

Made in Taiwan: Exploring the emergence of TSMC in Taiwan's pursuit of nation branding

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ABSTRACT

Despite being diplomatically marginalized in the international arena, Taiwan has been able to forge a distinct path for itself through its economic prosperity and ideological alignments. Taiwan as a whole has taken advantage of its resources and ability to integrate with the global economy, and this strategic approach continues to serve as a core element of the state's foreign policy. This paper aims to further illuminate a relatively overlooked perspective concerning the role of the semiconductor industry in Taiwan's nation branding efforts. Within its aims and limitations, this paper argues that the industry serves as a soft power and leverage tool for the government to expand and strengthen unofficial ties, consequently serving broader benefits to reinforce Taiwan's legitimacy. The paper concludes that the semiconductor industry is implemented as a soft power form of economic power by the government, rather than of a traditional coercive, hard power.

Influence is a testament to the effectiveness of Taiwan's soft power. Given Taiwan's inability to wield the kind of hard and commanding power that Joseph Nye has characterized as the utilization of "coercion and payment" (Nye, 2009, p.160), the imperative arises to bolster the deployment of soft power in Taiwan's foreign policy pursuits. As Nye defines it, soft power encompasses the broad umbrella for the power of attraction, which refers to the use of appeal and persuasion to achieve a country's desired outcomes. This strategic approach of soft power has consistently served as a valuable instrument in the expansion of Taiwan's global presence by emphasizing its strengths and contributions to the international community. Taiwan's current foreign policy relies on fostering economic ties to compensate for the lack of official diplomatic relations resulting from Beijing's pressures and its enforcement of the "One China" principle. The efficacy of developing a strong national brand through the use of soft power has been particularly pronounced in the 21st century, as Taiwan sought to distinguish itself from China, while strengthening symbiotic relationships with unofficial partner countries.

Taiwan's recent overwhelming dominance in the semiconductor industry has reshaped the traditional geographical and economical components of the international status quo and the dynamics between countries' relationships. More specifically, semiconductors have become indispensable for the United States, China, and Taiwan (Cronin, 2022). Recent scholars have coined the theoretical terms "Silicon Shield" or "Chip Shield" to describe the phenomenon of Taiwan's role in the global economy. This terminology hints at Taiwan's crucial role

in the global semiconductor supply chain¹ — accounting for more than 90% of the production of high-end chips — and the "Silicon Shield"² ensures that countries, including the U.S. and Japan, enact measures to attempt to prevent the Beijing government from invading Taiwan by force (Nordin & Stünkel, 2022).

The notion that economic power can serve as leverage for political and diplomatic purposes is widely acknowledged. However, the implications of "Silicon Shield" and "Chip Shield" remain controversial. Despite the contemporary importance, there is little scholarship that specifically seeks to dive into the causal mechanisms and connections between Taiwan's semiconductor industry dominance to its broader underlying interaction with Taiwan's global and domestic challenges.

The formulation of diplomatic strategies is complex, dynamic, and multifaceted; as such, it is hard to quantify the precise extent to which Taiwan's quest for legitimation and recognition are interrelated with its economic interactions. This paper proposes that Taiwan's dominant semiconductor industry has emerged as a defining phenomenon in the government's diverse appeal and interchanges with other entities, states, and countries. This paper argues that the semiconductor industry emerged as one of Taiwan's most important diplomatic tools — allowing the government to promote Taiwan's image to influential countries without directly challenging its independence from China. The industry strengthens Taiwan's security and enhances its interaction with the international community by creating opportunities for innovation and cooperation, consequently projecting soft power and nation branding.

Taiwan's semiconductor industry does not necessarily comprise a form of hard power since the government does not implement aggressive economic coercions, such as sanctions. Instead, it promotes Taiwan's image as a dependable partner in the global economy. By analyzing this complex relationship between Taiwanese enterprises with the Taiwanese government, this paper seeks to shed light on this particular dimension of Taiwan's diplomatic strategy and present a nuanced understanding of the centralized role that the semiconductor industry takes in the government's approach to shape Taiwan's legitimacy and credibility.

This research paper primarily centers on the dynamics of nation branding, diplomacy, and soft power in relation to Taiwan, rather than analyzing Taiwan in the context of U.S. and China relations. Before examining Taiwan's semiconductor industries' intertwinement with the nation's diplomatic approaches, it is important to consider the existing literature on Taiwan's unique background and historical context. Taiwan's diplomatic strategies and the global importance embodied by the Taiwanese Semiconductor Manufacturing Company (TSMC) are recurring themes that warrant further understanding. According to Companies Market Cap, which ranks publicly listed semiconductor companies based on market capitalization, the semiconductor industry is also dominated by other Taiwanese companies, such as United Microelectronics Corporation, MediaTek Inc, and Advanced Semiconductor Engineering, Inc.³ However, given the logistical constraints of this study, the following paper will focus solely on TSMC. Moreover, it is beyond the scope of this research paper to engage in the suggestions or critique of current and past policies and seek to predict Taiwan's future cross-strait tensions. Rather, the paper draws from the economic, political, and historical factors that have shaped the role of the Taiwanese Semiconductor Manufacturing Company in Taiwan's development, and aims to provide answers to the overarching question: how has diplomatic recognition emerged as a crucial phenomenon and become salient in Taiwan's semiconductor industry?

The paper is organized as follows: The first section provides context for understanding Taiwan's diplomatic strategy by presenting a historical overview of Taiwan's diplomatic status. It also explores the development of Taiwan's semiconductor industry, focusing on Taiwan Semiconductor Manufacturing Company (TSMC), and how it has come to be known as Huguo Shenshan (護國神山) — the 'magic mountain that protects the nation'. The second section offers concrete examples of the industry's use as diplomatic tools. This consists of a literature review, which will discuss the traditional academic theories of statehood, soft power, pragmatic diplomacy, nation branding, and their interrelation with Taiwan. The

second section adopts a mixed qualitative methodology approach, with a particular emphasis on case studies and in-depth interviews with subject matter experts aggregated to formulate a set of descriptive statistics. Case studies of TSMC's investments in Taiwan and the US, as well as specific Taiwanese government policies, provide insights into the ways in which soft power has emerged in actual implementation. Primarily, it also focuses on measures that Taiwan and TSMC have taken to preserve their dominance in the semiconductor industry.

Together, these sections complement the paper's overall argument and shed light on the complex relationship between Taiwan's semiconductor industry and related networks with other states.

Historical Background and Literature Review

This section provides historical context for the formulation of Taiwan's diplomatic isolation, Taiwan's economic development following Japan's withdrawal in 1945, and the emergence of the Taiwanese Semiconductor Manufacturing Company (TSMC). Subsequently, it presents a comprehensive analysis of the relevant existing literature regarding the concepts of statehood sovereignty and pragmatic diplomacy, soft power and nation branding, and how that interrelates with Taiwan's past, present, and future position.

Taiwan's Diplomatic Isolation

Following the defeat of the Nationalist Party (more notably known as Kuomintang) in the 1949 Chinese Civil War, KMT-led Chiang Kai Shek retreated to Taiwan to establish the Republic of China (ROC) in Taipei, while Mao Zedong's party established the People's Republic of China (PRC) in mainland China. Throughout, the Kuomintang, or KMT in Taiwan and the PRC in China both proclaimed themselves as the sole legitimate governing entity of China.⁴ At the time, both the ROC and the PRC rejected dual diplomatic recognition, implying that neither recognized the other as an independent and distinct sovereign state (Chiang, 2017). Matters quickly took a turn when in 1971, the United Nations General Assembly Resolution No. 2578 overwhelmingly voted to recognize the PRC's delegates as the sole representatives of China to the United Nations.⁵ The effects of the resolution were immediate, leading most countries (including the United States under Carter's administration in January 1979) to promptly shift to officially recognize the PRC as the sole legal government of China. Withdrawal from the UN marked a severe blow to ROC's legitimacy and its very existence, as it found itself marginalized and isolated from the international community. As of 2024, the PRC has formal diplomatic relations with 182 nations, compared to the mere 12 that Taiwan has. After Taiwan's transition from

an authoritarian regime under Martial Law to a prosperous democracy, various legal revisions have made it clear that the ROC has relinquished their claims to mainland China. Notably, this renunciation did not and does not signify that the ROC is then advocating for dual recognition. Rather, Taiwan's commitment to the PRC as the sole legitimate government of China provides it with considerable leeway to cultivate its respective political and economic objectives while "purporting to support the PRC's nationalist crusade" (Allen, 2004, p.196).

Through the various regime shifts and political movements between the late 1900s till early 2000s, many of the younger generations in Taiwan no longer resonate with the Chinese nationalism associations and ideologies that the Kuomintang placed on the 'Republic of China' (Lin, 2023). Nevertheless, PRC's "One-China Policy" (壹個中國原則) — the assertion that Taiwan is an inalienable territory of China — has persisted, and thus continues to impede Taiwan's attempts to achieve advancement in their legal and formal recognition as an independent state (Chan, 2009). It is important to note that Taiwan's identity does not just confine itself to the conflict between the PRC and the ROC. The historical roots of Taiwanese identity formation are significantly more complex and multifaceted, encompassing periods of aboriginal influence, Dutch colonization, Japanese rule, Spanish occupation, and Han Chinese immigration.

Taiwan's Economic Development Post 1950

Despite its relatively small domestic market, dense population, and limited natural resources, Taiwan has managed to transform itself into a strong export-oriented economy over the past few decades. Its economic development timeline is categorized into four main phases: the primary import substitution phase (1952-1957), the transition and export promotion phase (1958-1972), the secondary phase of import substitution (1973-1980), and the promotion of strategic and high-tech industries phase from 1981 to the present (Tsai, 1999).

During the primary import substitution phase, Taiwan resorted to interventions that sought to protect domestic infant industries through the implementation of trade barriers, U.S economic aid, foreign exchange controls, and import restrictions. In the book *Making Money: How Taiwanese Industrialists Embraced the Global Economy*, Hamilton and Kao (2017) describe how the withdrawal of Japanese professionals from technical industries in 1952 caused a rift in human capital resources, subsequently forcing Taiwan to improve its approach in economic reconstruction. Under KMT leadership, Taiwan implemented land reforms which, while serving political objectives, also significantly enhanced agricultural productivity (Johnston & Kilby, 1975). The increased productivity in the agricultural

sector led to a surplus in rice and sugar production. The tax payments collected from farmers helped support the expansion of three targeted industrial sectors: chemical fertilizers, plastics, and textiles, which in turn became the pillars for economic growth during the import substitution industrialization era (Tun-Jen, 2001).

While the import-substitution industries contributed greatly to Taiwan's economic growth through the 1950s, the overvalued currency and the reduction of US economic aid meant that this expansion quickly reached its limitations and was prone to destabilization (Ranis, 1979). To overcome this, Taiwan reoriented and transformed its economy to an export-oriented industrialized approach. In 1960, the 19-point programme was introduced "to encourage saving and investment, to reduce expenditure and to promote exports" (Tsai, 1999, p.73). This approach involved lifting previous protectionist measures, implementing fiscal incentives, and encouraging export financing for the development of private enterprises. This resulted in the surge and establishment of small and medium enterprises (SMEs) during this period.

With the implementation of export-oriented policies, labor-intensive industries quickly outpaced the former industries (fertilizers, plastics, textiles) and agricultural sectors that were targeted during the import-substitution era. However, in the early 1970s, Taiwanese individuals living in the United States provided valuable advice to policymakers in Taipei. This advice centered on industrial deepening strategies, which aimed to enhance the sophistication, efficiency, and value-added capabilities of Taiwan's industrial sector. They advocated for the prioritization of developing cutting-edge technologies, influencing the Taiwanese government to turn its focus on the privatization and development of science and technology capabilities for its revised industrial policy (Tung, 2001). Subsequently, the Taiwanese government made significant investments in bolstering the state's information and communication technology (ICT) industry by cultivating human talent, developing infrastructure, and supporting research institutes. In particular, the establishment of the Industrial Technology Research Institute (ITRI) in 1973, and the Hsinchu Science-based Industrial Park (HSIP) in 1980 were instrumental. While ITRI was a non-profit organization free from bureaucratic control, it remained the recipient of considerable state support. The institute has been pivotal in the development of the ICT industry, as it coordinated research and development efforts on products, housed high-skilled engineers returnees from California's Silicon Valley, and enabled collaboration between SMEs.

This strategic shift laid the foundations for Taiwan's transformation into a high-tech powerhouse. Hobday argued that the government's motive in the promotion of

high-tech industries was to merely exploit the fast-growing opportunity that it presented, “in the early days there was little strategic thinking about the place of electronics and information technology in economic development” (Hobday, 1995). Regardless, by the late 1980s, Taiwan’s economy shifted away from lower-value agricultural, non-consumer goods, and the “export of labor-intensive industrial products” (Greene & Ash, 2007, p.39) and high technology manufacturing goods — semiconductors, personal computers, telecommunications — emerged as the primary drivers of the island’s economy.

The Creation of the Taiwanese Semiconductor Manufacturing Company

The information and communication technology (ICT) sector in Taiwan quickly took an upward turn, and by the end of 1999, output exceeded the \$5 billion benchmark — ahead of France and the UK, and just behind the USA, Japan, and South Korea (Mathews, 1997). Fast forward to 2022, Taiwan ICT’s year-on-year revenue amounted to \$168 billion⁶ (Taiwan Semiconductor Industry Association, 2022). Particularly, Taiwan dominates in the outsourcing of semiconductor, or integrated circuits (IC), manufacturing processes, known most notably as “fab”, or the “foundry” market. In the month of March in 2023, integrated circuits (IC) accounted for 41.3% of Taiwan’s total exports (Bureau of Trade, 2023). One particular player stands out in the forefront of this phase: the Taiwanese Semiconductor Manufacturing Company, commonly referred to as TSMC.

Founded in 1987 by Morris Chang, a veteran executive from Texas Instruments, TSMC pioneered the pure-play foundry business model. By exclusively focusing on the manufacturing of chips, TSMC allowed other chip design firms without fabs to flourish, while it allocated capital into the innovation of research and development of smaller and more complex integrated circuits (Feigenbaum, 2020).⁷ With this specialization business model, TSMC quickly rose to become the world’s largest semiconductor foundry in terms of market value, and as of December 2022, it was responsible for more than 56% of the world’s foundry market share (TrendForce, 2022). By comparison, South Korea’s Samsung accounted for 17% of the chip fabrication market share, and China accounted for a mere 8.5%. Moreover, it is worth noting that TSMC alone contributed to 4% of Taiwan’s GDP in 2018. Through its substantial investments in research and development, TSMC has become the pioneer in fabrication of cutting-edge advanced chips, which consist of those with dimensions below the node size of 10 nanometer (nm). As of 2023, the market for 5nm semiconductor chips is heavily monopolized, with TSMC and Samsung being the only ones capable of producing them. Notably, TSMC has attained an overwhelming market share of almost 90% in the production of advanced 5 nm to 10 nm nodes (Counterpoint Research,

2022). In December 2022, TSMC announced that the manufacturing of 3nm technology had commenced, with Apple reportedly ordering a mass supply of it.

TSMC’s unparalleled dominance in the semiconductor industry, its Taiwanese roots, and pivotal position in the global supply chain has garnered it the appellation Huguo Shenshan (護國神山) — the ‘magic mountain that protects the nation’ — among the general Taiwanese population. This term stems from the notion that TSMC’s success is inextricably linked to the success of Taiwan, and its company is consequently seen as an emblem asset that safeguards Taiwan’s sovereignty and economic independence. More so, TSMC has become synonymous as a representation of Taiwan’s technological prowess and innovation (Shattuck, 2021).

Statehood Sovereignty and Pragmatic Diplomacy

Article 1 of the 1933 ‘Montevideo Convention on the Rights and Duties of States’ outlines the international legal requirements for statehood, which includes the possession of the following qualifications: (a) a permanent population; (b) a defined territory; (c) government; and (d) the capacity to enter into relations with other states. Following this definition, it can be asserted that Taiwan meets the eligibility criteria for statehood. In practice, Taiwan operates as a *de facto* state, where it exercises authority over its own geographic boundaries, however its status as a sovereign *de jure* state is not universally recognized. Despite possessing the attributes of a *de jure* state, Taiwan is cautious about explicitly declaring formal statehood due to concerns about Beijing’s threats. However, without a formal declaration, Taiwan cannot achieve nor maintain statehood in the lens of international law (Grant, 1998). The lack of a *de jure* statehood presents Taiwan with challenges in limited options for official diplomatic relations, as well as exclusion from organizations that require statehood as membership legitimacy and the international community as a whole.

Through its democratic reforms, Taiwan has demonstrated that “that popular sovereignty is vested solely in the people of Taiwan” (Allen, 2004, p.202). Regardless of Taiwan’s advancements in the economic, cultural, and governance spheres, Janice E. Thomson defines the concept of a state’s sovereignty as “not an attribute of the state, but is attributed to the state by other states or state rulers” (Thomson, 1995, p.219). This definition highlights the notion that international actors matter, if not arguably more, than domestic factors in determining Taiwan’s sovereignty and ability to make independent decisions. Timothy Rich’s article, “Status for sale: Taiwan and the competition for diplomatic recognition”, complements this by arguing that more often than not, the mere presence of internal sovereignty is not sufficient enough to warrant or

cause international recognition (Rich, 2009). Rich contends that despite Taiwan's de facto governance, and it having control over its own geographic boundaries, its ability to secure diplomatic recognition largely depends on its ability to compete with China in terms of economic and strategic incentives to other states. While both recognized and unrecognized states are allowed to similarly engage with the international community, unrecognized states like Taiwan constantly find themselves "striving to secure international acknowledgment of its statehood" (Payne & Cassandra, 2002, p.440). Payne and Cassandra note that despite Taiwan's economic power, it still heavily invests in diplomatic efforts to seek recognition from less influential and smaller states, which underlies the crucial intertwinement between recognition and state survival (Payne & Cassandra, 2002).

As best put in the words of Abid Hussain, diplomacy in a sense "acts like a bee which picks up nectar from flowers without ruffling the petals or preventing the flower from growing into a fruit" (Hussain, 2006, p.35). Thus, recognizing the importance that international actors have on its own political legitimacy and state security, Taiwan has since adopted a creative, flexible approach to diplomacy to cultivate and expand its unofficial partnerships. Jie Chen characterizes this approach, which was extensively practiced by Taiwan's first democratically elected president Lee Tung Hui, as "pragmatic diplomacy" (Chen, 2002). Pragmatic diplomacy, as Chen elaborates, emphasizes economic inducement returns, cultural exchanges, ideological alignments, as links to construct a collective identity and overcome the state's isolation in the international arena. In all, pragmatic diplomacy is a way to increase Taiwan's visibility worldwide (Hickey, 2006). Thus, it has been made clear throughout the years that, when the Taiwanese government interacts with other foreign bodies, economics serves as a critical aspect of Taiwan's foreign political objectives, rather than it being an autonomous, independent driver force (Rich, 2009). These efforts have been particularly practiced by the Democratic Progressive Party (DPP), whose goal centers around advocacy for a sovereign-independent Taiwan, free from unification with China. Lynch expands on this notion by suggesting that pragmatic diplomacy aims to reduce China's influence by emphasizing "Taiwanese subjectivity" (台灣主體性). The DPP then hopes that to some extent, the enhancement of these links can help Taiwan be understood as an independent collective (Lynch, 2004). In contrast, Leifer contends that these connections only serve to a certain degree of utility so long as the Taiwanese government does not take decisive actions to officially establish recognition of its ambiguous international status (Leifer, 2001).

Soft Power and Nation Branding

Pragmatic diplomacy can then be considered as a facet

of soft power. Soft power, as characterized by Nye, refers to "the ability to affect others to obtain the outcomes one wants through attraction rather than coercion or payment" (Nye, 2008, p.94). In accordance with this definition, Taiwan has placed a strong emphasis on its economy as a means of enhancing its soft power. Delisle noted that between 2000 and 2010, as Taiwan's capital and labor faced increasing competition from China, Taiwan sought to assert its worth as a "valuable and reliable partner in an increasingly globalized economy and, especially, in that economy's higher-end segments" (DeLisle, 2010). To achieve this, Taiwan uses "nation branding" as a means of promoting a positive image of the state in the international arena. Rasool argues that soft power is in essence an exercise in nation branding, and while the breadth of nation branding is still an evolving developing field, it can be comprehensively defined by Simon Anholt as "the systematic process of aligning the actions, behaviors, investments, innovations and communications of a country around a clear strategy for achieving a strengthened competitive identity" (Anholt, 2008, p.22).

Taiwan's semiconductor industry, particularly TSMC, provides a context where Fan's (2006) terminology for nation branding, such as "product related" and "national level", is pertinent. "Product related" pertains to the image of a product attributed to its country of origin, which in this context refers to Taiwanese chips. The term "national level" relates to the overall image of a country, that is Taiwan's portrayal as a "semiconductor powerhouse." By managing its reputation as a leader in the semiconductor industry, Taiwan enhances its interests in the global competitive context, particularly given the constant marginalization that it faces in the international arena (Wang, 2008). However, it has been noted that the practice of nation branding reduces the complexity of a nation's intricate characteristics into a few key elements that the government deems attractive or desirable to the global market (Jordan, 2014). Furthermore, some have argued that the concept of "nation branding" is often used by states as a way to promote a country's image without addressing the underlying issues that affect its reputation (Anholt, 2010). Instead, Anholt (2010) notes that countries should focus on improving their governance, policies, and institutions, and let their reputation be shaped by their actions. While this simplified representation of TSMC can be effective in improving Taiwan's image to a certain extent, it risks glossing over the nuanced, diverse, and intricate aspects of the country. In other words, when the Taiwanese government projects itself as a semiconductor powerhouse, Taiwan's image is superficially tied to the industry.

It is evident that Taiwan has adopted a comprehensive approach to international relations that emphasizes soft power, pragmatic diplomacy, and nation branding.

By enhancing Taiwan's reputation and image, nation branding can help increase its soft power and influence, while pragmatic diplomacy can help build partnerships and collaborations that promote shared interests and values. This approach has enabled Taiwan to break through certain degrees of diplomatic isolation and participate in international economic entities, such as the World Trade

Organization, Asia-Pacific Economic Cooperation, and the Asian Development Bank. By relying on these organizations, Taiwan was able to maximize influence and amplify their voice on the global stage (Burger & Wivel, 2018).

Research Methodology

This research paper implements a mixed qualitative methodology approach, with the particular use of case studies and in-depth interviews that were aggregated to formulate a set of descriptive statistics. This method enables a close examination of the data within a specific context, as well as an investigation of the underlying relationships of real-life phenomena through detailed analysis of a limited number of conditions (Zainal, 2007). The mixed qualitative approach allows for a comprehensive analysis of the subject matter through the use of multiple data sources, case studies and in-depth interviews, while also accommodating the diverse perspectives of the participants.

Research Design

In order to examine how the rhetoric related to Taiwan's diplomatic recognition is deployed in its economic integration with the global stage, I will analyze specific trade agreements and published public statements regarding TSMC's 2022 fab expansion in Arizona, as well as TSMC's capacity expansion in Taiwan.⁸ The recent introduction of the 2022 U.S. CHIPS and Science Act (referred to as the CHIPS Act), brought extensive global attention and discussion to Taiwan, prompting public statements from prominent political figures from the U.S. and Taiwan, including Joseph Wu, President Joe Biden, Economic Minister Wang Mei-Hua, and President Tsai Ing Wen. By subjecting political speeches to specific keywords, I will explore how politicians indicate a shift in policy implementation and frame these shifts in the context of underlying assumptions: that the ICT industry is an important means of diplomatic exchanges.

Subsequently, 13 in-depth interviews were conducted individually with subject matter experts who have demonstrated extensive engagement, either in an academic or professional capacity, in the study of Taiwan's role in the international relations sphere. A total of 13 questions were prepared for the interviews, with the first seven questions

aimed at assessing the interviewees' subjective opinions on a scale ranging from 1 to 5. It was made explicit that the degree of 1 indicated the least confidence, importance, or integration with the question or statement, while the degree of 5 indicated the highest level of confidence, importance, or integration. The remaining six questions were open-ended questions meant to provide the interviewee with a level of agency in controlling the specific wording and content of their responses. This approach was employed to facilitate a more comprehensive and nuanced expression of the interviewees' perspectives and experiences. I used an interpretivism approach on all 13 interviews, which included transcribing recorded responses, and subsequently aggregating them to formulate a set of descriptive statistics that would allow me to gain a subjective broader knowledge. By complementing both methods, I aim to understand the Taiwanese phenomenon in a comprehensive and holistic manner; the interviews allow for an opportunity to gain insight into how experts interpret and order the world. Using this qualitative dataset, I anticipate that my investigation will uncover a pattern and phenomenon whereby the semiconductor industry has emerged as a form of soft power diplomacy in opportunities to network with other countries. By analyzing statements from politicians and interview responses from subject experts, I will examine the research question from a range of perspectives and better understand the underlying relationships in a broader and more generalizable context.

By using the U.S. CHIPS Act, TSMC's domestic expansions, and Taiwan's semiconductor investment in the U.S. as the primary case studies, I will use critical discourse analysis methods to reveal the role that the semiconductor industry plays in Taiwan's search for national security and political recognition. Public statements and subject experts' perspectives will showcase the implications of different trade policies as a response and reflection with respect to the way in which soft power, nation branding, and the semiconductor industry are connected, whether in an explicit or implicit manner. Subject experts' responses or commentaries on policies will serve as an internal objective perspective, revealing the degree to which soft power and nation branding forms an implicit part of the data.

Case Study: TSMC's \$44 billion Fab Investment in Arizona

On December 6th, 2022, Taiwanese Semiconductor Manufacturing Company (TSMC) publicly announced its construction of a second fab in addition to its first fab in Arizona. The initial facility is scheduled to commence the production of 4 nm process technology in the year of 2024, whereas the subsequent facility is expected to commence

the production of 3 nm process technology in 2026. These substantial investments of nearly \$40 billion constituted the most extensive foreign direct investment in the annals of Arizona and is among the largest foreign direct investments in the history of the United States (TSMC, 2022). This investment was announced in May of 2020, shortly after worldwide supply chains were disrupted due to the onset of the Covid-19 pandemic. While TSMC has historically dedicated itself to the development of cutting-edge technology, the coronavirus pandemic marked a significant shift in its position, as the company found itself entangled in geopolitical considerations.

The pressure caused by global supply chain issues emphasized TSMC’s dominance and crucial role in the global economy and the chip shortages prompted President Biden’s administration to address and take aggressive proactive measures in the semiconductor manufacturing industry. The CHIPS Act was signed into law on August 9, 2022, with plans for the allocation of \$54.2 billion in subsidies to bolster domestic semiconductor production and research. Additionally, the Act provides 25 percent tax credits for the manufacturing building and processing equipment of U.S. chip fabs, amounting to approximately \$24.3 billion over five years (National Institute of Standards and Technology, 2022). The CHIPS Act marked a commitment from the U.S. government to bolster its semiconductor manufacturing capabilities, thereby explicitly demonstrating its acknowledgement of the sector’s position as a matter of economic, national, and strategic security importance.

TSMC’s ceremonial event to commemorate the relocation of its inaugural machines at its Arizona manufacturing plant attracted a distinguished ensemble of attendees, including

U.S. President Joe Biden, U.S. Secretary of Commerce Raimondo, TSMC’s founder Morris Chang, and an array of TSMC’s prominent customers, including executives from Apple and Nvidia. The presence of these notable figures emphasized the high regard in which TSMC is held within the United States. Noticeable throughout 2021 and 2022, over the course of ten distinct remarks and attendees’ interviews delivered under varying circumstances, a recurring theme began to materialize with regard to talk about Taiwan. Frequently utilized terms such as “security”, “partner”, and “stability” became increasingly interrelated and associated with concepts of “economic prosperity” and “supply chains.”

From an economic perspective, there is limited empirical evidence in support of TSMC’s investment in Arizona due to the significantly higher labor costs in comparison to other countries. During a conference talk at the Brookings Institution in April of 2022, TSMC’s founder Morris Chang noted that semiconductor manufacturing is 50 percent more expensive in the U.S. than it is in Taiwan. Additionally, there is a relative lack of human talent in the U.S. compared to Taiwan (Brookings, 2022). That being said, TSMC’s decision may be primarily attributed to two factors: (1) customers’ (e.g Apple and Nvidia) demands for geographic diversification (2) and a strategic move towards further integration in the global economy.

Case Study: Increase in Visits to Taiwan

While correlation does not indicate direct causation, it should be noted that the number of visits to Taiwan by high-level delegations of U.S. lawmakers has exponentially

FIGURE 1. Official Visits to Taiwan from January 2017 to February 2023



increased from May 2020 to December 2022 in the wake of the global chip shortage and the CCP's increased aggressiveness in the international sphere. This trend showcases a potential causal indication of the significance of Taiwan's forefront role in the global supply chain, and its implications as a leverage tool in foreign interactions. Specifically, as observed in the news sector of the Government Portal of the Republic of China (Taiwan), delegation visits to President Tsai's office surged dramatically following supply chain disruptions in 2020 (See Fig.1).

With a closer look at the specifics of the visits, it can be derived that the level of visitors have increased as well. By "level", this paper notes it under whether the attendee is from a superpower nation, and the political seniority of that particular attendee. Prior to 2020, most delegation visits were directed to the Department of International Cooperation in Taiwan, a unit under the Ministry of Economic Affairs, which engages in economic and technical cooperations with other foreign entities. Visits to President Tsai's office were mostly from countries with official diplomatic ties to Taiwan, such as Solomon Islands, Tuvalu, and Paraguay (See Fig. 2).

After 2020, there has been an increasing frequency of

visits involving higher-ranked officials from the U.S., Europe, and Japan – observable in Figure 1 and 3. Most notably, U.S. House of Representatives Speaker Nancy Pelosi's visit to Taiwan in August 2022 made her the highest-ranking official to set foot in Taiwan in more than 25 years since 1997 (Taylor & Westfall, 2022). In a press event following the visit, Pelosi stated:

"I know that some Taiwan businesses, significant ones, are already planning to invest in manufacturing in the United States...the ingenuity, the entrepreneurial spirit, the brainpower, the intellectual resource that exists in Taiwan and the success of the tech industry here, for one sector, has been, really, a model. And again, we want to increase our relationships." (Pelosi, 2022)

Apart from Nancy Pelosi, other senior American officials' visits included Senator Markey, Senator Blackburn, Arizona Governor Ducey, Congresswoman Murphy, and members Wenstrup and Moulton from the US House of Representatives. All these visits to Taiwan and President Tsai's office were publicized by the Ministry of Foreign Affairs, and while the objective of the visits may have been to increase bilateral economic cooperations, they also served as a characterization of deeper ties, and a shift of diplomatic

FIGURE 2. Official Visits to Taiwan from 2017 January to 2018 May.

Date	Visit
2017-1-25	Head of the British Office Taipei visits the Office of the President
2017-11-3	Delegation from the European Parliament visit the Department of International Cooperation in Taiwan
2017-11-20	Delegation from the European Commission visit the Department of International Cooperation in Taiwan
2017-11-27	Two members from the German Parliament visit Taiwan
2017-11-30	Delegation of European Parliament members visit the Department of International Cooperation in Taiwan
2017-11-30	Delegation of US state legislative members visit the Department of International Cooperation in Taiwan
2017-12-4	Delegation of Greece's New Democracy Parliament visit the Department of International Cooperation in Taiwan
2017-12-13	Chairman of the American Institute Taiwan visit Minister of Economic Affairs
2017-12-17	Quaestor of the European Parliament leads delegation to Taiwan
2018-1-10	Delegation of Irish Parliament visit the Department of International Cooperation in Taiwan
2018-1-16	Delegation of Canadian Provincial Parliament visit the Department of International Cooperation
2018-1-31	Solomon Islands National Parliament Speaker visits President Tsai
2018-2-9	Member of the European Parliament visit the Department of International Cooperation
2018-2-14	Delegation of Luxembourg's Chamber of Deputies visit the Department of International Cooperation in Taiwan
2018-3-20	Deputy Assistant Secretary of the US State Department visit Taiwan
2018-3-27	Foreign Minister of Guatemala visit President Tsai
2018-3-29	Delegation of members from the Korean National Assembly visit President Tsai
2018-4-2	Delegation of US congressional members visit President Tsai
2018-4-9	United Kingdom Investment Minister visit Taiwan and President Tsai for 2 days
2018-4-10	Delegation of British parliamentarians visit President Tsai
2018-4-12	Paraguay Minister of Finance visit President Tsai
2018-4-24	Delegation of Central American allies visit President Tsai
2018-5-3	Delegation led by US Congressman Ruben Gallego visit President Tsai
2018-5-15	Tuvalu Prime Minister visit President Tsai
2018-5-20	Saint Lucia Minister for Infrastructure, Ports, Energy and Labour visit President Tsai

interactions (See Fig 3).

Case Study: TSMC's Domestic Expansion and Influence in Taiwan

Taiwan has demonstrated a keen awareness of the strategic implications that the semiconductor industry holds, particularly with respect to TSMC, in its pursuit for national security and enhancement of broader foreign relations. As argued in Chris Miller's book *Chip War*, both TSMC and Taiwan are committed to maintaining the central position and dominance in the global chip industry (Miller, 2022). Despite TSMC's \$41 billion fab investment in Arizona, the company planned to increase investment in Taiwan through the expanding production facilities from the Hsinchu Science Park to central and southern parts of Taiwan. In fact, TSMC's plans for a \$60 billion fab investment in Southern Taiwan Science Park and a \$16

billion fab investment in Kaohsiung, is already 2 times greater than its investment in Arizona (Liu, 2021).

TSMC has made it explicitly clear that it intends to retain the majority of its production capability and latest

technology within Taiwan, including the most cutting-edge chips and its research and development facilities. TSMC's chairman Mark Liu stated during a Taiwan Semiconductor Industry Association conference that despite the U.S. government's subsidies, it's improbable that this decision will be altered (Wu, 2023). TSMC's Arizona fab is scheduled to begin the production of 4nm chips in 2024, followed by 3nm chips in 2026 (TSMC, 2022). The Ministry of Economic Affairs reiterated the capacity of the Arizona fab can only accommodate for a production of 20,000 chips per month, and with TSMC's monthly production of 2 million chips, the US then only accounts for 10% of TSMC's total monthly production (Ministry of Economic Affairs, 2022).

In a recent press briefing addressing Taiwan's potential loss of its 'silicon shield', Minister of Finance Wang-Mei-Hua emphasized that "Taiwan's complete supply chain system is undoubtedly TSMC's most critical production base" (Reuters, 2022). She further followed up by citing TSMC's President, Wei Zhejia, who stated that it is impossible to "de-Taiwanize" (去台化) Taiwan's comparative advantage position in the semiconductor industry. This is evident in the constant reiteration that TSMC's most advanced chips and technology will not be offshored to other countries, the heightened emphasis placed on the importance of

FIGURE 3. Official Visits to Taiwan July 2022 to November 2022.

2022-7-27	Delegation of members from Japan's House of Representatives visit Taiwan
2022-8-3	US House of Representatives Speaker, Nancy Pelosi, visit Taiwan and President Tsai
2022-8-8	Prime Minister of Saint Vincent and the Grenadines visit Taiwan
2022-8-9	Delegation led by Lithuania Deputy Minister of Transport and Communications visit Taiwan
2022-8-15	US Senator Markey and bipartisan US congressional delegation visit Taiwan
2022-8-22	Japanese House of Representatives Furuya Keiji visit Taiwan
2022-8-22	Indiana Governor Erich Holcomb visit President Tsai
2022-8-25	Delegation led by US Senator Marsha Blackburn visit Taiwan and President Tsai
2022-8-27	Republic of Palau Minister of Justice visit President Tsai
2022-8-30	Guatemalan Foreign Minister visit President Tsai
2022-9-2	Delegation led by US Arizona Governor Doug Ducey visit President Tsai
2022-9-4	Tulavu Prime Minister visit President Tsai
2022-9-5	Perpetual Secretary Pitte visit President Tsai
2022-9-7	Cross-party French Senate delegation visit Taiwan
2022-9	Delegation led by Congresswoman Stephanie Murphy visit Taiwan and President Tsai
2022-9-13	Delegation led by Lithuania Vice Minister of Economy and Innovation visit Taiwan
2022-9-18	Delegation led by Czech Senator Jiri Drahos visit Taiwan
2022-9-21	Delegation led by Chair of the Czech Senate Committee on Education, Science, Culture, Human Rights, and Petitions, visit Taiwan and President Tsai
2022-10-6	Palau President visit President Tsai
2022-10-11	Delegation led by Canada Member of Parliament and Chair of the Standing Committee on International Trade, Judy Sgro, visit President Tsai
2022-10-12	Delegation led by Former US Representative, Eddie Johnson, visit President Tsai
2022-10-13	Delegations led by US House of Representative, Brad Wenstrup and Seth Moulton, visit Taiwan
2022-10-21	King Mswati III of eSwatini visit President Tsai
2022-10-24	Delegation of German National Parliament visit President Tsai
2022-10-27	Delegation led by Indonesia's cross-party House of Representatives visit President Tsai
2022-10-27	Lithuanian and Ukrainian parliamentarians visit President Tsai
2022-11-8	St. Christopher and Nevis Prime Minister visit President Tsai
2022-11-9	Delegation led by United Kingdom Minister of State for Trade Policy, Greg Hands, visit President Tsai

semiconductors in public discourse among politicians, the recognition of Huguo Shenshan (護國神山) as an emblem of defense that is acknowledged among the Taiwanese populace, as well as the government's continued implementation of protective measures in this particular industry (Wuebbels, 2005). These actions altogether reflect Taiwan's understanding of the critical role that the semiconductor industry plays in bolstering its broader economic and geopolitical position in the international arena, as well as the government's commitment to safeguard its technological sovereignty and advantages.

Government's Rhetoric and TSMC's Scope Expansion

In January of 2023, the Legislative Yuan of Taiwan formally approved and ratified the amendments to Article 10-2 and Article 72 of the Statute for Industrial Innovation, which included, among other changes, the provision of 25 percent of tax credits for annual research and development and equipment procurement expenses (Statute for Industrial Innovation, 2023). While the Taiwanese government has always provided financial incentives and subsidies to business development projects, these new modifications serve as a testament to their unwavering commitment to promoting innovation and entrepreneurship, while

concurrently strengthening the country's economic and national security interests through the integration of such policies. In the Executive Yuan overview, it was explicitly noted in written words that:

“Faced upon the pressure of international competition, our country should continue to maintain its existing comparative advantages, and further consolidate and enhance the position of our domestic industries in the global supply chain. This has become one of strategic value of importance for national security and economic development, thus there exists the need to introduce additional tax incentives.” / 「面對國際局勢競爭壓力，我國應持續掌握現有優勢，進而鞏固並提升我國產業在國際供應鏈之地位，已成為國家安全及經濟發展之重要戰略，有必要新增租稅優惠措施。」 (Statute for Industrial Innovation, 2023, p.1).

The Executive Yuan's legislative changes demonstrated a need for pressure within the government to protect their most precious and valuable asset: the semiconductor industry. The explicit use of the phrase “strategic value of importance for national security” demonstrates the semiconductor industry's use for leverage in both national security and the expansion of

FIGURE 4. Overview for the Amendments to Article 10-2 and Article 72 of the Statute for Industrial Innovation.

產業創新條例第十條之二、第七十二條修正草案總說明

為促進產業創新，改善產業環境，提升產業競爭力，產業創新條例（以下簡稱本條例）於九十九年五月十二日公布施行，歷經七次修正，最近一次修正公布日期為一百十一年二月十八日。本條例公布施行迄今已逾十一年，對協助產業創新有一定之助益。

臺灣長期在全球產業供應鏈存在緊密的合作關係，我國產業之獨特性與不可取代價值，已成為國際經貿鏈結之後盾。惟在全球供應鏈走向區域化及產業鏈進行重組之際，我國產業需因應新競合情勢並持續扮演要角。在一連串全球重大事件干擾全球供應鏈運作下，各國基於強化產業韌性與國家安全考量，發布關鍵產業發展政策，強調供應鏈自主與穩定，爭取次世代技術主導權，透過鉅額補貼或擴大租稅優惠，增加國內生產並吸引國際企業的投資。

面對國際局勢的競爭壓力，我國應持續掌握現有優勢，進而鞏固並提升我國關鍵產業在國際供應鏈的地位，政府實有必要新增租稅獎勵措施，爰增訂第十條之二，明定於中華民國境內進行前瞻技術創新且居國際供應鏈關鍵地位之公司符合適用資格條件者，其投資於前瞻創新研究發展之支出金額百分之二十五得抵減當年度應納營利事業所得稅額；購置先進製程之全新機器或設備，支出金額百分之五得抵減當年度應納營利事業所得稅額。另外，為避免租稅過度優惠，爰參考 OECD 全球企業最低稅負制之精神，訂定有效稅率應達 15% 之適用條件，並修正第七十二條施行期間規定。

Taiwan's international space. The Taiwanese government is not shy to admit the semiconductor's strategic importance to the state and continues to consolidate its existing advantages (See Fig 4).

Throughout the increased legislative changes and government support, Taiwanese politicians have undergone a noticeable shift in their rhetorical emphasis on the country's strategic value for defense. More specifically in public official statements, there has been a marked increase in the usage of terms such as "chips", "supply chain", and "key player." In the 2022 National Day Address, President Tsai stated that "the concentration of the semiconductor sector in Taiwan is not a risk, but is the key to the reorganization of the global semiconductor industry." This was followed by language denoting a stronger stance of ensuring that Taiwan "will continue to maintain its advantages and capacity in leading-edge semiconductor manufacturing processes, and will help optimize the worldwide restructuring of the semiconductor supply chain [emphasis added], giving our semiconductor firms an even more prominent role" (Office of the President, 2022, para. 25). In a visit to TSMC's Fab 18 in Tainan, President Tsai reiterated: "we feel very proud of the TSMC name, and we will continue to be in the past many years and in the future", further emphasizing that "the government pays much attention to the semiconductor industry because it is crucial strategic industry for national development" (Office of the President, 2019, para.6). TSMC, with the Taiwan name explicitly noted in its brand, has become strategically aligned with the branding of Taiwan as a nation in itself. During an address at the 2023 International Religious Freedom Summit, You Si-Kun, acting as speaker for the Taiwanese parliament, emphasized the significance of Taiwan's position as a central player in the global supply chain, asserting that: "Taiwan has produced the best semiconductor chips and will be very important for global trade as well." Further they expressed concern that "if Taiwan cannot be safeguarded very carefully, it will be very dangerous to global trade as well as global peace."

At a conference hosted by the Brookings Institution in 2022, Taiwan's Minister of Finance, Wang-Mei-Hua stressed Taiwan's crucial role in the semiconductor supply chain in relation to Taiwan's peace defense. Specifically, Wang noted that "Taiwan has a very important role in the semiconductor supply chain. We dominate the foundry area. Everyone needs more advanced semiconductors. Taiwan will be a key player in the world and to make global prosperity, and thus make Taiwan safer." Effectively, through consistent emphasis on Taiwan's pivotal role in the semiconductor industry, the government aims to solidify its association with these companies in the global supply chain and position itself as a leading innovative hub. This strategy achieves to affirm its status as a desirable partner for collaboration, thereby gaining diplomatic leverage and enhancing its international

standing.

In the Ministry of Foreign Affairs' (MOFA) proposed budget of the fiscal year of 2023, in one of the columns for international cooperation, a proposed project was to: "Utilize our country's advantages in information and communication technology (ICT), and promote technology cooperation programs with our diplomatic or friendly developed countries. Through the assistance of our ICT advantage industries and technologies, we aim to enhance their level of information and drive the development of our country's ICT industry." (Ministry of Foreign Affairs, 2023, p.9)

Ever since 2015, budget proposals have started to explicitly include the ICT's industry as a measure to promote bilateral relationships with other foreign entities. It is safe to say that Taiwan's Ministry of Foreign Affairs has demonstrated an emergent awareness of the state's comparative strengths in the semiconductor, information, and communication technology industries through these proposals. For the fiscal year 2020 budget proposal, MOFA stated on page 42 that Taiwan will "promote the strength of our high-tech industries and technological R&D capabilities, and build a good image of our high-tech country." This could be interpreted to mean that the government hopes to leverage these strengths and translate the intensification of economic relations into showcasing the state's legitimacy, as well as bolster its diplomatic power.

Taiwan has acknowledged the need to further explore new means to strengthen its ties with states that do not extend official diplomatic recognition. By being able to utilize nation branding and distinguish itself from the PRC, be it by highlighting its origin as a bubble tea producer, a vibrant democracy, or a semiconductor powerhouse, Taiwan is able to translate those symbolic assets to create opportunities that bolster its legitimacy and visibility in the world.

Taiwan's Energy and Water Shortages

It is evident that the Taiwanese government has reached a consensus that the semiconductor industry is deemed of a larger importance than other industries — both locally and globally (Zhong & Chien, 2021). This notion of Huguo Shenshan has emerged to symbolize a national champion's value of pride to the government.

However, the industry comes with substantial environmental costs. TSMC is a significant water consumer, requiring up to 30 liters of water to manufacture a singular chip that resides in a phone or a laptop (Rosen, 2016). The 2021 Annual Report of TSMC disclosed that the aggregate annual water usage (measured in cubic meters) was 82.6 million cubic meters, marking a 7 percent increase from the previous year (Taiwan Semiconductor Manufacturing

FIGURE 5. The Ministry of Foreign Affairs 2023 Budget Estimation.

外交部 預算總說明 中華民國 112 年度	
重要計畫項目	實施內容
	六、制度化與資網安先進國家之資安合作，推動參與政府或非政府間資安議題之組織或倡議，以提升整體資安能力。 七、運用我國資通訊科技（ICT）優勢，推動與我邦交國或友好發展國家之 ICT 技合計畫，透過我 ICT 優勢產業技術協助，提升其資訊化程度，並帶動我國 ICT 產業發展。 八、持續推動爭取加入 CPTPP 等重要區域經濟整合機制。 九、與歐盟及歐洲各國洽簽相關協定，增進互惠互利實質關係；續推動臺歐盟 BIA 及推廣「臺歐連結獎學金」及「歐洲重要價值夥伴」計畫（EVIP），加強各領域之連結與合作；具體落實「強化歐洲鏈結計畫」以對接歐盟所提「全球通道計畫」，強化與歐盟及歐洲國家多層次、多面向之實質合作與交流。 十、持續推動與美國、日本、澳洲、歐洲及理念相近國家合作辦理「全球合作暨訓練架構」（GCTF）。

Company, 2021). For comparison, Taiwan's Ministry of Economic Affairs Water Resources Agency estimated that the national domestic consumption of water for the year of 2021 was 2.2 billion cubic meters, and 49.9 million cubic meters for the city of Hsinchu. This figure highlights the fact that TSMC alone used the equivalent of 3.6% of the national domestic water consumption, and 165.4% of the city of Hsinchu. This situation poses a huge environmental challenge for Taiwan, as it is already grappling with its worst drought in almost a century (United States Department of Agriculture, 2021).

Since early 2018, Taiwan has been tackling its crippling water shortage and droughts, directly affecting its two biggest industries, namely agriculture and semiconductors. In late 2020, the government, along with the Council of Agriculture, attempted to ration water usage by suspending water supplies for first and second crop of rice paddies farmlands in Taoyuan, Hsinchu, Miaoli, Taichung, Chiayi, and Tainan cities. While the semiconductor and other industrial industries were asked to reduce their water intakes by 13 percent, nonindustrial sectors such as hair salons, were asked to reduce it by 20 percent (HsinChu County Government, 2020). The water suspension, which impacted over 180,000 hectares of farmland, represented the largest such measure taken in the past two decades. Notwithstanding the offer of monetary compensation

for lost income, the suspension had a significant negative impact on the livelihoods of over 60,000 Taiwanese farmers (Narvaez, 2022).

Despite the lost livelihoods of rice farmers, it can be deduced the Taiwanese government was willing to make that sacrifice and tradeoff, making the decision to choose the semiconductor industry over seemingly less important businesses. In a BBC interview, a farmer named Chuang, expressed his frustrations saying:

“We have also taken into consideration the national economy, but they (government) should not have completely cut off our water supply. They could have provided us with water for one or two days per week, and farmers would have found a way to cope. However, they have now completely severed our water supply, and farmers are left with no solution... They (government of Taiwan) have placed their entire focus on semiconductors” (Sui, 2021).

In another report by Mirror Media, when asked about the continuous water intake by semiconductor industries despite the severe water shortages, an anonymous former official from the Taiwanese Water Resources Agency explained, “that’s a requirement of national policy, and we have to comply. Agriculture consumes a large amount of water but has low output value, while industry has high output value. What would the factories worth tens of billions of dollars

do if we cut off their water supply?” (Yi, 2021). It is worth noting that, most protests by farmers were directed at the sudden water supply cut off by the government, rather than highlighting the unfair supply of water and favoritism to TSMC and other semiconductor companies. This case thus highlights Taiwan’s delicate balancing act between economic priorities and domestic concerns. The government must navigate the needs of industries with varying profit outputs while ensuring these sectors contribute to shaping the country’s diplomatic stance on the global stage.

Subject Expert Interviews

Interviewees Screening

In the context of Taiwan’s contemporary approach to its foreign policy and TSMC’s role in it, in-depth interviews were conducted to gain valuable insights from individuals who possess relevant knowledge and can contribute to understanding this specific research interest.

Over the course of two months, fifteen interviews, each lasting between 30 to 60 minutes were conducted. To ensure diversity of expert perspectives on this matter, a maximal variation approach was employed. This approach involved purposeful sampling of individuals, which differed in professions, or in particular characteristics and traits of interest (Creswell, 2002). Although not all of the interviewees have privileged access to the decision making procedures within the specific Taiwan domain, all of them

have at least five years of particular research expertise in either cross strait relations, Taiwan’s foreign and domestic policies, international political economy, and/or security studies in the Pacific Asia. In this research, the fifteen subject experts’ perspective(s) on Taiwan were classified into one or more of the following categories: policy analysis (7), academics (9), and news editors (3). As in an exploratory expert interview, the interviewees from the field of interest can contribute as an external source of knowledge (Bogner & Menz, 2009).

Data Collection and Sample Size

In this study, semi-structured in-depth interviews were employed to explore the specific role of the semiconductor industry in the Taiwanese government’s pursuit of diplomacy. This approach was utilized primarily to take advantage of the method’s flexibility and versatility, and thus to avoid constraining subject responses. By providing subject experts with 10 minutes per question to express their views, semi-structured interviews allowed the opportunity for them to follow up on emerging ideas and explore the depth of their perspectives. Moreover, open-ended questions were utilized to minimize external influence and promote free expression, while providing the space for interviewees with the necessary safety to discuss politically sensitive topics. This was achieved by ensuring the interviewees that their full transcribed responses would not be released, as well as making known that they had the choice to decide on which specific responses they would not be comfortable answering.

FIGURE 6. Total Sum of Q1 to Q7 per Interviewee..

Interviewee	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Grand Total (out of max 35)
Research Associate focusing on geopolitics of the Indo-Pacific	3	4	4	4	5	3	5	28
Journalist focusing on contemporary politics and society in Taiwan	3	5	3	3	2	2	3	21
Professor of East Asian Studies	5	4	4	3	4	3	5	28
Professor specializing in security and international relations in the Asia-Pacific	4	4	3	3	4	4	3	25
Former Diplomat and current commentator and Professor specializing in Taiwan	4	4	5	4	5	5	3	30
China and Taiwan Analyst	3	4	3	3	3	1	2	19
Research Fellow and Professor with interests in Taiwan politics and security issues in the Asia-Pacific	3	4	3	3	4	3	2	22
Professor specializing in technology in East Asia	4	4	5	4	4	3	3	27
Research Fellow on foreign and defense policy	5	4	4	4	5	2	3	27
Research Fellow at a national academy	3	3	3	2	5	3	3	22
Professor focusing on the international politics of East Asia	3	4	4	3	4	3	2	23
Vice President for technology and economic policy think tank	3.5	4	5	5	5	2	4.5	29
Professor of Political Science focusing on international politics of East Asia	3	4	4	4	5	4	3	27
Professor specializing in Asian Studies	4	4	4.5	4	5	4	4	29.5
Former Program Coordinator at Taiwan-focused policy incubator	4	3	4	3	5	4	4	27
Grand Total (out of max 75)	54.5	59	58.5	52	65	46	49.5	

A list of guiding questions was created and used to help guide the interview process. The first seven questions were each answered on a 5-point scale, while the remaining seven questions were free-response and open-ended. The questions were designed such that all participants had the opportunity to address core issues of interest for this study.

Findings & Interpretations

An interpretive analytical approach was implemented to evaluate the relationship between Taiwan's semiconductor industry and its foreign relations. The questionnaire employed a scoring system ranging from 1 to 5, with a maximum cumulative score of 35 and a minimum score of 7. A score of 35 would then suggest a direct, absolute, and significant relationship between Taiwan's semiconductor industry and the government's conduct of national security and diplomacy, as determined via aggregated responses across the fifteen interviewees.

The average score across interviewees from Question 1 to Question 7 ranged between 3.07 and 4.35 (See Fig. 6 and Fig. 7). Question 5 received the highest score among interviewees, and it referred to as: Morris Chang has said that "chip making is a vital industry for Taiwan, with a profound impact on the daily lives of its people, its economy, and national defense." On a scale of 1 to 5, how much do you agree with this statement? (Chang, 2021). For Question 5 — out of fifteen interviewees, eight people gave a full score of a 5, five people gave a score of 4, and two people for both remaining scores of 2 and 3. Most subject matter

experts came to a general consensus that the semiconductor industry is an extremely vital industry for Taiwan, and composes a substantial share of its economy. A Professor of Political Science specializing in the international politics of East Asia reiterated that Taiwan's rapid economic growth and development story is "hard to ignore with Taiwan's semiconductor industry".

A recurring theme throughout the interviews was the notion that Taiwan's economic prosperity directly translates to some degree of diplomatic opportunities with other countries. Specifically, a Research Fellow and political scientist focusing on Taiwan politics mentioned how "Taiwan has opportunities in the economic space that it doesn't in the diplomatic space." For instance, Taiwan is both a current member of the WTO (World Trade Organization), and the Asia-Pacific Economic Cooperation. Thus as Taiwan is more effective in economic organizations, it is able to use its membership to advance its interests in the international setting in a way that it's not able to at the United Nations or the World Health Organization, or any of the other organizations that require formal statehood.

Question 3: "On a scale of 1 to 5, what degree of importance would you place Taiwan's semiconductor industry in its negotiation for some type of informal diplomacy interaction with other countries?" Most scholars placed the degree of importance at a mean score average of 3.82. While providing a rationale for the score, a journal editor observed that the broader public has limited knowledge of

FIGURE 7. Individual Average Score per Question..

Interviewee	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Research Associate focusing on geopolitics of the Indo-Pacific	3	4	4	4	5	3	5
Journalist focusing on contemporary politics and society in Taiwan	3	5	3	3	2	2	3
Professor of East Asian Studies	5	4	4	3	4	3	5
Professor specializing in security and international relations in the Asia-Pacific	4	4	3	3	4	4	3
Former Diplomat and current commentator and Professor specializing in Taiwan	4	4	5	4	5	5	3
China and Taiwan Analyst	3	4	3	3	3	1	2
Research Fellow and Professor with interests in Taiwan politics and security issues in the Asia-Pacific	3	4	3	3	4	3	2
Professor specializing in technology in East Asia	4	4	5	4	4	3	3
Research Fellow on foreign and defense policy	5	4	4	4	5	2	3
Research Fellow at a national academy	3	3	3	2	5	3	3
Professor focusing on the international politics of East Asia	3	4	4	3	4	3	2
Vice President for technology and economic policy think tank	3.5	4	5	5	5	2	4.5
Professor of Political Science focusing on international politics of East Asia	3	4	4	4	5	4	3
Professor specializing in Asian Studies	4	4	4.5	4	5	4	4
Former Program Coordinator at Taiwan-focused policy incubator	4	3	4	3	5	4	4
Average	3.63	3.93	3.9	3.47	4.33	3.07	3.3

Taiwan's crucial geopolitical role beyond its significance in the semiconductor industry. As a result, they may overlook other strategic factors that are equally important but not directly tied to the ongoing chip shortage. In contrast, a College of Arts and Sciences Dean highlighted TSMC's importance not only to Taiwan's economic prosperity but also to the nation's overall security; further, they noted that the concentration of the semiconductor industry in one particular place wasn't on most people's radar till the Covid-19 pandemic. A research associate focusing on geopolitics of the Indo-Pacific then emphasized that given Taiwan's limited diplomatic relations, TSMC's heightened visibility not only spotlights the company, but serves as a representative of Taiwan as a whole. While the rationale differed per interviewee, most agreed on TSMC's crucial role in the global supply chain, and that level of importance allowed Taiwan to amplify their voice in the global arena.

The question that scored the lowest amongst all the interviewees was Question 6 (seen in Fig 6, 7, 8). That question being: "The term 'silicon shield' coins the theory that Taiwan's dominance in the semiconductor industry is what partially keeps it safe from a potential Chinese military invasion. On a scale of 1 to 5, how much do you agree with the concept of 'silicon shield' and whether it actually possesses any influence?" Similarly to Question 3, interviewees noted that safeguarding Taiwan against a possible invasion by the PRC serves a purpose beyond merely securing the semiconductor industry. Notably, a Vice President for technology and policy think tank, a China and Taiwan analyst, and a Professor focusing on the international politics of East Asia all indicated Taiwan's long standing history with China. They pointed out that China's interest in reunifying with Taiwan is rooted in a concern for legitimacy, with the semiconductor industry serving as a secondary issue.

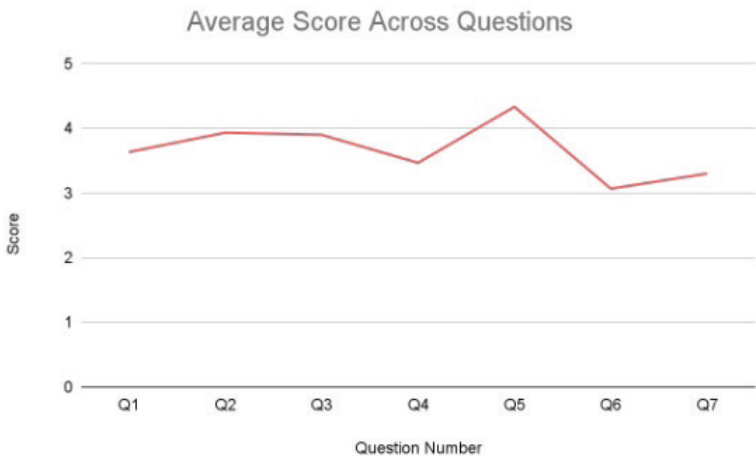
Throughout the interviews, it became evident that the

semiconductor industry originally developed for Taiwan's economic growth and stability. However, its comparative advantage and role as a strategic leverage tool have since evolved as unintended consequences. As perceptions of Taiwan improve, there seems to have an impact on wanting to defend and protect Taiwan. Research fellow at a national academy highlighted that the Taiwanese government's lack of diplomatic relations prompts the government to think about questions such as: How do we best brand ourselves? What benefits us the most? What is the cheat code and secret ingredient? How do we get attention? Why hasn't Taiwan been successful in promoting their pop culture compared to Korea? More so, there just hasn't been a coordinated attempt -- or a defining moment. Quite frankly, with the global supply chain shortage following the Covid-19 pandemic and increased U.S.-China tensions, Taiwan gained significant attention due to its dominant position in the semiconductor industry. The government was then able to capitalize on the situation, place a more centralized role in that narrative, and appeal to the international world their position in trade for semiconductors.

Conclusion

Despite a population of less than 23 million people, a geographic size slightly bigger than the US state of Maryland, and only 14 countries officially recognizing it as a sovereign state as of March 2023 (Ministry of Foreign Affairs, 2023), Taiwan is renowned as strategically important — serving as a perfect example of how a small state can “exploit a diplomatic niche that enhances its image and role” (Nye, 2008, p.104). Taiwan has become increasingly cognizant of the potential for strengthening its diplomatic ties through both official and unofficial channels. This has prompted a concerted effort to broaden the scope of its unofficial relations with countries such as the United States and Japan, seeking to leverage the vibrancy of Taiwan's democratic institutions and economic prosperity as means of further

FIGURE 8. Average Score for Questions 1-7 across Fifteen Interviewees.



integration into the global arena. However, as I have argued throughout the paper, the economic prosperity of Taiwan does not translate into the traditional hard power. The economic power does, however, serve as a viable key to increase their role as a relevant nation in its engagement with other countries and organizations.

Taiwan's absence of formal diplomatic relations with major powers (e.g., Australia, United States, Japan) and the lack of membership in international organizations, has led scholars to characterize it as a "financially rich, but diplomatically poor" state (Chan, 1997, p.37). Moreover, Taiwan's instability of recognition and press exposure has prompted the government and the wider business community in Taiwan to undertake a strategic approach aimed at garnering broader global attention and support for the state through soft power and nation branding. These efforts have involved the dissemination of a unique set of narratives that are designed to resonate with and appeal to diverse audiences. The emphasis of its role in the supply chains is a new strategy that Taiwan has adopted and implemented since the onset of the Covid-19 pandemic, by branding itself as a semiconductor powerhouse, that level of importance and interconnectedness consequently translates to some spillover importance to diplomatic presences. While some critics may be dubious about the strategic value of this strategy, Taiwan's increased reputation as a critical member of the international supply chain has partially served as a principle to open conversations with other states.

Despite it being applicable in every state, economic prosperity and national security are inseparable in its quest for legitimacy when it comes to Taiwan's specific case. While the future of Taiwan and China tensions remain uncertain, diplomatic exchanges have highlighted the rhetoric that the safety of the global supply chain is strictly contingent upon the security of Taiwan. As the dense semiconductor industry supply chain embeds Taiwan's security in developing the global technology industry network, this presents a considerable leverage tool for the Taiwanese government in its interactions with foreign entities. With the word: Made in Taiwan, TSMC achievements extends beyond its commercial success, but emerges as a crucial strategic cornerstone in Taiwan's nation branding and soft power efforts.

Endnotes

- 1 As defined by the Boston Consulting Group and the Semiconductor Industry Association, advanced chips consist of semiconductor chips that are below 10 nanometers. Report: <https://www.semiconductors.org/wp-content/uploads/2020/09/Government-Incentives-and-US-Competitiveness-in-Semiconductor-Manufacturing-Sep-2020.pdf>
- 2 The term "Silicon Shield" first originated in Craig Addison's 2001 book, *Silicon Shield: Taiwan's Protection Against Chinese Attack*. However, it was not until post the Covid-19 pandemic, where the term has exponentially increased its appearance in news articles and government speeches.
- 3 Largest semiconductor companies by market cap as of April, 2023. TSMC is ranked number 2 with a current cap of \$442 billion dollars. In terms of companies in Taiwan, this is followed by MediaTek (rank 22 at \$35.64 billion), UMC (rank 29 at \$20.24 billion), and Advanced Semiconductor Engineering, Inc (rank 33 at \$15.32 billion). Source retrieved from: <https://companiesmarketcap.com/semiconductors/largest-semiconductor-companies-by-market-cap/>
- 4 In this paper, the Republic of China (ROC) is interchangeably used to refer to Taiwan, and vice versa. The People's Republic of China (PRC) is interchangeably used to refer to China, and vice versa.
- 5 See Roy (2003) for a more detailed literature concerning Taiwan's history post the Chinese Civil War.
- 6 Note that all currencies mentioned in this paper are quoted in USD unless specified otherwise.
- 7 This paper has omitted some details on TSMC's creation. See Mathews (1997) for more detailed information regarding the evolution of TSMC.
- 8 Fab refers to a semiconductor production and manufacturing facility.

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Appendix

Interviewee Questionnaire

Question 1: On a scale of 1 to 5, to what extent do you believe Taiwan conducts its diplomatic strategies by prioritizing economic considerations — thereby compensating for traditional approaches that have tended to emphasize on the political and military dimensions?

Question 2: On a scale of 1 to 5, how interconnected or close would you describe the US and Taiwan to be? Do you believe in its 'deepening relationship' over the course of time?

Question 3: On a scale of 1 to 5, what degree of importance would you place Taiwan's semiconductor industry in its negotiation for some type of informal diplomacy interaction with other countries?

Question 4: On a scale of 1 to 5, what degree would you place Taiwan's semiconductor industry as a leverage tool for national security?

Question 5: Morris Chang has said that "chip making is a vital industry for Taiwan, with a profound impact on the daily lives of its people, its economy, and national defense." On a scale of 1 to 5, how much do you agree with this statement?

Question 6: The term 'silicon shield' coins the theory that Taiwan's dominance in the semiconductor industry is what partially keeps it safe from a potential Chinese military invasion. On a scale of 1 to 5, how much do you agree with the concept of 'silicon shield' and whether it actually possesses any influence?

Question 7: TSMC has been directly known as Huguoshenshan (護國神山) to Taiwanese people, on a scale of 1 to 5 how closely tied do you think semiconductor industries are to a sense of national identity and nationalism of Taiwanese people?