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Digital divorce: forces are pushing for a technology split from China

NAB Group Economics

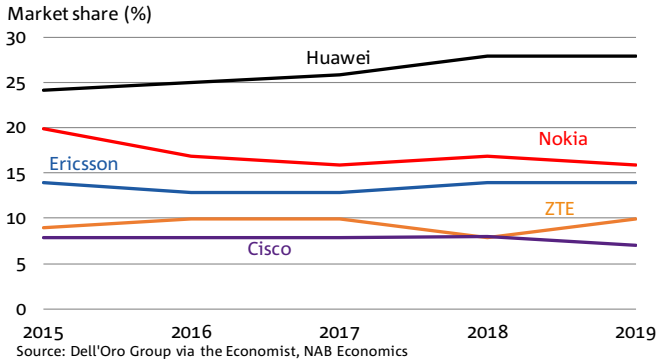
A key strategy in China's long term development plan has been to move away from labour intensive, low value added manufacturing (such as textiles, clothing and footwear) and encourage the growth of capital intensive, high value production, including high technology electronics. However China's emergence as a major player in this field has generated tensions with a range of countries (including the United States in the lead up to the trade war), reflecting concerns around forced intellectual property transfer and corporate espionage, data security and government intervention. Actively addressing these concerns could reshape global technology markets.

5G NETWORK INVESTMENT HIGHLIGHTS TECH ISSUES

Concerns around the rapid growth and influence of Chinese firms in global technology markets have been building for years, in part contributing to the US-China trade war. As a subset to the broader tech space, Chinese firms such as Huawei and ZTE have become major producers of telecommunications infrastructure, just as service providers have been investing in 5G networks around the world. In particular, Huawei has grown in market share, being the leading firm for global telecom equipment sales in 2019, at around 28% of the total, compared with almost 16% for second placed Nokia.

GLOBAL TELECOM EQUIPMENT SALES

Huawei the largest player



Source: Dell'Oro Group via the Economist, NAB Economics

However, concerns around China's tech firms have been broader than just the US-China trade relationship, with a range of countries implementing measures to curb their influence. For example, in 2018 the Australian Federal Government blocked Huawei from providing 5G technologies to networks in the country, while in mid-2020, the US Federal Communications Commission officially designated both Huawei and ZTE as a threat to national security (which means that US telecom firms are unable to access for federal government funding for these products). In July last year, the UK government banned telecom firms from purchasing Huawei equipment for its 5G rollout and ordered any existing equipment to be removed by 2027. In late 2020, Germany passed a new IT law that grants authorities greater oversight of telecom investment and the power to block Huawei products on national security grounds (although no ban has yet been implemented).

TECH TENSIONS COULD LEAD TO A SPLIT

In response to the concerns around China's growing technological power, a range of prominent think tanks have proposed a technology alliance of broadly-like minded countries. For example, in late 2020 the Center for a New American Security, Germany's Mercator Institute for China Studies, and Japan's Asia Pacific Initiative jointly proposed an alliance of countries that would introduce (among other items) common digital privacy guidelines, support collaborative research and development and

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establish greater control over supply chains. This proposal identified a group of countries such as major EU economies (including France, Germany, Italy and the Netherlands) along with the UK, United States, Australia, Canada, Japan and South Korea as suitable partners.

Similarly the US based China Strategy Group, which comprises a range of experts from the technology industry, academia and policy think tanks, recently made similar proposals around supply chains (boosting output in the United States and allied nations) as well as investing in education and skill immigration and establishing an International Technology Finance Corporation to fund investment. According to reports from Axios, the group's report is currently circulating within the Biden Administration in the United States. That said, it is unclear at present whether these proposals will receive official support within the government, however it fits with the expectations around multilateral trade action against China, as opposed to the unilateral approach under President Trump.

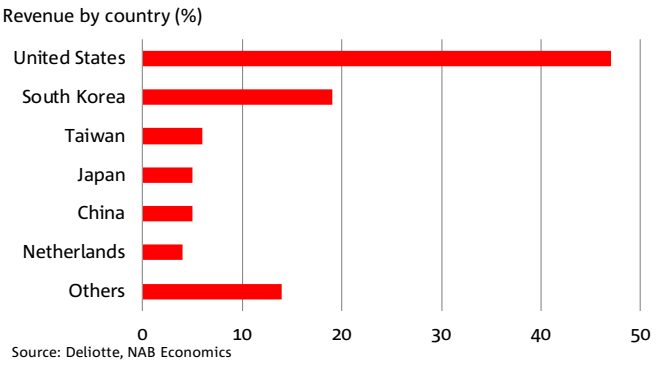
These various policy groups argue that the direct intervention by Chinese authorities (including state subsidies and preferential lending from SOE banks) and intellectual property practices by Chinese electronics firms provides these producers with an unfair advantage in global markets. A technology alliance would lead to a bifurcation (in the words of the China Strategy Group) of global markets, divided between alliance aligned countries and China-aligned ones.

HOW REALISTIC IS A TECHNOLOGY ALLIANCE?

In high level terms, it is not unreasonable to think that a technology alliance could have a major effect on China's rise in the global high tech sector. Proposed alliance members account for a sizeable share of global semi-conductor manufacturing (a critical sub-sector within the broad technology space), lead by the United States, South Korea and Japan. In 2019, the six largest semi-conductor manufacturing countries accounted for 86% of global revenues, with China at just 5%.

GLOBAL SEMI-CONDUCTOR PRODUCTION

China lags behind other countries



Source: Deliotte, NAB Economics

That said, this high level view overlooks the current interconnected nature of supply chains – with different countries (particularly within Asia) having different specialities within these links. This was highlighted by shortages in electronic components during the early stages of China's COVID-19 shutdown in early 2020. It would take time and considerable investment to develop technology alliance aligned supply chains.

One economy that is unclear regarding its alignment to any tech alliances is Taiwan. Economically Taiwan is closely tied to China, despite ongoing political tensions. It is interesting to note that the Trump Administration strengthened political ties with Taiwan, and the Biden Administration appears to be going further – with the Taiwan representative in Washington DC receiving an invitation to President Biden's inauguration (the first time since 1979 that such an invitation was granted).

However, such a strategy would be unlikely to completely isolate China – with the potential for Chinese firms to win supply contracts in otherwise non-aligned countries, such as emerging markets where lower cost Chinese technology might prove more desirable.

CONCLUSIONS

At this stage it is unclear how willing policy makers in the proposed alliance countries would be to implement these proposals, as some would represent a radical shift from the status quo. That said, there appears to be willingness in advanced economies to curb the influence of China's technology firms, which could result in a split in global markets. This could result in a number of negative trends – including increased costs through the supply chain (meaning higher costs for end consumers), reduced innovation (by slowing the free-flow of ideas within research and development) and disruption of global communications (should divergent technology streams strictly lock consumers into different systems).

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