

The “Chips Alliance”: How will the Global Technology War Affect Israel?

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The CHIPS and Science Act signed by President Biden in August 2022 changes the dynamics and norms of global technology commerce. The US has imposed unprecedented restrictions on the export of advanced chips to China, making it difficult for China to obtain essential equipment for artificial intelligence technologies that it could possibly use to undermine global stability. The US is currently recruiting its allies to join the struggle and setting up a “chips alliance.” How should Israel respond to a move that is perceived as the Cold War of the 21st century?

The global technology war has entered its third year, and it appears that the struggle between the United States and China has reached a new peak. A few months ago President Biden signed the CHIPS and Science Act of 2022, which allocates \$52 billion to encourage the construction of semiconductor fabrication plants in the United States, and more than \$200 billion over the next decade to ensure the continued research and development that is an essential condition for success in the field of artificial intelligence and super and quantum computing abilities. At the same time, it unveiled a comprehensive list of restrictions on the export of chips and technology to China, aimed at preventing Beijing from developing advanced technologies. On the face of it, this is an economic move intended to secure the technological superiority of the US, but it is in fact part of a larger struggle over the nature of the global order, in which the United States is determined to change the course of global trade in an unprecedented way, inter alia, with the aim of preventing attacks on the values of democracy.

First, a brief review of the development of global trade as we know it today, which was driven by the United States. At the peace talks after World War II, the US led the moves to establish international institutions such as the International Monetary Fund, the World Bank, and the General Agreement on Tariffs and Trade (GATT), and pushed for a free global market in which every country could trade its surplus production. These institutions reflected US global ambitions, and enabled countries to recover from the ravages of war. Over the years, the trade agreements gave rise to a series of strong economies, including China, which joined the World Trade Organization in November 2001, and within a few years became the second largest economy in the world.

It was a United States interest to include China in global trade, in spite of its suppression of human rights and its violations of WTO regulations. President Bill Clinton identified China's economic power, arguing that the country was essential for world trade and would be prepared to make concessions in return for the removal of barriers. After joining the WTO and until recently, China was the main exporter of cheap goods, but at the same time it managed to persuade global technology giants to set up facilities within its borders, and to import advanced technologies in the fields of chips and quantum computing that have enabled it to break into other industries, including in the military and security fields.

Since 2004 concerns have arisen in the United States regarding how China fulfills its part of the trade agreements. Successive administrations have tried to limit trade with China in order to prevent it from developing military technology that could endanger the US and its allies. In 2018 President Donald Trump embarked on a trade war, in an attempt to tackle the trade deficit, paralyze the Chinese technology giants, and stop them from stealing intellectual property rights and copying American technology, particularly in the field of communications. Ultimately, however, the American moves created little change, while China's ambitions to be the leader of global trade, which are at the heart of its national strategy and five-year plans, continued to become a reality.

The COVID-19 pandemic also helped to underscore dependence on the supply chains of industries originating in unstable or undemocratic countries (a danger that can emerge in other circumstances, such as the Russian invasion of Ukraine in February 2022).

The “Chips War”: From a Free Market to Alliance-Based Interests

In November 2020, Joe Biden was elected President of the United States, after a campaign in which he promised to bring manufacturing industries back to the US in response to the consequences of the pandemic and the damage to supply chains. From the start of his presidency, Biden promoted a process of technology legislation to encourage the establishment of manufacturing plants on American soil, and imposed far more comprehensive restrictions on exports than his predecessors. In the *US National Security Strategy*, published in October 2022, Biden highlighted the multi-dimensional competition with China and the need to stop China becoming stronger and threatening global stability, particularly in the context of advanced technology and semiconductors.

The chip industry is based on global supply chains. The chip crisis, developing as a result of geostrategic impetus, and exacerbated by the pandemic – and a variety of other independent factors such as earthquakes, fires, power outages, and climate – highlighted the risk to the United States when a sector that is so essential to its national security is sensitive to shocks that are not necessarily within US control. Although the United States seeks to encourage manufacturing on its own territory, it needs the cooperation of the world's leading chip manufacturers. The largest manufacturers are Taiwan, followed by Japan and South Korea. Companies in Holland and Japan are responsible for producing the lithography devices used in the manufacturing of advanced chips. All these facilities make use of American technology, and this is an important lever that the US can use to prevent trade with China in the framework of the new restrictions on exports, and to deprive China of access to advanced technologies.

American legislation has created a situation in which every country (or in fact every company) is committed to a review of its partnerships and other companies in its supply chain in order to assure compliance and avoid US sanctions. This is a challenging demand in view of China's economic status, its increasingly close contacts with countries in Asia and Europe, and the high price these countries could pay if China chooses to respond. Nevertheless, recent weeks have witnessed the formation of collaborations and deals indicating the start of a change and the emergence of a "chips alliance."

Taiwan, which relies on the United States for its security in the face of a threatened Chinese invasion, was the first to join the alliance. Soon after the publication of the law with the restrictions on China, Taiwan's leading chip company TSMC announced [the construction of two advanced chip plants in Arizona](#), with a total investment of \$40 billion. The announcement ceremony in Arizona [was attended by President Biden](#), who gave a speech illustrating the seriousness of the administration's intentions and the expectation that the other democratic partners of the United States would join the effort.

This month the European Union finalized approval of the European Chips Act. Like the American law, the EU legislation is intended to limit supply chains and promote the construction of further manufacturing facilities on the continent. EU member states will allocate billions of dollars in incentives, in order to double Europe's share of chip production to about 20 percent of the total. The European law does not include trade restrictions on China, but explicitly states that the EU will be part of a supply chain including the United States, Japan, South Korea, Singapore, and Taiwan; presumably, then, Europe is also committed to the "chips alliance." In this vein, while the European legislation was being drawn up, Intel announced [plans for two giant chip factories \(Mega-Fab\) in Magdeburg, Germany](#), which will make the most advanced chips in Europe.

In recent weeks Holland and Japan, the sites of the lithography machines that are essential to the manufacture of advanced chips, signed a joint

agreement with the United States and undertook to enforce the American export restrictions. This agreement will deny China access to essential instruments, and hamper its independent chip manufacturing capabilities. Although details of the agreement are confidential at this stage, Holland and Japan will probably enjoy a relative advantage for the future assimilation of American technologies, and a package of compensation for the potential losses of deals with China.

How Will the Change in Global Technology Trade Affect Israel?

The supply chain crisis showed the world the danger of relying on manufacturing facilities in unstable countries. Israel must examine its own supply chains in order to ensure an orderly supply of technology defined as essential for its security, and promote local manufacturing and partnerships with relevant allies. The government should continue the technology dialogue launched in 2022 and initiate a discussion on technology collaboration with the United States and the EU, particularly with respect to hardware and chips. In this context, Israel must highlight its relative advantage in the field of research and development, particularly in the field of artificial intelligence, where Israel has an ecosystem involving industry, academia, and security elements. They drive this subject forward through higher levels of cooperation, shared knowledge, and human resources than in many other countries.

Israel must also understand that the United States is determined to reshape the structure of global trade in order to protect its national security and democratic values. In an open discussion this past summer, the US Under Secretary of Commerce declared that the administration was prepared to take action against American companies that violated the requirements, and even more so against foreign companies. The importance of the ethical component of global trade is changing, with technology becoming a tool for the struggle between democracies and other forms of government. In the geostrategic rivalry between China and the United States, Washington is demanding from its allies and technological partners transparency and clarity in their conduct in the face of autocracies, and particularly China. Israel, which is considered a leader

in R&D for the chip industry, must avoid ambiguity on the matter of China and formulate a trade policy with China, as a confidence-building measure for the United States and its partners in the “chips alliance.”

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