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Biden's Manufacturing Plan and What China's Experience Tells Us about its Chances of Success

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- The Biden administration wants to revitalise the US manufacturing sector to better compete with China;
- The McKinsey Global Institute estimates that manufacturing could boost US GDP by 2.2% annually;
- But facing stiff competition from Europe and East Asia, the US will face similar problems as China if wants it to establish a strong and self-sufficient domestic manufacturing industry.

Summary

Since former US President Donald Trump launched his trade war with China, competition with Beijing has become an obsession in US politics. His successor, Joe Biden, now appears to be intensifying efforts to prevent China overtaking the US as the world's largest economy. Thus, Biden warned US Senators in February – after his first call with Xi Jinping – that China would 'eat our lunch', if the US did not increase its own spending on infrastructure and other domestic industries[1].

One area that is might particularly benefit from the US government's largesse is the manufacturing sector. Spurred by concerns over supply chain dependence on China, the Biden administration wants to increase massively investment in domestic production. The planned USD2 trillion (~£1.4 trillion) infrastructure bill includes several provisions to support domestic manufacturers as well as SMEs.

Perhaps surprisingly, the rivalry with Beijing appears to have led the White House to embrace policies that resemble China's directed industrial policy far more than the classic liberal, market-driven development, which the US has championed since the 1980s.

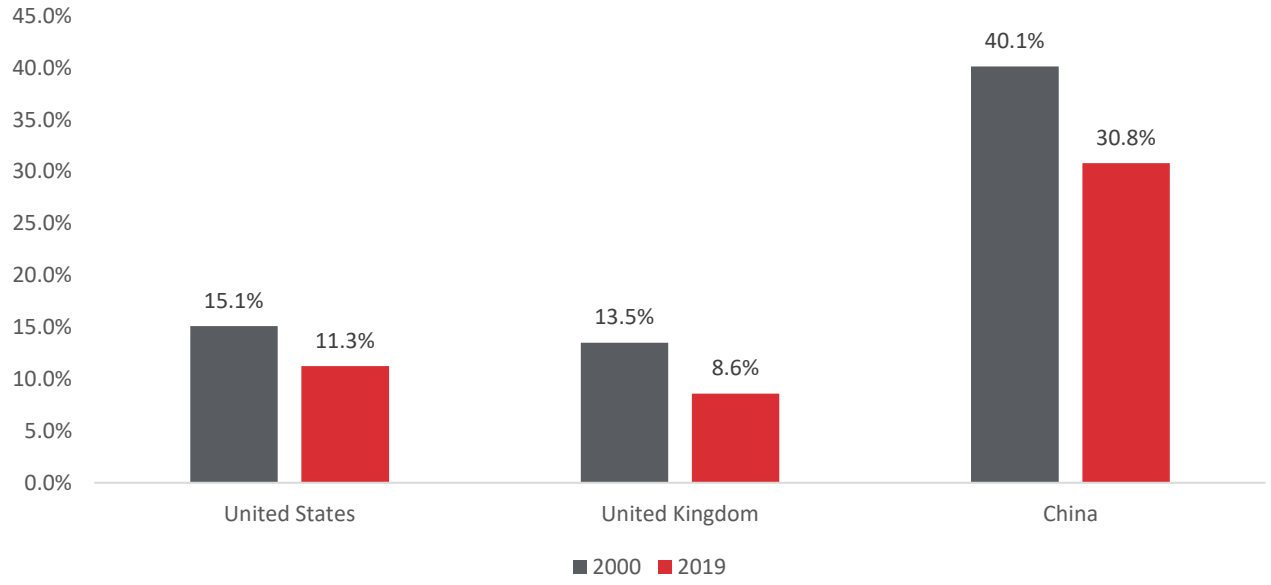
But rather than becoming a 'planned economy' as some critics fear, it is more likely that the Biden administration's attempts at import-substitution will run into the same roadblocks as China's ambitious Made-in-China 2025 strategy.

Background

Like most developed countries, the share of manufacturing in the US economy has continued to decline over the last century. In 2019, the sector accounted for only 11% of value added to the country's GDP, compared to over 15% in 2000. In total, the number of US manufacturers has shrunk by 25% since the end of the 1990s. In the same period, the United States' share of global manufacturing fell from 25% to 17% in 2019. By contrast, China accounted for nearly 29% of global manufacturing output in 2019, according to Statista[2].

[1] https://www.bbc.co.uk/news/business-56036245
[2] https://www.statista.com/chart/20858/top-10-countries-by-share-of-global-manufacturing-output/

Graph – Manufacturing as share of domestic GDP in 2000 and 2019



Source: MGI, UN Comtrade ©CBBC

Countering the trend has become a major objective of the Biden administration. In September 2020, his team released a 'Made in America' plan[3] which aims at turning the US manufacturing sector into the 'arsenal' of the country's post-covid recovery.

Since his inauguration, President Biden has proposed several bills to turn this plan into reality. Most prominently, the planned USD2 trillion (~£1.4 trillion) infrastructure bill, which includes several provisions to develop critical technologies and upgrade America's research infrastructure. The plan foresees an investment of more than $52 billion in domestic manufacturers. Additionally, the Biden administration wants to spend similar amounts on domestic basic research and semiconductors[4].

In all these plans China looms large.

Biden's focus on China is backed by Congress. On 21 April, the US Senate voted in favour of the bi-partisan Strategic Competition Act[5]. The 300-page bill not only expands the powers of the Committee on Foreign Investment in the United States (CFIUS), but also adds new sanctions on the use of 'forced labour'; it will also allow the US government to publish a list of IP violators, directly targeting Chinese SOEs which are suspected of having benefited from IP theft [6].

[3] https://joebiden.com/made-in-america/
[4] https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/
[5]https://www.foreign.senate.gov/imo/media/doc/DAV21598%20-%20Strategic%20Competition%20Act%20of%202021.pdf
[6] https://www.jdsupra.com/legalnews/strategic-competition-act-creating-more-8939979/

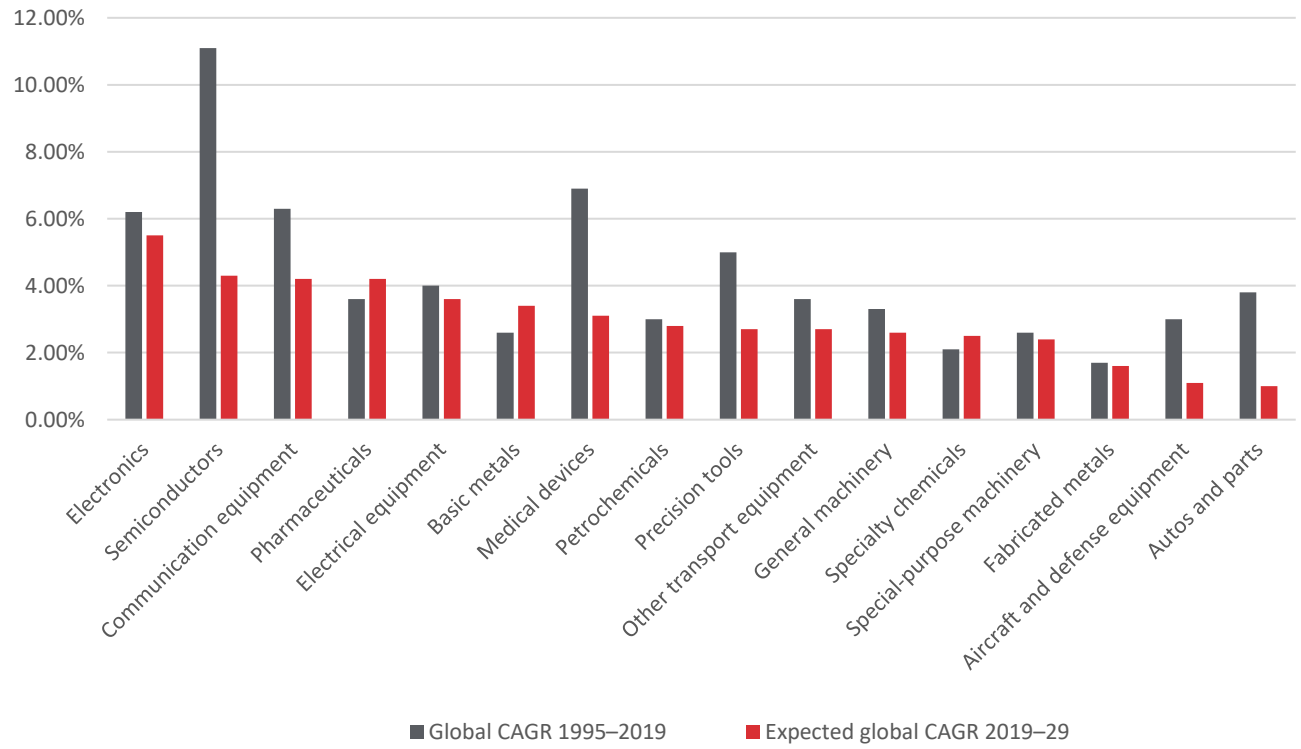
Which sectors would be affected?

Investing more in manufacturing could indeed help the US recovery. Although it employs only 8% of the American workforce, it attracts 20% of the nation's capital investment, 30 percent of productivity growth, 60% of exports, and 70% of business R&D, according to recent study by the McKinsey Global Institute (MGI)[7]. Strengthening the domestic industrial base therefore creates strong positive externalities across the entire economy.

MGI has identified 16 sectors where such investment would be particularly valuable: these include the traditional automotive sector as well as advanced industries such as electronics and semiconductors. Supporting these sectors could not only reverse the dwindling US share in global production – since 1990, the United States' share in the production of cutting-edge semiconductors has fallen from 37% to 10% - but create new jobs and spur economic growth.

On average, these sectors are expected to grow 3% in the coming decade with electronics, semiconductors, and telecommunications equipment being the most promising industries. MGI estimates that an increase in competitiveness could boost annual GDP by up to $460 billion (~£331 billion) – or 2.2% of the current US GDP.

Graph – Past and future global growth in 16 core manufacturing sectors



Source: MGI, UN Comtrade ©CBBC

[7] https://www.mckinsey.com/featured-insights/americas/building-a-more-competitive-us-manufacturing-sector

What are the challenges?

While more investment in domestic manufacturing appears to be a no-brainer, boosting competitiveness will require several structural adjustments.

Lack of Financing

The biggest problem of the US manufacturing sector has been the lack of long-term financing. MGI estimates that the US manufacturing sector would need capital investments of $15 billion to $25 billion (~£11 billion to £18 billion) annually to upgrade aging equipment and develop Industry 4.0 technologies.

Yet profitability across the industries has fallen by 80% over the last two decades. As result many US firms have therefore focused on the more profitable R&D and design activities while outsourcing assembling and production to partners in Europe and East Asia.

To compensate for the lack of investment incentives, the US government would have to provide up-front financing, especially for small and medium-size enterprises, which often lack access to large-scale investment funds. MGI also suggests that the US should follow the example of countries like Germany or Japan which often provide 40 to 50 percent of up-front costs for one or two large companies via state-backed financial institutions, eg the German Kreditanstalt für Wiederaufbau (KfW) or the Japan Finance Corporation. This could help manufacturers generate a sufficient profit to 'crowd in' private investment.

A strong dollar

But financing is only one of many challenges. The tight margins have also increased the impact of currency fluctuations. Over the last decade, the dollar has gained nearly 23% in value, whereas the value of the Renminbi has – compared to the US dollar - remained more or less unchanged [8]. Several industry experts, such as Mike Stumo**,** CEO of the Coalition for a Prosperous America, a trade body representing US SMEs, see the strong dollar as the main problem for America's manufacturing malaise [9].

Although China's weak Renminbi is generally quoted as the principal culprit, currency adjustments by other East Asian countries are often as impactful. Internal research estimates by the Center for Economic and Policy Research showed that currency interventions by Japan, Malaysia and Singapore alone have cost the US economy up 320,000 jobs annually in the first half of the 2010s[10].

[8] https://tradingeconomics.com/china/currency#:~:text=The%20CFETS%20RMB%20Index%20measures,the%20yen%20(11.5%20percent).
[9] http://www.scdigest.com/ontarget/21-03-02_Weaker_Dollar_Would_Boost_US_Manufacturer.php?cid=18425&ctype=content
[10] https://www.washingtonpost.com/posteverything/wp/2015/05/11/the-strong-dollar-is-hurting-u-s-manufacturing-theres-a-lesson-in-there-for-the-tpp/

Supply Chain Concentration

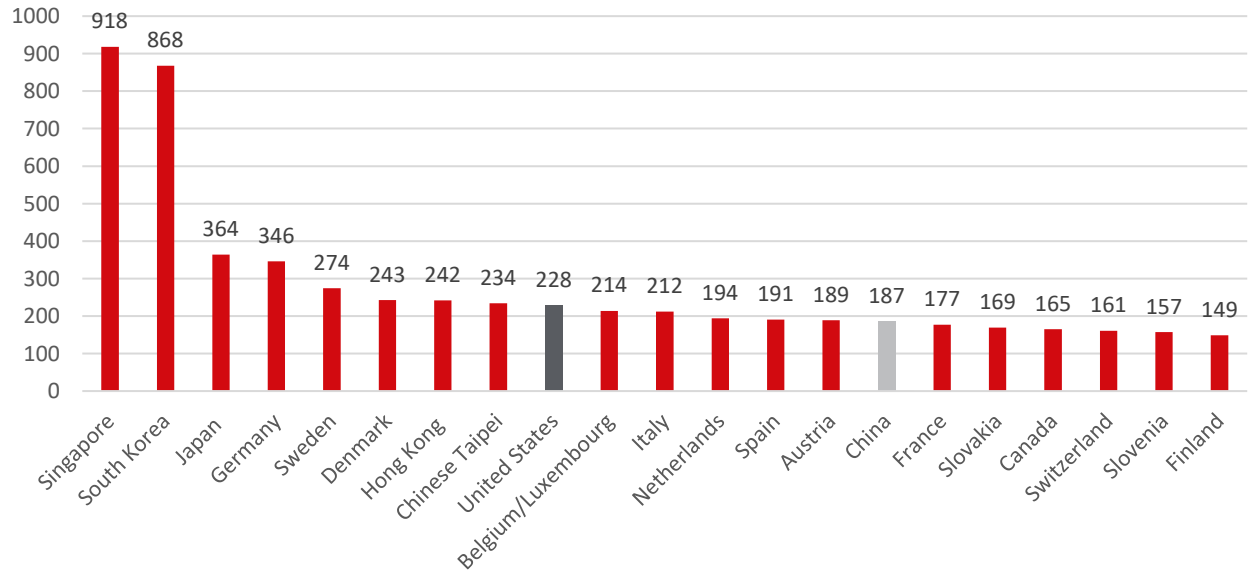
Also, supporting just a few national champions won't be enough. As US economist Paul Krugman has long pointed out in his Noble Prize-winning research, advanced manufacturing industries are usually highly concentrated in specific regional clusters[11].

The semiconductor industry is only the most extreme example of this trend. Taiwan and South Korea now account for over 83% of global chip production, according to recent research by TS Lombard [12]. While western firms such as America's Nvidia and UK's ARM are leading chip designers and patent holders, they do not produce semiconductors on their own, thus relying heavily on firms like Taiwan's TSMC or South Korea's Samsung.

What the US's strong focus on R&D and design has led to, is a loss of competitiveness in many advanced manufacturing sectors, which are essential for high-end production capacities. For example, the industrial robots market is nearly completely controlled by European and Japanese Firms - Swiss ABB and Japan's Fanuc continue to dominate two-thirds of China's automation market, despite the Chinese government's efforts to foster domestic competitors [13].

As a result, European and East Asian developed countries have taken a strong lead in industrial robots, with Singapore and South Korea at the top of the ranking. By contrast, in 2019, the US was only in ninth place behind Denmark and Sweden in terms of robots installed per 10,000 employees, according to the International Federation of Robotics[14].

Graph - Robot Density in the Manufacturing Industry in 2019



[11] Krugman, Paul (1991*), Increasing Returns and Economic Geography*, in: Journal of Political Economy, 1991, Vol. 99, No. 3, pp. 483-499
[12] https://blogs.tslombard.com/geopolitical-spotlight-shifts-to-semiconductors-the-new-oil
[13] https://www.wsj.com/articles/battle-of-the-robots-still-favors-japan-and-europefor-now-11611056099
[14] https://ifr.org/ifr-press-releases/news/robot-race-the-worlds-top-10-automated-countries

Source: International Federation of Robotics ©CBBC

Climbing up the same hill

Ironically, the US and China thus face similar problems. While providing funds for domestic producers is certainly helpful, currency fluctuations and lack of knowhow are far bigger obstacles.

Central Banks, both in China and the US, are generally opposed to significant devaluations, fearing that it could spur inflation and create dangerous imbalances in the wider economy. Also, it would go against the general market trend of a robust post-Covid recovery, which is expected to lead to a stronger rather than a weaker US dollar.

To fill the gap in advanced manufacturing knowhow, the US could learn from successful Chinese models, such as the automotive industry, where partnerships with European and Japanese firms has boosted the development of competitive domestic suppliers[15]. Yet even this model has so far failed to break into the most advanced parts of the supply chain, where incumbents often benefit from accumulated R&D investment and decade-long expertise.

In the end, the US will probably have to adopt a similar approach as Chinese firms did: increase co-operation with European and East-Asian firms and intensify efforts to acquire critical technologies through M&As.

While US companies might certainly arouse less concern than their Chinese rivals, they would still encounter opposition from European and East Asian governments worried about protecting their country's industrial crown jewels. Anti-trust concerns, as in the current debate regarding the planned acquisition of Britain's ARM by its American rival Nvidia, will also make outright acquisition difficult.

CBBC View

Rather than becoming *like* China - as Niall Ferguson has recently mused[16] - it is more likely that the Biden administration is facing the same problem *as* China when it comes to developing an advanced domestic manufacturing sector against strong foreign competition.

To be fair, the US is no stranger to industrial policy. Some have even argued that Alexander Hamilton's concept of 'infant industries' and his 1791 Report on the Subject of Manufactures[17] was probably the first example of a modern industrial policy[18], inspiring many late-comer economies from Wilhelmine Germany over Meiji-era Japan to modern-day China.

Yet fostering emergent technologies – as the US Defense Advanced Research Projects Agency (DARPA) has done rather successfully – is one thing, creating a domestic industry in established sectors with strong incumbents is far more difficult.

The most likely result of the Biden administration's ambitious plan is therefore not the creation of a self-sufficient and fully resilient US manufacturing industry, but rather one with a heavier reliance on European and East-Asian industry leaders and an increase in imports of high-tech components similar that that seen in China's recent trade balance.

[15] Thun, Eric (2006), *Changing Lanes in China. Foreign Direct Investment, Local Governments, and Auto Sector Development*, New York: Cambridge University Press
[16] https://www.spectator.co.uk/article/the-china-model-why-is-the-west-imitating-beijing
[17] https://founders.archives.gov/documents/Hamilton/01-10-02-0001-0007
[18] https://carnegieendowment.org/chinafinancialmarkets/60459

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