Agora Executive Briefing

Geopolitics of Artificial Intelligence: Europe claiming its place amid China and the USA

Date

Recipient(s): N.N.

Executive Summary

In a Competitive AI Age, Europe seeks its own Industrial Niche

1. Economic gains from AI will benefit countries that develop vibrant AI-related industries, leading to vigorous industrial and geopolitical competition between not only companies but also states, e.g. US and China.
2. The EU's digital industry is carving out its place alongside the US-China duopoly. However, digital and capital markets integration in Europe is not yet sufficient to nurture innovative players in this field.
3. The EU's approach is to put the trustworthiness of AI technologies at the center of its industrial policy, helping European companies to win future AI markets through higher quality products.

Watch out for

- The European Commission's **legislative proposal on trustworthy AI in Q1 of 2021**, to be adopted by the end of 2021.
- Political debates in the US and EU on the **regulation of "tech giants", possibly extending to breakups,** and its impact on major Chinese and US players.
- **EU** actions via **investment control mechanisms and/or market integration** to level the playing field and to enable a European digital industry.

Key Figures

- ICT decoupling: **FDI flows between US and China dropped by 69%** since 2017.
- AI related technologies expected to **add 14% to global economic output** by 2030.
- The **US** earmarked **4bn USD** in 2020 for military applications of AI, **China** spent up to **2.7bn USD** in 2018. In contrast, the **EU** set aside **only 30m USD** over the past two years for AI and cyber technologies.

State of Play

A Trillion Dollar industry, with the European Union as Referee rather than Player

Artificial intelligence (AI) refers to computer systems that can perform tasks normally requiring human intelligence, using a broad set of algorithmic techniques to solve complex problems. These techniques are driven by the exponential increase in computing power, the amount and availability of data, and the success of the online platform economy. By now they start to solve high-value problems across many sectors including surgical operations, predictive maintenance in manufacturing, precision agriculture, autonomous roads, and marine transportations. The expected economic bounty of **AI-related technologies – predicted to rise from 2tn USD in 2019 to 16tn USD by 2030** – has triggered intense **industrial and geopolitical competition between the US and China**. In addition to their respective "tech giants", a dozen research and innovation ecosystems and their hundreds of start-ups compete to create innovative AI related industries. **The EU, in contrast, has so far remained a regulatory player, not an industrial one:** It bets on the attractiveness of its large consumer market to impose high quality standards for the AI technologies that others are building.

Key Issues 1& 2

The Contested Future of AI – The European Union in the Crossfire of US-China Rivalry

The EU risks falling short on this future-oriented industry, as it has just begun to build a competitive AI landscape **in a contested arena.** Whether it is Amazon's machine-learning driving backend operations of Siemens or NASA; Google's Deepmind offering predictive analysis in healthcare; or SenseTime developing facial recognition identifying facemask-wearing individuals – American and Chinese are way ahead both in research and industrial application. Two key drivers are stoking US-China tensions, and both are not to the EU's advantage. First, the **belief that powerful military AI will provide strategic and tactical superiority over enemy forces**. Second, an awareness that **military investments often act as critical enablers of advances in "deep tech". Thus, they are a potent seed for new high tech markets** (witness how DARPA created the internet). Consequently, both **China and the US allocated large sums** to AI-related research and development (R&D) in the past years, whereas the EU's financial commitment has so far been puny.

US-China rivalry also affects the value chains of AI applications. Access to **key components for hardware and software** has become constrained, as the two superpowers started to decouple their economies. **Enablers of AI – i.e. both talent and hardware – are now restricted.** Unsurprisingly, flows of FDI in ICT between the US and China have plunged from 6.6bn USD in 2017 to 2.1bn USD in 2019. In parallel, **global standardization efforts around these technologies became balkanized.** At the behest of the central government, **Chinese companies are trying to control standard-setting via the International Telecommunications Union, while the U.S. has formed an "anti-Chinese" technological coalition** under the Global Partnership on AI. This creates a **highly inefficient commercial landscape**, with little regulatory certainty and high political risks for investments and exports. Over the long term, these risks create different and incompatible technological ecosystems. Each side may have their own markets, customers, standards, technologies, and producers, which will **increase the costs for businesses operating in both the US-led and the China-led "spheres"**.

AI made in Europe – Challenges and Opportunities Ahead

The EU realizes the importance of building a much stronger digital industrial base for its strategic autonomy. In order to create a dynamic AI industry and to compete globally, the EU has planned a number of binding and non-binding actions over the next six months. These include an **ex-ante competition tool for antitrust in digital industries, a legislative proposal to regulate AI, the Digital Services Act and the Action Plan on the Capital Markets Union**. Additional measures for **critical infrastructure protection and implementing multiple cooperation agreements with developing countries are also in the pipeline.** These actions will accelerate the top-down integration of the EU's Digital Single Market, building the financial firepower needed to scale innovation at an industrial level. This, in turn, will nurture the rise of new innovative players that can build and develop successful partnerships in markets like Africa.

The EU makes "trustworthiness" its AI strategy's cornerstone, in line with its concern for privacy, consumer protection, and citizens' rights. To tame foreign tech giants, it considers FDI and export control, data storage requirements, products bans, and regulations. In the short term, this may represent a comparative disadvantage for European start-ups and SMEs trying to pierce the market and scale up, as they have to invest significant amounts into R&D and compliance. **In the long term, however, the gamble is that this approach will provide a solid foundation for European companies to win mature AI markets through higher quality products**. Whether that will be the case will depend significantly on the EU's ability to implement an effective legislation in support of companies – particularly SMEs, innovators and researchers.