04/15/2026 07:28:31 [BN] Bloomberg News

China's Control Over Tech Threatens India’s Manufacturing Dreams (4)

India’s biggest companies are struggling to break Beijing’s grip on production of batteries, EVs and critical minerals.

By Alisha Sachdev

(Bloomberg) -- Late last year, hundreds of executives and engineers from Reliance Industries Ltd., India’s biggest company, fanned out across Wuxi and other cities in China. The goal: getting up to $1.1 billion worth of equipment exported to kit out Reliance’s planned battery plant — the country’s most significant attempt to manufacture the advanced lithium-ion cells that power electric vehicles and renewable energy storage systems.

Yet as senior company executives pushed suppliers and regulators to get the machines manufactured and past customs, Beijing dropped a diktat tightening controls on key battery-making technology and equipment. Reliance’s deal with its Chinese partner to help build the battery plant had hit a new roadblock. Despite the expensive machinery now sitting in Jamnagar in Gujarat state, where Reliance’s gigafactory is located, commercial production cannot begin anytime soon without further access to Chinese technology. Reliance did not respond to a request for comment.

The episode encapsulates the bind hampering Mukesh Ambani’s company and others, as China’s grip on high-tech manufacturing hinders India’s ambitions to jump-start local industries and ultimately become an export manufacturing alternative. Interviews with over a dozen insiders across India’s battery, EV and electronics manufacturing ecosystem — who asked not to be identified discussing sensitive information — highlight how critical up-and-coming sectors are even more dependent on China now, despite billions of dollars in investment under the Make in India initiative.

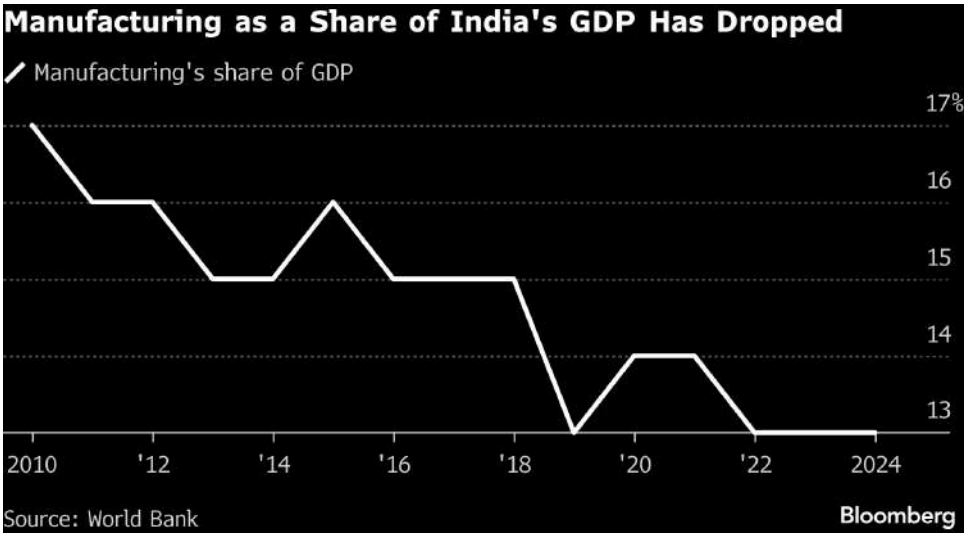
A unit of Foxconn Technology in Sriperumbudur. Although roughly a quarter of Apple's iPhones globally are manufactured in India, the country is exposed to China for most of the strategic manufacturing industries it has staked its future on.

The war in Iran has also amplified India's need to build out clean energy supply chains and work towards energy self-sufficiency.

India's "multitude of reforms in recent years have certainly positioned the country well to take advantage of global shifts in trade and financial flows," said Eswar Prasad, an economist and professor of trade at Cornell University, in emailed comments. But China's determination to ring-fence its prowess in new-technology industries "could leave India grasping for crumbs" at the lower end of the manufacturing spectrum, he said.

Prime Minister Narendra Modi wants manufacturing to rise to 25% of GDP, but World Bank data shows the segment's contribution has in fact shrunk from 17% in 2010 to just 13% in 2024. That could worsen under China's new restrictions. Exacerbating that is the fact that India's mission to boost manufacturing comes at a time of great geopolitical ruptures that are upending global trade.

"Unlike in the previous two decades, the global economic, trade and geopolitical landscapes have turned into a hostile rather than conducive environment for countries seeking to follow the traditional development path built around manufacturing-intensive, export-led growth," said Prasad.



In such a landscape, countries such as Japan and South Korea can cushion some of the geopolitical shocks, including from China's restrictions, because they already possess domestic ecosystems — but India is still trying to build one.

"China's curbs on core manufacturing technologies aren't India-specific but the effect on India is likely disproportionate," said Michael Deng, geoeconomics technology analyst at Bloomberg Economics.

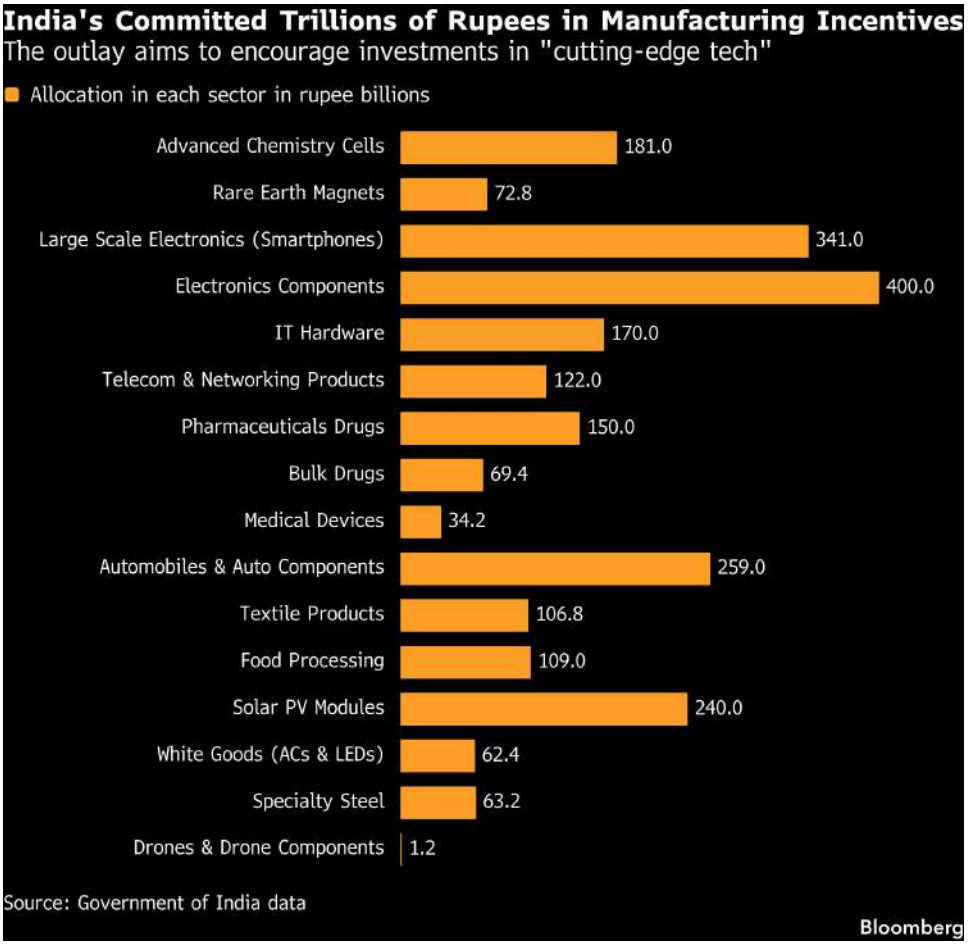
'Build Bridges'

Corporate India is starting to make its concerns known. Bhavish Aggarwal, founder of Ola Cell Technologies Pvt. Ltd., the country's first operational cell factory, privately warned policymakers in recent months that scaling domestic cell production without proven technology could deepen losses as China continues to set global battery prices and Indian demand remains limited, people familiar with the conversations said. He's appealed to policymakers to relax timelines for government incentives for cell production.

Workers carry a home battery storage system during the rollout of Ola’s 4680 Bharat Cell products at a store in Bengaluru in January.

At Tata Sons Pvt. Ltd.’s cell manufacturing arm Agratas Energy Storage Solutions Pvt. Ltd. executives are questioning whether the market is large enough to justify rapidly building capacity for nickel-manganese-cobalt cells, given they are primarily suited for premium EVs, according to people familiar with the matter. The company has turned to South Korea for the technology after early signs of export curbs from Beijing — the pivot helped de-risk exposure to China, but at greater cost and longer timelines, said the people.

Meanwhile, billionaire Sajjan Jindal’s plan to build a 50 gigawatt-hour plant by 2030 is in jeopardy after talks between his JSW Group and Chinese battery maker Gotion High-Tech Co. for a technology partnership stalled. Negotiations with smaller Chinese companies, meanwhile, triggered concerns around quality, and have so far been unsuccessful, according to people with knowledge of the matter.



Jindal — whose JSW Group has a joint venture in India with China's SAIC Motor Corp. and a separate partnership with Chery Automobile Co. to launch its own new-energy-vehicle venture — has emphasized the importance of Chinese technology for India. "If we have to expand and take our economy to a different level, we have to build bridges with China," he said at an event in Mumbai in February. Jindal is known to encourage employees from all manufacturing departments to visit China and learn processes fast, people familiar with the matter said.

A spokesperson for JSW Motors, which houses the group's new energy vehicle business, said the company's focus is to progressively localize technologies, strengthen supply chains and build engineering capabilities in India. An Ola Electric spokesperson said the company does not comment on ongoing discussions with the government or "respond to speculative reports," adding that "Ola's cell technologies are proprietary, proven, and fully developed in-house, with no concerns on this front nor any risk to scaling up cell manufacturing."

Jindal's comments highlight how economic relations between the two countries are further complicated by long-standing issues. India has itself placed rules requiring government approval for investments from countries that it shares a land border with after the deadly 2020 Galwan Valley clashes with China. Commerce Minister Piyush Goyal also publicly rejected BYD Co.'s proposed expansion in India last April.

Sajjan Jindal during the launch of MG's Cyberster electric sports car, a JSW Group joint venture with China's SAIC Motor, in Mumbai in 2024.

Yet only months ago, relations appeared to be stabilizing. Foreign Minister Wang Yi visited India and direct flights resumed after years of suspension. But that brief thaw has given way to renewed strategic mistrust.

Although India-US relations remain in a state of flux, Beijing increasingly sees India's alignment with the US on issues of technology, trade and defense as evidence that it is tilting toward American efforts to counter China, according to people familiar with Chinese thinking. Beijing is unlikely to ease restrictions on technology transfers or actively promote deeper industrial partnerships with Indian firms, the people said.

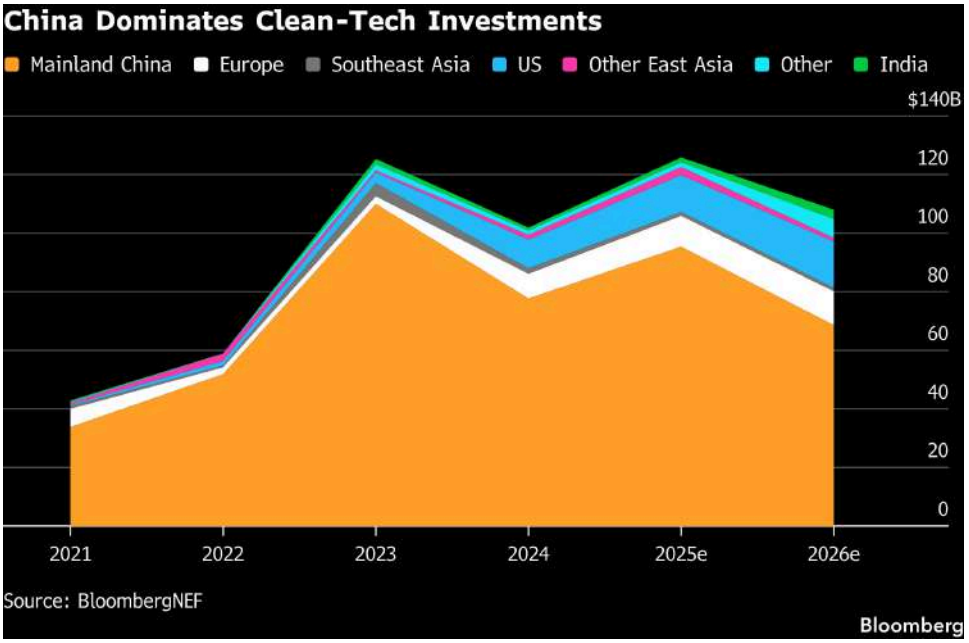
Even where it has resumed supplies of rare earth magnets to the US and other countries in a truce following export curbs in April, Indian automakers continue to be largely cut off.

The Indian government did not respond to a request for comment. The Chinese Ministry of Foreign Affairs said in a statement that China "has always carried out export control work in accordance with domestic laws and regulations and its international obligations, and is willing to strengthen dialogue and cooperation with relevant countries and regions to jointly maintain the stability of the global supply chain." With regards to US-India relations, it said that "cooperation between countries should not target or harm the interests of third parties."

Strategic Squeeze

Having access to products but not cutting-edge tech leaves India trying to build complex industries without the right expertise. Nowhere is the cost of that asymmetry clearer than in batteries — nearly all EVs sold in India rely on imported cells, and domestic production at 1 GWh is a fraction of the 178 GWh capacity India says its companies are building.

"India's 178 GWh narrative is largely fictional if one counts only commissioned, commercially producing cell capacity," wrote Christopher Chico, founder of online publication the Battery Chronicle. "The technology partnerships that were supposed to close that gap depend on a country that is actively restricting the transfer."



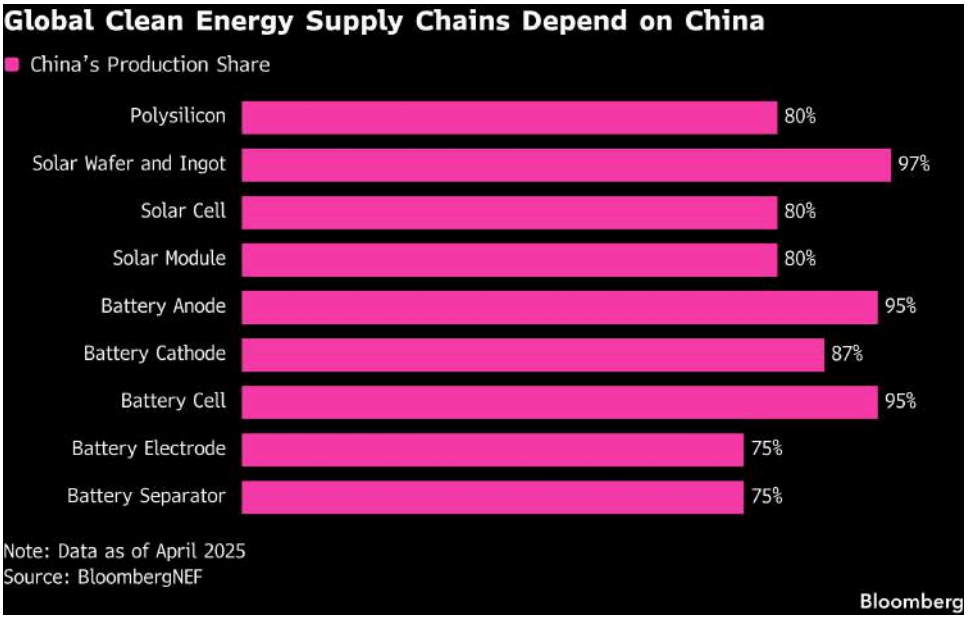
In fact, India's exposure to China runs through all the most strategic manufacturing industries New Delhi has staked its future on.

Tata Group's fabrication plant in Dholera, Gujarat, is meant to anchor India's entry into advanced chip manufacturing. Yet beyond high-profile machines supplied by companies like ASML Holding NV and other European, American and Japanese manufacturers, the operation's suppliers still depend on China for raw materials and tooling in order to begin production fast, according to people familiar with the matter.

They also estimate that Tata's plant could remain partially dependent on Chinese raw materials in its early years to reduce lead times and costs, with the balance coming from Japan and South Korea. A combination of these factors has already made its original 2026 production timeline uncertain, they added.

The same pattern extends into other critical minerals. India has stepped up exploration for lithium, cobalt and rare earths, but industrial-scale processing remains limited.

Tata Electronics, the Tata Group company which owns the Dholera fab, told Bloomberg News in an emailed statement that the fab is sourcing equipment and materials primarily from the US, Europe, Japan, South Korea and Taiwan, with no reliance on Chinese tooling. Procurement for materials and equipment is progressing as planned without any impact on timelines, it added. Agratas did not respond to a request for comment.



Electronics, on the other hand, provide a clearer example of how India has attracted global manufacturing, but also of the limits. India now produces roughly a quarter of Apple Inc.'s iPhones globally, and almost all of its US-bound models are expected to be assembled locally by the end of this year. Yet much of the higher-value component manufacturing and specialized production equipment still traces back to Chinese supply chains, according to people familiar with the matter.

Pragmatic Posture

India has sought to temper its own skepticism of Chinese capital in targeted ways. While its tight investment screening rules continue to require government approval for capital from neighboring countries, New Delhi recently eased procedures in select strategic sectors like electronics components, semiconductors and rare earths manufacturing to allow smaller, carefully structured investments.

That signals that India is not categorically opposed to Chinese capital, and in fact actively seeks it where it serves domestic industrial goals. India recently approved a joint venture between Dixon Technologies (India) Ltd., a contract manufacturer of electronics, and China's HKC Corp. to manufacture display modules in India.

A mobile phone assembly line at a subsidiary of Dixon Technologies in Noida.

“You have to work with China collaboratively and also around China,” said Barnik Maitra, chairman of US-based Hyperion Ventures, which seeks to build supply chains outside China in sectors like semiconductors and critical minerals. He argues India’s earlier hardline posture has evolved into a more pragmatic one, with inputs sometimes routed through third countries.

“China also has to make money,” said Maitra. “It has to figure out how to participate versus being completely antagonistic.”

In practice, that means selling parts and platforms to India while holding back on knowhow. In JSW Group’s partnership with Chery, the Chinese carmaker agreed to supply its vehicle platform and components under a royalty arrangement, according to people familiar with the talks, while earlier discussions around broader technology transfers were scaled back.

Meanwhile, Reliance, which aims to become one of the world’s largest new-energy companies, is not giving up. In Jamnagar, construction of the gigafactory complex to house its cell-manufacturing facility hums along even as the Chinese machinery sits in warehouses. Some executives remain in China to negotiate with suppliers and to pick up industry knowledge. With the odds of China easing its rules still slim, the company is

also scouting local technology and sending out requests for proposals to domestic battery material manufacturers to build out an upstream supply chain.

But for Indian companies the alternatives are costlier and smaller — and time may not be on India's side, according to Bloomberg Economics' Deng.

"And since the trigger has already been pulled," he added, "China has every reason to maximize the utility of these chokepoints while they still can."

(Corrects date of Galwan Valley clashes in 15th paragraph. Updates Chinese government and Indian government comments in 19th paragraph.)

--With assistance from Sudhi Ranjan Sen, Sanjai P R, Swati Gupta and Charlie Zhu.

To contact the author of this story:
Alisha Sachdev in New Delhi at asachdev25@bloomberg.net

To contact the editor responsible for this story:
Isabella Steger at isteger5@bloomberg.net
Bhuma Shrivastava
Rachel Chang