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Dragon taking over the Tiger after 30 years: Trade Deficit and Technology Race

Khyati Singh

Research Associate, Centre for Air Power Studies

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While the world was busy tracing the events that followed Nancy Pelosi's visit to Taiwan, yet another major country silently slipped into a trade deficit with China. This country is South Korea, which recorded a trade deficit with China for the first time in thirty years.¹ This was not just the post-pandemic world coming into being, or the war that is currently going on, which manifested this deficit. It is rather rooted in structural factors along with increasing penetration by the Chinese in the tech sector.

In 2016, amidst the growing tussle between the US and China, it was Korea that bore the brunt. South Korea installed America's Terminal High Altitude Area Defense (THAAD) missile interceptor, which raised serious security concerns for China. This ill-thought nod to help its friend America cost Korea dearly. The Chinese sanctions that followed unsettled the economy. China put sanctions on entertainment, K-Pop, Korean tourism, and consumer products. The estimated loss that the Republic of Korea (ROK) incurred was around \$7.5 billion.² The issue flared to great heights and entered the realm of political rhetoric quickly.

The current war might have overshadowed this great feat that China has managed to achieve and has butchered the surplus streak that ROK has enjoyed since August 1994. Another reason why this event didn't gain limelight is that political economists are assuming it to be an offset of events like the pandemic, the Ukraine crisis, etc. However, they are not taking the bigger picture into account. This deficit didn't come to the surface due to the mentioned causes; it was affecting the equation way earlier. The Korean International Trade Association (KITA) furnished data that shows that after a high in 2013, when the surplus was nearly around US\$ 63 billion, the balance of trade was showing a negative trend.³ There might have been a few instances of exceptions, but the ball was shifting to China's court. Hence, it would be a miscalculation to pin this decline on transitional factors and not account for structural changes that China is creating in its larger economic sphere of influence.

The ROK rode the wave of economic boom powered by its electrical machines sector but as the tides shifted, China took the lead. This has been the leading factor in the decline that ROK has witnessed. It imported technological machinery like integrated circuits, which was topping the charts of imports. The cost was pegged at around US\$ 21 billion in 2021 alone. This instance narrates the reality of changing trade dynamics in the world and the lead that China is taking.

China has dethroned the ROK of its traditional IT supremacy and is taking the IT world by storm. In 2014, President Xi Jinping echoed this advance in his speech and called for state-led developments along with an industrial policy that would make China a 'Cyber Great Power'.

President Xi Jinping set the agenda clear and the current trends are its clear manifestation. In addition, in its fourteenth Five Year Plan (FYP) for the year 2021-2025, PRC mentioned Research and Development (R&D) in key emerging technologies. The list consisted of Artificial Intelligence, Quantum Computing, Aerospace, Integrated Circuits, etc.⁴ This development will be facilitated by the massive budget which China has allocated for R&D and aims to increase it by nearly seven per cent on a yearly basis during the course of the FYP. The budget set aside for semiconductors alone is estimated to be 1 trillion yuan, indicating how desperately China is seeking to 'have-it-all'.⁵

ROK needs to put in more rigour to keep its technological edge. For instance, Samsung, the most famous South Korean brand, was the first in the world to develop the 3-nanometer chip. Likewise, SK Hynix's parent company, SK Group, which is amongst the largest memory chip makers in the world, has promised a sum of \$195 billion⁶ for its battery, biopharmaceutical, and semiconductors to keep in check the Chinese challenge.⁷

Semiconductors seem to be the most important of all assets at the moment, largely because not everyone has the expertise and facility to manufacture them, and as this world becomes digitalized, the demand will keep increasing. Unfortunately for China, a chunk of it comes from Taiwan, with whom it is facing a rather difficult situation. As a retaliation to the visit by Speaker Pelosi, China blocked several items imported including foods and fish but has kept semiconductor supply chains immune from its aggression.⁸ This is mainly because Chinese factories and smartphone assembly lines all rely on the multibillion-dollar ties that it has with Taiwan for its chips. Hence, China can't afford to touch this crucial cord.⁹

Albeit, China has refrained from any disruption on the lines of chips, its unabashed chase to become self-reliant in the field will only make it difficult for others to twist its arms in the near future. Thus, this works as a wake-up call for the major economies of the world, including India and ROK, to not let the technological ball slip out of their courtyard and invest in developing capabilities like semiconductors, integrated circuits, etc. The technological front is the new age of nukes and will be a key deciding factor in a conflict situation as they comprise critical infrastructure that is the backbone of a war. Hence, in a hawkish atmosphere, aspirational states cannot rely on manipulative state actors like China for crucial components. They have to pool resources and share technology with allies to deal with the crisis.

NOTES:

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³ Korean International Trade Association. [한국무역협회 K-stat \(kita.net\)](http://kita.net). Accessed on August 08, 2022.

⁴ Liza Lin, "China Targets AI, Chips Among Seven Battlefronts in Tech Race With U.S.", *Wall Street Journal*, September 03, 2020. [China Targets AI, Chips Among Seven Battlefronts in Tech Race With U.S. - WSJ](https://www.wsj.com) Accessed on August 08, 2022.

⁵ Daniel R. Russel, "Stacking the Deck: China's Influence in International Technology Standards Setting", *Asia Society Policy Institute* 2021. [ASPI_StacktheDeckreport_final.pdf \(asiasociety.org\)](https://www.asiasociety.org). Accessed on August 08, 2022.

⁶ "S.Korea's SK announces \$195 bln investment for chips, batteries, bio through 2026", *Reuters*, May 26, 2022. [S.Korea's SK announces \\$195 bln investment for chips, batteries, bio through 2026 | Reuters](https://www.reuters.com). Accessed on August 08, 2022.

⁷ Kate Park, "Samsung Electronics starts 3-nanometer chip production ahead of TSMC", *Tech Crunch*, June 30, 2022. [Samsung Electronics starts 3-nanometer chip production ahead of TSMC | TechCrunch](https://techcrunch.com). Accessed on August 08, 2022.

⁸ Joe McDonald, "China blocks some Taiwan imports but avoids chip disruptions", *AP News*, August 03, 2022. [China blocks some Taiwan imports but avoids chip disruptions | AP News](https://www.apnews.com). Accessed on August 08, 2022.

⁹ William A Reinsch, "Securing Semiconductor Supply Chains", *Center for Strategic and International Studies*, August 2022. [220802_Reinsch_Semiconductors.pdf \(csis-website-prod.s3.amazonaws.com\)](https://www.csis.org). Accessed on August 08, 2022.