Dealing with the geopolitical consequences of technological developments

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The US-China technological competition and challenges for Europe

Any examination of the geopolitical issues associated with current technological development must grapple with the context of the return of a "great power competition" between the US and China. Technology underpins their competition in all dimensions: a commercial problem is combined with a security problem and with a societal problem. In other words, **technological developments are both a cause and a consequence of geopolitical competition.** The US-China competition has accelerated since around 2016-2017, in the context of the Trump Administration and of Beijing's "Made in China" strategy on the other hand. The recent US sanctions against Chinese companies that resulted from bilateral tensions have had indirect effects on European companies and global value chains. Therefore, Europe can hardly stay out of these tensions.

The sharp differences between the US and the Chinese technological policy models suggest that they, individually, pose very distinct sets of challenges to Europe. Both the US and China are economic competitors to Europe and dominant in different segments of the global tech market, but the US model poses mostly privacy problems while the Chinese model poses primarily security risks and ethical problems. The Covid crisis has further demonstrated the essential role of digital technologies in ensuring the continuity of social life, businesses and administrations. In Europe, both factors have **accelerated the reflection on the need for a degree of European sovereignty over data and technologies**.

Indeed, the competition between the two powers and the critical importance of technologies mean that **Europe has no choice but to do what it has long avoided doing, which is to play power politics** (even if through the EU's "normative power" or "market power"). Therefore, Europe is in the process of design its own technology model, which, although it logically is close to the US, still diverges from the former, due to differences in political cultures between Europe and the US, as well as competing commercial interests.

In approaching the global tech competition, however, Europe is faced with difficulties to which China and the US are not. Firstly, **while the US and China are engaged in a bilateral race with each other, the EU, for its part, is caught in the challenge of designing a technology policy that addresses both sets of challenges at the same time**.

Secondly, the EU is a hybrid polity. **Addressing the challenges raised by emerging technologies and global competition requires a transversal approach**, considering e.g., the development of AI in high-risk domains such as defense, healthcare, transport, energy, public sector. While states like the US or China can combine economic, industrial, military and regulatory actions and decisions to conduct consistent and effective tech policies. T**he EU and its member states, by contrast, have a harder time coming up with a consistent strategy across the board**.

Thirdly, the US and China also have, nationally, large digital spaces, thriving digital markets, and large amounts of data collected under their jurisdiction. As a whole, **the European Union hosts few global digital players and has a fragmented digital market**. Moreover, **as a values-based political actor, the EU is concerned with privacy, regulation of the private sector, and a care for the ethics of technology to a larger extent than do other actors**. In a similar vein, there are also, in Europe, debates about or political oppositions to

developing AI, robotics and biotechnologies, or to using defense budgets to fund research into military applications of such technologies.

Finally, Europe is divided when it comes to assessing the strategic risks posed by the power of US big tech companies or reliance on Chinese telecommunications providers. This is, in part, because technology is only one component of European states' relations with the US or China: **security and economic interests may pull individual European countries either towards the US, or towards China, or both simultaneously, thus bringing any strategy-making to a standstill**.

All of these problems are currently being addressed but, on the whole, EU technology policy has thus far been more focused on norms, regulations and protective mechanisms than on engaging as a full participant in the global technological competition.

Policy Work in Progress

Despite the push and pull effects of US and Chinese links, and the complexity of designing a coherent European technology policy, **the EU has taken several policy steps over the past 3 to 5 years[1]. All these measures remain work in progress and are being complemented with measures taken by European governments individually, as illustrated here with the case of France.** All in all, Europeans have followed 4 lines of effort: data privacy; the protection of infrastructure and industry; the security of supply chains; and investment in research and innovation.

Data: The European Union – which for 80% of its data management depends on US companies – has been a regional vehicle and a global standard-setter for protective measures taken regarding privacy of individual data, as illustrated with the GDPR. With the launch of *Gaïa-X*, the objective is to offer new levels of protection for industrial and institutional data against espionage, through a **European federated data infrastructure project** -- or "sovereign cloud". Another, related goal is curbing the monopolistic position of US digital companies in Europe as well as harnessing the economics and societal benefits of European data. In France, the government is considering forcing large French companies to store their most sensitive data (business secrets, R&D) in a "trusted cloud".

Critical infrastructure and industry: Europeans have endeavored to protect key infrastructure and industry from takeover, and supply chains from disruption and security risks. In areas like 5G infrastructure and Foreign Direct Investment, the EU has only achieved to **guide member states into enforcing policies to assess risks and protect their national assets and infrastructure**. This resulted in the de facto exclusion of Huawei from the 5G networks of several though not all EU member states. Some countries, like France take further steps, this time towards US companies. France chose to prevent the takeover of Photonis (night vision binocular specialist) by the American Teledyne by imposing that the French public investment bank BPI maintain a minority share in the company and veto rights on the operations and management of its branches. The decision was justified by the French government to guarantee French economic security and defense industrial sovereignty.

Supply chains: Another axis of effort, particularly in the context of the Covid crisis, has been the **examination of supply chains and a concern with their resilience, the diversification of suppliers, and the need to relocate certain production chains** (e.g., semiconductors or lithium batteries manufacturing). In January 2021, in its updated Strategic Review, the French ministry for the Armed Forces has called for a more precise assessment

[1] This short paper only covers a small share of the great variety of EU policy initiatives takes over the past few years.

and mapping of Europe's critical dependencies, especially in raw materials used in high-tech factories.

Investment in Research and Innovation: There is a need to address Europe's competitiveness problem in fields of emerging technologies, where European companies are too few, too small or too expensive. The loss of the UK is also a blow to the EU's innovation base. Several funding schemes have been created or adapted at the EU level, to be more adapted to "disruptive innovation" and help start-ups "scale up" (e.g., European innovation Council created in 2017; the 2018 Digital Europe Program for AI development and the production of supercomputers). A **significant share (20%) of the Covid recovery package will be dedicated to "digital transformation". But at this point, European private and public investment figures remain well below those of the US government, or individual US private companies**. There are further discussions ongoing about creating synergies between the EU's civilian, space and defense research programs. In the same vein, France is advocating for the establishment of a well endowed European "DARPA". At the national level too, the ministry for the Armed Forces has come up with new funding mechanisms (DefInvest, DefInnov) to leverage civilian innovations with defense applications.

Transatlantic efforts and their limits

The close political, defense and security links with the US mean that the need for transatlantic cooperation on emerging technologies evident. **In particular, Europeans and the US must work together to build an international technological order that respects human rights principles and curbs the rise of illiberal practices, wherever they emanate from.** Nonetheless, when it comes to dealing with China, Europe and the US are on the same side of the table, but not in the same seat, not least given European trade links with and dependencies on China. During the Trump presidency, US unilateralism and pressures over allies, and extraterritorial sanctions have made transatlantic cooperation difficult as they had consequences on European companies. Besides, outside of the Trump administration's bullying attitude, Europeans have tended to disagree with the "decoupling" strategy.

Today, **European awareness of the risks posed by Chinese technological rise and the export of its illiberal model has grown, especially in the context of the Covid crisis**. This, combined with the incoming Biden administration, means that transatlantic dialogue and cooperation will resume and will undoubtedly be more fruitful over the next years. However, **Europeans have a different assessment of the global shifts in the balance of power**. Where the dominant vision in the US is a return to a bipolar international system, the EU sees a multipolar world where it can play a full role. **Democratic "clubs" – such as the "D10" or the "T12" – are, by definition, exclusive, will be insufficient in a complex, multipolar, and interdependent world where global standards are needed**. They need to be completed with multilateral efforts, and to include the European Union.

Ways ahead for the EU and its Member States

In the months ahead, in addition to protective measures on data, big tech regulation, and new investment plans, Europeans should seek to address their technological dependencies and be proactive on the global scene by:

- Engaging in a collective exercise to **map more precisely Europe's dependencies or risks** concerning critical raw materials and electronic components but also IT infrastructure (5G networks, satellites, data centers, information and communication platforms).

- Defining which technologies, infrastructure and governance mechanisms should be **developed or maintained nationally, at the EU level, at the transatlantic (EU-US or NATO) level, or with other partners**.
- Engaging with **partners across the globe, by promoting a multi-stakeholder and a human-centered approach to technologies**.
- Renewing effort at Europe-US dialogue and convergence in addressing both **transatlantic matters of taxation of big tech companies, data flows, US sanctions and their consequences for Europe; and China-related issues including risks in ICT supply chains, export controls, FDI screening, joint work on technical standards and norms**, etc.