Andalas Journal of International Studies

Vietnam's Success in Attracting U.S. Semiconductor Investment: Strategic Lessons for Indonesia

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ARTICLE INFO

Date received: 11 February 2026
Revision date: 29 June 2026
Date published: 22 July 2026

Keywords
FDI;
Indonesia;
semiconductor;
United States;
Vietnam

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ABSTRACT

Vietnam has been successful in attracting US investment in the semiconductor sector, as evidenced by the number of US chip companies opening factories there and by its acquisition of the International Technology Security and Innovation Fund (ITSI Fund). This makes Vietnam a key node in the global semiconductor supply chain due to the significant presence of US companies. Meanwhile, Indonesia has also been selected as a recipient of the ITSI Fund, but its implementation is still in the early stage, and US semiconductor companies have not yet invested in the country. This study aims to explain why Vietnam has succeeded in attracting US semiconductor investment and what lessons Indonesia can learn from this achievement. This study uses the Foreign Direct Investment (FDI) Theory from Schneider & Frey (1985) as an analytical tool to explain the success factors of Vietnam's semiconductor sector. This study uses a qualitative explanatory approach with a case study method, collecting data through document-based research and qualitative analysis. The findings indicate that Vietnam's success factors in the semiconductor sector lie in its progressive domestic economic development, stable domestic politics, and a coherent semiconductor policy. On the other hand, Indonesia faces various challenges in developing its semiconductor industry, including an ineffective bureaucracy, high levels of corruption, and the absence of a long-term roadmap for semiconductor industry development. Therefore, Indonesia can learn from several factors in Vietnam's success, particularly in establishing political stability, developing long-term planning, and increasing semiconductor cooperation with the United States.

INTRODUCTION

Semiconductors are core components in electronics, mobile devices, vehicles, medical equipment, green technology, and artificial intelligence systems, which makes the industry a significant part of the global economy. In 2023, government use, particularly military applications, accounted for about 30% of semiconductor demand, followed by computing devices (26%) and the automotive industry (14%), with the remainder spread across consumer electronics, industrial applications, and communications (Akayama et al., 2024). The industry traces back to the invention of the integrated circuit in the United States, which gave the U.S. an early lead in chip design and manufacturing (Varadarajan et al., 2024). It later spread to Japan and East Asia, where South Korea and Taiwan built up major memory chip industries.

The World Semiconductor Trade Statistics estimates the worldwide semiconductor sales to reach US$654.7 billion in 2025 (Semiconductor Industry Association, 2024). That growth follows a sharp disruption in the COVID-19 pandemic, with a steep fall in global demand and sales, especially in sectors such as passenger vehicles. The downturn in car production therefore disrupted the

semiconductor supply chains and a shortage developed by the end of 2020 as producers adapted their strategies (Frieske & Stieler, 2022). From that point on, governments gradually came to see semiconductors as a strategic resource, and they began to develop domestic industries. The United States enacted the Creating Helpful Incentives to Produce Semiconductors (CHIPS) Act to bolster its semiconductor ecosystem. In addition to tax incentives, the European Union and Japan provided grants under national and project-based schemes. South Korea and Taiwan also took additional steps, providing full tax incentives and R&D assistance through Taiwan's Chip Innovation Program and South Korea's K-CHIPS Act (Varadarajan et al., 2024). Made in China 2025 policy introduced by China to build a domestic semiconductor industry (Janjeva et al., 2024). Such moves have intensified the competition between the United States and China, with the former trying to contain China's technological rise and the latter seeking to lessen its dependence on American technology (Dhanak, 2024).

The global semiconductor GVC development has been affected by the U.S.-China rivalry. The semiconductor GVC encompasses the manufacturing and research and development (R&D) processes (Fernandez-Stark & Gereffi, 2019). Manufacturing includes design, front-end wafer fabrication, and back-end assembly and testing. R&D includes countries and firms engaged throughout the stages. The US, Taiwan and UK are top of the design sector. The United States, Taiwan, South Korea, China, Japan, and the European Union are leading in front-end wafer fabrication (Akayama et al., 2024). At the same time, the backend assembly and testing activities are concentrated in China, Taiwan, Japan, the European Union and the United States. The dominance of the U.S. remains clear, particularly in outsourced assembly and test (OSAT) services, where the U.S.-owned Amkor has invested and set up facilities in Vietnam, thereby embedding Vietnam into its semiconductor GVC (Akayama et al., 2024).

Vietnam's success in attracting U.S. investment in its semiconductor industry is evident in the number of major U.S. semiconductor firms, including Intel, Onsemi, Microchip and Amkor, that have opened factories there. In 2006, Intel invested about US$1 billion in Vietnam by establishing Intel Products Vietnam (IPV) Co., Ltd. The success of IPV led Intel to raise its investment, building an advanced chip assembly and test facility in Saigon Hi-Tech Park, bringing its total investment to some US$1.5 billion (Intel Corporation, 2021). Onsemi (formerly On Semiconductor), Microchip Technology Inc., and Amkor Technology are also significant investors. Onsemi focuses on assembly, testing, manufacturing, and design, positioning Vietnam within the company's global production network (HR Asia, 2020). Microchip established a development center in Ho Chi Minh City, citing Vietnam's rapid emergence in the global semiconductor industry (Microchip, 2025; Microchip USA, 2024). Amkor Technology expanded its U.S. investment in 2023 through Amkor Technology Vietnam (ATV), initially committing US$529.6 million, with further investment following in 2024, which strengthened local and global semiconductor supply chains (VnEconomy, 2025; Vietnam Investment Review, 2025).

Vietnam has become one of the United States' largest semiconductor partners in Asia, accounting for around 10% of U.S. chip imports over seven consecutive months, following sustained U.S. investment. Vietnam's semiconductor market grew 7.1% between 2016 and 2021 and was valued at US$18.2 billion in 2022 (Zhang et al., 2024). Exports of semiconductor devices, including diodes, transistors, semiconductor-based transducers, photovoltaic cells (assembled or not into modules or panels), light-emitting diodes (assembled or not with other LEDs), and mounted piezoelectric crystals, rose from just US$0.07 billion in 2011 to US$7.53 billion in 2022, a 54% increase over 2021 (Trading Economics, 2023b). In 2023, semiconductor device exports to the United States accounted for 66.2% of that total, worth US$5.25 billion. India was the next-largest destination at 12.2%,

followed by China (7%) and Canada (4.43%) (OEC, 2023). These figures indicate that the United States is Vietnam's primary semiconductor export market, consistent with the growth in U.S. investment in Vietnam's semiconductor sector.

This outlook led the United States, in September 2023, to select Vietnam as a key destination for semiconductor investment through a Comprehensive Strategic Partnership. The partnership falls under the International Technology Security and Innovation Fund (ITSI Fund), part of the U.S. CHIPS and Science Act, which provided US$2 million in initial funding for Vietnam's semiconductor workforce development, alongside an additional US$500 million for international semiconductor and telecommunications projects (Zhang et al., 2024). The partnership gives Vietnam a formal channel for continued U.S. semiconductor investment.

Whereas Vietnam has been able to translate its strategic partnership with the United States into tangible semiconductor investment, Indonesia has not. Other companies in the semiconductor sector in Indonesia include Sharp Semiconductor Indonesia, Toshiba Semiconductor Indonesia, Samsung Electronics Indonesia, and NEC Semiconductors Indonesia. The main attraction for the investors is a series of government regulations, including tax holidays, exemptions on import duties, and simplified business procedures for the semiconductor industry (Alfaruqi, 2023; Haedar, 2023). By comparison, Indonesia's exports of semiconductors are still low: in 2023, exports of semiconductor commodities reached US$361 million, far below Vietnam's US$7.53 billion (Trading Economics, 2023a; Trading Economics, 2023b). Indonesia has therefore not reached Vietnam's level of semiconductor manufacturing, as it is still developing the policies and industrial ecosystem needed to attract substantial foreign investment. In 2024, under the Indo-Pacific Economic Framework (IPEF), the U.S. announced that Indonesia had been selected to receive ITSI Fund support for its semiconductor sector (Andrianto, 2025). Implementation remains at an early stage, and few U.S. semiconductor companies have yet opened factories in Indonesia.

Previous studies have extensively examined Vietnam's and Indonesia's semiconductor industry challenges. Ding and Huang (2024) describe Vietnam as having a strong foundation in electronics, digital infrastructure, a long-term demographic dividend, and incentive policies to attract foreign investors and upgrade its semiconductor technology. Chi et al. (2024) point to ongoing labor and human resource problems in Vietnam's semiconductor industry. Nguyen and Dang (2025) raise the same issue and recommend a triple-helix collaboration among the Vietnamese government, industry, and academia to produce better and more inclusive semiconductor investment policy. Turning to Vietnam's foreign policy, Manurung and Zahidi (2024) explain that the U.S.-Vietnam Comprehensive Strategic Partnership has driven economic growth and technological development and innovation, including in the semiconductor industry (Manurung, 2024). Thanh et al. (2025) and Tao (2025) similarly argue that Vietnam is caught between U.S.-China rivalry and has responded by balancing its relations with both powers to gain economic advantage.

On the other side, Indonesia faces a different set of problems in developing its semiconductor industry. Haedar (2023) points to continuing limitations in infrastructure, skilled labor, and technology. Alfaruqi (2023) makes a similar argument, citing inadequate infrastructure, limited R&D, low labor capability, and low production levels. Nurhayati and Angdreas (2023) accordingly argue that Indonesia needs both short- and long-term strategies for developing its semiconductor investment, including market consolidation, stronger coordination among government regulations, closer collaboration between academia, business, and government on research and development, and the construction of a semiconductor ecosystem that meets international standards.

Taken together, the previous studies still examine Vietnam's and Indonesia's semiconductor industries from economic and political angles separately, and no study has directly compared the two countries. This study addresses that gap using Schneider and Frey's FDI theory, which integrates economic and political analysis, to compare Vietnam and Indonesia directly, an approach that matters for assessing how far Indonesia can learn from Vietnam's success in attracting U.S. semiconductor investment. Indonesia is currently developing a national roadmap for its domestic semiconductor industry, which makes lessons from other countries' experience, particularly Vietnam's, especially relevant. This study therefore aims to explain Vietnam's success in attracting U.S. semiconductor investment and to identify lessons Indonesia can apply in developing its own semiconductor industry. This leads to the central research question: "Why has Vietnam succeeded in attracting U.S. semiconductor investment, and what lessons can Indonesia draw from this achievement?"

RESEARCH METHOD

Qualitative-Explanatory Method with a Case Study Approach

This study uses a qualitative research method, emphasizing words and meaning over quantification, and follows an inductive approach. The research proceeds through several stages, including formulation of the research question, case selection, data collection, data interpretation, and construction of a conceptual and theoretical framework, during which the research question may be refined or additional data collected, followed by writing up findings and drawing conclusions (Bryman, 2021). The study adopts an explanatory approach to explain how and why a phenomenon occurs through theory (Bryman, 2021). It also employs a comparative case study design to generate insights from selected cases; specifically, a most-similar systems design is applied (Lamont, 2015). Qualitative analysis of document-based secondary sources such as government documents, academic articles, books, and policy reports helps to identify patterns, explanations, and causal mechanisms pertinent to the research question, enabling the study to produce findings and answer that question (Neuman, 2014).

This study compares the cases of the Vietnamese and Indonesian semiconductor industries in operational terms through the analysis of economic and political factors based on Schneider and Frey's (1985) FDI theory. The two countries were selected because they have many similar characteristics, even though their political systems are different. Both are part of the supply chain of the United States in Asia. Both have large and low-cost labor forces. Both have developing economies that are building their technology industries. Both have received support from the United States through the ITSI Fund. But Vietnam was the first to attract the investment of U.S. semiconductor companies and now is one of the biggest exporters of semiconductor devices in Southeast Asia, after Malaysia and Singapore. The qualitative analysis is therefore based on primary documents, Vietnamese and Indonesian policy on economic growth, domestic political conditions, cooperation with the United States, and semiconductor industry development plans for 2020-2025. In addition, the analysis is supplemented by an analysis of secondary documents, such as reports from international organizations and semiconductor companies, and research on the progress of semiconductor development in Vietnam and Indonesia. Findings highlight the economic and political differences that drive U.S. semiconductor FDI flows to Vietnam and Indonesia, and draw conclusions about which FDI-related factors underpinned Vietnam’s success and could be adopted by Indonesia.

Foreign Direct Investment (FDI) Theory

The main analytical tool applied in this study is FDI theory. The Organisation for Economic Co-operation and Development (OECD) defines Foreign Direct Investment (FDI) as an investment made by a firm or entity based in one country into a firm based in another country with the objective of establishing a long-term interest. Besides the cross-border flow of capital, FDI also includes the transfer of goods, services and knowledge that links and organises production processes across national borders (OECD, 2025). There are many theories that try to explain what attracts FDI to a host country. According to Schneider and Frey (1985), firms invest directly in a developing host country because they expect higher future returns than they would earn by investing in their home country or in other foreign countries. Schneider and Frey (1985) identify two principal determinants of FDI inflows, namely economic and political determinants.

Economic factors include per capita income, economic growth, inflation, balance of payments, labor costs and quality. High income and sustained growth increase the potential profitability of a country, making it more appealing to foreign investors, while high inflation and chronic balance-of-payments deficits signal instability and deter investment. Cheap labor costs increase profit margins and are a huge attraction on their own. Availability of skilled labor is also important as technology intensive sectors such as semiconductors depend on high quality human capital (Schneider & Frey, 1985).

Political factors include the political stability, the ideology of the government, and the country's position in the global political system. Political instability breeds uncertainty and raises the risk of nationalisation, both of which discourage foreign investment. Generally, investors prefer governments that promote market-oriented ideas, whether democratic or capitalist, to those on the left of the spectrum, which are often thought to be more hostile to foreign investment. Alignment with western countries such as the United States and Europe tends to reinforce the image of a country as politically stable and investment friendly, while close ties to socialist blocks are often associated with higher political and economic risk (Schneider & Frey, 1985).

FDI theory is a useful framework for this study since it considers economic and political conditions as jointly explanatory rather than separate domains, which is important for an industry like semiconductors, where investment decisions are based on both cost and skill considerations and on geopolitical alignment. The economic variables, income levels, labor costs, and labor quality, speak directly to why capital-intensive, technology-driven sectors locate where they do, while the political variables, stability, ideology, and bloc alignment- cover the strategic calculations that increasingly determine where the United States chooses to invest in critical technologies. Semiconductor investment is at the intersection of profit-driven decision-making and strategic technology competition. Hence, a framework that considers both the profit-driven decision-making and the strategic technology competition is better suited to this study than one that is focused on economic determinants alone. These same economic and political factors are then applied to examine Vietnam's success and Indonesia's challenges in developing its semiconductor industry later in this study.

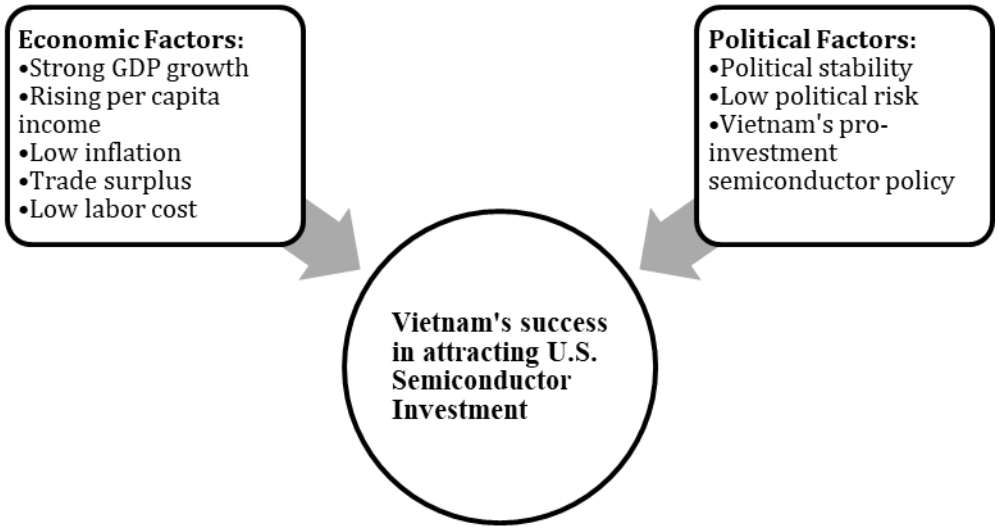
RESULTS AND DISCUSSION

Key Factors behind U.S. Investment in Vietnam's Semiconductor Industry

This section examines the economic and political factors behind Vietnam's success in attracting U.S. semiconductor investment, as suggested by the theory of FDI developed by Schneider and Frey and discussed above. The theory suggests that FDI is influenced primarily by two broad determinants namely economic and political conditions of the host country. The analysis follows that

structure, looking at Vietnam's economic performance through the lens of GDP growth, per capita income, inflation, trade performance, labor costs and labor quality and political factors such as domestic political stability and Vietnam's openness to international economic cooperation, both of which influence the investment climate and the perception of political risk by investors. The factors are then connected to the increasing presence of US semiconductor firms in Vietnam to explain why the country has become an attractive destination for long-term investment in this strategic industry. These relationships are captured in the following analytical model.

Figure 1. Key Factors of U.S. Semiconductor FDI into Vietnam
Source: processed by the author (2026), adopted from Schneider & Frey (1985)

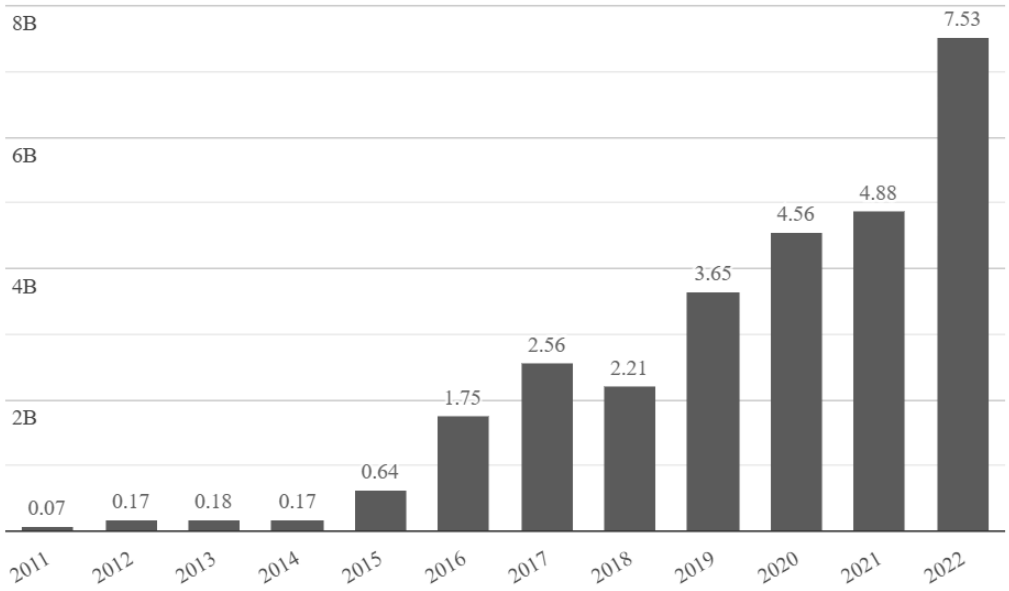


Vietnam's Economic Factors

The first variable of FDI that this study looks at is the economic performance of Vietnam. Vietnam's real GDP grew by 5.1 percent in 2023 and is expected to reach about 6.5 percent for 2024–2025 (International Monetary Fund, 2025). Per capita income in 2023 was US$4,717, compared to US$4,147 in 2022 (World Bank Group, 2025b). In 2024, the inflation was 3.63% and it is predicted to decrease to 3.4% in 2025 (International Monetary Fund, 2025). In 2024, Vietnam had a trade surplus of 5.9% of GDP (World Bank Group, 2025a). Economic indicators show Vietnam's economy grew with a higher purchasing power, a strong export focus and relatively stable monetary conditions. And that stability matters more for an industry like semiconductors, which relies on long investment horizons and predictable business conditions, than for a shorter-cycle industry, and it helps explain part of the attraction of Vietnam for long-term foreign investors.

This macroeconomic stability has also supported continued growth of Vietnam's semiconductor exports. Semiconductor exports have continued to climb, as production capacity has grown and foreign technology firms have scaled up operations, a sign that Vietnam has moved further into global semiconductor supply chains rather than remaining at the fringes of them. The below figure presents the trend of Vietnam's semiconductor exports:

Figure 2. Vietnam Exports Semiconductor Devices (HS 8541) to the United States
Source: Trading Economics (2023)



As can be seen from the above figure, Vietnam's semiconductor exports have kept increasing from US$0.07 billion in 2011 to US$7.53 billion in 2022, with an increase of about 54% in 2022 alone compared with the previous year. That acceleration is a reflection of the rapid growth of Vietnam's semiconductor manufacturing capacity, and its growing role in global supply chains. It's also a sign of the role that U.S. semiconductor companies have played in building Vietnam's production capacity, increasing its export competitiveness and helping it to emerge as a manufacturing base in Southeast Asia.

That strength in exports and overall economic performance hasn't translated to wages or quality of the workforce to the same extent. While Vietnam's workforce has yet to meet the expectations of the global semiconductor industry, it still benefits from low labor costs as an investment destination. Vietnam's manufacturing wages are on average about US$3 per hour, versus about US$6.5 per hour in China (Tran, 2024), keeping Vietnam competitive for labor-intensive manufacturing. Only about 20% of engineering graduates are considered qualified for high-technology work, semiconductor manufacturing included, a gap that traces back to a shortage of experienced trainers and technical experts, outdated laboratory facilities, weak university-industry collaboration, and limited public awareness of careers in the sector (Than & Yen, 2024). In that sense, Vietnam still lacks the human capital required for the global semiconductor industry. The Vietnamese government has responded by working with the United States to build up its workforce through training and human capital programs, including those supported by the International Technology Security and Innovation (ITSI) Fund under the CHIPS and Science Act of 2022, to raise the technical capabilities of Vietnam's labor force and its standing as a semiconductor production hub in the region.

These economic conditions suggest that the United States views Vietnam as an economy with strong growth momentum and potential for higher returns, consistent with the argument by Schneider and Frey's (1985) argument that firms invest abroad specifically to capture returns they could not get at home. Cheap labor offers some of that return directly, by reducing production costs for U.S. semiconductor firms operating in Vietnam, while the difference in labor quality acts as the sort of risk factor that theory considers a deterrent to investment. The difference in Vietnam's case is that this deterrent has not been left unchecked. Rather than requiring investors to shoulder the burden

of workforce development themselves, the Vietnamese government has shared that cost through joint training programs supported by the ITSI Fund, which reduces the long-term cost and risk of investing in Vietnam's semiconductor sector. This, together with the above mentioned trade surplus and growth of the per capita income, shows that the economic attractiveness of Vietnam does not simply arise from low costs, but rather a more comprehensive package, where the government actively balances out the constraints that would otherwise work against it.

Vietnam's Political Factors

Domestic political stability matters for attracting FDI because it is an indicator of the level of political risk in a country, which is the possibility that the returns on investment decline due to weak institutions or instability. Where institutions are weak and political risk is high, investors fear that host governments might expropriate FDI profits or move toward forced nationalization. High political risk also comes with bureaucratic inefficiency, corruption, currency controls, arbitrary taxation and weak security protections, all of which hinder the effective running of a foreign business (Hayakawa & Lee, 2012). Hence, foreign investors place a high premium on political stability, preferring stable environments to volatile ones. From the U.S. point of view, Vietnam's political and security conditions are mostly stable. Vietnam is a socialist-communist state ruled by one party, the Communist Party of Vietnam (Đảng Cộng sản Việt Nam – ĐCSVN), which means centralized control and policy continuity. That said, Vietnam has seen protests over environmental disputes, labor issues, and land rights, and concerns about media and internet restrictions that limit press freedom, as well as public frustration over pollution, maritime issues, and China's assertive presence in the South China Sea (U.S. Department of State, 2025b).

However, the United States sees these protests as largely peaceful, and the Vietnamese government tends to respond with tighter security and surveillance rather than losing control of domestic order. From an investment risk point of view, internal politics in Vietnam are generally regarded to be relatively stable (U.S. Department of State, 2025b). Tao (2025) claims that Vietnam's domestic political conditions bolster its position in the global semiconductor industry. The elite consensus on foreign policy direction in Vietnam is perceived to be strong, and its position between U.S. and Chinese influence compels it to balance domestic and foreign policy goals carefully in the pursuit of longer-term strategic interests. For Tao, that internal stability is exactly what enables Vietnam to hold its own in an international environment that is becoming more and more volatile.

Then there is another political factor to consider; that is, the alignment with a liberal economic system, as shown by a country's openness to international trade and economic cooperation. The country has adopted an open economic policy and is actively pursuing regional and multilateral trade linkages, including with the United States. This is best reflected in the number of Free Trade Agreements that Vietnam has signed. According to UNCTAD, Vietnam is a party to 17 free trade agreements, including the EU–Vietnam Free Trade Agreement (EVFTA) and the EU–Vietnam Investment Protection Agreement (EVIPA), and other major regional frameworks such as the Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) (Center for WTO and International Trade, 2024). This dense web of agreements reflects a market-driven, multilateral economic strategy that provides investors with greater legal safeguards, easier access to global markets and a more predictable business climate. That mix has helped Vietnam grow its place as a competitive manufacturing and investment hub in the Asia-Pacific, and it's part of what makes the country attractive for U.S. semiconductor investment in particular.

Put together, it can be seen that the United States no longer views communist ideology as a fundamental barrier to economic cooperation. Vietnam is still a socialist-communist state, but it has become a strategic economic partner of the United States, including in semiconductors. That pattern suggests that political stability now trumps ideological alignment in U.S. investment decisions, because stable domestic politics provides long-term strategic industries with the certainty they need. These points are regarding how economic growth can be achieved through political stability if domestic policy is in line with foreign policy. Vietnam, for example, has been able to develop a clear and well-directed semiconductor industry policy because of its stable domestic politics, as shown in the table below:

Table 1. Vietnam's Semiconductor Development Strategy
Source: Thu Vien Phap Luat (2024)

Category	Phase 1 (2024–2030)	Phase 2 (2030–2040)	Phase 3 (2040–2050)
Attracting FDI			
Design companies	100	200	300
Small-scale semiconductor chip manufacturing plants	1	2	3
Packaging plants	10	15	20
Scale			
Revenue of the semiconductor industry	US$25 billion/year	US$50 billion/year	US$100 billion/year
Value-added rate of the semiconductor industry	10–15%	15–20%	20–25%
Revenue of the electronics sector	US$225 billion/year	US$485 billion/year	US$1,045 billion/year
Value-added rate of the electronics sector	10–15%	15–20%	20–25%
Human Resources			
Engineers and graduates	50,000	100,000	Sufficient for the whole country

Based on the table above, it can be seen that Vietnam has established clear policies for developing its semiconductor industry, as reflected in the planned targets. Vietnam set goals for three phases: Phase 1 (2024–2030), Phase 2 (2030–2040), and Phase 3 (2040–2050). In each phase, Vietnam has outlined progressive and realistic targets, aiming to continuously increase incoming FDI in areas such as semiconductor design, manufacturing, and packaging. Furthermore, Vietnam has committed to increasing its revenue from semiconductor and electronics exports while enhancing the added value of these products. Lastly, Vietnam has a long-term plan to improve the quality of its semiconductor industry workforce, targeting 50,000 engineering graduates by 2030, 100,000 by 2040, and meeting the full workforce requirements of the Vietnamese semiconductor industry by 2050.

To achieve these industrial development plans, Vietnam has introduced various domestic policies that provide incentives for the semiconductor sector. One of the most important measures is Decision No. 182/2024/NĐ-CP, which regulates the operation of the investment support fund. This decision allows high-tech projects, including those in the semiconductor industry, to receive cost-based support from the state budget. For instance, R&D projects in semiconductors can obtain subsidies covering up to 50% of their initial investment costs (Deloitte Vietnam, 2025). Additionally, Vietnam enacted the Law on Digital Technology Industry, as follows:

Table 2. Semiconductor Incentives in Vietnam Based on the Law on Digital Technology Industry (Law No. 71/2025/QH15)
Source: Deloitte Vietnam (2025)

Incentivized Activities	**Investment/ CIT Incentives**	**Cost Subsidies**	**Customs Procedures**	**Human Resources Development Support**
(1) Production of raw materials, supplies, equipment, machinery and tools for semiconductor industry encouraged for investment and development	Specially-incentivized business sectors	-	-	-
(2) Projects designing semiconductor chip	• Specially-incentivized business sectors • Special investment incentives and support for large-scale project according to investment law	• Cost subsidies for human resource development training, R&D, trial production, purchase of machinery and equipment, technology and technological innovation • Direct cost subsidies for investment in factory construction, technical infrastructure, machinery and equipment	Privilege customs procedures according to customs law	05-year PIT exemption for high-quality DTI human resources participating in semiconductor chip R&D projects
(3) Projects manufacturing, packaging and testing semiconductor chip	• Specially-incentivized business sectors • Special investment incentives and support for large-scale project according to investment law	Direct cost subsidies for investment in factory construction, technical infrastructure, machinery and equipment	• Import used technological lines, equipment, machinery, and tools directly serving the project • Privilege customs procedures according to customs laws	05-year PIT exemption for high-quality DTI human resources participating in semiconductor chip manufacturing projects

*CIT= Corporate Income Tax; DTI= Digital Technology Indusrty; PIT= Personal Income Tax.

Based on the table above, the Vietnamese government offers various incentives to encourage investment and the development of the semiconductor industry, categorized into corporate income tax (CIT) incentives, cost subsidies, customs procedures, and human resource development support. For semiconductor chip design and manufacturing, packaging, and testing projects, incentives include investment support, R&D cost subsidies, factory construction and equipment procurement, facilitation of customs procedures, and a five-year income tax exemption for qualified human resources. This demonstrates a comprehensive stimulus package covering fiscal, technical, and human capital development to support industry growth.

Challenges in Developing Indonesia's Semiconductor Industry

In general, Indonesia's semiconductor industry is still in its early development stages and cannot be directly compared with Vietnam. However, an assessment of Indonesia's semiconductor industry can still be conducted using FDI theory to identify challenges across each investment-attracting factor. Indonesia continues to face several shortcomings in developing its semiconductor industry, as summarized in the following table:

Table 3. Challenges in Indonesia's Economic and Political Factors for Attracting Semiconductor FDI
Source: Compiled from various sources by the author (2025)

Key Factors of Investment	Indonesia's Conditions
Economy	Indonesia has progressive economic growth and abundant natural resources, but it remains a minor player in the export of semiconductor commodities.
Politics	There are political risks in the form of: ● Ineffective bureaucracy ● High levels of corruption ● There are no specific regulations or government rules directly related to the development of the semiconductor industry. ● There is no mature long-term planning, as seen from the absence of a long-term semiconductor industry roadmap.

On economic issues, Indonesia has managed to keep a relatively steady macroeconomic foundation but has failed to convert that stability into a competitive semiconductor industry. The economy is anticipated to increase 5.0% in 2024, with GDP per capita of roughly US$4,367. Inflation was mild at 2.2% in 2024 and the country recorded a trade surplus of 1.79% of GDP in the same year (The World Bank, 2025c). In the reasoning of Schneider and Frey's (1985), this kind of stability should make Indonesia more appealing to foreign investors, because it reduces economic uncertainty and encourages long-term investment. Labor costs: Average monthly manufacturing wages are US$190-200 (Badan Pusat Statistik, 2025), putting Indonesia on a par with Vietnam as a low-cost manufacturing destination. But Indonesia's human capital deficit is high, especially in semiconductors, where the country is expected to experience a shortfall of roughly 20,000 semiconductor engineers in the future years (Ken Research, 2025).

That leaves Indonesia with economic conditions broadly similar to Vietnam's but a semiconductor sector at a very different stage of growth. Vietnam has climbed the global value chain and become a key manufacturing and assembly hub. On the other hand, Indonesia is still concentrated downstream and has not yet developed a real manufacturing base (Kadin Indonesia, 2026). That gap is striking given Indonesia's raw material wealth, including coal, nickel and other base metals central to electronics production which has not translated into export strength: semiconductor device exports (HS 8541) totalled only US$400 million in 2023 (Trading Economics, 2023a), far below Vietnam's figures. In other words, favorable macroeconomic conditions and plentiful natural resources have not been sufficient on their own to develop a competitive semiconductor production ecosystem. Indonesia still tends to be viewed by foreign investors, U.S. semiconductor companies included, primarily as a large consumer market and raw material supplier, not a manufacturing base for high-value semiconductor production. This limits its potential to attract large-scale semiconductor FDI despite otherwise solid economic fundamentals.

The Indonesian political environment has been very stable as it can be seen in the ability to maintain security, public order and continuity of administration. The Indonesia Democracy Index shows Indonesia's ability to control political processes and maintain institutional stability (Kristofano & Febriani, 2024). Political stability is a process that reduces uncertainty and political risk and so enhances the country's attractiveness for foreign direct investment (Schneider and Frey, 1985). Similarly, Kristofano and Febriani (2024) also report the same correlation in their data. Political stability, FDI inflows and economic growth are interrelated, the stable political atmosphere promotes both investment and sustained development.

Even so, Indonesia still deals with domestic political and institutional problems that cut into its investment competitiveness. Bureaucratic inefficiency, particularly around licensing and administrative processes, remains a real obstacle, adding uncertainty and transaction costs for foreign investors (Septriani, 2024). Corruption is another drag on investor confidence across levels of government and sectors, as political elites often use public office to advance private business interests, concealing ownership through shell companies and subsidiaries in ways that reduce transparency (U.S. Department of State, 2025a). Indonesia's Corruption Perceptions Index did improve, rising to 37 out of 100 in 2024 and moving up from 115th to 99th among 180 countries, but the score itself still points to governance problems that can discourage long-term foreign investment, particularly in technology-intensive industries (U.S. Department of State, 2025a).

Another issue of relevance is the alignment of Indonesia with the liberal economic system which can be seen from its involvement in international trade and investment cooperation. A member of 14 Free Trade Agreements, both bilateral and regional such as ASEAN Free Trade Area (AFTA), ASEAN – Hong Kong, China Free Trade Agreement, the Regional Comprehensive Economic Partnership (RCEP) and ongoing negotiations for Indonesia – European Union Comprehensive Economic Partnership Agreement (IEU – CEPA) (Ismiralda, 2025). That network is part of a wider movement towards trade liberalisation and regional integration as well as better market access and investment protection. The relationship between Indonesia and the United States follows the same path. On 12 November 2023, the two nations upgraded ties to a Comprehensive Strategic Partnership, in which the U.S. continued to acknowledge Indonesia as an essential strategic and economic partner (U.S. Embassy in Jakarta, 2023).

Openness on trade to the United States and its allies has not, however, translated into semiconductor policy as fast-moving as Vietnam's. Indonesia's domestic political and institutional conditions have slowed the policies needed to build up its domestic semiconductor industry and draw in foreign investment, and unlike Vietnam, it has no comprehensive regulatory framework built specifically for semiconductor development. Some fiscal incentives like Government Regulation No. 78/2019 and Ministry of Industry Regulation No. 47/2019 give semiconductor investors a 30% corporate income tax reduction for six years, plus accelerated depreciation and amortization allowances, while Law No. 25/2007 on Investment and Ministry of Finance Regulation No. 130/2020 offer corporate income tax exemptions of up to 100%, for five to twenty years depending on investment size, covering everything from medium-scale investments of IDR 100 billion up to those exceeding IDR 1 trillion (LPEM FEB UI, 2025). Moreover, the government has introduced R&D-focused incentives as well. Ministry of Finance Regulation No. 153/2020 offers a super deduction of up to 300% for research and development, including chip design, wafer fabrication, and production efficiency research, and Ministry of Finance Regulation No. 136/PMK.02/2021 gives researchers and innovators financial incentives for intellectual property protection, letting universities and research institutions earn royalties on patented technology. These measures point toward an effort to build a

national innovation ecosystem and pull academia, research institutions, and industry into closer collaboration (LPEM FEB UI, 2025).

Compared with Vietnam, though, Indonesia is still at an early stage of semiconductor development, for a few reasons. First, its semiconductor ecosystem, including infrastructure, skilled labor, research capacity, and technological capability, has not yet reached what major U.S. semiconductor investors expect (Alfaruqi, 2023; Haedar, 2023). Second, the government has begun drafting a long-term semiconductor roadmap, but it remains unfinished and not formally adopted, which leaves future policy direction uncertain, a real gap given that a clear roadmap is what signals sustained government commitment, sets measurable targets, and gives investors the certainty they need before committing to capital-intensive investment. Third, few global semiconductor firms, U.S. firms especially, have set up in Indonesia. Fairchild Semiconductor and National Semiconductor both established operations there in 1973, only to relocate to Malaysia later over labor issues and rising regional competition (Yanwardhana, 2024).

Overall, Indonesia has strengthened its strategic partnership with the United States and introduced various fiscal incentives for semiconductor investment, but those measures have not yet produced substantial U.S. semiconductor FDI. Compared with Vietnam, it still faces greater institutional and policy constraints: no comprehensive semiconductor regulatory framework, an underdeveloped industrial ecosystem, and limited certainty about the sector's long-term direction. Read through Schneider and Frey's FDI theory, these conditions raise the perceived political and institutional risk of long-term investment, which puts Indonesia at a disadvantage relative to Vietnam. Indonesia has real economic potential and an open investment regime, but closing that gap will depend on stronger policy consistency, more effective institutions, and a sustained long-term commitment from government.

Lessons Learned for the Development of Indonesia's Semiconductor Industry

The comparative analysis above reveals that Vietnam has leapfrogged Indonesia in attracting U.S. semiconductor investment, although the two countries have many similar economic characteristics. The gap is more than economic conditions but also the political and institutional strategies that Vietnam has used to develop its semiconductor industry and deepen cooperation with the United States. That gap is, in fact, the reason Indonesia can learn from Vietnam's experience. The goal is not to copy Vietnam's model wholesale, but to adopt those aspects that are relevant to Indonesia's unique political, economic, and institutional setting to make Indonesia a more attractive destination for U.S. semiconductor investment.

Based on these findings, this study claims that Indonesia needs to capitalize on the existing momentum to draw a couple of concrete lessons from Vietnam. The first is on policy consistency and long-term commitment, Indonesia is a democracy, not a socialist one-party political system like Vietnam's, so it cannot just copy the Vietnamese political system. But it can achieve political stability in other ways: by maintaining policy continuity across administrations, improving bureaucratic coordination, and resolving domestic political disputes through democratic institutions rather than letting them stall policy. With more political certainty, the government could finalize and formally adopt its long-term semiconductor roadmap and provide investors clearer regulatory footing. Fiscal incentives are already in place and further investment in human capital and industrial infrastructure would go a long way toward making Indonesia attractive to U.S. semiconductor firms seeking reliable long-term investment locations, if accompanied by a more stable political environment and a credible long-term industrial strategy.

The second lesson is on economic diplomacy. Indonesia needs to do more to attract U.S. semiconductor investment. That does not mean giving up a balanced relationship with both the United States and China but it does mean increasing engagement with U.S. semiconductor companies and government agencies to accelerate the pace of investment commitments. Vietnam's approach is an example here. Indonesia should maximize the opportunities arising from its selection for the ITSI Fund by partnering with the United States on workforce development, technology transfer, and industrial capacity-building. It should also continue to expand its economic ties through free trade agreements and strategic partnerships with key semiconductor economies such as Japan and South Korea, in addition to the United States, to improve market access, build investor confidence, and diversify the avenues for domestic semiconductor development.

CONCLUSION

The findings point to political factors as the most important reason behind Vietnam's success in attracting US semiconductor investment. Political stability allows for a low-risk investment environment and domestic and foreign policy consistency. Vietnam's political stability has helped it develop a clear long-term roadmap for its semiconductor development, boost investor confidence and adopt a foreign policy balancing the U.S. and China with active diplomacy – which has worked to attract big U.S. semiconductor firms. In short, political stability underpins economic development in Vietnam, and economic factors are a supporting condition for success, not the primary driver of success. Drawing on Vietnam's experience, Indonesia should increase its strategic cooperation with the United States and make use of the ongoing U.S.–China competition to strengthen its domestic semiconductor industry. That means accelerating the implementation of the ITSI Fund, broadening cooperation on workforce development, technology transfer, and industrial capacity building, and demonstrating consistent long-term commitment through stable policy and a comprehensive semiconductor roadmap. Such measures would provide clear strategic direction, reduce regulatory uncertainty, strengthen Indonesia's position in the global semiconductor value chain, build investor confidence, and make the country more attractive for future U.S. semiconductor investment.

REFERENCES

Akayama, S., Chow, D., & Gupta, S. (2024). 'Localizing the global semiconductor value chain'. Arthur D. Little Report. https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.adlittle.com/sites/default/files/reports/ADL_Localizing_global_semiconductor_2024_0.pdf

Alfaruqi, M. H. (2023). 'Prospects of Semiconductor Industry in Indonesia : Technology and Foreign Investment'. Emerics. 1–6. https://www.emerics.org:446/issueFileDownload.es?brdctsNo=346674&brdctsFileNo=84401

Andrianto, R. (2025). Airlangga Bocorkan AS Tertarik Kembangkan Semikonduktor RI. CNBC Indonesia. https://www.cnbcindonesia.com/news/20250815172056-4-658522/airlangga-bocorkan-as-tertarik-kembangkan-semikonduktor-ri

Badan Pusat Statistik. (2025). Rata-Rata Upah/Gaji Bersih Sebulan Buruh/Karyawan/Pegawai menurut Provinsi dan Lapangan Pekerjaan Utama di 17 Sektor (Rupiah), 2025. Retrieved from Badan Pusat Statistik: https://www.bps.go.id/id/statistics-table/2/MjQ3NSMy/rata-rata-upah-gaji-bersih-sebulan-buruh-karyawan-pegawai-menurut-provinsi-dan-lapangan-

pekerjaan-utama-di-17-sektor--rupiah-.html

Bryman, A. (2021). Social Research Method (4th ed.). Oxford University Press.

Center for WTO and International Trade. (2024). Vietnam's FTAs as of Octorber 2024. Vietnam Chamber of Commerce and Industry (VCCI). https://wtocenter.vn/thong-ke/13814-vietnams-ftas-summary-as-of-april-2019

Chi, T. K., Cao, N., An, T., & Thang, L. Q. (2024). Current Situation of Human Resources in the Semiconductor Industry in Vietnam and Experiences From Taiwan. International Research Journal of Economics and Management Studies, 3(8), 90–98. https://doi.org/10.56472/25835238/irjems-v3i8p112

Deloitte Vietnam. (2025). Law on Digital Technology Industry no. 71/2025/QH15 Breakthrough incentive and support mechanisms to elevate digital technology as core industry of Vietnam (Issue Industry Insight). https://www.deloitte.com/content/dam/assets-zone1/southeast-asia/en/docs/services/tax/2025/sea-vn-tax-industry-insights-law-on-digital-technology-industry-en.pdf

Dhanak, K. (2024). 'U.S.-China Trade War: Analysis Of The Semiconductor Industry'. IOSR Journal of Business and Management, 26(10), 48–59. https://doi.org/10.9790/487x-2610064859

Ding, J., & Huang, C. (2024). The Impact of the China-US Trade Friction on Vietnam's Chip Industry. Interdisciplinary Humanities and Communication Studies, 1(9), 1–6. https://doi.org/10.61173/4sp5b061

Dũng, T. (2024). US tech giants on working visit to Vietnam. VN Economy. https://en.vneconomy.vn/us-tech-giants-on-working-visit-to-vietnam.htm

Frieske, B., & Stieler, S. (2022). 'The "Semiconductor Crisis" as a Result of the COVID-19 Pandemic and Impacts on the Automotive Industry and Its Supply Chains'. World Electric Vehicle Journal, 13(10), 189. https://doi.org/https://doi.org/10.3390/wevj13100189

Haedar, A. W. (2023). 'The Silicon Archipelago: Indonesia's Growing Semiconductor Industry'. Indonesian Engineering and Advanced Science (IdEAS)., 6(2), 33–38. https://journal.unm.ac.id/index.php/IdEAS/article/view/1755

Hayakawa, K., & Lee, H. (2012). 'How Does Country Risk Matter for Foreign Direct Investment ?'. ERIA Discussion Paper Series, ERIA-DP-20. https://www.eria.org/ERIA-DP-2012-03.pdf

HR Asia. (2020). On Semiconductor. https://hr.asia/hr-asia-best-companies-to-work-for-in-asia/on-semiconductor/

Intel Corporation. (2021). Intel Invest Additional $475 Million in Vietnam. Intel Newsroom. https://download.intel.com/newsroom/archive/2025/en-us-2021-01-26-intel-invests-additional-475-million-in-vietnam.pdf

International Monetary Fund. (2025). Vietnam. https://www.imf.org/en/countries/vnm

Ismiralda, N. (2025). Indonesia's International Free Trade Agreements. Retrieved from ASEAN Briefing: https://www.aseanbriefing.com/doing-business-guide/indonesia/why-indonesia/indonesia-s-international-free-trade-and-tax-agreements

Janjeva, A., Baek, S., & Sellars, A. (2024). China's Quest for Semiconductor Self-Sufficiency: The impact on UK and Korean industries. December. https://cetas.turing.ac.uk/sites/default/files/2024-12/cetas_briefing_paper_-_chinas_quest_for_semiconductor_self-sufficiency_-_the_impact_on_uk_and_korean_industries.pdf

Kadin Indonesia. (2026). International Economic Association Secretary-General Lili Yan Ing:

Indonesia Has Yet to Enter the Global Semiconductor Map. Retrieved from Kadin Indonesia: https://kadin.id/en/kabar/sekjen-international-economic-association-lili-yan-ing-indonesia-belum-masuk-peta-semikonduktor-dunia/

Kementerian Koordinator Bidang Perekonomian Republik Indonesia. (2024). Media Briefing: Pengembangan Industri Semikonduktor di Indonesia dan Kerja Sama Teknologi Small Modular Reactor (SMR). https://ekoves.ekon.go.id/kegiatan/pengembangan-industri-semikonduktor-di-indonesia-dan-kerja-sama-teknologi-small-modular-reactor-smr

Ken Research. (2025). Indonesia semiconductor metrology inspection equipment market report Size, Share, Growth Drivers, Trends, Opportunities & Forecast 2025–2030. Retrieved from Ken Research: https://www.kenresearch.com/indonesia-semiconductor-metrology-inspection-equipment-market

Kristofano, Y. Y., & Febriani, R. E. (2024). 'The Role of Political Stability and Foreign Direct Investment in Indonesia's Economic Growth'. Asian Journal of Applied Business and Management, 3(3), 261–276.

LPEM FEB UI. (2025). Indonesia's Semiconductor Industry Towards Realising the Potential for Growth. https://www.evidencefund.com/lib/4T9D9I4V

Manurung, R. H. (2024). The Vietnam-United States Comprehensive Strategic Partnership in the Indo-Pacific Region. Global and Policy Journal of International Relations, 12(01), 56–65. https://doi.org/10.33005/jgp.v12i01.4301

Mai, L., B.Poling, G., & Quitzon, J. (2024). 'An Indispensable Upgrade The U.S.-Vietnam Comprehensive Strategic Partnership'. In Center for Strategic and International Studies (pp. 1–10).

Microchip. (2025). Microchip In Vietnam. https://www.microchip.com/en-us/about/careers/microchip-around-the-world/asia-pacific/vietnam

Microchip USA. (2024). Vietnam Becomes a Key Player in Chip Manufacturing. https://www.microchipusa.com/industry-news/vietnam-becomes-a-key-player-in-chip-manufacturing?srsltid=AfmBOorf42UU-N8_1kxa2T7Za9MhPuzhyu49ZGZ_DbjedaM0wU1kjFUk

Neuman, W. L. (2014). Social Research Methods: Qualitative and Quantitative Approaches. Pearson Education Limited. https://doi.org/10.2307/3211488

Nguyen, N. H., & Dang, M. P. (2025). Policies for Vietnam's Semiconductor Workforce : A Triple Helix Model Approach. International Journal of Law Management & Humanities, 8(1), 359–377.

Nurhayati, E., & Angdreas, K. (2023). Strategi Pengembangan Investasi Industri Semikonduktor Di Indonesia. Majalah Sainstekes, 10(1), 049–067. https://doi.org/10.33476/ms.v10i1.2913

OEC. (2023). Where does Vietnam export to? (2023). The Observatory of Economic Complexity (OEC). https://oec.world/en/visualize/tree_map/hs17/export/vnm/show/168541/2023

OECD. (2025). OECD Benchmark Definition of Foreign Direct Investment (Fifth Edition). In OECD Benchmark Definition of Foreign Direct Investment (Fifth Edition). https://doi.org/10.1787/7f05c0a3-en

Schneider, F., & Frey, B. S. (1985). 'Economic and political determinants of foreign direct investment'. World Development, 13(2), 161–175. https://doi.org/10.1016/0305-750X(85)90002-6

Semiconductor Industry Association. (2024). 2024 Factbook (Issue February).

https://www.semiconductors.org/wp-content/uploads/2024/05/SIA-2024-Factbook.pdf

Septriani. (2024). 'Political Risk Indicators and Foreign Direct Investment (FDI) Attraction in Indonesia'. ISAR Journal of Economics and Business Management. 2(10), 91–96.

Tao, Y. (2025). 'Vietnam's Attitude Toward Bilateral Cooperation in Chip Industry under the U.S.-China Game and China's Response Strategies'. Advances in Economics, Management and Political Sciences, 167(1), 114–121. https://doi.org/10.54254/2754-1169/2025.21156

Than, T., & Yen, H. (2024). Vietnam semiconductor workforce meets just 20% of industry demand: academic. The Investor. https://theinvestor.vn/vietnam-semiconductor-workforce-meets-just-20-of-industry-demand-academic-d13267.html

Thu Vien Phap Luat. (2024). Decision on Promulgation of the Strategy for Development of Vietnam's Semiconductor Industry to 2030 and Vision to 2050. Thu Vien Phap Luat. https://thuvienphapluat.vn/van-ban/EN/Cong-nghe-thong-tin/Decision-1018-QD-TTg-2024-the-strategy-for-development-of-Vietnam-s-semiconductor-industry-to-2030/626869/tieng-anh.aspx

Trading Economics. (2023a). Annual International Trade Statistics by Country (HS): Indonesia. https://trendeconomy.com/data/h2/Indonesia/8541

Trading Economics. (2023b). Annual International Trade Statistics by Country (HS): Vietnam. https://trendeconomy.com/data/h2/Vietnam/8541

Tran, T. M. H. (2024). Vietnam and China Manufacturing: Key Comparisons for Business Strategies. Vietnam Briefing. https://www.vietnam-briefing.com/news/vietnam-versus-china-manufacturing-cost-quality-infrastructure-comparison.html

U.S. Department of State. (2023). New Partnership with Indonesia to Explore Semiconductor Supply Chain Opportunities. https://2021-2025.state.gov/new-partnership-with-indonesia-to-explore-semiconductor-supply-chain-opportunities/

U.S. Department of State. (2025a). 2025 Investment Climate Statements: Indonesia. https://www.state.gov/reports/2025-investment-climate-statements/indonesia

U.S. Department of State. (2025b). 2025 Vietnam Investment Climate Statement. https://www.state.gov/wp-content/uploads/2025/09/638719_2025-Vietnam-Investment-Climate-Statement.pdf

U.S. Embassy in Jakarta. (2023). FACT SHEET: President Joseph R. Biden and President Joko Widodo Announce the U.S.-Indonesia Comprehensive Strategic Partnership. https://id.usembassy.gov/fact-sheet-president-joseph-r-biden-and-president-joko-widodo-announce-the-u-s-indonesia-comprehensive-strategic-partnership/

U.S. Mission Vietnam. (2024). Department of State and Arizona State University Announce New ITSI Initiative. U.S. Embassy & Consulates in Vietnam. https://vn.usembassy.gov/department-of-state-and-arizona-state-university-announce-new-itsi-initiative/

Varadarajan, R., Koch-Weser, I., Richard, C., Fitzgerald, J., Singh, J., Thornton, M., Casanova, R., & Isaacs, D. (2024). Emerging Resilience in the Semiconductor Supply Chain. May. https://www.semiconductors.org/wp-content/uploads/2024/05/Report_Emerging-Resilience-in-the-Semiconductor-Supply-Chain.pdf

Vietnam Investment Review. (2023). Vietnam and US companies collaborate on semiconductors and innovation. Vietnam Investment Review. https://vir.com.vn/vietnam-and-us-companies-collaborate-on-semiconductors-and-innovation-105078.html

Vietnam Investment Review. (2025). Amkor Technology to triple factory output in Vietnam. https://vir.com.vn/amkor-technology-to-triple-factory-output-in-vietnam-122644.html&link=autochanger

VnEconomy. (2025). Amkor Vietnam to boost chip production to 3.6 billion products. https://en.vneconomy.vn/amkor-vietnam-to-boost-chip-production-to-3-6-billion-products.htm

World Bank Group. (2025a). Current account balance (% of GDP) - Viet Nam. https://data.worldbank.org/indicator/BN.CAB.XOKA.GD.ZS?locations=VN

World Bank Group. (2025b). GDP per capita (current US$) - Viet Nam. https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=VN

World Bank. (2025c). Inflation, consumer prices (annual %) - Indonesia. Retrieved from World Bank: https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?locations=ID

World Bank. (2026). Indonesia: Trade balance, percent of GDP. Retrieved from The Global Economy: https://www.theglobaleconomy.com/Indonesia/Trade_balance/

Yanwardhana, E. (2024). Tragis! RI Pernah Punya Pabrik Semikonduktor, Tapi "Dibegal" Malaysia. CNBC Indonesia. https://www.cnbcindonesia.com/news/20240512233155-4-537445/tragis-ri-pernah-punya-pabrik-semikonduktor-tapi-dibegal-malaysia

Zhang, V., Faida, A., & Nishiuwatoko, L. (2024). Vietnam's Semiconductor Industry Attracts US Investments. Asia Matter for America. https://asiamattersforamerica.org/articles/vietnams-semiconductor-industry-attracts-us-investments

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