Industry Report on Industrial Catalyst and Adsorbent

10 March 2026

Prepared for

Devson Catalyst Limited

Disclaimer

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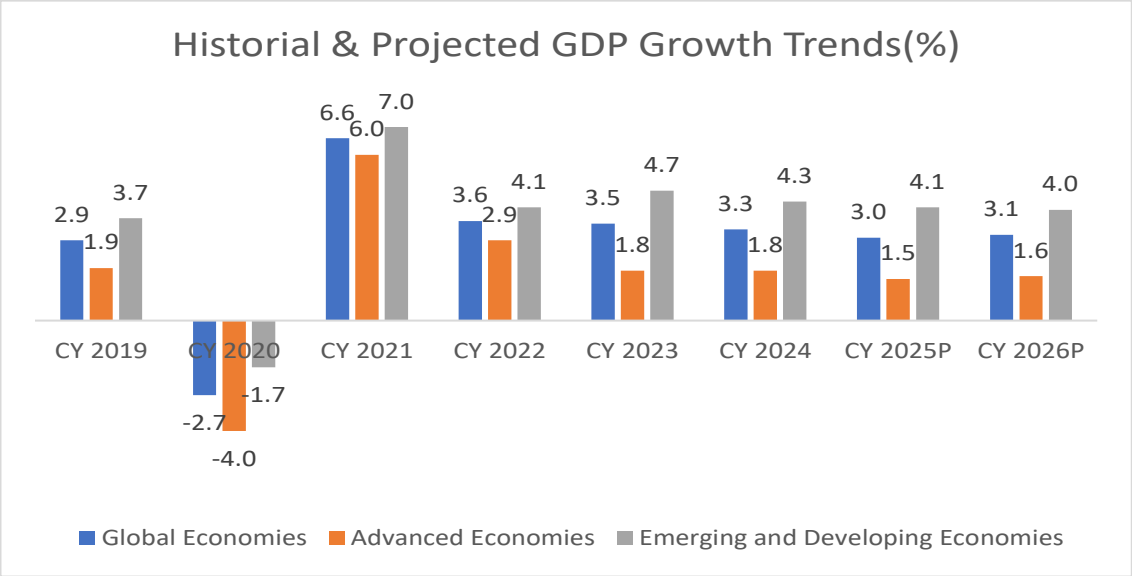
Global Macroeconomic Scenario

Global Economic Overview

The global economy, which recorded GDP growth at 3.3% in CY 2024, is expected to show moderation by growing at 3.0% in CY 2025. This marks the slowest expansion since 2020 and reflects a -0.3%point downgrade from January 2025 forecast. Moreover, the projection for CY 2026 has also reduced to 3.1%. This slowdown is majorly attributed due to numerous factors such as high inflation in many economies despite central bank effort to curb inflation, continuing energy market volatility driven by geopolitical tensions particularly in Ukraine and Middle East, and the re-election of Donald Trump as US President extended uncertainty around the trade policies as well as overall global economic growth. High inflation and rising borrowing costs affected the private consumption on one hand while fiscal consolidation impacted the government consumption on the other hand. As a result, global GDP growth is projected to slow down from 3.3% in CY 2024 to 3.0% in CY 2025.

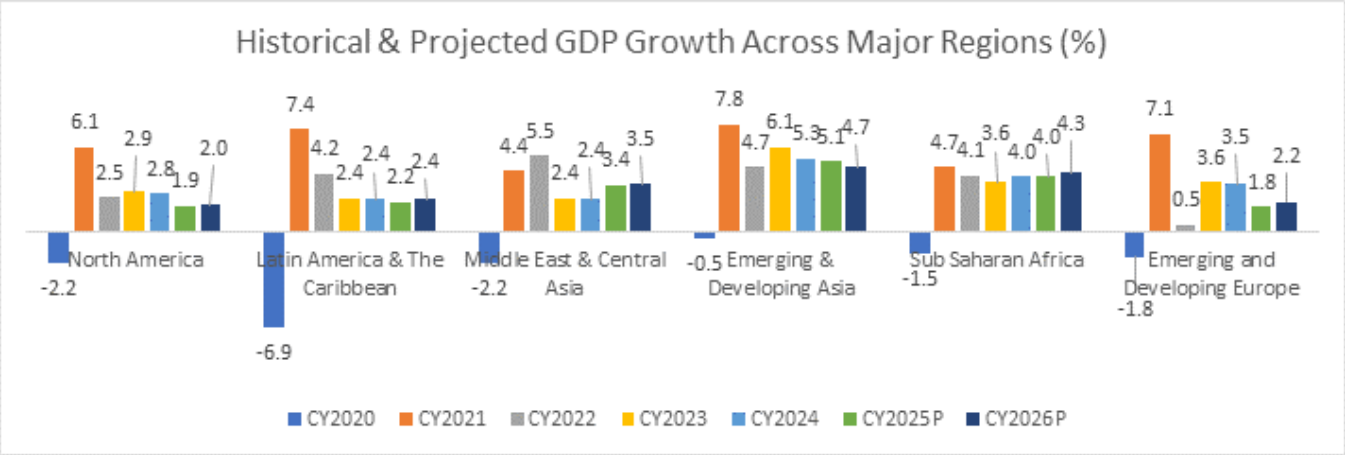


Source – IMF Global GDP Forecast Release July 2025

Note: Advanced Economies and Emerging & Developing Economies are as per the classification of the World Economic Outlook (WEO). This classification is not based on strict criteria, economic or otherwise, and it has evolved over time. It comprises of 40 countries under the Advanced Economies including the G7 (the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada) and selected countries from the Euro Zone (Germany, Italy, France etc.). The group of emerging market and developing economies (156) includes all those that are not classified as Advanced Economies (India, China, Brazil, Malaysia etc.)

Historical and Projected GDP Growth

GDP growth across major regions exhibited a mixed trend between 2022-23, with GDP growth in many regions including North America, Emerging and Developing Asia, and Emerging and Developing Europe slowing further in 2024. In 2025, GDP growth rate in Emerging and Developing Asia (India, China, Indonesia, Malaysia, etc.) is expected to moderate further to 5.1% from 5.3% in the previous year, while in the North America, it is expected to moderate to 1.9% in CY 2025 from 2.8% in CY 2024. Similarly in Emerging and Developing Europe is expected to moderate further to 1.8% from 3.5% in the previous year.



Source-IMF World Economic Outlook July 2025 update.

Except Middle East & Central Asia, all other regions like Emerging and Developing Asia, Emerging and Developing Europe, Latin America & The Caribbean, Sub Saharan Africa and North America, are expected to record a moderation in GDP growth rate in CY 2025 as compared to CY 2024. Further, growth in the United States is expected to come down at 1.9% in CY 2025 from 2.8% in CY 2024 due to lagged effects of monetary policy tightening, gradual fiscal tightening, and a softening in labour markets slowing aggregate demand.

Global Economic Outlook

The global macroeconomic environment remains shaped by divergent regional trends and continued geopolitical and policymaking uncertainties. A wave of new U.S. tariffs, mostly effective from August 7, has shaken markets and raised costs for global trade. On August 1, the U.S. announced higher tariff rates for countries from which it imports goods, with most of the rates effective from August 7. A 15% rate will act as a baseline floor for countries with which the U.S. has a trade deficit; a 10% rate applies for those with which the U.S. has a trade surplus. However, there are some countries that are subject to higher U.S. tariffs.

In North America, the United States continues to engage in trade negotiations with multiple countries and has announced plans to introduce sector-specific tariffs, targeting industries such as copper and pharmaceuticals. However, talks with Canada have stalled, despite Canada's decision to withdraw its Digital Services Tax in an effort to ease tensions. As a result, the U.S. imposed a 35% tariff on Canadian goods that

do not meet United States-Mexico-Canada Agreement (USMCA) compliance standards, effective August 1. This move has further strained bilateral relations and added complexity to the regional trade landscape.

By August 7, the U.S. had announced increased tariffs of 15-50% on Asian economies, with most rates around 20%. Although these tariffs are lower than the levels announced in April, they remain higher than those applied to most Western counterparts, impacting exporters such as Taiwan Region (20%) and India (25%, with the U.S. saying this could rise to 50% at the end of August). Moreover, on July 28, the US imposed a 15% tariff on most EU imports under a new trade agreement, impacting Nordic countries such as Denmark, Finland, and Sweden. Key exemptions include aircraft parts and semiconductor equipment, while steel and aluminum continue to face 50% tariffs.

Global tariff uncertainty continues to weigh heavily on business and consumer confidence, contributing to financial market volatility, recession risks, and a broader economic slowdown. Our latest Global Business Optimism Insights report shows a further though more moderate decline in business sentiment as firms face unpredictable trade policies, rising input costs, and weaker demand, especially in export-driven sectors such as automotives, electricals, and metals across the U.S., Mexico, South Korea, and Japan. Elevated borrowing costs and persistent inflation have heightened financial risk perceptions, prompting companies to delay capital expenditure, scale back hiring, and diversify supply chains to manage operational volatility. Central banks, pressured by tariff-driven inflation and unstable markets, are shifting their policy stance and may increasingly prioritize supporting growth over fighting inflation.

Global Growth Projection

At broader level, the global economy is expected to experience a slowdown in 2025, with GDP growth projected to decline to 3.0%, down from 3.3% in 2024. This deceleration reflects persistent inflationary pressure, geopolitical uncertainties and tightened monetary policies. However, a sightly recovery is anticipated in 2026, with growth projected to improve to 3.1%. Global inflation is expected to decline steadily, to 4.2% in 2025 and to 3.6% in 2026. Inflation is projected to converge back to the target earlier in advanced economies, reaching 2.2% in 2026, whereas in emerging market and developing economies, it is anticipated to decrease to 4.6% during the same period. Trade tariffs function as a supply shock for the countries imposing them, leading to a decrease in productivity and an increase in unit costs.

Countries subject to tariffs experience a negative demand shock as export demand declines, placing downward pressure on prices. In each scenario, trade uncertainty introduces an additional layer of demand shock since businesses and households react by delaying investment and spending, and this impact could be intensified by stricter financial conditions and heightened exchange rate volatility. Moreover, Global trade growth is expected to slow down in 2025 to 1.7%. This forecast reflects increased tariff restrictions affecting trade flows and, to a lesser extent, the waning effects of cyclical factors that have underpinned the recent rise in goods trade. Geopolitical tensions as seen in the past such as the wars in Ukraine and the Middle East could exacerbate inflation volatility, particularly in energy and agricultural commodities.

India Macroeconomic Analysis

India emerged as one of the fastest grow economies amongst the leading advanced economies and emerging and developing economies. In CY 2024, even amidst geopolitical uncertainties, particularly those affecting global energy and commodity markets, India continues to remain one of the fastest growing economies in the world and is expected to grow by 6.4% in CY 2025.

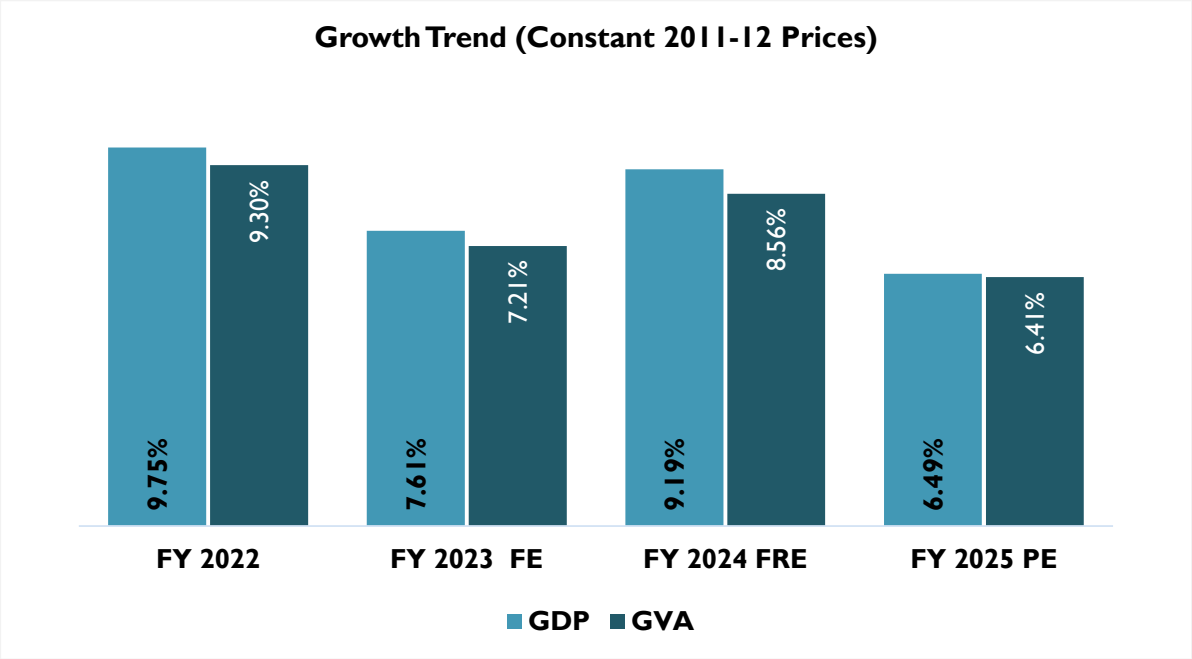
Country	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025 P	CY 2026 P
India	–5.8%	9.7%	7.6%	9.2%	6.5%	6.4%	6.4%
China	2.3%	8.6%	3.1%	5.4%	5.0%	4.8%	4.2%
United States	-2.2%	6.1%	2.5%	2.9%	2.8%	1.9%	2.0%
Japan	-4.2%	2.7%	0.9%	1.4%	0.2%	0.7%	0.5%
United Kingdom	-10.3%	8.6%	4.8%	0.4%	1.1%	1.2%	1.4%
Russia	-2.7%	5.9%	-1.4%	4.1%	4.3%	0.9%	1.0%

Source: World Economic Outlook, July 2025

By stepping up expenditure on infrastructure projects, the Government has provided a significant boost to economic growth. The annual growth in capital expenditure of the central government moderated to 7.27% in FY 2025 against the average of 26.52% in the previous two fiscal which translated in moderate GDP growth in 2024 to 6.5% against 9.2% in the previous calendar year. In the Union Budget 2025-2026, the government announced INR 11.21 billion capex on infrastructure (10.12% higher than previous year revised estimates) coupled with INR 1.5 trillion in interest-free loans to states. This has provided much-needed confidence to the private sector and is expected to attract the private investment and support India's economic growth in the current year.

Historical GDP and GVA Growth trend

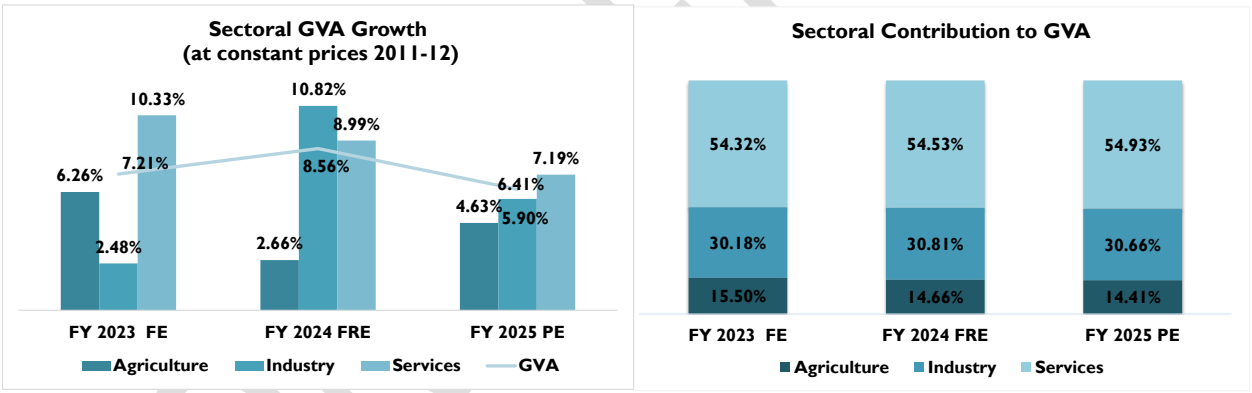
As per the latest estimates, India's GDP at constant prices is estimated to grow to INR 187.96 trillion in FY 2025 (Provisional Estimates) with the real GDP growth rates estimated to be 6.5% for FY 2025. Similarly, real Gross Value Added (GVA) growth stood is estimated to have moderated to 6.4% in FY 2025. Even amidst global economic uncertainties, India's economy exhibited resilience supported by robust consumption and government spending.



Source: Ministry of Statistics & Programme Implementation (MOSPI), National Account Statistics: FY2025.

FE is Final Estimates, FRE is First Revised Estimate and PE is Provisional Estimates

Sectoral Contribution to GVA and annual growth trend



Source: Ministry of Statistics & Programme Implementation (MOSPI)

FE is Final Estimates, FRE is First Revised Estimate and PE is Provisional Estimates

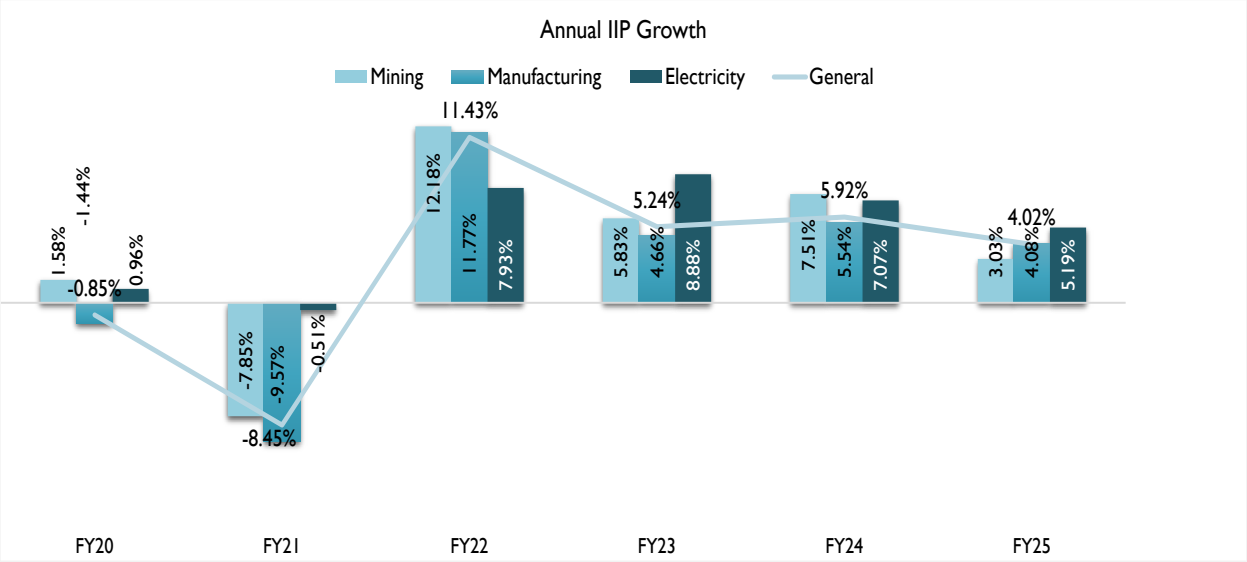
Sectoral analysis of GVA reveals that the industrial sector experienced a moderation in FY 2025, recording a 5.90% y-o-y growth against 10.82% year-on-year growth in FY 2024. Within the industrial sector, growth moderated across sub sector with mining, manufacturing, and construction activities growing by 2.69%, 4.52%, and 9.35% respectively in FY 2025, compared to 3.21%, 12.30%, and 10.41% in FY 2024. Growth in the utilities sector too moderated to 6.03% in FY 2025 from 8.64% in the previous year. The industrial sector's contribution to GVA moderated marginally from 30.81% in FY 2024 to 30.66% in FY 2025.

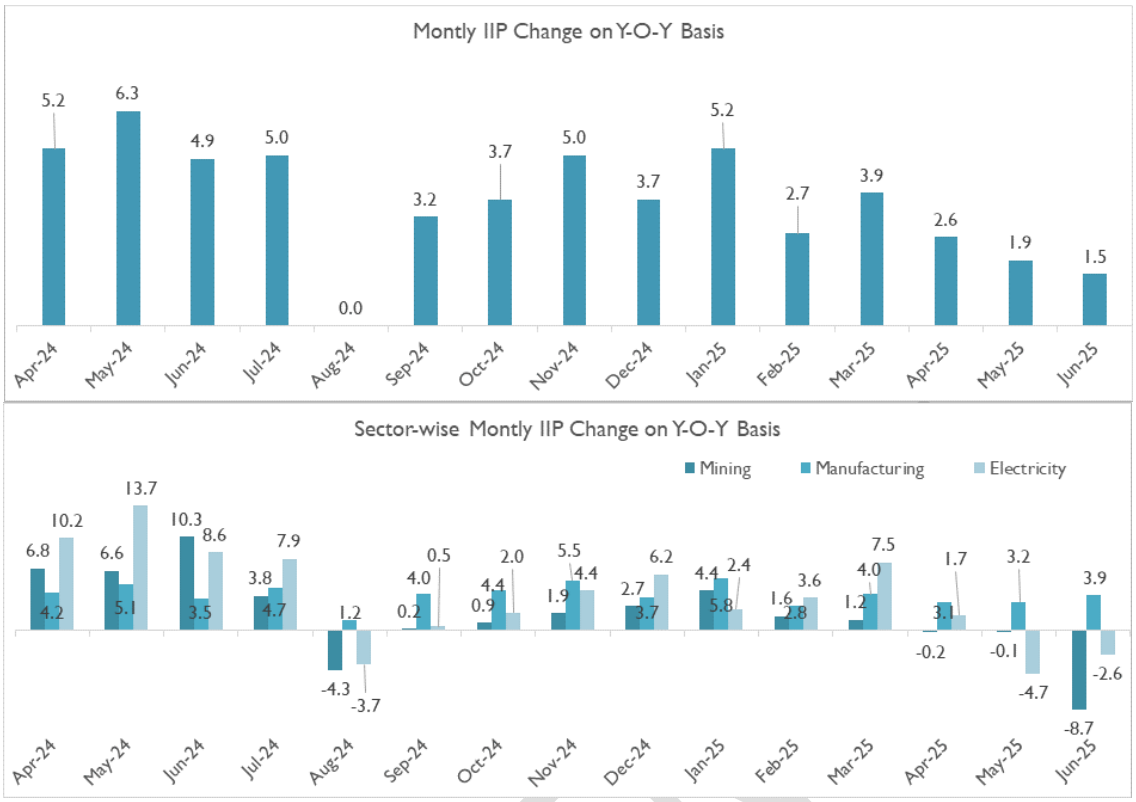
The services sector remained the largest component of the economy, although its growth rate moderated. Its growth slowed to 7.19% in FY 2025 from 8.99% in FY 2024. Despite this deceleration, its share in GVA continued to increase, rising from 54.32% in FY 2023 to 54.53% in FY 2024 and further to 54.93% in FY 2025.

The agriculture sector saw an acceleration, with growth increasing from 2.66% in FY 2024 to 4.63% in FY 2025. However, its contribution to GVA declined marginally from 14.66% in FY 2024 to 14.41% in FY 2025. Overall, Gross Value Added (GVA) growth moderated to 6.41% in FY 2025 from 8.56% in FY 2024

Annual & Monthly IIP Growth

Industrial sector performance as measured by IIP index exhibited moderation in FY 2025, recording a 4.02% y-o-y growth against 5.92% increase in the previous year. The manufacturing index showed moderation and grew by 4.08% in FY 2025 against 5.54% in FY 2024. Mining sector index too moderated and exhibited a growth of 3.03% in FY 2025 against 7.51% in the previous year while the Electricity sector Index, also witnessed moderation of 5.19% in FY 2025 against 7.07% in the previous year.



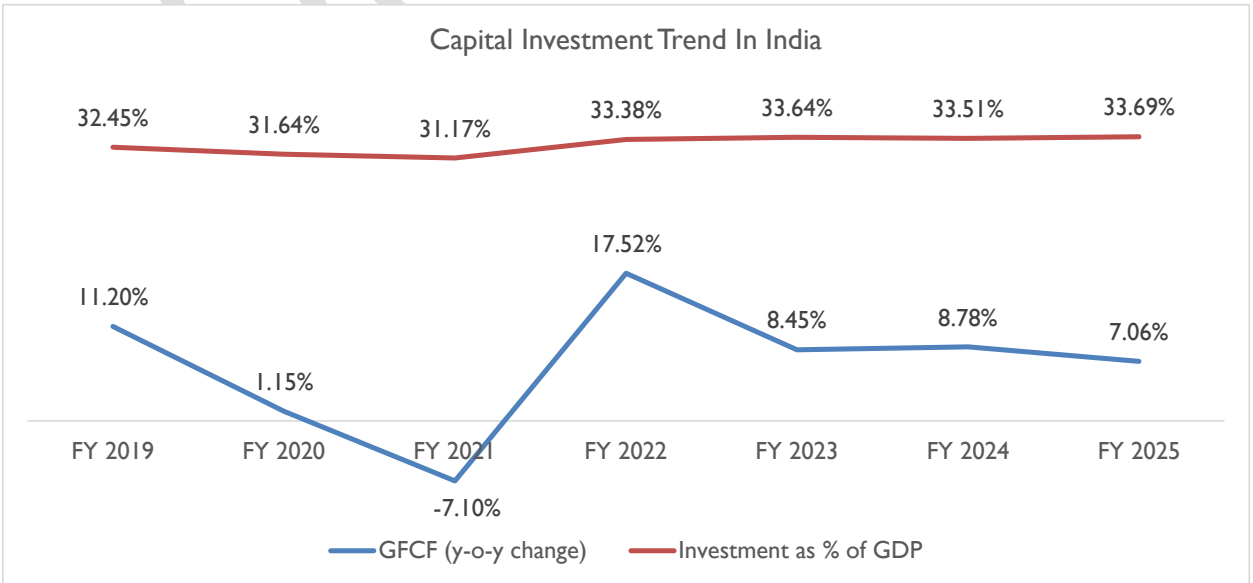


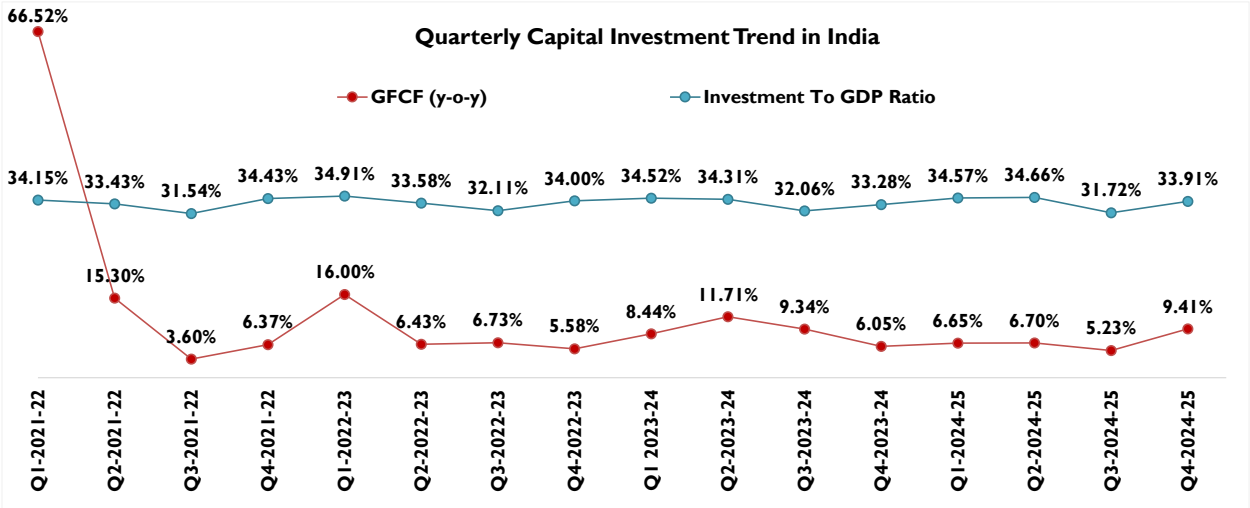
Source: Ministry of Statistics & Programme Implementation (MOSPI)

The IIP growth rate for the month of June 2025 is 1.5% which was 1.9% in the month of May 2025. The growth rates of the three sectors, Mining, Manufacturing and Electricity for the month of May 2025 are (-)8.7%, 3.9% and (-)2.6% respectively.

Annual and Quarterly: Investment & Consumption Scenario

Other major indicators such as Gross fixed capital formation (GFCF), a measure of investments, has shown fluctuation during FY 2025 as it registered 7.06% year-on-year growth against 8.78% yearly growth in FY 2024, taking the GFCF to GDP ratio measured to 33.69%.

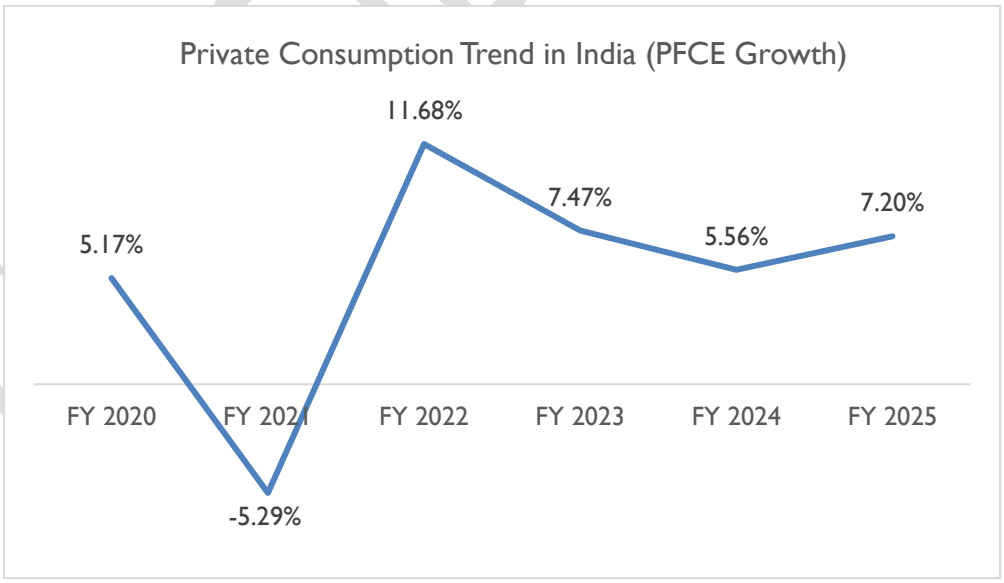


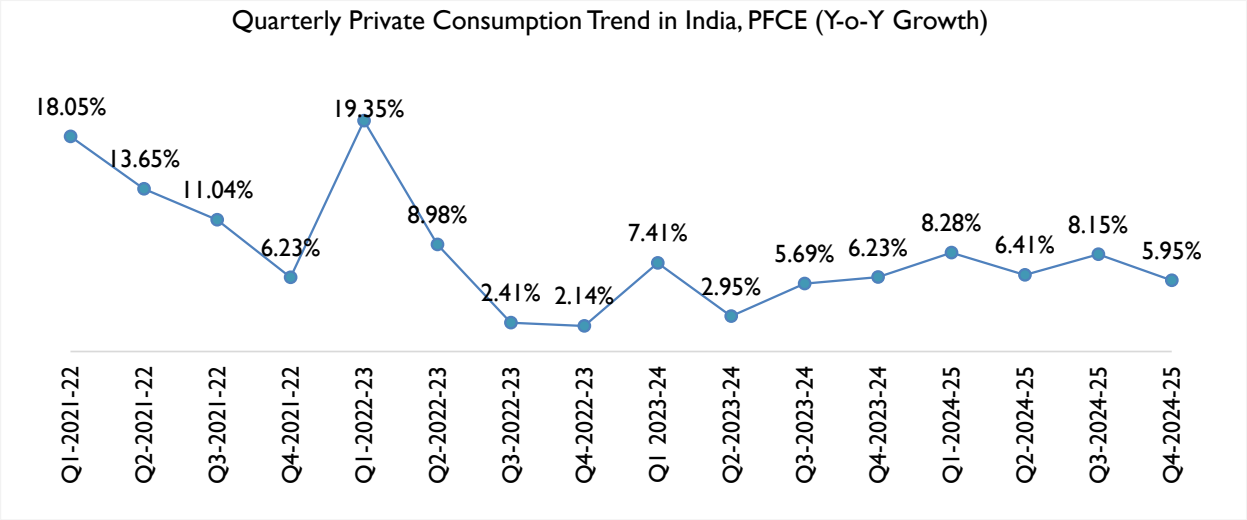


Source: Ministry of Statistics & Programme Implementation (MOSPI)

On quarterly basis, GFCF exhibited a fluctuating trend in quarterly growth over the previous year same quarter. In FY 2024, the growth rate moderated to 6.05% in March quarter against the previous two quarter as government went slow on capital spending amidst the 2024 general election while it observed an improvement in Q1 FY 2025 by growing at 6.65% against 6.05% in the previous quarter and moderated in the subsequent two quarter. On yearly basis, the growth rate remained lower compared to the same quarter in the previous year during FY 2025. The GFCF to GDP ratio measured 33.91% in Q4 FY 2025.

Private Consumption Scenario





Sources: MOSPI

Private Final Expenditure (PFCE) a realistic proxy to gauge household spending, observed growth in FY 2025 as compared to FY 2024. However, quarterly data indicated some improvement in the current fiscal as the growth rate improved over the corresponding period in the last fiscal.

Inflation Scenario

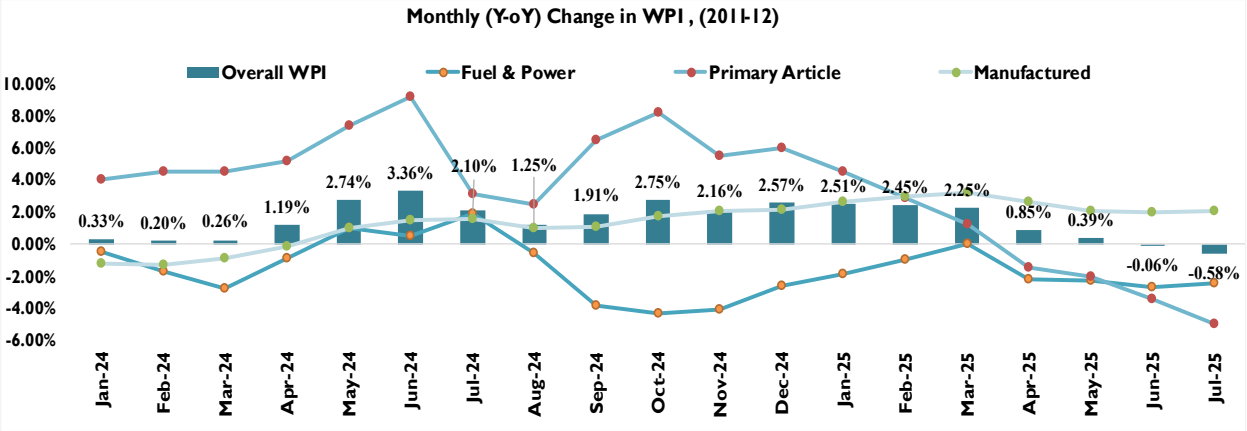
The inflation rate based on India's Wholesale Price Index (WPI) exhibited significant fluctuations across different sectors from January 2024 to July 2025. The annual rate of inflation based on All India Wholesale Price Index (WPI) number is (-) 0.58% (provisional) for the month of July, 2025 (over July, 2024). Negative rate of inflation in July 2025 is primarily due to increase in prices of manufacture of food products, electricity, other manufacturing, chemicals and chemical products, manufacture of other transport equipment and non-food articles etc.

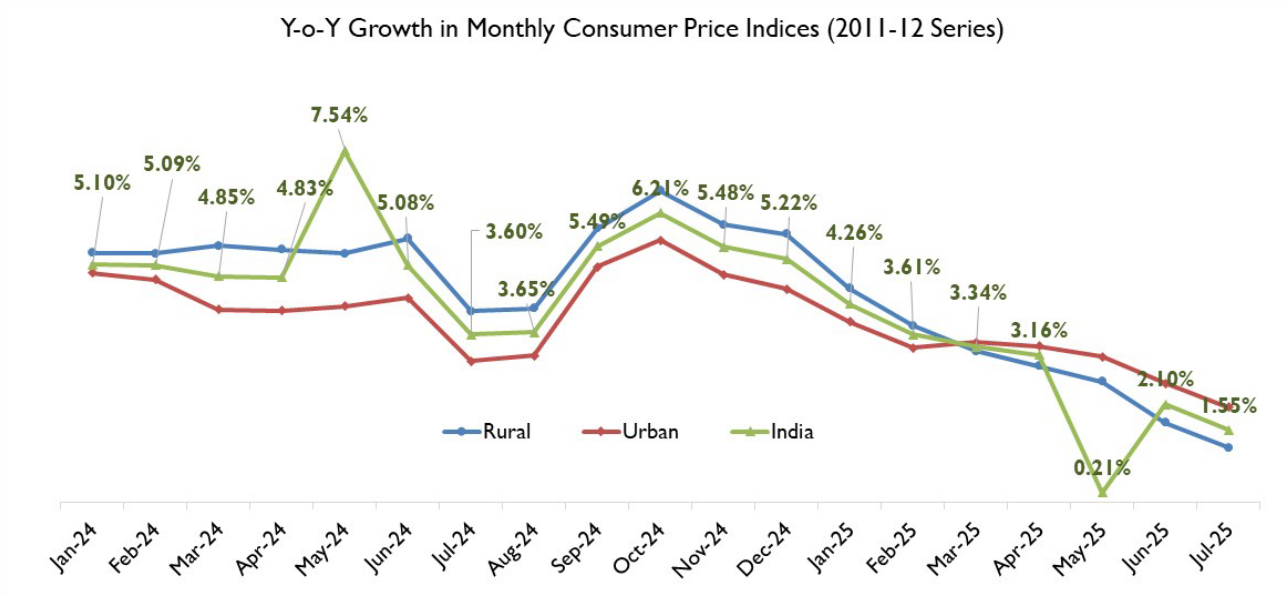
By July 2025, Primary Articles (Weight 22.62%), - The index for this major group increased by 1.18 % from 185.8 (provisional) for the month of June 2025 to 188.0 (provisional) in July, 2025. Price of Crude Petroleum & Natural Gas (2.56%), non-food articles (2.11%) and food articles (0.96%) increased in July, 2025 as compared to June, 2025. The price of minerals (-1.08%) decreased in July, 2025 as compared to June, 2025.

Moreover, power & fuel, the index for this major group increased by 1.12% from 143.0 (provisional) for the month of June, 2025 to 144.6 (provisional) in July, 2025. The price of mineral oils (1.98%) increased in July, 2025 as compared to June, 2025. Price of coal (-0.44%) and electricity (-0.36%) decreased in July, 2025 as compared to June, 2025.

Furthermore, Manufactured Products (Weight 64.23%), The index for this major group declined by 0.14% from 144.8 (provisional) for the month of June, 2025to 144.6 (provisional) in July, 2025. Out of the 22 NIC two-digit groups for manufactured products, 9 groups witnessed an increase in prices, 9 groups witnessed a decrease in prices and 4 groups witnessed no change in prices. Some of the important groups that showed month-over-month increase in prices were other manufacturing; other transport equipment; motor vehicles,

trailers and semi-trailers; other non-metallic mineral products and furniture etc. Some of the groups that witnessed a decrease in prices were manufacture of basic metals; fabricated metal products, except machinery and equipment; food products; chemicals and chemical products and paper and paper products etc in July, 2025 as compared to June, 2025.

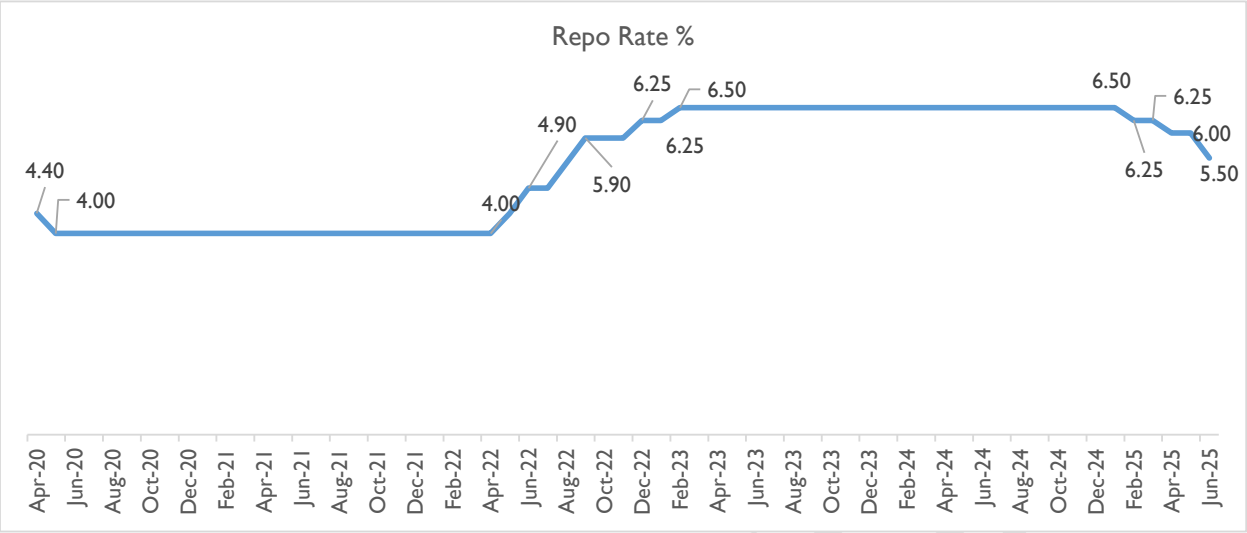




Source: MOSPI, Office of Economic Advisor

Retail inflation rate (as measured by the Consumer Price Index) in India showed notable fluctuations between January 2024 and July2025. Overall, the national CPI inflation rate moderated to 1.55% by July 2025, indicating a gradual easing of inflationary pressures across both rural and urban areas. Rural CPI inflation peaked at 6.68% in October 2024, declining to 1.18% in July 2025. Urban CPI inflation followed a similar trend, rising to 5.62% in October 2024 and then dropping to 2.05% in July 2025. CPI measured above 6.00% tolerance limit of the central bank since July 2023. As a part of an anti-inflationary measure, the RBI has hiked the repo

rate by 250 bps since May 2022 and 8 Feb 2023 while it held the rate steady at 6.50 % till January 2025. On 6th June 2025, RBI reduced the repo rate by 50 basis points which currently stands at 5.50%.



Sources: CMIE Economic Outlook

Growth Outlook

The Union Budget 2025-26 has laid the foundation for sustained growth by balancing demand stimulation, investment promotion and inclusive development. Inflation level is reaching within the central bank's target; the RBI may pursue further monetary easing that will support growth. The medium-term outlook is bright, fuelled by the emphasis on physical and digital infrastructure spending. With a focus on stimulating demand, driving investment and ensuring inclusive development, the budget introduces measures such as tax relief, increased infrastructure spending and incentives for manufacturing and clean energy.

These initiatives aim to accelerate growth while maintaining fiscal discipline, reinforcing India's long-term economic resilience. The expansion of tax relief i.e. zero tax liability for individuals earning up to INR 12 lacs annually under the new tax regime is expected to strengthen household finances and, consequently, boost consumption.

The external sector remains resilient, and key external vulnerability indicators continue to improve. However, tariff-related uncertainty is likely to weigh on exports and investment, prompting us to cut our CY26 GDP growth forecast to 6.4%.

Product Overview

India's industrial catalyst and adsorbent ecosystem play a critical role in enabling efficient, sustainable, and high-quality production across refining, petrochemical, chemical, fertilizer, and gas-processing industries. These materials ranging from process-specific catalysts to high-performance adsorbents and inert ceramic support media are essential for purification, dehydration, sulphur removal, hydro processing, cracking, and environmental compliance. Together, they enhance reaction efficiency, protect downstream equipment, extend catalyst life, and support cleaner manufacturing practices. As India's industrial sectors expand and adopt stricter quality and emission standards, the demand for advanced catalytic systems, specialized adsorbents, and durable ceramic balls continues to rise, positioning this segment as a foundational enabler of the country's broader industrial and energy-transition goals.

The following sections provide a structured overview of these three key product categories and their roles within the industrial ecosystem:

- **Catalysts:** Industrial catalysts are critical materials that accelerate chemical reactions without being consumed, enabling large-scale refining, petrochemical, and chemical processes to operate more efficiently and sustainably. By lowering activation energy, these catalysts allow reactions to occur at lower temperatures and pressures reducing energy usage, improving yield, and enhancing product quality. Within this category, several specialized catalyst types play essential roles:
  - **Chloride Guard Catalysts** remove chloride impurities from feedstocks, protecting downstream equipment and improving product purity.
  - **Sulphur Guard Catalysts** capture sulphur contaminants to prevent catalyst poisoning and ensure smooth operation of hydrotreating and reforming units.
  - **Claus Catalysts** enable sulphur recovery by converting hydrogen sulphide into elemental sulphur, a vital step for environmental compliance in refineries and gas-processing units.
  - **Other Process Catalysts** support hydroprocessing, reforming, isomerization, cracking, and other critical transformations across the oil & gas, petrochemical, fertilizer, and polymer sectors.

Together, these catalysts form the backbone of high-efficiency industrial processes, where even incremental improvements translate into major operational and environmental benefits.

- **Adsorbents:** Adsorbents are essential materials used for purification, drying, and separation of gases and liquids. Unlike catalysts, which accelerate reactions, adsorbents selectively trap impurities or specific molecules, ensuring clean output streams and protecting process units. The two major commercial adsorbents include:
  - **Activated Alumina** – used for dehydration, fluoride removal, gas purification, and protection of downstream catalyst beds by eliminating moisture and trace contaminants.

- **Molecular Sieves** – crystalline aluminosilicates designed to adsorb molecules based on size and polarity; widely used in natural gas drying, air separation, refining, petrochemicals, and environmental applications.

These adsorbents are indispensable in industries requiring ultra-pure feedstocks, stable reaction environments, and strict environmental compliance.

➢ **Ceramic Balls:** Ceramic balls serve as **inert support media** in fixed-bed reactors across refineries, petrochemical plants, and chemical processing units. They do not participate in reactions but provide:

- mechanical strength,
- thermal stability,
- uniform distribution of gas and liquid flows, and
- support for catalyst and adsorbent beds.

By maintaining bed integrity and ensuring even flow distribution, ceramic balls enhance catalyst performance and extend reactor life, making them a fundamental component of industrial reactor design.

Key Attributes of Industrial Catalyst:

➢ **High Reaction Efficiency:** Industrial catalysts accelerate chemical reactions, allowing processes to occur faster and at lower temperatures or pressures. This efficiency reduces energy consumption and increases overall productivity. In large-scale operations, even small improvements in reaction rates can lead to significant cost savings. Catalysts ensure that reactions proceed in a controlled manner, maintaining consistent production quality. This attribute is especially critical in refining, petrochemical, and chemical manufacturing units where throughput is a key metric.

- **Selectivity and Product Purity:** Catalysts are engineered to favor the formation of the desired product over unwanted by-products. High selectivity minimizes waste and enhances the overall yield of valuable chemicals. This feature also reduces downstream purification requirements, saving time and operational costs. In processes like hydrocracking, sulphur removal, or ammonia synthesis, selectivity ensures efficiency and compliance with quality standards. By controlling reaction pathways, catalysts contribute to stable and predictable production outcomes.
- **Thermal and Mechanical Stability:** Industrial catalysts are designed to withstand high temperatures, pressures, and harsh chemical environments without losing activity. Thermal stability ensures that the catalyst continues to perform over extended operating periods. Mechanical strength prevents structural breakdown during handling, mixing, or reactor operations. This durability is essential for processes in refineries, gas plants, and chemical reactors where extreme conditions are common. Stability ensures consistent performance, reduces downtime, and lowers replacement frequency.
- **Reusability and Regeneration:** Most industrial catalysts can be regenerated and reused multiple times, making them cost-effective over their life cycle. Regeneration involves removing deposits or restoring active sites, allowing the catalyst to recover its original activity. This reduces the need for frequent replacement and minimizes waste. Reusability is particularly important in continuous industrial processes such as hydro processing, sulphur recovery, and gas purification. It ensures sustainable operations while lowering operational costs for manufacturers.
- **Environmental Compliance:** Catalysts are crucial in reducing harmful emissions and meeting environmental regulations. For example, Claus catalysts convert hydrogen sulfide into elemental sulphur, preventing air pollution. Similarly, catalysts in automotive exhaust systems reduce NOx, CO, and hydrocarbons. By enabling cleaner chemical processes, catalysts help industries comply with increasingly strict environmental standards. Their role in waste minimization and emission control makes them indispensable for sustainable industrial operations.
- **Tailor-Made Formulations:** Today's catalysts are developed with a high degree of customization to suit specific chemical reactions or operating environments. Whether the objective is to eliminate chloride or sulphur contaminants, enhance hydro-processing efficiency, or purify industrial gases, tailored formulations help achieve superior process outcomes. By aligning catalyst properties with feedstock characteristics and process conditions, industries can improve yields, minimize energy use, and enhance operational reliability. Customization also enables the use of specialized catalyst categories such as molecular sieves, activated alumina, and Claus catalysts which perform targeted roles in adsorption, purification, and sulphur recovery.

Key end use application:

- **Hydrocarbon Purification (Removal of Sulphur, Chloride, and Moisture):**

Industrial catalysts such as **Chloride Guard and Sulphur Guard** are used to remove impurities from hydrocarbon streams in **refineries** and **petrochemical plants.** This purification prevents **corrosion, protects downstream catalysts**, and ensures smooth operation of processing units. Removing moisture, sulphur, and chloride also improves fuel quality and compliance with environmental standards. These applications are critical for hydro processing, catalytic reforming, and other refining operations. Effective purification enhances product yield, reliability, and plant safety.

- **Hydrogen and Synthesis Gas Production**

Catalysts play a key role in producing hydrogen and synthesis gas (syngas) through processes like steam reforming, partial oxidation, or water-gas shift reactions. High-efficiency catalysts ensure optimal conversion rates, reducing energy consumption and improving gas purity. Hydrogen and syngas are essential feedstocks for ammonia, methanol, and other chemical syntheses. Proper catalyst selection ensures consistent reaction conditions and prevents contamination of product streams. This application is vital for the chemical and fertilizer industries.

- **Sulphur Recovery and Desulphurization Processes:**

Claus catalysts are widely used in sulphur recovery units (SRUs) to convert hydrogen sulphide (H_2S) into elemental sulphur. This process reduces sulphur emissions and recovers valuable by-products, ensuring compliance with environmental regulations. Desulphurization catalysts also remove sulphur compounds from fuels and gas streams, protecting downstream equipment. These applications are critical in **oil & gas refineries** and natural gas processing plants. Effective sulphur management improves environmental sustainability and operational efficiency.

- **Gas Drying and Separation (Using Molecular Sieves, Activated Alumina):**

Molecular sieves and activated alumina are used to remove moisture, carbon dioxide, and other impurities from gases and liquids. These materials provide selective adsorption, improving process efficiency and protecting sensitive downstream catalysts. Applications include air separation, natural gas processing, and petrochemical purification. By ensuring high-purity feedstocks, these materials enhance product quality and reduce maintenance issues. Gas drying and separation are fundamental for continuous and reliable industrial operations.

- **Refining and Petrochemical Conversion Reactions:**

Catalysts are essential in refining processes like hydrocracking, catalytic reforming, and isomerization, as well as in petrochemical conversions like polymerization and oxidation reactions. They increase reaction rates, improve selectivity, and enhance yield of desired products. Proper catalyst choice ensures energy efficiency

and process stability. These applications are critical for producing fuels, plastics, chemicals, and other high-value products. They directly impact plant profitability and operational reliability.

- **Emission Control and Environmental Management:**

Catalysts help reduce harmful emissions by converting pollutants like NOx, CO, and hydrocarbons into less harmful substances. Applications include automotive catalytic converters, flue gas treatment, and industrial emission control units. By minimizing environmental impact, catalysts help industries comply with strict government regulations. They also enable sustainable operations and reduce health and safety risks. This application is increasingly important as industries focus on green and clean technologies.

Major end use industries/ customer segments:

- **Oil & Gas Refineries:**

Refineries are the largest consumers of industrial catalysts, using them for processes like hydrocracking, catalytic reforming, desulphurization, and sulphur recovery. Catalysts help improve fuel quality, increase yield, and protect downstream equipment from corrosion or fouling. They are also crucial for meeting environmental standards by reducing sulphur and other impurities in fuels. Efficient catalysts enable refineries to optimize energy consumption and production costs. Refineries rely heavily on specialized catalysts such as Chloride Guard, Sulphur Guard, and Claus catalysts.

- **Petrochemical and Chemical Manufacturing:**

Chemical plants use catalysts for a wide range of reactions, including polymerization, oxidation, hydrogenation, and synthesis of basic chemicals. Catalysts improve reaction selectivity and efficiency, ensuring higher product yield and consistent quality. Molecular sieves, activated alumina, and catalyst carriers are commonly used in gas purification and process enhancement. Petrochemical applications include production of plastics, synthetic fibers, and other high-value chemicals. Custom-designed catalysts are often deployed to suit specific feedstocks and reaction conditions.

- **Natural Gas Processing Facilities:**

Natural gas plants use catalysts and adsorbents for purification, drying, and removal of contaminants like H_2S, CO_2, and water vapor. Catalysts ensure smooth operation of downstream units, prevent corrosion, and protect sensitive equipment. Molecular sieves and activated alumina are widely used for gas dehydration and separation. Efficient purification is critical for meeting pipeline specifications and environmental regulations. The use of catalysts improves overall plant efficiency, reduces downtime, and increases gas quality for industrial or commercial use.

- **Fertilizer Industry:**

Fertilizer manufacturing relies heavily on catalysts for ammonia synthesis, urea production, and hydrogen generation. Catalysts accelerate chemical reactions and improve conversion efficiency, enabling large-scale production at lower energy costs. They help maintain consistent production rates and high product purity. Catalyst systems like molecular sieves, catalyst carriers, and activated alumina also play roles in gas treatment and purification within fertilizer plants. Efficient catalyst usage directly impacts profitability and sustainability of fertilizer operations.

- **Environmental and Emission Control Applications:**

Industries across sectors increasingly use catalysts to comply with environmental regulations and reduce emissions. Applications include flue gas treatment, automotive catalytic converters, and sulphur recovery units. Catalysts convert harmful pollutants like NOx, CO, and SOx into less harmful substances, helping industries reduce their environmental footprint. They also support sustainable industrial operations by minimizing waste and energy consumption. Growing global emphasis on clean technologies is driving higher adoption of catalysts in emission control systems.

- **Specialty Chemical and Polymer Manufacturing:**

Catalysts are essential in producing specialty chemicals, adhesives, resins, and high-performance polymers. They enable precise control over reaction pathways, improving product quality and yield. Catalyst carriers, molecular sieves, and activated alumina are often used to enhance reaction efficiency and ensure uniform performance. Industries producing paints, coatings, and advanced materials rely on catalysts for consistent and scalable production. Customized catalyst formulations help meet specific requirements of specialty chemical applications.

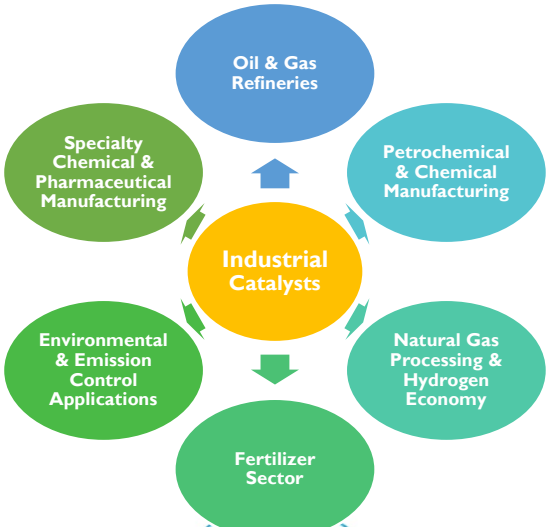
Market Scenario: India's Industrial Catalyst Industry

The Indian industrial catalyst industry plays a foundational role in the country's economic and manufacturing ecosystem, supporting some of the most strategically important value chains, including Oil & Gas, Petrochemicals, Steel, Fertilizers, and others. **Catalysts are substances that accelerate chemical reactions, enhance product yield and quality, reduce energy consumption, and enable environmentally cleaner industrial operations without being consumed in the process.** In modern industrial production, catalysts are not optional inputs; they are mission-critical performance materials that determine efficiency, sustainability, and economic viability.

India's rise as a major hub for refining, chemicals, and pharmaceuticals has fundamentally strengthened its catalyst consumption profile. Growing domestic energy needs, shifts toward cleaner fuels, large-scale petrochemical integration, and continuous expansion of fertilizer capacity have all contributed to sustained demand. Over the last decade, increasing emphasis on **environmental compliance, fuel quality upgradation, BS-VI emission norms, and green energy transition policies** has further accelerated the adoption of advanced adsorbents, guard bed catalysts, and reactor media including **activated alumina, molecular sieves, inert ceramic balls, and catalyst carriers**.

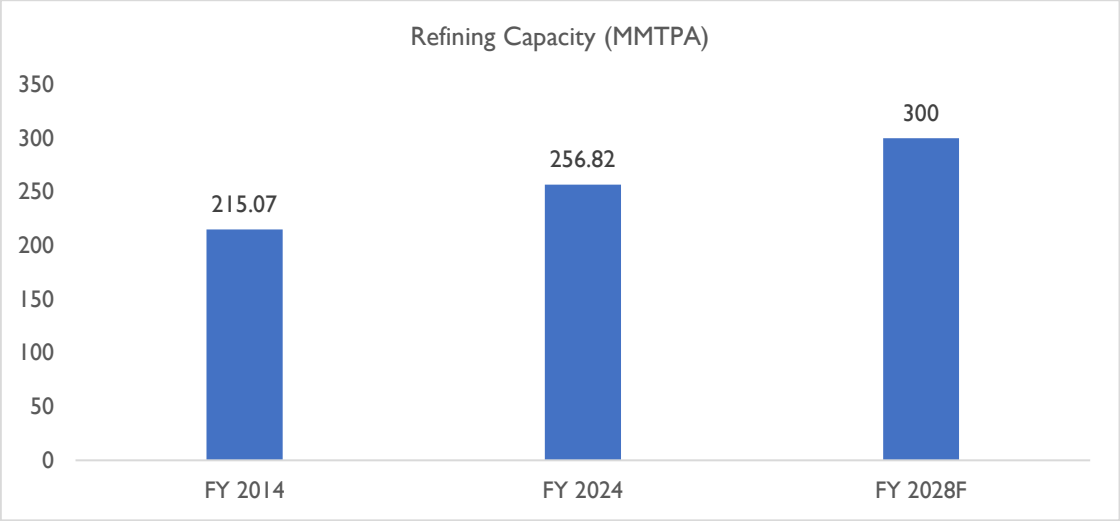
Looking ahead, the Indian industrial catalyst market is expected to grow at an average **CAGR of 6%–7% during FY 2025–2031**, supported by refinery modernization, natural gas infrastructure growth, specialty chemical manufacturing, and a structural shift toward cleaner and technology-intensive industrial processes. The market's attractiveness is reinforced by recurring replacement cycles, large-scale maintenance programs, import substitution push under Atmanirbhar Bharat, and increasing domestic capability in advanced catalytic materials. The following section provides a comprehensive overview of the major end-use industries and explains how their capacity expansion, technology adoption, and regulatory priorities collectively shape catalyst demand across India's industrial ecosystem.

Overview on Industrial Catalyst End user sectors:



➢ Oil & Gas Refineries

The oil and gas refining sector remains the dominant consumer of industrial catalysts in India, accounting for the largest share of demand due to extensive use in fuel upgrading, impurity removal, and residue conversion processes. India today operates 19 public sector refineries, three private refineries and one joint-venture refinery, and has expanded refining capacity from 215.07 MMTPA in 2014 to 256.82 MMTPA in 2024, with planned expansion beyond 300 MMTPA by 2028. India has been increasing its refining capacity to meet rising fuel demand, support energy security, and transition to cleaner, BS-VI-compliant fuels. This progression is shown below:



Source: Press Information Bureau (PIB)

F= Forecasted

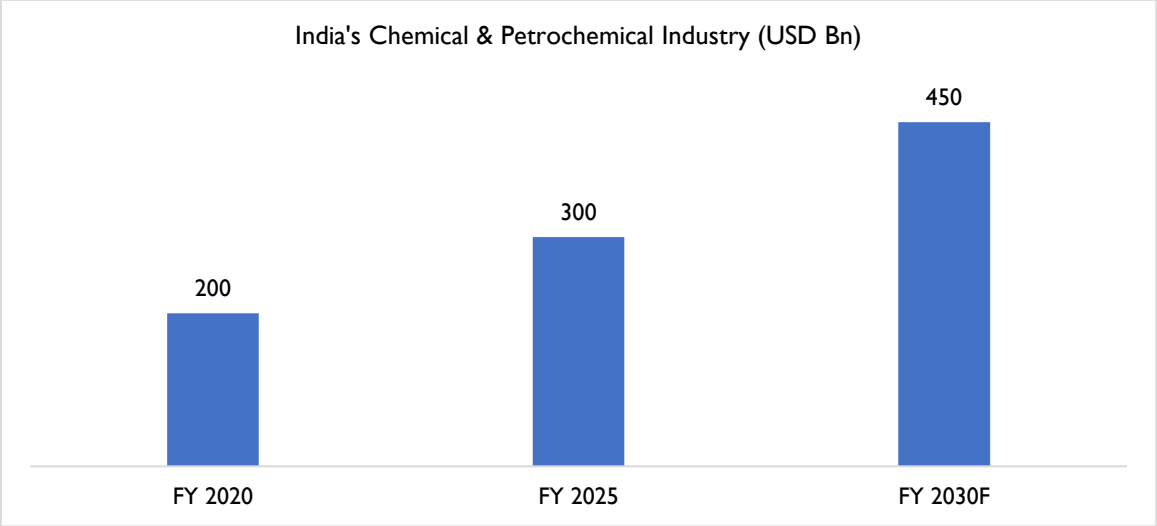
Under the Bharat Stage VI (BS-VI) emission norms and the national mandate for cleaner transportation fuels, refineries have scaled hydro processing, desulphurization, reforming, and cracking units all of which rely heavily on catalyst systems.

Materials such as activated alumina, molecular sieves, chloride and sulphur guard catalysts, ceramic balls, and carrier media play essential roles in gas purification, impurity removal, catalyst bed stability, and feed protection. The industry follows planned maintenance shutdown cycles every two to five years, requiring systematic catalyst replacement, regeneration, and replenishment. This predictable cycle ensures recurring demand, making the refining sector the backbone of India's industrial catalyst market.

➢ Petrochemical & Chemical Manufacturing

The petrochemical and chemical sector forms the second most significant application segment for catalyst consumption in India. With the country shifting toward integrated refinery-petrochemical complexes including major initiatives such as HPCL Rajasthan Refinery, IOCL's Paradip petrochemical expansion, and OPaL there has been a steady rise in catalyst usage for polymer production, aromatics processing, and

downstream chemical manufacturing. These plants use advanced catalytic media and reactor packing materials to ensure feedstock purity, optimize conversion efficiency, and maintain consistent product quality. Structured ceramic tower packing, high-surface-area activated alumina, molecular sieves, and guard catalysts are deployed across distillation, dehydration, hydrogenation, and polymer synthesis processes. As India aims to reduce dependency on imported petrochemicals and build self-sufficiency in polymers, elastomers, and chemical intermediates, catalyst demand in this segment will continue to grow in line with capacity creation and process intensification efforts.

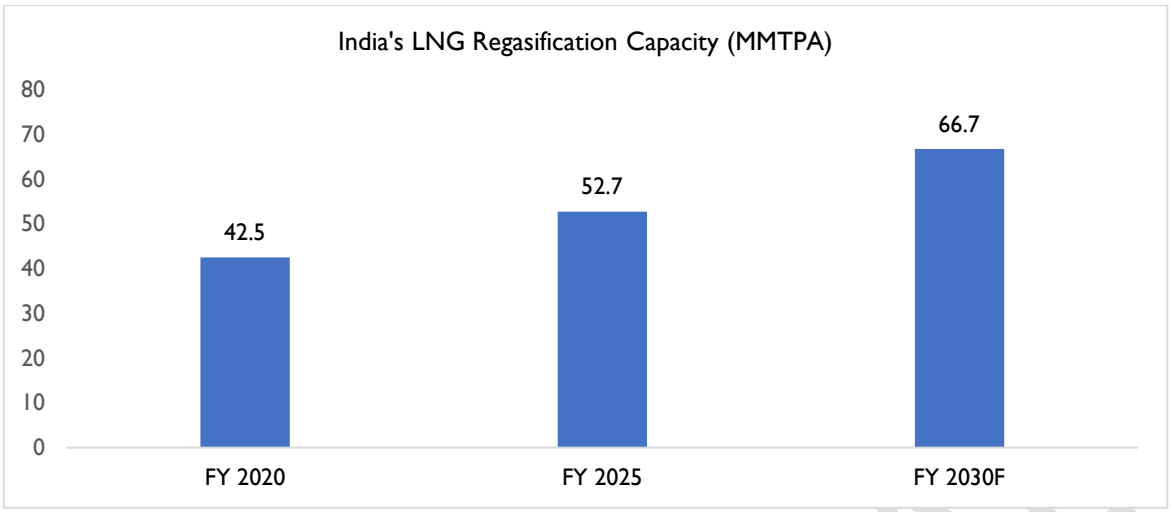


Source: Press Information Bureau (PIB), NITI Ayog

This growth momentum is further supported by India's broader chemical and petrochemical expansion plans, with the overall industry expected to grow at a **CAGR of 8.4% between FY 2020 and FY 2030**, providing a clear outlook for long-term catalyst demand. India's petrochemical capacity is projected to increase from about 29.62 MT in FY 2024 to nearly 46 MT by 2030. This growth is strongly driven by the push for self-reliance, as nearly 45% of the country's petrochemical intermediates are still imported. India's Petroleum Intensity Index (PII)—which indicates how much crude is converted into petrochemicals—is also expected to rise by around 15% by 2030 and further by 25% by 2040. These trends signal a clear shift toward higher petrochemical integration, which will significantly increase catalyst demand across new and upgraded complexes.

- **Natural Gas Processing & Hydrogen Economy**

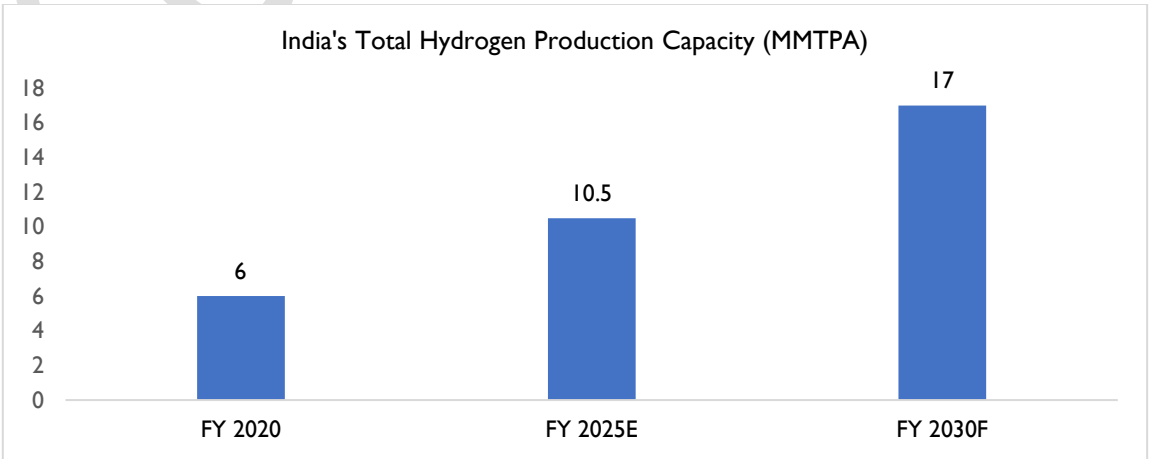
India's expanding natural gas infrastructure and accelerating shift toward clean hydrogen are emerging as major drivers of catalyst demand across purification, separation, and low-carbon fuel production. The country's LNG regasification capacity has grown from **42.5 MMTPA in FY 2020** to an estimated **52.7 MMTPA by FY 2025**, and is projected to reach **66.7 MMTPA by FY 2030**, supported by the expansion of over 25,000 km of gas pipeline networks and rising consumption from industrial users, city gas distributors, and the power sector.



Source: Ministry of Petroleum & Natural Gas, Press Information Bureau (PIB), Petroleum and Natural Gas Regulatory Board (PNGRB)

This scale-up in natural gas handling is directly increasing the use of high-performance catalysts and adsorbents across processing facilities. Molecular sieves, activated alumina, and sulphur/chloride guard catalysts are essential for removing moisture, CO_2, sulphur species, and trace contaminants from feed gas, thereby protecting downstream equipment, ensuring process reliability, and enabling compliance with stringent gas quality requirements. As more gas-based industries come online—including petrochemicals, refining, fertilizers, and CGD networks—the demand for purification catalysts is expected to rise steadily.

Parallel to natural gas growth, India is building a strategic foundation for a hydrogen-based energy economy. India's total hydrogen production capacity is expected to increase from **6 MMTPA in FY 2020** to **10.5 MMTPA by FY 2025**, and further to **17 MMTPA by FY 2030**, reflecting a strong CAGR of about **11%**. In addition, the country has set an ambitious target to produce **5 million metric tonnes (MMT) of green hydrogen annually by 2030** under the National Green Hydrogen Mission. Achieving this requires ultra-pure feed gases for electrolysis, as well as advanced catalysts for ammonia and methanol synthesis, hydrogen purification, and associated reactor systems.



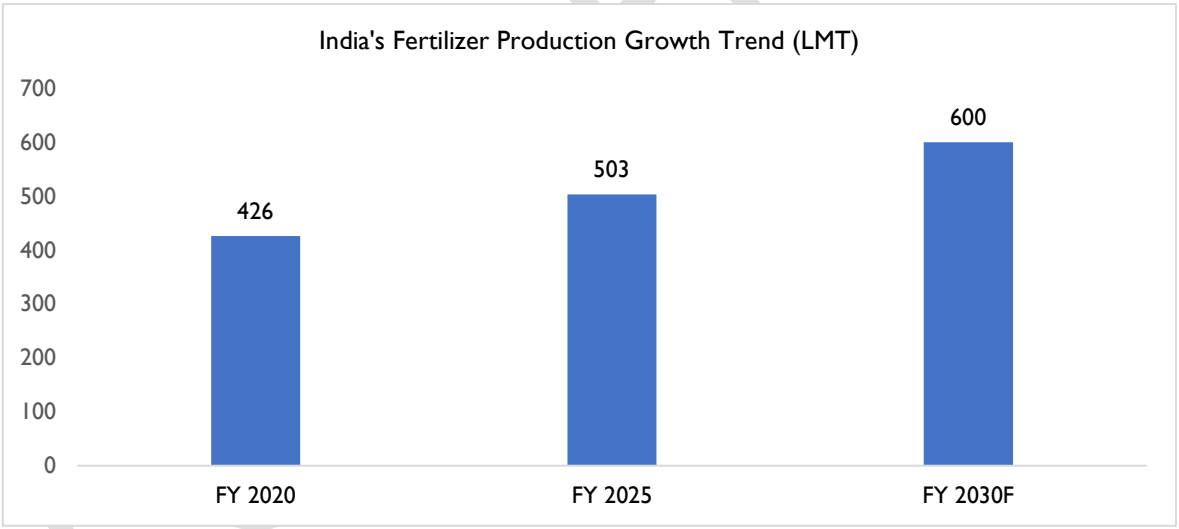
Source: Institute for Energy Economics & Financial Analysis (IEEFA), Press Information Bureau (PIB), D&B Research Estimates

*E= Estimated, F= Forecasted

As hydrogen blending into natural gas pipelines, gas-based power systems, and green ammonia production gain momentum, high-efficiency purification catalysts and adsorbents will remain indispensable to maintaining gas quality, protecting electrolyzers, and enabling large-scale adoption. Together, the expansion of LNG infrastructure, growing hydrogen production, and rising adoption of clean-fuel technologies place catalysts at the center of India's long-term clean energy and industrial transformation.

- **Fertilizer Sector**

The fertilizer industry remains one of India's most significant catalyst-consuming segments, particularly due to the ammonia–urea production chain where catalysts are essential across reforming, methanation, ammonia synthesis, and purification stages. India's fertilizer output is projected to grow steadily from **426 LMT in FY 2020 to 503 LMT in FY 2025**, and further to **600 LMT by FY 2030**, reflecting a **CAGR of approximately 3.5% during 2020–2030**. This growth trajectory is supported by the operationalization and revival of major ammonia–urea plants at Gorakhpur, Sindri, Barauni, Ramagundam, and Talcher, each with capacities of around 1.27 MMTPA.



Source: Press Information Bureau (PIB), Ministry of Chemicals & Fertilizers

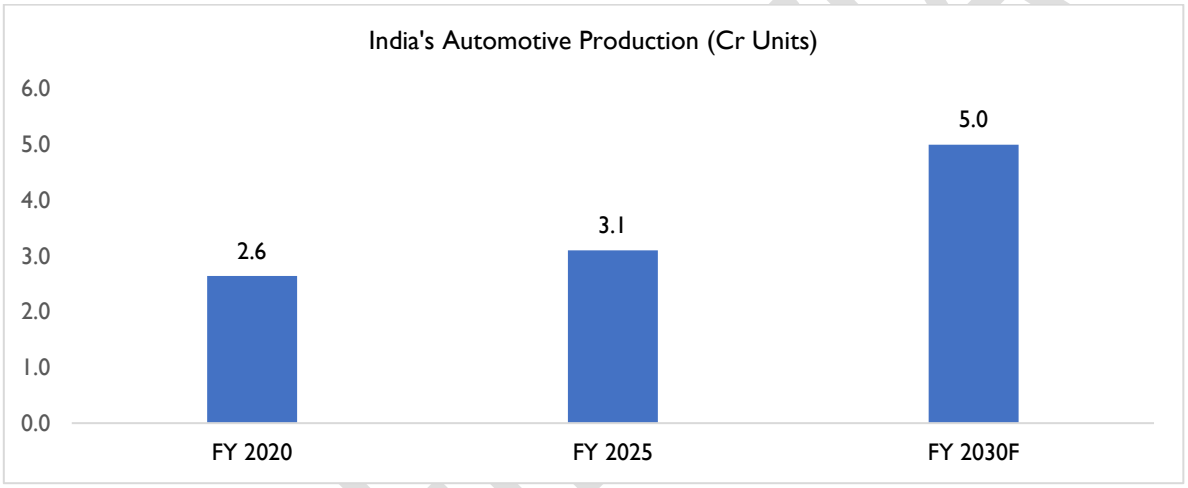
These facilities rely on a wide range of catalysts and supporting media—including activated alumina, molecular sieves, ceramic balls, and catalyst carriers—to optimize gas conversion efficiency, eliminate impurities, and maintain reactor stability. As fertilizer demand grows in line with national priorities for agricultural productivity and balanced nutrient use, the sector will continue to require routine catalyst replenishment and periodic technology upgrades.

Government-driven modernization programs and efficiency enhancement initiatives further support steady catalyst consumption. With India reinforcing its objective of achieving fertilizer self-sufficiency and ensuring

reliable domestic production, the fertilizer sector is expected to remain a **stable and predictable market for catalyst demand** throughout the coming decade.

- **Environmental & Emission Control Applications**

Environmental compliance regulations have emerged as a major driver of catalyst consumption in India. Under the BS-VI emission standards, catalytic converters have become mandatory across all vehicle categories, accelerating the use of platinum-group metal–based catalyst systems. India's automotive production is estimated to rise from **2.6 crore units in FY 2020 to 3.1 crore units in FY 2025**, and further to **5.0 crore units by FY 2030**, reflecting a **CAGR of about 6.6% during 2020–2030**. This sustained increase in vehicle manufacturing directly strengthens demand for catalytic systems used in exhaust treatment and emission control across OEM and aftermarket channels.



Source: Society of Indian Automobile Manufacturers (SIAM), D&B Research Estimates

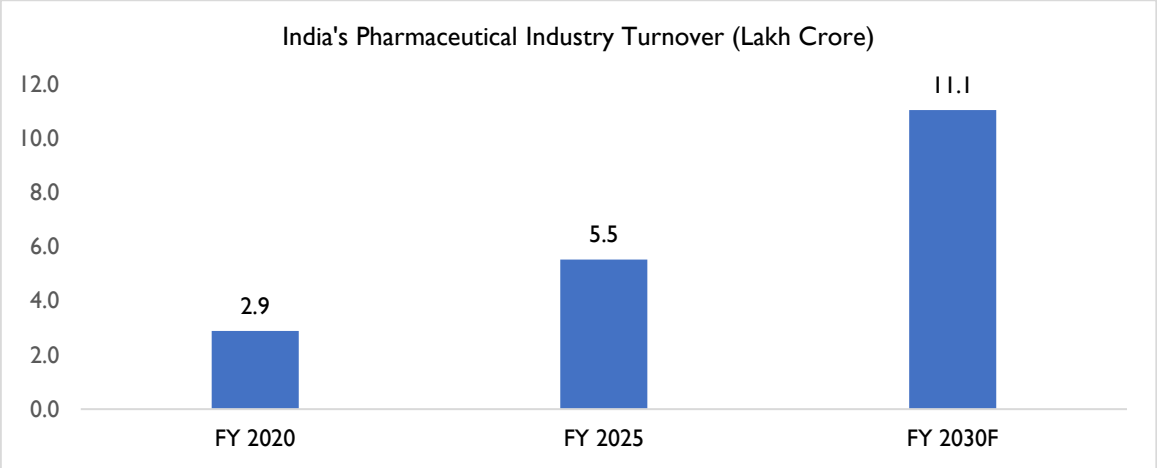
Looking ahead, India's broader automotive ecosystem is on a strong growth trajectory. Automotive component manufacturing is projected to reach USD 145 billion by 2030, while exports are expected to grow from USD 20 billion to USD 60 billion, enabling India to expand its share of the global automotive value chain from 3% to 8%. This expansion will further reinforce the demand for emission-control catalysts, including three-way catalysts, diesel oxidation catalysts, and selective catalytic reduction systems.

Beyond automobiles, refineries and natural gas processors also contribute substantially to catalyst requirements. These industries deploy Claus catalysts, tail-gas treatment catalysts, activated alumina, and molecular sieves for sulphur recovery, desulphurization, and flue-gas purification in line with guidelines from the Central Pollution Control Board (CPCB) and the Ministry of Environment, Forest and Climate Change. As India adopts stricter environmental norms and transitions toward cleaner fuel pathways, catalyst consumption in emission-control applications is expected to grow consistently over the coming decade.

➢ **Specialty Chemical & Pharmaceutical Manufacturing**

India's specialty chemical and pharmaceutical sectors are emerging as some of the strongest engines of catalyst consumption, largely due to the increasingly complex and high-purity processes adopted across production lines. These industries rely on tightly controlled reaction environments—whether for converting intermediates, refining molecular structures, or ensuring stringent impurity thresholds—which inherently increases the need for advanced catalytic systems.

As India strengthens its stature as the world's third-largest pharmaceutical manufacturer by volume and a major supplier of global generics, the scale of operations across the sector has expanded significantly. Industry turnover is projected to rise from **₹2.9 lakh crore in FY 2020** to **₹5.5 lakh crore in FY 2025**, and further to **₹11.1 lakh crore by FY 2030**, implying a **14.4% CAGR** over the decade. This accelerated growth brings with it a proportional increase in demand for catalysts that support reaction selectivity, conversion efficiency, and purification consistency.



Source: Department of Pharmaceuticals, Government of India

A similar momentum is visible in the specialty chemicals domain, which now represents one of the most dynamic segments of India's broader chemical industry. Accounting for nearly **47% of the national chemical market**, this segment is expanding due to rising consumption across automotive, electronics, construction, aerospace, nutrition, and agrochemical sectors. Agrochemicals alone form a **US$5.5 billion sub-segment**, projected to contribute nearly **40% of India's chemical exports by 2040**. Such diversification deepens the requirement for tailored catalytic systems that support controlled synthesis, impurity management, and yield improvement.

At the operational level, the manufacture of APIs, intermediates, vitamins, specialty molecules, and polymer-grade compounds relies on catalysts such as **selective hydrogenation catalysts, polymer-grade alumina, structured ceramic media, and precise adsorbent formulations**. Indian firms—including Sud-Chemie India, Viridis Chemicals, and Hetero Catalysts—are increasingly developing localized catalytic

solutions, enabling process optimization, reduced dependency on imports, and alignment with global quality benchmarks. The sector's shift toward domestic capability development supports long-term resilience, especially in supply chains involving regulated markets.

Broadly, India's industrial catalyst ecosystem is benefitting from the simultaneous expansion of specialty chemicals, pharmaceuticals, refining modernization, petrochemical capacity addition, and environmental compliance mandates. The recurring nature of catalyst replacement, combined with capacity upgrades across energy, manufacturing, and emission-control applications, ensures sustained demand. Government initiatives under **Atmanirbhar Bharat** and **Make in India** further encourage backward integration, technology partnerships, and domestic manufacturing of advanced catalytic systems, positioning the catalyst industry as a vital enabler of India's industrial growth, clean-energy transition, and long-term sustainability objectives.

Demand Scenario

Analysis of key factors that are shaping the demand in the industry

- Rapid Urbanization and Energy Consumption Growth
- Accelerated Industrialization and Manufacturing Expansion
- Decarbonization and Energy Transition Policies
- Growth in Process Intensification and Technology Upgradation
- Rising Focus on Import Substitution and Domestic Catalyst Production

➢ Rapid Urbanization and Energy Consumption Growth

India's rapid urbanization adding nearly 25–30 million new city residents every five years is driving a sharp increase in demand for refined fuels, fertilizers, petrochemicals, and construction materials. As more people migrate toward cities, the need for transportation fuels, power, and plastics intensifies, prompting refineries and petrochemical complexes to expand operations. Urban infrastructure growth drives higher throughput in hydrocracking, desulphurization, and reforming units, all of which depend on industrial catalysts and adsorbents to enhance yield and control emissions. The growth in urban fuel consumption and expansion of gas distribution networks in metropolitan regions further elevate the use of catalysts in purification and upgrading units across India's downstream energy sector. In parallel, urban waste management initiatives and municipal waste-to-energy plants are increasingly using catalyst-supported processes for gas purification, hydrogen generation, and emissions control. Similarly, biogas upgradation systems in urban and peri-urban areas rely on molecular sieves and activated alumina for CO_2 and moisture removal. As India's cities expand,

the intersection of energy demand, environmental compliance, and industrial growth ensures a broad-based and sustained demand for catalyst materials across refining, petrochemical, and clean energy domains.

- **Accelerated Industrialization and Manufacturing Expansion**

The Indian government's push through Make in India 2.0 and Production Linked Incentive (PLI) schemes has catalyzed major investments in chemical processing, advanced materials, and specialty manufacturing. The establishment of new process plants for paints, coatings, textiles, plastics, and fine chemicals has amplified the requirement for reforming, hydrogenation, oxidation, and polymerization catalysts. Industries are increasingly deploying molecular sieves and adsorbents for feedstock purification, process optimization, and volatile organic compound (VOC) abatement, which enhances both product quality and environmental compliance. This industrial broad-basing beyond traditional oil refining and fertilizer production is redefining the structure of catalyst consumption in India.

Simultaneously, expansion in core industries such as steel, cement, and non-ferrous metals is also fostering indirect catalyst demand through increased chemical usage in flue gas treatment, emission control, and process gas purification. India's vision to become a global manufacturing hub for electronics, semiconductors, and specialty chemicals is encouraging technology collaborations for catalytic and adsorbent systems. As industries modernize and diversify, they require customized catalyst formulations, driving innovation, localization, and long-term demand consistency across multiple process applications.

- **Decarbonization and Energy Transition Policies**

India's commitment to achieve net-zero emissions by 2070 is reshaping its industrial and energy landscape, with catalysts emerging as a critical enabler in this transition. Policies such as the National Green Hydrogen Mission, Biofuel Policy (2018), and National Carbon Capture, Utilization, and Storage (CCUS) Framework are stimulating investment in low-carbon fuels and chemical processes. Catalysts play a pivotal role in enabling green hydrogen production, methanation, and ammonia synthesis, where they ensure high conversion efficiency under low-emission operating conditions. Likewise, reforming and hydroprocessing catalysts are key to producing renewable diesel, sustainable aviation fuel (SAF), and methanol from biomass and waste feedstocks.

In addition, the deployment of carbon capture and gas purification units across power, steel, and fertilizer sectors is generating significant demand for molecular sieves, activated alumina, and tailored adsorbents capable of selectively separating CO_2 and other impurities. The adoption of cleaner process chemistries, along with increasing ESG compliance mandates from global investors, is pushing Indian companies to retrofit existing units with next-generation catalysts. Consequently, India's pathway toward decarbonization not only aligns with sustainability goals but also provides a structural long-term growth opportunity for the domestic industrial catalyst market.

- **Growth in Process Intensification and Technology Upgradation**

Industrial process plants across India are transitioning toward advanced reactor designs and process intensification techniques to improve throughput, yield, and energy efficiency. Technologies such as fluid catalytic cracking (FCC), selective hydrogenation, and advanced reforming depend on precision-engineered catalysts to maintain selectivity and reaction control. Structured ceramic packings and high-performance catalyst carriers are increasingly used to enhance mass and heat transfer, minimize pressure drop, and extend catalyst life. This modernization wave is particularly visible in refineries, petrochemical complexes, and specialty chemical units adopting continuous catalytic processes for cleaner and more efficient operations. Moreover, the integration of digital monitoring and AI-based process control in catalyst performance management has enabled predictive maintenance and optimization, reducing unplanned downtimes. As India's process industries pursue energy conservation and emission minimization, the adoption of high-efficiency reactor media such as structured ceramics and high-surface-area alumina is rising sharply. This convergence of process intensification and digital transformation supports consistent demand for technologically advanced catalyst systems, underscoring the strategic shift toward high-value, performance-oriented process materials.

- **Rising Focus on Import Substitution and Domestic Catalyst Production**

India's industrial catalyst market has historically been dependent on imports from established global players in Europe, the US, and Japan. However, recent policy frameworks under Atmanirbhar Bharat and the PLI Scheme for Advanced Chemistry Cells and Specialty Chemicals have prioritized domestic manufacturing and innovation. Public sector enterprises such as IOCL, BPCL, and GAIL are increasingly issuing tenders favoring Indian-made catalysts, spurring R&D investment in high-surface-area activated alumina, low-chloride catalyst carriers, and improved Claus catalyst formulations. These developments are helping local manufacturers move up the value chain from bulk materials to precision-engineered catalyst systems.

Furthermore, collaborations between public R&D institutes like CSIR-NCL, IIP Dehradun, and private catalyst firms are advancing indigenous formulations suitable for refinery, petrochemical, and environmental applications. With increasing government emphasis on technology self-reliance and supply chain resilience, India's domestic catalyst ecosystem is poised for rapid expansion. This strategic shift not only reduces import dependence but also creates export potential for Indian-made catalysts and adsorbents in emerging Asian and African markets, positioning India as a competitive supplier in the global catalyst value chain.

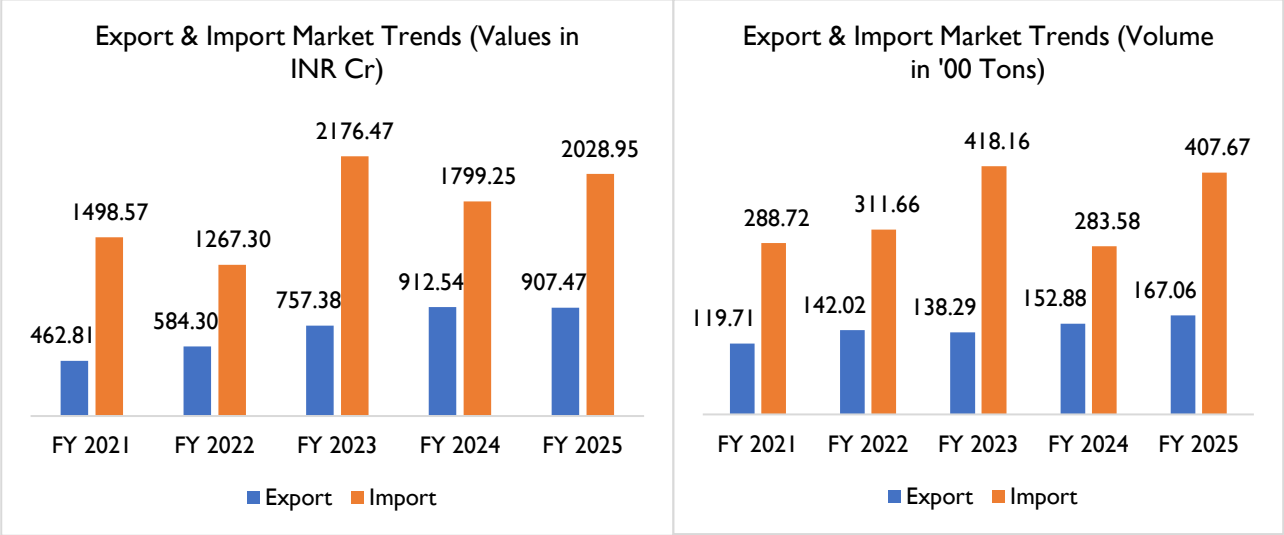
Regulatory Landscape

- **Chemical Promotion & Cluster Development**: There are proposals and policies (from NITI Aayog, Department of Chemicals & Petrochemicals etc.) aimed at creation of world-class chemical hubs / clusters with shared infrastructure, logistical support, and possibly viability gap funding (VGF). The idea is that chemical / catalyst producers could be located in such clusters to reduce cost of operations (e.g. utilities, effluent treatment, feedstock access). Improved port-related infrastructure for transport of raw materials and export goods is also flagged.
- **Reduced Import Duties / Tariff Policy on Raw Materials**: The chemicals sector is allowed 100% FDI (automatic route) except certain hazardous chemicals; and manufacture of many chemical products is de-licensed, which reduces regulatory overhead. Additionally, in some chemical policies there is an intention to reduce duties or provide exemptions for critical raw materials/feedstocks, to encourage domestic value addition. Though I didn't find one specific policy that gives raw materials for catalysts special duty exemption, the broader approach for chemicals could benefit catalyst manufacturers.
- **Ease of Doing Business & Regulatory Streamlining**: The proposal from NITI Aayog includes measures like fast-tracking environmental clearances, simplifying regulatory compliance, and reducing friction in approvals. For industrial catalysts, which often involve hazardous materials, metals, supports, there is benefit if environmental, safety & handling approvals are faster and clearer. Also, schemes like "Make in India" and simplification of licensing help reduce entry barriers.

Trade Details

India remains a net importer in this product category, which includes specialized ceramic components, activated alumina, and advanced catalytic materials. Between FY 2021 and FY 2025, import volumes and values consistently exceeded exports, reflecting the country's continuing dependence on high-performance materials and technologies that are not yet produced domestically at sufficient scale or specification. Although exports have grown steadily supported by rising global demand and improving manufacturing capabilities imports still dominate overall trade. The following section provides an analysis of India's top export and import partner countries to highlight the key trade relationships and evolving market trends in this segment.

The trade trend analysis for FY 2021–FY 2025 shows a steady rise in both exports and imports for this product category; however, imports have consistently remained higher in both value and volume. This reflects India's increasing integration into global trade for these specialized industrial materials, while simultaneously underscoring its dependence on foreign suppliers to meet domestic requirements. The continuous growth in export performance points to improving competitiveness and a widening international footprint, whereas the sustained high level of imports indicates strong internal demand and the need for materials that are not yet fully produced at the required scale or specifications within the country.



Source: Directorate General of Foreign Trade

Between FY 2021 and FY 2025, exports rose from **INR 462.81 crore to INR 907.47 crore**, reflecting nearly a **96% growth** over five years. Imports, however, increased from **INR 1,498.57 crore to INR 2,028.95 crore**, showing continued dependence on foreign suppliers for certain specialized materials. The export-import gap remained wide, with imports consistently over twice the value of exports, indicating that while export competitiveness is improving, domestic industries continue to rely heavily on imported catalysts, alumina, and ceramic materials. Notably, FY 2023 marked a strong growth phase for both exports and imports, with exports peaking at **INR 757.38 crore** and imports reaching **INR 2,176.47 crore**, suggesting

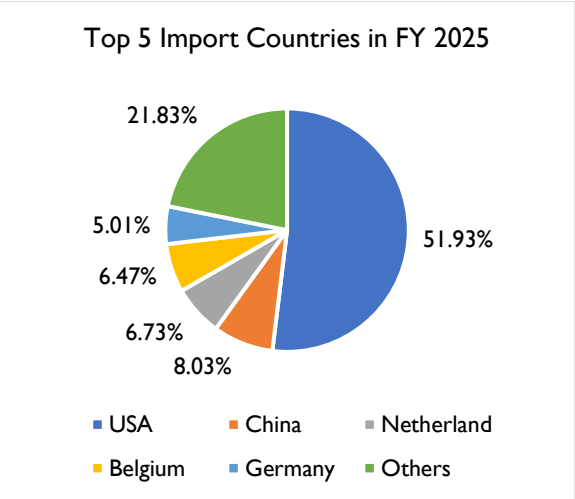
robust global and domestic demand. Although exports slightly declined in FY 2025, the overall upward trend underscores sustained international interest in Indian-origin products.

In terms of physical volume, exports increased from **119.71 '00 tons in FY 2021 to 167.06 '00 tons in FY 2025**, highlighting consistent expansion in production and shipment capacity. Imports also grew from **288.72 '00 tons to 407.67 '00 tons** during the same period, underscoring India's growing consumption base and industrial scale. The volume growth for exports was more gradual compared to the sharper rise in import volumes, which reflects the difference in domestic manufacturing self-sufficiency versus dependency on imported inputs. The highest trade activity was observed in FY 2023, coinciding with global post-pandemic industrial recovery, followed by stabilization in FY 2024 and FY 2025.

While the export sector has shown commendable growth, increasing nearly twofold in value and volume, imports have remained dominant, reflecting India's continued integration into global supply chains as both a consumer and supplier. The widening trade gap suggests opportunities for capacity expansion, value addition, and technological advancement within domestic industries to reduce dependency and improve export competitiveness.

Top 5 Export & Import partners:

The profile of India's major export and import partners in FY 2025 reflects shifting trade dynamics and deeper global engagement in this product segment. The United States stands out as the dominant partner on both sides of the trade ledger, underscoring strong bilateral flows. Export markets appear relatively diversified, spanning developed economies such as Germany as well as fast-growing destinations like Indonesia and China. Imports, however, remain concentrated among a smaller set of advanced economies, highlighting India's reliance on technologically superior countries for specialized materials and inputs. The notable presence of "Other" countries in both export and import shares further indicates ongoing diversification efforts, pointing toward India's strategy to develop a broader and more resilient trade ecosystem.



Source: Directorate General of Foreign Trade

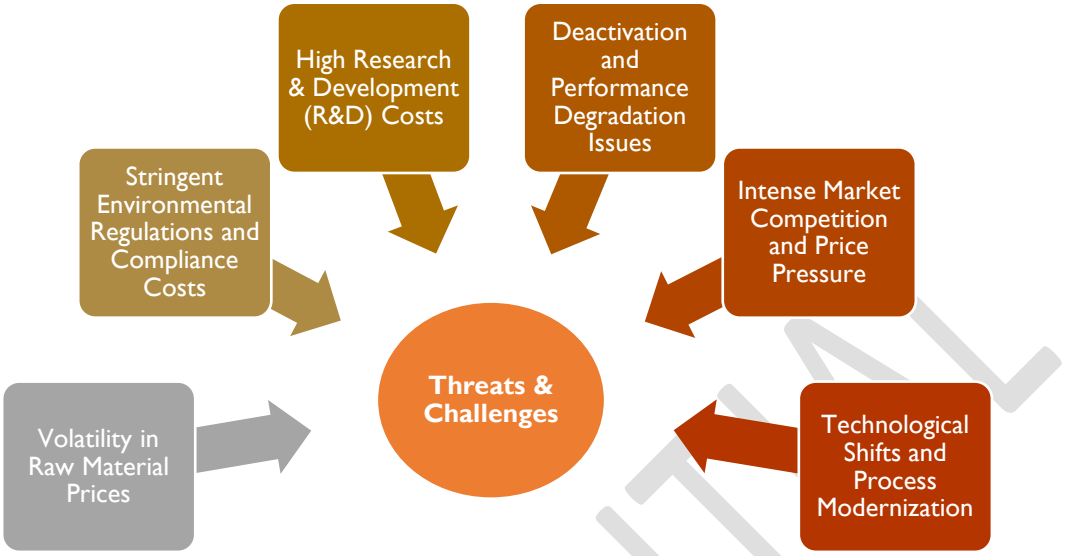
The comparative analysis of India's top export and import partners in FY 2025 reveals a distinct pattern in trade dynamics, showcasing both strength and dependency in global engagements. The USA stands out as the most dominant partner, accounting for 21.7% of total exports and a notably higher 51.9% of total imports. This indicates a strong and strategic bilateral trade relationship where the U.S. serves not only as a key destination for Indian goods but also as a primary source of advanced products, technology, and capital equipment. Such a concentration of imports from a single country suggests deep economic interdependence but also highlights potential vulnerability to policy shifts or trade barriers imposed by the U.S. government.

On the export front, India's market appears relatively diversified, with countries such as China (10.99%), Germany (8.92%), Indonesia (7.85%), and the Netherlands (5.44%) contributing significantly to outbound trade. This distribution points toward India's increasing competitiveness in both developed and emerging markets. The presence of major European economies like Germany and the Netherlands indicates strong demand for Indian engineering goods, pharmaceuticals, and IT services, while Indonesia's inclusion reflects regional trade growth within Asia. The large share of 'Others' (45.11%) further underlines that India's export base is expanding across multiple geographies, reducing overreliance on a few markets and enhancing trade resilience.

Conversely, India's import structure remains more concentrated, with the USA, Netherlands, Germany, Belgium, and China together constituting a major share. The composition of import partners suggests a high dependency on advanced economies for industrial inputs, technology products, and capital goods. The limited share of developing countries in the import mix reflects India's ongoing reliance on Western suppliers for critical manufacturing components. However, the 21.83% share of 'Others' signals gradual efforts toward diversification, potentially through increased sourcing from Asian and African nations. Overall, while India's export footprint is broadening, the import dependence on a few large economies emphasizes the need for policy-driven diversification, enhanced domestic manufacturing, and strategic trade partnerships to strengthen long-term economic stability.

Threats & Challenges:

Key threats & challenges facing the industry



- **Volatility in Raw Material Prices:** The production of industrial catalysts relies on metals and materials such as platinum, palladium, nickel, cobalt, and alumina. Fluctuations in global prices of these raw materials can significantly impact manufacturing costs and profit margins. Supply disruptions due to geopolitical tensions or trade restrictions further increase price instability. Manufacturers often face challenges in maintaining consistent pricing for customers. This volatility directly affects long-term contracts and profitability in the catalyst industry.
- **Stringent Environmental Regulations and Compliance Costs:** While catalysts support environmental sustainability, their own production and disposal processes must adhere to strict regulations. Compliance with global and national emission standards (such as REACH, EPA, and CPCB norms) increases operational complexity and cost. Industries must continuously upgrade facilities and adopt cleaner production technologies. Improper waste handling or disposal can lead to penalties and reputational damage. Ensuring regulatory compliance without compromising cost competitiveness remains a persistent challenge.
- **High Research & Development (R&D) Costs:** The catalyst industry is technology-intensive, requiring continuous innovation to improve efficiency, selectivity, and life span. Developing advanced formulations, nanostructured catalysts, or tailor-made solutions demands heavy investment in R&D. Small and mid-sized manufacturers often struggle to keep pace with global players due to financial and technical constraints. Additionally, scaling laboratory innovations to industrial-scale production involves long testing cycles and regulatory approvals. This limits the speed of market entry for new products.
- **Deactivation and Performance Degradation Issues:** Over time, catalysts can lose activity due to fouling, poisoning, or sintering caused by impurities, temperature fluctuations, and operational stress.

This leads to reduced efficiency, lower yields, and increased maintenance requirements. Catalyst deactivation often forces unplanned shutdowns, impacting productivity and profitability. Regeneration can restore activity but adds operational cost and downtime. Maintaining consistent catalyst performance across long production runs remains a key technical challenge.

- **Intense Market Competition and Price Pressure:** The global catalyst market is highly competitive, with numerous domestic and international players offering similar products. Customers often demand high-performance catalysts at low prices, squeezing profit margins. Larger companies with economies of scale dominate through advanced technologies and stronger supply chains. Smaller firms face challenges in differentiation and brand recognition. Price competition, coupled with customer preference for proven global brands, makes market penetration difficult for new entrants.
- **Technological Shifts and Process Modernization:** Rapid technological advancements in refining, petrochemicals, and green chemistry require constant adaptation of catalyst designs. The shift toward renewable feedstocks, bio-based fuels, and hydrogen economy introduces new performance expectations. Traditional catalyst formulations may become obsolete if they fail to support these evolving industrial processes. Manufacturers must invest continuously in new materials, reactor designs, and digital monitoring systems to remain relevant. Adapting to this changing landscape demands agility and sustained innovation.

Expected Growth: India's Industrial Catalyst Industry

The outlook for India's industrial catalyst industry is strongly positive, underpinned by rapid expansion across its key end-use sectors and the nation's broader industrial transformation. The **chemical industry**, valued at **USD 220 billion in 2024** and projected to reach **USD 380–400 billion by 2030**, will continue to be one of the largest demand centers for catalysts, driven by investments in petrochemicals, specialty chemicals, and performance materials. Parallel growth in the **pharmaceutical sector**, expected to reach **USD 130 billion by 2030**, will sustain demand for high-performance catalysts used in complex synthesis reactions, process intensification, and yield optimization. Similarly, the **automotive industry's ambition** to achieve **USD 145 billion in auto component production** and reach **7.5 million vehicle units by 2030** will expand the market for advanced emission-control and fuel-efficiency catalysts, especially with tightening regulatory norms.

Beyond traditional applications, India's transition toward **green hydrogen, biofuels, carbon capture, and circular economy initiatives** presents significant new frontiers for catalyst innovation. The government's emphasis on **Atmanirbhar Bharat** and **green manufacturing** encourages localized production of advanced catalyst systems, reducing import dependency and positioning India as a potential export hub for sustainable catalytic technologies.

Collectively, these dynamics point to a robust decade ahead one defined by **technological innovation, localization of manufacturing, and diversification into clean energy and environmental catalysts**, ensuring that India's catalyst industry remains a critical enabler of industrial efficiency, environmental compliance, and low-carbon growth.

Competitive Landscape

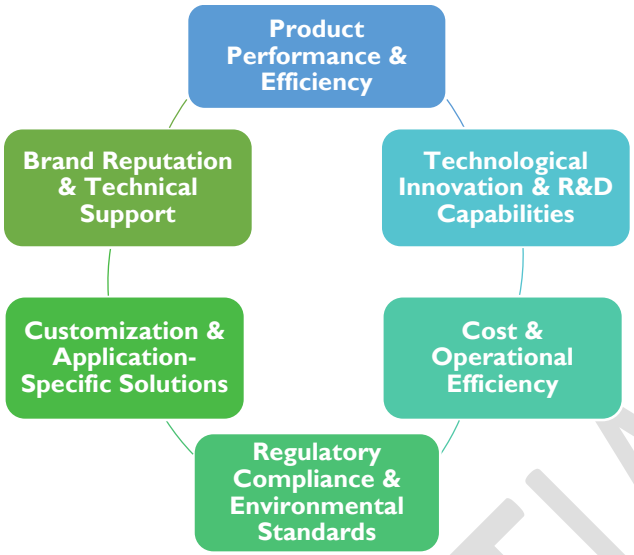
The industrial catalyst market in India is characterized by a mix of multinational and domestic players supplying both high-performance and cost-sensitive products. Global leaders such as BASF SE, Johnson Matthey, Honeywell UOP, Clariant, W.R. Grace, and Haldor Topsoe dominate specialized segments like Sulphur Guard, Claus, and Chloride Guard catalysts. These companies leverage advanced R&D, proprietary technologies, and process expertise to offer catalysts with superior efficiency, durability, and compliance with stringent environmental regulations, giving them a strong competitive edge in refinery and petrochemical applications.

At the same time, a new generation of Indian manufacturers has expanded its footprint in both commodity and semi-specialty catalyst segments, particularly Activated Alumina, Molecular Sieves, Catalyst Carriers, and Ceramic Tower Packing. Domestic producers are increasingly focusing on process-specific customization, indigenous R&D, and the development of advanced catalyst systems for emerging applications such as hydrogenation, reforming, and polymer-grade alumina. Their advantages include shorter lead times, competitive pricing, local technical support, and flexibility in adapting products to Indian feedstock and operating conditions—enabling them to capture a growing share of the domestic market.

Competition varies significantly across product segments. Commoditized materials such as Molecular Sieves, Inert Ceramic Balls, and Tower Packing continue to face price-based competition, where mechanical strength, purity, and consistency remain key differentiators. Conversely, advanced catalyst systems like Hydrogenation, Reforming, and Emission-Control catalysts require deep technical expertise, specialized formulations, and process validation, resulting in higher entry barriers and longer qualification cycles. Suppliers that can offer superior performance, longer catalyst life, and integrated operational support maintain a sustainable advantage in these high-value segments.

Finally, tightening environmental regulations, growing investments in clean fuels, and increasing process-efficiency requirements continue to reshape the competitive landscape. As India's refining, petrochemical, and clean-energy industries evolve, success in the catalyst market will depend on the ability to balance innovation, compliance, and cost-effectiveness while meeting emerging needs in sustainability and low-carbon technologies. While global players will continue to lead in technology-intensive areas, domestic manufacturers are steadily advancing toward higher-value, application-specific catalyst solutions, marking a gradual shift from import dependence to technological self-reliance.

Analysis of key factor shaping competition in the sector



- **Product Performance & Efficiency:** Catalyst efficiency and durability are among the most critical factors influencing competition. Companies that provide catalysts with higher sulphur removal efficiency, longer life cycles, or better adsorption capacity gain a clear competitive edge. For example, in Claus and Sulphur Guard Catalysts, performance under varying feed conditions directly affects operational cost and regulatory compliance. Superior product performance enables suppliers to command premium pricing and build long-term customer relationships.
- **Technological Innovation & R&D Capabilities:** The ability to develop tailored catalysts and adsorbents for specific industrial processes sets leading players apart. Innovation includes improving pore structures, thermal stability, resistance to poisoning, and regenerable catalysts. Companies investing in R&D can offer process-optimized solutions, which are particularly valuable in high-complexity operations like refining and natural gas treatment. Strong R&D also allows faster response to evolving environmental standards and fuel regulations.
- **Cost & Operational Efficiency:** Cost competitiveness remains a key factor, especially in commoditized segments such as molecular sieves, ceramic balls, and tower packing. Lower manufacturing and delivery costs, combined with reliable supply chains, allow companies to compete effectively in price-sensitive markets. Additionally, catalysts that improve operational efficiency for end-users, by reducing downtime or regeneration frequency, enhance the value proposition, influencing buyer preference.
- **Regulatory Compliance & Environmental Standards:** Strict environmental regulations such as SO_2 emission limits, fuel sulphur content mandates, and industrial wastewater norms drive demand for high-performance catalysts. Suppliers that ensure compliance through superior technology gain an advantage, while non-compliant products risk market rejection. This factor also encourages long-term partnerships between catalyst producers and industrial clients aiming to meet regulatory targets efficiently.

- **Customization & Application-Specific Solutions:** Competition is heavily influenced by the ability to customize catalysts to specific feedstock conditions and operational requirements. Feed variations in chloride, sulphur, moisture, or temperature necessitate tailor-made solutions. Suppliers who can optimize product design (e.g., guard beds, pore size, or carrier material) for unique client needs are more likely to capture high-value contracts and maintain repeat business.
- **Brand Reputation & Technical Support:** Long-standing reputation, proven track record, and post-sales technical support are vital competitive differentiators. Industrial catalyst customers often prefer suppliers who can provide installation guidance, troubleshooting, and performance monitoring, ensuring smooth operations. A trusted brand backed by technical expertise reduces operational risk and strengthens client loyalty, which is particularly important for high-cost or high-risk catalysts like Claus and Sulphur Guard types.

Analysis of entry barriers / other factors

- **High Technological Expertise and R&D Requirements:** Developing high-performance catalysts requires significant technical knowledge in chemical reactions, adsorption mechanisms, and material science. Entry is difficult for new players without established R&D capabilities, as customers demand catalysts that perform reliably under extreme temperatures, high pressures, or corrosive environments. Advanced process optimization, customized catalyst design, and innovation in regenerable materials create a strong barrier to entry.
- **Capital-Intensive Manufacturing:** Setting up facilities for catalyst production involves high-capital investment in specialized equipment, calcination units, precision shaping machinery, and quality testing laboratories. For products like Activated Alumina, Molecular Sieves, or Sulphur Guard Catalysts, maintaining strict control over surface area, porosity, and mechanical strength is critical. This high upfront cost discourages small or unestablished companies from entering the market.
- **Stringent Regulatory and Environmental Compliance**: The catalyst industry is closely linked to emission control and environmental standards. Compliance with regulations such as SO_2 emission limits, fuel sulphur content, and wastewater treatment norms requires not only high-quality products but also consistent documentation and certification. New entrants must navigate these regulatory hurdles to gain market acceptance, which acts as a significant barrier.
- **Customer Reliance on Established Brands:** Industrial clients in refining, petrochemical, and fertilizer sectors often prefer long-standing suppliers with proven track records. Reputation, consistent performance, and after-sales technical support are highly valued. New entrants without established credibility face difficulty convincing customers to adopt unproven products, limiting market access.
- **Access to Raw Materials and Supply Chain:** Catalyst production depends on high-purity alumina, metal oxides, and ceramic raw materials. Securing reliable sources of these inputs and maintaining supply

chain efficiency is challenging for new entrants. Established players benefit from long-term supplier contracts and bulk procurement, giving them a cost advantage and consistent product quality.

- **Market Fragmentation and Niche Requirements:** Some segments, like Molecular Sieves or Ceramic Tower Packing, are commoditized, allowing moderate entry. However, high-value, specialized catalysts such as Sulphur Guard, Chloride Guard, and Claus Catalysts require process-specific customization. Meeting these niche requirements demands expertise and local process knowledge, making it difficult for generic entrants to compete effectively.

Entry Barriers in the Catalyst & Adsorbents Industry:

- **Regulatory and Approval Barriers**

The catalyst and adsorbents industry is highly regulated, and suppliers must meet stringent regulatory and technical prequalification criteria before being considered. This involves comprehensive technical evaluations, commercial scrutiny, and financial assessments of the vendor. Even after initial prequalification, approvals are often order-to-order, requiring audits, compliance checks, and repeated documentation. These processes are time-consuming and resource-intensive, making it extremely difficult for new entrants to secure initial contracts. Established suppliers benefit from long-standing approvals and trust, which gives them a strong competitive edge. Overall, regulatory barriers ensure that only qualified and compliant companies can operate effectively in this sector.

- **Technical Barriers**

Producing catalysts and adsorbents requires specialized technical knowledge and advanced manufacturing capabilities. Products must meet precise specifications for activity, selectivity, pore structure, and mechanical strength, often customized for each client's process. Customers typically mandate plant-level trials and extended validation before approving new suppliers, adding complexity for newcomers. Establishing such technical credibility demands robust R&D, skilled personnel, and process optimization. Companies lacking a proven track record find it challenging to meet these high standards. Consequently, technical barriers act as a significant deterrent to new players attempting to enter the market.

- **Commercial and Relationship-Based Barriers**

Relationships and reputation play a crucial role in this industry, where end users like oil & gas, petrochemical, and fertilizer companies prefer long-established suppliers. Switching vendors involves operational risk, repeated validation cycles, and internal approvals, which discourages customers from experimenting with new entrants. The incumbents' long-term relationships and proven reliability create a commercial moat, making it difficult for newcomers to gain traction. New entrants often struggle to penetrate these established networks and build trust with clients. This ensures that companies with a strong presence maintain a dominant market position over time.

- **Financial and Capital Barriers**

Entering the catalyst and adsorbents industry requires significant upfront investment in manufacturing facilities, quality control systems, and R&D infrastructure. In addition, inventory management, process validation, and long approval cycles increase the financial burden before any revenue is realized. The return on investment is long-term, with initial operations often incurring losses. Smaller or less-capitalized companies face difficulties in securing funding and absorbing these early costs. High financial requirements act as a strong barrier, protecting established players and deterring inexperienced companies from entering the market.

- **Operational and Scale Barriers**

Operational expertise and scale are critical in producing consistent, high-quality catalysts and adsorbents. The production processes require precision, reliable supply chains, and customized solutions for different industrial applications. New entrants often lack the experience and scale to deliver products consistently across multiple regions. Incumbents can leverage their operational capabilities to ensure process reliability, timely delivery, and repeatable quality, which are essential for industries with zero tolerance for downtime. Operational and scale barriers, therefore, further reinforce the position of established manufacturers, making it extremely challenging for new competitors to penetrate the market.

Company profile: Devson Catalyst Limited

Company Overview:

Devson Catalyst Limited, established in 2004 began operations with the manufacture of low-tension insulators and subsequently diversified into inert ceramic balls, activated alumina, tower packing, catalysts, and molecular sieves. **Devson Catalyst is an indigenous manufacturer of catalysts, adsorbents, and ceramic balls in India and operates as an integrated catalyst and adsorbent company based in Gujarat.** The company is ISO 9001:2015 certified and has an annual production capacity of approximately 7,000 metric tons. It operates under established quality systems and supplies products across multiple regions, including the Indian Subcontinent, North Europe, the Middle East, South East Asia and South & West Europe.

The company manufactures a comprehensive range of products used across the chemical purification value chain, spanning catalysts, adsorbents, and ceramic balls. Its portfolio includes refinery and process catalysts such as Chloride Guard, Sulphur Guard, Claus catalysts, hydrotreating catalyst and reforming catalyst along with adsorbents comprising activated alumina (DEV-101™) and molecular sieves. Activated alumina with a dedicated installed capacity of around 2,545 MT per annum. The material is engineered to deliver defined adsorption characteristics, controlled pore structure, and high mechanical strength, enabling its use in drying gas and liquid streams to dew points of up to –40°C.

Devson Catalyst also manufactures ceramic balls (DEV-25™M, DEV-50™M, DEV-99™) and ceramic tower packing materials, including saddles, Raschig rings, Pall rings, and partition rings. These products are used across petroleum refineries, petrochemical complexes, steel plants, fertilizer units, acid plants, and industrial gas processing systems. **The company offers application-specific solutions to customers operating in the Oil & Gas, Petrochemical, Steel, and Fertilizer industries and positions among the leading global manufacturers of ceramic balls based on its scale, integrated product portfolio, and export presence.** Key performance attributes include defined chemical resistance, mechanical strength, thermal stability, and mass-transfer efficiency. Supported by in-house manufacturing facilities, relevant quality checks and continuous product development initiatives, **Devson Catalyst maintains an established and integrated role within India's catalyst, adsorbent, and ceramic support materials value chain.**

Products Offerings:

1. **Catalyst**

A substance that speeds up the chemical reaction without being consumed or permanently changed itself. It makes processes more efficient. Catalyst can be of multiple types considering the process involved and end-use industries.

Key features:

- Protects from impurities.
- Improves process efficiency.
- Not prone to severe conditions.
- Environment friendly

Sn	Product	Description	Photo
1.	Chloride Guard Catalyst	Used in oil & gas and petrochemical industry to remove harmful chloride impurities from process streams. It helps to protect equipment and reduce maintenance costs	
2.	Sulphur Guard	It is made from zinc oxide or copper-based materials, which react with sulphur and trap it permanently. Helps in removing harmful sulphur impurities in oil & gas before they reach sensitive equipment.	
3.	Claus Catalyst	It is made from alumina or titania, work inside special units called Claus converters and are stable at high temperatures. Used in oil & gas and petrochemical industry to safely convert toxic hydrogen sulphide (H_2S) gas into elemental sulphur, which is harmless and useful.	
4.	Hydrotreating Catalysts	It is made from metals like cobalt, nickel, and molybdenum on a strong alumina base, these catalysts improve fuel quality, protect equipment, and help produce ultra-low Sulphur fuels required by environmental regulations. Used in oil & gas and petrochemicals industry to remove harmful impurities such as Sulphur, nitrogen, and metals.	
5.	Reforming Catalysts	It converts fuels like natural gas into hydrogen or synthesis gas, which are essential for many industries. Used in steel industry for steel production through DRI process and in fertilizer industry for hydrogen and ammonia plants.	

2. Adsorbent

It removes unwanted substances from air, gas or liquids by making them stick to its surface.

Key features:

- High absorption capacity.
- Deep drying capabilities.

- Porous and strong structure.
- Withstand harsh conditions

Sn	Product	Description	Photo
1.	Activated Alumina	A porous material that works like a strong sponge to absorb moisture and remove impurities from gases and liquids. Used in oil & gas and petrochemical industry to keep systems clean and dry. Act as support material for catalyst, helping them work effectively.	
2.	Molecular Sieve	A special material with very tiny, uniform holes that act like a high-precision filter to dry and clean gases and liquids. They selectively trap impurities such as moisture, CO_2, and Sulphur compounds, even when present in very small amounts.	

3. Ceramic Balls

It is a small, hard sphere made from ceramic material that is placed inside industrial reactors and towers. It does not take part in any chemical reaction but plays an important support and protection role. Ceramic balls help hold catalyst beds in place, distribute gas or liquid evenly, and prevent sudden pressure or flow from directly hitting and damaging the catalyst.

Key features:

- High resistance to heat, chemicals and wear & tear.
- Ensures uniform distribution of material.
- Protect catalyst and optimize performance.

Sn	Product	Description	Photo
1.	Ceramic & Alumina Balls	Inert support materials placed inside reactors to hold the catalyst firmly and ensure smooth, even flow of gas or liquid. Act like a protective cushion, preventing catalyst damage from uneven flow, pressure surges, or wear & tear.	
2.	Ceramic Tower Packing	Ceramic tower packings are specially shaped ceramic pieces used inside tall process columns to help gases and liquids mix more effectively	

Key Customer Segments Served: Devson Catalyst serves a wide range of core industrial sectors, reflected in its diverse client base that includes oil & gas, petrochemical, fertilizer and steel manufacturers. With a strong portfolio covering catalysts, adsorbents, inert ceramic balls, tower packing, and bed support media, the company supports mission-critical operations across India's energy and manufacturing value chain. Its clientele featuring leading organizations from refining, gas, fertilizers, steel, EPC, petrochemicals, and specialty process industries demonstrates Devson's capability to meet varied operational and process requirements across domestic and international markets.

Key strengths:

- **Comprehensive Product Range**: Devson Catalyst offers a diverse portfolio of products, including Chloride Guard Catalyst, Sulphur Guard Catalyst, Claus Catalyst, Activated Alumina, Molecular Sieves, Inert Ceramic Balls, and Ceramic Tower Packing. This extensive range caters to various industrial applications, ensuring that clients receive tailored solutions to meet their specific needs.
- **Advanced Manufacturing Facilities**: The company operates state-of-the-art manufacturing facilities equipped with the latest technologies. These facilities enable Devson Catalyst to maintain stringent quality control measures, ensuring consistent product performance and reliability across all offerings.
- **Commitment to Research and Development**: Devson Catalyst invests continuously in research and development to enhance product quality and performance. This commitment ensures that the company remains at the forefront of technological advancements, providing innovative solutions to its clients.
- **Global Reach with Local Expertise**: Devson Catalyst has established a strong presence in both domestic and international markets. The company's global reach is backed by a deep understanding of local market dynamics, allowing it to serve a diverse clientele effectively.
- **Focus on Sustainable Practices**: Devson Catalyst emphasizes sustainable industrial practices by providing solutions that enhance efficiency and reduce costs. The company's products are designed to contribute to environmentally friendly operations, aligning with global sustainability goals.
- **Strategic Positioning as an Indigenous MSME**: Devson Catalyst operates as a fully indigenous MSME enterprise, benefitting from national initiatives that promote domestic manufacturing and technological self-reliance under Make in India. The company's presence in the catalyst and advanced materials segment identified as a strategic area for India's refining, petrochemical, fertilizer, and clean energy industries provides it with a clear domestic edge. By manufacturing catalysts and adsorbents locally, Devson offers competitive pricing, shorter supply chains, and faster responsiveness to customer requirements compared to import-dependent alternatives. Its MSME status enables access to policy-driven incentives such as priority in PSU procurement, R&D support, and subsidized finance, strengthening scalability and operational flexibility

- **Trusted Supplier with Proven Track Record**: Devson Catalyst has built a reputation as a reliable and trusted supplier over years of consistent performance. The company meets stringent client specifications, delivering catalysts, adsorbents, and ceramic balls that adhere to exacting quality standards. This long-term credibility enables strong relationships with both Indian and global customers, creating a significant competitive advantage over new entrants.
- **Strong Operational and Technical Capabilities**: Success in this industry requires robust technical expertise and operational excellence, which Devson Catalyst has developed over decades. The company ensures timely supply, consistent product quality, and process reliability across multiple regions. These capabilities, combined with its ability to adapt to evolving client needs, strengthen its entrenched position in the market and make it challenging for newcomers to compete.
- Strategic Exposure to India's Petrochemical Growth**:** India is currently one of the largest refiners and producers of petrochemicals, and this position is expected to strengthen over the long term, supported by favorable demographics and rising domestic demand. With the majority of Devson Catalyst's revenue derived from the petrochemical industry, the company is well positioned to significantly benefit from sustained growth in India's petrochemical sector, supporting long-term demand for its catalysts and adsorbents.

Financial Analysis:

Particular	Unit	Devson Catalyst Limited			
		As at end for Fiscal			
		As of September 30th2025	Fiscal 2025	Fiscal 2024	Fiscal 2023
Revenue from operations (1)	₹ in lakhs	3,133.20	5,319.21	4,346.99	3,253.15
Total Income (2)	₹ in lakhs	3,183.89	5,353.89	4,375.04	3,274.64
EBITDA (3)	₹ in lakhs	882.27	1,093.17	669.08	360.47
EBITDA Margin (4) **(%)**	in %	27.71%	20.42%	15.29%	11.01%
Profit after Tax (5)	₹ in lakhs	663.35	767.23	407.84	233.55
Current Ratio (6)	In Times	4.49	3.26	1.81	1.66
Debt Equity Ratio (7)	In Times	0.04	0.13	0.33	0.15
Debt Service Coverage Ratio (8)	In Times	3.55	7.72	95.30	2.53
Return on Capital Employed (%) (9)	in %	31.11%	44.71%	36.67%	32.37%
Net profit Ratio (%) (10)	in %	21.17%	14.42%	9.38%	7.18%
Return on Equity (%) (11)	in %	27.31%	44.76%	36.20%	29.26%
Net Worth (12)	₹ in lakhs	2,761.08	2,097.73	1,330.50	922.66

Note: We have considered standalone figures.

Parameter	Formula
Revenue from operations	Revenue from operations is calculated as the sum of revenue from sale.
Total Income	Total income is calculated as the sum of revenue from operations and other income for the period/year.
EBITDA	Operating EBITDA refers to earnings before interest, taxes, depreciation, amortisation, gain or loss from discontinued operations and exceptional items.
EBITDA Margin	Operating EBITDA Margin refers to EBITDA during a given period as a percentage of Total income during that period.
Profit after Tax	Profit / (loss) for the period/ year is calculated as Total Income less Total Expenses plus Share of (loss) from joint

	ventures (Net of tax) less Total Tax expenses for the period/ year.
Current Ratio	Current Ratio is a liquidity ratio that measures our ability to pay short-term obligations (those which are due within one year) and is calculated by dividing the current assets by current liabilities.
Debt Equity Ratio	Debt to equity ratio is calculated by dividing the debt (i.e., borrowings (current and non-current) and current maturities of long-term-borrowings) by total equity (which includes issued capital and all other equity reserves).
Debt Service Coverage Ratio	Debt Service Coverage Ratio is calculated by dividing the sum of Profit after Tax and interest amount by sum of the repayment of loan and Interest.
Return on Capital Employed	RoCE is calculated as profit before tax plus finance costs divided by total equity plus Reserves & Surplus.
Net profit Ratio	(Net Profit Ratio/Margin quantifies our efficiency in generating profits from revenue and is calculated by dividing net profit after taxes by total revenue.
Return on Equity	Return on equity (RoE) is equal to profit for the year divided by the total equity during that period and is expressed as a percentage
Net Worth	Equity Share Capital + Reserve and Surplus (including surplus in the Statement of Profit & Loss) – Preliminary Expenses to the extent not written-off.