

Name of student:

Thi Loan LITOT

Name of your Level 1:

Anissat MOHAMED

Source:

Google Scholars

Paper title:

The GenAI is out of the bottle generative artificial intelligence from a business model innovation perspective

Keywords specific to the paper:

artificial intelligence, generative AI, ChatGPT, business model, innovation, large language models

Summary of the main contributions:

This research paper focuses on the implications of generative artificial intelligence (GAI) from the perspective of business model innovation by using ChatGPT as a prominent example. It highlights the unprecedented speed of growth of GAI applications compared to other consumer platforms like Instagram and TikTok. The paper discusses how GAI, which encompasses text, image, audio, and other media generation, has captured the interest of both practitioners and researchers due to its user-friendly interfaces and potential impact on various industries. The study aims to provide a Business Model Innovation (BMI) perspective on GAI by deriving six propositions about its potential impact on industry dynamics and examining its implications in three specific industries: software engineering, healthcare, and financial services. To achieve this, the authors conduct an in-depth qualitative content analysis based on a scoping review methodology using a sample of 513 sources, including academic journals and non-academic sources. This includes databases such as EBSCO, ScienceDirect, Web of Science, and Google Scholar, as well as searches in prominent search engines like Google and Bing. The search process targets publications related to "business model innovation" and "generative AI" and involves manual selection and narrowing down of results to ensure relevance. The findings reveal a wide range of research interests and applications of GAI across various industries and disciplines. GAI was found to be applicable in generating text, images, videos, audio, and code, with significant implications for industries such as healthcare, education, media, creative, and journalism. The analysis also highlights the diverse perspectives on the potential effects of GAI, ranging from beneficial outcomes to ethical concerns.

The authors then derive six propositions to provide a first understanding of GAI's impact on innovation activities, work environment, and information infrastructure, as shown in the figure below.

GAI's Impact on Innovation Activities	GAI's Impact on Work Environment	GAI's Impact on Information Infrastructure
Prop. I—Initiators of Innovations: GAI levels the playing field by providing access to expertise, technology, and resources.		
Prop. II—Degree of Innovations: GAI's sweet spot lies in combinations of factual knowledge and creative thinking.	Prop. IV—People: GAI has its highest impact on the jobs of white-collar knowledge workers.	
Prop. III—Timing of Innovations: GAI affects most business models initially via value creation innovations.	Prop. V—Skill Set: GAI redefines required skill sets as many job roles transform from being creators to becoming editors.	Prop. VI—Consume or Customize: "The GAI is out of the bottle." It is not a question if generative AI <i>will</i> be used by companies— but <i>how</i> .

Fig. 3 Propositions of GAI's impact on businesses (own illustration)

The research paper then proceeds on analyzing GAI's potential impact on three case studies, which are software engineering, healthcare and financial services, by characterizing for each of these their value creation innovation, new proposition innovation and value capture innovation. GAI's impact on software engineering is deep, with automated code generation, bug detection, and performance optimization already revolutionizing the landscape. Platforms like GitHub are witnessing a significant portion of new code being AI-generated. GAI integration could lead to a shift in developer roles towards more strategic decision-making rather than traditional coding, potentially transforming the industry's workflow. In the healthcare sector, AI-powered solutions, particularly in mental health, are becoming more and more attractive. GAI chatbots are being developed to provide emotional support and aid in diagnosis, potentially making therapy more accessible to a greater audience. The authors enlightens how the integration of AI-driven diagnostics and virtual mental health support could significantly improve patient care and reduce costs. New revenue models, including subscription-based services, are likely to emerge, reshaping the value capture within the industry while ensuring scalability and enhanced customer satisfaction through personalized offerings. GAI's influence on investment management is characterized by its ability to process vast amounts of financial data, predict market trends, and optimize investment strategies. This includes AI-driven analytics, personalized investment products, and fraud detection mechanisms. As AI algorithms become integral to investment decision-making, new revenue models like performance-based fees and freemium structures could emerge, reshaping the value capture dynamics within the

sector. Additionally, operational efficiency gains and scalability through AI-driven automation could transform the cost structure and customer relationships, leading to better outcomes for both clients and investment managers.

The authors conclude by discussing GAI as a significant driver of innovation, which allows new partnerships and processes for example. GAI is anticipated to revolutionize customer relationships, personalized marketing, and content creation, offering new revenue models and cost structures. However, despite its transformative potential, the rapid growth of GAI also presents significant challenges, including ethical biases, manipulation risks, and the need for regulatory oversight. To harness the benefits of GAI while limiting risks, ethical frameworks and collaboration between stakeholders are essential. Overall GAI is expected to redefine business models and spark a new era of innovation, necessitating further empirical research to understand its evolving impact on businesses over time.

Supported by a software application? (If yes, provide more details)

Not supported by any software application