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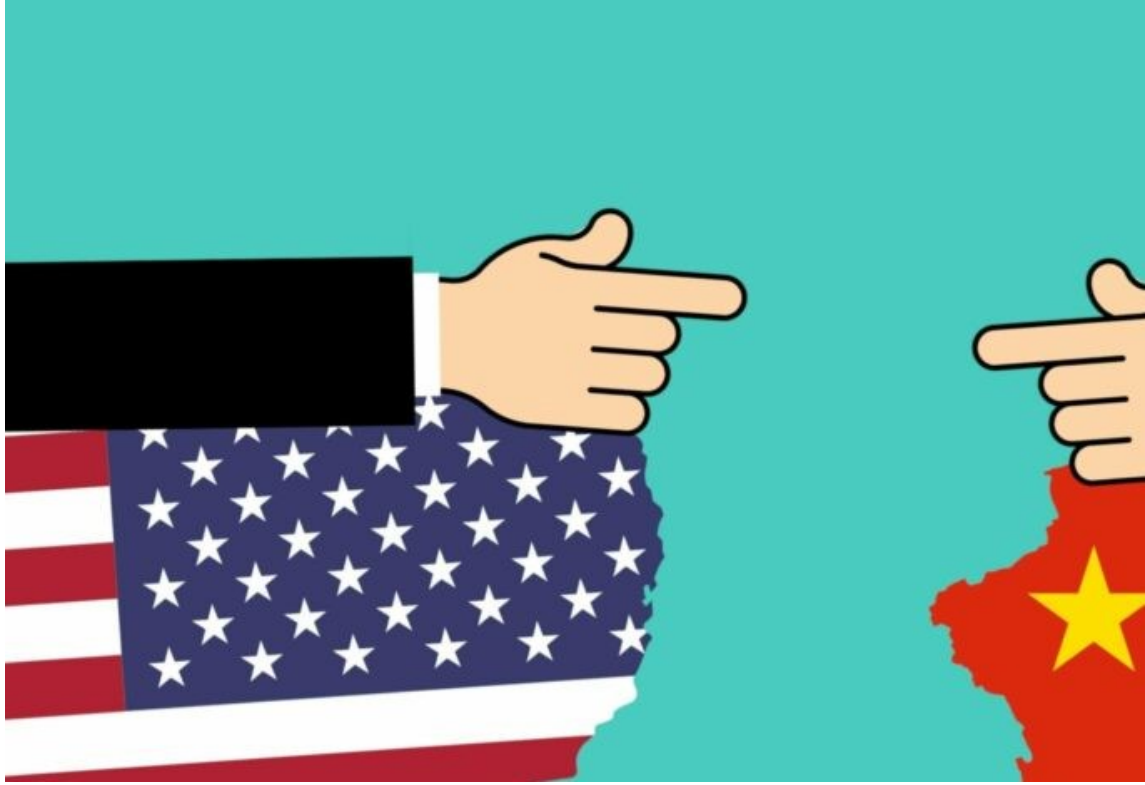
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زبانهای اروپایی

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Why is Biden waging a real chip war against China?



Sources: By Wereld Morgen [Photo: Mohamed Hassan, PxHere/CC0]

Translated from Dutch for Rebellion by Sven Magnus

Recently the United States has identified China as its main enemy and tries to thwart its economic and technological rise. Chips play a critical role, as they are the backbone of economic and military capabilities in the digital age. It is highly doubtful that the United States will succeed with this tactic.

The key to the future

Technology is the key to the future. On the one hand, it is the basis of military power and, on the other, of economic productivity and competitive position in the world market.

Until recently, the United States maintained a dominant and impregnable position in both areas. The White House wants to maintain that monopoly at all costs, but China's rise threatens to end it.

According to U.S. presidential security adviser [Sullivan](#), "We face a competitor who is determined to surpass America's technological leadership and is willing to devote almost unlimited resources to that goal."

Therefore, the United States has identified the People's Republic of China as its [main enemy](#) and tries to thwart the economic and technological rise of this Asian giant.

War for chips

Especially semiconductors and in particular chips (1) are in the crosshairs. It's logical, because in the future, geopolitical supremacy will likely [rely more and more on computer chips](#). Chips are integrated circuits that in practice form the nervous system of all electronic devices.



Photo: One chip (PIXNIO/CCO)

Until the last century the power of military attack was based on firearms, warships, fighter jets or (nuclear) missiles. In the digital age, chips [are the backbone](#) of economic and military capabilities.

According to [James Mulvenon](#), a Chinese cybersecurity expert, "The Pentagon has decided that chips are the hill on which it is willing to die. The chip industry is the last one in which the United States is a leader and it is the industry that everything else is built on." In early October 2022, the White House moved from words to deeds. The Biden administration [introduced sweeping export controls](#) that will severely hamper Chinese companies' attempts to obtain or manufacture advanced computer chips.

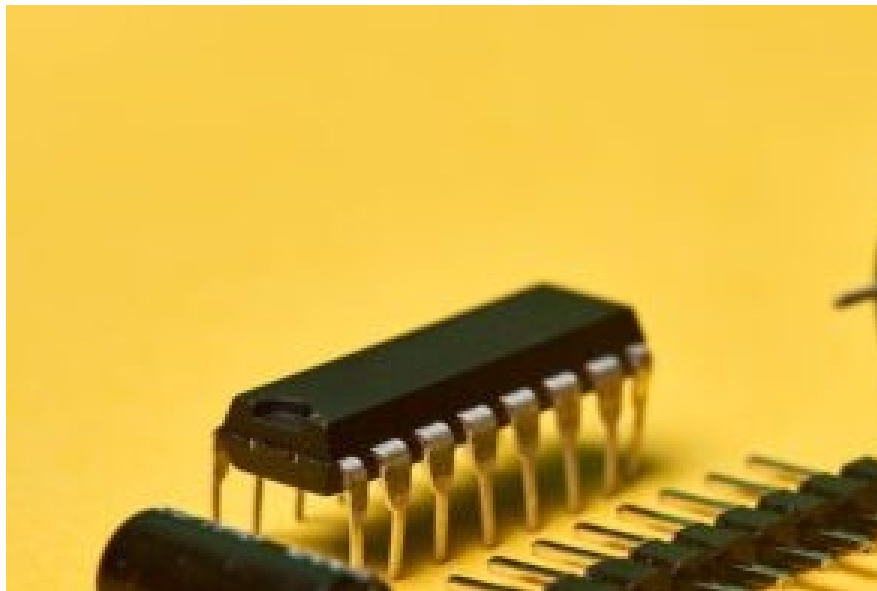


Photo: Semiconductors (Flickr/CC BY 2.0)

Under the Trump administration, U.S. companies could no longer sell chips to Huawei. Biden has now expanded those trade restrictions to more than 40 Chinese companies, including several chipmakers. The new measure prohibits any U.S. or non-U.S. companies from supplying those Chinese companies with hardware or software whose supply chain includes U.S. technology.

The export restrictions are not only aimed at military applications, but try by all means to block the development of China's technological power. The strategy is to isolate China from the rest of the world in chip supply chains to deny it the opportunity to develop its own chip industry domestically.

[Paul Triolo](#), experto en China y en tecnología, califica esta nueva medida de «punto de inflexión importante» en las relaciones entre Estados Unidos y China. «Estados Unidos ha declarado esencialmente la guerra a la capacidad de China para promover el uso de la informática de alto rendimiento con fines económicos y de seguridad».

At the same time, the United States is doing everything it can to increase its technological edge. For example, the White House National Council on Science and Technology just

released a 47-page document titled *National Strategy for Advanced Manufacturing* that contains 11 strategic goals to increase America's competitiveness in chips.

Geopolitics aside, the chip industry is also big business. The market capitalization of the largest publicly traded chip companies now exceeds [\\$4 trillion](#). China [spends more](#) on imports of computer chips than on oil.

In search of allies

While Biden likes to say he loves collaborating with allies, this war over chips emanates only from the United States. Experts admit that if other countries continue to supply China, then the restrictions may have little effect. The only consequence is that American chip companies miss out on the large Chinese market.

In the past, the United States had pressured other countries to stop supplying high-tech products to China. In the case of chips, it was mainly South Korea, Japan, Taiwan and the Netherlands. Under the new measure, foreign companies working with U.S. technology will have to act in accordance with U.S. restrictions. They have to apply for U.S. permission on a case-by-case basis.

Of course, those countries are not eager to do so, as China is a very important, if not the most important, customer. Samsung, for example, is the world's largest manufacturer of memory chips. Partly as a result of the new measure, this South Korean company expects [32% less revenue](#). It remains to be seen whether, and to what extent, these countries will seek and find potential loopholes.

In particular, Washington wants to include Taiwan in its isolation strategy. Taiwan accounts [for 92%](#) of the world's high-end chips. For China, imports from Taiwan are of vital economic and technological [importance](#).

The recent provocative visit of Pelosi and other US politicians to Taiwan by Pelosi is clearly part of this war of chips. In mid-September, the U.S. Senate approved a bill that provides [\\$6.5 trillion](#) in direct military aid to the island. Washington is ratcheting up pressure against China on several fronts.

Chances of success?

Chips are the main engine of electronics. China now accounts for [about 12%](#) of world production, which is absolutely insufficient for one's own needs. Only [one-sixth](#) of what you need in chips is produced domestically. In addition, at the moment it is not capable of producing state-of-the-art chips. In other words, the country relies heavily on chip imports. Annually it represents about [400 billion dollars](#). If that supply is jeopardized, it would not

only mean a very large economic loss, but would also seriously harm technological progress. In this sense, chips represent [the Achilles heel of](#) Chinese industry.

To overcome this dependency and catch up technologically, China is investing [more than any other country](#) in this strategic industry. The country has already made great progress in a number of areas. For example, it has successfully produced a 7-nanometer (2) chip, putting China only one or two "generations" behind industry leaders in Taiwan and South Korea. Despite these advances. For the time being, it remains [dependent on imports](#) from other countries (3). It doesn't have to stay that way. [Analysis Mason](#), a leading consulting firm, claimed in a recent report that China could be self-sufficient in chips within three to four years.

In any case, the U.S. restrictive strategy will motivate the Chinese government to allocate even more resources and make progress. *Asia Times* cites the example of the 2015 block from supplying Intel's high-end Xeon Phi processors to Chinese supercomputer manufacturers. A year later, Chinese researchers developed those processors themselves.

In the past, the United States often managed to call countries to order and put them firm, but it is highly doubtful that this will work with China. By the end of this decade we will know whether America's attempt to neutralize China's chip industry has succeeded or failed.

Notes:

(1) [Semiconductors](#) are electronic components based on semiconductor material. Examples of semiconductors are a diode and a transistor. You could say that semiconductors are like the building blocks of [chips](#). Chips are small integrated circuits. They are part of a computer or other electronic devices. The media does not usually distinguish between semiconductors and chips.

(2) The company in question, SMCI, is now reportedly working on even more advanced 5-nanometre chips.

(3) For example, China cannot [manufacture](#) advanced semiconductor devices [without](#) EUV lithography equipment from ASML (Netherlands) and electronic design automation (EDA) tools from Synopsys and Cadence (United States) or Siemens (Germany).

Source: <https://www.dewereldmorgen.be/artikel/2022/10/13/waarom-biden-een-ware-chipoorlog-tussen-de-vs-en-china-ontketent/>

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