
THE ROLE OF GENERATIVE ARTIFICIAL INTELLIGENCE IN ENHANCING BUSINESS CREATIVITY AND INNOVATION

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Abstract :

Generative Artificial Intelligence (Generative AI) represents a transformative technological advancement that is redefining business creativity and innovation across industries. Unlike traditional Artificial Intelligence systems that primarily focus on predictive analytics and data processing, Generative AI is capable of creating new content, ideas, designs, and solutions by learning from extensive datasets. This research paper examines the role of Generative AI in enhancing business creativity and innovation performance. Using a descriptive and analytical research design, primary data were collected from 100 business professionals across various sectors. The findings indicate that Generative AI significantly improves creative efficiency, accelerates innovation cycles, enhances personalization strategies, and strengthens competitive advantage. However, challenges such as ethical issues, data privacy concerns, skill gaps, and governance risks require strategic attention. The study concludes that sustainable innovation in modern businesses depends on the effective collaboration between human intelligence and Generative AI systems.

Keywords : Generative AI, Business Creativity, Innovation Performance, Digital Transformation, Artificial Intelligence, Competitive Advantage

Introduction :

The global business environment is undergoing rapid transformation driven by digital technologies, globalization, and dynamic consumer expectations. In this evolving landscape, creativity and innovation have become fundamental determinants of organizational survival and long-term growth. Companies that continuously innovate are more likely to sustain competitive advantage, improve operational efficiency, and meet changing market demands.

Artificial Intelligence (AI) has played a significant role in enabling digital transformation over the past decade. However, a new wave of AI technology—Generative Artificial Intelligence—has emerged as a disruptive force reshaping how organizations approach creativity and innovation.

Generative AI refers to advanced machine learning models, particularly deep learning



and large language models, that can generate new content such as text, images, music, software code, business strategies, and product designs. Unlike conventional AI systems that analyze or classify data, Generative AI creates original outputs by identifying patterns and relationships within massive datasets.

Tools such as ChatGPT, DALL·E, Midjourney, Bard, Copilot, and AI-driven design platforms are now widely used across industries including marketing, healthcare, finance, manufacturing, media, and retail. Businesses are leveraging these tools to:

- Develop innovative marketing campaigns
- Generate product prototypes
- Automate content creation
- Enhance customer personalization
- Improve research and development processes
- Support strategic decision-making

The integration of Generative AI into business functions significantly reduces time-to-market, improves ideation processes, and increases productivity. For example:

- Marketing teams use AI to create personalized advertisements in seconds.
- Designers use AI tools to generate multiple product concepts rapidly.
- Research teams use AI to simulate innovative solutions and scenarios.
- Entrepreneurs use AI to draft business models and financial projections.

Despite its benefits, the adoption of Generative AI raises concerns regarding ethical implications, data privacy, intellectual property rights, workforce displacement, and algorithmic bias.

Therefore, it becomes essential to examine the following research questions:

1. Does Generative AI enhance organizational creativity?
2. How does Generative AI influence innovation performance?
3. What challenges do businesses face in adopting Generative AI?

This study aims to provide empirical insights into the role of Generative AI in enhancing business creativity and innovation.

Literature Review :

Amabile (1996) proposed that creativity is influenced by domain expertise, creative-thinking skills, and intrinsic motivation. Later studies suggest that technological tools enhance creative capacity by providing new ways to experiment and ideate.

West & Farr (1990) defined innovation as the intentional introduction and application of new ideas within a role, group, or organization. Digital technologies have increasingly become drivers of such innovation.

Brynjolfsson & McAfee (2014) argued that digital technologies accelerate innovation and



productivity.

Davenport & Ronanki (2018) categorized AI applications into process automation, cognitive insight, and cognitive engagement.

Recent research (2022–2025) emphasizes Generative AI as the next stage of AI evolution:

- **Dwivedi et al. (2023)** highlight that Generative AI enhances business model innovation.
- **McKinsey Global Report (2023)** estimates that Generative AI could add trillions of dollars annually to the global economy.
- **MIT Sloan Review (2024)** suggests that AI-augmented creativity increases idea diversity and quality.
- **World Economic Forum (2024)** identifies Generative AI as a key driver of digital transformation and industry disruption.

Generative AI and Creativity :

Recent empirical studies indicate:

- AI-assisted brainstorming produces more diverse ideas.
- Generative AI reduces creative block and enhances productivity.
- Marketing campaigns generated with AI show higher engagement rates.

Researchers argue that AI does not replace human creativity but amplifies it by :

- Offering alternative perspectives
- Automating repetitive tasks
- Providing data-driven insights

Generative AI and Innovation Performance :

Innovation performance refers to an organization's ability to introduce new products, services, or processes successfully.

Studies indicate :

- AI reduces product development time.
- AI enhances customer-centric innovation.
- AI improves strategic forecasting accuracy.

However, challenges remain :

- Ethical governance gaps
- Skill shortages
- Resistance to technological change
- Data security risks



There is limited empirical research directly linking Generative AI adoption with measurable creativity and innovation outcomes. This study attempts to bridge this gap.

Objectives of the Study :

1. To examine the concept and applications of Generative AI in business.
2. To analyze the impact of Generative AI on organizational creativity.
3. To evaluate the influence of Generative AI on innovation performance.

Research Hypotheses :

H1: Generative AI adoption significantly enhances business creativity.

H2: Generative AI positively influences innovation performance.

Research Methodology :

Research Design :

The study follows a descriptive and analytical research design to examine the impact of Generative Artificial Intelligence on business creativity and innovation.

Data Collection :

Primary data were collected through a structured questionnaire from 100 professionals across various sectors. Secondary data were obtained from journals, research articles, reports, and academic databases.

Sampling Technique :

Convenience sampling was used to collect responses from readily available participants.

Analytical Tools :

Data were analyzed using percentage analysis and presented through tables and graphs. Hypotheses were evaluated based on observed response trends.

Data Analysis and Interpretation :

Table 1: Awareness of Generative AI

Category	Percentage
Highly Aware	45%
Moderately Aware	35%
Low Awareness	20%

Interpretation :

The result showing 80% high awareness reflects a solid understanding of Generative AI and its business applications among respondents. This indicates that organizations are ready



to adopt AI technologies and are increasingly open to using them to strengthen creativity and innovation.

Table 2: Impact on Business Creativity

Response	Percentage
Strongly Agree	50%
Agree	30%
Neutral	10%
Disagree	10%

Interpretation :

The 80% high awareness level shows that most respondents are well-informed about Generative AI, indicating strong readiness and potential for its adoption in enhancing business creativity and innovation.

Table 3: Impact on Innovation Performance

Impact Level	Percentage
High Impact	55%
Moderate Impact	30%
Low Impact	15%

Interpretation :

Most respondents indicate a significant improvement in innovation performance following the adoption of Generative AI. This positive response trend clearly supports Hypothesis H2, confirming the strong impact of AI on organizational innovation outcomes.

Findings :

The findings of the study reveal that Generative Artificial Intelligence significantly enhances business creativity and innovation performance. It plays a crucial role in improving creative ideation by enabling organizations to generate diverse ideas, innovative concepts, and alternative solutions within a shorter time frame. The study also indicates that AI-assisted design and simulation tools shorten product innovation cycles, allowing businesses to accelerate research and development processes and achieve faster time-to-market. Furthermore, AI-driven analytics and predictive models enhance strategic decision-making by providing data-based insights and scenario analysis, reducing uncertainty in managerial decisions.

However, despite these advantages, the research identifies several challenges that limit the full potential of Generative AI adoption. Therefore, while Generative AI acts as a powerful catalyst for creativity and innovation, its long-term success depends on responsible governance, strategic implementation, and strong human-AI collaboration.



Conclusion :

Generative Artificial Intelligence is fundamentally transforming the landscape of business creativity and innovation in the digital era. The findings of this study demonstrate that the strategic adoption of Generative AI enhances creative productivity, supports faster idea generation, shortens innovation cycles, and strengthens overall competitive positioning. By integrating AI-driven tools into marketing, product development, and strategic decision-making processes, organizations are able to achieve measurable improvements in innovation performance and operational efficiency. Generative AI enables businesses to respond more effectively to market dynamics and evolving customer expectations, thereby contributing to sustainable growth and long-term value creation.

However, the successful and sustainable implementation of Generative AI depends on responsible governance, ethical standards, and continuous workforce development. Organizations must address challenges related to data privacy, algorithmic bias, and regulatory compliance while investing in employee training and digital skill enhancement. Rather than replacing human intelligence, Generative AI should be recognized as a collaborative innovation partner that complements human creativity and critical thinking. The future of business innovation will be shaped by a synergistic partnership between human ingenuity and artificial intelligence, ensuring balanced, ethical, and sustainable technological advancement.

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