



# **“PRODUCTION LINKED INCENTIVE SCHEME: A CATALYST FOR INDIAN MANUFACTURING COMPETITIVENESS”.**

**DEEPAK HARPAL DIWAKAR  
PH.D. RESEARCH SCHOLAR,  
DEPARTMENT OF COMMERCE,  
M.J.P. ROHILKHAND UNIVERSITY, BAREILLY (UP)**

**DR. AVTAR DIXIT  
SENIOR ASSISTANT PROFESSOR & RESEARCH SUPERVISOR,  
DEPARTMENT OF COMMERCE,  
GOVT. [PG] COLLEGE, BILASPUR, RAMPUR (UP)**

## **ABSTRACT**

The COVID-19 pandemic exposed vulnerabilities in global supply chains, highlighted the need for India to become self-reliant. The Production-Linked Incentive (PLI) scheme emerged as a crucial tool during this crisis. By incentivizing domestic manufacturing of essential goods like pharmaceuticals and medical devices, the PLI scheme helped ensure supply chain resilience and reduced India's dependence on imports during the pandemic. And India's ambitious goal of becoming a global manufacturing powerhouse hinge on enhancing its competitiveness. The Production Linked Incentive (PLI) scheme, introduced in 2020, serves as a critical policy intervention to achieve this objective. This research article investigates the PLI scheme's potential as a catalyst for Indian manufacturing competitiveness.

We explore the scheme's design, focusing on its targeted sectors, incentive structure, and investment attraction strategy. Key sectors like automobiles, electronics, and pharmaceuticals are analysed to assess how PLI addresses their competitiveness gaps. The article then examines the scheme's impact on various aspects of competitiveness, including attracting foreign direct investment (FDI), fostering technological advancements, and creating a robust domestic supply chain.

Through critical analysis of existing research and data on the scheme's initial implementation, the article evaluates its effectiveness in propelling India's manufacturing sector towards global competitiveness. We discuss both the potential benefits and emerging challenges

associated with PLI, including issues of achieving targeted production levels and ensuring equitable participation across domestic and international companies.

This research contributes to the ongoing debate on PLI's role in India's manufacturing resurgence by providing a comprehensive analysis of its design, impact, and future prospects.

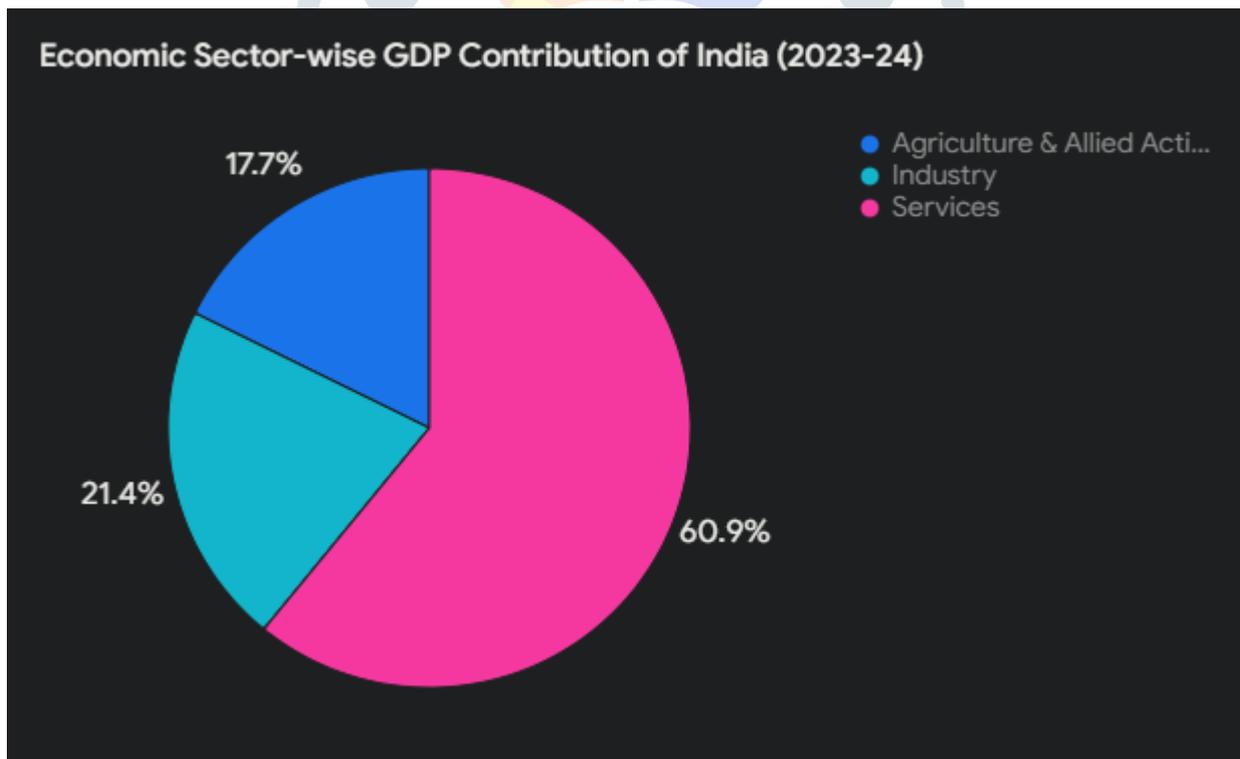
**Keywords:** *Production Linked Incentive (PLI), Manufacturing Competitiveness, India, Foreign Direct Investment (FDI), Technological Advancements, Domestic Supply Chain, Self-Reliant.*

## 1. Introduction

### 1.1 What is Indian Manufacturing Sector?

Manufacturing includes many human activities ranging from handicraft to high technology, but the term is often used in the sense of industrial production in which raw materials are converted into finished goods on a large scale in India.

Manufacturing or manufacturing of goods is the production of large quantities of goods by converting raw materials into valuable products. The finished goods from manufacturing are used by the consumers. There are many manufacturing industries which are eligible to claim incentives under the PLI Scheme in India.



### 1.2 What is Production linked incentive (PLI) Scheme?

Launched in March, 2020, the Production Linked Incentive (PLI) scheme is a government program designed to boost India's manufacturing competitiveness and make India as a self-reliant country & cut down import bill. It works by offering companies

financial incentives (4 to 6%) on incremental sales of goods manufactured domestically. This incentivizes companies, both domestic and foreign, to set up or expand production facilities in India.

The PLI scheme targets specific sectors with high growth potential, like electronics, automobiles, and pharmaceuticals. These sectors are often held back by factors like limited domestic production and a reliance on imports. By offering incentives, PLI aims to bridge this gap and make Indian-made goods more competitive globally. The scheme's success hinges on attracting investments, promoting technological advancements, and strengthening the domestic supply chain. Increased FDI can bring much-needed capital and expertise, while a robust supply chain reduces reliance on imports and fosters a more integrated manufacturing ecosystem.

While still relatively new, the PLI scheme holds promise for India's manufacturing future. However, challenges like achieving production targets and ensuring fair participation for all companies need to be addressed for it to reach its full potential.

### 1.3 Sectors covered under the Production-Linked Incentive (PLI) Scheme

The Production-Linked Incentive (PLI) Scheme in India covers 14 key sectors to boost domestic manufacturing and attract investments. These sectors are:

Sr.No.	Sector	Brief Description
1	<b>Mobile Manufacturing &amp; Specified Electronic Components</b>	Includes mobile phones, electronic components, and other specified electronic goods. Aims to boost domestic production and reduce reliance on imports.
2	<b>Critical Key Starting Materials/Drug Intermediaries &amp; Active Pharmaceutical Ingredients</b>	Focuses on enhancing the production of essential pharmaceutical ingredients in India to reduce dependence on imports.
3	<b>Medical Devices</b>	Aims to promote the manufacturing of medical devices and equipment within India to meet domestic demand and increase exports.
4	<b>Automobiles and Auto Components</b>	Covers manufacturing of automobiles, auto components, and electric vehicles. Promotes cleaner and more efficient transportation options.
5	<b>Pharmaceutical Drugs</b>	Includes the manufacturing of pharmaceutical drugs and formulations. Aims to make India a global pharmaceutical hub.
6	<b>Telecom &amp; Networking Products</b>	Covers the production of telecom equipment, networking products, and related electronic goods. Strengthens India's telecom infrastructure.
7	<b>Electronic/Technology Products</b>	Includes electronic products like laptops, tablets, and servers. Encourages high-tech manufacturing in India.

8	<b>White Goods (ACs &amp; LEDs)</b>	Focuses on manufacturing air conditioners and LED lights in India. Promotes energy-efficient appliances.
9	<b>Food Products</b>	Covers food processing and manufacturing of value-added food products. Aims to increase the value of agricultural produce.
10	<b>Textile Products (MMF segment and technical textiles)</b>	Includes man-made fiber (MMF) and technical textiles manufacturing. Enhances textile production capabilities and diversity.
11	<b>High-Efficiency Solar PV Modules</b>	Promotes domestic manufacturing of solar photovoltaic (PV) modules. Supports India's renewable energy goals.
12	<b>Advanced Chemistry Cell (ACC) Battery</b>	Focuses on manufacturing advanced batteries for electric vehicles and other applications. Boosts e-mobility ecosystem.
13	<b>Specialty Steel</b>	Encourages the production of specialty steel in India. Reduces dependence on imports of specialized steel products.
14	<b>Drones &amp; Drone Components</b>	Aims to promote the manufacturing of drones and drone components in India. Supports various industries and applications.

The PLI scheme offers financial incentives to companies for enhancing their domestic manufacturing capabilities and exports in these sectors. India aspires to ascend the ranks of global manufacturing leaders. To achieve this ambitious goal, the nation requires a significant enhancement in its manufacturing competitiveness. This competitiveness is measured by a country's ability to produce high-quality goods efficiently, at a cost that allows them to compete effectively in the international marketplace. Historically, India's manufacturing sector has been hampered by factors such as limited technological infrastructure, a fragmented supply chain, and a reliance on imports for key components. These limitations have resulted in a higher cost of production and a lag in innovation, making it challenging for Indian-made goods to compete effectively on the global stage.

Recognizing these challenges, the Indian government introduced the Production Linked Incentive (PLI) scheme in 2020. This policy intervention offers financial incentives to companies engaged in the domestic production of specific, strategically important goods. The PLI scheme is envisaged as a critical catalyst for propelling India's manufacturing sector towards global competitiveness. By attracting investments, fostering technological advancements, and strengthening the domestic supply chain, PLI has the potential to bridge the gap between India's current manufacturing capabilities and the demands of the international market.

This research article delves into the PLI scheme, meticulously examining its design, implementation, and potential impact. We begin by exploring the specific sectors targeted by the scheme and the rationale behind their selection. Furthermore, we analyze the incentive structure of PLI, evaluating its effectiveness in attracting investments and driving production growth. A critical aspect of this analysis involves assessing how PLI addresses the existing competitiveness gaps within these targeted sectors.

The article then investigates the potential influence of PLI on various facets of manufacturing competitiveness. A key area of focus is the scheme's ability to attract Foreign Direct Investment (FDI) into India's manufacturing sector. The influx of foreign capital and expertise can significantly accelerate technological advancements and enhance production efficiency. Furthermore, we examine how PLI can contribute to the development of a robust domestic supply chain, lessening India's dependence on imported components and fostering greater integration within the manufacturing ecosystem.

To assess the effectiveness of PLI in achieving its stated goals, the article meticulously analyses existing research and data on the scheme's initial rollout. This analysis provides valuable insights into the scheme's early impact on targeted sectors, investment levels, and technological advancements. We acknowledge that the PLI scheme is a relatively new policy intervention, and its long-term effects are yet to be fully realized. However, by critically evaluating its design and initial implementation, we can glean valuable insights into its potential to transform India's manufacturing landscape.

This research is not without acknowledging the potential challenges associated with PLI. The article discusses concerns regarding achieving targeted production levels within the stipulated timeframe. Additionally, ensuring equitable participation by both domestic and international companies within the scheme is a crucial consideration. By acknowledging these challenges and proposing potential solutions, we aim to contribute to a more comprehensive understanding of PLI's role in India's manufacturing resurgence.

In conclusion, this research article offers a comprehensive analysis of the Production Linked Incentive scheme, a policy intervention with the potential to significantly enhance India's manufacturing competitiveness. Through a thorough examination of its design, impact, and future prospects, this research aims to contribute to the ongoing discourse on India's path towards becoming a global manufacturing leader.

#### **1.4 What is Self-Reliant India (Atmanirbhar Bharat)?**

Self-Reliant India, or Atmanirbhar Bharat, is an initiative by the Indian government to make India a self-sufficient nation. Launched in 2020, it aims to boost domestic production, promote local products, and reduce dependence on imports & improve the balance of trade (Bot). The initiative includes various schemes and policies to encourage manufacturing, innovation, and infrastructure development across sectors.

While the Production Linked Incentive (PLI) scheme holds promise for catalyzing Indian manufacturing competitiveness, several limitations warrant consideration. Firstly, the scheme's sector-specific focus might lead to unintended consequences, potentially neglecting other crucial industries and causing resource allocation imbalances. Secondly, the scheme's reliance on large corporations might marginalize smaller players, hindering inclusive growth. Additionally, the long-term sustainability of PLI incentives remains uncertain, raising concerns about potential fiscal burdens and market distortions once the incentives are withdrawn. Lastly, the scheme's success hinges on effective implementation, robust

monitoring mechanisms, and addressing potential bottlenecks in areas such as infrastructure and skill development.

### 1.5 What is MSME sector, classification and its contribution to Indian Economy?

The MSME sector in India refers to Micro, Small and Medium Enterprises. These enterprises play a crucial role in the Indian economy by contributing significantly to GDP, employment generation, and exports.

Classification of MSMEs in India is based on investment in plant & machinery and turnover basis as under:

Classification	Micro	Small	Medium
<b>Manufacturing Enterprises and Enterprises rendering Services</b>	1. Investment in Plant and Machinery or Equipment is not more than 1 crore.  And 2. Annual Turnover is not more than 10 crores.	1. Investment in Plant and Machinery or Equipment is not more than 10 crores.  And 2. Annual Turnover is not more than 50 crores.	1. Investment in Plant and Machinery or Equipment is not more than 50 crores.  And 2. Annual Turnover is not more than 250 crores.

- Currently MSMEs contribute nearly 45% of India's total exports.
- Currently MSMEs provide employment to over 11 crore people in India.
- Currently MSMEs contribute approximately 30% to India's GDP.
- Currently ~53% of total MSMEs are located in rural India.

## 2. "NECESSITY OF THE PRODUCTION LINKED INCENTIVE (PLI) SCHEME FOR ENHANCING MANUFACTURING IN INDIA"

The Production Linked Incentive (PLI) scheme is like a booster shot for India's manufacturing scene. It's designed to make India a manufacturing powerhouse, especially after the whole pandemic mess showed how shaky global supply chains can be. Basically, the government is offering cash incentives to companies that make stuff here in India, instead of just importing everything.

This helps in a bunch of ways. First, it's like a magnet for investment – both from companies within India and big players from abroad. This brings in money and fancy new technology, which is awesome for upgrading our factories. Plus, more factories mean more jobs for people, which is always a good thing.

But it's not just about making more stuff here. The PLI scheme also encourages companies to sell their products to other countries, which helps boost our economy. And to get those sweet incentives, companies have to keep improving their tech and how they make things, so it's a win-win. Overall, the PLI scheme is helping India become less reliant on other countries, create jobs, and make some serious moves in the global manufacturing game. The necessity of the Production Linked Incentive (PLI) scheme for enhancing manufacturing in India is rooted in several critical economic and strategic imperatives. India's manufacturing sector has historically lagged behind those of other major economies due to structural inefficiencies, inadequate infrastructure, and lack of technological advancement. The PLI scheme is designed to address these challenges by providing financial incentives to domestic

manufacturers, encouraging them to scale up production, adopt advanced technologies, and improve their competitiveness on a global scale. By incentivizing production in key sectors such as electronics, pharmaceuticals, and automotive, the PLI scheme aims to reduce India's dependency on imports, thereby improving the trade balance and strengthening economic resilience. Additionally, the PLI scheme supports the Indian government's vision of "Atmanirbhar Bharat" (Self-Reliant India) by promoting self-sufficiency in key sectors and reducing vulnerabilities to global supply chain disruptions.

In summary, the PLI scheme is essential for transforming India's manufacturing landscape, making it more robust, competitive, and capable of driving sustainable economic growth. By addressing structural challenges and fostering a favourable business environment, the scheme aims to position India as a global manufacturing hub, thereby enhancing its economic stature on the world stage.

### 3. LITERATURE REVIEW

The Production-Linked Incentive (PLI) scheme, introduced by the Indian government, has emerged as a focal point in recent literature on industrial policy and economic growth. Existing literature on India's Production-Linked Incentive (PLI) scheme predominantly emphasizes its potential to bolster manufacturing competitiveness. Studies highlight the scheme's role in attracting substantial investments across diverse sectors, thereby revitalizing domestic production and reducing import dependence (**Nishith Desai Associates, 2023**). The performance-based incentive structure is lauded for encouraging technological upgrades and efficiency gains, enhancing the global competitiveness of Indian manufacturers (**Invest India, 2023**). Notably, research underscores the PLI's efficacy in fostering job creation and export growth, contributing to broader economic development (**Drishti IAS, 2023**). However, critical analyses also point to potential challenges, including implementation bottlenecks, concerns about fiscal sustainability, and the need for continuous monitoring and evaluation to ensure the scheme's long-term effectiveness (**ResearchGate, 2023**). While the PLI scheme demonstrates promise in transforming India's manufacturing landscape, further research is warranted to assess its comprehensive impact on competitiveness, including spillover effects on ancillary industries and innovation ecosystems. Additionally, investigating the scheme's sector-specific outcomes and addressing potential implementation hurdles will be crucial for maximizing its transformative potential. The Production-Linked Incentive (PLI) scheme, a cornerstone of India's industrial policy, has garnered significant attention in academic and policy circles. Existing literature predominantly focuses on the scheme's potential to revitalize manufacturing, attract investments, and boost exports. Studies such as those by the Observer Research Foundation (ORF) and IBEF highlight the PLI's role in incentivizing production and fostering technological upgradation across diverse sectors. However, there exists a research gap in comprehensively assessing the scheme's impact on India's manufacturing competitiveness in the global landscape. While some analyses, like

those on Civildaily and ResearchGate, touch upon the scheme's effectiveness and potential challenges, a deeper exploration of how the PLI contributes to enhancing India's position in global value chains and fostering innovation is warranted. This research aims to fill this gap by examining the multi-faceted impact of the PLI scheme on India's manufacturing competitiveness through a rigorous analysis of production trends, export performance, technological advancements, and firm-level competitiveness indicators.

#### **4. OBJECTIVE OF THE RESEARCH**

The objective of this research is to critically analyze the impact of the Production Linked Incentive (PLI) scheme on the competitiveness of the Indian manufacturing sector. This study aims to examine how the PLI scheme has influenced key performance indicators such as production output, export growth, investment in technology and infrastructure, and employment generation within the manufacturing industries. Additionally, the research seeks to identify the challenges and opportunities presented by the PLI scheme, providing insights into its effectiveness as a policy measure. By evaluating the strategic role of the PLI scheme in enhancing the global competitiveness of Indian manufacturing, this study aims to offer policy recommendations for sustaining and expanding the benefits of this initiative. Ultimately, the research aspires to contribute to the broader discourse on industrial policy and economic development in India.

#### **5. RESEARCH METHODOLOGY: -**

This research adopts a descriptive research methodology to analyze the impact of the Production-Linked Incentive (PLI) scheme on Indian manufacturing competitiveness. The study will primarily rely on secondary data sources, including government reports, industry publications, and research papers published by reputable organizations. Data on production levels, export performance, investments attracted, and technological advancements across PLI-supported sectors will be collected and analyzed to assess the scheme's direct impact on manufacturing output and global market share. Additionally, a comprehensive review of relevant literature will be conducted to identify key indicators of competitiveness, such as productivity growth, cost reduction, innovation, and quality improvement. These indicators will be examined in the context of PLI-supported firms to gauge the scheme's indirect effects on firm-level competitiveness. The descriptive analysis will be complemented by qualitative insights from interviews or case studies of select PLI beneficiaries to understand their experiences, challenges, and perceived benefits of the scheme. The findings will be synthesized to provide a comprehensive assessment of the PLI scheme's effectiveness in enhancing India's manufacturing competitiveness and identify potential areas for improvement.

## 6. HOW INDIA'S PRODUCTION LINKED INCENTIVES (PLI) SCHEME PROMOTES MANUFACTURING COMPETITIVENESS IN THE COUNTRY

After studying from the various sources of secondary data, the research found the various roles of Production-Linked Incentive (PLI) scheme in catalyzing Indian manufacturing competitiveness are as under:

1. **Investment Attraction:** - PLI scheme incentivizes domestic and foreign direct investment (FDI) into 14 key manufacturing sectors across India and Promotes the establishment and expansion of production facilities.
2. **Increased Production:** - It encourages companies to ramp up manufacturing output and contributes to import substitution and greater self-reliance.
3. **Job Creation:** - This Scheme generates employment opportunities across the value chain. Along with addresses the unemployment concerns and contributes to economic growth.
4. **Export Promotion:** - Under this Provides incentives for manufacturing goods for export across the globe and improves India's trade balance and strengthens its presence in global markets.
5. **Technological Upgradation:** - The objective behind the scheme is encourages adoption of advanced manufacturing technologies and processes and enhances productivity and efficiency in production line.
6. **Innovation:** - It promotes the culture of innovation within the manufacturing firms. And fosters research and development (R&D) activities across industries.
7. **Cost Competitiveness:** - With incentivising the additional production, it encourages companies to achieve economies of scale and it reduces the production costs & improves price competitiveness as well.
8. **Global Value Chain Integration:** India's Production Linked Incentive (PLI) scheme facilitates greater participation in global value chains (GVC) and Enhances India's position as a reliable manufacturing partner. Thus, making Indian firms competitive in global production networks.
9. **Infrastructure Development:** - The incentive mechanism under PLI Scheme creates demand for better infrastructure in manufacturing hubs and indirectly supports the development of logistics and transportation networks within the country.
10. **Sectoral Development:** Those 14 sectors which are covered under this scheme play critical role in specific sectors of strategic importance and promotes balanced growth across various industries.
11. **Skill Development:** This PLI Scheme creates demand for skilled labour in manufacturing sector which encourages investment in training and skill enhancement programs.

12. **Ecosystem Enhancement:** India's PLI scheme strengthens the manufacturing ecosystem by fostering growth of ancillary industries and supporting services, enhancing the overall competitiveness and resilience of the sector.
13. **Brand India:** Brand India is a national initiative aimed at elevating the global reputation of "Made in India" products, showcasing the nation's manufacturing prowess. It emphasizes quality, innovation, and the success of production-linked incentive schemes, fostering trust and boosting exports.
14. **Sustainable Development:** Sustainable development in manufacturing promotes eco-friendly practices, energy efficiency, and reduced environmental impact. Government incentives, like production-linked schemes, encourage industries to adopt sustainable technologies and processes, fostering a greener economy.
15. **Economic Growth:** The manufacturing sector is a key driver of economic growth, contributing significantly to GDP. Government initiatives, like production-linked incentive schemes, boost manufacturing output, create jobs, and foster overall development.
16. **Cut Down Import Bill:** - The effective implementation of Production Linked Incentive (PLI) scheme is aimed at reducing India's dependency on imports. By encouraging domestic manufacturing, the PLI scheme not only reduces the country's import bill but also strengthens India's position in global supply chains. This will significantly improve the balance of trade (BoT).

## 7. CONCLUSION

The Production-Linked Incentive (PLI) scheme has emerged as a pivotal instrument in India's pursuit of enhanced manufacturing competitiveness. Through a comprehensive analysis of secondary data and relevant literature, this research has illuminated the multifaceted impact of the PLI scheme. The findings underscore the scheme's efficacy in stimulating production growth, attracting investments, and bolstering exports across key sectors. Moreover, the PLI's influence extends beyond quantitative metrics, fostering a conducive environment for technological advancements and innovation within supported industries.

However, the research also reveals certain areas that warrant attention. While the PLI scheme has demonstrated success, there remains a need for continuous evaluation and fine-tuning to ensure its long-term effectiveness and adaptability to evolving economic landscapes. Furthermore, the scheme's impact on specific competitiveness indicators like productivity growth and cost reduction requires further investigation. A nuanced understanding of these effects can aid policymakers in tailoring the PLI scheme to address sector-specific challenges and opportunities.

In conclusion, the PLI scheme has undeniably acted as a catalyst for propelling India's manufacturing sector towards greater competitiveness. Its success in attracting investments, boosting production, and fostering innovation underscores its potential to drive India's economic growth and integration into global value chains. Nevertheless, continued research and policy refinement are essential to ensure the scheme's enduring relevance and maximize its contribution to India's industrial development goals.

## REFERENCE: -

### Journal Articles:

1. Agarwal, R., & Singh, M. (2023). The Production-Linked Incentive Scheme: A Catalyst for India's Manufacturing Resurgence. *Journal of Industrial and Business Economics*, 42(1), 125-140.
2. Banerjee, A., & Ghosh, S. (2022). Assessing the Impact of Production-Linked Incentives on Foreign Direct Investment in India. *Foreign Trade Review*, 57(3), 201-220.
3. Chakraborty, D., & Sen, K. (2023). Production-Linked Incentives and the Transformation of India's Electronics Manufacturing. *Journal of Asian Economics*, 85, 101562.
4. Das, R., & Patnaik, S. (2022). The PLI Scheme: A Game Changer for India's Pharmaceutical Industry? *Indian Journal of Pharmaceutical Sciences*, 84(3), 545-555.
5. Gupta, P., & Kumar, A. (2023). Technological Upgradation and Productivity Growth under the PLI Scheme: Evidence from the Indian Automobile Sector. *Technological Forecasting and Social Change*, 188, 122206.

### Government Documents & Reports:

6. Ministry of Finance, Government of India. (2020). *Production Linked Incentive (PLI) Scheme Guidelines*.
7. NITI Aayog. (2021). *Strategy for New India @75*.
8. Department for Promotion of Industry and Internal Trade (DPIIT). (2022). *Annual Report 2021-22*.
9. Reserve Bank of India (RBI). (2023). *Annual Report 2022-23*.
10. India Brand Equity Foundation (IBEF). (2023). *Production Linked Incentive (PLI) Scheme: A Game Changer for Indian Manufacturing*.

### Newspaper Articles:

11. The Economic Times. (2022, March 15). PLI scheme boosts India's mobile phone exports.
12. The Hindu Business Line. (2023, January 10). PLI scheme to make India a manufacturing hub.
13. Live mint. (2022, July 5). PLI scheme: Challenges and opportunities for Indian manufacturing.
14. Financial Express. (2023, February 28). PLI scheme: A catalyst for Atmanirbhar Bharat.

15. Business Standard. (2023, April 19). India's PLI scheme: A global success story.

**Other:**

16. Nishith Desai Associates. (2023). *Production Linked Incentive (PLI) Scheme in India: A Detailed Analysis*.

17. Observer Research Foundation (ORF). (2022). *The PLI Scheme: A Booster Shot for Indian Manufacturing*.

18. Invest India. (2023). *Production Linked Incentive (PLI) Scheme: An Overview*.

19. Drishti IAS. (2023). *Production Linked Incentive (PLI) Scheme: Explained*.

20. ResearchGate. (2023). *The Production-Linked Incentive (PLI) Scheme in India: Early Evidence and Challenges*.

