

**FT Swamp Notes** **US-China trade dispute**

## The risks of US-China decoupling

High-end semiconductors is an area where US companies remain dominant, but the evidence is pointing towards Chinese acceleration



Huawei's booming smartphone business is now sufficiently large to pull along a growing indigenous Chinese chip supply chain © Getty Images

**Edward Luce** YESTERDAY

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In October 2022, Joe Biden launched an experiment. The US would try to end America's role in China's military modernisation by shutting China out of the high-end semiconductor market. Biden officials were careful to emphasise that they were not aiming to restrict China's economic growth. This was purely about dual-use technology. That goal seemed — and still seems — reasonable; if there is a danger the two giants will go to war some day, why on earth would we be helping them? Moreover, as Jake Sullivan, Biden's national security adviser, reminded us in [White House remarks last week](#), the restrictions only affect a tiny share of the chips market. It is a “small yard, high fence” approach.

On a political level, it is hard to imagine the Biden administration could have done

On a political level, it is hard to imagine the Biden administration could have done any less. There is no doubt that America's most sophisticated chips, including those used for artificial intelligence, have contributed to China's military growth. Most of the critiques of Biden's restrictions, particularly from Mike Gallagher, the Republican chair of the House "Select Committee on the Strategic Competition between the United States and the Chinese Communist party", say that Biden has not gone far enough. To underline: why would America want to sell China the means to make evermore effective weapons systems?

It is hard to answer that with anything other than "it shouldn't". But most policies have unintended consequences. The more complex the measure, the likelier it is to produce unforeseen results. In this case, restricting the exporters, end users, intermediate suppliers and more recently the outward-bound investors in chips across sophisticated global supply chains is fiendishly complicated. There is evidence that it is accelerating China's ability to reproduce the technology on its own. If anyone doubts China's ability to replicate and supplant a leading global industry, they should ask western electric vehicle carmakers, solar panel producers, high-speed rail equipment manufacturers and even quantum computing researchers what they think. China has cleaned up many of these markets.

High-end semiconductors is an area where US companies remain dominant — chiefly Intel, Nvidia, Qualcomm, AMD and Micron. These companies fear that their Chinese competitors will now catch up and displace them within five years instead of say, ten or fifteen, had Biden left the world as it was. It is very hard for a non-specialist, such as myself, to know which argument is right. But the evidence is pointing towards Chinese acceleration. Chinese chipmakers, like SMIC, are coming up with increasingly high-end products, [according to a report this week](#) by my colleague, Qianer Liu. This includes a new chip that narrows the gap between China's AI processors and Nvidia's market-leading ones. To be sure, Chinese companies cannot yet make the current cutting-edge 3-nanometre chips. But SMIC plans to make a 5nm chip as early as this year with Huawei, whose latest smartphone, the Mate 60 Pro, is flying off the shelves in China and abroad. It will probably not be long before they can produce almost good enough 3nm chips.

Remember when we tried to kill off Huawei? For a while, the bans on almost any high-tech sales to Huawei hit it hard, particularly after the company was shut out of US and other western telecoms networks. But in the last couple of years the company, which the Pentagon says has ties to the Chinese military, has come back with a vengeance. Huawei's booming smartphone business is now sufficiently large to pull along a growing indigenous Chinese chip supply chain.

This is having a couple of effects. The first is that Chinese semiconductor companies are starting to flood the global market in certain products. As Chris Miller points out in [this recent FT op-ed](#), this could put a lot of non-Chinese companies out of business. We have seen that movie in other industries before. The second, as this [important paper](#) by the Stimson Center's Ansgar Baums lays out, is that China is rebuilding global chip supply chains at home. Baums says the Biden policy has triggered "the technology equivalent of de-dollarization". If that is true, then history tells us China will expand its production to the rest of the world, which would make a US sanctions regime increasingly hard to sustain. As the Wall Street Journal's Greg Ip argues in [this sobering piece](#), expanding US export controls to other countries as China itself offshores more and more of its production is a "recipe for the decoupling of the US not just from China, but the whole world".

As I say, I lack the knowledge to adjudicate this critical debate. But I believe it is too important to be left to the specialists. Thankfully, Chris Miller, whose seminal book, *Chip War*, [won the FT's 2022 business book of the year award](#) has agreed to reply to this note. Chris, you are immersed in this subject: which of the two arguments that I have laid out has greater merit?

## Recommended reading

- My [column this week](#) looks at America's "do-harm Congress" following this week's debacle over the border security bill. "In today's hallucinogenic politics, Republicans still own the phrase 'Washington is broken'", I write. "Could there be a greater irony?" Do also listen to mine
- and Alex Rogers' Swamp Notes podcast on [how money is shaping the 2024 presidential election](#).

- This Patrick Radden Keefe [essay in the New Yorker](#) (A teen's fatal plunge into the London underworld) left me mortified about the ineptitude and likely corruption of London's Metropolitan Police. I still believe the city of my birth is the most exciting in the world but it's a moral quagmire in
- so many ways.

## Chris Miller responds

The biggest policy experiment we're watching isn't Biden's: it's Xi Jinping's. The idea

THE BIGGEST policy experiment we're watching isn't Biden's, it's AI chipmaking. The idea of tech “decoupling” wasn't invented by anyone in Washington. For a decade, China's leaders have been trying to wean themselves off foreign products, which is why China's imports as a share of GDP have fallen from nearly 30 per cent around 2005 to slightly over 15 per cent today. Chips are now China's largest remaining import.

The idea that Biden's chip controls inspired China to seek self-sufficiency gets the causality backward: Beijing's been spending tens of billions of dollars annually on chip subsidies since around 2014, before almost anyone in Washington knew what a semiconductor was. China's technological advances — which are real — stem from this decade of state-led investment. Before the US imposed chip controls in 2022, China's Yangtze Memory Technologies Corp was near technological parity in Nand memory chips. As early as the mid-2010s, Huawei's chip design team was recognised as one of the world's best. Fears that China's state-backed firms would catch up and then drive US tech firms out of the market inspired Washington to take a tougher stance and impose restrictions on selling high-end chips and chipmaking tools.

America's chip choke hasn't halted all of China's technological progress — how could it? — but it has certainly hurt. In the memory chip space, YMTC's capacity expansion has been significantly delayed. In AI, Chinese firms either say they've stockpiled Nvidia chips or insist they're skilled at responding to adversity — neither of which is a ringing endorsement of Huawei's homegrown graphics processing units. China can produce some fairly advanced 7nm chips, and — according to reporting by your colleague Qianer Liu — a much smaller volume of 5nm chips. Yet she also reports that these chips sell for 40 to 50 per cent more than comparable semiconductors from Taiwan. In other words, the US restrictions are adding friction and driving up China's cost of computing power, the most limited resource in AI development today. That's why White House officials think their chip strategy is working.

*Chris Miller is the author of 'Chip War', a professor at the Fletcher School, a non-resident senior fellow at the American Enterprise Institute and a partner at Greenmantle*

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