

Taiwan in Transition

# As China's ascension looms, Taiwan seeks an economic solution for its continued survival

This article is first in a four-part series, Taiwan in Transition, about Taiwan's economic evolution from manufacturing to innovation. For access to the entire series, click [here](#).

**By Michael Sedwick**

TAIPEI, Taiwan---After spending a long weekend with family and friends, Huang Huai Hsuan finds herself once again checking in for a return flight to Shanghai. A 26-year-old account manager for an information technology company, Huang has lived and worked in Shanghai since graduating from National Taiwan University, the top educational institution in Taiwan.

Despite experiencing occasional bouts of loneliness, Huang said she has not considered returning to Taiwan; China offers better work opportunities that pay much higher salaries than in her native country.

"My starting salary in Shanghai was 20 percent higher than in Taiwan, and afterwards it doubled within four years," Huang said. "I'll move anywhere for that kind of money."

Taiwan, a sovereign island of 23 million people just 100 miles off the coast of mainland China, is facing a major economic turning point as mainland China siphons off its market share and labor talent. The walls are closing in from all sides, and Taiwan is on the verge of economic stagnation, according to a Feb. 10 Los Angeles Times [article](#).

Taiwan is a market [leader](#) in computer semiconductor manufacturing, yet China is eager to dethrone Taiwan in this product category by luring away its employees with higher salaries. The rest of Taiwan's economy excels at manufacturing various products, yet competition is fierce and profits are razor thin.

The solution to this economic challenge, the government has decided, is to encourage innovation: the creation of new, patent-protected products that make life more efficient and provide higher profit margins to businesses and higher salaries to employees.

To encourage new business ideas, the Taiwan Ministry of Science and Technology ([MoST](#)) opened [Taiwan Tech Arena](#) in June 2018. The arena is an innovation center that prepares Taiwanese companies to expand abroad and also invites foreign talent to develop businesses and high-value products in Taiwan.

The arena is located inside a government-owned sports complex, despite its not being related to sports events. Walking around the perimeter, one must circle past an ice rink, box office, and a fast food restaurant until reaching a pair of glass doors.

A large sign behind the registration desk is the only clue that this oval-shaped, domed stadium contains one of Taiwan's government-designated hopes for rejuvenating the economy.

The Taiwan Tech Arena is self-contained with over 3,000 square meters of floor space that stretches along the periphery of the stadium complex. According to its [website](#), the arena aims to support 100 startups per year by hosting privately run accelerator programs. An accelerator program is a group of investors that offer mentorship and advice to startup companies in exchange for partial ownership. To support companies within the arena, the government does not charge rent to any tenants, said Daphne Lien, community manager of the arena.

Chen Liang Gee, minister of MoST, said that the arena will become a key asset for building Taiwan's innovation ecosystem. As an example, a team of medical doctors with an idea for a microscopic medical robot can instantly find qualified engineers through the arena's network of companies and recruiters. For this team of doctors, innovation means saving lives more quickly and with better technology.



Taiwan Tech Arena's office is located in the back side of a government-owned sports complex.  
**Photo Credit: Michael Sedwick**

“TTA will be the ideal platform for talent to form new tech ventures, for startups to find talent, for startups and corporations to collaborate and co-create, and for investors to connect with valuable investment targets,” Chen said in a [statement](#) released to announce the arena's launch.

A walk through the arena shows that MoST Minister Chen's goals are beginning to take effect. The floor plan includes hubs of activity at permanent desks in the corners of the floor space that belong to accelerators and their mentored startups. Unlabeled prototypes

of various inventions sit patiently on shelves, protected by “No Photography” signs.

Space in the middle of the floor area contains “hot desks,” working space that anybody can temporarily use for cross-team collaboration. Posters advertising networking events line the walls near the communal kitchen and staircases.

Lien, the arena’s community manager, said that she has witnessed how government support can help local private companies find success in international markets. Sitting with a cup of tea in the arena’s communal kitchen, Lien said she just joined a group trip to [CES](#), one of the world’s largest annual consumer technology exhibitions. Lien said that the goals of the trip included helping companies gain international media exposure and sales contracts with international businesses.

“MoST funded 44 local teams for the trip in order to connect them with the international market,” Lien said, the market referring to customers outside of Taiwan. “Eight of them won CES Innovation Awards, and several companies are working on multi million dollar contracts thanks to the connections made there.”

The CES Innovation Award is “an annual competition honoring outstanding design and engineering in consumer technology products,” according to the CES [website](#).

[Lubn](#), a company that joined the arena delegation at CES this year, won an innovation award in the “Smart Home” product category. Lubn creates smart key lockboxes for the real estate industry that will replace traditional passcode lockboxes. To prevent unauthorized access to a property for sale, Lubn’s [lockbox](#) takes a person’s photo to confirm identity before granting access to house keys. For Lubn, innovation means providing greater security and more peace of mind.

Other arena-sponsored companies that attended CES have created products that broadly help people from all walks of life, ranging from the inactive elderly to rural schoolchildren and fearless firefighters. [Sinopulsar](#) has built adult diapers that can detect wetness and weight before alerting a handheld device when a diaper change is necessary; a nurse or caretaker no longer needs to manually check. For Sinopulsar, innovation means better care.

[Equalearning](#) has created a software that makes online learning easier for students in rural areas with poor internet access. Instead of linking each student computer to the internet, Equalearning enables the teacher’s computer to download online learning material and instantly forward it to each student. For Equalearning, innovation means faster education.

[Upsafety](#), another local company that attended CES, has created a wearable watch that tracks firefighters' health and vital signs while battling an inferno; the watch sends an alert to the outside team's tablet device if a colleague needs to be saved. For Upsafety, innovation means increased safety.

The industries represented in the Taiwan Tech Arena, including internet-connected devices, software, and artificial intelligence, reflect the government's [plan](#) to shift Taiwan's economy from low-profit manufacturing to high-profit innovation. Manufacturers, companies who produce other companies' products, typically have lower profit margins than companies that design their own products.



A group shot of the teams that Taiwan Tech Arena showcased at CES 2019 in Las Vegas  
**Photo Credit: Taiwan Tech Arena**

Higher profits will be essential if Taiwanese companies want to be able to afford to keep its labor talent from fleeing to China, and the iPhone is a perfect example of Taiwan's motivations for this economic shift. Apple, the only company owning the patent for the iPhone, has higher pricing power and profitability than Foxconn, the Taiwanese manufacturer of the iPhone. It is more difficult for Foxconn to make a profit, because it must compete against other factories to keep Apple's manufacturing contract.

Apple reported a [26 percent profit](#) margin in the second quarter of 2018, whereas Foxconn reported only a [2 percent profit](#) in the same time period. Lower profit means that Taiwanese manufacturers such as Foxconn have a limited ability to increase employee salaries.

TTA Managing Director Dr. Lewis Chen said that the government has invited accelerators to host, mentor, and invest in startup companies that have high potential. Accelerators are investment groups that offer money and mentorship to startups in exchange for partial ownership. Chen is unrelated to MoST Minister Chen.

Sitting in one of the arena's 16 meeting rooms, Chen explained with great gesticulation that TTA's tenant accelerators each have a specific policy focus and can provide unique resources for the arena.

“BE Capital focuses on medical devices, which can link to local hospitals and medical companies to improve biomedical investment. But SparkLabs Taipei has connections to Korea, Silicon Valley and other countries that help us connect to other international industries and markets,” Chen said, referring to two of the arena’s tenant accelerators.

Recent government policies have favored Taiwan-based companies expanding internationally due to the small size of its domestic market, said Lien.

“The government wants to build a “unicorn” so that Taiwan can be recognized more internationally,” Lien said, referring to the nickname of a startup valued at more than \$1 billion.

Besides this goal, the government has foreign investment targets and have loosened foreign investor restrictions accordingly.

On March 9, 2018, the executive branch of Taiwan’s government announced an action [plan](#) to make it easier for startups to incorporate and raise investment capital. Some of the policies include expanding startup investment by NT\$5 billion annually over the next several years; the government has also [proposed](#) laws that offer preferential tax treatment for angel investors, simplify permissions for foreign investment, and ease rules for foreigner listings on Taiwan’s stock markets.

The stakes are high, because recent Chinese economic policies could have a devastating impact on Taiwan’s semiconductor industry and overall economy. According to the Council on Foreign Relations, a U.S.-based think tank, China currently produces enough semiconductors to satisfy 22 [percent](#) of domestic demand and must import the remainder.

China’s government, however, wants to domestically produce 70 percent of its own demand by 2025, a 318 percent increase. Because [8 percent](#) of Taiwan’s GDP relies on semiconductor exports to China and Hong Kong, China’s goals leave a significant chunk of Taiwan’s economy exposed.

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The relationship between China and Taiwan is a complicated one, and their economic rivalry is just the tip of the iceberg. Taiwan is officially known as the Republic of China. With the exception of 50 years of Japanese rule between 1895 and 1945, Taiwan has been under Chinese control since the Qing Dynasty conquered the island in 1683.

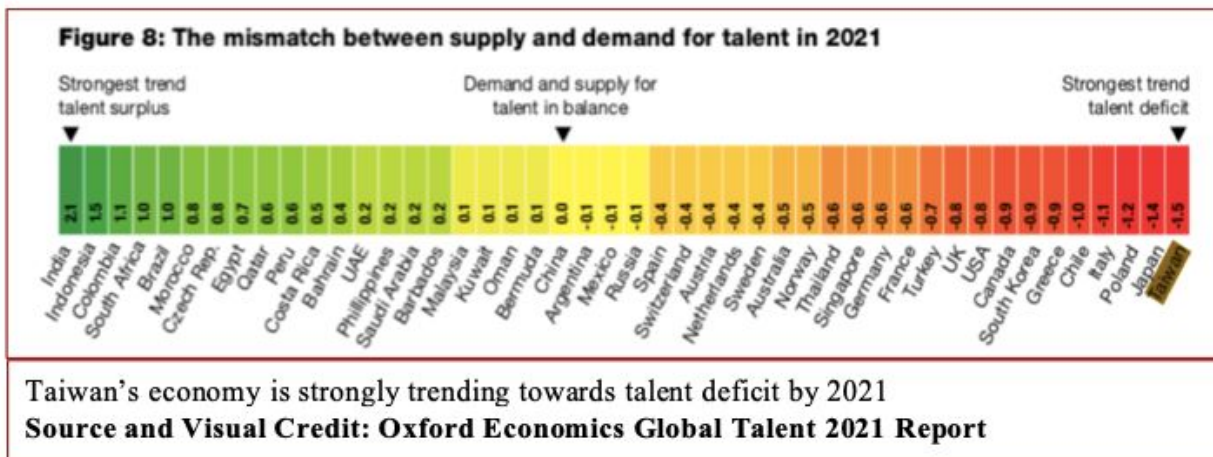
The definition of “Chinese” in this context, however, is a topic of contentious debate. Taiwan’s constitution claims ownership of mainland China; Taiwan thus considers itself a government in exile ever since the Chinese communists defeated them in 1949. Likewise, mainland China claims rule over Taiwan, considering it as its most important national security issue.

Despite Taiwan’s constitutional claims to mainland China, the incumbent Taiwanese Democratic Progressive Party is anti-China and pro-democracy, two sources of anathema between the two [sides](#). In response, China has leveraged its increasing economic and political power to destabilize the Taiwan [economy](#).

In Feb. 2018, mainland China’s Taiwan Affairs Office released [31 policies](#) to encourage Taiwanese to study, invest, and work in China. For example, Taiwanese are now allowed to test for and join an additional 134 licensed professions in China that were inaccessible before. China said that the new policies were meant to “deepen the economic and cultural cooperation of China and Taiwan Province.”

Data from Taiwan’s labor pool in the semiconductor industry is telling of the challenges faced here by the China-induced brain drain. According to a [Reuters](#) study of 10 years of Taiwan economic data, semiconductor labor costs have risen 66 percent faster than revenue, a signal that Taiwanese manufacturers are trying to keep up with Chinese compensation.

The problem is worse at the macroeconomic level. Taiwan’s National Development Council [cited](#) an Oxford Economics [study](#) that reported Taiwan will have the largest talent deficit in 2021 out of 46 countries surveyed. The study included Taiwan’s economic rivals such as China and South Korea as well as developing and developed countries from every region of the world.



The Taiwanese government has recently loosened its own visa restrictions in order to address part of the talent deficit. Taiwan's [Entrepreneur Visa](#) offers one year of residence for a team of up to three foreigners without the requirement of having a business plan or incorporation paperwork. The team can extend their visa beyond one year if they have started a business and meet other requirements, TTA Community Manager Lien said.

Despite Taiwan's attempt to be foreigner friendly, however, Lien said she still suggests seeking external support for the visa applications.

"The paperwork is complicated and difficult. So local startup hubs have to help foreigners complete it," Lien said.



Taiwan Tech Arena's open floor plan is designed for easy collaboration amongst workers  
**Photo Credit: Taiwan Tech Arena**

Taiwan has thus begun an exigent journey that is key to its future survival. Like a college student that has left home for the first time, Taiwan is discovering how to wean itself off of its prior support system: the semiconductor and manufacturing industries that have built its economy over the last several decades.

The transition will be painful. Successful business ideas require risk-taking and failure, multiple attempts before triumphs. Instead of waiting for other countries to tell Taiwan which products to build, Taiwan

must decide what to build for itself. With mainland China lurking around the corner waiting to pounce on Taiwan's products and people, the urgency is greater than ever.

Emphasizing that TTA opened only last year, arena director Chen said he feels that things are moving quickly to help create successful, innovative, and profitable companies that boost its local economy.

“What can our government do to become better friends with countries and companies around the world? TTA came into the picture to let Taiwan become a startup nation. Come to TTA, and we can figure out how to help you get the important resources you need to grow,” said Chen.

Huang, the expat now living in China, said she agreed that the government needed to give companies tools to help them thrive and one day give Taiwan a brand that it can be proud of. Brands, not factories, Huang said, are what give countries power and wealth.

“America has Apple, and Korea has Samsung,” Huang said. “Taiwan needs a name to put on that list, too.”