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TECH EMANCIPATION FROM CHINA

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ANALYSIS


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1

Executive Summary

Over the past few years, India has taken decisive steps to reduce its dependence on Chinese technology and investments. This was triggered by border skirmishes with China in 2020, but built on long-standing national security concerns about China, given the history of conflict between the two countries.

India has banned hundreds of Chinese apps like TikTok and UC Browser, imposed measures to reduce Chinese imports, restricted Chinese investments in Indian companies, and mandated telecom infrastructure be from “trusted sources”, and tried to reduce the import of products from China. These actions have come along with active support and development of regulations in favour of domestic companies and innovation, a push for manufacturing in India, and global alliances to ensure that China doesn’t dominate emerging technologies. Not all of these moves have been successful: it hasn’t been able to address its trade gap with China, Chinese technology is still implemented in Indian telecom networks, and Indian alternatives to Chinese applications haven’t really succeeded to replace TikTok.

India has, however, been opportunistic, and demonstrated agility in leveraging geopolitical developments to further its goals: there is a clear sense of direction in its approach. Its actions underscore striking a balance between economic gains and strategic interests.

Thus far, the anti-China measures instituted by the Indian government haven’t gravely harmed India. They have benefitted a few Indian companies, and American companies even more so. The impact on trade has been minimal so far. It’s, however, probably still too early to understand the full impact of these policies as the efforts are part of a long-term approach, but an approach that so far looks promising.

While, to some, India’s approach to tech emancipation from China might appear illiberal, it’s also important that openness should not

be a vulnerability. India's technology derisking from China holds key lessons like assessing dependence risks, building domestic capabilities, opportunism in policymaking, fostering international alliances, and supporting a domestic technology ecosystem.

2

Background: Why and how India acted against China Tech

At 8:47 PM on June 29th 2020, a press release¹ from the Indian government sent shockwaves across India's vibrant Internet ecosystem: it announced a ban on 59 apps that India said were prejudicial to "sovereignty and integrity of India, defence of India, security of state and public order." While the announcement didn't specifically mention China, each of these apps was linked to the country. The ban was enforced in the midst of the deadliest clash between India and China in 50 years², with multiple skirmishes with fatalities between Indian and Chinese soldiers on the "Line of Actual Control", which separates territories in the Himalayas controlled by each side. On that list of banned apps were TikTok, ShareIt and UC Browser, three of the most popular apps in India at that time. Another 118 apps were banned in September³ and 43 in November⁴ 2020, followed by 54 in 2022⁵. In 2023, 138 betting and 94 loan apps with links to China were banned⁶, taking the total to 509 apps.

With a population of 1.4 billion people and a teledensity of 84.56%, India has 881.25 Million Internet connections, of which 847.31 million

¹Press Information Bureau, "Government Bans 59 mobile apps which are prejudicial to sovereignty and integrity of India, defence of India, security of state and public order", June 2020, <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1635206>

²The Diplomat, "A Skirmish in Galwan Valley: India and China's Deadliest Clash in More Than 50 Years", June 2020, <https://thediplomat.com/2020/06/a-skirmish-in-galwan-valley-india-and-chinas-deadliest-clash-in-more-than-50-years/>

³Press Information Bureau, "Government bans 54 Chinese apps that pose threat to national security," August 2021. <https://pib.gov.in/PressReleasePage.aspx?PRID=1650669>

⁴Press Information Bureau, "Government of India bans 43 mobile apps," November 2021. <https://pib.gov.in/PressReleasePage.aspx?PRID=1675335>

⁵News on Air, "Government bans 54 Chinese apps that pose threat to national security," August 24, 2021

⁶Reuters, "India bans Chinese-linked betting, loan-lending apps," February 2023. <https://www.reuters.com/world/india/india-ban-chinese-linked-betting-loan-lending-apps-ani-2023-02-05/>

are wireless. It is the largest Internet market in the world outside of China, in terms of number of users. India has the cheapest data rates in the world, at around EUR 0.11 per GB, and data consumption of over 200 GB per Internet user per year⁷. Several global Internet companies, including Facebook⁸, WhatsApp⁹, Instagram¹⁰ and YouTube¹¹ count India as their largest market, and it remains a key battleground for dominance among Big Tech US companies and well funded Indian startups.

The rapid digitisation that has taken place under Prime Minister Narendra Modi's tenure, led largely by a rapid reduction in data costs and the rollout of 4G, flagship programs like Digital India and Make in India, and a focus on Atmanirbhar Bharat (self reliant India) have also helped. Post the COVID19 pandemic, where global supply chains were disrupted, India has also positioned itself as a viable alternative to China for setting up manufacturing, as global companies seek to diversify and de-risk their supply chains.

While the ban on Chinese apps and restrictions on Chinese investments were sudden and effective, in areas where substitution is difficult, India appears to have a roadmap and a long term strategy.

2.1 Addressing the dominance of Chinese devices in India

A large Internet user base, over 95% of which is wireless, is naturally a large market for handset manufacturers. In 158 million shipments in 2019, India surpassed the US to become the second largest

⁷Telecom Regulatory Authority of India, "Quarterly Performance Indicator Report," August 2023.

https://trai.gov.in/sites/default/files/QPIR_21082023_0.pdf

⁸The New York Times, "Facebook Fueled Anti-Muslim Violence in India, Report Says," October 2021.

<https://www.nytimes.com/2021/10/23/technology/facebook-india-misinformation.html>

⁹Moneycontrol, "WhatsApp Business' big India push: In-chat payments, paid verification, and more," September 2023. <https://www.moneycontrol.com/news/business/whatsapp-business-big-india-push-in-chat-payments-paid-verification-more-11396691.html>

¹⁰Statista, "Countries with the most Instagram users as of July 2021" <https://www.statista.com/statistics/578364/countries-with-most-instagram-users/>

¹¹CNBC, "Five of YouTube's biggest markets in the world are in Asia," April 2019. <https://www.cnbc.com/2019/04/24/five-of-youtubes-biggest-markets-in-the-world-are-in-asia.html>

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market for mobile handsets in the world¹², after China. Chinese brands accounted for 72% of handset shipments to India, with Xiaomi consistently the largest handset brand in the country, and only Samsung as a non-Chinese brand among the top five. As per data from the Indian government, Electronic Components, Telecom Instruments and Computer Hardware Peripherals were the three top categories of imports from China between 2015 and 2020¹³.

While there have been concerns about handsets sending data to China¹⁴, which was acknowledged by Xiaomi in 2014¹⁵, stakeholders in India were also concerned about the dependence on Chinese handsets as the primary access point to the Internet, especially given the conflict between India and China. In 2020, an affiliate of the ruling political party BJP raised concerns about Chinese goods in India, saying that “Business and War cannot go side by side”¹⁶, following which Oppo cancelled a handset launch event in the country¹⁷.

The Indian government has more recently begun investigations into Chinese companies, including Vivo¹⁸ and Oppo¹⁹, alleging tax and customs duty evasion²⁰ and foreign exchange violations²¹. In 2022, it

¹²Counterpoint Research, “India Surpassed USA to Become Second Largest Smartphone Market in the World, Reaching 158 Million Shipments in 2019”, January 2020, <https://www.counterpointresearch.com/india-surpassed-usa-become-second-largest-smartphone-market-world-reaching-158-million-shipments-2019>

¹³“IMPORT-EXPORT FROM CHINA”, LOK SABHA 17 UNSTARRED QUESTION NO. 649 (H), September 2020, https://www.medianama.com/wp-content/uploads/2023/12/loksabhaquestions_annex_174_AU649.pdf

¹⁴MediaNama, “Will look into whether Realme is sending user data back to China: Rajeev Chandrasekhar” June 2023. <https://www.medianama.com/2023/06/223-realme-sending-user-data-to-china-probe/>

¹⁵MediaNama, “Xiaomi MIUI phones sent user data to Chinese servers without consent; issues a fix,” August 2014. www.medianama.com/2014/08/223-xiaomi-miui-phones-sent-user-data-to-chinese-servers-without-consent-issues-a-fix/

¹⁶Rediff News, “Business and War Cannot Go Side by Side,” June 2020, <https://www.rediff.com/business/interview/why-indians-must-boycott-chinese-products/20200620.htm>

¹⁷Mint, “Oppo cancels live online phone launch in India amid calls to boycott Chinese goods,” June 2020. <https://www.livemint.com/technology/gadgets/oppo-cancels-live-online-phone-launch-in-india-amid-calls-to-boycott-chinese-goo-11592409314706.html>

¹⁸Press Information Bureau, “DRI detects Customs duty evasion of Rs. 2.217 crore by M/s. Vivo Mobile India Pvt. Ltd.” August 2022. <https://pib.gov.in/PressReleasePage.aspx?PRID=1847927>

¹⁹MediaNama, “Indian authorities go after Oppo for tax evasion after Vivo and Xiaomi” July 2022. <https://www.medianama.com/2022/07/223-oppo-tax-evasion-dri/>

²⁰The Print, “Chinese giants committing fraud in India: Why Xiaomi, Vivo, Oppo, Huawei are under fire,” September 2021. <https://theprint.in/india/chinese-giants-committing-fraud-in-india-why-xiaomi-vivo-oppo-huawei-are-under-fire/1054046/>

²¹Enforcement Directorate, “Press Release”, June 2023 <https://enforcementdirectorate.gov.in/sites/default/files/latestnews/Press%20Release%20in%20case%20of%20Xiaomi9.6.2023.pdf>

froze Xiaomi's assets in India²² and blocked nearly 119 bank accounts linked to Vivo²³. The Indian government has claimed that the total amount of tax evasion detected across various Chinese companies is a little over \$1 Billion, with Oppo, Vivo, and Xiaomi contributing to over 97 percent of this amount²⁴.

Despite regulatory and enforcement action against Chinese companies, the dominance of Chinese manufacturers, especially BBK Electronics, which owns popular brands like Oppo, Vivo, Realme and OnePlus²⁵, has not waned. In 2022, of the 152 million handsets shipped to India, four Chinese brands (Oppo, Vivo, Xiaomi and Realme) accounted for 60% of the shipments. BBK Electronics has also invested in manufacturing in India: it set up a \$300 million facility to manufacture Oppo phones in India²⁶. Vivo intends to invest almost a billion dollars in the country and export one million phones in 2023²⁷. Xiaomi's supplier Dixon Technologies²⁸ is also opening a new factory in India. By 2019, Xiaomi had invested over \$35 billion in India²⁹.

In order to reduce the import of handsets, and bring in investment and jobs to the country, India began to woo global companies to set up manufacturing facilities in India, after global handset manufacturers sought to diversify their supply chains post the COVID19 pandemic.

²² CNBC TV18, "Xiaomi scam: FEMA authority clears India's biggest seizure order against China phone giant", September 2022, <https://www.cnbctv18.com/business/companies/xiaomi-scam-fema-authority-clears-indias-biggest-seizure-order-against-china-phone-giant-14844881.htm>

²³ Gadgets 360, "Oppo, Vivo, Xiaomi, other Chinese tech firms under government scanner," August 2022, <https://www.gadgets360.com/mobiles/news/oppo-vivo-india-xiaomi-chinese-tech-firms-government-scanner-ed-serachers-finance-minister-nirmala-sitharaman-3224249>

²⁴ RAJYA SABHA

UNSTARRED QUESTION NO. 237, "Order in the case of Xiaomi", July 1, 2023, <https://www.medianama.com/wp-content/uploads/2023/07/AU237.pdf>

²⁵ Counterpoint Research, "India Smartphone Market Q4 2022: Xiaomi Retains Leadership, Realme Surpasses Samsung to Take Second Spot," January 2023, <https://www.counterpointresearch.com/insights/india-smartphone-market-q4-2022>

²⁶ The Sunday Guardian, "Oppo wants to make India global export hub", April 2022, <https://sundayguardianlive.com/business/oppo-wants-make-india-global-export-hub>

²⁷ Business Standard, "Vivo to export 1 mn 'Made in India' smartphones, invest Rs 3,500 cr in 2023", April 2023, https://www.business-standard.com/technology/tech-news/vivo-to-export-1-mn-made-in-india-smartphones-invest-rs-3-500-cr-in-2023-123041300397_1.html

²⁸ Bloomberg, "Xiaomi supplier to open smartphone plant as India pushes local", September 2023, <https://www.bloomberg.com/news/articles/2023-09-15/xiaomi-supplier-to-open-smartphone-plant-as-india-pushes-local>

²⁹ Business Insider, "Xiaomi investment in India: New products launch expected", March 2019, <https://www.businessinsider.in/xiaomi-investment-india-new-products-launch-expected/articleshow/68460618.cms>

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The Indian government had already been promoting its “China-Plus-One” strategy, initially as an opportunistic response to the US-China trade conflict, hosting roadshows in coordination with its Missions abroad³⁰. Apple had begun assembling older and lower budget iPhones in India in 2017, but over the last couple of years, has been investing in manufacturing high-end phones. The latest iPhone 15 is being manufactured in India, and Foxconn, which manufactures the iPhone, is looking to double³¹ its investment in the country.

Towards this end, India has allowed 100% foreign direct investment³² (except from countries sharing land border with India, which includes China) for electronics manufacturing, and introduced performance linked incentive schemes for manufacture and assembly of Large Scale Electronics, electronic components, IT Hardware for production of laptops, tablets, PCs and servers, along with schemes to attract global electronics manufacturers along with their supply chain to set up units in the country. It has announced an outlay of almost \$10 billion for the development of semiconductor manufacturing, to help establish a semiconductor fabrication value chain in the country, and for research into cutting-edge semiconductors³³. There is now zero customs duty on capital goods, and simplified import of used plant and machinery. Public procurement also prioritises electronics products that are made in India.

In 2021, four companies in the Electronic System Design Manufacturing (ESDM) sector diversified their manufacturing base from China to India.³⁴ In December 2022, the Indian government said

³⁰ LOK SABHA 17. UNSTARRED QUESTION NO. 1734, “IMPACT OF US-CHINA TRADE WAR ON INDIAN ECONOMY”, March 2020, https://www.medianama.com/wp-content/uploads/2023/12/loksabhaquestions_annex_173_AU1734.pdf

³¹ Mint, “Foxconn to double workforce, investment in India by this time next year,” September 2023, <https://www.livemint.com/companies/news/foxconn-to-double-workforce-investment-in-india-by-this-time-next-year-11694969169602.html>

³² Press Information Bureau, “Electronic Hardware Manufacturing Sector”, March 2022 <https://pib.gov.in/PressReleasePage.aspx?PRID=1811371>

³³ Press Information Bureau, “India’s semiconductor mission”, December 2022 <https://pib.gov.in/PressReleasePage.aspx?PRID=1885367>

³⁴ LOK SABHA 17 UNSTARRED QUESTION NO. 1448, “SHIFTING PRODUCTION FROM CHINA TO INDIA”, February 2021, https://www.medianama.com/wp-content/uploads/2023/12/loksabhaquestions_annex_175_AU1448.pdf

that the imports of mobile handsets have decreased from around \$5.89 billion in the Financial Year (FY) 2014-15 to around \$1.3 billion in FY 2021-22, whereas Mobile phone exports crossed the \$1 Billion mark for the first time ever in the month of September 2022, with \$5 Billion of mobile phone exports till October, in FY 2022-23, doubling year on year.³⁵

However, weaning the country off low-cost Chinese devices looks like a difficult task. In August 2023, the Ministry of Commerce and Industry announced restrictions on the import of laptops, tablets, all-in-one personal computers, and ultra-small form factor computers and servers, allowing imports only for licensed entities.³⁶ This move met with resistance from US-based industry bodies operating in India, who said that this will also impact international companies that want to sell in India, that it is a non-tariff barrier going against WTO rules, and is a considerable risk to significant investments made by US companies in datacenters in India³⁷. The notification is likely to be withdrawn, and news reports suggest that the Indian government will introduce an import management system.³⁸

The United States in May 2019 placed Huawei on its “Entity List”, barring companies in the US from working with Huawei. Notably, this prohibited Google from working with Huawei on new device models or providing Google’s apps including Gmail, Maps, YouTube, the Play Store and others for these devices³⁹ and US carriers from signing deals with the Chinese company. This made Huawei smartphones less appealing to US users, and consequently, most major retailers in the US including Best Buy, Walmart, and Adorama stopped selling Huawei smartphones. In India, however, doing away with Chinese

³⁵LOK SABHA 17 UNSTARRED QUESTION NO. 1253, “TRADE WITH CHINA”, December 2022, https://www.medianama.com/wp-content/uploads/2023/12/loksabhaquestions_annex_1710_AU1253.pdf

³⁶MediaNama India Import Curb Laptop Tablet Personal Computers, August 2023. <https://www.medianama.com/2023/08/223-india-import-curb-laptop-tablet-personal-computers/>

³⁷MediaNama, “Eight industry bodies object to India’s restriction on import of laptops, PCs”, August 2023. <https://www.medianama.com/2023/08/223-industry-bodies-object-india-import-restrictions-laptops-pcs/>

³⁸MediaNama, “India’s Plans Curb Laptop Import Might Be Called Off”, September 2023, <https://www.medianama.com/2023/09/223-indias-plans-curb-laptop-import-might-called-off/>

³⁹Google, “Answering your questions on Huawei devices and Google services” February 2020. <https://support.google.com/android/thread/29434011?hl=en>

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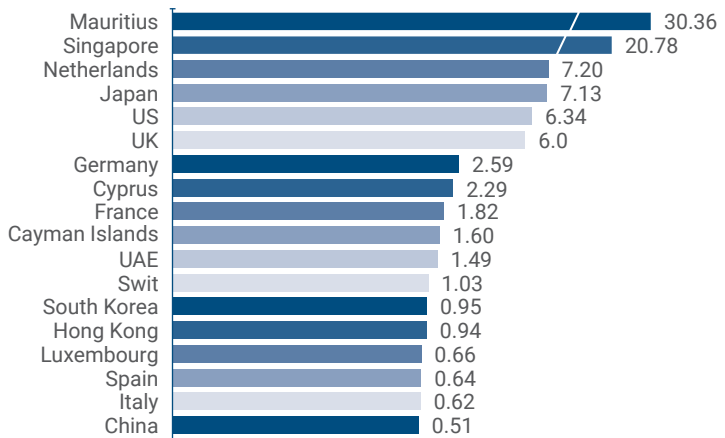
smartphone manufacturers will be more complicated as Chinese companies like Xiaomi, Oppo, Realme, and Vivo make up more than 50 percent of the market share and have invested significantly to set up manufacturing units in India. These companies also make entry-level smartphones, which is crucial in a country where close to half the population still does not own a smartphone.⁴⁰

2.2 Regulating Chinese investments in Indian companies

India may not have signed up for it, but it had unwittingly become a part of China's Digital Belt and Road Initiative. Chinese investments in India had a disproportionately digital focus, and it is suspected that investments have also been routed through Singapore and Hong Kong, via investment vehicles.

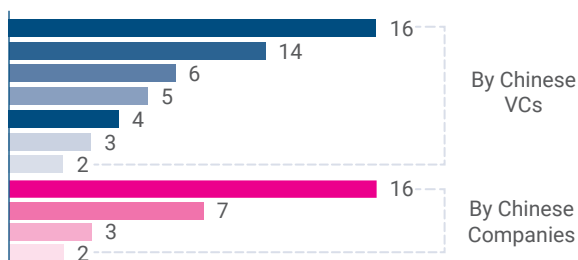
DIRECT INVESTMENT BY CHINA IN INDIA

Share of Foreign Direct Investment (FDI) in last 20 years (%)



⁴⁰Counterpoint Research, "India Smartphone Share," November 2023. <https://www.counterpointresearch.com/insights/india-smartphone-share/>

CHINESE INVESTMENT IN INDIAN STARTUPS



Due to tenuous nature of the Sino-Indian relationship, at least a part of China's investment is suspected to be routed through Hong-Kong and Singapore.

Period from April 2000 to March 2000

Source: Tracxn

Source: Department for Promotion of Industry & Internal Trade

Most substantial investment in Indian startups has historically been from international Venture Capital Funds, with only a few Indian companies or family offices willing to commit investments of upwards of \$100 million. By 2020, 69 Chinese companies and Venture Capital firms had invested in 104 Indian startups, and 18 of India's then 30 unicorns had Chinese funding. In terms of Venture Capital investments, firms like Shunwei Capital (16 investments) and Swastika (12 investments), led the pack. [Trip.com](#), previously CTrip, a Chinese travel aggregator, owns almost half of India's largest online travel company MakeMyTrip⁴¹.

While some of the investments from Chinese firms were financial in nature, others were more strategic: India's largest companies in domains such as online shopping, payments, ride hailing, food delivery, online grocer, digital insurance aggregation, fantasy gaming, digital B2B ecommerce, all once had Chinese investments, and many still do.

⁴¹MediaNama, "China's Ctrip Now Owns Almost Half of Makemytrip After Share Swap With Naspers," April 2019. <https://www.medianama.com/2019/04/223-chinas-ctrip-now-owns-almost-half-of-makemytrip-after-share-swap-with-naspers/>

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Alibaba's investment in India's largest digital payments company Paytm in 2015, via its payments arm Ant Financial⁴², opened the door to Chinese investments in India. By 2020, 18 of 30 Indian unicorns (startups valued above \$1 billion) had a Chinese investor. Among companies, Tencent, Alibaba, Xiaomi and ByteDance were key participants⁴³, with Tencent an investor in 16 of the 30 unicorns. Tencent was among the first Chinese companies to enter the Indian market by buying a 7.5% stake in ibibo⁴⁴, which was then a social network owned by Naspers, itself a key Tencent investor. When its attempts to launch products like the QQ messenger, QQ mail, and eventually Wechat⁴⁵ did not meet with much success in India, Tencent ramped up investments in more successful ventures in the country.

Tracking and attributing investments from China is not easy: investments can be made through debt instruments like convertible debentures that can be converted into equity shares at a later date. The sale of shares can be made in a different market, for example, in companies headquartered in markets like Singapore or Delaware (US), with operations in India via Indian subsidiaries. Investments can also be made via venture capital funds operating out of markets like Hong Kong and Singapore, instead of mainland China. Thus, while official statistics from the Indian government indicate foreign direct investment from China as \$743 million⁴⁶ between 2017-18 and 2019-20, the number is most likely to be much larger.

⁴²TechCrunch, "Alibaba's Financial Affiliate Takes 25% Stake In India's One97, Owner Of Paytm", February 2015. <https://techcrunch.com/2015/02/05/antfinancial-one97/>

⁴³Gateway House, "Chinese Investments 2020", July 2020. https://www.gatewayhouse.in/wp-content/uploads/2020/07/Chinese-Investments_2020-Final.pdf

⁴⁴MediaNama, "Tencent's Option To Buy 50% In MIH India Expired On 17th June 2013", August 2013. <https://www.medianama.com/2013/08/223-naspers-tencent-mih-india/>

⁴⁵MediaNama, "Tencent Focusing Wechat in India Monetization No Plans for Other Products", January 2013. <https://www.medianama.com/2013/01/223-tencent-focusing-wechat-in-india-monetization-no-plans-for-other-products/>

⁴⁶"INVESTMENT FROM CHINA", LOK SABHA 17 UNSTARRED QUESTION NO. 1748, September 2020, https://www.medianama.com/wp-content/uploads/2023/12/loksabhaquestions_annex_174_AU1748.pdf

In 2020, into the first month of the COVID19 lockdown in April, India imposed restrictions⁴⁷ on foreign direct investment in the country. While this was positioned as an attempt to curb “opportunistic takeovers/acquisitions of Indian companies”, it specifically restricted investments from entities of a country “which shares a land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country”, saying that such investments need government approval. Previously, the policy specifically restricted investments from Bangladesh and Pakistan, and while this brought five other countries into the restriction, it is evident that it was targeting investments from Chinese companies. It’s worth noting that less than a month before this, the European Commission had issued guidelines⁴⁸ to protect critical European assets and technology during COVID19, highlighting that “when our industrial and corporate assets can be under stress, we need to protect our security and economic sovereignty.” There were fears, in particular, of opportunistic acquisitions in Italy⁴⁹ and Germany⁵⁰.

The Chinese embassy reacted immediately⁵¹, calling on India to revise the policy, clarifying that Chinese investment in Indian startups has exceeded \$8 billion, and the “the additional barriers set by Indian side for investors from specific countries violate WTO’s principle of non-discrimination, and go against the general trend of liberalisation and facilitation of trade and investment.” It added that the policy does “not conform to the consensus of G20 leaders and trade ministers to realise a free, fair, non-discriminatory, transparent, predictable and stable trade and investment environment, and to keep our markets open.”

⁴⁷Review of Foreign Direct Investment (FDI) policy for curbing opportunistic takeovers/acquisitions of Indian companies due to the current COVID-19 pandemic”, DPIIT, 2020 https://dpiit.gov.in/sites/default/files/pn3_2020.pdf

⁴⁸“Coronavirus: Commission issues guidelines to protect critical European assets and technology in current crisis”, European Commission, 2020 https://ec.europa.eu/commission/presscorner/detail/en/IP_20_528

⁴⁹“Is Italy’s Economic Crisis an Opportunity for China?,” The Diplomat, April 2020. <https://thediplomat.com/2020/04/is-italys-economic-crisis-an-opportunity-for-china/>

⁵⁰“Germany to Launch \$610 Million Fund for Startups Hit by Coronavirus.” Reuters, March 2020. <https://www.reuters.com/article/us-health-coronavirus-germany-fund-idUSKBN21717T>

⁵¹MediaNama, “How will the restriction on Chinese investments affect the Indian Internet ecosystem?” April 2020. <https://www.medianama.com/2020/04/223-china-investment-india-foreign-investment/>

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The impact of the restriction on Chinese investment was felt most by Indian unicorn startups, which are high spending businesses battling to become dominant monopolies. Food delivery service Zomato had just six months of capital when its business dropped by 90% in the first COVID19 wave, and the ban on Chinese investment led to the company considering an IPO⁵², especially since it was unable to get two thirds of the \$150 million it had raised from Ant Financial in January 2020⁵³. Though it recovered as food deliveries were allowed post the first wave, it listed on the Indian stock exchanges soon after. Other Chinese funded companies such as Paytm and PolicyBazaar also subsequently listed in the Indian stock markets, giving their Chinese investors an opportunity to gradually exit.

Post the ban and buoyed by the boost for digital startups, India reached 100 unicorns in August 2023⁵⁴. Funding in startups went from \$12.7 billion in 2019⁵⁵, to \$11.5 billion in 2020, \$42 billion in 2021 and \$25 billion in 2022⁵⁶.

2.3 Preventing the proliferation of Chinese apps

The first sign of Chinese app dominance came in the browser market. In 2013-14, when mobile data prices in India were among the most expensive in the world, Alibaba owned UC Browser⁵⁷ was the primary browser for a majority of Indians, beating Google's Chrome. It grew by using less data for browsing, and gained popularity by leveraging over

⁵²"With Just Six Months of Cash in Bank, IPO Was a Desperate Contingency Plan: Zomato CEO." The Economic Times, October 2021. <https://economictimes.indiatimes.com/tech/startups/with-just-six-months-of-cash-in-bank-ipo-was-a-desperate-contingency-plan-zomato-ceo/articleshow/87291999.cms?from=mdr>

⁵³"Zomato Struggles to Get \$100 Million Funding from Ant Financial Amid India-China Tension." Business Today, July 2020. <https://www.businesstoday.in/latest/corporate/story/zomato-struggles-to-get-100-million-funding-from-ant-financial-amid-india-china-tension-263398-2020-07-07>

⁵⁴"India's Unicorn Club: The Comprehensive List of Unicorns in India." Inc42, January 2020. <https://inc42.com/features/indias-unicorn-club-the-comprehensive-list-of-unicorns-in-india/>

⁵⁵"Despite \$12.7Bn Funding in 2019, Indian Startup Funding Deals at a 5-Year Low." Inc42, February 2020. <https://inc42.com/datalab/despite-12-7-bn-funding-in-2019-indian-startup-funding-deals-at-a-5-year-low/>

⁵⁶"Indian Tech Startup Funding Report 2022." Inc42, March 2022.

<https://inc42.com/reports/indian-tech-startup-funding-report-2022/>

⁵⁷MediaNama, "UC Browser has over 400 million users worldwide; 58% market share in India", May 2016. <https://www.medianama.com/2016/05/223-ucbrowser-400m-users-worldwide/>

200 content partnerships with media and entertainment platforms starting in 2012⁵⁸. It peaked at 59.1% mobile browser market share in 2016⁵⁹, when India became UC Browsers largest market outside of China, accounting for 80 million users⁶⁰. Additionally, it entered the news aggregation market by launching UC News in India.

TikTok had blazed its way to the top of the app download charts in India, with around 200 million users by 2020⁶¹, its largest outside of China, before it was banned in the country. It was not just millennials, influencers and Gen Z's using TikTok, but also farmers and bricklayers. TikTok signed up companies like Pepsi and several local e-commerce brands for advertising⁶². Many Indian TikTok influencers were on the top ten earners' list on the platform in May 2020⁶³. A year before the ban, TikTok star Sonali Phogat⁶⁴ stood for local elections in the state of Haryana, as a candidate of Prime Minister Narendra Modi's political party, the BJP.

At the same time, however, concerns were growing about the proliferation of Chinese apps in India. In 2019, six of the top ten downloaded apps in India were from Chinese companies, including TikTok, Likee, UC Browser, Helo, Vmate and ShareIT, as were two of the top 10 gaming companies: Tencent and Doodle Mobile⁶⁵. Following a standoff in 2017 between Indian and Chinese forces in

⁵⁸StatCounter, "India Browser Market Share 2012." <https://gs.statcounter.com/browser-market-share/all/india/2012>

⁵⁹StatCounter, "India Mobile Browser Market Share 2016." <https://gs.statcounter.com/browser-market-share/mobile/india/2016>

⁶⁰The Indian Express, "UCWeb Browser Launches UC News to Focus on Content", June 2016. <https://indianexpress.com/article/technology/social/ucweb-browser-launches-uc-news-to-focus-on-content-2839261/>

⁶¹"India Bans TikTok and Dozens of Other Chinese Apps." CNN, August 2020. <https://edition.cnn.com/2020/08/13/tech/tiktok-ban-trump-india/index.html>

⁶²MediaNama, "TikTok Seeks to Diversify Content to Attract More Advertisers in India", June 2019. <https://www.medianama.com/2019/06/223-tiktok-best-known-for-music-videos-seeks-to-diversify-content-to-attract-more-advertisers-in-india/>

⁶³Inc42, "The Outline by Inc42: India Uninstalls China; Geopolitics Goes Digital." July 2020. <https://inc42.com/features/the-outline-by-inc42-india-uninstalls-china-geopolitics-goes-digital/>

⁶⁴India Today, "How TikTok Got Sonali Phogat BJP Ticket in Haryana." October 2019. <https://www.indiatoday.in/elections/story/how-tiktok-got-sonali-phogat-bjp-ticket-in-haryana-1606653-2019-10-06>

⁶⁵App Annie, "State of Mobile 2020 Ranking Tables." https://prod-appannie-cms-files.s3.amazonaws.com/200_State_of_Mobile_2020_Ranking_Tables_EN.pdf

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Doklam⁶⁶, a disputed area between China and Bhutan, a newspaper report⁶⁷ cited “security agencies” concerned about the proliferation of Chinese apps, especially news apps like UC News and NewsDog. The report highlighted concerns that the apps could foment unrest via disinformation. Gateway House, a think tank, highlighted propaganda, influence and censorship as key concerns with such apps, which it said gave China veto power over free speech in other markets. Secondly, it said that firms controlled by Chinese companies could control the online marketplace for commerce and financing⁶⁸.

PUBG (PlayerUnknown’s Battlegrounds), a game from South Korean company (Krafton) which was being distributed in India by Tencent Games, and was banned by local government bodies in multiple districts across the state of Gujarat⁶⁹ for a period of time in 2019, because of concerns about additional and promotion of violent behaviour.

TikTok was banned from onboarding new users in 2019 for a brief period by an Indian court⁷⁰ for insufficient child protection measures. Concerns were raised by political activists about Helo, another Bytedance company, for violating the code of conduct for advertisements during elections⁷¹. The economic wing of the RSS (Rashtriya Swayamsevak Sangh), a social organisation of which the ruling party BJP is the political arm, called for a ban on TikTok and Helo, claiming that it had become a hub for “anti-national content” that was capable of disrupting the “fabric of our society”⁷². Several

⁶⁶The Hindu, “What Is the Doklam Issue All About?” January 2018. <https://www.thehindu.com/news/national/what-is-the-doklam-issue-all-about/article22536937.ece>

⁶⁷DNA India, “Be Wary of News ‘Content.’” April 2018. <https://www.dnaindia.com/india/report-be-wary-of-news-content-2658073>

⁶⁸Gateway House, “Chinese Investments in India 2020.” July 2020. https://www.gatewayhouse.in/wp-content/uploads/2020/07/Chinese-Investments_2020-Final.pdf

⁶⁹MediaNama, “Gujarat Govt Bans PUBG.” March 2019. <https://www.medianama.com/2019/03/223-gujarat-govt-pubg-ban/>

⁷⁰MediaNama, “Why the Madras High Court’s Interim Ban on TikTok is Worrying,” April 17, 2019, <https://www.medianama.com/2019/04/223-why-the-madras-high-court-s-interim-ban-on-tik-tok-is-worrying/>

⁷¹The Economic Times, “BJP’s Plan to Move EC Over Poll Meddling Will Sting Bytedance,” April 6, 2019, <https://economictimes.indiatimes.com/startups/bjps-plan-to-move-ec-over-poll-meddling-will-sting-bytedance/articleshow/68731748.cms>

⁷²Scroll, “RSS Affiliate Calls for Ban on Chinese Apps TikTok and Helo for Spreading Anti-National Content.” July 2019. <https://scroll.in/latest/930614/rss-affiliate-calls-for-ban-on-chinese-apps-tiktok-and-helo-for-spreading-anti-national-content>

Members of Parliament called for the ban on TikTok for⁷³ its close relationship with the Chinese government⁷⁴, transfer of data of Indian citizens to China, collecting children's data⁷⁵ and encouraging pornography⁷⁶. There was no evidence present to substantiate these allegations.

Concerns were also raised about money laundering and extortion by predatory lending apps operating from China, with over 700 cases registered in 2022⁷⁷. Police investigations indicated that such applications had malware and the data was being sent to servers in China⁷⁸, while call centres⁷⁹ for recoveries⁸⁰ were being operated from within India. The issue was repeatedly raised in Parliament⁸¹. Many of these apps return in different shapes or forms on app stores, whether Apple⁸² or Google⁸³, even after being banned.

According to the US Federal Bureau of Investigation, applications run by Chinese companies collect a vast amount of personal

⁷³MediaNama, "Why They Want TikTok Banned in India", July 2019. <https://www.medianama.com/2019/07/223-why-they-want-TikTok-banned-in-india/>

⁷⁴MediaNama, "MPs Seek a Ban on TikTok and Helo, Saying It Spreads Fake News", July 2019. <https://www.medianama.com/2019/07/223-mps-seek-a-ban-on-TikTok-helo-saying-it-spreads-fake-news/>

⁷⁵MediaNama, "TikTok Shares User Data with Chinese Government, Tharoor Tells Lok Sabha; Company Denies His Claims", July 2019. <https://www.medianama.com/2019/07/223-TikTok-shares-user-data-with-chinese-government-tharoor-tells-lok-sabha-company-denies-his-claims/>

⁷⁶The Economic Times, "TikTok Encourages Pornography, Want to Ban It: State Commission for Women Head." April 2019. <https://timesofindia.indiatimes.com/city/bengaluru/TikTok-encourages-pornography-want-to-ban-it-state-commission-for-women-head/articleshow/68833070.cms>

⁷⁷The Economic Times, "700 Cases Against Chinese Firms Suspected of Economic Disruption." October 2022. <https://economictimes.indiatimes.com/news/india/700-cases-against-chinese-firms-suspected-of-economic-disruption/articleshow/91133567.cms>

⁷⁸MediaNama, "Chinese Man Arrested by Delhi Police for Running Illegal Loan Apps," April 2022. <https://www.medianama.com/2022/04/223-chinese-loan-app-arrested-delhi-police/>

⁷⁹Indian Express, "Telangana Police Arrest Chinese Man Involved in Instant Loan Apps," Jan, 2021. <https://indianexpress.com/article/cities/hyderabad/telangana-police-arrest-chinese-man-instant-loan-apps-7145755/>

⁸⁰Hindustan Times, "Chinese Loan App Scam: Shanghai-Based Officials Instructed Employees to Use Abusive Language for Quick Recovery of Dues in India," May 2023. <https://www.hindustantimes.com/cities/mumbai-news/chinese-loan-app-scam-shanghai-based-officials-instructed-employees-to-use-abusive-language-for-quick-recovery-of-dues-in-india-101682967007013.html>

⁸¹Economic Times, "Coordinated Efforts Taken to Contain Chinese Loan Apps: FM in Rajya Sabha", December 2022. <https://bfsi.economictimes.indiatimes.com/news/fintech/coordinated-efforts-taken-to-contain-chinese-loan-apps-fm-in-rajya-sabha/96276368>

⁸²MediaNama, "Predatory Loan Apps Continue to Operate on Apple App Store", July 2023. <https://www.medianama.com/2023/07/223-apple-app-store-predatory-loan-apps-continue/>

⁸³MediaNama, "Google Bans Digital Lending Apps from Accessing User Photos", April 2023. <https://www.medianama.com/2023/04/223-google-ban-digital-lending-apps-access-user-photos/>

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information, whether biometric, contact lists, location data, log data, communication metadata, and credit card details. Legal agreements for data storage and privacy policies can obfuscate the transfer of data to entities working with the Chinese government, to be used for targeting and exploitation by state actors⁸⁴.

Laws in China provide for enabling such activity: Article 7 of its National Intelligence Law states that⁸⁵ “All organisations and citizens shall support, assist, and cooperate with national intelligence efforts in accordance with law, and shall protect national intelligence work secrets they are aware of”, while Article 10 makes this law applicable extraterritorially. Article 14 enables intelligence agencies power to insist on this support⁸⁶.

In addition, Article 28 of China’s Cybersecurity Law states that⁸⁷ “network operators”, believed to include social media platforms, application creators and other technology companies, “shall provide technical support and assistance to public security organs and national security organs that are safeguarding national security and investigating criminal activities in accordance with the law.” This may provide agencies access to data of foreign citizens stored within China.

The conflict at the Line of Actual Control with China gave the Indian government an opportunity to stop Chinese apps from becoming dominant in the country: India saw these apps as “prejudicial to sovereignty and integrity of India, defence of India, security of state and public order.”

The ban also became a rallying point for a more conservative Internet policymaking: the Indian government positioned it as an opportunity

⁸⁴FBI, “Dangerous Partners: Big Tech and Beijing”, March 2020. <https://www.fbi.gov/news/testimony/dangerous-partners-big-tech-and-beijing>

⁸⁵Wikipedia, “National Intelligence Law of the People’s Republic of China,” Accessed on October 21, 2023 https://en.wikipedia.org/wiki/National_Intelligence_Law_of_the_People%27s_Republic_of_China

⁸⁶ The Diplomat, “The Real Danger of China’s National Intelligence Law,” February 2019. <https://thediplomat.com/2019/02/the-real-danger-of-chinas-national-intelligence-law/>

⁸⁷Wikipedia, “Cybersecurity Law of the People’s Republic of China,” Accessed on October 21, 2023 https://en.wikipedia.org/wiki/Cybersecurity_Law_of_the_People%27s_Republic_of_China

for self-reliance⁸⁸. Indian startups have also benefited from other favourable policies: The Public Procurement Policy for Micro and Small Enterprises (MSEs) requires the government to procure at least 25% of their goods and services from MSEs⁸⁹. India's Government e-Marketplace (GeM) also provides startups with an e-commerce platform to list their products and services for public procurement.

Post the ban there were a couple of reversals: Garena Free Fire, made by Singapore based Sea Limited was banned because of Chinese ties. The Singapore government raised this issue with India, and the app was relaunched with local partners for cloud storage⁹⁰.

Similarly, Krafton, the makers of PUBG, relaunched it in India as Battlegrounds Mobile India⁹¹.

The ban on Chinese apps had the following impact on India's digital ecosystem:

The rise of the clones: The ban on TikTok meant that a 200 million user base, and an ecosystem of advertisers and influencers needed somewhere to go. Apps like Chingari, Roposo, Moj, Josh, MX Takatak, Mitron, Punch, tried to tap that billion dollar opportunity, but have largely struggled for either or both users and monetization⁹². Chingari launched video commerce, switched to live streaming and launched its own cryptocurrency called the Gari token⁹³. Bangalore based NCore games launched Fau-G, to try and address the gap left

⁸⁸Press Information Bureau, "Government of India Launches Public Procurement Policy for Micro and Small Enterprises," July 2020 <https://pib.gov.in/PressReleasePage.aspx?PRID=1637701>

⁸⁹Ministry of Micro, Small, and Medium Enterprises, "Public Procurement Policy for Micro and Small Enterprises," Accessed on October 22, 2023 <https://msme.gov.in/public-procurement-policy#skipCont>

⁹⁰Medianama, "Garena Free Fire to Relaunch in India," September 2023

⁹¹Battlegrounds Mobile India, "Battlegrounds Mobile India: News," May 2023. https://www.battlegroundsmobileindia.com/news_view/823.

⁹²Quartz India, "The Race to Become India's TikTok is On and Everyone's Struggling," July 2020. <https://qz.com/india/1875374/the-race-to-become-indias-TikTok-is-on-and-everyones-struggling>.

⁹³Mint, "Salman Khan Launches India's First Social Crypto Token: Chingari's Gari," October 2021. <https://www.livemint.com/technology/apps/salman-khan-launches-india-s-first-social-crypto-token-chingari-s-gari-11634461594740.html>

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by PUBG⁹⁴. Koo, an app similar to X (previously Twitter), positioned itself as an Indian alternative to Twitter, following a face-off between Twitter and the Indian government.

The rise of tech nationalism and the pushback against US Big Tech:

The pushback against “digital colonisation”^{95,96} predates the ban on Chinese apps: In 2015, at a summit organised by Carnegie India, founders of two of India’s largest internet startups sought protection against their foreign competitors: E-commerce major Flipkart’s co-founder Sachin Bansal said that India needs to do what China did: “[tell foreign players that] we need your capital, but we don’t need your companies”. Cab booking app Ola’s founder Bhavish Aggarwal asked for protection against “capital dumping”. The ban on Chinese apps has amplified the pushback against digital colonisation, and the dominance of US Big Tech in India. Following the decision by Google in 2020 to impose a 30% fee on transactions on apps downloaded from its Play Store⁹⁷, and barring apps from taking users to in-app browsers or websites to make payments, Indian startup founders petitioned India’s Ministry of Electronics and IT and India’s Competition Commission of India to address this apparent abuse of its dominance. While the Competition Commission has since ruled against Google, and the matter has now gone to courts, every minor development in the case becomes a lightning rod for a renewed debate on the issue. Even India’s central bank, the Reserve Bank of India, has made it a priority to attempt proportionate regulation of

⁹⁴BQPrime, “Ncore to Launch Homegrown FAU-G Game with Galwan Valley Backdrop in October,” September 2020. <https://www.bqprime.com/business/after-pubg-ban-ncore-to-launch-homegrown-fau-g-game-with-galwan-valley-backdrop-in-oct>

⁹⁵Indian Express, “Basis of a Revolution,” April 2016. <http://indianexpress.com/article/opinion/columns/aadhaar-bill-lpg-subsidy-mgnrega-paperless-govt-basis-of-a-revolution/>

⁹⁶Economic Times, “Indian Startups Need Level Playing Field after Uber’s Chinese Unit Sold to Didi Chuxing,” July 2016. <https://economictimes.indiatimes.com/small-biz/startups/indian-startups-need-level-playing-field-after-ubers-chinese-unit-sold-to-didi-chuxing/articleshow/53497351.cms>

⁹⁷Medianama, “Indian Startup Founders Protest Google Play Store Policy,” October 2020. <https://www.medianama.com/2020/10/223-indian-startup-founders-google-play-store-policy/>

Big Tech and FinTech⁹⁸ firms operating in the country, as a part of its Vision 2025 plan for digital payments.

Increase in foreign funding of Indian startups: Post the ban on Chinese apps, Indian startups raised over \$35 billion in 2021 and \$20 billion in 2022, the two most successful years in fundraising for Indian startups. Over 40 companies gained unicorn status in 2021, valued at more than \$1 billion each, and 20 in 2022. Currently, there are over 100 unicorns in India⁹⁹. It is important to note that this funding came in after the limitation being imposed on Chinese investment in India.

The shift of the influencer ecosystem to Instagram and YouTube: Instagram launched Reels¹⁰⁰ and YouTube launched Shorts¹⁰¹ within a couple of months of the ban on TikTok. This offered a soft landing for influencers, whether artists, entertainers, satirists and travel vloggers, who switched to the platforms¹⁰². Instagram was the primary beneficiary of the ban¹⁰³, although repeating that success was challenging for many, given the fact that TikTok offers greater virality for content than Instagram¹⁰⁴.

The US was the first to praise India's ban of Chinese apps with the former US Secretary of State Mike Pompeo welcoming the ban and noting that it "will boost India's sovereignty."¹⁰⁵ Brendan Carr, Commissioner of the US Federal Communications Commission

⁹⁹Inc42, "The Indian Unicorn Tracker," Accessed on October 20, 2023. <https://inc42.com/the-indian-unicorn-tracker/>

¹⁰⁰Instagram, "Introducing Instagram Reels," August 2020. <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement>

¹⁰¹YouTube Blog, "One Year of YouTube Shorts: What We've Learned So Far," September 2022. <https://blog.youtube/news-and-events/one-year-of-youtube-shorts-what-weve-learned-so-far/>

¹⁰²The Quint, "India Needs Strong Tech Policy Regulations, Not Ban on Chinese Apps," September 2020. <https://www.thequint.com/opinion/india-needs-strong-tech-policy-regulations-not-ban-on-chinese-apps#read-more>

¹⁰³Business Insider, "Why India Banned TikTok and What the US Can Learn from It as Pressure Mounts for Biden to Follow Suit," August 2021. <https://www.businessinsider.in/tech/news/why-india-banned-tiktok-and-what-the-us-can-learn-from-it-as-pressure-mounts-for-biden-to-follow-suit/articleshow/96816831.cms>

¹⁰⁴Quartz India, "India's TikTok Stars Will Need YouTube, Instagram to Save Them," August 2020. <https://qz.com/india/1874935/indias-tiktok-stars-will-need-youtube-instagram-to-save-them>

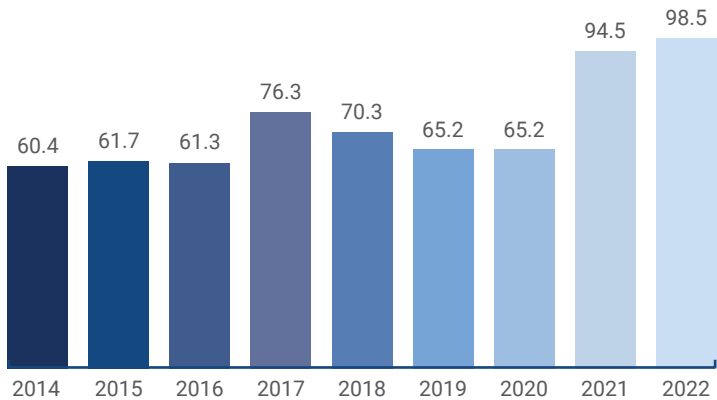
¹⁰⁵NDTV, "US Welcomes Ban on Chinese Apps, Will Boost India's Integrity," July 2020. <https://www.ndtv.com/india-news/us-welcomes-ban-on-chinese-apps-will-boost-indias-integrity-2255478>

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(FCC), recently called India's move an "incredibly important precedent" and a "guide star" for other countries¹⁰⁶.

In the last couple of years, TikTok has been banned on government devices in the US, the UK, the EU, Canada, Taiwan, and Australia. The US, under former President Donald Trump, was also close to imposing a complete ban on TikTok, but this plan lost steam under the leadership of President Biden. Although, the US government has still kept this option open with US senators introducing a legislation in March 2023 that gives the White House the power to ban TikTok nationwide¹⁰⁷. The foremost concern here is that ByteDance could hand over sensitive user data such as location information to the Chinese government. Another concern is how TikTok's

INDIA'S IMPORTS FROM CHINA BETWEEN 2014 & 2023 (USD Billion)



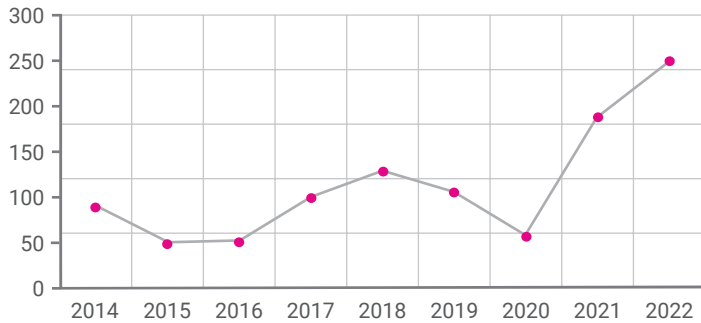
recommendation algorithm could be used to spread misinformation or Chinese propaganda. The US government is currently reviewing ByteDance's relationship with the Chinese government and the

¹⁰⁶Economic Times, "India Has Set an Important Precedent in Banning TikTok: US Official," July 2021. <https://economictimes.indiatimes.com/tech/technology/india-has-set-an-important-precedent-in-banning-tiktok-us-official/articleshow/96666862.cms>

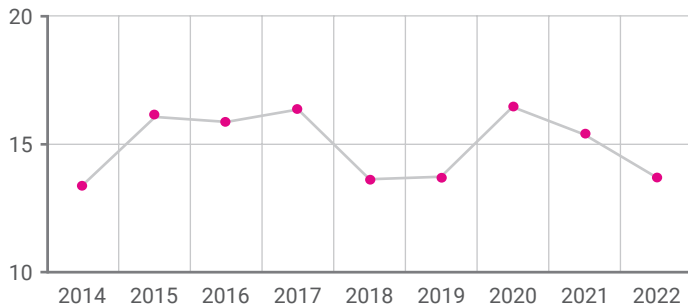
¹⁰⁷The Guardian, "White House Bipartisan Bill Calls for TikTok Ban," March 2023. <https://www.theguardian.com/technology/2023/mar/07/white-house-bipartisan-bill-tiktok-ban>

handling of user data¹⁰⁸, the outcome of which could decide the fate of the company in the US. However, there is not much proof of TikTok misusing data or sharing data with the Chinese government, except for one notable incident reported in December 2022 of Bytedance employees using TikTok to track the location of two US journalists to check if they were in the same location as employees suspected of leaking confidential information¹⁰⁹.

INDIA'S IMPORTS BETWEEN 2014 & 2023 (USD Billion)



INDIA'S IMPORTS FROM CHINA AS A PERCENTAGE OF OVERALL IMPORTS (%) BETWEEN 2014 & 2023



¹⁰⁸The New York Times, "TikTok Ban: What You Need to Know," December 2023. <https://www.nytimes.com/article/TikTok-ban.html>

¹⁰⁹Forbes, "TikTok Tracks Forbes Journalists: Inside Bytedance's Controversial Practices," December 2022. <https://www.forbes.com/sites/emilybaker-white/2022/12/22/tiktok-tracks-forbes-journalists->

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2.5 Dealing with Chinese telecommunications equipment

Deployment of Chinese telecommunications infrastructure has been a concern for India for many years¹¹⁰, given the risk of network surveillance by the Chinese government, but also, in times of conflict, the ability to disable networks. Huawei's investment in 5G helped it take global leadership¹¹¹ in telecommunications infrastructure.

Concerns were raised about the deployment of Chinese infrastructure in Parliament, including the potential risk of a 'back door' (surveillance) by China. The Government indicated¹¹² that a least three of five telecom operators in India had Chinese equipment, including both the government owned telecom operators.

In 2021 and 2022, India issued notifications¹¹³ restricting the usage of telecom equipment by telecom operators to "Trusted Products" from "Trusted Sources", which had to be identified by the country's National Cyber Security Coordinator. The National Cyber Security Coordinator also has the right to designate certain sources from which no procurement is allowed¹¹⁴.

The only telecom operator without Chinese equipment deployed in India currently is Reliance Jio¹¹⁵, India's largest telecom operator, and it deploys Open RAN technology, including for 5G. In Sept 2022 it was reported that government owned telecom operators BSNL and

¹¹⁰Mint, "Running Scared of Huawei," Feb 2010. <https://www.livemint.com/Home-Page/c5NDHgz2Y9icDOE1V2vWdl/Running-scared-of-Huawei.html>

¹¹¹Communications Today, "Seven Companies Continue to Hold Sway Over the Global Telecom Equipment Market," April 2022. <https://www.communicationstoday.co.in/seven-companies-continue-to-hold-sway-over-the-global-telecom-equipment-market>

¹¹²RAJYA SABHA UNSTARRED QUESTION NO. 497,

"Telecom equipment of China used by Domestic Telecom Operators, September 17, 2020 <https://pqars.nic.in/annex/252/Au497.pdf>

¹¹³Department of Telecommunications, "Procurement of Telecom Equipment_UL," July 11, 2022.

¹¹⁴MediaNama, "Indian DOT Asks Telcos to Prevent Purchase of Chinese Telecom Equipment," July 2022, <https://www.medianama.com/2022/07/223-indian-dot-telcos-prevented-purchase-chinese-equipment/>.

¹¹⁵Economic Times, "Will Open RAN Live Up to Its Promise?," December 2022, <https://economictimes.indiatimes.com/news/telecom-diary-will-open-ran-live-up-to-its-promise/96133249>.

MTNL, among others, have mobile network equipment coming from Chinese manufacturers and were issued security guidelines for the same¹¹⁶. As per unconfirmed news reports, ZTE is currently seeking joint-venture partnerships¹¹⁷ with Indian manufacturers, and is willing to transfer technology, and engage in research and development and design.

In December 2022, the US decided to ban approvals of new telecommunications equipment from Huawei and ZTE, saying they pose “an unacceptable risk” to U.S. national security¹¹⁸. The UK, Estonia, France, Latvia, Portugal, Romania and Sweden have all restricted deployment of Huawei or ZTE technology in communications networks in some shape or form over the last few years¹¹⁹. Germany, which currently has over half of its 4G and 5G infrastructure relying on Huawei technology¹²⁰, is also contemplating rules to ban the use of 5G core technology from Huawei or ZTE from 2026¹²¹.

To ensure that neither country is dependent on China for 6G, India and the US have partnered¹²² to create “secure and trusted telecommunications, resilient supply chains”, and launched two Joint Task Forces on advanced telecommunications, focused on Open RAN and research and development in 5G/6G technologies, with cooperation in setting standards, facilitating access to

¹¹⁶MediaNama, “BSNL to Exclude Chinese Equipment Vendors Huawei, ZTE,” September 2020, <https://www.medianama.com/2020/09/223-bsnl-equipment-huawei-zte/>

¹¹⁷The Economic Times, “Chinese Telco ZTE Is on the Hunt for New Routes into India,” July 2023, <https://economictimes.indiatimes.com/industry/telecom/chinese-telco-zte-is-on-the-hunt-for-new-routes-into-india/articleshow/102125798.cms>.

¹¹⁸Reuters, “U.S. FCC Bans Equipment Sales, Imports from ZTE and Huawei over National Security Risk,” December 2022 <https://www.reuters.com/business/media-telecom/us-fcc-bans-equipment-sales-imports-zte-huawei-over-national-security-risk-2022-11-25/>

¹¹⁹Reuters, “European Countries Who Put Curbs on Huawei 5G Equipment,” September 2023, <https://www.reuters.com/technology/european-countries-who-put-curbs-huawei-5g-equipment-2023-09-28/>

¹²⁰FierceWireless, “Huawei Faces Uncertain 5G Future in Germany,” September 2023, <https://www.fiercewireless.com/5g/huawei-faces-uncertain-5g-future-germany#:~:text=It%20calculated%20that%2057%25%20of,equipment%20at%20a%20similar%20level>

¹²¹Reuters, “German Interior Ministry Wants to Force 5G Operators to Slash Huawei Use: Official,” September 19, 2023, <https://www.reuters.com/business/media-telecom/german-interior-ministry-wants-force-5g-operators-slash-huawei-use-official-2023-09-19/>

¹²²The White House, “Joint Statement from the United States and India,” June 2023, <https://www.whitehouse.gov/briefing-room/statements-releases/2023/06/22/joint-statement-from-the-united-states-and-india/>

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chipsets for system development, and establishing joint research and development projects. These initiatives are being led by Bharat 6G Alliance and the U.S. Next G Alliance. Importantly, the two countries are creating a “Trusted Network/Trusted Sources” bilateral framework.

The Bharat 6G Mission is divided into two parts: in Phase 1 (from 2023 to 2025) the government will provide support for testing 6G technology concepts, and in Phase 2, it will support completion and commercialisation of selected concepts. The hope is that this will enable indigenous manufacturing, reduce imports, and facilitate market access for Indian telecom technology products and services, with an intention to enable the country to emerge as a global leader in 6G technology, with ownership of minimum 10 percent of the intellectual property rights in 6G.

India has over 200 6G patents¹²³ so far, but this is a far cry from the 4500+ patents China holds, which is more than 50 percent of the total number of 6G patents. The US, South Korea, the EU, and Japan make up most of the remaining fifty percent as of October 2022¹²⁴. This is a step in the right direction, even though India has a lot of ground to cover.

2.6 Controlling the direct import of e-commerce products from China

The rise of e-commerce in India, the growth of Flipkart (now owned by Walmart) and the launch of Amazon (in 2013), led to the creation of a large online seller ecosystem in India, and consequently the increase in import of products from China. The fact that Chinese imports were

¹²³Press Information Bureau, “DoT Launches Bharat 6G Alliance to Drive Innovation and Collaboration in Next-Generation Wireless Technology”, July 2023 <https://pib.gov.in/PressReleasePage.aspx?PRID=1937088>

between 10 to 70 percent cheaper than products manufactured in India significantly impacted sourcing from medium and small scale industries, including those producing toys, sports goods and fire-crackers¹²⁵.

Issues have been raised frequently in India's parliament about the country's trade deficit with China. With the growth of e-commerce imports from China, questions have also been raised about fake and counterfeit products from the country¹²⁶.

Organisations associated with the BJP, India's ruling political party, have been raising issues about the import of Chinese goods in India for years, calling for the boycott of Chinese products¹²⁷, especially after the skirmishes between Indian and Chinese armed forces. The Swadeshi Jagran Manch, an organisation affiliated with the Rashtriya Swayamsevak Sangh, the parent organisation of the ruling political party BJP, highlighted in 2020 how India has only 350 non-tariff barriers on China, while the US has imposed 6,500¹²⁸. The Confederation of All India Traders (CAIT)¹²⁹ has been calling for a boycott of Chinese products since 2020, asking in 2023 that higher customs or anti-dumping duty should be imposed on the goods that are being dumped or are non-essential imports.

In 2018, two years prior to the ban on Chinese apps in India, the Swadeshi Jagran Manch estimated that Indians were placing around 200,000 orders a day on Chinese e-commerce websites¹³⁰. Indians had been buying directly from Chinese websites like AliExpress, Club

¹²⁴Questel, "6G: A New Era Already on the Rise - 6G Patents a Reality," October 2022, <https://www.questel.com/resourcehub/6g-a-new-era-already-on-the-rise-6g-patents-a-reality/>

¹²⁵Business Today, "Chinese Imports Hitting India's MSME Sector," February 13, 2014, <https://www.businesstoday.in/magazine/cover-story/story/chinese-imports-hitting-india-msme-sector-134280-2014-02-13>

¹²⁶LOK SABHA 17, UNSTARRED QUESTION NO. 3954, "Trade with China", July 2019, https://www.medianama.com/wp-content/uploads/2023/12/loksabhaquestions_annex_171_AU3954.pdf

¹²⁷Rediff News, "Business and War Cannot Go Side by Side," June 2020, <https://www.rediff.com/business/interview/why-indians-must-boycott-chinese-products/20200620.htm>

¹²⁸The Economic Times, "RSS Affiliates VHP, SJM Give Call to Boycott Chinese Goods," June 2020, <https://economictimes.indiatimes.com/news/politics-and-nation/rss-affiliates-vhp-sjm-give-call-to-boycott-chinese-goods/articleshow/76457059.cms>

¹²⁹The Economic Times, "CAIT Launches 'China Quit India' Campaign to Boycott Chinese Goods," August 2020, <https://economictimes.indiatimes.com/news/politics-and-nation/cait-launches-china-quit-india-campaign-to-boycott-chinese-goods/articleshow/77446374.cms?from=mdr>

¹³⁰The Economic Times, "Swadeshi Jagran Manch Raises Concern Over Chinese E-commerce Apps Bypassing Laws, Duties," December 2018, <https://economictimes.indiatimes.com/industry/services/retail/swadeshi-jagran-manch-raises-concern-over-chinese-ecommerce-apps-bypassing-laws-duties/articleshow/66947421.cms?from=mdr>

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Factory and Shein, who allegedly used tactics like under invoicing of products or attributing them as gifts, in order to evade customs duty¹³¹. In 2019, Customs offices in Delhi, Bengaluru and Mumbai began stopping the clearance of packets from South East Asia and China, classified as gifts¹³², and subsequently sealed warehouses for undervaluing and wrongful declaration of goods¹³³. AliExpress has been banned since June 2020.

In addition, Consumer Protection (E-Commerce) Rules¹³⁴, notified in 2020, applied extra-territorial jurisdiction to e-commerce entities that may not have an Indian establishment. It mandated that products should mention the country of origin, and details of importers from whom the e-commerce has purchased goods should be disclosed.

Despite the above measures to reduce Chinese imports, China remains the single largest country India imports from; a bulk of the imports remain electronics and computer hardware. As per data from India's commerce ministry, the trade gap between the two countries had increased to \$83 billion in 2022-23, up from \$73 billion the previous year, with imports up 4.16% to \$98.5 billion¹³⁵.

However, a silver lining is that China's share in India's overall imports has fallen in the last few years, albeit marginally: It fell by 1.7% from 15.4 percent in 2021-22 to 13.7% in 2022-23.

Globally, China remains the largest exporter, and its trade surplus, especially with its largest trade partner, the US, continues to grow.

¹³¹The Economic Times, "After Gifting Route, Chinese E-sellers Cut Invoice Price," April 2019, <https://economictimes.indiatimes.com/tech/internet/after-gifting-route-chinese-e-sellers-cut-invoice-price/articleshow/68747980.cms>.

¹³²The Economic Times, "Bengaluru and Delhi Customs Forbid Clearing Gifts," July 2019, <https://economictimes.indiatimes.com/small-biz/policy-trends/bengaluru-and-delhi-customs-forbid-clearing-gifts/articleshow/70221405.cms>.

¹³³The Economic Times, "Mumbai customs cracks down on bulk importers of Chinese e-tailers," June 2019, <https://economictimes.indiatimes.com/internet/mumbai-customs-seizes-hundreds-of-gifts-from-china/articleshow/69866448.cms>

¹³⁴Ministry of Consumer Affairs, Food & Public Distribution, "E-commerce Rules," Accessed on October 22, 2023, <https://consumeraffairs.nic.in/sites/default/files/E%20commerce%20rules.pdf>.

¹³⁵Directorate General of Commercial Intelligence and Statistics, "Indian Trade Statistics," Accessed on November 26, 2023, <https://tradestat.commerce.gov.in/eidb/>

In 2022, US imports from China totaled \$537 billion, an increase of 6.3% (\$31.8 billion); the trade deficit with China was \$383 billion, an increase of 8.3% of (\$29.4 billion)¹³⁶. In 2023, however, China's exports to the US are faltering. For the first seven months of the year, China's exports were 5% lower than the previous year¹³⁷.

¹³⁶Bureau of Industry and Security, U.S. Department of Commerce, "U.S. Trade with China," Accessed on November 2023, <https://www.bis.doc.gov/index.php/country-papers/3268-2022-statistical-analysis-of-u-s-trade-with-china/file>

¹³⁷CNN, "China's economy suffers new blow as exports drop 14% in July" August 2023, <https://edition.cnn.com/2023/08/08/economy/china-trade-exports-decline-july-intl-hnk/index.html>.

3

Understanding India's approach to de-risking from China

India appears to have a clear, directional and long term approach towards reducing its dependence on China in the area of technology and digital related imports. It is clear, given the history of war and border conflicts between the two countries, the disputes over boundaries, and the global dominance that China enjoys economically, that it sees dependence on China as a vulnerability, and a national security concern. It does not hurt, of course, that moves such as the ban on Chinese applications also feed and empower jingoism.

India is opportunistic in its approach, calibrating its responses based on global and bilateral geopolitical considerations. Most importantly, it is not afraid to take hard decisions, and is prepared to deal with the consequences, and leverage the geopolitical situation to its benefit. Its actions are also based on the state of dependence of local sectors on China, and for each segment, whether the dependence on devices, telecommunication equipment, mobile applications, or imports, there appears to be a direction, if not a strategy. For example, the ban on Chinese apps operating in India was swift and largely effective, and the cessation of Chinese funding was effective but not painless. However, reducing the dependence on Chinese handsets, addressing the trade deficit and import dependence, and addressing deployment of Chinese telecommunications infrastructure is a slow process, and thus the measures being implemented are more gradual.

It is also actively trying to create an environment for decoupling where necessary, by supporting local substitution. While it is using coercive measures, whether via regulation, restriction, taxation, or investigation, to reduce dependence on Chinese companies in the country, it is also creating incentive based approaches to encourage investment in Indian startups, and Internet and telecommunications infrastructure. It is also important to remember that India has "China

envy”: it envies China’s trade surplus, manufacturing heft, the power that comes with the world’s corporations being dependent on it, and is actively positioning itself as a more democratic environment for foreign investment.

India is acutely aware of global developments, and is willing to make swift policy changes to take advantage of these situations, in a manner that it either enables investment in the country, or reduces dependence on China, or pushes back against a foreign technology company. As S. Jaishankar, India’s Minister of External Affairs articulated at the launch of the Asia Society Policy Institute in New Delhi¹³⁸, his government will be opportunistic, saying “the way China leveraged the international situation in the 70s and 80s... The fundamental [objective] of foreign policy should be an obsession for creating empowerment for organisations in India.” “Do, in a sense, what China did. Some version of that has to happen in India,” he added.

The fear of colonisation runs deep in Indian society, and the fear of digital colonisation is a recent addition to the Indian public policy lexicon. This also builds support politically for the Narendra Modi government: It understands that digital successes and the push-back against large global corporations work well for a domestic base of voters, which includes a young, opportunistic and aspirational base that sees opportunity for success as entrepreneurs and employees in the digital domain.

It is clear that India also does not want to just be a market for foreign companies and products. As Jaishankar also said, “If you give globalisation meaning in terms of giving others a level playing field in your home in terms of they’re stronger and better supported you’re committing economic suicide”, and that foreign companies will have “No free run in our market. That would be unilateral economic disarmament.” Jaishankar highlighted his government’s support for medium and small businesses, Production Linked Incentive

¹³⁸September 2022, “Rising But Divided: Asia’s Geopolitical Future”, Asia Society, <https://www.youtube.com/watch?v=yeY6flxCdFY>

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schemes for manufacturing, push for exports, support given to an Indian 5G solution.

It is worth noting that for a liberal democracy, banning hundreds of applications from a particular country is unheard of: It goes against the principle of internationalism, and greater political and economic cooperation between states as a means of enabling interdependence and mutual growth. Banning of social media applications is also censorship of free speech, and it censors not just legal speech, but prevents future speech. Protecting carriers of speech is an important part of protecting the fundamental right of freedom of speech and expression of citizens.

However, given the global nature of the Internet, as was also evident in the US, with the interference of Russia in the 2016 elections¹³⁹, there is a risk to national security when authoritarian regimes use global platforms to further their geopolitical goals. Typically, in a liberal democracy, companies and citizens are empowered to challenge the state, and thus the rules of engagement with authoritarian states, where companies and citizens might act as an extension of the state, should perhaps be different from those with liberal democracies.

Such an illiberal approach should not necessarily be emulated for all countries: globalisation provides people with greater opportunities, the diversification of production and sourcing creates interdependence, which in turn enables collective growth and peaceful coexistence. The flow of investment into different countries also helps uplift underdeveloped economies.

However, a country's openness should not be its weakness, and reciprocity in the assertion of sovereignty is essential when dealing with illiberal countries that do the same.

¹³⁹Report On The Investigation Into Russian Interference In The 2016 Presidential Election," U.S. Department of Justice, March 2019, <https://www.justice.gov/archives/sco/file/1373816/download>.

4 Key Recommendations

India still has some way to go before it satisfactorily addresses its dependence on China, especially in the realm of technology, but the direction it is taking is clear and focused. The following approach can aid governments reduce their dependence on China going forward:

Conduct a comprehensive assessment of dependence on China: Evaluate the extent and nature of Chinese technology dominance in critical sectors, including telecommunications, infrastructure, and emerging technologies, apart from manufacturing and imports. India's approach indicates a multi-pronged approach towards reducing dependence from China.

Develop a national technology strategy: Formulate a cohesive national strategy that promotes domestic innovation, reduces dependence on Chinese technology, and safeguards national security and economic interests. It is important here to find the right balance for each domain: India's approach demonstrates the need to carefully balance economic gains from Chinese trade with national security concerns, acknowledging the potential short-term costs for long-term resilience.

Encourage research and development in emerging technologies: Invest in research and development to foster indigenous technological advancements, with a focus on emerging technologies like 6G, artificial intelligence, as well as on cybersecurity to strengthen independence. Provide incentives for domestic and international investments in emerging technologies that align with European interests, fostering innovation and reducing reliance on Chinese investments. Focusing on a public-partnership model for technological resilience helps.

Be opportunistic: Leverage local, global and geopolitical developments to further strategic objectives of decoupling or derisking from China, and enabling local alternatives. India leveraged COVID19 and concerns about acquisitions by Chinese companies to restrict investments from China, and the breakdown of supply chains,

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to position India as an alternative destination for manufacturing. It leveraged public sentiment against China following skirmishes to ban Chinese applications.

Actively nurture a local technology startups and investment ecosystem: Creating a conducive and vibrant environment for startups enables investment. Foster a supportive environment for startups and entrepreneurship, providing access to funding, mentorship, and regulatory support to promote the growth of European technology companies. India is encouraging its startup and technology ecosystem to help build resilience for the country, including prioritisation of public procurement from startups. India's restrictions on Chinese investments in startups highlight the importance of nurturing indigenous innovation ecosystems to reduce dependence on strategic capital from unfavourable nations.

Strengthen regulatory frameworks: Enhance regulatory frameworks to ensure the security and privacy of data, assess the security risks of Chinese technology, and enforce regulatory action in case of consumer services and implement stringent certification processes for critical infrastructure. India's restrictions on imports and investments underscore the importance of robust regulatory frameworks that protect national security and economic interests.

Foster international alliances: Collaborate with like-minded countries, such as India, to pool resources, share expertise, and establish joint initiatives aimed at countering Chinese technology dominance. India has actively sought partnerships with countries sharing similar concerns about Chinese dominance, especially the US, to foster collective action to counterbalance China's influence.

Support domestic or regional (EU) alternatives: Provide incentives and support for the development of domestic or regional alternatives to Chinese technology, encouraging the growth of local startups and innovation ecosystems. India's ban on Chinese apps and technology in telecom emphasises the need to accelerate the development of indigenous alternatives that align with national interests.

Promote supply chain diversification: Encourage diversification of supply chains to reduce reliance on Chinese technology, fostering

partnerships with other countries to ensure robust and resilient sourcing options. India's approach highlights the importance of reducing reliance on a single country for technology, promoting a diversified supply chain to mitigate risks.

Build cybersecurity capabilities: While India has placed political emphasis on cybersecurity, it has also considered policies for enabling cybersecurity in the country. Emancipation from Chinese technology is just one part of the solution. India's actions also emphasise the significance of robust cybersecurity measures to protect against potential threats posed by Chinese technology.

Enhance public awareness and education: Educate the public about the risks and implications of Chinese technology dominance, promoting digital literacy and responsible technology use. India's actions have capitalised on the growing anti-China sentiment among its population, aligning policy decisions with public opinion to gain support for measures against Chinese technology. This is built on a concerted effort from the Indian government and political stakeholders to highlight the potential risks associated with Chinese technology.

Enhance investment screening mechanisms: Strengthen investment screening mechanisms to carefully scrutinise investments from Chinese entities in critical sectors, ensuring that they align with national security and strategic interests. India implemented investment screening mechanisms for investment from countries with which it has physical boundaries, including China.

Advocate for international standards and norms: Engage actively with international standards development organisations to influence the formulation of global technology standards, ensuring a level playing field and reducing reliance on Chinese-dominated standards. Advocate for the establishment of global standards and norms that ensure transparency, security, and ethical use of technology, countering China's influence in shaping global technological governance. India's approach underscores the value of international cooperation to establish common standards, share best practices, and collectively address the challenges posed by Chinese technology dominance.

Build a framework for “Trusted Products” from “Trusted Sources”:

Creating such frameworks, where vendors have to demonstrate that they are able to ensure compliance with national security requirements, meet data protection norms and ensure independence from the control of their country of origin, will help weed out companies that pose a national security risk.

About the Author

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[Nikhil Pahwa](#) is an entrepreneur, journalist and activist. He is the Founder and Editor of MediaNama, a leading publication chronicling the evolution of digital policy in India, and an advisor to Saka Ventures, which invests in early stage Indian startups building for the world. Nikhil is also on the advisory board of the [CyberBRICS project](#). He started the [SaveTheInternet.in](#) campaign for Net Neutrality in India, and co-founded the Internet Freedom Foundation.

Nikhil is a [TED Fellow](#), an [Asia21 Fellow](#) and was named one of India Today Magazine's "Indians of Tomorrow". He has been profiled in [Forbes](#), [Wired](#) and [GQ](#). He gave a TED Talk in 2016, and spoke at the EU's Cyber Direct forum in 2019. At TED, he has conducted Discovery sessions on "How to build a movement". Nikhil has given talks at Harvard, Oxford, Columbia, Stanford, IIM Ahmedabad, IIT Kanpur, TISS Mumbai, among several other prestigious universities.

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