



Michael R. Splinter  
*Chairman of the Board*

Senator Robert Menendez  
*Honorary Co-Chair*

Senator Lisa A. Murkowski  
*Honorary Co-Chair*

Rupert J. Hammond-Chambers  
*President*

---

***INTERNAL COMMENTARY:  
THE STRATEGIC IMPORTANCE OF THE TSMC ARIZONA INVESTMENT***

***MAY 15, 2020***

***RUPERT J. HAMMOND-CHAMBERS  
PRESIDENT***

Taiwan Semiconductor Manufacturing Company (TSMC) is the world's largest contract chip manufacturer. A key link in the global technology supply chain, it is the most important company most people have never heard of. TSMC, based in Taiwan, is now doubling down on its relationship with the United States in a big way.

On Friday, May 15, 2020 TSMC announced the most important technology news of the year; the company committed to building a cutting-edge 5nm fabrication plant (fab) to produce semiconductor chips in Arizona. Its U.S. customers for the chips produced here will not only include U.S. tech companies, but will also include the Pentagon, defense contractors, and the national security community.

The visionary founder of TSMC, Morris Chang, imagined a world where fabless semiconductor companies would absorb the financial burden of designing chips, but would outsource their actual production to his TSMC. His vision created a monster that dominates the sector he created - the foundry manufacturing sector – making almost 50% of all chips produced by foundries globally. TSMC's state-of-the-art process technology and CAPEX investment of approximately US\$15 billion/year ensures that it has few, if any, peers.

Successive Taiwan governments have continued to nurture TSMC through prioritized access to land, power, and water, thereby allowing it to serve as the beating heart of Taiwan's technology miracle. Critically, Taiwan has also significantly improved its intellectual property rights and trade secrets protections - under pressure from the U.S. - thereby boosting innovation and promoting successful research and development in Taiwan.

The strategic nature of TSMC's business has increasingly placed it in the crosshairs of policymakers both in China and in the United States. China craves control over Taiwan for many reasons, and absorbing its leading chip industry is one of them. Chinese chip production capacity is currently modest at best. It is throwing significant efforts at building up that capacity, but this is not an industry where you can steal your way to the top. TSMC's production in China is at a middle-of-the-road technology level, 300mm, and that is unlikely to change soon. China's top chip companies - including Huawei's HiSilicon - are therefore reliant on TSMC's Taiwan-based foundries for cutting-edge chip production.

Taiwan companies like TSMC have long avoided involvement in public policy in the U.S., and the recent U.S.-China trade tensions left many Taiwan companies unprepared for the economic ramifications. However, over the last three years TSMC has leaned into the challenges presented by public policy decisions beyond Taiwan's shores. That culminated with hiring a top Government Relations executive in Washington, D.C. last year, to ensure that the company has a voice in the sector it created.

TSMC's market dominance underscores the importance of supporting Taiwan as a flourishing democracy allied with the United States. Yet it also showcases a significant U.S. vulnerability. Domestic U.S. foundries are mostly operating at lower technology levels, with companies having little interest in the massive investment costs necessary to compete globally.



Michael R. Splinter  
*Chairman of the Board*

Senator Robert Menendez  
*Honorary Co-Chair*

Senator Lisa A. Murkowski  
*Honorary Co-Chair*

Rupert J. Hammond-Chambers  
*President*

---

America's most important companies therefore rely heavily on TSMC's Taiwan-based high end chip production. While Taiwan is the most cost-effective manufacturing base, that base is vulnerable to supply chain disruption shocks such as an earthquake or an attack from China. Therefore, while Taiwan is a critical ally the U.S. also needs to maintain a balance where cost and convenience are not the only considerations, but where national security is also a key concern.

A supply-chain shock severing U.S. access to chips manufactured at the highest technology levels would almost immediately have significant and negative ramifications for the domestic U.S. economy. In addition, it would disrupt the ability of American defense companies - and the Pentagon - to acquire the chips required for military platforms and systems.

If a conflict with China in the Taiwan Strait results in disruption to chip supply, such a severing of access to TSMC's chips would come at the exact time when U.S. domestic production of military equipment would have to spike. In such an eventuality, domestic access to chips would be essential to ensuring smooth production and a continued safeguard of U.S. national security.

Access to cutting-edge chips is also a concern in the struggle with China over the future of 5G. Dominance over the platform for our next-generation devices will have a dramatic impact on both commercial and personal activity, and Artificial Intelligence will supercharge the process. And at the heart of every device is a chip. Binding TSMC more closely to the U.S. will be a cornerstone in our efforts to contend with China, and to build the ecosystem the U.S. need to flourish and compete.

TSMC's decision to significantly invest in the U.S. reflects the degree to which supply-chains are shifting. Long driven primarily by cost pressures, they are now transcending spreadsheets and factoring in geostrategic risk and the intangible benefits of onshoring. Should our Taiwan supply be disrupted, the U.S. cannot simply switch to sourcing from Vietnam or convert a domestic factory to start making cutting-edge chips – the cutting-edge technology is simply not there.

The importance of this TSMC commitment to invest in Arizona therefore cannot be overstated, and it should significantly address a genuine economic and national security choke point for the United States.

-----  
Rupert J. Hammond-Chambers  
President  
US-Taiwan Business Council  
1700 North Moore Street, Suite 1703  
Arlington, Virginia 22209  
Tel: (703) 465-2930  
Cell: (202) 445-4777  
[Rupert.JHC@us-taiwan.org](mailto:Rupert.JHC@us-taiwan.org)