

THE TRANSFORMATIVE ROLE OF AI IN SHAPING THE FUTURE OF ECONOMIC LANDSCAPES

OM Perkash¹, Ravi Kumar², Dr Zulfiqar Ali Umrani³

¹Audit Manager-New York Financial Services (NYFS) KPMG LLP USA. US CPA and ACCA-²Senior Auditor Deloitte USA, ³Director ORIC Associate Professor Ziauddin University Karachi

¹omrohira@outlook.com, ²ravi_kumar2008@hotmail.com, ³zulfiqar.umrani@zu.edu.pk

Received: 11 November, 2023 Revised: 15 December, 2023 Accepted: 25 December, 2023 Published: 10 January, 2024

ABSTRACT

The rapid adoption of AI in several sectors is changing the global economic landscape. Innovation, trade, labour markets, and security are all affected by this revolutionary technology, which brings both unprecedented potential and concerns. The purpose of this research is to examine AI's potential monetary impacts by looking into its potential consequences on innovation, security, international trade, and labour markets. By analyzing present trends, possibilities, and challenges, we hope to provide insights that aid in the creation of policies and strategic decisions. The study's findings show that AI's impact is two-sided, with the good side being the possibility of increased economic growth and the bad side being things like job losses, a lack of standards, and security concerns. The study emphasises the importance of working together to overcome these challenges and fully utilise AI's capabilities. As AI keeps changing the economic landscape, it becomes vital to balance risks and opportunities. Guidelines for ethical AI design, continuous retraining of workers, and adaptable regulatory approaches are all proactive measures advocated for in the paper. A recurring issue that arises as we form an AI future prioritising inclusivity, innovation, and responsible governance is the importance of collaboration.

Keywords: financial consequences of AI; AI's influence on the economy; AI's revolutionary financial consequences

INTRODUCTION

Artificial intelligence (AI) is a subfield of computer science concerned with the development of smart machines capable of performing activities traditionally associated with human intelligence. Skills in learning, perception, problem-solving, and language comprehension are required for these tasks. Artificial intelligence (AI) technologies are versatile tools because they can adapt to different situations and mimic human cognitive processes (Chen et al., 2020). Many different areas have found useful uses for artificial intelligence (AI), but computer vision, robotics, NLP, and ML are among the most wellknown. Machine learning is a subfield of AI based on algorithms that enable systems to improve themselves via experience and learning from past

mistakes without requiring human intervention in the form of explicit programming (Chen et al., 2020).

Natural language processing facilitates humancomputer interaction by teaching computers to understand, interpret, and generate human speech. Robotics is concerned with the creation of intelligent machines that can carry out physical activities, whereas computer vision allows robots to process and interpret visual input (Bahja, 2020). The advent of AI has been a game-changer in many sectors of the modern economy, including global trade. In many different fields, AI has the potential to increase efficiency, innovation, and production. Data analytics and translation services are two examples of AI technologies that are already lowering trade

barriers worldwide by improving communication and decision-making (Alkatheiri, 2022).

Problems arise when trying to integrate AI into business processes. Issues such as data access, ethics, and regulatory frameworks must be thoroughly considered in order to maximise the benefits of AI while minimising its risks. In this introductory section, we lay the framework for investigating the ways in which AI is influencing international trade by describing the possible advantages and the domains where trade regulations can play a pivotal role in promoting AI research (Brynjolfsson et al., 2019).

With AI's rapid development, macroeconomic variables and the dynamics of global trade will undergo profound changes. Artificial intelligence (AI) has the ability to increase productivity, which could lead to more economic growth and more possibilities for international trade. It will take time for economies to adapt to take use of these advantages to their fullest potential, we need cutting-edge innovation like AI, which is why supportive trade policies and investments in supplementary factors like trained labour are so important (Wamba-Taguimdje et al., 2020).

Artificial intelligence (AI) influences the kind and quality of economic growth, which in turn supports the shift to service-based economies. Adaptability and skill development are becoming more important in today's job environment as a result of this trend. As artificial intelligence (AI) plays an increasingly important role in the expansion of goods production, the proportion of services in international trade is projected to increase (Di Vaio, Palladino, et al., 2020).

The influence of artificial intelligence (AI) on global value chains (GVCs) is already apparent. From improving future trend predictions to bolstering supply chain risk management, it has a wide range of uses. The total efficacy of GVCs is enhanced by the efficiency improvements brought about by AI in sectors such as demand forecasting, warehouse management, and just-in-time production (Kliestik et al., 2023).

The expansion of smart manufacturing, which incorporates AI-driven innovations like Industry 4.0, is also having an effect on GVCs. This networked technique paves the way for self-maintenance, predictive devices, and seamless communication among supply chain actors. Though AI enhances GVCs, it opens the door to additional automation and innovations like 3D printing, which could alter the global manufacturing landscape and force output offshore (Gölgeci et al., 2023).

Artificial intelligence (AI) is already helping small businesses with international trade on platforms like eBay. Expanded access to markets, fewer linguistic obstacles, and increased exports are all made possible by machine translation services powered by AI. By leveraging AI in digital platforms, businesses are able to access a global audience, which in turn boosts commerce and economic growth (Hong & Zahid, 2023). The widespread effects on the economy, changes to growth patterns, and applications in digital platforms and global value chains are just a few ways in which artificial intelligence is shaking up international trade. As we move forward, we will delve more into these themes, exploring the opportunities and challenges presented by the intersection of AI and international commerce (Modgil et al., 2022).

Prosperity and Economic Outcomes

The convergence of digital transformation and artificial intelligence (AI) is causing a worldwide shift in business paradigms away from merely improving communication. Through the use of digital technology as the driving force behind this groundbreaking shift in both processes and goods. AI is spearheading this shift, paving the road as digital transformation's principal enabler and an integral part of business framework development (Kitsios & Kamariotou, 2021).

The global digital transformation is profoundly affected by the way businesses are defined. This shift isn't an end in and of itself, but rather a strategic move towards greater efficiency and sustainability. According to Vacas Aguilar, many businesses are still in the early stages of digital transformation, which involves the integration of digital devices and networks. What makes this method successful is the formulation of defined, quantifiable goals within a digital strategy that outlines the techniques and critical pieces for a seamless implementation (Cantú-Ortiz et al., 2020).

understanding the idea of a digital ecosystem is necessary for comprehending the intricate web of ties that exist among companies with a common goal of

seeing technological advancements realised. Academics describe this ecosystem as a network of interdependent enterprises and a context in which digital goods adapt to new requirements. Because of this, it is clear that digital ecosystems are intrinsically linked by technology (Wamba-Taguimdje et al., 2020).

To comprehend the contemporary digital revolution and its impact on industrial change, it is essential to trace its intellectual ancestry back to its academic antecedents. Central to the digital revolution—a subset of the broader industrial revolution—is the merging of data, computation, AI, and pervasive connectivity. This convergence has accelerated technological advancement due to the remarkable information-storage, processing, and conveying capacities of electronic devices (Magistretti et al., 2019).

What we call "digital disruption" is the result of the fourth industrial revolution, which is characterised by developments in AI, blockchain technology, and robotics, and which is causing a dramatic shift in how we live and work. Artificial intelligence is driving this revolution. Intellect, which is defined as the ability to reason, perceive, and act independently in pursuit of predetermined objectives (Agarwal et al., 2022).

Russell and Norvig classify AI definitions according to two dimensions: human-rational and thoughtbehavior. This lines up with the principles of the Turing Test, which state that a computer is considered to have passed the test if its responses cannot be distinguished from those of another person. To be considered artificially intelligent, a system must be able to learn on its own, understand natural language, represent information, and engage in automated reasoning (Reier Forradellas & Garay Gallastegui, 2021).

Artificial intelligence (AI) has the ability to revolutionise society, economy, the environment, and technology due to its rapid growth, competitive advantage, and pervasiveness in all of these areas. As a result, several countries, Spain included, have established national AI strategies to guide efforts for the digital transformation of both the public and commercial sectors (Peyravi et al., 2020).

Significant implications for optimising company procedures and cutting down on overhead expenses are held by the intersection of digital transformation and artificial intelligence. In the midst of the ongoing fourth industrial revolution, artificial intelligence (AI) is leading the charge, changing the face of business and communication alike. What follows is a more in-depth examination of the specific applications of AI in international trade, as well as its wider ethical and legal implications (Brem et al., 2021).

Concerns about the impact of AI on the employment market are prevalent as the technology becomes increasingly prevalent in many industries. When seen from a more complex angle, though, AI does more than just create new job categories and possibilities; it also eliminates existing jobs (Velarde, 2020).

When it comes to artificial intelligence, manufacturing is one area where it really shines. The rise of AI-powered robots has rendered routine and repetitive tasks obsolete in today's workforce. The employment of AI-powered robots in automotive assembly lines, for instance, has simplified manufacturing while, in some areas, reducing the need for human labour. Concurrently, the nature of work has altered due to the increased demand for skilled engineers and technicians to create, implement, and oversee these AI systems (Peters, 2020).

Logistics and transportation also provide a solid illustration. The advent of autonomous vehicles and AI-driven route optimisation could have an effect on jobs that rely on human drivers. On the other hand, it gives rise to brand-new occupations, such as AI system technicians, data analysts who specialise in transportation efficiency, and experts who have overseen and managed autonomous vehicle fleets (Dillon, 2019).

The field of customer service has also been profoundly affected by AI. Chatbots and virtual assistants powered by AI have automated repetitive inquiries and could eventually replace some entrylevel customer support jobs. Still, jobs in artificial intelligence (AI) programming, development, and maintenance have opened up as a result of this shift, highlighting the fact that employers' skill sets are evolving (Nascimento et al., 2019).

To alleviate concerns about job displacement, it is crucial to recognise that AI is also enabling the development of new jobs. For instance, new occupations such as medical AI analysts have

emerged as a result of AI's application in healthcare; these individuals employ AI algorithms to sift through massive datasets in search of diagnoses. Robo-advisors and algorithmic trading are creating opportunities for financial technology experts, and AI is also driving innovation in other sectors, like banking (Lakhchini et al., 2022). The changing nature of employment needs due to the incorporation of AI has made initiatives to reskill and upskill workers important. Efforts to train employees with future-proof skills are receiving increased funding from governments, educational institutions, and businesses (Bandi & Kothari, 2022). A prime illustration of this is Singapore's Skills Future programme. This comprehensive programme aims to provide citizens with opportunities to develop new skills while promoting technology literacy. To prepare students for the ever-changing job landscape, it offers courses in digital marketing, artificial intelligence, and data analytics (Bandi & Kothari, 2022). Amazon and other companies in the US have started massive programmes to help people improve their skills. Employees' tuition is covered by Amazon's "Career Choice" programme in fields where there is a strong need, like AI. The program's goal is to help employees transition into roles that are more in line with the evolving needs of the company and the job market (Krishnan et al.).

Furthermore, business-education partnerships are promoting individualised training programmes. For instance, in order to ensure that graduates possess the requisite skills when they enter the market, IBM collaborates with educational institutions to develop AI-specific courses. These programmes train people to use AI by filling the gap between what's taught in schools and what companies really require. The democratisation of AI education also depends on online learning environments (Kaur et al., 2023). Anyone, anywhere in the world, can improve their AI skills with the use of online learning platforms such as Udacity, Coursera, and edX. These platforms often collaborate with prominent corporate figures to offer courses that align with real-world AI applications. Proactive workforce development is necessary since, although AI may lead to the loss of some employment, it also opens up new opportunities. A commitment to preparing the workforce for an AI-driven future may be seen in global programmes and corporate initiatives that aim to reskill and upskill employees (Joshi et al., 2021). Together, these efforts aim to alleviate the challenges caused by job displacement and equip individuals to thrive in a labour market focused on artificial intelligence.

Promising New Approaches and Business Models In particular, the advancements in artificial intelligence (AI) have ushered in a new age of innovation among the startup and entrepreneurial AI-powered communities. innovations are transforming whole industries, bringing new perspectives to old problems, and creating opportunities for ambitious dreamers. Startups driven by artificial intelligence are achieving remarkable strides in sectors such as healthcare, where diagnostic tools powered by AI enhance accuracy and efficiency. As an example, PathAI assists pathologists in making diagnoses from patient images by use of machine learning algorithms. The testing process is accelerated and diagnostic precision is increased, which could lead to the saving of lives (Di Vaio, Palladino, et al., 2020).

New companies driven by artificial intelligence are shaking up the banking industry. Businesses such as Wealthfront and Robinhood utilise AI algorithms to make financial services more accessible to more people by automating trading and offering personalised investment advice. With their intuitive interfaces and computational insights, these businesses are revolutionising personal finance management. AI is also driving innovation in the ecommerce industry (Lee et al., 2019).

Startups like Stitch Fix utilise AI algorithms to provide customers personalised wardrobe suggestions. By tracking user actions and preferences, these platforms enhance the buying process, leading to happier and more loyal customers (Reim et al., 2020).

Artificial intelligence (AI) technology, which were formerly reserved for large, well-funded companies, are now within reach of many smaller businesses, helping to level the playing field and inspire new generations of business owners. The use of cloudbased AI platforms and services allows for the provision of scalable solutions with little to no upfront capital expenditure. One example is Google's Cloud AI platform, which provides small businesses with tools for data analysis and machine learning.

This paves the way for businesses to use AI for jobs like image recognition, NLP, and predictive analytics without incurring huge internal resource costs (Soni et al., 2019).

DataRobot and similar businesses are making artificial intelligence (AI) more accessible by providing automated machine learning platforms. These platforms make it possible for businesses who don't have a lot of data science resources to build and employ ML models. Insights, optimisation of processes, and better decision-making are all within reach for small firms with the help of these technologies. The incorporation of AI is causing massive disruption in traditional industries, testing the limits of conventional business models and necessitating modification in order to remain relevant. Particularly affected are sectors that rely heavily on automation and data-driven decisions (Di Vaio, Boccia, et al., 2020). The retail business is undergoing a transformation due to AI-driven technologies that enhance the customer experience. Amazon Go, a cashier-less retail powered by artificial intelligence, is the best example of the new trend.

Critical Analysis

Concerns regarding the potential for prejudice and unfairness in AI algorithms are growing in importance alongside the revolutionary advances brought about by AI. Willful or pervasive Algorithmic biases can amplify existing inequalities in society. Resolving these biases is crucial for ensuring the ethical use of AI technologies. Common sources of algorithmic biases include societal prejudices and historical injustices reflected in biased training data. One example is the potential underperformance of facial recognition software when it comes to underrepresented ethnic groups compared to its primary training set of Caucasian faces. Diversity in training datasets, including a variety of demographics, is crucial for reducing the likelihood of perpetuating preexisting biases (Cheng et al., 2021).

Also, AI research must be transparent. Since many AI systems operate as "black boxes," the decisionmaking process behind them is often puzzling. Users and developers are better able to identify and fix biases in algorithms when they can evaluate them more easily. Here, it's crucial to employ XAI methods, which aim to make AI systems more interpretable and understandable. Projects such as "Explainable AI" by Google and IBM's "AI Fairness 360" strive to provide developers with the tools they need to detect and mitigate biases in their models (Ghai, 2023).

Promoting responsible and transparent procedures across the AI lifecycle is essential for ethical AI development, which also requires addressing biases. To guarantee the ethical development of AI, the following are crucial: Prioritising inclusive design entails immediately considering different user perspectives. With more people included, biases can be lessened, and AI systems can be sure to cater to a wide range of users. To identify and fix biases that could occur in real-world applications, it is crucial to consistently ask for user feedback (Miralles, 2020). It is critical to set clear ethical guidelines and standards to guide AI organisations and developers. Projects like the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems provide guidelines for creating AI that doesn't violate any moral principles. By adhering to these standards, AI systems will ensure that they do not violate any social or moral standards (Nakao et al., 2022).

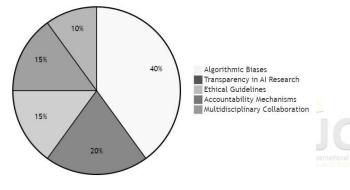
Before developing and implementing AI systems, it is crucial to set up methods for monitoring and accountability. Responsible governance AI mechanisms within businesses and governmental oversight are necessary to put a halt to unethical behaviour. Transparency ensures that What happens in society as a result of programmers' AI applications is their responsibility. In order to create AI that abides by ethical standards, one must constantly observe and adapt (Okolo et al., 2022). To account for changes in societal norms, artificial intelligence systems need be updated. To help find and fix such ethical problems as shown in figure 1, AI models should be audited and evaluated frequently (Okolo et al., 2022).

The development of ethical AI requires close cooperation across many different groups and individuals, such as technologists, sociologists, politicians, and ethicists. Multidisciplinary teams offer a holistic perspective that can be invaluable in integrating ethical considerations into technical development processes. Responsible AI deployment necessitates addressing bias and guaranteeing ethical progress, notwithstanding the immense potential for

AI to improve society. Diversifying training data, using explainable AI to increase openness, and adhering to ethical standards are all ways to minimise biases. Additionally, important components of developing ethical AI include inclusive design, continuous monitoring, accountability frameworks, and collaborative, multidisciplinary approaches. To build a future that is socially just and technologically advanced, it is essential to maintain moral norms while artificial intelligence (AI) takes centre stage in many fields (Nascimento et al., 2019).

Figure 1:

Critical Components in Ethical AI Development -Emphasis on Addressing Algorithmic Biases, Transparency, Ethical Guidelines, Accountability, and Multidisciplinary Collaboration



RESULTS

The careful examination of AI revealed significant data protection concerns and highlighted the need for stringent rules to safeguard user privacy and ensure the advancements in AI while maintaining moral standards. We spoke about how important it is to use diverse and unbiased training datasets to lessen algorithmic biases. In order to address data privacy concerns, it is crucial that AI development be visible, and explainable AI (XAI) techniques have made this easier.

In order to advise AI developers and organisations in the context of data protection, they must adopt ethical principles and guidelines. One of the initiatives that was brought up was the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems which is designed to help with the ethical creation of AI. In order to keep data privacy standards up when societal norms change, it is important to incorporate user feedback and prioritise constant monitoring and adjustment.

The data protection conversation's takeaways can inform the development of regulations and policies governing the application of AI. Various training datasets, transparency measures, ethical standards, and continuous monitoring can be utilised by organisations and legislators to develop thorough data protection rules. In addition, the emphasis on user feedback highlights the importance of involving people in the development process to ensure that data privacy safeguards meet user expectations .

Cybersecurity concerns emerged as a critical component in the examination of AI's gamechanging economic impact. With an eye towards both opportunities and risks, the possible integration of AI technology into many areas was investigated. Digital platforms, smart manufacturing, and autonomous vehicles were among the areas studied for the potential dangers that AI poses.

Strong cybersecurity measures are necessary to address the changing threat landscape linked to AI deployment, according to the report. When it comes to cybersecurity issues, the critical study highlighted the importance of collaboration and interdisciplinary approaches. Discussing cybersecurity with a wide variety of experts—ethicists, sociologists, lawmakers, and technologists—is crucial, as the conversation highlighted. Research has shown that a commitment to accountability and supervision mechanisms is crucial for ensuring that AI technology is developed and used appropriately.

Security measures for AI systems are built upon the knowledge obtained from analysing cybersecurity issues. Cybersecurity experts and organisations can improve cybersecurity measures in the AI era by leveraging the emphasis on responsibility, diverse teams, and collaboration. Focused cybersecurity programmes are designed to protect critical infrastructure and sensitive data by identifying potential vulnerabilities in specific industries, such as digital platforms and smart manufacturing.

The discussions on data protection and cybersecurity have yielded useful knowledge that can shape future regulations, standards, and practices as shown in table 1. Handling the complex problems associated with the integration of AI technologies into different industries requires careful consideration of the many

factors, which include collaboration frameworks and ethical requirements .

Table 1:

Insights and Recommendations from Discussions on Data Protection and Cybersecurity in AI Integration

Aspect	Findings/Recommendations
Data Protection	1. Importance of stringent rules for
Concerns	user privacy
	2. Use of diverse, unbiased training
	datasets to reduce algorithmic
	biases
	3. Utilization of Explainable AI
	(XAI) techniques for transparency
	4. Adoption of ethical principles and
	guidelines by AI developers and
	organizations
	5. Incorporating user feedback for
	constant monitoring and adjustment
	of privacy standards
	6. Implication in policy
	development for AI regulation and
	governance
Cybersecurity	1. Need for strong cybersecurity
Concerns	measures due to AI's economic
	impact
	2. Examination of potential risks in
	digital platforms, smart
	manufacturing, and autonomous vehicles
	3. Emphasis on interdisciplinary
	approaches and collaboration for
	cybersecurity
	4. Importance of accountability,
	supervision mechanisms, and
	responsibility in AI technology
	5. Leveraging knowledge from
	cybersecurity analyses for
	improving AI security measures
	6. Designing focused cybersecurity
	programs for specific industries like
	digital platforms and smart
	manufacturing
Overall	1. The need for careful
Takeaways	consideration in AI integration,
	considering collaboration and
	ethical requirements
	2. Shaping future regulations and
	standards based on knowledge from
	discussions

DISCUSSION

Concerns about economic inequality and job loss have prompted calls for more regulation of artificial intelligence (AI) in many sectors. Regardless of AI has the potential to increase efficiency and production, but it also raises questions about the future of labour due to the automation of some tasks. The critical analysis took into account the potential for upskilling and reskilling programmes and the likelihood of job displacement when analysing the implications of AI on labour markets (Kusumi et al., 2022).

Displacement poses a threat to existing labour systems, particularly those involving routine and repetitive tasks. Due to the possibility of a decline in certain industries and the lack of suitable alternatives for employees, this transformation could lead to economic disparity. However, the topic of upskilling and reskilling programmes as a means to address this problem was also raised during the discussion. Proactive measures, such as training programmes and educational initiatives, can equip the workforce to adjust to the evolving job market and lessen economic disparities (Hong & Zahid, 2023).

The findings of the investigation lay the groundwork for policies and actions to address economic inequality and job displacement. Knowing the two sides of the coin when it comes to AI's impact on jobs allows policymakers to craft targeted responses, such comprehensive reskilling programmes. There is hope that these initiatives, which aim to provide employees with the skills necessary for a dynamic job market, might help reduce economic inequality and increase economic inclusion (Gölgeci et al., 2023).

The lack of AI standards and interoperability is a big problem that is preventing the technology from being widely used and collaborating. System integration and communication can be hindered by the vast array of AI frameworks, platforms, and technologies that are accessible. Unlocking the full potential of AI across businesses requires uniform protocols and guaranteed interoperability, as emphasised by the thorough analysis (Korteling et al., 2021).

Standardisation is essential for constructing an ecosystem in which different AI systems can work together efficiently. The ability of AI technology to grow and promote collaboration could be hindered by a lack of standards if it leads to isolated

applications. When different systems can easily interact and understand data. we have interoperability, the foundation of a unified and networked AI architecture. The subject of nonstandardization interoperability and offers stakeholders interested in shaping the AI ecosystem with useful direction. Policymakers and business moguls might use these findings to promote interoperability and the development of standardised practices (Di Vaio, Palladino, et al., 2020). Working together on open standards and shared frameworks will promote innovation and cross-industry collaboration, leading to an AI ecosystem that is more efficient and integrated.

There will be advantages and disadvantages to the possible AI revolution in the security industry. Concerning the potential creation of autonomous weapons, the inquiry brought up ethical and security concerns. Particularly in sensitive contexts, the risks associated with AI systems' independence in decision-making processes should be thoroughly examined. But we also talked about how AI could enhance cybersecurity, threat identification, and analytics for the future. There are ethical dilemmas that arise from using AI in autonomous weapons, and countries throughout the world need to work together to find solutions. The need of responsible AI governance and the need to prioritise human oversight in critical decision-making processes are underscored by the potential misuse of AI in security circumstances (Chen et al., 2020).

By debating the risks and opportunities associated with AI, security experts and policymakers are better able to navigate the complex intersection of AI and security. national The discovered concerns underscore the critical need for immediate action to establish international agreements and ethical frameworks to regulate the development and application of AI in sensitive domains. A prudent application of AI is essential for the preservation of security standards since the technology has the ability to enhance cybersecurity and threat detection (Bandi & Kothari, 2022). The discussions surrounding AI paint a nuanced picture of the opportunities and challenges presented by this dynamic landscape, including concerns about job displacement, a lack of standards, and security threats. Integrating AI in a way that is ethical, inclusive, and secure can be achieved with the help

of these results, which can direct collaborative efforts, policy creation, and strategic decision-making (Brem et al., 2021).

CONCLUSION

The impact of artificial intelligence (AI) on the global economy is undeniable. Artificial intelligence is reshaping numerous sectors, including business, new product development, and job boards. This is shaking things up in the business world and challenging long-held assumptions. Looking at the many ways AI is changing the economy, it's clear that this tech revolution is more than just a passing trend; it's a fundamental shift that impacts our societies in every way. One way to measure the economic impact of AI is by looking at how it has improved productivity, efficiency, and creativity in various industries. From encouraging AI-driven innovations in startups to automating business processes to improve efficiency, the business landscape is evolving at a rapid pace. We recognise economic inequality and the risk of job loss, but we also have solutions, such as programmes that teach people new skills, so they can be prepared for the jobs of the future. Also, by influencing global value chains, altering the dynamics of global trade, and facilitating cross-border transactions through digital platforms, AI is triggering a paradigm change in international trade.

Economic integration with AI is marked by a delicate balancing act of possibilities and challenges. On the one hand, AI can revolutionise decision-making, open up new business opportunities, and boost economic growth. But other problems necessitate careful planning and consideration, such as job loss, a lack of standards, and security risks. The displacement of workers is a big worry; it's a threat and a motivating factor in the push to redefine employment. Worker reskilling and upskilling programmes are crucial tools for equipping workers with the skills needed in today's dynamic labour market. As industries face challenges with AI standardisation technology's lack of and interoperability, there is a call for collaboration to establish shared frameworks, to foster an AI ecosystem that is both coherent and interconnected. Collaboration across industries, nations, and stakeholders is essential to the advancement of artificial intelligence. Artificial intelligence (AI) is

ever-changing, so harnessing its power while limiting its dangers requires a collaborative effort. Collaboration is key for resolving concerns such as governance. standardisation. ethical and international regulations for AI development and usage. To foster innovation and skill development with an eye towards economic impact, governments, businesses, and academic institutions need to collaborate. Collaborative policy and legislative development is necessary to ensure the ethical use of AI, protect user privacy, and promote equitable economic practices. Collaboration between IT firms, academics, and lawmakers is necessary to standardise AI technologies and create a unified framework that allows for seamless interoperability.

REFERENCES

- Agarwal, P., Swami, S., & Malhotra, S. K. (2022). Artificial intelligence adoption in the post COVID-19 new-normal and role of smart technologies in transforming business: a review. Journal of Science and Technology Policy Management.
- Alkatheiri, M. S. (2022). Artificial intelligence assisted improved human-computer interactions for computer systems. *Computers and Electrical Engineering*, 101, 107950.
- Bahja, M. (2020). Natural language processing applications in business. *E-Business-higher education and intelligence applications*.
- Bandi, S., & Kothari, A. (2022). Artificial Intelligence: An Asset for the Financial Sector. Impact of Artificial Intelligence on Organizational Transformation, 259-287.
- Brem, A., Giones, F., & Werle, M. (2021). The AI digital revolution in innovation: A conceptual framework of artificial intelligence technologies for the management of innovation. IEEE Transactions on Engineering Management.
- Brynjolfsson, E., Hui, X., & Liu, M. (2019). Does machine translation affect international trade? Evidence from a large digital platform. *Management Science*, 65(12), 5449-5460.

- Cantú-Ortiz, F. J., Galeano Sánchez, N., Garrido, L., Terashima-Marin, H., & Brena, R. F. (2020). An artificial intelligence educational strategy for the digital transformation. *International Journal on Interactive Design and Manufacturing (IJIDeM), 14*, 1195-1209.
- Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *Ieee* Access, 8, 75264-75278.
- Cheng, L., Varshney, K. R., & Liu, H. (2021). Socially responsible ai algorithms: Issues, purposes, and challenges. *Journal of Artificial Intelligence Research*, 71, 1137-1181.
- Di Vaio, A., Boccia, F., Landriani, L., & Palladino, R. (2020). Artificial intelligence in the agrifood system: Rethinking sustainable business models in the COVID-19 scenario. *Sustainability*, *12*(12), 4851.
- Di Vaio, A., Palladino, R., Hassan, R., & Escobar, O. (2020). Artificial intelligence and business models in the sustainable development goals perspective: A systematic literature review. *Journal of Business Research*, *121*, 283-314.
- Dillon, A. P. (2019). A study of the Toyota production system: From an Industrial Engineering Viewpoint: Routledge.
- Ghai, B. (2023). *Towards Fair and Explainable AI* using a Human-Centered AI Approach. State University of New York at Stony Brook,
- Gölgeci, I., Gligor, D. M., Bayraktar, E., & Delen, D. (2023). Reimagining global value chains in the face of extreme events and contexts: Recent insights and future research opportunities. In (pp. 113721): Elsevier.
- Hong, Z., & Zahid, R. A. (2023). The Security of Global Value Chains (GVC): Recent Trends, Challenges, and Future Risk Management. *Emerging Trends in Sustainable Supply Chain Management and Green Logistics*, 194-228.
- Joshi, V., Sharma, M., & Ranjan, P. (2021). Artificial Intelligence and Financial Decision Making-Review of efficacy in Usage within Financial Organizations in India. *Turkish Online Journal of Qualitative Inquiry*, 12(7).

- Kaur, K., Kumar, Y., & Kaur, S. (2023). Artificial Intelligence and Machine Learning in Financial Services to Improve the Business System. In Computational Intelligence for Modern Business Systems: Emerging Applications and Strategies (pp. 3-30): Springer.
- Kitsios, F., & Kamariotou, M. (2021). Artificial intelligence and business strategy towards digital transformation: A research agenda. *Sustainability*, *13*(4), 2025.
- Kliestik, T., Nagy, M., & Valaskova, K. (2023). Global value chains and industry 4.0 in the context of lean workplaces for enhancing company performance and its comprehension via the digital readiness and expertise of workforce in the V4 nations. *Mathematics*, 11(3), 601.
- Korteling, J., van de Boer-Visschedijk, G. C., Blankendaal, R. A., Boonekamp, R. C., & Eikelboom, A. R. (2021). Human-versus artificial intelligence. *Frontiers in artificial intelligence*, 4, 622364.
- Krishnan, S., Deo, S., & Sontakke, N. Operationalizing algorithmic explainability in the context of risk profiling done by robo financial advisory apps. Research Paper 8th December 2019.
- Kusumi, K., Kremsdorf, R., Kakajiwala, A., & Mahan, J. D. (2022). Pediatric Mineral and Bone Disorder of Chronic Kidney Disease and Cardiovascular Disease. *Advances in Chronic Kidney Disease*, 29(3), 275-282.
- Lakhchini, W., Wahabi, R., El Kabbouri, M., Bp, C., & Hassan, S. (2022). Artificial Intelligence & Machine Learning in Finance: A literature review. *International Journal of Accounting*, *Finance, Auditing, Management and Economics*.
- Lee, J., Suh, T., Roy, D., & Baucus, M. (2019). Emerging technology and business model innovation: the case of artificial intelligence. *Journal of Open Innovation: Technology, Market, and Complexity, 5*(3), 44.
- Magistretti, S., Dell'Era, C., & Petruzzelli, A. M. (2019). How intelligent is Watson? Enabling digital transformation through artificial intelligence. *Business Horizons*, 62(6), 819-829.

- Miralles, H. (2020). *Development of an Ethical AI Toolbox.* Universitat Politècnica de Catalunya,
- Modgil, S., Singh, R. K., & Hannibal, C. (2022). Artificial intelligence for supply chain resilience: learning from Covid-19. *The International Journal of Logistics Management*, 33(4), 1246-1268.
- Nakao, Y., Stumpf, S., Ahmed, S., Naseer, A., & Strappelli, L. (2022). Toward involving endusers in interactive human-in-the-loop AI fairness. ACM Transactions on Interactive Intelligent Systems (TiiS), 12(3), 1-30.
- Nascimento, D. L. M., Alencastro, V., Quelhas, O. L. G., Caiado, R. G. G., Garza-Reyes, J. A., Rocha-Lona, L., & Tortorella, G. (2019).
 Exploring Industry 4.0 technologies to enable circular economy practices in a manufacturing context: A business model proposal. *Journal of Manufacturing Technology Management*, 30(3), 607-627.
- Okolo, C. T., Dell, N., & Vashistha, A. (2022). *Making AI explainable in the Global South: A systematic review.* Paper presented at the ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies mal of Contempo (COMPASS).
- Peters, O. (2020). Distance teaching and industrial production* A comparative interpretation in outline. In *Distance education* (pp. 95-113): Routledge.
- Peyravi, B., Nekrošienė, J., & Lobanova, L. (2020). Revolutionised technologies for marketing: Theoretical review with focus on artificial intelligence. *Business: Theory and Practice*, 21(2), 827-834.
- Reier Forradellas, R. F., & Garay Gallastegui, L. M. (2021). Digital transformation and artificial intelligence applied to business: Legal regulations, economic impact and perspective. *Laws*, 10(3), 70.
- Reim, W., Åström, J., & Eriksson, O. (2020). Implementation of artificial intelligence (AI): a roadmap for business model innovation. *AI*, *1*(2), 11.

- Soni, N., Sharma, E. K., Singh, N., & Kapoor, A. (2019). Impact of artificial intelligence on businesses: from research, innovation, market deployment to future shifts in business models. arXiv preprint arXiv:1905.02092.
- Velarde, G. (2020). Artificial intelligence and its impact on the Fourth Industrial Revolution: A review. *arXiv preprint arXiv:2011.03044*.
- Wamba-Taguimdje, S.-L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C.
 E. (2020). Influence of artificial intelligence (AI) on firm performance: the business value of AI-based transformation projects. *Business Process Management Journal*, 26(7), 1893-1924.

