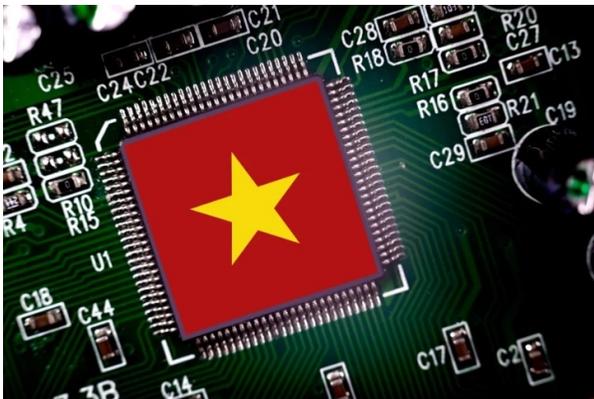




SEMICONDUCTOR SUPPLY AND ECONOMIC SECURITY IN VIETNAM

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Despite many prospects, Vietnam's semiconductor industry still has many challenges to overcome.

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The fallout from the Covid-19 pandemic, international trade disputes between the US and China, and the ongoing Russia–Ukraine war have made the supply chain vulnerable to disruptions. Tensions between China and Taiwan are also an ongoing concern. These issues urge countries to work on their economic security so that they can be more resilient in unstable world dynamics. Economic security is explained in different ways; however, all explanations lead to a common final goal, which is to protect against risks. As one of the region's fastest-growing economies in recent years, Vietnam aims to become the latest chip

manufacturing hub. Today Vietnam relies completely on overseas supplies for chips due to the lack of domestic high-tech firms. There are only 2 domestic companies engaged in chip design, namely FPT and Viettel High Tech Industry Corporation (VHT), while the integrated circuit design, assembly, and testing phases are predominantly conducted by domestic enterprises with foreign involvement. Vietnam has recently received foreign investment due to its political stability, young and cheap labor, open market, and welcoming government policies. These investments are being used as both a means to boost exports and take advantage of manufacturers' desire to diversify supply chains to prevent complete dependence on China. Vietnam's strategy is to enhance economic security and develop its ambition to be a key semiconductor hub in the region.

Recently, when Vietnam upgraded its diplomatic relations with the US to a Comprehensive Strategic Partnership—the highest level in Hanoi's policy—it opened a new door for further Vietnam-US cooperation in the semiconductor industry. During President Biden's visit to Vietnam, the parties signed a MoU to formalize US industry support by expanding the capacity of the semiconductor ecosystem in Vietnam. The US will also partner with Hanoi to further develop Vietnam's regulatory framework, workforce, and infrastructure needs under the International Technology Security and Innovation Fund (ITSI Fund) created by the CHIPS Act of 2022. Regarding workforce development, the US and Vietnam will hold joint teaching labs and training courses for semiconductor assembly, testing, and packaging. On the 18th of September 2023, Vietnamese Prime Minister Pham Minh Chinh visited leading tech firms in Silicon Valley—including Meta, Synopsys, and NVIDIA. In his visit, he met top leaders of these giant tech-firms to emphasize the value of American tech-firms in Vietnam, especially in sectors that support the nation's priorities. He also provided advice on how to further integrate Vietnam into the world supply chain through policies, human resource training, and technological advancements. Prime Minister Pham Minh Chinh also expressed hope that a manufacturing facility would be built in Vietnam, making Vietnam a key hub in Southeast Asia. As a result of his visit, there were some deals

signed between the US and Vietnamese companies in his presence. Moreover, the US Geological Survey (USGS) estimates that Vietnam has the world's second largest rare-earth metal deposits after China with an estimated 22 million tons, which accounts for around 19 percent of the world's total known reserves. Vietnam has certainly become a source of interest because of its rare-earth metal supply, which has increased in demand as the range of applications increases and geopolitical concerns drive calls for a wider supply base. Because of this, Vietnam can take advantage of its position as a supplier of rare-earth minerals and strengthen its economic security significantly.

In addition to these developments with the US, on the 13th of October, South Korea and supporting industry enterprises in Hanoi established an investment cooperation program between N&G Group and Hanoi Supporting Industry Business Association (HANSIBA) in Vietnam and the South Korean Cheongju Entrepreneurs Council (CEC) and CEC's Member Business Delegation. This program focuses on manufacturing equipment, semiconductor components, electronic boards, and precision mechanics for the electronics industry. In early November, the Japanese Minister of Economy, Trade, and Industry—Nishimura Yasutoshi—sought to partner with Vietnam in semiconductor manufacturing, artificial intelligence research, and rare earth mineral mining.

Based on the responses from the US, Japan, and South Korea, Vietnam takes the idea of partnership with the broadest possible range of countries to address shared concerns and interests, which helps economic security. Here, there is a high possibility for Vietnam, the US, Japan, and South Korea to cooperate based on each country's strength in the semiconductor industry. This interdependence is enhanced by the existing good relationships and like-minded goals. Japan and South Korea are the US's allies in the Indo-Pacific, while Vietnam is the US's key partner in the region. The US also encourages Southeast Asian countries to cooperate with its allies if possible. Moreover, Japan and South Korea are good partners of Vietnam with a strong focus on economic relations, and now semiconductors. More specifically, Japan and

Vietnam are members of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) which facilitates both countries' cooperation in the technology and semiconductor industry. Moreover, South Korea expects that joining the CPTPP will strengthen their supply chain. On the other hand, the US and South Korea are both comprehensive strategic partners for Vietnam, so this is also an area for further cooperation. Interestingly, it seems like there are already many areas for the US, Vietnam, Japan, and South Korea to further cooperate in the semiconductor industry, such as in the diversification of mechanisms, and include bilateral and multilateral agreements with like-minded partners. This promises a strong commitment for economic security, not only for Vietnam, but also for its partners.

Today, Vietnam is known as the fastest-growing economy in Southeast Asia. If the US and its allies work well with Vietnam in semiconductor supply, it will be easy for them to gain access to ASEAN's market of over 600 million people, which will bring significant economic advantages to the US, Japan, and South Korea. Additionally, it can help them to strengthen their relationship with ASEAN countries through stronger economic commitment, which helps them enhance capacity building, resulting in less dependence on China's supply chain. Economic security is important for protecting against risks such as regional conflict or market crashes. Southeast Asian countries would be more vulnerable to these situations due to their developing economies. Learning from the experience of the Russia-Ukraine war and the pandemic, Southeast Asia understands the importance of building resiliency in response to global shocks.

Economic interdependence also contributes to geopolitical stability. When like-minded countries cooperate, it deters the potential for conflict by sending a message to adversaries of the costs that would be incurred. Vietnam and other ASEAN member states have disputes with China in the South China Sea, yet China remains the top trading partner of the bloc. China is regarded as the world's factory and plays an essential role in international trade, therefore, dealing with China is more complex than dealing with Russia due to the difference in economic

size and dependence. Another lesson from the Russia-Ukraine war is that countries need to consider alternative options for resiliency in the face of sudden conflict and the disruption of supply chains. Multilateralism and diversification in the high-tech industry does not mean decoupling from China, rather, it is a de-risking strategy so countries can strengthen their economic security; a front and center narrative in geopolitical competition in the Indo-Pacific.

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