09.12.2019 -- https://www.zerohedge.com/geopolitical/exodus-3000-taiwanese-chip-engineers-flee-mainland-made-china-2025

# 3,000 Taiwanese Chip Engineers Flee To Mainland For "Made in China 2025"

The trade war between the US and China has morphed into a tech war where both countries are rapidly decoupling their economies from one another, but at the same time, advancing technologies as the artificial intelligence (AI) arms race will heat up by the mid-2020s.

China, which we reported last night has ordered all government offices and public companies to replace foreign PCs and software with domestic made alternatives within three years, wants to dominate the world through its military power and AI, along with advanced weaponry like hypersonic missiles, fifth-generation fighters, and laser weapons. To do this, President Xi Jinping has already launched huge initiatives, such as state-funded programs to spur innovation in AI.

One such development in the tech war turned AI arms race between the US, is that China is now attracting semiconductor engineers from Taiwan to further 'Made in China 2025' initiative, reported Nikkei Asian Review. (1)

More than 3,000 semiconductor engineers have left Taiwan for new jobs on the mainland. The recent departure was so significant that it's equivalent to 10% of all chip engineers on the island.

The Nikkei notes that cash-strapped mainland companies are offering engineers in Taiwan, double the pay and extra benefits.

One engineer told Nikkei that he left a top Taiwanese semiconductor firm in late 2018 for a job in China.

> "It's only natural to want to launch a big project and increase my value as an engineer," he said.

He said his salary doubled in China, and his new employer covered his child's private education. The man said the move was a no brainer.

The trend at play is that China could hollow out Taiwan's semiconductor industry by 2030.

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Taiwan is an important ally of the US and has been used as a weapon by Washington as the trade war deepens. Beijing has stepped up reunification pressures on the island, as the US continues to supply weapons to Taipei.

Beijing's 'Made in China 2025' initiative could transform the economy into a global leader in high-tech fields, including the pharmaceutical industry, automotive industry, aerospace industry, semiconductors, IT, and robotics. The move would likely displace the US as the world's superpower by 2030.

A Taiwanese industry insider told Nikkei that mass-producing chips are both capital and talent intensive. So when China is sucking away talent from Taiwan, this could be damaging to the long term survivability of the Taiwanese chip industry.

> "Chinese players are now trying to overcome the barrier by recruiting not only top executives, but entire production teams on the ground," a Taiwanese industry insider said. "They are paying two to three times as much as Taiwanese companies."

Some Taiwanese companies said it extremely hard to compete with Chinese chip manufacturers.

> "We are improving our compensation, but it is difficult to compete with mainland companies," Nanya Technology President Lee Pei-ing said.

Mainland China is expected to surpass Taiwan as the largest semiconductor manufacturing equipment producer in the world. This could be setting the stage for China's rise of high-tech domestic chips.

> "The goal is to bring Taiwanese talent to the mainland and hollow out Taiwan," said Meng Chih-cheng, an associate professor at Taiwan's National Cheng Kung University.

In summary, China's desire to ascend as the world's global superpower is evident through its actions today. It's the reason why Washington has launched a trade war, now turned tech war, that has also morphed into an AI arms race. The problem, as the Thucydides Trap postulates, is that a real war almost always follows.

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(1) https://asia.nikkei.com/Business/China-tech/Taiwan-loses-3-000-chip-engineers-to-Made-in-China-2025

China tech

## Taiwan loses 3,000 chip engineers to 'Made in China 2025'

### Beijing rolls out red carpet with triple the pay and benefits

KENSAKU IHARA, Nikkei staff writer December 03, 2019 03:16 JST

TAIPEI -- China is ramping up *steigern* recruitment of Taiwanese talent in semiconductors, attracting top executives and engineers alike to bolster an industry that the U.S. trade war has shown to be a Chinese Achilles' heel.

The aggressive campaign has sparked concerns about a brain drain within Taiwan's chip industry, which is struggling to compete with generous offers by cash-rich mainland companies.

A man in his 50s left a longtime job at a leading Taiwanese semiconductor maker a year ago for a position on the mainland.

"It's only natural to want to launch *starten* a big project and increase my value as an engineer," he told Nikkei during a trip back to Taipei.

The man's salary more than doubled with the move, and his new employer pays for his child's private education. The decision was easy, the man said.

More than 3,000 semiconductor engineers have departed Taiwan for positions at mainland companies, the island's Business Weekly reports. Analysts at the Taiwan Institute of Economic Research say this figure appears to be accurate. **That amounts to nearly one-tenth of Taiwan's roughly 40,000 engineers involved in semiconductor research and development.**

The trend is not new. Richard Chang moved to the mainland in 2000 after his Taiwanese business was acquired by Taiwan Semiconductor Manufacturing Co., the world's leading contract chipmaker. **Chang brought several hundred employees and launched Semiconductor Manufacturing International Corp. in Shanghai.**

SMIC is now the world's fifth-largest contract chipmaker and has become a key rival for TSMC with backing from Beijing.

TSMC's former chief operating officer, **Chiang Shang-yi,** and research and development executive, **Liang Mong-song**, have taken high-ranking roles at state-affiliated players in China. **Charles Kao, known as the "godfather" of Taiwan's DRAM industry, also joined Tsinghua Unigroup in 2015**. Unigroup competes with Taiwanese players like Nanya Technology in dynamic random access memory.

Taiwan Semiconductor Manufacturing Co. is among the companies losing talent to mainland China. (Photo courtesy of TSMC)

But such career moves have accelerated under Beijing's "Made in China 2025" plan to foster self-sufficiency in high-tech industries.

Semiconductor manufacturing is both capital- and talent-intensive: Even with the best equipment on the market, a company cannot mass-produce chips without technicians to work on them.

**"Chinese players are now trying to overcome the barrier by recruiting not only top executives, but entire production teams on the ground," a Taiwanese industry insider said. "They are paying two to three times as much as Taiwanese companies."**

Taiwanese companies are finding themselves outmatched.

"We are improving our compensation, but it is difficult to compete with mainland companies," Nanya Technology President Lee Pei-ing said.

Taiwan updated its trade secrets act in 2013, imposing prison sentences of up to 10 years for leaking corporate secrets outside the island. But this has not deterred career moves to the mainland in the semiconductor industry.

**The effect of these transplants is noticeable. China's Changxin Memory Technologies and Yangtze Memory Technologies next year are slated to start mass-producing memory chips, one of Taiwan's strengths.**

**As a market for semiconductor manufacturing equipment, mainland China is expected to surpass Taiwan as the world's largest next year.**

In addition to bolstering the mainland's chip industry, Beijing also may be rolling out the red carpet for Taiwanese engineers as a step toward its longtime goal of reunification. **Beijing announced 26 measures in November aimed at treating Taiwanese equally to mainland Chinese, advocating for more Taiwanese to work and study on the mainland.**

"The goal is to bring Taiwanese talent to the mainland and hollow out Taiwan," said Meng Chih-cheng, an associate professor at Taiwan's National Cheng Kung University.

## How talent from Taiwan powers Chinese chipmakers

*(key people recruited by China)*

| | Company/ position | Year moved to China | Role in Chinese industry |
|---|---|---|---|
| **Richard Chang** | Worldwide Semiconductor Manufacturing Corp. (acquired by TSMC in 2000)/ General manager | **2000** | Founder of Semiconductor Manufacturing International Corp. (SMIC) |
| **Chiu Tzu-yin** | TSMC/ Factory manager | **2001** | CEO of SMIC from 2011 to 2017, currently CEO of Shanghai ZingSEMI |
| **Lin Zhi-guo** | Siliconware Precision Industries/ Vice president | **2012** | President of Jiangsu Cangjiang Electronics Tech |
| **Charles Kao** | Inotera Memories (acquired by Micron Technology in 2016)/Chairman | **2015** | CEO of Tsinghua Unigroup's DRAM unit |
| **Yuan Di-wen** | MediaTek/ Assistant chairman | **2015** | Vice president of Spreadtrum |
| **Jiang Shang-yi** | TSMC/Co-chief operating officer | **2016** | Served as outside director for SMIC, now CEO of Wuhan Hongxin Semiconductor Manufacturing |
| **Liang Mong-song** | TSMC/Senior R&D executive | **2017** | Joined Samsung Electronics in 2011, became co-CEO of SMIC in 2017 |
| **Sun Shi-wei** | United Microelectronics/ CEO | **2017** | Served as vice president of Tsinghua Unigroup and CEO of Wuhan Xinxin Semiconductor Manufacturing |
| **Stephen Chen Zheng-kun** | Rexchip Electronics (acquired by Micron in 2013)/President | **2017** | President of Fujian Jinhua Integrated Circuit |
| **Yang Guang-lei** | TSMC/Senior R&D executive | **2019** | Outside director for SMIC |

*Source: Company announcements, other documents*