

Made in China, the U.S. or elsewhere?

The RBC Emerging Markets Equity team

Trade tensions between China and the U.S. have been dominating news headlines and driving uncertainty in equity markets across the globe, but whether or not Presidents Trump and Xi will agree to a trade truce in the near term is anybody's guess. As long-term owners of the companies in which we invest, we seek to understand the broader implications of deteriorating geopolitical relations, such as those between China and the U.S., and how these are likely to affect companies and their supply chains.

Until recently, the consensus has been that the U.S.'s spat with China was principally driven by a desire to reduce its trade deficit and boost manufacturing activity locally. However, recent developments suggest that its motivations are far more complex and far-reaching than that. The U.S.'s decision to target Huawei, a strategically important company for China and world leader in 5G technology, indicates that the tensions are less about trade and more about China's increasing power and influence globally. In particular, they indicate the growing threat posed by China to the U.S. in terms of technological leadership.

Déjà vu?

The current situation bears some resemblance to 1957 when the Soviet Union launched the first Earth-orbiting satellite, Sputnik 1. This caught the U.S. by surprise and ignited the Space Race which the U.S. ultimately won in 1969 when the first human landed on the moon. It was from this event that the term "Sputnik moment" was first coined, meaning: "a moment when a country realises it is threatened and has to redouble its efforts in education and R&D in order to catch up". By sanctioning Huawei, effectively preventing the Chinese company from purchasing "U.S. origin components", (most importantly semiconductor chips) which it depends upon and lacks the capability to substitute, the U.S. has left China feeling vulnerable and exposed. In our view, rather than aiding the U.S. in its negotiation tactics, these actions against Huawei will only provide further impetus to China to achieve its longer-term goals of technological leadership and self-sufficiency. In effect, the U.S. has unintentionally triggered China's latest "Sputnik moment".

Nothing new

In our report published in January of this year, [China Made: the end, or a new beginning?](#), we argued that supply-chain shifts are nothing new; companies have been moving low-end production away from China for some time to reduce labour costs. We believe that trade tariffs imposed by the U.S. will only accelerate the trend further by prompting

companies to diversify their supply chains and reduce their reliance on China.

At the same time, China has evolved to become a world leader in value-add goods. This has been driven both organically through China's economic progression but also actively by the Chinese government. China's "Five-Year Plan", as well as initiatives such as "Made in China 2025" and its latest Science and Technology Innovation Board all focus on intelligent manufacturing, self-sufficiency and moving up the value-add manufacturing supply chain. This is reflected in China's growing R&D spend, but the key question is: will China's investments pay off in the long run, and will they be sufficient to withstand the growing backlash from the U.S.? We decided to dig deeper into the numbers.

Innovation

To track China's progress regarding innovation, we looked at international patents filed under the Patent Co-operation Treaty (PCT). This is a strict measure designed to grant patents under multiple international jurisdictions through one unified application. We found that China's applications have been growing at a rapid rate and in 2018 exceeded those from the U.S. for the first time.

China's progress is also evident when we consider various education metrics. For example, the Programme for International Student Assessment (PISA) has ranked China and other Asian countries in the top 5 countries in terms of mathematical literacy.¹ This contrasts with the U.S., for example, which features at the lower end of the spectrum. A comparison of student degrees in the fields of Science and Engineering shows a similar trend, with the number of degrees in China equating to more than Europe, the U.S. and Japan combined.

The quality of China's academic institutions also seems to be improving. Tsinghua University topped The National University of Singapore in this year's Times Higher Education Asia University Rankings² – a first for a mainland China institution. The university also published the most Maths and Computer Science papers in the top 1% of those most cited globally, with five other Chinese universities featuring in the top 13.³ This achievement would have been unthinkable 20 years ago.

Clearly there is still some way to go for the quality of China's output in the fields of education, academic research and innovation to match its quantity, however the

data so far seems to point to rapid progress in this respect. Whether you believe all of the data or not, the trend line is clear.

Self-sufficiency

To understand the implications of U.S. tariffs and sanctions on China, we looked at trade data to determine China's exposure and dependence on the rest of the world.

Imported components in China's total exports has fallen from 60% in the 1990s to 40% today.⁴ This suggests that China is producing components that were previously imported, in contrast with other countries, such as Philippines, Bangladesh and Vietnam, which lack the capability to produce their own. The trend towards substitution of imports is further visible in China's import mix; imports of intermediate, processed products have fallen over time, while the need for primary goods has risen.

Export data also points to increasing self-sufficiency. In the 10-year period to 2018 exports as a percentage of China's GDP have fallen from over 30% to 18%, as the domestic Chinese market has increasingly driven demand.⁵

Diversified trade

Digging deeper into the export numbers shows diversified exposure by geography with little dependence on the U.S. Exports to the U.S. have been shrinking over time and now account for less than 20% of China's overall exports, which equates to approximately 3.6% of China's total 2018 GDP. This contrasts with exports to Belt and Road Initiatives (BRI) nations which have risen to over 50% of China's overall exports (or 9.6% of China's total 2018 GDP).³ This disparity has the potential to increase as China continues to expand its book of BRI signatories, up this year to 133 countries compared to 72 in 2017.

Competitive advantages

We noted previously that for some time companies have been diversifying their supply chains away from China to lower-cost regions, and that we expect the recent trade tensions to accelerate this further.

In order to assess the extent of these shifts and their longer-term impact on China as a leading manufacturing hub, we look to assess China's relative competitiveness versus other manufacturing locations.

While cheap labour has so far been the primary driving force behind the shift away from China, other costs are equally important to companies when assessing moving production. Looking at ease of doing business rankings, China scores well versus alternatives such as India, Indonesia, Vietnam and Bangladesh, and its score has been improving in recent years. Looking at the numbers in more detail, we have identified several key advantages which China offers that are unlikely to be replicated by any other single country. These include: scale in terms of both labour force and land availability, a developed supply base, best-in-class infrastructure, increasing innovation and, importantly, proximity to a huge end market.

China's "Sputnik moment"

The U.S.'s move to impose tariffs on Chinese goods will, in our view, prove to be successful in accelerating the ongoing shift of production away from China, irrespective of whether or not a trade truce is reached, as companies reconsider the risks of being over-exposed to any one country. The same cannot be said of the U.S.'s sanctions on Huawei. We believe that rather than strengthening the U.S.'s position at the negotiating table, this will only provide further impetus to China to focus its efforts on precisely those areas which the U.S. is looking to suppress – namely, China's strengthening innovation and technological prowess.

In terms of our portfolio, we will continue to seek companies with exposure to China's large end-market, as well as those Chinese companies with technological expertise in value-add segments.

¹National Science Board, Jefferies, May 2019.

²<https://www.timeshighereducation.com/world-university-rankings/2019/regional-ranking#survey-answer>.

³Jefferies, May 2019.

⁴UN Comtrade, HSBC, October 2018. China's imports of parts and components as a % of China's merchandise exports.

⁵Statista, 2019.

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Dijana is the Product Specialist in the Emerging Markets Equity team in London. Prior to joining RBC Global Asset Management in 2018, Dijana was Vice President at Citi Private Bank where she spent six years across the Managed Investments and Investment Marketing businesses, focusing on the positioning of investment capabilities and thought leadership respectively. Dijana began her investments career at KPMG Investment Advisory, and prior to that worked in the Old Masters department at Christie's Auction House.

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