



Manufacturing Hubs: Building Integrated Industrial Ecosystems

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Key Takeaways

- Manufacturing policy has shifted to **infrastructure-led, integrated hub development** to enable scale, reliability, and long-term industrial competitiveness.
- Union Budget has proposed **3 chemical parks, 7 PM MITRA parks, MSME clusters, and ₹10,000-crore Biopharma SHAKTI**.
- Public capital expenditure has expanded from **₹2 lakh crore in FY2014–15 to ₹12.2 lakh crore in FY2026–27 (Budget Estimate)**, supporting infrastructure creation.
- **MSMEs, which comprise 7.47 crore enterprises, account for 35.4% of manufacturing output and anchor manufacturing hubs nationwide.**

Introduction

Manufacturing is a foundational pillar of India's economy, contributing around 16–17 per cent of GDP and employing over 27 million workers. As the country works towards transforming from a \$3.7 trillion economy to a \$30–35 trillion economy by 2047, manufacturing is expected to play a central role, with its share in GDP rising to at least 25 per cent.

In this context, India's manufacturing strategy has increasingly focused on the development of **integrated manufacturing hubs**, spatial ecosystems that combine physical infrastructure, regulatory support, common facilities, and connectivity. These hubs are designed to support scale, reduce transaction costs, and anchor long-term manufacturing activity, strengthening India's position within domestic and global production networks.

Manufacturing Hubs in a Changing Global Context

The Economic Survey 2025–26 observed that global manufacturing is undergoing a structural transition, with competitiveness shaped less by low-cost production and more by reliability, resilience, and strategic indispensability. As production processes become more technology-intensive and system-dependent, the

ability to operate within stable, integrated manufacturing environments has emerged as a critical determinant of long-term industrial competitiveness.

Countries that are able to provide stable production environments are supported by **infrastructure, logistics, skills, and institutional coordination**, and they are **better positioned** to sustain manufacturing activity and retain long-term production mandates.



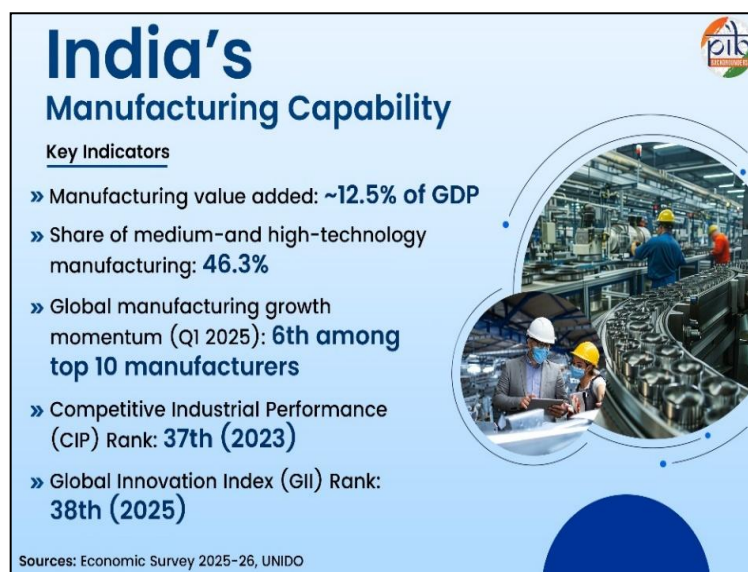
This global shift and the ongoing industrial momentum have been underpinned by a move towards **high-technology manufacturing** and a growing emphasis on **strategic indispensability within GVCs**. As manufacturing becomes increasingly technology-intensive and system-dependent, it underscores the importance of preparedness, productivity, and the capacity to scale. Manufacturing hubs providing integrated ecosystems with shared infrastructure, supply chain linkages, and logistics connectivity, enable firms to operate at scale, move up the value chain, and integrate more effectively into global production networks.

A **Global Value Chain (GVC)** consists of a series of stages involved in producing goods or services, with each stage adding value and at least two stages occurring in different countries.

India's Industrial Manufacturing Trajectory

India's infrastructure approach has undergone a structural transformation, with the focus moving from **project-level execution to system-level planning**. Such system-level planning directly enhances the effectiveness of manufacturing hubs by reducing bottlenecks, improving logistics efficiency, and supporting timely execution.

Global investment trends increasingly recognise India as a preferred manufacturing destination. The country is currently ranked as the third most sought-after manufacturing location worldwide. At the same time, the composition of production is evolving, with **medium- and high-technology activities accounting for 46.3% of total manufacturing value added**, indicating a gradual shift towards more sophisticated industrial structures.



India's Manufacturing Hub Landscape

The manufacturing hub landscape across the country has evolved into a **multi-layered ecosystem**, reflecting differences in **scale, sectoral requirements, and spatial planning**. Rather than following a single model, policy interventions have supported diverse forms of manufacturing hubs. The manufacturing landscape today comprises **large integrated parks, sector-specific ecosystems, MSME clusters, and corridor-linked industrial nodes**, each designed to address specific production, logistics, and value-chain needs.

Large Integrated Manufacturing Hubs

These are **master-planned industrial zones** with **plug-and-play infrastructure** that host **anchor manufacturers and their supplier ecosystems** in one location. They provide **shared utilities, logistics, and support infrastructure**, enabling quick project implementation and economies of scale. These parks may be **multi-sector or sector-anchored** and can be developed **independently or within industrial corridors**.

Plug-and-play Infrastructure: Ready-to-use facilities that minimize setup time and costs, enabling industries to operationalize quickly and achieve faster returns on investment.

National Industrial Corridor Development Programme (NICDP) is a transformative initiative designed to establish Greenfield Industrial Smart Cities across India, positioning the country as a global manufacturing hub. Till date, 20 industrial smart cities have been approved by the Government of India which cover 7 industrial corridors and 13 States. Of these, 4 industrial smart cities namely Dholera (Gujarat), Shendra-Bidkin (Maharashtra), Integrated Industrial Township at Greater Noida (Uttar Pradesh) and Integrated Industrial Township at Vikram Udyogpuri near Ujjain (Madhya Pradesh) have been completed and other 16 are under various stages of development. These industrial nodes are being developed with **plug-and-play infrastructure and multimodal connectivity**.

PM MITRA (Pradhan Mantri Mega Integrated Textile Region and Apparel) represents **large integrated manufacturing hubs** tailored for the textile value chain, combining **processing, manufacturing, logistics, and common facilities** within a single park framework. These parks have been announced in seven states, including **Tamil Nadu, Telangana, Gujarat, Karnataka, Madhya Pradesh, Uttar Pradesh, and Maharashtra**.

Sector-Specific Manufacturing Ecosystems

Certain manufacturing sectors require specialised and capital-intensive infrastructure, making ecosystem-based manufacturing hubs essential. These hubs integrate production units with supplier networks, testing, regulatory, and skilling infrastructure to support complete value chains.

- **Bulk Drug Park Scheme:** This scheme is facilitating the establishment of three **Bulk Drug Parks** in Gujarat, Himachal Pradesh, and Andhra Pradesh to reduce the cost of bulk drug manufacturing through the creation of world-class common infrastructure. These parks provide shared facilities, including solvent recovery plants and common effluent treatment systems, to improve efficiency and environmental compliance.
- Semiconductor and electronics ecosystems are supported under **the Semicon India Programme and Electronics Components Manufacturing Scheme (ECMS) 2.0**, covering fabrication, assembly, packaging, and testing. These hubs are designed to strengthen domestic manufacturing capacity in critical sectors while improving integration with global value chains.
- **Biopharma SHAKTI** (Strategy for Healthcare Advancement through Knowledge, Technology and Innovation) has been announced, with an outlay of ₹ 10,000 crores over the next 5 years to develop India as a global Biopharma manufacturing hub.

Micro, Small, and Medium Enterprises (MSME) Manufacturing Clusters

Micro, Small, and Medium Enterprises (MSMEs) constitute a **core pillar of India's manufacturing ecosystem**, with significant implications for manufacturing hubs at the regional level. MSMEs account for **35.4%** of manufacturing output, contribute **48.58%** of exports, and generate **31.1%** of GDP, highlighting their substantial role in India's industrial economy.

The MSME sector comprises over **7.47 crore enterprises** and employs more than **32.82 crore persons**, making it the second-largest source of employment after agriculture. With such scale, MSMEs are central to the development of manufacturing hubs, particularly in Tier-2 and Tier-3 cities, where clusters often form around shared skills, local supplier networks, and cost advantages.

- The **Micro & Small Enterprises – Cluster Development Programme (MSE-CDP)** supports infrastructure creation, **Common Facility Centres (CFCs)**, and technology upgradation in MSME clusters. Under MSE-CDP, a total of 580 projects have been approved, comprising **227 Common Facility Centres (CFCs) and 353 Infrastructure Development (ID)** projects.
- The **India Industrial Land Bank (IILB)** maps industrial estates, clusters, parks, and zones across the country.
- State Industrial Development Corporations develop and **manage industrial estates** for MSMEs.

Corridor-Linked Industrial Nodes

Complementing these hub models are corridor-enabled industrial regions, which emphasise spatial integration and logistics efficiency as part of a broader industrial ecosystem, rather than functioning as standalone production units. These corridors provide **trunk infrastructure, freight connectivity, and multimodal logistics, enabling industrial concentration at scale.**

Trunk infrastructure is the higher-order infrastructure development with the primary purpose of serving 'catchment' areas to be shared between developments, commonly provided by local governments. It includes the development of the main line of infrastructure, such as water supply, drainage, sewerage/septage, roads, streetlight, electricity, etc.

Industrial corridors such as the Delhi–Mumbai Industrial Corridor (DMIC), Chennai–Bengaluru Industrial Corridor (CBIC), Amritsar–Kolkata Industrial Corridor (AKIC), and Vizag Chennai Industrial Corridor (VCIC) are designed to support manufacturing hubs and clusters by improving connectivity and facilitating integrated planning across regions.

State Capacity and On-Ground Execution

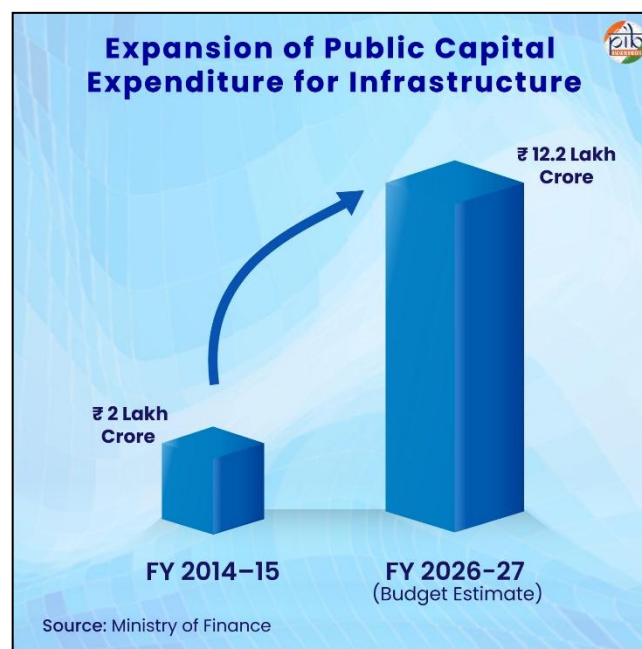
The performance of manufacturing infrastructure hubs is overall shaped by **state capacity in land aggregation, trunk infrastructure provisioning, and regulatory approvals.** Strengthening execution and coordination has therefore been a key focus of recent infrastructure policy initiatives.

To address coordination challenges in infrastructure planning and delivery, the Government has launched the **PM Gati Shakti National Master Plan**, an integrated platform that brings together infrastructure-related data and projects of **44 central ministries and 36 states/Union Territories**. The initiative enables coordinated planning of transport, logistics, and utility infrastructure, with a focus on multimodal connectivity, last-mile linkages, and time-bound execution.

To reinforce infrastructure creation, public capital expenditure has increased substantially in recent years. The Government capital outlay has grown from **₹2 lakh crore** in FY2014–15 to a Budget Estimate of **₹12.2 lakh crore** in 2026–27. This sustained increase has strengthened the physical backbone required for large manufacturing ecosystems, including industrial parks, logistics infrastructure, and freight connectivity.

What Is Capital Expenditure?

When the Government incurs expenditure to create assets such as schools, hospitals, buildings, roads, bridges, canals, railway lines, etc., or reduces its liability, such as repayment of loans, etc., such expenditure is known as capital expenditure.



Institutional mechanisms have also been introduced to improve project preparedness and execution capacity. The **India Infrastructure Project Development Fund (IIPDF)** supports Central and State authorities by financing transaction advisers to develop **bankable infrastructure projects**, helping create a robust project pipeline. In parallel, the **National Infrastructure Enablement Index (NIEI)** has been developed to assess the **institutional preparedness of States/UTs and Central Ministries/Departments** for infrastructure delivery.

These measures have improved the enabling environment for manufacturing hubs. State-level initiatives across the country illustrate the development of manufacturing hubs across different sectors and regions:

- **Uttar Pradesh is developing the Defence Industrial Corridor across six nodes**, including Aligarh, Agra, Chitrakoot, Jhansi, Kanpur, and Lucknow, to support defence and aerospace manufacturing.
- **Tamil Nadu, also known as the Detroit of Asia, has expanded electronics and automobile manufacturing clusters**, supported by dedicated industrial parks and logistics infrastructure.
- **Gujarat continues to leverage industrial estates and port-linked manufacturing hubs** to attract large-scale manufacturing investment.

Meanwhile, industrial corridors, including the **Delhi–Mumbai Industrial Corridor** and the **Chennai–Bengaluru Industrial Corridor**, further reflect coordinated Centre–State execution, with industrial nodes developed through joint institutional frameworks and phased infrastructure provisioning.

Policy Support for Infrastructure Hubs & Budget Announcement

The policy framework in recent years has focused on the creation of **integrated infrastructure-led manufacturing**, recognizing that sustained industrial competitiveness depends on infrastructure, coordination, and execution rather than firm-level interventions alone.

This strategic approach is reflected in **mission-oriented initiatives such as the National Manufacturing Mission, PM-MITRA Park, PM-Gati Shakti**, Digital Public Platforms (like ULIP), sector-specific capacity-building measures, and the development of industrial corridors, parks, and clusters that combine physical infrastructure with institutional support. Together, these interventions aim to minimise logistics friction, financing delays, and coordination losses that previously constrained industrial competitiveness.

The Union Budget 2026-27 lays the foundation by advancing infrastructure-led manufacturing through focused support for manufacturing parks, shared facilities, and improved connectivity. The Budget reinforces the hub-based approach to manufacturing, with an emphasis on scale, reliability, and stronger linkages across value chains.

2026-27 KEY BUDGET ANNOUNCEMENTS: MANUFACTURING HUBS	
Sector/Area	Announcement
Chemicals	Three new Chemical Parks to be established to strengthen cluster-based chemical manufacturing with shared utilities, safety infrastructure, and logistics connectivity.
Textiles	Continued implementation of 7 PM MITRA (Mega Integrated Textile Region and Apparel) Parks approved earlier, aimed at creating large, integrated textile manufacturing hubs.
MSME (Micro, Small, and Medium Enterprises) Manufacturing Clusters	Strengthening of cluster-based manufacturing and Common Facility Centres (CFCs) to support MSME access to shared production, testing, and quality infrastructure.

Capital Goods / Industrial Support Infrastructure	Support for tool rooms, testing, and calibration facilities to strengthen domestic capital goods and industrial manufacturing capability.
Infrastructure Planning Linked to Manufacturing	Continued rollout of PM GatiShakti for coordinated, multimodal planning of infrastructure connected to industrial and manufacturing locations.
Global Biopharma & Manufacturing Hub: Biopharma SHAKTI	Outlay of ₹10,000 crore over five years to build a biopharma-focused manufacturing ecosystem , including three new National Institute of Pharmaceutical Education and Research (NIPERs) and a nationwide network of over 1,000 accredited clinical trial sites .

Conclusion

As India works towards its goal of becoming a Viksit Bharat by 2047, manufacturing is expected to play a crucial role in supporting sustained economic growth and employment generation. The Economic Survey and Union Budgets reflect the importance of policy support and public investment in strengthening manufacturing through infrastructure-led development and integrated industrial ecosystems.

An important element of this strategy is the growing focus on Tier-2 and Tier-3 cities, where manufacturing hubs are benefiting from cost advantages, local skills, and improved connectivity. Continued emphasis on such regions, supported by coordinated government policies and infrastructure development, will be essential for ensuring that manufacturing-led growth is broad-based, resilient, and aligned with India's long-term development objectives.

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