

Looking beyond 5G: Why Europe is far from naïve when it comes to issues of strategic dependence



The United States has advised countries in Europe to avoid using technology provided by the Chinese company Huawei in their 5G networks. Yet so far, these warnings have had a relatively limited impact on European governments. [Vasileios Theodosopoulos](#) argues that despite disagreements over 5G, the United States should not overlook the EU's efforts elsewhere to develop supply chain security and safeguard critical resources and technologies.

Over the past two years, Washington has exerted considerable effort to get its European allies to [exclude Chinese telecommunications giant Huawei from the continent's 5G infrastructure](#). The US government's chief concern is that relying on the company's equipment poses considerable [security risks](#) and might [jeopardise the transatlantic relationship](#). Of course, 5G exemplifies a broader US concern: namely, that Chinese companies might come to dominate key global value chains and infrastructure, creating dependences and security vulnerabilities that Beijing could then leverage to its geopolitical advantage.

While [Europe's response to 5G](#) has attracted the most attention across the Atlantic, it should not be seen as the only measure of the European approach to supply chain security or the safeguarding of critical resources and technologies. In fact, there are other domains beyond 5G in which Chinese dominance poses equal, if not greater, risks and where Brussels is already working on reducing its dependence and enhancing its strategic autonomy. Washington should not overlook the Union's efforts here, especially as all digital technologies rely on critical materials, as [the EU's new industrial strategy](#) also recognises.

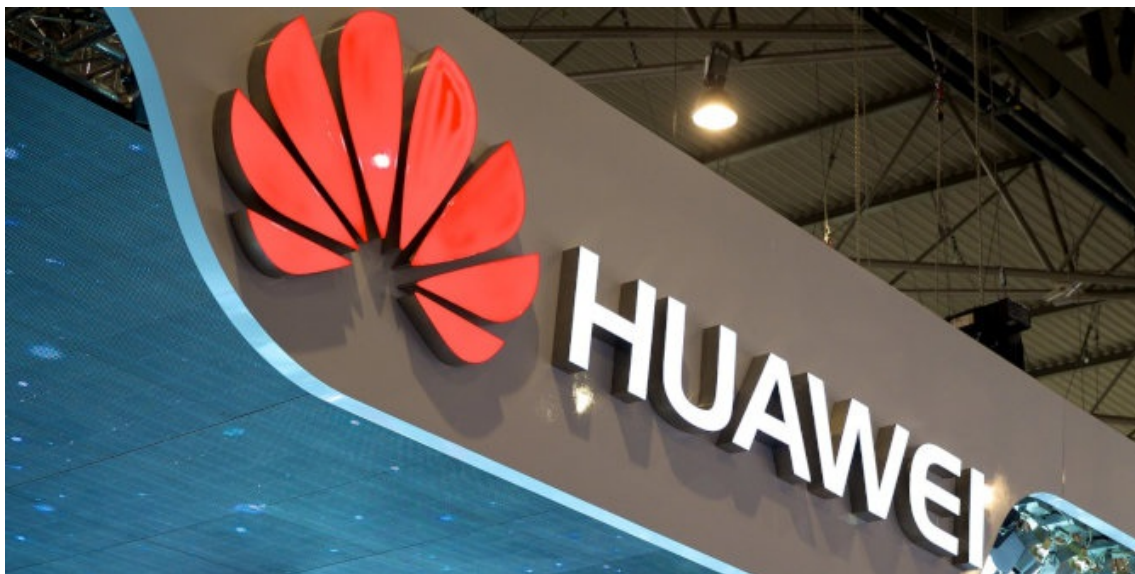
Under the digital hood

While they might lack the techno-futuristic appeal of 5G or AI, [critical raw materials](#) are vital for the security and prosperity of our 21st century societies. Underpinning all innovative digital technologies are material components such as hard-drives, semiconductors and batteries, in the production of which critical materials are irreplaceable. They are also essential for 'green' technologies, such as solar panels, wind turbines and electric batteries, as well as for manufacturing state-of-the-art aerospace and defence equipment (e.g. super-alloys, laser technology, ammunition). In short, many sensitive technologies, including 5G, would be nothing without critical materials.

For access to these materials, [global supply chains largely rely on a handful of countries](#). China, in particular, enjoys overwhelming dominance in the production and processing stages of critical raw material value chains and Beijing is the leading supplier for both the [EU](#) and the [US](#). Coupled with the ever-growing global demand for critical materials and the increasing geopoliticisation of international trade, this dependence creates serious security of supply challenges for both sides of the Atlantic. [Beijing's past threats to cut off the US' supply of rare earths](#) may have been a preview of what the future holds.

The EU as a geopolitical player

The EU has not remained idle in the face of this growing geopolitical risk. Under the framework of its 2008 [Raw Materials Initiative](#), the Union has followed a three-pronged approach to strategic materials. First, Europe has secured its supply of raw materials from abroad through [partnerships and policy dialogues](#) with key material producers and other major importers, including the US. The Union has also [utilised the WTO framework to undo Chinese protectionist measures](#) when it comes to critical materials, including rare earth elements. Europeans have begun more actively pursuing supplier diversification as well. For instance, last summer a [European firm replaced a Chinese company as the key investor in an Australian rare earths plant](#), securing the rights to its entire output. Under its new [Africa Strategy](#), the EU also plans to deepen its cooperation with African raw materials producers.



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Second, with a view to boosting its domestic production capacity, Brussels has launched a [number of initiatives](#) focused on mapping the continent's own resources and building up relevant expertise. In recent years, exploration activities in Europe have also increased, with [major projects in Greenland and Sweden](#) reaching advanced stages of exploration and development. Another example of Europeans' determination to decrease their import-dependence is the [European Battery Alliance initiative](#), which aims to build an integrated value chain for lithium-ion electric car batteries.

Finally, Europe has also invested considerable effort and resources into [improving its resource use efficiency](#), [enhancing its supply of secondary raw materials](#) and [developing alternatives for critical raw materials](#). In the past few years, the EU research and innovation framework programme has provided around [450 million euros' worth of funding to raw-material related projects](#), and efforts along these lines are expected to continue under the Union's next budgetary cycle.

Taking the EU's efforts further

Of course, the EU approach to critical raw material security is not without its weaknesses. To start with, its overarching policy and strategy framework, [last revised in 2011](#), does not fully reflect today's geopolitical context. The Union has also not focused enough on building capacity in and around Europe, while its supply diversification efforts are still in their infancy. As it seeks to develop a [new action plan](#) to remedy these deficiencies, Europe should look at what the US has been doing in this area since the release of its 2019 "[Federal Strategy to Ensure a Reliable Supply of Critical Minerals](#)".

Through the strategy, Washington seeks to reduce the 'strategic vulnerability' caused by its dependence on critical minerals imports. Abroad, it has started developing alternative import options through strategic partnerships with major producers, such as the multilateral [Energy Resource Governance Initiative](#) platform and bilateral partnerships with [Australia](#), [Canada](#) and [Greenland](#). Meanwhile, the government seeks to rebuild domestic value chains by encouraging [recent industry initiatives](#) in this field. Notably, the [US Army intends to finance domestic rare earth element production](#), while [legislation introduced in the Senate](#) would allow producers to form a cooperative and create a fully integrated domestic rare earth value chain.

Europe should examine the American approach closely. Although the political, legal, economic and technological-industrial circumstances on the two sides of the Atlantic differ, European strategists and policymakers may still gain valuable insights from studying the US strategy, which could potentially be adapted to European realities. However, it could be in the interests of both the US and the EU to compare strategies, as there is substantial overlap between their respective threat perceptions and objectives.

A strategic partnership for raw materials?

Indeed, given the importance of critical raw material supplies working together on areas like resource mapping, research and development, and investment is essential. Joining forces could allow Brussels and Washington to coordinate their policies and resource allocation, avoiding a duplication of efforts. But the two partners could go further than this.

For example, the existing [EU-US-Japan trilateral conference on critical materials](#) could be extended to include like-minded countries like Australia and Canada, which share the concerns about the concentration of critical global value chains and technologies under authoritarian control. Between them, these advanced market democracies, which include both critical resource material producers and consumers, possess the market depth and the financial and technological-industrial wherewithal to reshape the global critical material supply architecture and increase their collective strategic autonomy.

The issue of raw materials security of supply shows that the transatlantic agenda on strategic dependence should not be limited to 5G; recent tensions notwithstanding, shared values and interests ensure ample scope for EU-US cooperation. Furthermore, it demonstrates that Europe's ambition for strategic autonomy should not be interpreted as a desire to weaken the transatlantic relationship. Rather, it is an effort to make Europe more capable and independent, and thus more valuable as an ally, which will often entail working *with* Washington and contributing to US strategic autonomy too. As such, embracing Europe's plans to reduce its critical resource dependences is in Washington's best interest – even more so in view of its growing geopolitical competition with China.

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Note: This article gives the views of the author and does not reflect the official policy or position of the EUISS, the European Union, EUROPP – European Politics and Policy or the London School of Economics. The author would like to thank Daniel Fiott for his invaluable input to the article.

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