Economics

# DBS Focus

# Taiwan more vulnerable to tech war than S Korea

Group Research

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- *Escalating China-US tech war carries the risk of disrupting the regional electronics supply chain considerably.*
- *As global consumers replace Chinese electronics products with substitutes from other countries, it may also benefit South Korea and Taiwan.*
- *The tech war calls for supply chain diversification by Taiwanese and Korean electronics firms. South Korea is relatively well prepared.*
- *In the short term, a further escalation of tech war/trade war would require monetary/fiscal stimulus to support growth. There is more policy room for South Korea than for Taiwan.*
- ***Implication for forecast**: The downside risks to our GDP growth forecasts are higher for Taiwan (2019: 1.9%) than for South Korea (2019: 2.1%).*
- ***Implication for investment**: A BOK rate cut is expected for the next 3-6 months.*

The China-US tensions have spread from trade to tech. Following the new tariff threats earlier this month, the US Commerce Department said on May 16 that it has added China's Huawei on a trade blacklist, prohibiting American firms from selling parts and components to the Chinese tech giant. It was reported that American semiconductor companies such as Qualcomm and Intel had suspended shipments to Huawei, while Google had also suspended business with Huawei that requires the transfer of hardware, software and technical services. The US government later eased the ban on 21 May, granting a 90-day reprieve to allow Huawei to purchase American goods to maintain existing networks and provide software updates to existing handphone users. Furthermore, the US may expand the trade blacklist from Huawei to several other Chinese companies that produce advanced technology products, such as the surveillance camera and commercial drone makers.

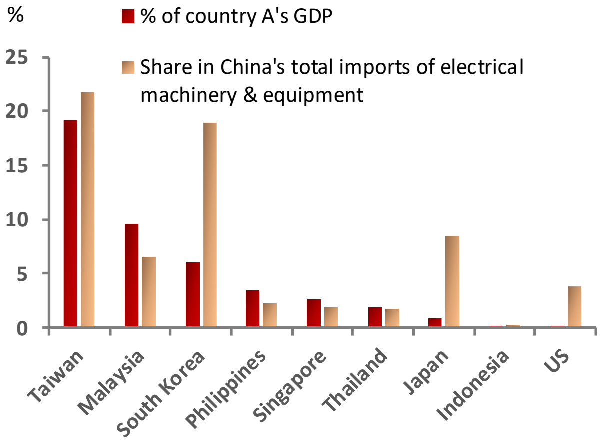
## Supply chain disruption: Taiwan will be hurt more than South Korea

The China-US tech war would hurt Taiwan and South Korea through disrupting the regional electronics supply chains. On the surface, the US's trade ban could prompt Chinese tech companies to seek alternative sources of supply, creating opportunities for the Taiwanese and Korean semiconductor companies. It is true that Taiwan and South Korea are important players in global IC foundry. That said, IC design and IT software are still largely dominated by the US today (here). As the US moves to cut the upstream technology supply for Chinese tech companies, it carries the risk of disrupting the entire supply chain, including hurting the Taiwanese and Korean semiconductor firms that do business with China.

Taiwan will be hurt more than South Korea in this regard. Taiwan and South Korea are currently China's two largest import sources of electrical machinery and equipment, accounting for a share of 22% and 19%, respectively. As a percentage of their respective GDP, the ratio is as high as 19% for Taiwan, compared to 6% for South Korea.

Meanwhile, as far as Huawei's suppliers are concerned, there are more Taiwanese than Korean companies on the list. According to news reports, 10 out of Huawei's 92 core suppliers are from Taiwan (e.g., Foxconn, TSMC, ASE, Largan, MediaTek), while only 2 are from South Korea (SK Hynix, Samsung).

**China's imports of electrical machinery & equipment, by source**




Source: CEIC, DBS

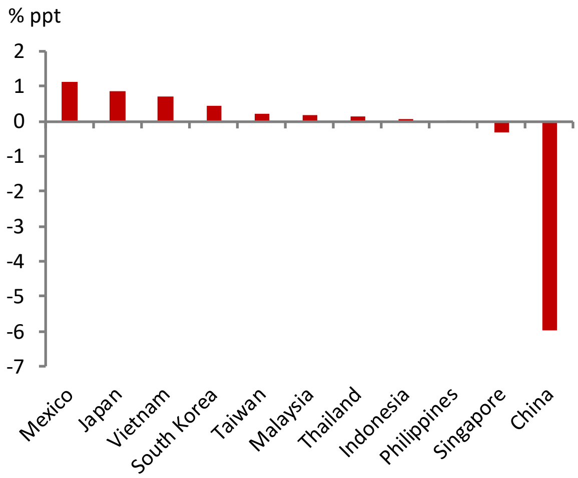
## Substitution effects: South Korea will benefit more than Taiwan

The China-US tech war could also benefit Taiwan and South Korea through the substitution effects. As Chinese tech companies face technology protectionism from the US, global consumers would have incentives to replace Chinese electronics products with substitutes from other countries including South Korea and Taiwan.

South Korea should benefit more than Taiwan. Samsung is the No. 1 smartphone supplier in the world, accounting for a market share of 21% (IDC, 2018); while Huawei ranks No. 2 with a 15% share. It is reasonable to expect that consumers will shift to buy Samsung from Huawei, if the latter is frozen out from the Android ecosystem. Meanwhile, Samsung also competes with Huawei in the telecom space. Huawei is currently the leader in global telecom infrastructure market, occupying a big share of 28% (Dell'Oro, 2018). Samsung remains a laggard, holding only 3%. But Samsung has set an ambitious plan to expand investment in 5G technology and boost the telecom network equipment business in the next three years. Huawei's woe, against the backdrop of China-US tech war, would present an opportunity for Samsung.

At the macro level, there is a relatively high degree of product/industrial overlapping between South Korea and China, which suggests that the substitution effects should be relatively significant. In fact, South Korea may have benefited from the substitution effects on Chinese products during the previous rounds of China-US trade war, which started in mid-2018. In the US's import market, the share of Chinese products has declined by 6ppt between June 2018 and March 2019. The share of Korean products has increased by 0.4ppt during the same period, while that of Taiwan has risen only 0.2ppt.

**Changes in shares in the US's imports (Mar19 vs Jun18)**




Source: CEIC, DBS

## Supply chain diversification: South Korea is better prepared than Taiwan

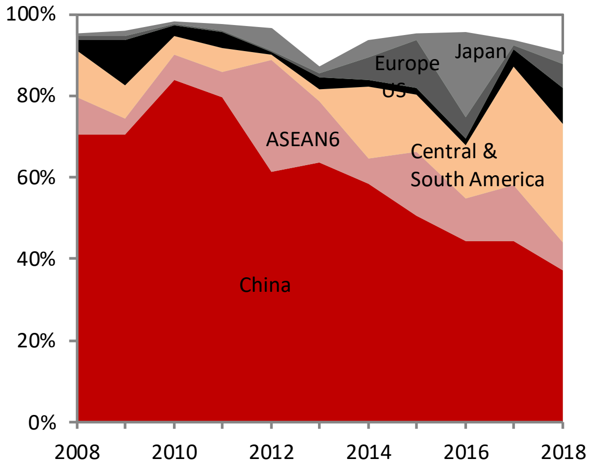
The disputes between China and the US in the technology area, if persist, would require the Taiwanese and Korean tech companies to diversify production bases. Shifting production from China to other countries may help to avoid the conflicts with the US on sensitive issues like cybersecurity and IP protection.

South Korea is better prepared than Taiwan. Samsung has already invested heavily in Vietnam to build smartphone factories in the past several years. The company's production facilities in Vietnam currently account for approximately 50% of its total smartphone production. Taiwan's Foxconn still primarily relies on China as its production bases. The company has just started to expand operations in India and Vietnam recently.

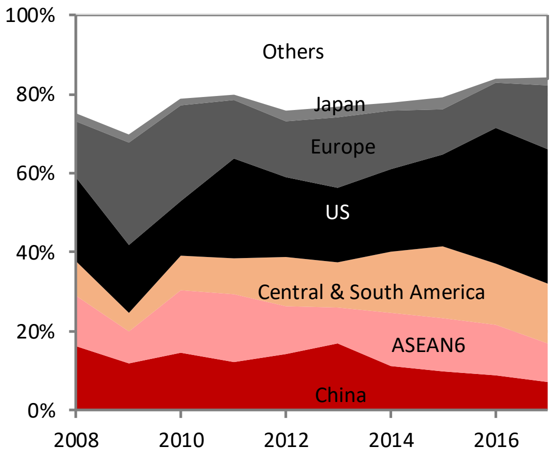
Reflected in macro data, South Korea's outward FDI is relatively diversified on the geographic basis. About 10%

of its total outward FDI went to China in 2018. The flows into ASEAN, Central & South America, Europe and the US were equally large, each accounting for a share of 10-20%. In contrast, Taiwan's outward FDI is still tilted towards mainland China. Although the share of China in Taiwan's overall outward FDI has fallen sharply over the past decade, it remains at about 40% today.

**Taiwan's outward FDI, by market**




**South Korea's outward FDI, by market**




Source: The Export-Import Bank of Korea, CEIC, DBS

## Policy stimulus: South Korea has more room than Taiwan

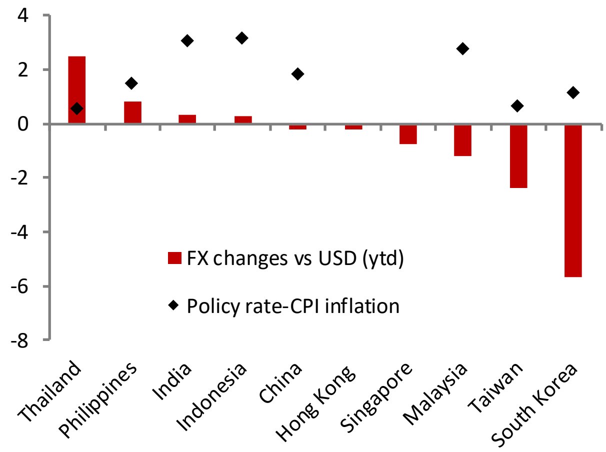
In the short term, a further escalation of tech war/trade war would require monetary/fiscal policy stimulus to counter growth slowdown. In this regard, South Korea has more room than Taiwan.

The Bank of Korea raised rates by 50bps during the cyclical economic recovery in 2016-18. With real interest rates returning to the long-term normal levels (latest: 1.2%), there is adequate leeway for the BOK to cut rates to support growth. Partly reflecting the rate-cut expectations, the KRW has depreciated 6% YTD against the USD, which should, in turn, help to underpin export competitiveness. In Taiwan, the central bank refrained from normalising rates during the 2016-18 recovery. Real interest rates are relatively low (latest: 0.7%), leaving limited space for monetary easing.

Both economies have the room to expand fiscal policy, given that government debt levels are not high (30-40% of GDP) and sovereign rating profiles are sound. The Korean government has unveiled a KRW6.7tn supplementary budget in April to shore up the economy. Taiwan has not undertaken similar measures so far. Given that Taiwan's presidential and parliamentary elections are not far away (January 2020), substantial government policy changes could be delayed to next year.

**Asia: FX & Real interest rates**

%, % pa




Source: Bloomberg, DBS

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**Sources**: Data for all charts and tables are from CEIC, Bloomberg and DBS Group Research (forecasts and transformations).