southeast Asia (Report, 2023).

Moreover, robo-advisors such as Wealthfront and Betterment deploy AI to manage investment portfolios automatically, offering personalized, low-cost advice accessible to retail investors. These platforms have grown rapidly, managing over \$150 billion in assets combined as of 2024, lowering barriers to entry for wealth management traditionally reserved for affluent clients (Statista, 2024).

#### **4.4. Ethical Considerations, Transparency, and Regulatory Challenges**

The integration of AI into finance introduces critical ethical and governance issues. Foremost is the "black box" nature of many AI models especially deep learning networks where decision-making processes are opaque, complicating accountability in case of errors or biases (Mohanty, 2023).

Financial regulators worldwide are increasingly developing frameworks to ensure algorithmic transparency and fairness. The European Union's proposed AI Act, expected to come into effect in 2026, aims to regulate high-risk AI applications, including those in finance, mandating rigorous risk assessments, documentation, and human oversight (Commission, 2024).

Furthermore, algorithmic bias poses a serious threat to equitable access to financial services. If training data reflect historical inequalities or discriminatory practices, AI systems may inadvertently perpetuate these biases, denying credit or favorable financial treatment to marginalized groups (Barocas, 2016). This necessitates continuous auditing and inclusive data practices to mitigate systemic bias (Kashif, 2024).

Lastly, the increasing automation in finance raises concerns about job displacement among traditional financial professionals, requiring proactive workforce reskilling and education to manage the socio-economic impact (Saeed, 2023).

## 5. COMPARISON BETWEEN AMAZON AND ALIBABA: AI IN COMMERCE AND FINANCIAL SERVICES

Artificial Intelligence (AI) has emerged as a transformative force shaping global commerce and financial services. Two dominant players in this evolution are Amazon and Alibaba, giants not only in e-commerce but also in integrating AI to redefine operational models and customer experiences. This section provides an extensive comparative analysis of their AI strategies, technologies deployed, market impacts, and ethical considerations, illustrating how AI adoption reflects distinct business environments and visions (Hassan, 2023).

### 5.1. Amazon's AI-Driven Innovations in Commerce

Amazon's AI applications are multifaceted, centering primarily on enhancing consumer experience and optimizing logistics. The company leverages machine learning algorithms to analyze billions of data points from customer behavior, enabling personalized product recommendations that increase average basket size and conversion rates.

- **Recommendation Systems:** Amazon's recommendation engine uses collaborative filtering and deep learning to create highly accurate predictions of user preferences. According to a study (McKinsey, 2023), personalized recommendations contribute to up to 35% of Amazon's sales, underlining AI's direct influence on revenue.
- **Warehouse Automation:** Amazon Robotics automates over 200 warehouses worldwide, employing AI-powered robots to pick, pack, and transport goods. This automation has reduced operational costs by an estimated 20% and improved delivery speed by 40% since implementation began in 2015 (Amazon.com, 2024).
- **Voice Commerce:** With Alexa, Amazon integrates AI into voice-activated commerce. Alexa's natural language processing (NLP) capabilities allow seamless voice ordering, enhancing accessibility and convenience. By 2024, over 100 million Alexa-enabled devices have been sold, with voice shopping growing at a CAGR of 30% (Voicebot.ai, 2025).
- **Challenges and Social Impact:** Automation's success has sparked debate over labor displacement. The Brookings Institution (2024) reports that while automation boosts efficiency, it potentially threatens 25% of warehouse jobs. Amazon invests in upskilling programs, yet critics argue that the social costs and worker conditions require further regulatory attention (Giudici, 2018).

### 5.2. Alibaba's Integration of AI in Commerce and Financial Services

Alibaba's AI strategy transcends commerce, deeply intertwining with financial services via Ant Financial (now rebranded as Ant Group). This integration allows Alibaba to create an ecosystem where commerce and finance complement each other, powered by advanced AI.

- **Augmented Reality and Virtual Shopping:** Alibaba has pioneered AR applications allowing consumers to visualize products virtually before purchase. For example, Taobao's "See Now, Buy Now" feature enables users to try clothes virtually using AI-driven body mapping technology. This reduces return rates by up to 15% (Relations, 2024).
- **AI-Powered Credit Scoring:** Ant Group uses AI algorithms analyzing non-traditional data sources—such as mobile phone usage, social media, and

transaction histories—to offer microloans and credit to individuals and SMEs previously excluded from formal banking. The World Bank (2023) highlights that Ant Financial has enabled financial services for over 200 million unbanked customers in China and other Asian markets.

- **Fraud Detection and Risk Management:** AI also plays a crucial role in fraud prevention, employing real-time anomaly detection systems that analyze millions of transactions per second. Alibaba reports that its AI systems have reduced fraudulent activities by 30% in the last three years.

**Ethical and Regulatory Concerns:** Despite its success, Alibaba faces challenges related to data privacy and algorithmic fairness. China’s regulators have increased scrutiny over data governance, fearing monopolistic practices and social control risks embedded in AI-powered financial platforms. Transparency in AI decision-making remains an open question.

### 5.3. Comparative Table and Analysis

**Table 1.** A Comparative Analysis of Amazon and Alibaba in AI and E-Commerce

Feature	Amazon	Alibaba
<b>AI Focus</b>	Consumer personalization, logistics	Integrated commerce-finance ecosystem
<b>Key Technologies</b>	Recommendation engines, robotics, voice AI	AR shopping, AI credit scoring, fraud AI
<b>Market Reach</b>	North America, Europe, global	China, Asia-Pacific, emerging markets
<b>Financial Inclusion</b>	Limited (mainly commerce focused)	Extensive (millions unbanked served)
<b>Workforce Impact</b>	Automation threatens warehouse jobs	Employment impact less direct, but social concerns over data use
<b>Regulatory Challenges</b>	Data privacy, labor laws	Algorithmic bias, monopoly risk, data privacy

**Source :** (Relations, 2024)

Amazon’s AI strategy emphasizes enhancing operational efficiency and user experience in mature markets with advanced infrastructure. Alibaba’s model adapts AI to address emerging market challenges such as financial inclusion, combining e-commerce with fintech innovation.

### 5.4. Broader Implications and Future Outlook

- **Economic Impact:** AI-driven automation and personalization increase productivity and consumer spending but require balancing with labor market shifts. Amazon’s model suggests that AI can boost logistics efficiency drastically but must be managed to mitigate social displacement.
- **Financial Services Transformation:** Alibaba’s AI integration in financial services is pioneering for emerging economies, enabling access to credit and payment systems for millions. This demonstrates AI’s potential to democratize finance but also emphasizes the need for regulatory frameworks protecting consumer rights and data security.
- **Ethical Considerations:** Both companies face ethical dilemmas: labor impact and privacy in Amazon’s case, and algorithmic bias and data

control for Alibaba. Developing transparent AI systems and responsible governance models is essential to ensure sustainable benefits.

## **6. LIMITATIONS, ETHICAL CHALLENGES, AND FUTURE PERSPECTIVES OF AI IN COMMERCE AND FINANCE**

### **6.1. Technological and Functional Limitations**

Despite its impressive advancements, AI still faces significant technological hurdles that limit its full potential in commerce and finance. A core challenge is AI's lack of true contextual understanding and common sense reasoning (Al-Asad, 2023). For example, in retail, recommendation systems occasionally suggest irrelevant products due to incomplete user context or rapidly changing trends. Similarly, in finance, algorithmic trading systems can misinterpret sudden geopolitical events or unexpected market shocks, leading to suboptimal or even detrimental decisions

(Malali, 2020). Furthermore, AI systems often struggle with "edge cases" rare or unusual scenarios that fall outside their training data. This limits their reliability in complex decision-making contexts where human intuition remains irreplaceable.

### **6.2. Algorithmic Bias and Ethical Concerns**

One of the most pressing issues with AI adoption is algorithmic bias, which can perpetuate or even amplify existing social inequalities. Since AI learns patterns from historical data, any bias embedded in this data risks being reproduced in AI-driven decisions. For instance, in credit scoring, biased datasets can result in the unjust exclusion of minority groups or disadvantaged populations from loan access (BARZI, G, & Z, 2023).

Addressing bias requires rigorous auditing, transparency, and the development of fair AI frameworks. Ethical AI development must ensure inclusivity and equity, while avoiding discrimination. However, achieving unbiased AI is extremely challenging due to complex societal biases reflected in data, and the "black box" nature of many machine learning models which limits interpretability (Bredt, 2019).

### **6.3. Transparency and Accountability**

AI algorithms, particularly those based on deep learning, are often described as "black boxes" because their decision-making processes are opaque even to their creators. This opacity raises serious concerns in finance, where investment decisions affect individuals' livelihoods, or in commerce, where pricing algorithms can impact consumer fairness (Ait El Bour, 2020).

Questions of accountability remain unresolved: when an AI system causes harm or financial loss, who is legally responsible? The company, the developers, or the algorithm itself? Regulators and lawmakers worldwide are grappling with creating frameworks that ensure transparency and assign liability clearly. The European Union's AI Act and the AMF's guidelines are early steps towards this (Mohanty, 2023).

#### **6.4. Dependence on Technology and Security Risks**

Increasing automation creates heightened dependency on technology infrastructure, exposing businesses to systemic risks. Technical failures, software bugs, or cyberattacks could disrupt critical operations in commerce and finance with severe economic consequences. For example, algorithmic trading errors or cyber fraud could trigger market instabilities or massive financial losses (Bogojevic, 2021).

Robust cybersecurity measures, fail-safe protocols, and contingency planning are essential to mitigate these vulnerabilities. Companies must balance the efficiency gained through AI automation with the resilience required to withstand technical disruptions (Bogojevic, Challenges of Financial Risk Management: AI Applications, 2021).

#### **6.5. Impact on Employment and Social Inequalities**

AI-driven automation threatens to displace jobs that involve routine or manual tasks in both commerce and finance, such as cashiers, warehouse workers, or traditional financial advisors. While AI can free employees from repetitive tasks, enabling them to focus on higher-value activities, this shift requires comprehensive workforce retraining programs to avoid exacerbating unemployment and social inequalities (Youssef, 2024).

Moreover, the concentration of AI capabilities in large tech companies risks deepening economic disparities and market monopolies. Smaller businesses and developing regions might lag in AI adoption, further widening global inequalities. Inclusive policies and public investments are necessary to democratize AI access and benefits.

#### **6.6. Future Perspectives: Towards Responsible and Inclusive AI**

Looking forward, the development and deployment of AI in commerce and finance must be guided by principles of responsibility, inclusiveness, and sustainability. Some promising directions include:

- **Explainable AI (XAI):** Improving the interpretability of AI models so that users and regulators can understand how decisions are made, thus enhancing trust and accountability.
- **Ethical AI Frameworks:** Establishing international standards and certification systems to ensure AI respects human rights, privacy, and fairness.
- **AI and Financial Inclusion:** Expanding AI-driven microfinance and credit scoring tools to underserved populations, especially in developing countries, to foster economic growth and reduce poverty (Dakalbab, 2024).
- **Human-AI Collaboration:** Designing AI systems that augment rather than replace human decision-making, combining machine efficiency with human judgment and ethics (Lee, Suh, Roy, & Baucus, 2019).
- **Regulatory Evolution:** Adapting legal frameworks continuously as AI technologies evolve, to balance innovation with protections against risks.
- **Sustainability Considerations:** Developing AI with awareness of environmental impacts, reducing energy consumption of large data centers and training processes.

In sum, AI holds immense potential to transform commerce and finance

positively but must be managed carefully to mitigate risks and maximize societal benefits.

## 7. CONCLUSION

Artificial intelligence has become an indispensable driver of transformation in the commerce and finance sectors. Its capabilities in data analysis, automation, and personalization are revolutionizing business models, enhancing company competitiveness, and opening new opportunities for consumers and investors alike.

However, this technological revolution also brings significant challenges that cannot be overlooked. Technological limitations, algorithmic biases, lack of transparency, and risks related to security and employment demand heightened vigilance. The pursuit of ethical, fair, and explainable AI is now at the core of concerns for researchers, regulators, and economic actors.

For AI to become a true engine of inclusive and sustainable innovation, it is essential to adopt rigorous governance that fosters human-machine collaboration while safeguarding fundamental rights. Establishing appropriate regulatory frameworks and investing in professional training will be key pillars of this transition.

Ultimately, the future of artificial intelligence in commerce and finance will depend on our collective ability to balance innovation with responsibility, building resilient, fair, and beneficial systems for society as a whole.

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