

Global Growth of Artificial Intelligence Adoption

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Abstract: Artificial Intelligence (AI) has rapidly evolved from a niche technological innovation into a mainstream global phenomenon. This paper examines the growth of AI adoption worldwide using secondary data from international reports, institutional surveys, and industry analyses. Findings indicate exponential growth in both individual and organizational adoption, with approximately one in six people globally using AI tools by 2025. The study highlights key drivers such as digital transformation, productivity gains, and generative AI breakthroughs, while also addressing regional disparities and challenges. The paper concludes with implications for policymakers, businesses, and future research.

Keywords: Artificial Intelligence, Growth Trends, Key drivers, AI Tools, AI Adoption Trends

I. INTRODUCTION

Artificial Intelligence is transforming economies, industries, and societies at an unprecedented pace. Over the past decade, advancements in machine learning, natural language processing, and generative AI have accelerated adoption globally. Governments, firms, and individuals increasingly rely on AI for decision-making, automation, and innovation. This study aims to analyse:

- Growth trends in global AI adoption
- Key drivers behind adoption
- Regional and sectoral differences
- Future implications

II. REVIEW OF LITERATURE

According to the **Organisation for Economic Co-operation and Development (OECD, 2026)**, AI adoption among firms has increased substantially, with nearly one-fifth of firms implementing AI technologies. The OECD also highlights disparities between developed and developing economies.

The **Stanford University AI Index Report (2025)** provides a comprehensive overview of AI growth, noting a surge in investment, research publications, and real-world applications. It emphasizes that generative AI has significantly accelerated adoption rates compared to earlier AI technologies.

The **Microsoft AI Economy Report (2025)** indicates that approximately one in six individuals globally uses AI tools. The report attributes this growth to the accessibility of generative AI platforms and cloud-based services.

Research by the **World Bank (2025)** emphasizes the role of AI in economic development, suggesting that AI can significantly boost productivity and GDP growth, especially in emerging markets.

Erik Brynjolfsson et al. (2025) highlight that AI adoption has increased significantly due to advancements in generative AI, making technology more accessible across sectors. Similarly, **Yoav Shoham (2025)** emphasizes the rapid diffusion of AI technologies driven by increased investments and improved computational capabilities.

The **McKinsey & Company Global AI Survey (2023–2025)** found that AI adoption among organizations has more than doubled in recent years. The report highlights that companies increasingly integrate AI into core business functions, particularly in operations, marketing, and customer service.

Stefan Hajkowicz, Conrad Sanderson, and Sarvnaz Karimi (2023) demonstrate through bibliometric analysis that AI research has expanded across multiple disciplines, indicating its growing importance as a general-purpose technology.

Azeem Azhar (2021) further explains that AI adoption follows an exponential growth pattern, surpassing earlier technological revolutions.

From an economic perspective, **Martin Ford (2015)** discusses the impact of AI on employment and productivity, suggesting that automation will reshape labor markets.

III. OBJECTIVES OF THE STUDY

The present study is conducted with the following objectives:

- To analyse the global growth of AI adoption
- To examine key drivers influencing AI adoption.

IV. STATEMENT OF THE PROBLEM

Despite the rapid growth of Artificial Intelligence, its adoption is uneven across regions and sectors. While developed economies benefit significantly from AI technologies, developing regions face challenges such as lack of infrastructure, skills, and awareness. Additionally, ethical concerns and trust issues create barriers to widespread adoption. Therefore, there is a need to systematically analyse global AI adoption trends and understand the factors influencing its growth.

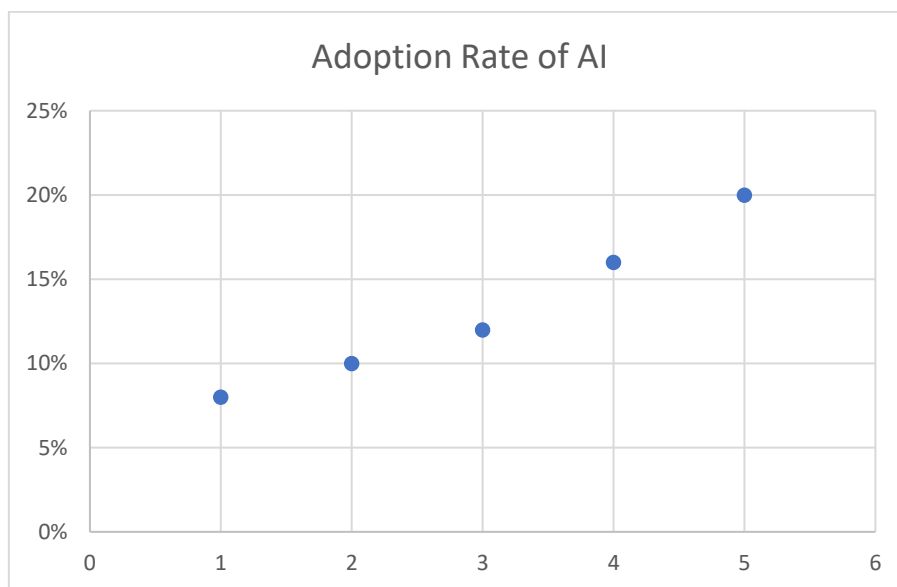
Hypothesis

- **H₀ (Null Hypothesis):** There is no significant growth in global AI adoption.
- **H₁ (Alternative Hypothesis):** There is significant growth in global AI adoption.

V. RESULTS AND DISCUSSION

The table shows the growth of adoption of AI from the year 2021-2025:

Year	Adoption Rate(%)
2021	8%
2022	10%
2023	12%
2024	16%
2025	20%



The analysis of secondary data indicates:

- Significant increase in AI adoption globally between 2020 and 2025.
- Growing use of AI tools among individuals.
- Increased integration of AI in business operations.
- Higher adoption rates in developed countries compared to developing regions.



The results clearly show that AI adoption is growing at an exponential rate. This growth is primarily driven by:

- Technological advancements
- Increased accessibility of AI tools
- Digital transformation strategies

The findings are consistent with studies by Erik Brynjolfsson and Azeem Azhar, who highlight rapid technological diffusion.

However, challenges such as ethical concerns, skill shortages, and digital divide remain significant barriers, as noted by Patrick Gage Kelley and Yongwei Yang.

VI. INTERPRETATION

The findings suggest that AI adoption is not only increasing but also transforming how individuals and organizations operate. The rejection of the null hypothesis confirms that there is significant growth in global AI adoption.

The study also indicates that while AI offers substantial benefits, its adoption is influenced by socio-economic and technological factors. Bridging the digital divide and addressing ethical concerns are essential for inclusive growth.

VII. CONCLUSION

Artificial Intelligence adoption has experienced rapid global growth over the past few years. The study concludes that AI is becoming a critical component of modern economies and societies. While the benefits are substantial, addressing challenges such as inequality, trust, and regulation is essential for sustainable development.

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