

International balance of power determined by Chinese control over emerging technologies, study shows

April 22 2024



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The fierce competition between China and the United States of America for control of emerging technologies such as AI and 5G will determine

the international balance of power, a new study says.

Developments in [quantum computing](#), the Internet of Things, and Big Data have transformed the global order and have led to new alliances and dynamics, the analysis shows.

Forming new allies has become imperative for the U.S. because the country cannot address the challenges posed by China in isolation. This has involved sharing sensitive advanced technologies with [national security](#) and [military applications](#) and civil and military technology research.

China's growing use of emerging technologies in civilian and military domains has escalated China's stakes as a threat and a near-peer competitor to the US.

[The study](#), by Maria Papageorgiou from the University of Exeter and Muhammed Can and Alena Vieira from the University of Minho, is published in the journal *Chinese Political Science Review*.

Researchers used data collected between 2017 and 2023 and analyzed [strategic decisions](#), such as bans and [export controls](#) directed at China's companies and the changing alignment posture of Western states.

Dr. Papageorgiou said, "China's growing power and expansion in emerging are key to driving momentum of the global shifts in technology and the geopolitical landscape. While clear-cut considerations of alliances might not be as prevalent as in the Cold War period, balancing dynamics are already in place."

The study shows that western states have tried to undermine China's power through diplomatic efforts, bans and restrictions and securing monopoly over the critically important production of semiconductors.

They have also made alliances designed to exclude or target China by leveraging its extensive network of allies. Many were already allies, so these arrangements add another layer to the already existing alliance.

There are new arrangements that exclude China as well as diplomatic coordination aimed at undermining China that does not always include the U.S. This includes agreements between Germany and Taiwan.

The research shows the geographic expansion of Chinese manufacturers and suppliers could lead to a significant advantage over other competitors. These cross-border mergers and acquisitions have raised national security concerns for governments.

China has developed several systems that could penetrate U.S. defenses and its disinformation campaigns reinforce the assessment of the country's intentions as aggressive.

The U.S. has accused Chinese companies of stealing or misusing intellectual property rights from U.S. companies.

Export controls and bans have played an increasingly important role in the U.S. government's efforts to deny China access to critical technologies. It has also pressured its allies to adopt export controls and bans around sensitive technologies.

Initiatives such as the US–Japan–ROK cooperation in areas like research and development and supply-chain security shows the United States and its allies are actively supporting each other in technology and enhancing supply-chain security.

More information: Maria Papageorgiou et al, China as a Threat and

Balancing Behavior in the Realm of Emerging Technologies, *Chinese Political Science Review* (2024). [DOI: 10.1007/s41111-024-00248-0](https://doi.org/10.1007/s41111-024-00248-0)

Provided by University of Exeter

Citation: International balance of power determined by Chinese control over emerging technologies, study shows (2024, April 22) retrieved 4 May 2024 from <https://phys.org/news/2024-04-international-power-chinese-emerging-technologies.html>

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