

Observation and Analysis of the Development of Generative Artificial Intelligence in Mainland China

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Although artificial intelligence (AI) has been in development since the 1950s, it wasn't until the end of 2022, with the release of OpenAI's ChatGPT, that general conversational AI truly started to capture global attention, potentially causing profound impacts across various fields. ChatGPT, with its exceptional conversational abilities, has sparked a new global AI wave along with other generative AI models. Generative AI represents the next generation of deep learning-based technology capable of generating content such as text, images, audio, and code. According to a March 2023 report by Goldman Sachs, technologies like ChatGPT are poised to disrupt the global workforce market, potentially replacing 300 million full-time jobs while also increasing productivity. However, generative AI also brings risks such as privacy concerns and the spread of false information, making regulation a global concern.

The article also provides an initial analysis of the future development and competition in artificial intelligence between the United States and China. Mainland China boasts significant advantages in policy, resources, fundamental research, and applications, backed by substantial data resources and government support, resulting in impressive research papers and patent achievements. However, the United States still leads in innovation, market influence, and other areas, allowing it to spearhead the evolution of AI technology and societal norms. The emergence of generative AI has added complexity to the competition, and measures such as the US-China tech war and restrictions on foreign investment have also affected China's AI development. In the future, the two countries may establish different AI standards and compete in the international market. The United States holds a lead in generative AI, possessing an innovative ecosystem and the world's top talent. The long-term impact of chip restrictions on China's AI development remains to be observed.

For a China that prioritizes national security and has long placed a high emphasis on the development of artificial intelligence, the impact is more comprehensive. This article outlines the changes and developments in China's

relevant policies. On the policy front, China has consistently placed significant emphasis on cutting-edge artificial intelligence technologies. As early as 2017, there was the policy document "Development Plan for a New Generation of Artificial Intelligence." In 2022, they introduced the "Guiding Opinions on Accelerating Scenario Innovation to Promote High-Quality Economic Development through High-Level Applications of Artificial Intelligence," aimed at guiding the development of AI scenario applications. This policy underscores both development and security, encourages innovation, and emphasizes governance under the rule of law.

Following the advent of ChatGPT, in July 2023, the Cyberspace Administration of China issued the "Interim Measures for the Management of Generative Artificial Intelligence Services," regulating generative AI. These measures emphasize the prohibition of generating illegal content while also relaxing some provisions from the draft solicitation opinion published in April. This series of policy changes demonstrates China's open attitude towards AI development, while simultaneously emphasizing security and the rule of law. The flexibility of these policies reflects the complexity of the Chinese Communist Party's governance of society.

Finally, the article raises the potential impact of relevant developments on Taiwan. The effects of the competition in AI between the United States and China on Taiwan are multi-faceted. In terms of regulatory stance, Taiwan may be influenced by mainland China's content censorship and should remain vigilant against AI models designed for united front purposes. In non-content industries such as healthcare, finance, and automated production, AI technology can be applied, and Taiwanese businesses may face challenges in choosing which AI solutions to adopt. Furthermore, Taiwan's information and communication technology (ICT) and semiconductor industries have high potential for participation in AI hardware support, making them potential suppliers. In summary, apart from prudently addressing the impact of AI on industries and the economy, Taiwan should also closely monitor the potential effects of the US-China AI competition.

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