ijamrsd.com
ISSN: 2583-6404
Journal of Advanced Multidisciplinary Research Studies and Development
Peer Reviewed Referred Journal | Bi-monthly | Open Access

CREATIVE DESTRUCTION IN THE AGE OF CHATGPT: RETHINKING SCHUMPETER IN THE AI ERA

Amol Vasant Patil[1], Prof. Shamrao Bhagawan Wayase[2]
[1] *Assistant Professor, Department of Economics & Research Center, NTVS's G.T. Patil Arts, Commerce & Science College, Nandurbar – 425412, Maharashtra, India.*
Email: amolpatilep@gmail.com
[2] *Head and Professor, Department of Economics & Research Center, NTVS's G.T. Patil Arts, Commerce & Science College, Nandurbar – 425412, Maharashtra, India.*
Email: shamraowayase71@gmail.com

Abstract
This paper re-examines Joseph Schumpeter's theory of innovation in the context of artificial intelligence, especially generative AI systems like ChatGPT. Schumpeter explained capitalism as a changing system driven by innovation and "creative destruction," where new technologies replace old industries and create new economic patterns. Today, generative AI represents a new stage of technological change that affects not only machines and production but also knowledge-based and cognitive work. The paper argues that AI follows the process of creative destruction by disrupting existing jobs and creating new types of opportunities. However, unlike earlier industrial revolutions, AI also creates new structural challenges. These include the concentration of data in a few large firms and the growing power of digital platforms. Such changes may increase market dominance and economic inequality. This paper introduces the concept of "creative concentration" to explain how AI-driven innovation may simultaneously disrupt markets while reinforcing long-term platform dominance. The study concludes that Schumpeter's theory remains useful for understanding modern innovation, but it must be expanded to reflect the digital and data-driven nature of today's economy.

Keywords: Artificial Intelligence, Creative Destruction, Generative AI, Platform Capitalism, Labour Market, Digital Economy.

► *Corresponding Author: Amol Vasant Patil*

1. Introduction

Technological progress has always played a central role in economic development. Throughout history, major technological innovations such as the steam engine, electricity, automobiles, biotechnology, nanotechnology, and digital technologies that use the internet have changed the way things are made, the way people work, and the way businesses compete. Every time technology changes, it creates new industries and slowly replaces older ways of making things.

Joseph Schumpeter described this evolutionary process through his concept of "creative destruction." He argued that capitalism advances through innovation, as entrepreneurs introduce new products, processes, and technologies that render existing methods obsolete. While this process stimulates economic growth and structural transformation, it also creates instability and displacement within markets and employment systems.

In the contemporary era, artificial intelligence (AI), particularly generative AI tools such as ChatGPT, represents a new phase of technological transformation. Unlike earlier forms of automation that primarily replaced manual labour, generative AI increasingly performs cognitive and knowledge-based tasks, including writing, coding, data analysis, and decision support.

The growing relevance of artificial intelligence is also reflected in recent policy initiatives and international events. The India AI Impact Summit 2026, held in New Delhi, highlighted the expanding role of AI in economic development, governance, and technological innovation (Government of India, 2026). Similarly, the Artificial Intelligence in Agriculture Conference organized by the Government of Maharashtra emphasized the application of AI technologies in improving agricultural productivity and promoting digital transformation in farming systems (Shivalkar, 2026). These developments indicate that artificial intelligence is no longer limited to technological experimentation but is increasingly becoming an important element of economic policy and sectoral development strategies.

Objectives of the Study

1. To explore whether the emergence of ChatGPT and other generative AI technologies represents a new phase of creative destruction.
2. To examine whether artificial intelligence strengthens innovation-driven competition or contributes to greater market concentration through data control and digital platforms.
3. To analyze how the increasing use of artificial intelligence may influence industrial structures and the distribution of economic power.

Research Methodology

This study uses a conceptual and analytical approach. The analysis is based on Joseph Schumpeter's theory of innovation and creative destruction. The study is primarily based on secondary data sources such as international reports, research articles, websites, and institutional publications to examine the economic implications of generative AI.

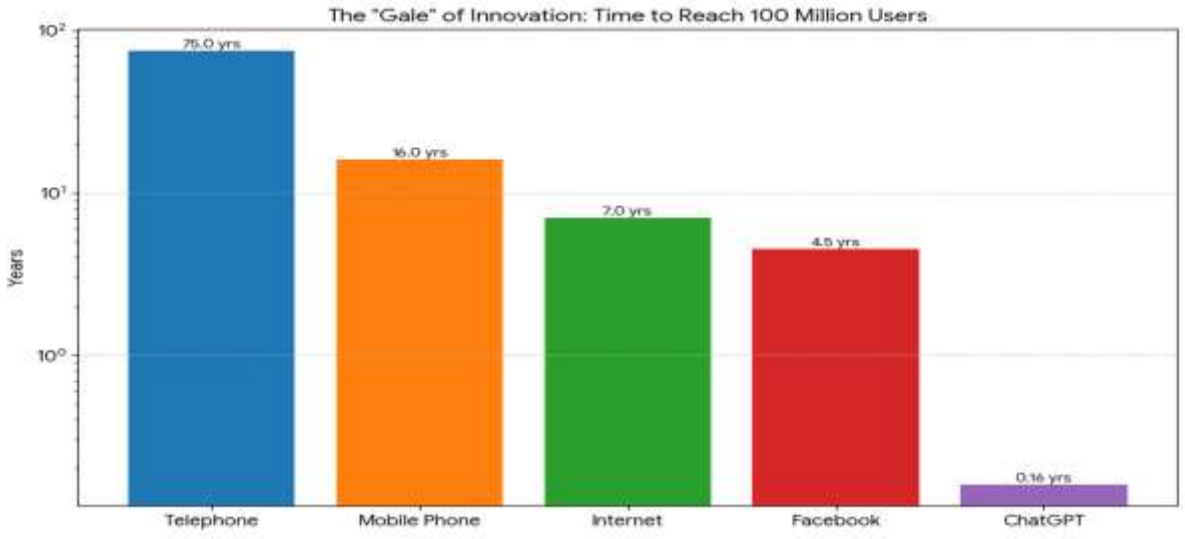

Figure 1: Adoption Speed of Technologies: Time to Reach 100 Million Users

Source: Author's compilation based on World Economic Forum (2025) and OpenAI Investor Reports.

As shown in Figure 1, the comparative data illustrate the time required for major technologies to reach 100 million users. Historical technologies such as the telephone required several decades, approximately 75 years, to achieve this milestone. In contrast, ChatGPT reached 100 million users in nearly two months.

From a Schumpeterian perspective, this comparison highlights the unprecedented speed of creative destruction in the AI era. Schumpeter described innovation as a "gale of creative destruction," but the current wave of AI-driven change suggests that this gale has intensified significantly in terms of velocity.

The rapid adoption of generative AI implies that economic disruption now occurs at a much faster pace than in previous technological revolutions. Labour markets, educational systems, international trade, and regulatory frameworks have limited time to adjust. As a result, the destruction phase may become more volatile, increasing short-term instability even if long-term innovation benefits remain substantial.

2. Schumpeter's Theory of Innovation

Joseph Schumpeter, particularly in *The Theory of Economic Development* (1911) and later in *Capitalism, Socialism, and Democracy* (1942), argued that economic development occurs through what he called "new combinations." These include:

- Introduction of new products
- Introduction of new methods of production
- Opening of new markets
- Discovery of new sources of raw materials
- Creation of new forms of organization

According to Schumpeter, innovation disrupts economic equilibrium. Firms that fail to adapt gradually decline, while innovative firms expand and gain competitive advantage. Entrepreneurs earn temporary monopoly profits as a reward for innovation, but these profits disappear as competitors imitate the new idea.

Schumpeter emphasized that capitalism is inherently dynamic and unstable because innovation continuously reshapes economic structures. This ongoing transformation is what he famously described as "creative destruction."

Historically, major technological shifts illustrate this process. Railways in the 19th century replaced horse-based transportation, automobiles in the early 20th century displaced carriages, and digital photography in the late 20th century largely eliminated film-based cameras. Each wave dismantled existing industries while simultaneously creating new sectors and opportunities.

3. Literature Review

Schumpeter's concept of creative destruction, developed in *The Theory of Economic Development* (1911) and later elaborated in *Capitalism, Socialism, and Democracy* (1942), has significantly influenced modern growth theory. Building on this foundation, Aghion and Howitt (1992) formalized creative destruction within endogenous growth models, demonstrating how innovation-driven competition sustains long-term economic expansion. Baumol (2002) further argued that in contemporary capitalism, innovation has become institutionalized within large corporations.

Research on automation and digital transformation expanded particularly after the 2000s. Brynjolfsson and McAfee (2014) emphasized the economic implications of digital technologies for productivity and employment, while Acemoglu and Restrepo (2018) examined the labour market effects of automation, highlighting its impact on wages and inequality.

More recently, global institutions have assessed the economic implications of artificial intelligence. The World Economic Forum (2023), McKinsey (2023), and the IMF (2024) estimate that AI will significantly affect employment structures while generating substantial productivity gains. In addition, recent scholarship conceptualizes AI as a potential general-purpose technology (Helpman, 1998), implying broad spillover effects across sectors comparable to transformative technologies such as electricity and the internet.

Despite these contributions, limited research directly integrates generative AI within the original Schumpeterian framework, particularly in relation to data concentration and platform dominance. This paper seeks to address that gap by connecting classical innovation theory with contemporary AI-driven structural changes.

4. Generative AI and ChatGPT: Global and Indian Context

Global Context:

The emergence of generative AI since 2022 has marked a significant shift in the nature of technological change. Tools such as ChatGPT moved from experimental innovation to mass adoption within a very short period. Today, generative AI systems are embedded in diverse domains, including digital education platforms, software engineering workflows, marketing and media production, customer interaction systems, and professional services such as law and finance. Unlike earlier technological waves that mainly automated physical or repetitive tasks, generative AI increasingly performs knowledge-based functions. It assists in drafting reports, generating code, summarizing complex information, and supporting analytical decision-making. As a result, productivity improvements are most visible in sectors where information processing and cognitive skills are central. At the same time, debates have intensified regarding employment displacement, intellectual property, and regulatory oversight.

Indian Context:

India presents a distinctive environment for AI adoption. The country's strong IT services sector and expanding digital ecosystem have facilitated early experimentation with generative AI tools. Technology firms are integrating AI into business solutions, while startups are developing applications tailored to local markets in areas such as education, fintech, and public service delivery.

Policy initiatives promoting digital infrastructure and innovation have further encouraged AI development. However, India's large and diverse labour force creates a dual challenge. While AI offers opportunities for productivity growth and global competitiveness, uneven digital skills and access may widen existing inequalities if workforce adaptation does not keep pace with technological change.

5. ChatGPT as Creative Destruction

5.1 Destruction

The expansion of generative AI is gradually altering the demand structure within knowledge-based labour markets. Tasks that rely on standardized writing, routine coding, basic customer interaction, or preliminary data analysis can increasingly be performed by AI systems at lower cost and greater speed. As firms adopt these technologies, the need for certain entry-level and repetitive cognitive roles may decline.

This transformation represents the disruptive side of technological change. Similar to earlier industrial transitions, occupations built around routine intellectual functions face restructuring.

The displacement is not necessarily immediate or universal, but the direction of adjustment reflects a clear shift in labour demand.

5.2 Creation

Simultaneously, generative AI stimulates the emergence of new professional categories and business models. Organizations require specialists to design, supervise, customize, and ethically govern AI systems. Demand is rising for professionals skilled in data management, AI deployment, system auditing, and strategic integration.

Beyond individual roles, new service ecosystems are forming around AI-based solutions, consulting, and digital platforms. This constructive dimension illustrates how innovation expands economic possibilities even as it transforms existing structures.

Together, these dynamics strongly align with Schumpeter's concept of creative destruction: technological progress dismantles certain economic functions while generating new sources of growth and opportunity.

6. From Creative Destruction to Creative Concentration

While Schumpeter emphasized that monopoly profits from innovation are temporary, the structure of the AI economy raises new questions. In his framework, competition eventually erodes market dominance as rival firms imitate successful innovations. However, the dynamics of generative AI appear different in important ways.

First, advanced AI systems depend heavily on large-scale data. Firms that control vast datasets possess a structural advantage, making it difficult for smaller competitors to catch up. Second, digital platforms benefit from strong network effects: as the number of users increases, the value of the service expands, reinforcing market dominance. Third, the development of cutting-edge AI models requires substantial capital investment and computing infrastructure, creating high entry barriers.

These factors suggest that AI-driven innovation may not only replace existing industries but also consolidate economic power within a small number of dominant platforms. This pattern can be described as "creative concentration," where innovation strengthens market control rather than dispersing it.

Creative concentration may be defined as a structural condition in which innovation disrupts existing industries while simultaneously reinforcing long-term dominance of data-rich digital platforms. Unlike traditional creative destruction, where market power erodes over time, creative concentration may produce persistent dominance due to data lock-in and network reinforcement.

Thus, unlike earlier industrial revolutions, the AI era may combine technological disruption with increasing market concentration, raising new concerns for competition policy and economic inequality.

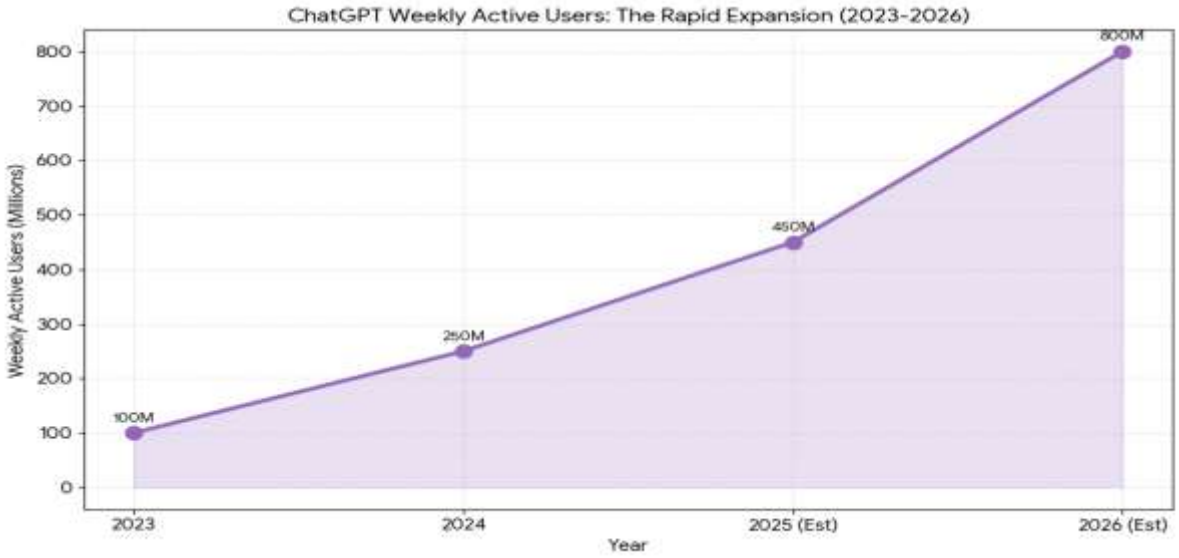

Figure 2: Global User Expansion
Source: Gartner Strategic Technology Trends (2026)

This figure illustrates the rapid expansion of ChatGPT's global user base, rising from approximately 100 million weekly users in 2023 to projected estimates suggesting continued expansion toward 2026. The steep upward trajectory reflects the acceleration of generative AI adoption across industries and regions. According to Schumpeterian theory, this growth pattern indicates that AI is transitioning from an experimental innovation to a potential General Purpose Technology (GPT) capable of reshaping multiple sectors at the same time. Such technologies have historically transformed production systems and organizational structures.

Economically, the sharp expansion during 2025–2026 coincides with significant revenue growth exceeding $10 billion annually. This phase suggests the emergence of innovation-driven market dominance, where early movers consolidate competitive advantages through scale, data accumulation, and platform integration.

The figure therefore supports the argument that AI transformation is not only disruptive but also structurally concentrating, reinforcing the concept of "creative concentration" introduced earlier.

7. Labour Market and Inequality

The labour market effects of generative AI are likely to be skill-biased. Rather than uniformly reducing employment, AI tends to complement workers who possess advanced digital, analytical, and problem-solving skills. Individuals capable of effectively using AI tools may experience productivity gains, improved performance, and potentially higher wages.

In contrast, workers engaged in routine cognitive tasks face greater displacement risk. Activities involving standardized writing, repetitive data processing, or basic programming are increasingly automated, which may reduce demand for such roles or compress wages in these segments.

As a result, income inequality may widen. The productivity premium enjoyed by high-skilled workers could increase the wage gap between those who adapt to AI technologies and those whose tasks are more easily automated. The distributional consequences of AI, therefore, depend heavily on education, reskilling systems, and labour market policies.

The magnitude of these distributional effects will depend on institutional capacity, educational adaptation, and regulatory design.

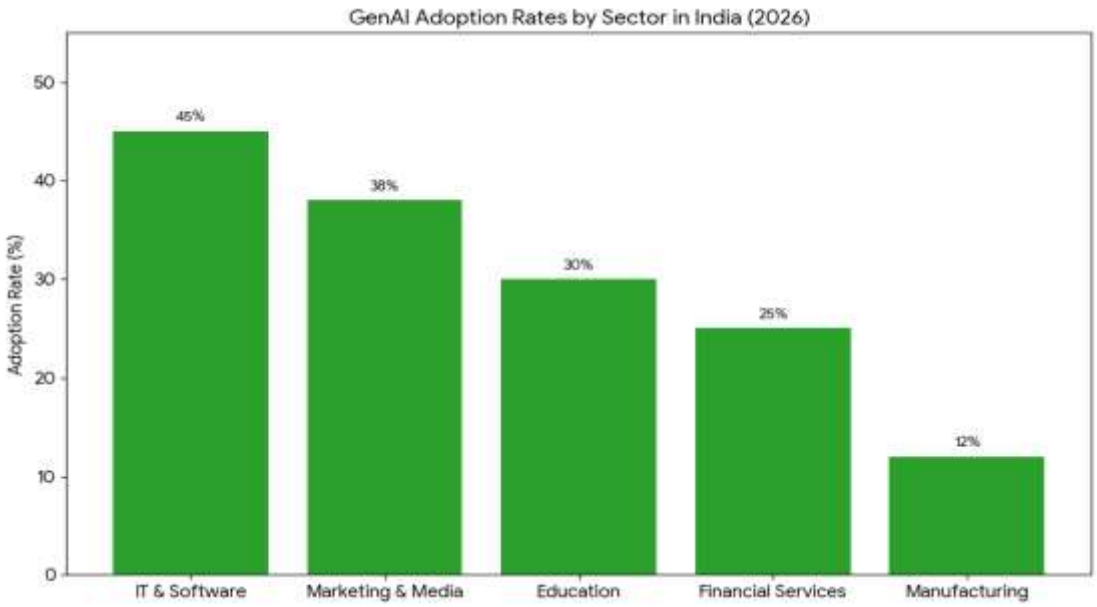

Figure 3: Sectoral Adoption in India

Source: NASSCOM–EY Report on GenAI Adoption (2025–26); Ministry of Electronics and IT Annual Report

As shown in Figure 3, this bar chart presents estimated adoption levels of generative AI across major Indian industries in 2026. The highest adoption rates are observed in IT and software services (approximately 45%), followed by marketing and digital media (around 38%). Moderate adoption is visible in sectors such as financial services and professional consulting, while traditional manufacturing shows comparatively lower integration.

From a Schumpeterian perspective, higher adoption within IT and marketing reflects the concentration of what may be termed "routine cognitive destruction." These sectors rely heavily on information processing, coding, documentation, and content generation tasks increasingly supported or automated by generative AI systems.

The sectoral distribution also provides an India-specific insight. Since India's economic strength is deeply rooted in IT services and business process outsourcing, the country's white-collar workforce stands at the forefront of AI-driven restructuring. This reinforces the earlier argument that AI's labour market effects in India will be uneven and skill-dependent.

The figure therefore strengthens the claim that generative AI transformation in India is both sectorally concentrated and distributionally significant.

For India, where educational access remains uneven, this is particularly important. Without large-scale reskilling, AI adoption may widen income gaps.

8. Policy Implications

The economic transformation driven by generative AI requires carefully designed public policy. Public policy should aim not to restrict innovation but to align technological progress with inclusive and competitive economic development.

First, the education system must evolve. Foundational digital understanding is no longer sufficient; students need exposure to AI applications, data reasoning, and problem-solving skills that complement automated systems. Early integration of AI-related competencies can reduce future skill gaps.

Second, workforce adaptation must extend beyond formal education. As technology reshapes tasks across sectors, mid-career professionals will require accessible and affordable reskilling pathways. Flexible training models, industry collaboration, and digital learning platforms can support continuous skill upgrading.

Third, competition authorities must update regulatory tools to address digital market dynamics. Data accumulation, platform dominance, and network advantages may create persistent market power. Effective oversight is necessary to preserve competitive conditions.

Fourth, smaller enterprises should not be excluded from technological gains. Targeted financial incentives, technical guidance, and shared digital infrastructure can enable SMEs to participate in AI-driven productivity growth. Finally, governance frameworks must ensure transparency, accountability, and protection of user data. Responsible regulation is essential to maintain trust in AI systems.

A balanced policy response will determine whether AI becomes a driver of broad-based prosperity or a source of structural concentration and inequality.

9. Conclusion

The rise of generative AI marks a transformative moment in the evolution of modern capitalism. Technologies such as ChatGPT extend automation beyond physical production into the domain of knowledge and cognitive work, signaling a structural shift in how value is created and distributed within the economy.

Viewed through a Schumpeterian perspective, this transformation reflects the enduring logic of creative destruction. Established roles and business models are being restructured, while new professional categories, industries, and technological ecosystems are emerging. Innovation continues to act as the engine of economic change.

Yet the contemporary digital environment introduces dynamics that differ from earlier industrial revolutions. Data ownership, platform integration, and strong network effects may allow leading firms to consolidate market power in ways that are more persistent than the temporary monopolies Schumpeter described. In this context, technological disruption may coexist with increasing economic concentration.

Schumpeter's analytical framework therefore remains highly insightful, but it must be broadened to incorporate the realities of data-driven markets and global digital platforms. Ultimately, the long-term impact of AI will depend not only on technological capabilities but also on institutional responses. Well-designed policies can help ensure that AI-led growth enhances productivity while maintaining competition, inclusion, and social welfare.

The future trajectory of capitalism in the AI era will depend on whether creative destruction remains a force of dynamic competition or evolves into sustained structural concentration.

References

1. Acemoglu, D., & Restrepo, P. (2018). Artificial intelligence, automation, and work. *National Bureau of Economic Research Working Paper No. 24196*. https://doi.org/10.3386/w24196

2. Aghion, P., & Howitt, P. (1992). A model of growth through creative destruction. *Econometrica, 60*(2), 323–351. https://doi.org/10.2307/2951599

3. Baumol, W. J. (2002). *The free-market innovation machine: Analyzing the growth miracle of capitalism*. Princeton University Press.

4. Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. W. W. Norton & Company.

5. Government of India. (2026). *India AI Impact Summit 2026*. Government of India.
6. Helpman, E. (Ed.). (1998). *General-purpose technologies and economic growth*. MIT Press.
7. International Monetary Fund. (2024). *Artificial intelligence and the future of work*. IMF.
8. McKinsey Global Institute. (2023). *The economic potential of generative AI: The next productivity frontier*. McKinsey & Company.
9. Ministry of Electronics and Information Technology. (2025–2026). *Annual report*. Government of India.
10. NASSCOM & Ernst & Young. (2025–2026). *Generative AI adoption in India*. NASSCOM.
11. OpenAI. (2025). *Investor relations and user statistics reports*. OpenAI.
12. Schumpeter, J. A. (1934). *The theory of economic development* (R. Opie, Trans.). Harvard University Press. (Original work published 1911)
13. Schumpeter, J. A. (1942). *Capitalism, socialism and democracy*. Harper & Brothers.
14. Shivalkar, A. (2026, February 23). *Maharashtra to host India's first AI agriculture conference, says CM Fadnavis*. Indian Express.
15. World Economic Forum. (2023). *The future of jobs report 2023*. World Economic Forum.
16. World Economic Forum. (2025). *Strategic technology trends*. World Economic Forum.
17. World Economic Forum. (2026). *Strategic technology trends 2026*. World Economic Forum.