

# Semiconductor Competition Between China and Taiwan

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**ABSTRACT:** This paper explores the competition between China and Taiwan in the semiconductor industry. It discusses the current state of the industry in both countries, their competitive advantages, and the strategies employed to gain an edge. The research also examines the global implications of this competition, the key factors shaping the rivalry, and possible avenues for cooperation to enhance the semiconductor industry's competitiveness and efficiency. The relationship between China and Taiwan is experiencing intense competition over the electronics sector, including semiconductors and electronic chips. Taiwan plays a significant role in the high-tech and electronics industry, which makes it a target of China's economic and technological hegemony strategies. China seeks to achieve superiority in these industries and gain control over the global supply chain, which gives it great strategic power. Its policy is to try to increase its influence on Taiwan, both by diplomatic pressure and by constant military threats. China seeks to achieve "national unity" and restore Taiwan under its control. This geopolitical escalation is increasing simultaneously with the rivalry between China and the USA. The United States stands by Taiwan through its political and military support, which further aggravates the tension between the two states. This competitiveness manifests itself in multiple areas, including technology, security and economics. In short, the conflict between China and Taiwan over semiconductors and electronic chips reflects the rising geopolitical tensions in the region, with the overlap of economic, political and technological factors, the ongoing rivalry between China and the United States further complicates the scene.

**KEYWORDS:** China, Taiwan, semiconductor, competition, challenges

## **Introduction**

The semiconductor industry is witnessing intense competition between China and Taiwan, both vying for a larger share of the global semiconductor market, valued at over \$400 billion. While China focuses on significant investments in the industry, Taiwan emphasizes research and development. Each country possesses unique strengths and weaknesses, leading to continuous rivalry in the foreseeable future. China stands as the world's largest semiconductor market, having received substantial government investments and subsidies. In contrast, Taiwan ranks as the second-largest semiconductor market and houses prominent companies like TSMC and UMC. This rivalry has led to a trade war, with tariffs imposed on semiconductor imports by both countries.

The Sino-Taiwanese conflict represents an important geopolitical tension in East Asia. The relationship between China and Taiwan is experiencing intense competition over the electronics sector, including semiconductors and electronic chips. Taiwan has a large role in the high-tech and electronics industry, which makes it a target of China's economic and technological hegemony strategies. China seeks to achieve superiority in these industries and gain control over the global supply chain, which gives it great strategic power. Its policy is to try to increase its influence on Taiwan, both by diplomatic pressure and by constant military threats. China seeks to achieve "national unity" and restore Taiwan under its control.

This geopolitical escalation is increasing simultaneously with the rivalry between China and the USA. The United States stands by Taiwan through its political and military support, which further aggravates the tension between the two states. This competitiveness manifests itself in multiple areas, including technology, security and economics.

In short, the conflict between China and Taiwan over semiconductors and electronic chips reflects the rising geopolitical tensions in the region, with the overlap of economic, political and technological factors, the ongoing rivalry between China and the United States further complicates the scene.

The primary problem addressed in this study is to examine the most significant implications and consequences of the competition between China and Taiwan in the semiconductor industry.

To achieve this, sub-questions are formulated as follows:

1-What is the significance of semiconductors, and why are they crucial in today's world?

2-What challenges does the Sino-Taiwanese semiconductor competition pose?

3-What are the outcomes of the Sino-Taiwanese competition in the semiconductor sector?

In addressing the main problem and its sub-questions, the research adopts the Copenhagen School's information security approach, analyzing the solid and intelligent sides of information under the leadership of theorist "Barry Buzan." The epistemological perspective and composite analysis are utilized to comprehend the competition dynamics and implications. Additionally, a statistical approach is employed to grasp the conflict and investment structures accurately through digital language.

It is essential to note that due to the novelty of the subject, the research faced difficulties in obtaining references. As a result, real-time data analysis was employed, considering the global implications.

## 1. Conceptual Framework

**1.1. Definition of Semiconductors:** Semiconductors are materials with electrical properties between conductors and insulators, used in various electronic devices like transistors, diodes, and integrated circuits. They play a critical role in industries such as computers, smartphones, and solar cells (Britania Encyclopedia 2022). Semiconductors are materials that have the advantage of being able to conduct electricity better than insulators (such as plastics) and twice as well as conductive materials (such as metals). Semiconductors include materials such as silicon and germanium, they are characterized by electrical properties that can be controlled by adding impurities or changing the temperature. The importance of semiconductors is not limited only to technological industries, but is expanding to everyday life, the economy and national security. Here are some aspects that highlight their importance:

**Technological industries:** Semiconductors are fundamental for the electronics and Information Technology Industry. They are used in the manufacture of electronic chips (chips), which are essential parts for computers, smartphones and various electronic devices.

**Alternative energy:** Semiconductors are used in the manufacture of solar cells and devices for converting solar energy into electricity, contributing to the provision of clean and sustainable energy sources.

**Communication:** Modern communication networks, including the internet and mobile phones, rely on semiconductors to ensure fast and efficient data transmission.

**Medicine and Biosciences:** Semiconductor is used in the manufacture of Biosensors and advanced medical technologies.

**Defense and national security:** Semiconductors are at the top of the list of critical technologies in the development of security systems, surveillance and smart weapons.

In general, semiconductors can be considered a "pillar and lifeline" for individuals and states due to their profound impact on technological, economic and security development. Almost every aspect of modern life is influenced by devices and technology, and this reinforces the role of semiconductors as one of the infrastructure elements of this development.

**1.2. Electronic Chips:** Electronic chips, commonly found in modern devices like phones, computers, and cars, are essential in various industries, including microchips. The manufacturing of these chips requires substantial funds and complex equipment (Thra 2022). Electronic chips are small chips of a semiconductor material (most often silicon) that contain electronic microcircuits made up of millions of electronic components such as transistors, capacitors and resistors. These chips are the basic element of the electronics industry, and it is they that enable the work and functions of various electronic devices. The importance of electronic chips manifests itself in a wide range of industries and uses, including:

**Computers and smartphones:** electronic chips make it possible to manufacture central processors (CPUs) and graphic processing units (GPUs) that form the main brain of computers and smartphones. They contribute to increasing the speed and performance of these devices.

**Communication:** chips are used in the manufacture of communication devices such as mobile phones, Wi-Fi devices and radios, and help in the transmission and reception of signals.

**Smart cars:** chips play an important role in the development of smart cars, Control Systems, Security and in-car entertainment.

**Household appliances:** includes household electronics such as televisions, air conditioners and washing machines, where chips contribute to improving their performance and saving energy.

**1.3. Quantum Computing:** Quantum computing employs quantum mechanical effects to perform computations, offering significant performance gains for specific problems compared to conventional supercomputers. It can handle quantum-safe encryption algorithms (Cybersecurity Review 2021).

**1.4. Encryption and Key Systems:** Quantum secure encryption provides solutions to the limitations of traditional public key technologies like RSA and ECC, enhancing security and resilience against attacks. (EGE 2022.)

**1.5. Governmental Policies:** Government policies in China and Taiwan significantly impact the semiconductor competition, with both countries providing support and incentives to develop their semiconductor industries (EGE 2022; Le Figaro 2022).

**1.6. Price Competition:** China and Taiwan compete directly in terms of pricing, offering more services at lower price points, potentially affecting the semiconductor industries of both countries ( BBC 2022). The price competition between China and Taiwan in the semiconductor field reflects the challenges and economic and industrial dynamics between the two countries. Here are some aspects that can affect this rivalry:

**Production cost:** China has relatively low production costs due to its large workforce and well-developed infrastructure. This gives Chinese companies a competitive advantage in terms of costs.

**Technological improvement:** Taiwan is famous for advanced technologies and high quality in the semiconductor industry. This can lead to more high-quality products and high performance, but it can also be associated with higher production costs.

**Market competition:** companies from China and Taiwan are facing global competition in the semiconductor market. Companies from both countries strive to offer products at competitive prices to maintain market share and attract customers.

**Specialization and diversity:** some Taiwanese companies are among the leaders in the semiconductor industry, and this allows them to offer specialized and diverse products. Specialization can help maintain higher profit margins despite price competition.

**Government support:** governments in both countries are intervening to support the semiconductor industry by providing financing and subsidies. This can affect the ability of companies to offer products at competitive prices.

Ultimately, the price competition between China and Taiwan in the semiconductor field reflects a delicate balance between technology, costs and quality. These dynamics can change over time based on technological developments, economic and political factors.

**1.7. Property Rights:** Both China and Taiwan have strong intellectual property laws, but enforcement varies, leading to concerns and challenges for some companies (BBC 2022.).

**1.8. Semiconductor Industry:** A highly competitive and rapidly developing sector, the semiconductor industry in China and Taiwan is characterized by significant investments in technology and research (EGE 2022).

## 2. Factors Driving and Structuring the Sino-Taiwanese Competition Over Semiconductors

**2.1. Economic and Strategic Importance:** Semiconductors are crucial for economic growth and national security in both countries, shaping their competition for market share and technological superiority (Britannica Encyclopedia 2022). Semiconductors represent a strategic sector of great economic and technological importance. This sector plays a vital role in the development and progress of technological and electronic industries. Here are some points that embody the economic and strategic importance of semiconductors and have influenced the rivalry between China and Taiwan:

**Biotechnology:** Semiconductors are used in a wide range of devices and applications ranging from smartphones to medical devices and industrial systems. So, countries and companies that manage to advance in this area achieve tremendous economic impact and strengthen their technological position.

**Innovation and scientific research:** The development of semiconductor technologies requires constant innovation and research, which contributes to enhancing scientific and technological progress and increasing competitiveness in the global market.

**Manufacturing and supply:** The production and manufacturing of semiconductors represents a prominent sector in the global supply chain. Taiwan and China are dueling to achieve leadership in this field to meet the growing demand for these technologies.

**Industrial dependence:** There are a lot of other industries that rely heavily on semiconductors, such as electric cars, renewable energy, artificial intelligence, and the Internet of things, which increases the importance of this sector.

**Technological independence:** The pursuit of the development of semiconductor technologies contributes to the achievement of technological independence of countries and companies, making them less exposed to the impact of global political and economic changes.

**The impact of cyber security:** Developments in the field of semiconductors are related to the advancement of communication technology and information security, and this enhances the importance of this sector from a strategic and defensive point of view.

Taiwan and China occupy leading positions in the field of semiconductors and strive to achieve dominance and superiority in this vital sector, making it a vital competitive area influenced by economic and technological developments in the world

**2.2. Market Size and Growth:** The semiconductor market's rapid growth attracts both China and Taiwan, leading to increased investments and efforts to capture a larger market share (Thra 2022; EGE 2022). The overall market price plays a decisive role in shaping the competition between China and Taiwan in the field of semiconductors. Here's how the overall market price can affect this rivalry:

**Attract customers and market:** Low prices tend to attract customers and manufacturers. In a competitive environment, companies that offer high-quality products at affordable prices can be more attractive to customers and achieve a larger market share.

**Profit margin and competitiveness:** If companies succeed in offering semiconductors at competitive prices and acceptable quality, this can lead to increased demand and, consequently, increased revenue, even if profit margins are tight.

**Investments and development:** The market price can affect the ability of companies to attract investments and allocate resources for research and development. Companies that are able to offer products at attractive prices increase the chances of attracting investments and accelerate technological progress.

**Technological superiority:** If China or Taiwan can offer advanced semiconductors at competitive prices, this can strengthen its technological position and make it outperform competitors in the global market.

**The influence of government and politics:** The market price may be related to government interventions and policies. Government support and infrastructure facilitation can help to achieve better competitiveness in the semiconductor market.

**Reputation and brand:** The market price can affect the reputation of companies and their brand. Providing good quality products at competitive prices may help build a positive reputation and increase brand value.

Thus, the overall market price shows a direct impact on the competitiveness of China and Taiwan in the field of semiconductors, and can be a pivotal factor influencing corporate decisions and strategies in this sector.

**2.3. Government Support:** Both countries receive substantial government support in the form of research and development funding, tax incentives, and subsidies, bolstering their semiconductor industries (EGE 2022; Le Figaro 2022).

**2.4. Competitiveness:** China and Taiwan view each other as major competitors in the global semiconductor industry, driving continuous rivalry and efforts to gain a competitive edge (Britannica Encyclopedia 2022). Both the Chinese and Taiwanese governments have provided significant support to the semiconductor industry with the aim of enhancing competitiveness and achieving technological progress. Below is an overview of government support from both countries:

China:

**National Industrial Development Strategy:** The Chinese government has launched several strategies aimed at the development of technological industries, including the semiconductor industry. These strategies include "Semiconductor industry and chip technology," and "Integrated circuit industry and green technology."

**R&D (Research and Development) investment:** The Chinese government has provided significant funding for semiconductor R&D, including the development of manufacturing technologies and chip technology technologies.

**Encouraging foreign direct investment:** China encourages foreign direct investment in the semiconductor industry by providing benefits and facilities to foreign companies that want to invest in this sector.

Taiwan:

**National plan for technological industry:** Taiwan considers the semiconductor sector as one of its priorities in the national plan for technological industry, and provides financial support and facilities to promote development and innovation in this field.

**Cooperation with the private sector and academia:** Taiwan encourages cooperation between the government sector, the private sector and academia to achieve pioneering technical developments in the field of semiconductors.

**Skills and Workforce Development:** Taiwan invests in developing labor skills and providing specialized training to support industry growth and increase competitiveness.

Government support in both cases is aimed at promoting technology, innovation and increasing competitiveness in the semiconductor industry, which in turn helps to strengthen the global position of China and Taiwan in this vital sector.

**2.5. Political Relations:** The complex political relationship between China and Taiwan affects the semiconductor competition, adding an additional dimension to the rivalry (BBC 2022).

**2.6. Technology Transfer:** Both countries aim to develop their advanced semiconductor technologies but heavily rely on foreign technology, leading to efforts to acquire technology through various means (EGE 2022).

The competition between China and Taiwan in the semiconductor industry is driven by various economic, strategic, and political factors, as both countries recognize the industry's significance in achieving future growth and competitiveness. The United States' policies also play a vital role, supporting Taiwan while imposing sanctions on China, which has intensified the conflict between the two parties.

### **3. Stakes of the Sino-Taiwanese Conflict Over Electronic Chips**

The competition's stakes are significant for both countries, and they face various challenges in the semiconductor industry, including intellectual property concerns, dependence on foreign technology, high research and development costs, talent shortages, and environmental and safety regulations (BBC 2022; Le Figaro 2022). Relations between China and Taiwan have a significant impact on the competition and the semiconductor industry between the two countries, as these relations are characterized by complexity and political and economic challenges. The following points summarize the impact of these relationships:

**Technical cooperation and Exchange:** While there are political tensions between China and Taiwan, there are also levels of technical cooperation and exchange between the two countries. Some companies and enterprises in Taiwan cooperate with Chinese companies in the field of semiconductors for mutual benefit.

**Impact on trade and investment:** China-Taiwan relations affect the flow of trade and investment between the two countries. The semiconductor industry is influenced by the trade and economic policies and decisions made by governments in China and Taiwan.

**Technology transfer and intellectual property rights:** There are challenges related to technology transfer and intellectual property rights between China and Taiwan as a result of political tensions. There may be concerns about technology transfer and leakage of technical information.

**The impact of political stability on investments and R&D:** Political tensions between China and Taiwan may affect the stability of investments and R&D in the semiconductor industry. Political instability can affect the decisions of companies and investors.

**Impact on brands and reputation:** The impact of China-Taiwan relations can be reflected on the brands and reputation of companies in the semiconductor industry. Companies may face challenges in building a positive reputation and customer trust in the market.

In general, China-Taiwan relations affect various aspects of the semiconductor industry through their impact on trade, technical cooperation, investments, and intellectual property rights. Political and economic tensions between the two countries may disrupt or enhance their competitiveness in this vital sector. The semiconductor industry between China and Taiwan faces many challenges that affect the competitiveness and cooperation between the two countries. Political tensions between China and Taiwan affect the economic and trade relations between the two countries, and this may complicate technical cooperation and technology transfer.

### **4. The United States of America's Policy Towards China in the Field of Semiconductors**

The United States has implemented export restrictions on semiconductor-related items, aiming to prevent China's progress in the semiconductor industry. The restrictions have led to tensions and complaints to the World Trade Organization (BBC 2022). Washington has used electronic chips in its economic war, or rather, its geostrategic conflict with Beijing. The administration of former President Donald Trump was able to cut off semiconductor supplies from Taiwan and others to

the Chinese company "Huawei" after Beijing banned access to all American chip technology. In October 2022, the administration of current President Joe Biden imposed a set of export controls restricting sales of advanced electronic chips to China, which include chips designed to run artificial intelligence applications, military supercomputers, as well as chip manufacturing equipment. Taiwan quickly jumped to the American side, announcing that it would not allow Chinese chip design companies to contract with Taiwanese chip factories to produce chips that could replace those that the United States no longer allows to be sent to China. US President Joe Biden has been more open than any US president in decades about defending Taiwan from a possible Chinese invasion, and Taiwan's semiconductor industry has also been a victim of Chinese government-backed industrial espionage and talent hunting campaigns. South Korea, one of the closest US allies in Asia, has indicated that it will also cut off chip supplies to China if Washington imposes global sanctions on it. Cutting off supplies will put China and Russia in a significantly weak technical position and hinder their manufacture of advanced military equipment. Observers say Taiwan's government is aware that China's goal is to end its strategic dependence on Taiwan's semiconductors and electronic chips, which Taiwan refers to as the "Silicon shield", as soon as possible. Of course, Taiwan is committed to US policies aimed at preventing this, although it generally prefers to be as calm as possible about this to minimize the reaction from China. Greg Allen, a semiconductor policy expert, says that given that US companies design more than 95 percent of the AI chips used in China, as well as produce the manufacturing equipment used in every Chinese chip factory, these export controls pose an extraordinary obstacle to China's ambitions to lead the world in AI technology and achieve semiconductor.

While Washington wants to prevent China from acquiring sufficient technology for self-reliance in the production of electronic chips, it may seek to undermine Taiwan's electronic chip industry as well due to several concerns. When automakers in the United States, Europe, Japan and their governments turned to Taiwan to fill the shortage of electronic chips in 2021, they gave Taipei political and economic clout in a world where technology is being recruited in the great power rivalry between the United States and China, according to the American "Bloomberg" network. So, the West considers Taiwan's grip on the semiconductor business to be a threatening point in the global supply chain, pushing many powers from Tokyo to Washington to increase self-reliance.

The main concern about Taiwan's dominance in the chip industry relates to the fact that it is under constant threat of a Chinese invasion, as Beijing refuses to give up the use of force to resolve the dispute over the status of the island. In previous years, as part of its ongoing military expansion, China has deployed missiles along the Taiwan Strait, periodically conducted military exercises near the island, and sent fighter jets and its aircraft carrier over and around the Strait in a show of force. China conducted military exercises around Taiwan, including simulated attacks and a blockade of the island, which it considers an integral part of its territory. The Group of Seven has consistently warned Beijing against any attempt to change the status quo with respect to Taiwan by force, and some of its members have sounded the alarm in recent days.

According to analysts, the biggest concern is that the Taiwanese company's chip factories would cause collective damage if China followed through on its threats to invade Taiwan. A military invasion of Taiwan could disrupt the supply of semiconductors and electronic chips and seriously disrupt dozens of high-tech companies that rely on them. The head of the Taiwanese company, Mark Liu, expressed concern in this regard when he warned last year that the military invasion would make TSMC factories inoperable (Independarabia.com 2022).

Washington's concern also relates to China's control over the electronic chip industry if it succeeds in annexing Taiwan to its sovereignty. In March, former US national security adviser Robert O'Brien said that his country would destroy Taiwan's highly developed chip

industry so that China could not seize it if it successfully annexed the island. "The United States and its allies will not let these factories fall into the hands of the Chinese," he said in press comments. He compared the order to the decision of the late British Prime Minister Winston Churchill to destroy the French naval fleet during World War II after the surrender of France to Nazi Germany, killing more than 1,000 sailors.

Like Taiwan, Japan and the Netherlands are also global giants in the semiconductor industry, along with the United States, the group of these countries dominates the market for complex equipment, which is a vital component of all chip factories. While there are Chinese companies that produce semiconductor manufacturing equipment, they produce only a small part of the many different types of equipment required for the production of chips, and the equipment produced by Chinese companies lags far behind the latest technologies in the United States, the Netherlands and Japan. According to the Center for Strategic and International Studies, the most advanced Dutch machines, for example, contain more than 100 thousand pieces and cost more than 340 million dollars each, rivaling the James Webb Space Telescope in terms of technological complexity.

On the other hand, the United States is intensifying its efforts to strengthen its capabilities in the chip industry and reduce dependence on external sources. Biden last year signed the long-awaited law CHIPS and Science Act, which allocates about 52 billion dollars to promote the production of microchips, the powerful engine of high-end electronics used in a wide range of products, including smartphones, electric vehicles, aircraft and military gear. Earlier, US Commerce Secretary Gina Raimondo stressed the need to reduce dependence on supplies from Taiwan, saying that "our dependence on Taiwan for chips is untenable and unsafe." During the Trump administration, Washington negotiated with Taiwan to establish a 12 billion-dollar chip manufacturing plant in Arizona. Similarly, it agreed with the South Korean electronics company "Samsung" on a USD 10 billion facility in Austin, Texas. The "Chips for America - Chips for America Act," passed by Congress last year, was also introduced to encourage the establishment of more factories in the United States.

In return, China is pushing to strengthen its domestic semiconductor manufacturing capacity. Beijing has pledged to allocate 150 billion dollars to expand the industry and increase self-reliance, within the framework of which plans have been made to build new semiconductor production plants. According to the Chinese National Bureau of Statistics, chip manufacturing in China grew by 33.3 percent in 2021. Observers expect China to produce more advanced chips than before (Independarabia.com 2023).

## **5. Results of the Sino-Taiwanese Competition for Electronic Chips**

The competition has resulted in increased investment and development in both countries' semiconductor industries, significant government support, market share gains, intellectual property concerns, and the policy of the USA towards the Chinese semiconductor industry is focused on several aspects, including Sino-Taiwanese competition in this area. Here's an overview of this policy:

**National security and technology:** The U.S. semiconductor industry is a vital sector in terms of national security and technology. Therefore, it may take restrictive and controlling policies to prevent the transfer of advanced technology to China.

**Combating technological dependence:** The United States seeks to reduce its dependence on semiconductor technology imported from China and promotes the development of a domestic manufacturing and design base to achieve technological independence.

**Laws and legislation:** The United States may impose laws and legislation to verify the use of American technology in China in accordance with national security standards.

**Support for domestic R&D:** The US government may provide support to domestic enterprises to develop advanced semiconductor technology and enhance competitiveness.



Alliances and international cooperation: The United States may strengthen cooperation with other countries regarding the semiconductor industry and share knowledge and technology to address Chinese challenges.

Export bans and sanctions: The United States may impose restrictions on the export of certain technologies and equipment to Chinese companies, and this may affect supply and competitiveness.

In general, the policy of the United States is aimed at maintaining the competitiveness of domestic industry and ensuring national security, and may take measures to control the transfer of technology and innovation to China. This policy directly affects the competition between China and Taiwan in the semiconductor field and may pose additional challenges for the two countries in this context of continued dependence on foreign technology (EGE 2022; Thra 2022; BBC 2022).

## **6. The results of the Chinese-Taiwanese competition on semiconductors**

The competition between China and Taiwan over semiconductors has produced several important results affecting the technological and economic sector both regionally and globally. Among these results are:

Sustainable technological progress: the competition between China and Taiwan in the field of semiconductors has pushed the sector to continuous technological development. This progress involved improvements in chip performance and the development of more advanced manufacturing techniques.

Advanced innovations: competitive pressure has pushed companies and researchers in China and Taiwan to innovate and develop new technologies, resulting in the production of chips with advanced functionality and new applications.

Market expansion and job creation: the success of China and Taiwan in the field of semiconductors contributes to the expansion of the domestic and global market, which creates greater opportunities for companies and investors and increases the number of jobs.

Economic and trade impact: the semiconductor industry spans a wide range of sectors, so the success of China and Taiwan in this area positively affects the two national economies.

Competitive price and quality: competition pushes companies to offer products at competitive prices and improved quality, which customers benefit from by providing better products at affordable prices.

Supply chain and technology evolution: competition stimulates the development of supply chain and advanced manufacturing technologies, supporting innovation and sustainability in the sector.

Political and geopolitical effects: success in this area affects the political and geopolitical context between China and Taiwan and on relations with other countries.

In general, the competition between China and Taiwan in the semiconductor field brings multiple benefits from technological progress and innovations to providing economic opportunities and providing benefits to the industry and the two economies. However, the potential challenges and risks in such an advanced competition should also be taken into account.

## **7. Conclusion**

The semiconductor competition between China and Taiwan holds profound economic and technological implications. The rivalry is driven by their investments and achievements in technology, as both countries aim to secure a competitive edge. The competition is expected to benefit the global semiconductor industry through innovation and reduced prices. However, political tensions between China and Taiwan may affect the stability of investments and research and development (R&D) efforts in the semiconductor industry. Political instability can affect the

decisions of companies and investors. Furthermore, the impact of China-Taiwan relations can be reflected in the brands and reputation of companies operating within the semiconductor industry. Companies may face challenges in establishing and maintaining positive reputations and in earning customer trust in a climate characterized by geopolitical tensions. In general, China-Taiwan relations affect various aspects of the semiconductor industry through their impact on trade, technical cooperation, investments, and intellectual property rights. Political and economic tensions between the two countries can either disrupt or enhance their competitiveness within this pivotal sector. The semiconductor industry is a technological and geopolitical intersection with significant implications for all stakeholders involved.

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