Analysis of India's Current Industrial Policy and the Way Forward

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<u>Abstract</u>

India was likely the first non-communist emerging nation to implement a comprehensive industrial policy in the years following World War II. In the period that ensued, India went through two major industrial policy phases: the 1950-1980 phase marked by licensing, import substitution and nationalization, and the period post- 1991 economic crisis which paved the way for the new industrial policy focusing more on FDI and delicensing. Since then, there have been a multitude of new developments, like climate change and rising dependence on China for raw materials(rise of China), that have influenced how India takes forth its industrial sector. Along with ensuring sustainable development, India also had to ensure that its MSME sector flourishes in face of growing competition. Since the Covid-19 pandemic has highlighted the need to have a robust manufacturing base in place and decrease reliance on imports, it is important for India to revisit its industrial policy. In this given context, this paper aims to analyse the current industrial policy of India by first understanding and analysing the historical industrial policies that were undertaken post independence. The paper then delves into the current industrial policy that is followed in India which has manufacturing, incentivisation, and climate change as its key focus areas. In doing so, this paper also highlights the policy challenges that India faces as it drives towards a new industrial policy. Additionally, this paper seeks to draw lessons for India from East Asian economies that have successfully implemented their industrial policies. Finally, this paper suggests policy measures that might be incorporated while devising a new Industrial Policy for new India.

Introduction

Few economic measures are met with the same vehement resistance from economists as industrial policy. Even when they appear to be philosophically antagonistic to it, government across the globe use it extensively. Government have become more conscious of industrial policy as they address several issues, including the green transition, supply chain resilience, the difficulty of finding good jobs, and geopolitical competition with China. As a result, the importance of industrial policy has increased significantly in recent years.

Defining Industrial Policy

Despite frequent discussions, industrial policy is rarely stated explicitly. We define industrial policies as those governmental initiatives that specifically aim to change the composition of economic activity in order to advance a social objective. Typically, the objective is to promote economic growth, productivity, and innovation. However, it could also be to encourage exports, import substitution, well-paying jobs, underdeveloped regions, or climate change. Hence, in certain contexts, (settings ,) what are referred to as regional policies¹, place-based policies², or innovation policies³ overlap with industrial policies. Industrial policies are frequently referred to as productive development policies⁴ or structural transformation policies in developing countries, in part because the term "industrial policy" has come to have a negative connotation as well as to reflect the fact that similar policies must be implemented for a wider range of developmental challenges that go beyond industrialization. In more recent times, industrial policy has also been referred to as a procedure that entails 'conversation' between the public and private sectors in order to produce data for identifying and removing legally enforceable development restrictions⁵.

Industrial policies can take many different shapes, but they always encourage private-sector actors—firms, entrepreneurs, and investors—to act in ways that are compatible with the intended course of structural change. The most visible forms of industrial policy are subsidies, which are given to certain exports, investments, R&D projects, etc. However, the range extends from import protection to exemptions from particular restrictions to public funding of vital inputs like land or training. Since government attention is in short supply, industrial policy also refers to public-private partnerships like deliberation councils or business-government roundtables that aim to ease the limitations encountered by particular industries or groupings of businesses.

Historical evolution of India's industrial policy

India experienced 'deindustrialization' in the nineteenth century as a result of colonial free trade policies that made it difficult for the country's indigenous handcraft industries to compete with machine-manufactured imported goods. Later in the century, more contemporary cotton and jute mills were built, and in 1911 the Tata Iron and Steel Company started operations. In the years between the two world wars, many industries grew, notably after 1923, when the colonial administration started enforcing minor import taxes, mostly to raise money. Yet by 1951, only 2% of the labour force in the newly independent nation was employed in modern (mechanised) industry, and manufacturing

¹ Slatery C, Zidar O. 2020. Evaluating State and Local Business Incentives. J. Econ. Perspect. 34(2):90–118

² Neumark D, Simpson H. 2015. Place-Based Policies. In Handbook of Regional and Urban Economics, Vol. 5, pp. 1197–1287. Elsevier

³ Mazzucato M. 2014. The Entrepreneurial State: Debunking Public vs. Private Sector Myths. New York: Anthem Press. Rev. ed.

⁴ Fernández-Arias E, Sabel C, Stein EH, Trejos A. 2016. Two to Tango: Public-Private Collaboration for Productive Development Policies. Washington, D.C.: Inter-American Development Bank

⁵ Rodrik, D. (2007). 'Normalizing Industrial Policy'. Paper prepared for the Commission on Growth and Development. Cambridge, MA: John F. Kennedy School of Government, Harvard University

accounted for only approximately 14% of the nation's income.⁶ The processing of agricultural raw materials (cotton and jute textiles, paper, sugar, vegetable oils) or minerals (iron and steel, cement) formed the foundation of the modern manufacturing industry. These sectors were all dependent on foreign tools and machinery. Almost no capital goods were manufactured domestically, with the exception of a small amount of textile machinery and railway engines. It is necessary to understand the government of independent India's policies in this context.

1. <u>NEHRU- MAHALANOBIS MODEL</u>:

The period from 1948-1980 can be summed up as: Planning, Protection, Public sector, Industrial licensing and Price controls⁷. The Indian five-year plans, inspiration for which was drawn from Soviet planning for industrial development, were created to promote economic and social development within a "socialist" framework, in line with the goals of the top leadership. The programmes aimed to rapidly industrialise the country, increase per capita income, and achieve equity in the distribution of benefits from economic growth. They also aimed to produce a better regional distribution of industrial development and lessen the current economic power concentration. While the First Five year plan was influenced by the Harrod-Domer Model, it was the Second Five Year Plan, a brainchild of P.C. Mahalanobis, that really laid the foundation of heavy industries in India and increased the role of the public sector for the coming years. It was marked by price controls, distribution controls and import licensing and hence came to be known as 'license raj'. The negative aspects of this license regime could be seen in the way it was implemented. Commercial import of consumer goods was prohibited. Hence a policy of import substitution was followed. As a result of having to purchase their needs from domestic suppliers regardless of price or quality, the sectors that used those commodities as intermediate inputs were likewise less competitive. Due to import substitution, domestic companies were able to dominate the whole Indian market, but technological breakthroughs were made slowly, and the quality of Indian goods lagged behind those produced abroad. Particularly, all of these hurt export competitiveness. Corruption increased as there were no clear criteria for license allotment which paved way for arbitrariness. While this model helped set up heavy industries, generate employment and set up IITs, the introduction of subsequent acts like the Monopolies and Restrictive Trade Practices (MRTP) Act (1969) further reinforces the licensing system.

⁶ Bhattacharjea, A (2023). 'Industrial policy in India since Independence' Indian Economic Review (2022) 57:565–598 https://doi.org/10.1007/s41775-022-00154-9

⁷ Bhattacharjea, A (2023). 'Industrial policy in India since Independence' Indian Economic Review (2022) 57:565–598 https://doi.org/10.1007/s41775-022-00154-9

The Wage-Goods Model:

One drawback of the Nehru-Mahalanobis model was that the infrastructural projects have very long gestation periods and a newly independent India did not have necessary consumer goods such as bread and match sticks creating a vacuum in national wealth and heavy import bills. The wage-goods model was implemented to cover this very gap, ensuring that India becomes self-reliant for basic needs and work on building the nation. C.N. Vakil and P.R. Brahmananda (both prominent economists and professors who gave an alternative model of development in their book titled "Planning for an Expanding Economy" in 1956) stressed the importance of wage goods, or what they called liquid capital, in determining the rise of employment and income, in stark contrast to Mahalanobis' model, which placed focus on the role of fixed capital. They proposed a development model that gave wage goods industries, particularly agriculture, the highest priority for allocating investment resources. They contend that labour may be used to produce capital if wage items are somehow made available. The growth process can be initiated if the additional capital is intended to produce wage goods. This growth process will accumulate and become self-sustaining.

A general conclusion about the first 30 years of industrial policy would be that public investment in heavy industries and infrastructure, protection of the domestic market, and licencing restrictions on consumer goods production all encouraged the growth of a diversified manufacturing sector, which could produce a variety of goods that would otherwise have been impossible in a capital-scarce, technologically backward economy. However, the haphazard manner in which restrictions were applied led to growing inefficiencies.

The period from 1980-1991:

During this period, the rhetoric changed from redistribution to growth and productivity as the government adopted a more 'pro-business' approach. This was followed up by policy changes like the **Industrial Policy Statement of 1980**. The policy statement aimed to promote economic federalism in the nation by fostering the integrated development of the small and major sectors. The Industrial Policy of 1980 emphasised the need to support rural industries in the nation without upsetting the ecological balance in order to increase employment and per capita income in rural areas. Hence, 'economic federalism' was followed. The policy increased the limits on the value of plant and equipment that defined small scale industries and enabled up to a 25% automatic growth of licensed capacity. It also "regularised" capabilities installed in some industries above the licenced maximum. In some industries, "broadbanding," where

licenses may now be used to make other goods within the same broad industrial group, was permitted. Towards the end of the decade, a demand stimulus from two additional developments that did not fit the deregulation or public investment perspectives strengthened the influence of these supply-side easings. The rupee's actual depreciation was one, as it was now connected to a basket of currencies. Exports were boosted and imports were reduced as a result, which further limited trade as tariffs rose. The government's consumption spending surged quickly while capital expenditures decreased. This was another development. However, the ensuing fiscal shortfalls planted the seeds for what transpired next.

2. <u>NEW INDUSTRIAL POLICY 1991:</u>

There is no question that 1991 marked the beginning of a new period of changes that were more consistently "pro-market." The end of industrial licensing may have been the most beneficial development brought about by the new industrial strategy. The 1991 policy only allowed for licensing in fewer than fifteen areas. This indicates that obtaining a license and waiting to start a business is necessary only in the case of these carefully chosen industries. This indicates that only in the case of these few carefully chosen industries is obtaining a license and waiting to start a business necessary. The country's period of license raj or red tapeism has come to an end as a result. Changes were also made to the Monopolistic and Restrictive Trade Practices (MRTP) Act. Instead, in 2010, the Competition Commission emerged as the watchdog in monitoring competitive practices in the economy. There was also de-reservation of the industrial sector. The reforms in the public sector were aimed at enhancing efficiency and competitiveness. The government also adopted a policy of disinvestment. The economic reform measure's welcoming of foreign investment and technology was another key component. This action has increased industry rivalry and benefited the nation's business climate. Foreign investment was permitted, including FDI and FPI. In a similar vein, loan capital has also been developed in the nation to draw in international investment. The country's movement towards liberalisation, privatisation, and globalisation in the later period had its origins in the industrial policy of 1991.

The Indian industry has undergone extensive reorganisation as a result of the reforms and liberalisation. Along with allowing the importation of items created elsewhere, local firms started to outsource their operations to cheaper suppliers abroad, particularly in China. This practice, also referred to as "hollowing out" Indian industry, resulted in an early deindustrialization of the country. The manufacturing sector's GDP contribution has remained at 14–16%, down from a high of 17.8% in 1997, while it accounts for about 30% of GDP in East Asian nations. India's economic growth was supported by the services sector, which currently makes up 56% of the GDP, as the industrial sector faltered. Even though the service sector has experienced rapid growth, it has not been able to absorb people proportionally, leaving agriculture to support up to 46% of India's workforce while contributing only 15% of GDP. Due to this imbalance, there is low production, widespread informality, and ongoing poverty.

3. INDUSTRY AND IT:

One of the key debates regarding the success of Indian industrial policy is focused on the development of a modern, heavily export-oriented IT industry. The industry is believed to have avoided the bureaucratic inefficiencies of strong government participation during the Nehru-Mahalanobis period of 1950–1980 since it entered the Indian market relatively late. Furthermore, it is asserted that the industry's development in the 1990s and 2000s corresponded with the overall liberalisation of the Indian economy as a result of reforms introduced by Dr. Manmohan Singh in 1991, which is why it has been successful.

The availability of inexpensive skilled workers accounts for all of India's competitive advantage in software development which was fostered by the government. Firstly, a great number of engineering colleges were built in both the public and the private sectors, particularly in South India where the state government was highly entrepreneurial. These colleges offered education that was heavily subsidised by the state and federal governments, including IT education. Second, the development of the IT sector was fundamentally influenced by the Nehru-Mahalanobis vision, which was mentioned before and called for building a strong scientific and technology foundation to alter the Indian economy and foster a higher level of autonomous innovation and development. Particularly important to the growth of the IT industry was the government's assistance in Bangalore's formation as a hub for the majority of scientific and technological activity in India. The IT story is instructive in the broader perspective of the advancement of science and technology in India. Under liberalisation and globalisation, industrial strategy throughout the previous two decades—albeit in a new form—aided the nation in creating a software sector that is heavily focused on exports.

Revival of Industrial Policy

Recently, there have been discussions about the restoration of industrial policy with appropriate adjustments to the evolving global economic environment. This is primarily fueled by the COVID-19

pandemic's effects on economic activity as well as exogenous shocks brought on by supply chain interruptions and uncertainty. The push for a new industrial policy by the US administration to support the manufacturing sector and the implementation of the performance-linked incentive scheme (PLIS)⁸ by the Indian government in certain sectors are both blatant signs of the return of an industrial policy aimed at developing cutting-edge strategies to assist businesses in enhancing economic performance. The US, formerly the leading supporter of free markets and globalisation, has recently defined its industrial strategy with the passage of the \$550 billion Infrastructure Investment and Jobs Act, the \$737 billion Inflation Reduction Act, and the \$280 billion CHIPS and Science Act⁹. Through hundreds of billions of dollars in subsidies and tax advantages, these Acts will promote local manufacture and innovation of semiconductor chips, electric mobility, and other new technology items. The Buy America Act also permits the application of domestic content restrictions on solar panels. India's recent initiative, Make-in-India, to promote manufacturing and create jobs, is in line with the general trend. A number of initiatives, including ease-of-doing-business, production-linked incentives (PLIs), tariff protection, sectoral missions like the Semiconductor Mission, and Gati Shakti, have been implemented as part of India's new industrial policy. India's recent emergence as a net exporter of toys and mobile devices inspires confidence in the efficacy of the industrial policy.

Therefore, industrial policy is once again being used as an instrument to counteract the impacts of external shocks. Its two main goals are to increase national economic activity and implement strategies that will make the industrial sector more resilient. The latter is done to ensure that economies are able to protect themselves from external shocks that have long-lasting and detrimental consequences on economic growth.

The resurgence of industrial policy as a tool for boosting economic performance raises significant questions about its fundamental components, which are crucial to give it the legitimacy it needs to address concerns with economic growth. Additionally, the focus on strengthening supply chains carries the risk of "turning inwards" and rising protectionism, which could result in decoupling from production networks. The restoration of industrial policy also heralds the return of traditional methods for comprehending how institutions contribute to economic growth and the value of governmental control over the economy.

Current Industrial Policy

The current and any future industrial policy of India should be seen in the broader context of LPG reforms and the establishment of the World Trade Organisation. After delicensing was adopted in

⁸ https://www.epw.in/journal/2023/37/commentary/challenges-return-industrial-policy.html

[°]https://www.thehindubusinessline.com/opinion/new-industrial-policy-for-new-india/article66433347.ece#:~:text=India's %20new%20industrial%20policy%20has,Gati%20Shakti%2C%20among%20many%20initiatives.

1991, the only industries that remained under the licensing regime by 2020 were electronic aerospace and defense equipment, industrial explosives, a few hazardous chemicals, and tobacco products. When India joined the WTO in 1995, it had to abide by the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), which brought about another significant change. In 2005, the Special Economic Zones (SEZ) Act was adopted. This provided tax benefits to companies for creating and running SEZs as well as to units housed within those zones.

Industrial policy is being implemented in a very different environment than it was a few decades ago. The biggest change is the actual global fall in manufacturing as a driver of GDP and employment growth. Even in China, employment in the industrial sector has decreased at least since 2014. The industrial strategy will need to focus on services far more than it currently does if one of its main objectives is employment. The **Department for Promotion of Industry and Internal Trade** (DPIIT), Ministry of Commerce & Industry, has devised a new industrial policy that was released in 2022. The proposed industrial policy prioritises enhancing competitiveness, achieving global scale, integrating with global supply chains, assisting local industry in moving up the value chain, transforming into a knowledge economy, enhancing ease of doing business, and creating skills and employment. A strategy to create mega clusters that can work with global supply chains and meet the demands of important industries including heavy engineering, electronics, food processing, pharmaceuticals, semiconductors, and autos is also included in the policy.¹⁰

In this context, the following key areas are what the Indian government is focusing on pertaining to its industrial sector.

1. MANUFACTURING:

The **Make in India** programme was first introduced in 2014 by the NDA government with the goals of promoting investment, fostering innovation, creating world-class infrastructure, and turning India into a centre for manufacturing, design, and innovation. The Indian government continues to place a high premium on the growth of a thriving manufacturing sector. Since its inception, the Make in India project has achieved great progress; Make in India 2.0 now focuses on 27 areas.

The draft Industrial Policy 2022—Make in India for the world has been circulated by the Union Ministry of Commerce and Industry for consultations with other ministries.¹¹

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https://www.outlookindia.com/business/here-are-key-things-to-know-about-industrial-policy-2022-make-in-india-for-the-world--news-244881

¹¹https://www.outlookindia.com/business/here-are-key-things-to-know-about-industrial-policy-2022-make-in-india-for-th e-world--news-244881

Currently, a little bit over 15% of the country's GDP comes from production. The goal of this campaign is to increase this country's commitment to 25%, as is the case with other developing nations in Asia. While doing so, the government wants to turn India into a favoured global hub for manufacturing, create jobs, and attract significant foreign direct investment. FDI equity inflow in the manufacturing sector between 2014-2022 has surged by 57% over the preceding 8 years, from 2006 to 2014, thanks to the Make in India Initiative.¹² The current Make in India campaign, as stated in Budget 2023, also focuses on establishing centres of excellence to create a strong ecosystem for AI in India.¹³

Another important initiative launched in the direction of self-reliance by the Government of India is the Atmanirbhar Bharat Abhiyaan (Self- reliant India Mission). It was announced in 2020 in the wake of the pandemic with a special relief package of 20 lakh crore rupees, amounting to approximately 10% of India's GDP. The scheme seeks to reduce India's reliance on imports and increase the country's production of high-quality domestic goods. It focuses on five important pillars, namely: economy, infrastructure, systems, democracy and demand. The mission has also undertaken reforms in the labour sector, agricultural marketing, coal sector, defence production and technology-driven education. Atmanirbhar Bharat Abhiyaan is closely linked to the Production Linked Incentive Scheme. While the major goal of this mission is to "make India self-reliant (Atmanirbhar) by creating an eco-system that will allow Indian companies to be highly competitive on the global stage", there are challenges that are stark as India tries to achieve the goal of self- reliance. India's logistics costs, at 14% of GDP, are significantly higher than those of its developed-world counterparts $(6-8\%)^{14}$. In sophisticated nations, logistics expenses encompass planning, procurement, and warehousing due to a high degree of outsourcing, while in India, they are mostly associated with transportation costs. There are also manufacturing and compliance costs which are high, while investments in R&D are low. However, there are no easy solutions. For instance, to reduce manufacturing cost if the government reduces power cost, it will translate to state governments losing their cross-subsidising power. To swiftly and affordably remove coal from the mines, investment will also be necessary¹⁵. Therefore, a refocus on skill development and reskilling is needed. Although achieving self-sufficiency is an ideal goal, India cannot achieve its development objectives unless it confronts the global community with a strong export policy.

¹² https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1947211

¹³ https://www.financialexpress.com/policy/economy-budget-2023-making-make-in-india-happen-2972140/

¹⁴https://dst.news/news/india-joins-hands-with-industry-foreign-experts-to-estimate-total-logistics-cost-special-secretary-logistics/#:~:text=The%20report%20put%20India's%20logistics,around%2014%20percent%20of%20GDP.

¹⁵ https://www.thehindubusinessline.com/opinion/what-exactly-is-atmanirbhar-bharat/article34328520.ece

A close collaboration between government departments and private exporters is needed to achieve this.¹⁶

India improved its position from 142 in 2014 to 63rd among 190 nations in the World Bank's ranking of the **ease of doing business (EODB)**.¹⁷ The EODB study measures the time, expenses, and red tape that small and mid-sized businesses in a country suffer with in dealing with their authorities.¹⁸ Department for Promotion of Industry and Internal Trade (DPIIT), GOI, has launched various reform measures to improve business environment in India like the National Single Window System (NSWS) in 2021 with the goal of integrating and simplifying the regulatory clearance processes across states for enterprises, the introduction of the information portal "India Industrial Land Bank" (IILB)¹⁹,the Jan Vishwas (Amendment of Provisions) Bill, 2022 (proposing to decriminalise 44 business laws), and the ongoing campaign to lessen the burden of regulatory compliance for industry are a few other significant initiatives of DPIIT on EoDB.

2. ONE NATION ONE STANDARD:

One of the major components of the new proposed industrial policy is the **One Nation One Standard** regime. India wants to establish itself as a global leader in establishing quality standards, and the One Nation One Standard Mission²⁰ is a crucial attempt to that end. The mission is to improve goods and services' international credibility by bringing consistency to the quality standards that apply to both. India wants to establish itself as a global leader in establishing quality standards, and the One Nation One Standard Mission is a crucial attempt to that end. The mission is to improve goods and services' international credibility by bringing consistency to the quality standards that apply to both. Similar to how other nations impose their standards on imported goods, the government intends to harmonise Indian standards with international benchmarks. The mandatory application of standards to more products will

¹⁶https://www.livemint.com/opinion/online-views/india-must-look-beyond-its-atmanirbhar-bharat-policy-116110704971 64.html

¹⁷https://inc42.com/buzz/economic-survey-2022-23-india-reduced-39000-compliances-ease-of-doing-business/#:~:text=A ccording%20to%20the%20World%20Bank,rank%20from%20142%20in%202014.

¹⁸ https://www.clearias.com/ease-of-doing-business-rank/

¹⁹ The India Industrial Land Bank (IILB), which was introduced on August 29, 2020, is a GIS-based portal that acts as a central hub for all data relating to industrial infrastructure, including connectivity, infrastructure, natural resources, and terrain, as well as plot-level details on available plots, lines of business, and contact information. It attempts to inform potential investors intending to start up businesses in the nation about the land that is currently accessible.

²⁰ https://pib.gov.in/PressReleasePage.aspx?PRID=1699604

be made easier by uniform national standards. The Center's goal with this initiative is to make sure that imported items meet Indian requirements.²¹

3. INCENTIVISATION:

Launched in 2020, the Production Linked Incentive (PLI) scheme was introduced to increase domestic manufacturing capacity, together with increased import substitution and job creation. The programme is essential to growing India's overall economy, which has been suffering from a lack of private investment for almost ten years and is having difficulty producing enough jobs, particularly in manufacturing²². Based on a percentage of their income over a maximum of five years, both domestic and foreign businesses receive cash incentives for manufacturing in India under the PLI system. The industry will benefit from the emphasis on R&D investment by staying current with trends worldwide and remaining competitive on the global market. However, concerns about the fairness and efficiency of the programme are raised by the lack of clear cut standards or criteria that ministries and departments employ to allocate these incentives. Additionally, WTO rules prevent India from tying PLI subsidies to domestic value addition²³. Another issue is of delays in clearances which impact the implementation of projects. Administrative issues are also brought on by the absence of a centralised database²⁴ that records information such as an increase in production or export or the number of new positions generated. This informational uncertainty affects transparency and may result in fraud, deepening the cracks and weakening the structure of the policy. The effectiveness of PLI must be evaluated by the government, taking into account job creation, cost per job, and reasons for limited success.

4. <u>VISION INDIA @ 2047:</u>

A more certain India is aiming high with a 2047 vision of being a developed country and having the third-largest economy after 75 years of independence. Among the accomplishments boosting the national confidence to aim high are successes in utilising technology for inclusive development, leadership in ICT services, a new generation of entrepreneurs scripting success

²¹ https://testbook.com/static-gk/one-nation-one-standard-mission

²² The PLI scheme covers 14 industries, which are, solar PV modules, advanced chemistry cell (ACC) batteries, drones and drone parts, as well as the manufacturing of mobile devices, medical devices, automobiles and auto components, pharmaceuticals, drugs, specialty steel, telecom & networking products, electronics, white goods (ACs and LEDs), food products and textile products.

²³ https://www.drishtiias.com/daily-updates/daily-news-analysis/production-linked-incentive-scheme-1

²⁴ https://www.thehindubusinessline.com/opinion/many-gaps-in-the-pli-scheme/article66639145.ece

with their unicorns, and vaccination of her own population in a record time with vaccines made in India while also aiding other nations around the world. The current government proposal to release a new Industrial Policy Resolution is most pertinent in that context. The Vision India@2047, which outlines an ambitious plan for India's economic future and aims to make it a developed country and one of the two largest economies in the world by 2047, is closely related to the G20 agenda for India.²⁵ Therefore, any future industrial policy shall weave itself in line with Vision 2047 for India to achieve its agenda of becoming a leading global power in the years to come.

5. <u>INFRASTRUCTURE</u>

In recent years, the Indian government has undertaken measures to ensure infrastructural development that is in line with not only economic advancement but also caters to achieving Sustainable Development Goals (SDGs). For the entire development of society, infrastructure development involves the participation of many parties. As a result, the Public-Private Partnership (PPP) method is primarily used in the Indian infrastructure industry. The Department of Economic Affairs claims that India has adopted a methodical strategy to develop a strong PPP programme for the "delivery of high-priority public utilities and infrastructure."²⁶ According to the World Bank, India's programme is one of the biggest in the world, with "close to 2000 PPP projects in various stages of implementation." The National Logistics Policy (NLP) announced in 2022 offers supply chain connectivity for the movement of goods and services. Similar to this, the Ministry of Shipping is creating a nationwide PPP network of inland waterways under the SagarMala plan to boost shipping and ease trade. Through different programmes like the Telecom Technology Development Fund and the Digital India project, the government has also made significant headway in implementing improvements in digital infrastructure.

Green industrial policy is an extension or complex form of traditional industrial policy and at its heart is sustainability. Budget 2023 increases our emphasis on sustainable growth. With a budget of Rs 19,700 crore, the National Green Hydrogen Mission would help India take commercial and technological leadership in this emerging industry while also easing the transition to a low-carbon economy. The Union Ministry of Petroleum and Natural Gas will receive 35,000 crores from the budget for high-priority capital investments related to energy

²⁵ https://asiasociety.org/seattle/events/g20-vision-india2047-and-indias-ascent-global-power

²⁶https://www.investindia.gov.in/team-india-blogs/infrastructure-development-india#:~:text=As%20per%20the%20Depart ment%20of,the%20world%20according%20to%20the

transition, net zero goals, and energy security.²⁷ Additionally, the budget talks about viability gap funding for transition to green technologies, a Green Credit Programme, and grid integration of 13 Gigawatt renewable energy from Ladakh thereby connecting even the most remote corners of India and ensuring industrial development in those regions. Individual states have also taken steps towards a green industrial policy, for instance, Tamil Nadu's leather sector is working to make its production method more environmentally friendly by using a zero liquid discharge procedure, utilising renewable energy, recycling, and creating circular products.

Therefore, India's economic growth is fueled by the cumulative development of its infrastructure. Industrial growth is accelerated by rising demands for labour, goods, and capital investments in infrastructure.

Challenges

Any industrial policy has to evolve with the demands of the current global scenario. The inability to successfully adapt to rising trends in the industrial sector leads to failure of industrial policies. Following are some challenges that the current Indian industrial policy faces.

1. ENVIRONMENTAL:

One of the most significant issues facing industrial policy today is climate change, which has emerged as one of the century's founding challenges. Finding (i) superior, low-carbon industrial methods and (ii) successfully sharing and transmitting these is challenging. Both must deal with the apparent need to avoid placing unreasonable constraints on the nations' ability to expand and catch up in the industrial world while also avoiding creating politically unacceptably large numbers of job losses in developed economies. The first barrier is the technological advancement necessary to minimise GHG emissions, such as in carbon capture and storage (CCS) technology and alternative energy sources including solar, wind, and hydro power. Herein, reducing oil dependency, while also sustainably accelerating economic and technological advancement especially in the developing countries, is a challenge since oil has been describes as the "lifeblood of industrial civilisation"²⁸. Inappropriate industrial policy may not only fail to reduce GHG emissions, but it may even make them worse.

²⁷https://www.thehindu.com/news/national/budget-2023-energy-transition-carbon-reduction-policies/article66457760.ec

²⁸ Matutinovic, I. (2009). 'Oil and the Political Economy of Energy'. Energy Policy, 37 (11): 4251-8.

2. <u>SKILLING</u>:

India has no dearth of human resources. In fact, India is in the golden period of having a demographic dividend. As a result, the government has made a lot of effort to increase the number of competent workers. The NDA government has increased its emphasis on skill development by creating the Ministry of Skill Development and Entrepreneurship and through missions like the Skill India Mission. However, the jobs that young people who participate in skill-building programmes receive fall short of their expectations. Employers lament that the learned skills do not match what they require at the same time. Therefore, even if they can afford to, companies choose to invest in machinery and automation rather than expanding their workforces. Thus, "jobless high growth" keeps going. To give India's youth greater skills and more jobs, a fresh approach is needed. India's current problem in higher education is a severe shortage of qualified faculty, organisational capital, and regulatory capacity. The biggest takeaway from the India Skills Report (2022) is that half of India's young jobseekers lack the skills necessary for employment, and in this context, the proliferation of institutions providing subpar education only makes matters worse²⁹. The report itself offers standard analyses of changes in the kinds of skills that are needed as well as an upbeat spin on new skilling initiatives. Therefore, any future industrial policy has to take into consideration the lack of skilled workers in India and measures to bridge that gap.

3. <u>RAW MATERIALS:</u>

According to a survey conducted by PHD Chamber of Commerce and Industry (PHDCCI), the major challenge facing Indian business is the rising cost of raw materials because restrictions in many regions of the nation have slowed down economic recovery due to interruptions in supply chains and a decline in demand.³⁰ The survey, which included 34 industries, found that 73% of respondents were having trouble keeping up with the escalating cost of raw materials. Other significant issues for organisations include access to working capital (64%), maintaining profitability (63%), diminishing demand (62%), and retaining the entire workforce (61%). Disruptions in the supply chain are driving up commodity costs dramatically, which has had a negative influence on firms' profit margins during the challenging coronavirus pandemic. A significant obstacle to India's efforts to lessen its reliance on China is the country's considerable reliance on imports from China for a variety of goods,

²⁹ https://www.financialexpress.com/opinion/indias-skilling-challenge/3080881/

https://www.thehindubusinessline.com/news/national/higher-cost-of-raw-materials-biggest-challenge-for-india-inc-phd-ch amber-survey/article34749999.ece

including cell phones, semiconductors, and pharmaceuticals. India's domestic production of many commodities is reliant on Chinese imports for raw materials and components. For instance, India imported iron and steel valued at about \$1.98 billion in 2022. The Statue of Unity, which was built with 553 bronze panels manufactured in China, serves as an illustration of this dependence.³¹ India also uses imported Chinese semiconductor chips to manufacture finished items that are essential for the creation of electronic products, thus increasing the fiscal deficit.

4. TRIPS AGREEMENT:

Harmonising intellectual property rights (IPR) laws is required by the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) of the World Trade Organisation (WTO) among all member states.³² All WTO members must adopt and uphold minimal intellectual property norms under the TRIPS Agreement. In the past, India facilitated process patents. This indicates that the manufacturing process, rather than the finished product or the product itself, was the subject of a patent. This in turn provided a great deal of flexibility for manufacturers to reverse-engineer things and find other means of producing the same product at a lower cost. Product patents are one of the standards that had to be upheld under TRIPS, leading to the patenting of the finished product in addition to the process.³³ It was anticipated that this would have the effect of making it far more difficult for manufacturers to develop alternative methods of producing a commodity, making it better for larger firms to create these commodities. In general, and particularly in the areas of patent law and access to medicines, the TRIPS Agreement has had a considerable impact on Indian IP laws and their implementation. Although the agreement has aided in the promotion of stronger protection for intellectual property rights in India, it has also raised issues with regard to the availability of reasonably priced medications and the capacity of Indian businesses to compete on a global scale. As a result, continual efforts are required to strike a balance between the nation's TRIPS commitments and its domestic policy objectives, notably in the field of public health.

5. SPATIAL and REGIONAL DISPARITY:

Indian economic and industrial growth has witnessed disparities not only in terms of income but infrastructure as well. Since independence, policymakers and economists have faced a

³¹ https://thewire.in/trade/india-china-imports-trade-deficit

³² https://journals.sagepub.com/doi/10.1177/0260107919875573

³³ https://llbmania.com/2021/09/03/impact-of-trips-on-pharmaceutical-industries-in-india/

significant challenge as a result of differences in employment, infrastructure facilities, and social and economic growth within and across regions. Many foreign companies are reluctant to establish operations in India because of the country's poor infrastructure. Only a few areas in India have developed infrastructure and amenities. One of the causes of such may be the expansion of urban centres and industrial hubs. Even today, there is inadequate connectivity between villages in India's rural areas. To address the issue of the rising regional gap, the central government has launched numerous infrastructure investment plans. The prevalence of industries in one region forces migration to that region thereby depriving the home state/region of human resources. With this comes also the challenge of providing the migrant labour of adequate resources and ensuring their development. In terms of infrastructure facilities, there is a definite gap amongst the states. Kerala exhibits the highest proportion across all facilities. When it comes to various infrastructure facilities, there is a significant gap among the seven Northeastern states.³⁴ Therefore, any industrial policy will have to tackle the challenge of curbing these disparities and ensuring equitable distribution of resources.

Lessons for India

A number of Asian nations saw notable economic accelerations in the second half of the 20th century and started to quickly catch up with developed nations. The emergence of a new market fundamentalism in developed nations, particularly in the UK and the US, led to an unconditional acceptance of an accelerated de-industrialization in these countries as a natural result³⁵ of shifting comparative advantage while these prosperous Asian countries were rapidly industrialising. The key takeaway from the success tales of East Asia over the long term is unquestionably that comparative advantage is not a "given" and that policy may affect comparative advantage within certain bounds. The comparative Asian experience demonstrates that there are two potential causes for industrial policy failure. A sound industrial policy plan should also be "experimentalist" so that various policy instruments may be tested and policies can be modified and reformed in the wake of experience. This will help limit the dangers of mistakes in policy design when applied with the proper methodology of policy analysis. The Asian experience has much to teach us about this as well.

³⁴https://www.researchgate.net/publication/331980834_India's_regional_disparity_and_its_policy_responses/link/5c98a 54f45851506d72968e3/download

³⁵ Khan, Mushtaq. Ch-5, 'The Role of Industrial Policy: Lessons from Asia'. 2015.

U8_Khan_(2015)_Ch5_Role-of-Industrial-Policy-Lessons-from-Asia

PDF (www.fae.usach.cl)

- The results of applying Industrial Policy instruments have ranged from mediocre success (Mexico, Brazil, Malaysia, and Thailand) to exceptional economic performance (Japan, South Korea, and Taiwan). Since the government and bureaucrats running Industrial Policy cannot choose winning industries and firms better than free markets, many have questioned its usefulness, claiming that not only does it fail, but it also results in the improper allocation of public resources to industrialists (often monopolists)³⁶ in the form of freebies.
- 2. Within two generations, Japan, South Korea, Taiwan, and Singapore became developed nations due to their industrial policies that prioritised areas of **comparative advantage** (like Chile) and their expansion (like Malaysia), but more importantly, they also took moonshots at cutting-edge technology and used innovation to dominate export markets. This is the key component lacking from the industrial policies of countries like Malaysia and Thailand, for example, which have little innovation and have focused on being effective manufacturers of goods created by multinational corporations, depriving them of a significant portion of the value addition.
- 3. Another aspect of industry policy that has worked for countries like South Korea, the US and to certain extent China as well is the **'creative industry'**³⁷ as described by Erik Berglof and Vince Cable. The commercialised arts, such as music, architecture, and advertising, as well as fashion, design, and film, are all included in the content industries. The US gave "Hollywood" and copyright concerns top priority during the Uruguay Round trade discussions in the 1990s, indicating the importance of the creative industries economically. India exports far more crafts, information technology services, and **"cultural goods**" (music and movies) than it does industrial or agricultural items. The fact that Singapore, which is frequently cited as an example of best practises in industry policy, unveiled a ten-year plan to increase the nation's competitiveness in design is noteworthy. The establishment of Korean brands in music, television soap operas, design, and fashion is the goal of the Republic of Korea's adoption of the creative industries as a top long-term strategic priority.
- 4. **Incentives** have frequently been attributed to China's earlier success. Every foreign investor in China touts how simple doing business there is in the first place. Local governments have a lot of power, which enables swift decision-making, excellent infrastructure, and business-friendly

³⁶https://www.livemint.com/opinion/columns/a-good-industrial-policy-is-about-making-and-not-picking-winners-116732 84674377.html#:~:text=A%20valuable%20lesson%20for%20India,moderate%20success%20from%20overwhelming%20vict ory.

³⁷ https://www.adb.org/sites/default/files/publication/401871/ewp-537-industrial-policy-emerging-economies.pdf

regulations in special economic zones. Certainly, subsidies and cheap capital played a part, but without the other elements, China would not have been able to grow so quickly. Industrial policy is still a contentious topic, and India should proceed with caution before attempting to emulate China's state interventionist model in its entirety because there is a high chance of corruption and failure on the part of the government. It can be wise to actively interact with think tanks to learn what might be effective.

Even so, some elements of China's industrial policy may be applicable to India, such as better targeting of multinational corporations in emerging industries where there may be a chance for comparative advantage and improved coordination between the federal and state governments. Upstream investments in tertiary-level science, technology, engineering, and maths education are as significant.

India's government has so far made modest progress towards a well-rounded Industrial Policy. Its most recent endeavour started with production-linked incentives (PLIs) for sectors in which India has some comparative advantage and progressed to modest support for a growth in India's comparative advantage (subsidies for semiconductors). However, for our exports to thrive, we need an industrial policy that not only strengthens and broadens our comparative advantage but also makes moonshot investments in technologies that we can own and export, like green hydrogen.

Way forward

Even though determining the structure and design of an industrial policy for India in the twenty-first century is an ambitious task, it is one that deserves more consideration in today's policy debate.³⁸ Policymakers should give considerable thought to the issues surrounding how to create an industrial strategy that is welfare-focused, forward-looking, and one that not only meets the difficulty of creating good employment but also some of our most urgent social and environmental issues. With this thought in mind, following are some recommendations to help India achieve the goal of formulating a robust yet accommodative industrial policy in the near future. It is important to note that these recommendations are not exhaustive in nature and can be supplemented with recommendations in the draft Industrial Policy 2022 by the DPIIT.

1. Given the need for abundant financial resources to meet the growing demands of Indian industries, it is recommended to create a new institutional architecture for industrial finance, especially considering the difficulties commercial banks have in providing term loans due to asset-liability mismatches. For the term lending requirements of the manufacturing sector, a

³⁸ https://www.ciiblog.in/a-new-industrial-policy-for-building-back-better/

new national industrial development bank has been suggested by an Institute for Studies in Industrial Development (ISID)³⁹ research. This bank could be made on lines of the National Bank for Financing Infrastructure and Development (NaBFID) created in 2021.

- 2. Any industrial policy design must recognise its connections and interactions, both at a more detailed level with agricultural and services policies and at a more general level with trade, competition, and sector-specific policies. Without a systems-based perspective supported by a whole-of-government strategy, this will not be practicable. To construct an industrial policy, stakeholders involved in the design of particular policies must collaborate, align interests, optimise, and harmonise the operation of critical sub-systems⁴⁰. Therefore, it is suggested that any future industrial policy has its foundation in the principle of systems approach to entail the benefits of holistic development.
- 3. Presently, there are multiple laws that govern the industrial sector. The development of new industries is hampered by this, and it also threatens their survival. Therefore, it is suggested that there is an establishment of a single window system to grant all statutory clearances, including clearances for the environment, forests, and pollution, especially for small and medium-sized businesses. A revision of the work and social security laws is also necessary. While the 29 labour laws have been codified into 4 labour codes, something akin to this can also be achieved for industrial sector at large, thereby simplifying the process for upcoming industries as well.
- 4. The DPIIT has suggested the implementation of a special cell to facilitate the patenting and commercialization of pilot application frameworks as well as their creation and testing. On the front of sustainability, it has recommended establishing global champions and implementing the "polluter pays" approach. The promotion of foreign direct investment in R&D is necessary, with a concentration on high value-added manufacturing operations.⁴¹
- 5. The Micro, Small and Medium Enterprises (MSME) sector accounts for about 45% of the nation's manufacturing output and for about 40% of all exports; however, the sector faces problems with, among others, a lack of access to credit, technology, infrastructure, and skill development⁴². Therefore, it is important that the MSME sector's access to finance be supplemented by alternative sources such as private equity, venture capital, and angel funds. With this in mind, the DPIIT has recommended that in addition to encouraging shared economy models in important fields like equipment leasing, the MSMEs be permitted to

³⁹ https://www.thehindubusinessline.com/opinion/new-industrial-policy-for-new-india/article66433347.ece

⁴⁰ https://www.livemint.com/Opinion/zNSs9mYJupx0exXBjTcKSN/A-new-industrial-policy-for-Bharat.html

⁴¹https://economictimes.indiatimes.com/news/economy/policy/new-industrial-policy-aims-to-focus-on-one-nation-one-sta ndard/articleshow/96746058.cms?from=mdr

⁴² https://prsindia.org/policy/report-summaries/industrial-policy-in-the-changing-global-scenario

leverage the corporate bond market and that their intellectual property rights be accepted as collateral for loans.⁴³

- 6. Production Linked Incentive scheme has been brought with a vision to boost India's manufacturing sector and bring in investments. However, it is plagued with underlying problems like delays in implementation and lack of a centralized database for tracking growth in the nation. Additionally, at present, different ministries monitor the value addition of their respective PLI schemes so here is no way to compare two different schemes. Therefore, what is needed is development of a metric and a centralised database to track and monitor progress across different sectors. This will also aid in recognising the sectors and industries which are performing well with respect to the incentives they are getting. A centralized database will also reduce the problem of delays and the resources that are lost due to these delays in implementation. PLI schemes can also encourage green investments in the country by offering additional incentives for green technologies leading to higher utilisation of raw materials and reduction in waste discharged in the manufacturing process. Before creating the structure for such incentives, discussions with the appropriate industry stakeholders and forums would be essential to its success. These new PLI incentives might be tied to specific carbon emission reduction thresholds with built-in certification requirements. Authorised organisations for calculating carbon footprints might be more important in this situation.
- 7. India could expand the Make in India programme into Make in South Asia to encourage regional supply networks with its neighbours. To encourage its manufacturers to expand into Bangladesh and Sri Lanka, India can offer financial advantages, including providing products on the value chain. Given the factor endowments and industrial experience of India's neighbours, the food processing, textiles and clothing, and automotive sectors may be possibilities for this.

Conclusion

It is no surprise that India needs a new industrial policy, especially since it dreams of becoming a developed nation by 2047. Following a trajectory of industrial policies marked by "license raj", 'import substitution', and then eventually LPG reforms, India has paved for itself a road of industrial advancement in line with sustainable development, supported by efficient leadership. However, it still faces important challenges in the form of smooth energy transition, meeting rising global demand, developing a resilient manufacturing base while ensuring equitable development for its people and

⁴³https://economictimes.indiatimes.com/news/economy/policy/new-industrial-policy-aims-to-focus-on-one-nation-one-sta ndard/articleshow/96746058.cms?from=mdr

building an efficient supply chain. Therefore, to ensure that there is consonance in achieving the goal aimed for in Vision India @ 2047 document, Bharat must be the heart of any new, forward-thinking industrial policy for India. It must place a high priority on generating employment in rural and semi-urban areas and acknowledge the significance of rural non-farm and agriculture-related economic growth for industrial development. Industrial policy should resist the temptation of the short-term benefits of over-protectionism in order to take a long-term perspective on issues relating to trade and competition.

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