

India's Industrial Policies: Rejecting the Old Status Quo and Creating the New

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Introduction

Of India's 1.4 billion people, approximately 565 million are part of the workforce, the majority in agriculture.¹ The country's working-age population is expected to increase significantly, and if it is to create sufficient jobs for its youth, facilitate economic growth, and increase exports, it will need a robust, growing manufacturing sector.² India has long prioritized targeted industrial policy measures to boost manufacturing. While those measures occasionally obstruct foreign firms operating in India, violate World Trade Organization (WTO) rules, and lead to trade disputes, they are also in keeping with the emerging global trade norms championed by the United States, the European Union, and China. However, some of India's measures are even more stringent than those of other countries, and those industrial policy measures have not significantly boosted India's manufacturing sector, which has remained stagnant.

Industrial Policies in India

The Indian government has increasingly relied on three types of industrial policy measures to boost manufacturing: production-linked incentives (PLIs), tariffs, and domestic content requirements (DCRs).

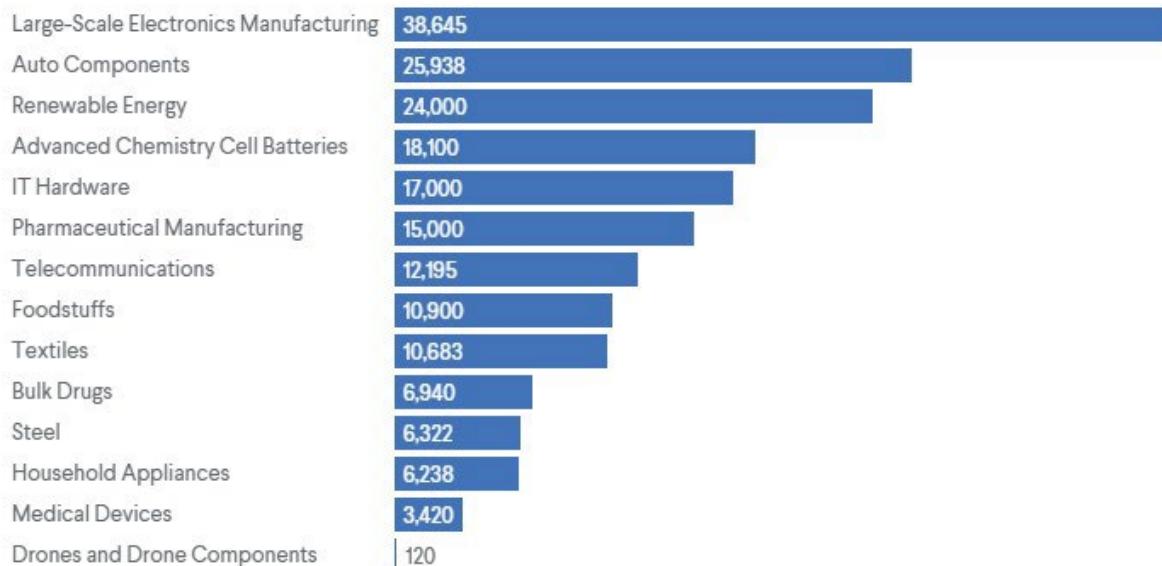
Production-linked Incentives

In March 2020, the Indian government introduced the PLI Scheme to provide financial incentives to manufacturers based on measurable outcomes—such as sales of products manufactured in India—and to offset the manufacturing cost disabilities in India.³ The objective of the policy is to “boost domestic manufacturing in sunrise and strategic sectors, curb cheaper imports and reduce import bills, improve cost competitiveness of domestically manufactured goods, and enhance domestic capacity and exports” and “create global champions in manufacturing.”⁴ Domestic firms are eligible for PLIs, as well as Indian factories or subsidiaries owned by foreign companies.

Initially, PLIs were intended for the manufacturing of mobile and allied equipment, pharmaceutical ingredients, and medical devices.⁵ Over time, they have been expanded to cover a total of fourteen sectors with an outlay of 1.97 trillion rupees (\$22.76 billion) spread over five years.⁶ To be eligible for PLIs, a firm has to meet some qualifications, primarily related to the scale of production.

Manufacturing Incentives by Sector

Approved Production Linked Incentive allocations, in crores* of rupees (₹)



*1 billion = 100 crores

Source: Press Information Bureau, Government of India

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Tariffs

India's trade policy in the last decade has emphasized import substitution to increase domestic production and make the country less dependent on foreign goods. For instance, the simple average of tariff rates increased from 12 percent in fiscal year 2011 (FY 2011) to 13 percent in FY 2015 and 14.3 percent in FY 2021.⁷

The proportion of tariff lines (i.e., products that can be assigned tariffs) with a rate above 15 percent increased from 13.6 percent in 2015 to 25.4 percent in 2021. While the simple average tariff rate on nonagricultural products increased from 9.5 percent to 11.1 percent between 2015 and 2021, some sectors see a significantly higher level of protection: the tariff on automobiles has risen from 60 percent in FY 2011 to 125 percent in FY 2016. Mobile phones, which had not been subjected to any custom duty until 2015–16, were hit with a 20 percent duty by 2018.

Not only have average tariff rates increased, but they tend to be higher than those of other economies. The difference between India's tariff rates and those of other competing economies is even more stark for nonagricultural products. The proportion of tariff lines with zero tariffs is relatively low, emphasizing India's reservations about opening up any sector of its economy.

Domestic Content Requirements

India has instituted laws that impose Domestic Content Requirements (DCR)—that is, certain projects require their component parts to be manufactured domestically. For example, from 2010 to 2013, under the government's Jawaharlal Nehru National Solar Mission program to reduce reliance on fossil fuels, projects using crystalline silicon solar technology were required to procure solar modules domestically. Thin-film solar technologies, however, were exempt. After 2013, the DCR became increasingly stringent to expand to both solar cells and modules and restricted access to government subsidies and schemes.⁸

Similarly, the Domestically Manufactured Iron and Steel Products policy requires the government to give preference for procurement to steel and iron products with a minimum of 15 to 50 percent value addition.⁹ That is to say, if the lowest bidder is a domestic supplier, the supplier is awarded the contract for the full amount. However, if the lowest bidder is a foreign supplier, only 50 percent of the contract quantity is awarded, while the remaining is awarded to the lowest bidder among the domestic suppliers.

This policy now includes consumer electronic devices as well: in 2020, India extended public procurement preference to domestic suppliers of desktops, laptops, tablets, servers, and mobile phones.¹⁰

Violating Some Global Trade Norms

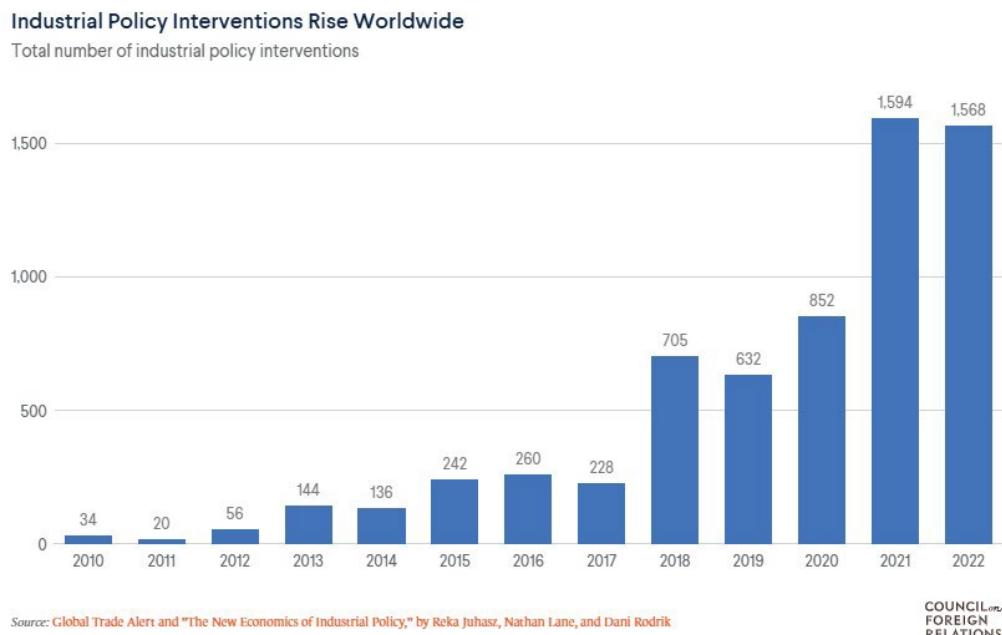
India's industrial policies occasionally disadvantage foreign competitors in India, contravene WTO rules, and spark trade disputes. On one hand, India's PLIs are not linked to exports, and there is no express requirement for the use of domestic goods over imported goods. Thus, by being nondiscriminatory and neutral with respect to exports and domestic sales, PLIs are compliant with WTO rules. On the other hand, some PLIs, such as those on mobile phones, require the applicant to declare "a plan for domestic value addition". In other words, the applicants need to specify the extent that domestic goods are utilized in their production. Despite the reporting requirement, the quantum of incentive is not linked to or contingent on utilizing domestic goods. However, such measures can be interpreted differently, potentially risking countervailing action from importing countries.¹¹

Though India's tariff regime is characterised by high rates and frequent changes, it broadly aligns with its bound commitments. But in some instances, India's tariffs have been found to be violate WTO norms. For example, India's introduction of customs duties of up to 20 percent on information and communication technology products in 2014 led to a dispute at the WTO.¹²

WTO rules also prohibit countries from discriminating between imported and domestic goods.¹³ In 2014, the United States launched a trade dispute against India's Jawaharlal Nehru Solar Energy Mission for providing incentives to domestically produced solar cells and modules. The WTO's Appellate Body upheld the U.S. complaint against India.¹⁴

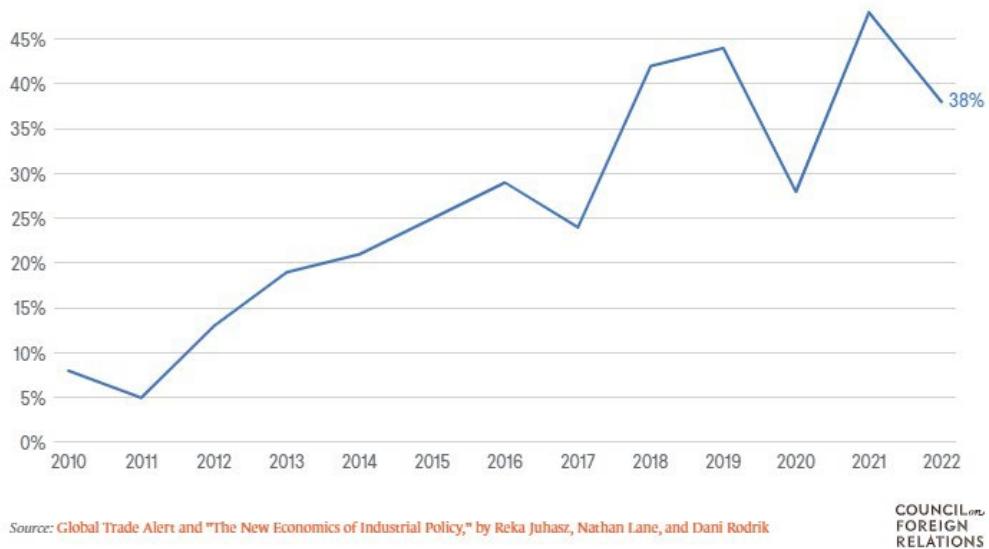
In Sync With Emerging Trade Norms

Despite violating some established trade practices, India's adoption of industrial policies aligns with the global rise in protectionism.¹⁵ Not only has the number of industrial policies increased, but their proportion of total policies has also grown. Some of India's largest trading partners have implemented significant industrial policies themselves, such as the United States' CHIPS and Science Act, Inflation Reduction Act, and Infrastructure Investment and Jobs Act; China's Made in China 2025 initiative; and the European Union's Green Deal Industrial Plan.



Industrial Policy Dominates Trade Actions

Share of global trade interventions targeting industry



Furthermore, in comparison to those industrial policies, India's incentives seem small and thinly spread. For example, India's PLI for chipmakers is one-fifth of the \$53 billion in incentives that the CHIPS and Science Act offers for firms building chip factories in the United States.¹⁶ China's annual spending on its industrial policies is around \$700 billion.¹⁷

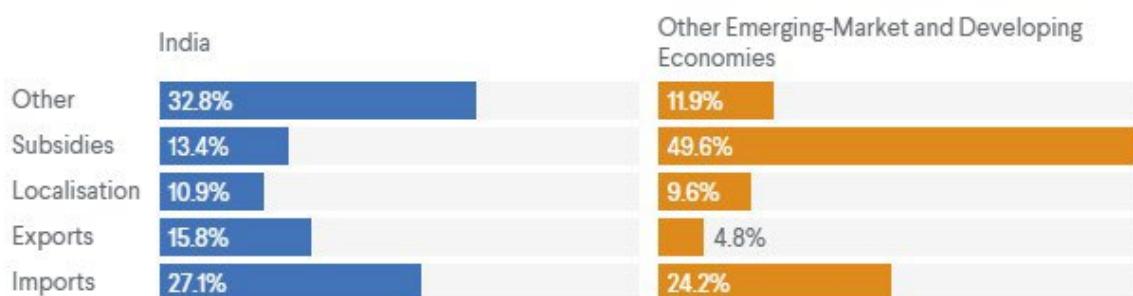
Globally, subsidies tend to be the most preferred industrial policy intervention, accounting for more than half of all industrial policy measures worldwide in 2023.¹⁸ A study of subsidy awards by China, the European Union, and the United States revealed 11,861 subsidy changes and awards between 2011 and 2019, and 3,754 between 2020 and 2021 alone.¹⁹ Analysis of the corporate subsidies database shows that less than 1.05 percent of the subsidy policy changes involved the elimination of subsidies, termination of a subsidy scheme, or reduction in subsidy payments. Thus, once initiated, subsidies tend to remain in place. Further, when an economy adopts a set of subsidies, other economies typically adopt a similar set six months later, reflecting a tit-for-tat pattern that has led to a global subsidy race (as seen in semiconductors).²⁰

Furthermore, subsidies are less dominant in India than in other emerging market and developing economies. Instead, India prefers trade-related barriers.²¹ Corporate subsidies (PLIs) in India are also less transparent than elsewhere; less than 5 percent of Indian subsidies were direct transfers.

India also prioritizes tariffs, which are increasingly popular globally. In 2018, the first Donald Trump administration raised tariffs on several products, especially those from China, to "protect domestic industries and to incentivize foreign countries to change their practices."²² China, Canada, and the European Union responded with retaliatory tariffs. The Joe Biden administration stopped increasing those tariffs in 2020, but did not reduce them. In 2024, it raised tariffs on other items such as steel, medical equipment, electric vehicles, lithium-ion batteries, and solar cells. President Trump has now announced he will impose an additional tariff of 10 percent on China and 25 percent on Canada and Mexico.²³ Meanwhile, China's average tariffs toward exporters from all countries except the United States have declined from 8 percent to 6.5 percent, while over the same period average U.S. tariffs increased from 2.2 percent to 3.0 percent.²⁴

India Leads Emerging-Markets in Industrial Policy

Comparison of policy measures among developing economies, 2011–23

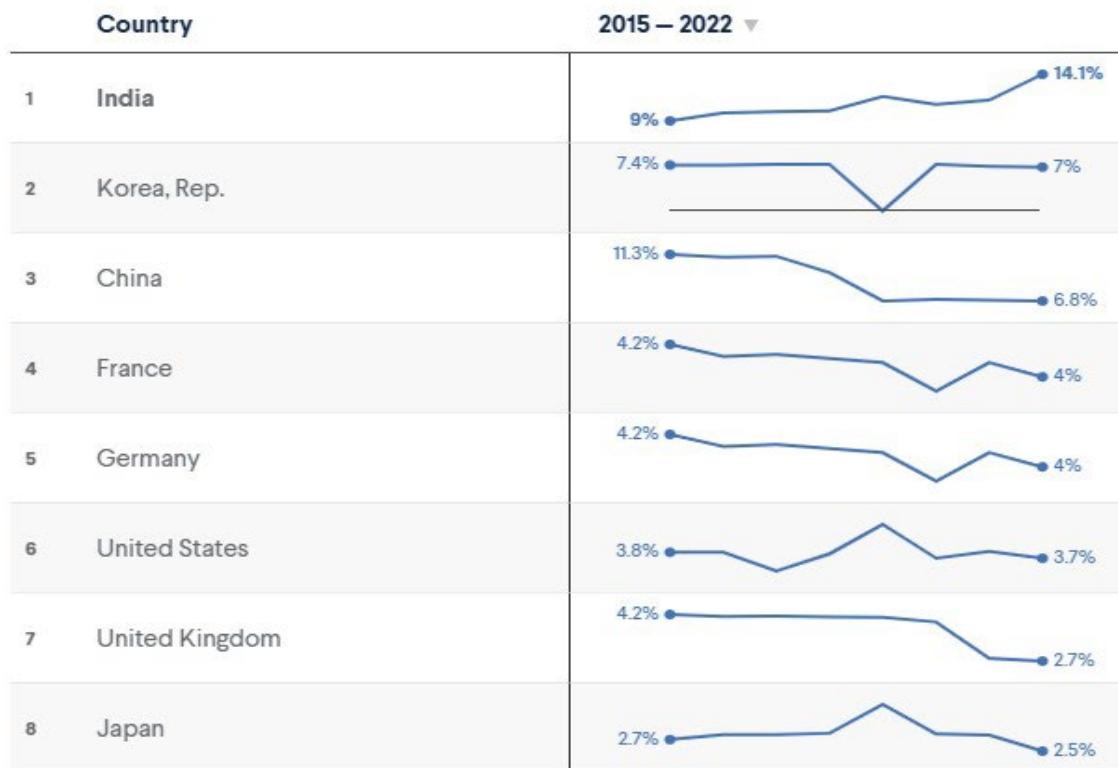


Source: Global Trade Alert; New Industrial Policy Observatory; World Bank

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India's Manufacturing Tariffs Highest Among Peers

Most favored nation tariff rates by country (%)



Note: Author's calculation based on World Development Indicators

Source: [World Bank](#)

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A recent study of 40 economies identified that they employed 146 localization measures between 2008 and 2014.²⁵ Most of the measures were used by economies with large gross domestic product (GDP) and population. DCR is not restricted to closed economies; the DCR-imposing countries collectively accounted for nearly 52 percent of world exports. For the high- and middle-income countries, DCRs were ranked among the top ten industrial policy measures.²⁶

The United States, Brazil, Canada, and South Africa have all used DCRs to justify environmental goals, such as those in the renewable energy sector.²⁷ Many countries use DCRs as a compulsory eligibility and scoring criterion in public electricity tenders and also for bonus payments on top of an existing feed-in tariff in case the investor is meeting the DCR.²⁸ Countries such as Canada, China, France, Italy, and Spain introduced local content incentives in public procurement and feed in tariffs in the late 1990s and 2000s. However, a 2018 study found India to be the most prominent user of DCR.²⁹

India's Industrial Policies: Evaluating the Outcomes

One of the key objectives of an economy's industrial policy is to boost domestic manufacturing. India's manufacturing sector, however, has remained stagnant. Its share of GDP remains the same in 2024 as it was in 2014 (17.3 percent).³⁰ In addition, India's exports as a share of GDP have fallen from 25.2 percent in 2014 to 22.7 percent in 2024. Apart from the broader picture, it could be worthwhile to look at the implications for specific sectors.

In 2010, India and Vietnam exported similar value of electronic items. In the following ten years, Vietnam's exports grew to nine times India's. Currently, India is a minor player in the global electronics trade, and India's share of high-tech exports relative to the rest of its manufacturing is a mere 12 percent compared to 23 percent, 22 percent, and 39 percent for China, Israel, and Vietnam, respectively.³¹ High import duties and localization requirements prevent Indian manufacturers from accessing cheaper intermediate inputs, preventing India's electronics sector from scaling up. An Indian Council for Research on International Economic Relations study recommended the removal of "localization policies from programs like PLI and PMP and not increasing custom duties further" and suggested "prioritizing exporting at scale to the global market (globalize) to increase the share of domestic value addition (localize)."³²

An India Cellular and Electronics Association report identified "higher tariffs of India on inputs result in higher costs of production and lower competitiveness."³³

The DCR measures have also adversely affected the solar power sector. A study of Indian solar auctions from 2014 to 2017 found that DCR increased the cost of solar power by about 6 percent per kWh generated from those projects. While there was an increase in the domestic manufacturing capacity, Indian solar panels remained 14 percent more expensive. The solar panel industry also failed to increase market share or break into export markets.³⁴

While the smartphone PLI has helped boost the domestic production of phones from 2.14 trillion rupees to 4.1 trillion rupees between FY 2020 and FY 2024, the progress has been slow for PLI in textiles, advanced chemistry cells, solar modules, and automobiles.³⁵ A few months back, an interministerial panel found that investment growth has been "significantly slow" in textiles, IT hardware, and specialty steel. Even in phone manufacturing, the focus has been on assembly, not local value addition.³⁶ Moreover, the achievements in phone manufacturing seem to result from government efforts beyond PLI. The Indian government facilitated the expansion of Apple's local value chain in iPhone and electronics manufacturing by providing clearances to several of Apple's Chinese suppliers to form joint ventures in India.³⁷ India's current approach seems to focus on facilitating the entry of prominent players into domestic production. Another instance worth highlighting is Tesla; the government set provisions for reducing import duties on electric vehicles if certain preconditions on local manufacturing are met.³⁸ India seems to be opting for a probusiness approach over a pro-market approach. With the business environment not undergoing fundamental changes, what happens once the PLI period ends remains to be seen.

There have also been concerns about PLI allocations.³⁹ In some instances, PLI has been allocated to newcomers. In others, PLI support has flown to conglomerates, increasing their already sizable market power. Execution has been poor and disbursement slow, with just 4.92 percent of 1.97

trillion rupees being disbursed.⁴⁰ The PLI scheme assumes that what works for a particular sector, such as smartphones, will work for other sectors, such as IT hardware, but experience has proven otherwise, necessitating course correction.⁴¹

The Way Ahead: How to Understand India's Interests

Though India's industrial policy measures have created friction with existing trade norms, those kind of policies are now the global norm. In fact, India's measures remain much smaller in scale compared to other major economies. Furthermore, while the measures employed are not much different, their composition differs. Globally, subsidies are preferred, whereas India's industrial policy toolkit is primarily dominated by trade-related barriers alongside subsidies.

The demand for trade-related barriers stems from the prevalence of a large number of less competitive firms, which are a result of a historically difficult business environment characterized by high tax rates, policy instability, limited scalability, and excessive regulations. As the benefits of protectionist measures are typically concentrated among domestic producers, compared to those of liberalization measures that are spread thinly over a large consumer base, the political economy ensures that the demand for protectionist policies is high.

Moreover, protectionist measures are easier and quicker to implement, often requiring only executive orders. In contrast, reforms to improve the overall business environment are complex and tedious. For instance, building infrastructure takes years, improving law and order requires interventions at different government levels, and bolstering state capacity requires consistent efforts. In the absence of independent fiscal institutions, such as a fiscal council, public expenditure tends to be shaped by pressure group politics rather than factors such as social productivity.

Compounding those issues, liberalization is not widely perceived to be beneficial in India, as reflected in predominant government narratives such as Vocal for Local and Atmanirbhar Bharat, or Self-Reliant India. Geopolitical factors reinforce this perception. As protectionism rises globally, spearheaded now by global leaders such as the United States, the incentives for policymakers in India to pursue liberalization reduce further.

Ironically, India also provides a cautionary tale for other countries—its industrial policies have not been able to increase its competitiveness. The manufacturing sector remains stagnant, and exports have declined. While the PLI scheme has been a mixed bag, measures such as increased tariffs and DCR have adversely impacted India's competitiveness.

India's pursuit of industrial policy appears to be a reaction to its domestic economic situation, encouraged by global trends, rather than any attempt to reshape the prevailing international order. Its industrial policies fall short of expectations for boosting India's manufacturing sector, foster economic growth, or creating more jobs.

To boost manufacturing, India needs to get its fundamentals right.⁴² This includes removing obstacles to private investments, such as high corporate taxes and uncertainty associated with the

tax regime; implementing measures to attract, nurture and retain talent from within and outside the country; removing restrictive regulations, such as those on land and labor; and preventing protectionist measures like high tariffs that hinder firms from scaling up. India should also incentivize private firms to invest in research and development through measures such as tax credits. India's 1991 reforms set it on a growth trajectory. Now, it is time for the next set of factor market reforms.

I am grateful to Anupam Manur and Pranay Kotasthane for their valuable input on this paper. I also appreciate the constructive feedback received during the workshop that helped refine this paper.

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¹ Indian Ministry of Finance, "Economic Survey," accessed January 15, 2025, <https://www.indiabudget.gov.in/economicsurvey>.²

SBI Research, "Precursor to Census 2024: The Fine Prints of a Rapidly Changing Nation," accessed January 15, 2025, <https://sbi.co.in/documents/13958/0/24092024-Precursor+to+census+2024+%281%29.pdf/2dd4a183-9c43-3ed8-5cf514853be84b6?t=1727173401480>.

³ M. Rajshekhar, "What India's Solar and Battery PLIs Tell Us About How the Scheme Is Working," CarbonCopy, September 7, 2022, <https://carboncopy.info/what-indias-solar-and-battery-plis-tell-us-about-how-the-scheme-is-working>.

⁴ Government of Indian Press Information Bureau, "Status of Production-Linked Incentive Schemes," accessed December 6, 2024, <https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1710134>.

⁵ Aashish Aryan and Prabha Raghavan, "What Is PLI Scheme?," *The Indian Express* (blog), November 8, 2020, <https://indianexpress.com/article/explained/what-is-pli-scheme-which-sectors-will-be-under-it-7001985>.

⁶ Government of Indian Press Information Bureau, "PLI Schemes: Shaping India's Industrial Growth," accessed January 20, 2025, <http://pib.gov.in/PressNoteDetails.aspx?NoteId=153454>.

⁷ Arvind Panagariya, "India's Trade Policy and a Road Map for Its Liberalization," The 1991 Project, accessed December 6, 2024, <https://the1991project.com/writing/papers/indias-trade-policy-and-road-map-its-liberalization>.

⁸ "Jawaharlal Nehru National Solar Mission (Phase II)," All About Renewables, <https://allaboutrenewables.com/renewable-energy-policy/jawaharlal-nehru-national-solar-mission-phase-ii/233.a>

⁹ Indian Ministry of Steel, "Policy for Giving Preference to Domestically Manufactured Iron & Steel Products in Government Procurement (DMI&SP)" (translated) accessed December 6, 2024, <https://steel.gov.in/en/policies/policy-providing-preference-domestically-manufactured-iron-and-steel-product-govt>.

¹⁰ Deepak Mishra, Neha Gupta, Sanya Dua, and Sanjna Agarwal, *Globalise to Localise: Exporting at Scale and Deepening the Ecosystem Are Vital to Higher Domestic Value Addition in Electronics*, Indian Council for Research on International Economic Relations, August 22, 2022, <https://icrier.org/publications/globalise-to-localise-exporting-at-scale-and-deepening-the-ecosystem-are-vital-to-higher-domestic-value-addition-in-electronics-icrier-august-2022>.

¹¹ Sudipta Bhattacharjee and Vikram Naik, "Production Linked Incentive Schemes – Compatibility With WTO Norms," Khaitan & Co., April 23, 2021, <https://www.khaitanco.com/sites/default/files/2021-04/Production%20Linked%20Incentive%20Schemes%20E2%80%93%20Compatibility%20with%20WTO%20Norms.pdf>.

¹² "EU Launches Consultation on Dispute With India Over Tariffs on Information and Communication Technology (ICT) Goods," European Commission Directorate-General on Trade, November 28, 2024, https://policy.trade.ec.europa.eu/news/eu-launches-consultation-dispute-india-over-tariffs-information-and-communication-technology-ict-2024-11-28_en.

¹³ Prabash Ranjan, "A Case for Accepting the WTO Ruling," *The Hindu*, November 1, 2016, <https://www.thehindu.com/opinion/columns/A-case-for-accepting-the-WTO-ruling/article15002418.ece>.

¹⁴ Ravi Kanth, Asit Ranjan Mishra, and Utpal Bhaskar, "WTO Rules Against India in Solar Panels Dispute With the US," Mint, August 27, 2015, <https://www.livemint.com/Politics/1IyE8Bz6bgZZ6LhXXIB8eL/WTO-panel-rules-against-India-in-solar-dispute.html>.

¹⁵ Réka Juhász et al., "The Who, What, When, and How of Industrial Policy: A Text-Based Approach," <https://dx.doi.org/10.2139/ssrn.4198209>.

¹⁶ Shouvik Das and Prasid Banerjee, "India May See Trickle-down Benefits of U.S. CHIPS Act," Mint, September 9, 2022, <https://www.livemint.com/technology/tech-news/india-may-see-trickle-down-benefits-of-us-chips-act-11662665233288.html>.

¹⁷ Eliot Chen, "Big Spender," The Wire China, September 4, 2025, accessed December 6, 2024, <https://www.thewirechina.com/2022/09/04/chinas-industrial-policy>.

¹⁸ Fernando Martín Espejo, “What Is Industrial Policy and Why Does It Matter?” I by IMD, August 26, 2024, <https://www.imd.org/ibyimd/management/what-is-industrial-policy-and-why-does-it-matter>.

¹⁹ Johannes Fritz and Simon Evenett, “Subsidies and Market Access: New Data and Findings from the Global Trade Alert,” Centre for Economic Policy Research, October 25, 2021, <https://cepr.org/voxeu/columns/subsidies-and-market-access-new-data-and-findings-global-trade-alert>.

²⁰ Anabel González, “Reasons to Fear a Global Subsidy Race and What to Do About It,” WTO Blog, June 27, 2023, https://www.wto.org/english/blogs_e/ddg_anabel_gonzalez_e/blog_ag_27jun23_e.htm; John Edwards, “Chips, Subsidies, Security, and Great Power Competition,” Lowy Institute, accessed December 6, 2024, <https://www.lowyinstitute.org/publications/chips-subsidies-security-great-power-competition>.

²¹ Franziska Ohnsorge, Martin Raiser, and Zoe Leiyu Xie, “The Renaissance of Industrial Policy: Known Knowns, Known Unknowns, and Unknown Unknowns,” World Bank Blogs, October 29, 2024, <https://blogs.worldbank.org/en/developmenttalk/the-renaissance-of-industrial-policy-known-knowns-known-unknown>.

²² Elijah Asdourian and David Wessel, “What Are Tariffs, and Why Are They Rising?,” Brookings, accessed December 5, 2024, <https://www.brookings.edu/articles/what-are-tariffs-and-why-are-they-rising>.

²³ Peter Tabor et al., “President-Elect Trump Announces Tariff Plans for Largest U.S. Trading Partners,” Holland & Knight, accessed December 6, 2024, <https://www.hklaw.com/en/insights/publications/2024/12/president-elect-trump-announces-tariff-plans>.

²⁴ Chad P. Bown, “U.S.-China Trade War Tariffs: An Up-to-Date Chart,” Peterson Institute for International Economics, August 29, 2019, <https://www.piie.com/research/piie-charts/2019/us-china-trade-war-tariffs-date-chart>.

²⁵ Sherzod Shadikhodjaev, ed., “Local Content Requirements and Industrialization,” in *Industrial Policy and the World Trade Organization: Between Legal Constraints and Flexibilities*, Cambridge International Trade and Economic Law (Cambridge: Cambridge University Press, 2018), 147–93, <https://doi.org/10.1017/9781316535172.007>.

²⁶ Réka Juhász, Nathan J. Lane, and Dani Rodrik, “The New Economics of Industrial Policy,” National Bureau of Economic Research, August 2023, <https://www.nber.org/papers/w31538>.

²⁷ Hanna Deringer, Fredrik Erixon, Philipp Lamprecht, and Erik van der Marel, *The Economic Impact of Local Content Requirements: A Case Study of Heavy Vehicles*, European Centre for International Political Economy, January 2018, <https://europe.org/publications/the-economic-impact-of-local-content-requirements>.

²⁸ Fabian Scheifele, M. Brauning, and B. Probst, “The Impact of Local Content Requirements on the Development of Export Competitiveness in Solar and Wind Technologies,” *Renewable and Sustainable Energy Reviews* 168 no.3 (October 2022).

²⁹ Hanna Deringer et al., “The Economic Impact of Local Content Requirements: A Case Study of Heavy Vehicles,” European Centre for International Political Economy, accessed December 6, 2024, <https://europe.org/publications/the-economic-impact-of-local-content-requirements>.

³⁰ TCA Sharad Raghavan, “Ten Years of ‘Make in India’ and the Manufacturing Sector Is Back to Where It Was in 2013–14,” The Print, September 25, 2024, <https://theprint.in/economy/10-yrs-of-make-in-india-the-manufacturing-sector-is-back-to-where-it-was-in-201314/2283732>.

³¹ World Bank, “High-Technology Exports (% of Manufactured Exports),” accessed December 6, 2024, <https://data.worldbank.org/indicator/TX.VAL.TECH.MF.ZS>.

³² Deepak Mishra et al., “Globalise to Localise: Exporting at Scale and Deepening the Ecosystem Are Vital to Higher Domestic Value Addition in Electronics,” Indian Council for Research on International Economic Relations, accessed January 30, 2025, <https://icrier.org/publications/globalise-to-localise-exporting-at-scale-and-deepening-the-ecosystem-are-vital-to-higher-domestic-value-addition-in-electronics-icrier-august-2022>.

³³ “A Tariff Study Across Competing Economies: A Disability Assessment Due to Tariffs on India’s Mobile Manufacturing & Exports Competitiveness,” Indian Cellular and Electronics Association, accessed December 6, 2024, <https://www.communicationstoday.co.in/wp-content/uploads/2024/07/2nd-July24-ICEA-TARRIF-4.0.pdf>.

³⁴ Benedict Probst et al., “The Short-Term Costs of Local Content Requirements in the Indian Solar Auctions,” *Nature Energy* 5, no. 11 (November 2020): 842–50, <https://doi.org/10.1038/s41560-020-0677-7>.

³⁵ Jatin Grover and Rishi Raj, “Mobile PLI May Be Extended Beyond 2026,” Financial Express, May 23, 2024, <https://www.financialexpress.com/business/industry/mobile-pli-may-be-extended-beyond-2026-3497936>.

³⁶ Shreya Nandi and Shreya Jai, “PLI Scheme’s Progress Slows in Key Sectors, Affecting Manufacturing Goals,” Business Standard, February 11, 2024, https://www.business-standard.com/industry/news/investment-slows-in-key-sectors-under-production-linked-incentive-scheme-124021100402_1.html; Chidambaran G. Iyer, “For Mobiles, PLI Is Not Enough,” The Hindu BusinessLine, October 9, 2024, <https://www.thehindubusinessline.com/opinion/for-mobiles-pli-is-not-enough/article68737611.ece>.

³⁷ Kiran Rathee and Subhrojit Mallick, “Fourteen Chinese Suppliers to Apple Get Nod to Make in India via JV Route,” *The Economic Times*, January 19, 2023, <https://economictimes.indiatimes.com/industry/cons-products/electronics/14-chinese-suppliers-to-apple-get-nod-to-make-in-india-via-jv-route/articleshow/97111853.cms?from=mdr>.

³⁸ “India Woos Tesla by Slashing Import Duty on EVs to 15% From 70-100%,” *The Hindu*, March 16, 2024, <https://www.thehindu.com/news/national/india-woos-tesla-by-slashing-import-duty-on-evs-to-15-from-70-100/article67955547.ece>.

³⁹ M. Rajshekhar, “Five Questions India Needs to Answer About Its PLI Scheme,” CarbonCopy, September 19, 2022, <https://carboncopy.info/five-questions-india-needs-to-answer-about-its-pli-scheme>.

⁴⁰ Subhash Chandra Garg, “Optimize India’s PLI Scheme,” Deccan Herald, accessed January 30, 2025, <https://www.deccanherald.com/opinion/optimise-india-s-pli-scheme-3088786>.

⁴¹ Jatin Grover, “Govt Mulls Separate PLI for Electronics Component Manufacturing,” *Financial Express*, November 1, 2023, <https://www.financialexpress.com/business/industry-govt-mulls-separate-pli-for-electronics-component-manufacturing-3293048>.

⁴² Sarthak Pradhan and Pranay Kotasthane, “India’s Climb up the Innovation Ladder: Policy Enablers and Impediments,” The 1991 Project, accessed December 6, 2024, <https://the1991project.com/writing/papers/indias-climb-innovation-ladder-policy-enablers-andimpediments>.