

Banning Chip Technologies to China. Increasing Sanctions Until Beijing Breaks

By [Karsten Riise](#)

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I have predicted that the US will not be satisfied with banning the new chip technologies to China. The US will also ban China from older technologies. We now see my prediction holds true. Not even a year has passed since the US introduced the chip sanctions on China - and the US is already unhappy that it "allowed" China "too much".

Pushing China Back - Even in Old Chipmaking Technology

The EUV chip making technology is banned for China. That technology is controlled by ASML in the Netherlands, and the ASML was happy to make good business with China. But the US has "convinced" the Netherlands to ban export of ASML's newest technologies to China. The next technology, high-NA EUV is surely banned for China too. But as an important sign of more disasters to hit China, the US is not satisfied with banning new technologies. In "agreement" between the US and the Netherlands, the [US will now ban DUV](#), ASML's older chip making technology from being sold to China as well. China has boasted that it was trying to make 7 nm chips (though with severe drawbacks) with the older DUV technology it had already acquired. Those Chinese efforts will be over before they get started. And China can forget everything about making even more advanced chips like the new 5 nm and the upcoming 2 nm process.

Pushing China Back - Even in Downgraded Technology

Just a couple of days ago, we also saw the US government walk back on its acceptance of NVIDIA selling to China the A800, their downgraded "China-version" of the A100 chip. NVIDIA made a special downgraded "China-version of the A100, to an A800 chip which has much slower I/O (input-output) speed. The A100 is not even NVIDIA's latest AI-chip, and NVIDIA thought they had an agreement with the US government about the slower "China-chip" A800. The US government already regrets to have accepted NVIDIA's slow "China-chip" A800 and the US government is about to [forbid the A800](#) too. No reason to talk about NVIDIA's new "China-version" H800 of NVIDIA's latest and most advanced AI-chip" H100.

The H800 will be banned for China too.

Pushing China Back - Even in Scientific Cooperation

But the US will not stop even there or anywhere else in its efforts to keep China's chip making technology in the Middle Ages. The US will now also diminish or [cancel the Science and Technology Agreement](#) (STA) with China, to avoid that China's specialists can learn anything to be able to develop China's own chip making technology.

China A Decade Behind in Chips

To make advanced chip making machines, China has severe obstacles both in optics, lasers, and chemical photoresist. China is a [decade behind](#) - which means that China lacks in EVERYTHING to make this work - see video [intro here](#).

China's attempt to mimic ASML in chips making is not going well. China can [only work](#) down to the 90 nm node. Even their next attempt will only be at the 28 nm node. That's a far cry from the 2 nm forefront of the West.

China is a decade behind ! In AI and chips, a decade is like a century in a human life.

Panic in China

The US chip sanctions are now creating [panic in China's semiconductor](#) industry. China's leadership wanted to participate in the AI race. But they never realized that extremely advanced chips and data centers are a necessary precondition for everything in technology - including AI. China is stuck now.

China-Russia - Going the Way of the Soviet Union

This is about AI, but more than that. It is about depriving China-Russia of technology **as a whole**. No technology and hence no advanced country can run without modern computers. China is a decade behind in its own chip-making technology. Already now, 2023, China is without modern computing chips.

China is in an undeclared cold war with the US. A US war for the total destruction of China as a power - even as a regional power. The salami is cut - slice by slice, technologies are taken away from China, investments are taken away from China, business cooperation is taken away from China, cooperation with the EU is deprived by the US, relations with India are part of the chess game - everything is done.

It took Russia until Autumn 2022 to really understand that the US wants to destroy Russia as a power. China has not fully understood, that Russia is only a secondary target of the US - the primary target is the destruction of China.

Lack of advanced IT, chips, and computers were a crucial part of the reason why the Soviet Union fell behind and collapsed. The Soviet Union could extend 1930-technologies into the 1950'ies and even build nuclear bombs and missiles. But the Soviet Union never mastered computing. Imagine a "Soviet Union" today without fast computing centers, personal computers, cell phones, or broadband. Lack of computing was one of the big reasons why Soviet productivity continued to stagnate and even fell after the 1960'ies. Such a "Soviet Union" would not have survived 3 days of fighting in Ukraine for lack of air defense and

absence of guided weapons and advanced satellites. That would have been the fate of the Soviet Union, if it had not broken down already in 1991.

China and Russia are now on the same path as the Soviet Union to technological backwardness and decay. The iceberg of IT technology may not look much on today's surface to the leaderships in Beijing and Moscow. But the iceberg of technology is hard and runs deep enough to break the unsinkable "Titanic" of both countries. And in today's much faster era, the continuous downgrading of Chinese and Russian computing power will not be slowly catastrophic over a long period of 3 decades – in our time, it will already limit them in AI, supercomputing, cell phones, 6G, economic growth, and advanced military tech and research over the next 3 years. Only extreme and urgent technological efforts can perhaps save China and Russia,.

Beijing and Moscow have run into the iceberg of chips & technology – and there are no signs that they are waking up.

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Karsten Riise is a Master of Science (Econ) from Copenhagen Business School and has a university degree in Spanish Culture and Languages from Copenhagen University. He is the former Senior Vice President Chief Financial Officer (CFO) of Mercedes-Benz in Denmark and Sweden.

He is a regular contributor to Global Research.

Featured image: Broken on the iceberg of IT technology – by: Karsten Riise

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