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Pipelines of Progress: Global and Indian Steel Tubes & Pipes Industry

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List of Abbreviations

AMRUT – Atal Mission for Rejuvenation and Urban Transformation	FY – Financial Year
API – American Petroleum Institute	GAIL – Gas Authority of India Limited
APL – Above Poverty Line	GDP – Gross Domestic Product
ASTM – American Society for Testing and Materials	GI – Galvanized Iron
BIS – Bureau of Indian Standards	GJ – Gigajoule
BOF – Basic Oxygen Furnace	GNDI – Gross National Disposable Income
BSE – Bombay Stock Exchange	GP – Galvanized Plain
CAGR – Compound Annual Growth Rate	GST – Goods and Services Tax
CE – Conformité Européenne (European Conformity)	GVA – Gross Value Added
CGD – City Gas Distribution	HR – Human Resources
CMIE – Centre for Monitoring Indian Economy	HRC – Hot Rolled Coil
CNG – Compressed Natural Gas	HSAW – Helical Submerged Arc Welded
COO – Chief Operating Officer	HSLA – High Strength Low Alloy
COVID – Coronavirus Disease	IBEF – India Brand Equity Foundation
CPI – Consumer Price Index	IF – Induction Furnace
CR – Cold Rolled	IIP – Index of Industrial Production
CRC – Cold Rolled Coil	IMF – International Monetary Fund
CRFH – Cold Rolled Full Hard	INR – Indian Rupee
CY – Calendar Year	IOCL – Indian Oil Corporation Limited
DCS – Distributed Control System	IRC – Indian Roads Congress
DFC – Dedicated Freight Corridor	IS – Indian Standard
DFT – Dry Film Thickness	ISI – Indian Standards Institution
DRI – Direct Reduced Iron	ISO – International Organization for Standardization
EAF – Electric Arc Furnace	JJM – Jal Jeevan Mission
EBITDA – Earnings Before Interest, Tax, Depreciation, and Amortization	LFPR – Labour Force Participation Rate
EMS – Environmental Management System	MOSPI – Ministry of Statistics and Programme Implementation
EN – European Norm	MS – Mild Steel
EPC – Engineering, Procurement, and Construction	MT – Million Tonnes
ERP – Enterprise Resource Planning	MTPA – Million Tonnes Per Annum
ERW – Electric Resistance Welded	MW – Megawatt
ESG – Environmental, Social, and Governance	NHAI – National Highways Authority of India
EV – Electric Vehicle	NIP – National Infrastructure Pipeline
	NMDC – National Mineral Development Corporation
	OEM – Original Equipment Manufacturer
	OHSAS – Occupational Health and Safety Assessment Series

FE – Foreign Exchange
PAT – Profit After Tax
PE – Provisional Estimate
PESTLE – Political, Economic, Social, Technological, Legal, and Environmental
PFCE – Private Final Consumption Expenditure
PIB – Press Information Bureau
PLFS – Periodic Labour Force Survey
PLI – Production Linked Incentive
PM – Prime Minister
PMAY – Pradhan Mantri Awas Yojana
PMI – Purchasing Managers' Index
PNGRB – Petroleum and Natural Gas Regulatory Board
PPP – Purchasing Power Parity
RBI – Reserve Bank of India
RINL – Rashtriya Ispat Nigam Limited
ROCE – Return on Capital Employed
RONW – Return on Net Worth
SAIL – Steel Authority of India Limited
SAW – Submerged Arc Welded
SCADA – Supervisory Control and Data Acquisition
SEBI – Securities and Exchange Board of India
SGS – Société Générale de Surveillance
SWOT – Strengths, Weaknesses, Opportunities, and Threats
TMCP – Thermo-Mechanically Controlled Process
UAE – United Arab Emirates
USA – United States of America
USD – United States Dollar
WEO – World Economic Outlook

1. Global Macroeconomic Scenario

1.1 Global GDP Growth Scenario

As per the IMF's World Economic Outlook (WEO) Update published in July 2026, global growth is projected to slow to 3.0% in CY 2026, down from an average of 3.5% in CY 2024–25, before recovering to 3.4% in CY 2027. This is broadly unchanged on a cumulative basis compared with the April 2026 WEO, though it conceals sharp divergence across countries. The moderation reflects the negative supply shock from the conflict in the Middle East and associated disruptions to energy flows through the Strait of Hormuz, which is being partly offset by an accelerating global technology cycle driven by artificial intelligence (AI)-related investment and adoption. Economies well integrated into the AI/technology value chain—including Taiwan, Korea, Thailand and Malaysia—have significantly outperformed expectations, while energy-importing economies with limited exposure to the technology upturn, including many low-income countries, continue to face a more pronounced drag.

Global headline inflation is projected to rise from 4.1% in CY 2025 to 4.7% in CY 2026, before easing to 3.9% in CY 2027, marking a stalling of the disinflation trend that had been in place since early 2024. The upward revision (0.3 percentage point higher than the April 2026 WEO for 2026) reflects higher energy and food prices, with crude oil prices projected to rise by approximately 32% and natural gas prices by about 22% in 2026 relative to 2025. World trade volume growth is projected to slow sharply from 5.0% in 2025 to 3.5% in 2026, before recovering to 4.3% in 2027, reflecting tariff-related drag and the gradual adjustment of global trade and production linkages.

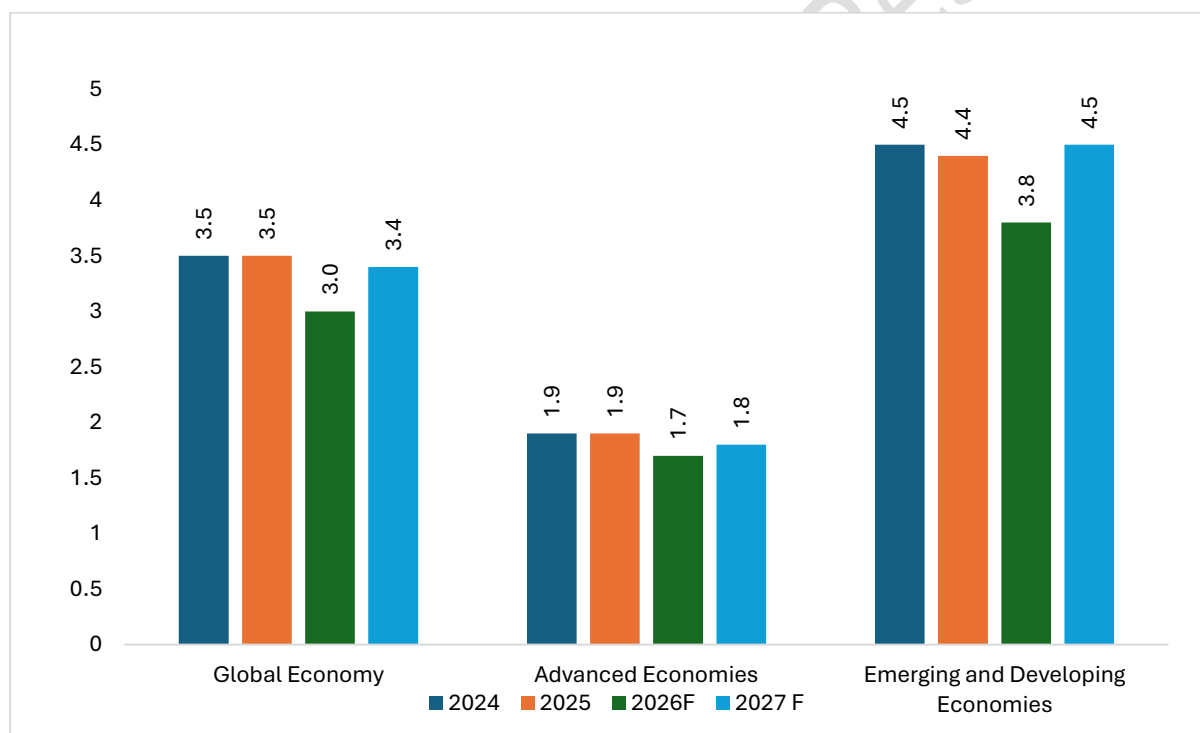
In China, growth is projected to slow to 4.6% in CY 2026 (down from 5.0% in CY 2025) and further to 4.1% in CY 2027, as elevated global oil prices, structural headwinds and continued property sector weakness weigh on activity, notwithstanding stronger-than-expected exports and high-tech manufacturing. In the Euro Area, growth is projected to slow to 0.9% in CY 2026 before improving to 1.2% in CY 2027, reflecting the drag from higher energy prices, a sizable negative carryover from the first quarter, and weak consumer confidence; Germany's growth is projected at 0.7% in CY 2026, improving to 1.0% in CY 2027, supported by net exports and fiscal measures.

Meanwhile, India is expected to remain among the fastest-growing major economies despite an increasingly uncertain global environment. According to the IMF, India's real GDP growth is projected at 6.4% in FY2026–27 and 6.7% in FY2027–28, supported by resilient private consumption, robust services activity and domestic demand. On a calendar-year basis, the IMF projects India's economy to expand by 7.0% in 2026 and 6.4% in 2027. Consumer price

inflation is expected to remain broadly contained, supporting macroeconomic stability even as global inflationary pressures persist.

Overall, while global growth in CY 2025 remained resilient, the outlook for CY 2026 reflects a genuine crosscurrent—a war-driven supply shock pulling growth down, countered by an AI/technology-led investment boom pushing growth up in select economies. Risks to the outlook remain tilted to the downside, with renewed Middle East conflict, trade fragmentation, and a potential correction in AI-driven valuations as the key threats, while a swifter energy-market normalisation and stronger technology investment present the main upside. India's relative macroeconomic stability, resilient domestic demand, and continued investment momentum position it favourably amid these global crosscurrents.

1.2 Historical GDP Growth Trends



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.). F – Forecast, Source – IMF World Economic Outlook July 2026

In CY 2024, global growth remained resilient at 3.5%, supported by easing inflation and improved supply chain conditions. Advanced economies expanded by 1.9%, while emerging and developing economies recorded stronger growth of 4.5%, reflecting continued resilience across developing markets.

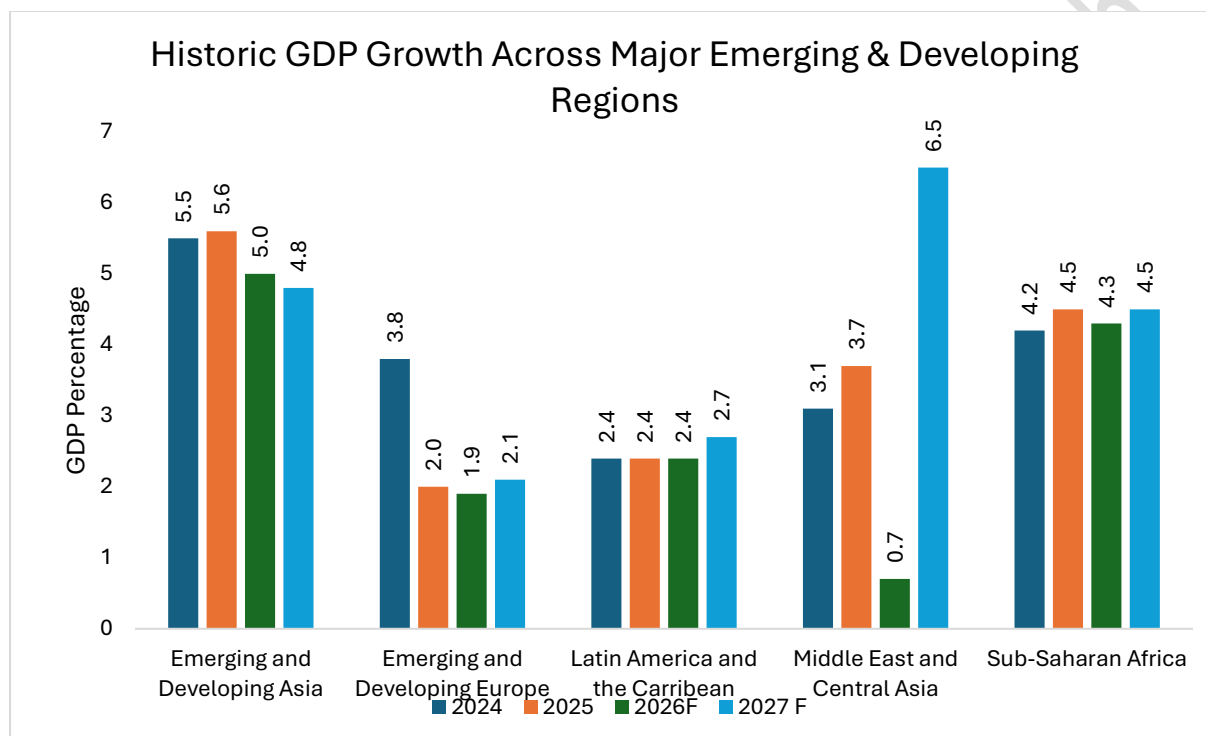
In CY 2025, global GDP growth remained stable at 3.5%, despite ongoing geopolitical tensions and structural challenges. Advanced economies maintained growth at 1.9%, while emerging and developing economies continued to outperform with growth of 4.5%.

Global growth is projected to moderate to 3.0% in CY 2026, reflecting the impact of higher energy prices, geopolitical tensions, and trade-related headwinds. Advanced economies are expected to grow at 1.7%, while emerging and developing economies are projected to expand by 3.8%.

Growth is expected to recover to 3.4% in CY 2027, supported by improving global trade conditions and continued investment momentum. Advanced economies are forecast to grow at 1.8%, while emerging and developing economies are projected to expand by 4.5%, highlighting their continued resilience relative to advanced economies.

1.3 GDP Growth Across Major Regions

GDP growth across major global regions—including Europe, Latin America & the Caribbean, Middle East & Central Asia, and Sub-Saharan Africa—continues to display varied trajectories. While some regions are stabilizing post-pandemic, others remain challenged by structural and cyclical issues. The global outlook presents a mixed scenario, with emerging economies continuing to outperform advanced economies.



Source-IMF World Economic Outlook July 2026 update.

In Emerging and Developing Asia, growth stood at 5.5% in CY 2024 and increased to 5.6% in CY 2025. Growth is projected to moderate to 5.0% in CY 2026 and further to 4.8% in CY 2027. The moderation reflects weaker external demand, trade-related uncertainty, and spillovers from slower growth in China, partly offset by resilience in domestic demand across major economies, with India continuing to act as a key growth driver.

Emerging and Developing Europe recorded growth of 3.8% in CY 2024, moderating to 2.0% in CY 2025 and 1.9% in CY 2026, before improving to 2.1% in CY 2027. The region continues to face structural manufacturing weakness, geopolitical spillovers and subdued external demand, although gradual stabilization in trade and domestic demand is expected to support recovery.

For Latin America and the Caribbean, growth stood at 2.4% in CY 2024 and remained unchanged at 2.4% in CY 2025 and CY 2026, before improving to 2.7% in CY 2027. The modest outlook reflects weak productivity trends, fiscal constraints, and subdued external demand, partially supported by improving macroeconomic stability and policy credibility.

In the Middle East and Central Asia, growth stood at 3.1% in CY 2024 and improved to 3.7% in CY 2025, before declining sharply to 0.7% in CY 2026 and rebounding to 6.5% in CY 2027. This volatility reflects geopolitical disruptions, particularly conflicts affecting energy markets, alongside fluctuations in commodity prices and regional uncertainty.

Sub-Saharan Africa recorded growth of 4.2% in CY 2024, improving to 4.5% in CY 2025. Growth is projected to moderate slightly to 4.3% in CY 2026 before improving to 4.5% in CY 2027. Growth is supported by improving domestic demand and supply conditions, although structural constraints, high debt levels and commodity price volatility continue to pose risks.

Overall, while regional growth trajectories remain uneven, emerging and developing economies are expected to continue outperforming advanced economies, supported by relatively stronger domestic demand and favourable demographics. However, disparities persist due to structural challenges, geopolitical tensions, and commodity market volatility.

1.4 Global Economic Outlook

At the current juncture in CY 2026, the global economy continues to exhibit mixed performance, with divergence in outcomes across regions driven by differences in growth dynamics, inflation trends, geopolitical exposure, and policy responses. While the global economy had shown resilience through technology-led investment, accommodative financial conditions, and reduced tariff pressures, the broader outlook has weakened due to the outbreak of conflict in the Middle East, disruptions in energy markets, and elevated geopolitical risks. Structural headwinds, including tighter financial conditions, geoeconomic fragmentation, and subdued productivity growth, continue to keep global growth below historical averages.

The United States continues to demonstrate relative resilience among advanced economies, though growth is moderating as the economy absorbs the lagged effects of prior policy tightening and softer labour market conditions. Across advanced economies, growth is projected at 1.7% in CY 2026, constrained by weak industrial activity, lower productivity growth, and cautious business investment. In Europe, growth conditions remain subdued, with persistent manufacturing weakness, energy-related uncertainties, and weak external demand weighing on activity, although gradual monetary easing and fiscal support may provide some stabilization.

In China, growth prospects remain constrained by continued property sector stress, weak domestic demand, and changing trade dynamics, although export-oriented sectors and technology-linked investment continue to provide support. In contrast, India remains among the strongest-performing major economies, with GDP growth projected at 7.0% (calendar year basis) in CY 2026, supported by resilient domestic demand, sustained infrastructure investment, digitalisation, and structural reforms. Broader Emerging and Developing Asia continues to outperform other regions, although growth is moderating amid weaker global trade momentum.

In Latin America and the Caribbean, growth remains modest amid fiscal constraints, weak productivity trends, and subdued external demand, although improving macroeconomic management in some economies provides support. Sub-Saharan Africa is expected to see gradual strengthening supported by improving supply conditions and domestic demand recovery, while the Middle East and Central Asia face a more volatile outlook due to direct spillovers from conflict-related disruptions and uncertainty in commodity markets. The impact of energy supply risks, including disruptions related to the Strait of Hormuz, has increased downside risks for commodity-importing economies and vulnerable emerging markets.

Globally, inflation dynamics have become more challenging. Global headline inflation is projected to rise to 4.7% in CY 2026 from 4.1% in CY 2025, reflecting the inflationary effects of higher energy prices, supply-side disruptions, and second-round pressures. Central banks

are therefore expected to remain vigilant, with policy responses remaining cautious and data dependent. While monetary easing had been expected to support demand, renewed inflation risks may delay or moderate the pace of policy normalization in several economies.

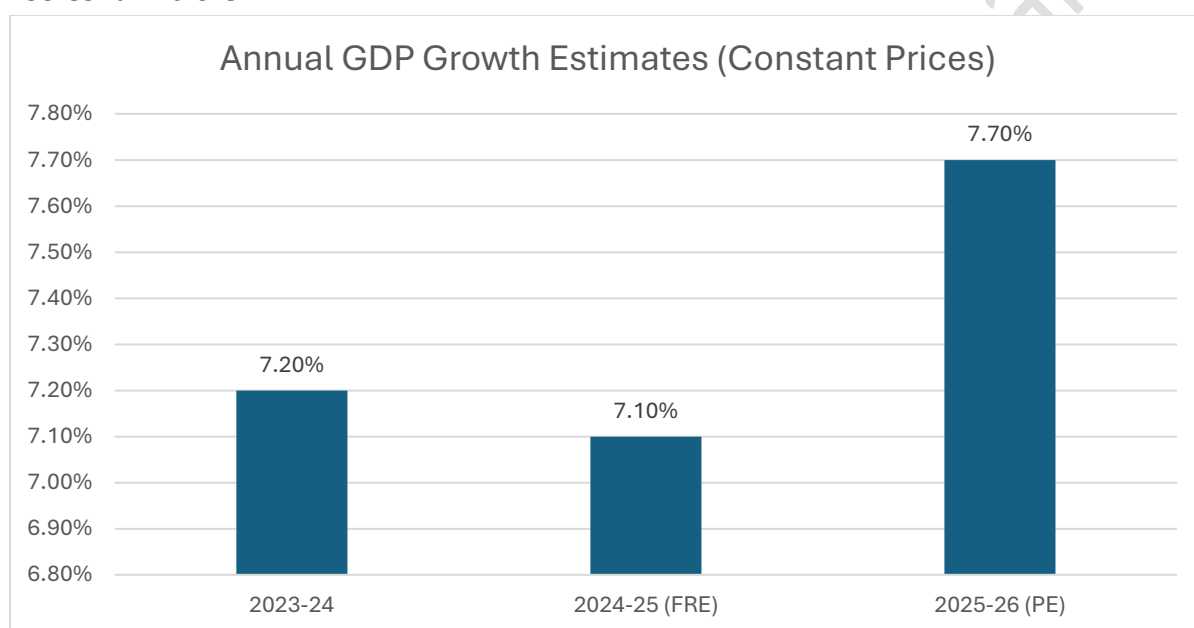
Looking ahead, the medium-term outlook remains one of slower but stable growth, with global GDP projected at 3.4% in CY 2027, following a moderation to 3.0% in CY 2026, below the long-term historical average. Advanced economies are expected to remain on a structurally lower growth path, while emerging and developing economies continue to provide the primary engine of global growth. Future prospects will depend significantly on the evolution of geopolitical tensions, the normalization of energy markets, progress in restoring trade stability, and the extent to which productivity gains from technological innovation, including artificial intelligence, translate into broader economic growth. The IMF also highlights that structural reforms, multilateral coordination, and strengthened macroeconomic resilience will be critical to sustaining growth momentum over the medium term.

Overall, while the global economy remains resilient, the outlook has become more fragile amid elevated downside risks. Growth in CY 2026 and beyond is expected to remain below historical averages, shaped by geopolitical uncertainty, tighter financial conditions, and structural constraints, although emerging economies—particularly India and broader Asia—continue to provide relative support to global growth.

2. India's Macroeconomic Scenario

2.1 Gross Domestic Product (GDP)

According to the latest Provisional Estimates by MOSPI, GOI (05 June 26), Real GDP has been estimated to grow by 7.7% in FY 2025-26. Nominal GDP has witnessed a growth of 8.9%. Real GDP or GDP at Constant Prices is estimated to attain a level of INR 323.12 lakh crore in the FY 2025-26, against the First Revised Estimate (FRE) of GDP for the year 2024-25 of INR 299.89 lakh crore.



Note: FRE - First Revised Estimates; PE – Provisional Estimate

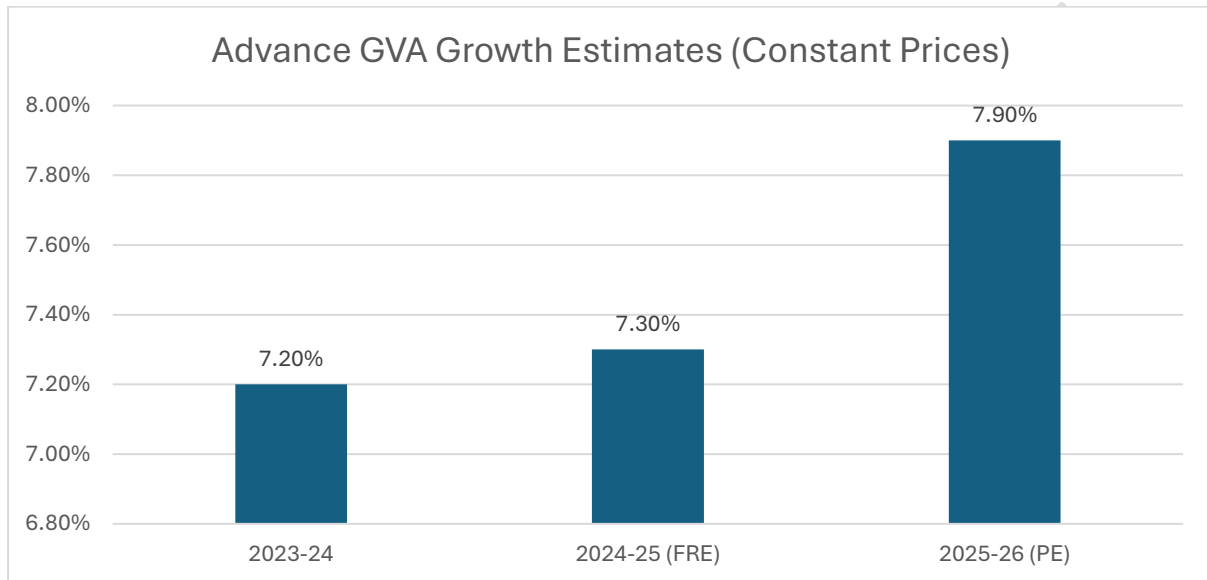
Source: New Series of Gross Domestic Product (GDP) Estimates with Base Year 2022-23 by MOSPI, PIB Press Release dated 05 June 2026).

According to the International Monetary Fund (IMF) World Economic Outlook Database (April 2026), India is estimated to be the sixth-largest economy in the world in 2026, with a Gross Domestic Product (GDP) of approximately USD 4.15 trillion at current prices. India's ranking reflects the latest national accounts data, including the revised GDP series released by the Government of India, which changed the base year from FY 2011-12 to FY 2022-23. India's position in the global ranking is influenced by the revised GDP estimates and the depreciation of the Indian Rupee against the U.S. Dollar.

The economies ranked ahead of India are the United States (USD 32.38 trillion), China (USD 20.85 trillion), Germany (USD 5.45 trillion), Japan (USD 4.38 trillion), and the United Kingdom (USD 4.26 trillion).

2.2 Gross Value Added (GVA)

According to the Provisional Estimate of GDP for 2025-26 by MOSPI, Govt. of India (GoI), Real GVA is estimated at INR 294.91 lakh crore in the year 2025-26, against INR 273.36 lakh crore in FY 2024-25, registering a growth rate of 7.9% as compared to 7.3% growth rate in 2024-25. Nominal GVA is estimated to attain a level of INR 314.87 lakh crore during FY 2025-26, against INR 288.54 lakh crore in 2024-25, showing a growth rate of 9.1%.

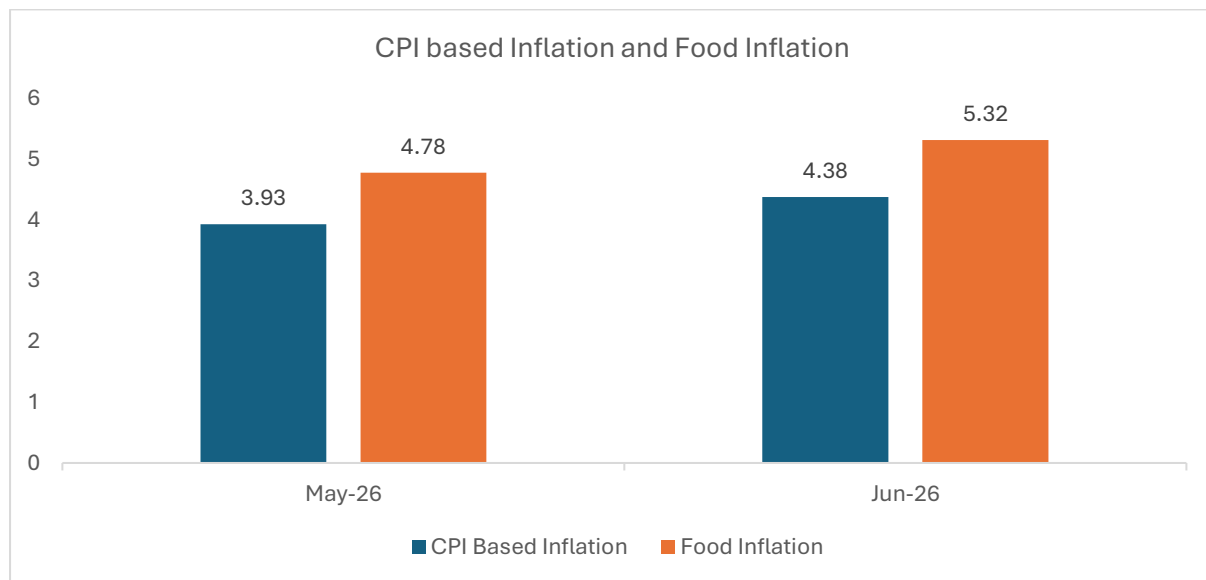


Note: FRE - First Revised Estimates; PE – Provisional Estimate

Source: New Series of Gross Domestic Product (GDP) Estimates with Base Year 2022-23 by MOSPI, PIB Press Release dated 05 June, 2026)

2.3 Consumer Price Index (CPI)

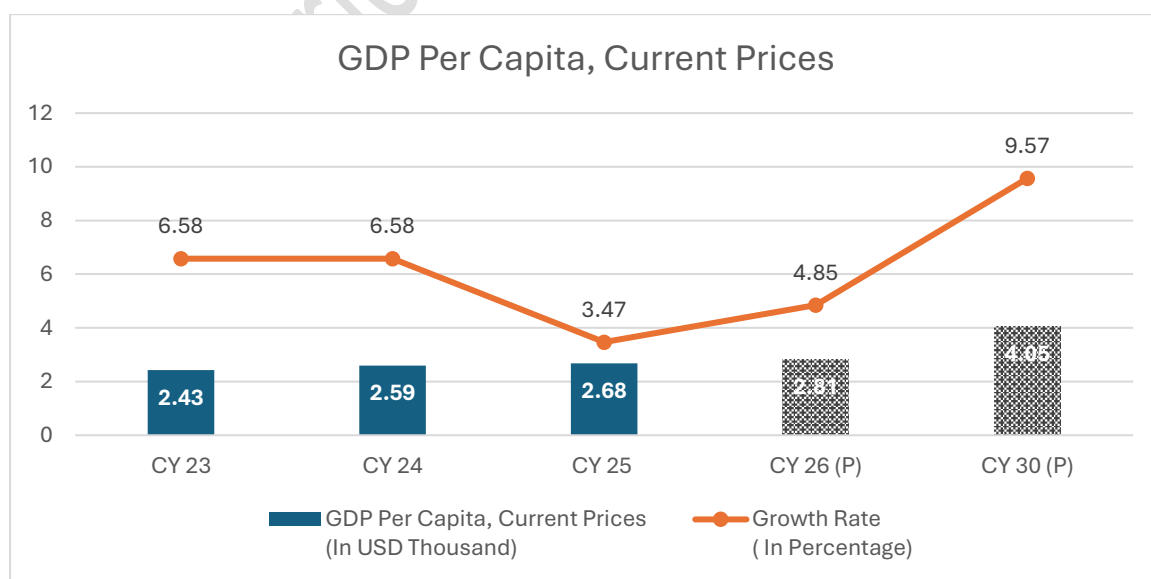
Year-on-year inflation rate based on All India Consumer Price Index (CPI) with base year 2024 for the month of June 2026 over June, 2025 is 4.38%(Provisional). Corresponding inflation rates for rural and urban are 4.74% and 3.92%, respectively.



Source: MOSPI, GOI, 13 July 2026

2.4 India Per Capita GDP Forecast

Per capita GDP growth for India is estimated at 9.57 % CAGR between FY 2026-FY 2030. Increased individual incomes are expected to create additional discretionary spending, which may be beneficial for the sector.



Note: E = Estimated, P = Projected

Source: IMF Data Mapper, World Economic Outlook April 2026, India, GDP Per Capita

2.5 Private Final Consumption Expenditure (PFCE)

Private Final Consumption Expenditure (PFCE) represents the total spending by resident households on final consumption of goods and services, serving as a key indicator of consumer demand and overall economic well-being. It reflects the extent of household consumption and plays a crucial role in driving GDP growth. PFCE, at constant prices, accounted for 55.7% of GDP in FY2026 (same as FY2025). This marks a gradual moderation from 56.4% in FY2024 and 57.1% in FY2023, indicating a relative shift in the composition of economic growth. The decline is primarily attributable to higher changes in stocks (inventory build-up), which increased the share of investment components in GDP, even as household consumption continues to remain a key driver of the economy.

Source: - MOSPI, Press Note on New Series of GDP Estimates with Base Year 2022-23, Provisional Estimates of Annual Gross Domestic Product For 2025-26 released on June 05th, 2026.

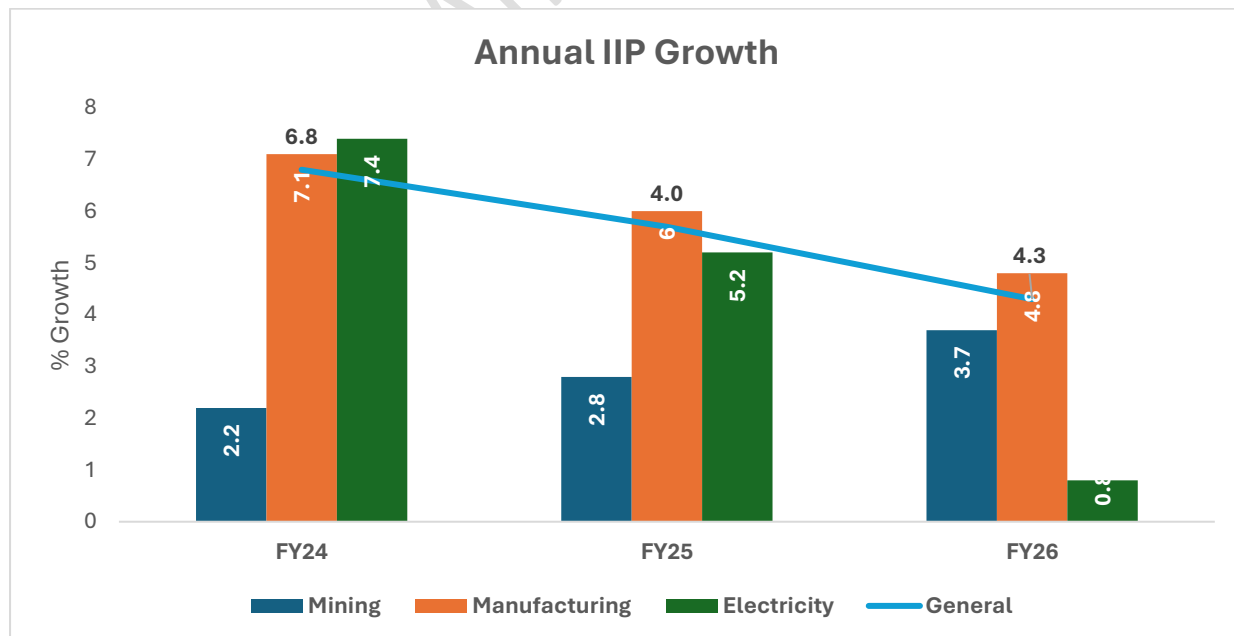
2.6 IIP Growth – Index of Industrial Production

As per the Index of Industrial Production (IIP), industrial output grew by 7.3% in June 2026, indicating an improvement in industrial activity compared with the 5.7% growth recorded during FY 2025. IIP growth had moderated from 6.8% in FY 2024 to 5.7% in FY 2025, reflecting a moderation in industrial momentum during the year. The subsequent acceleration in June 2026 indicates a strengthening in industrial activity, supported by improved output across key industrial segments.

Among key components:

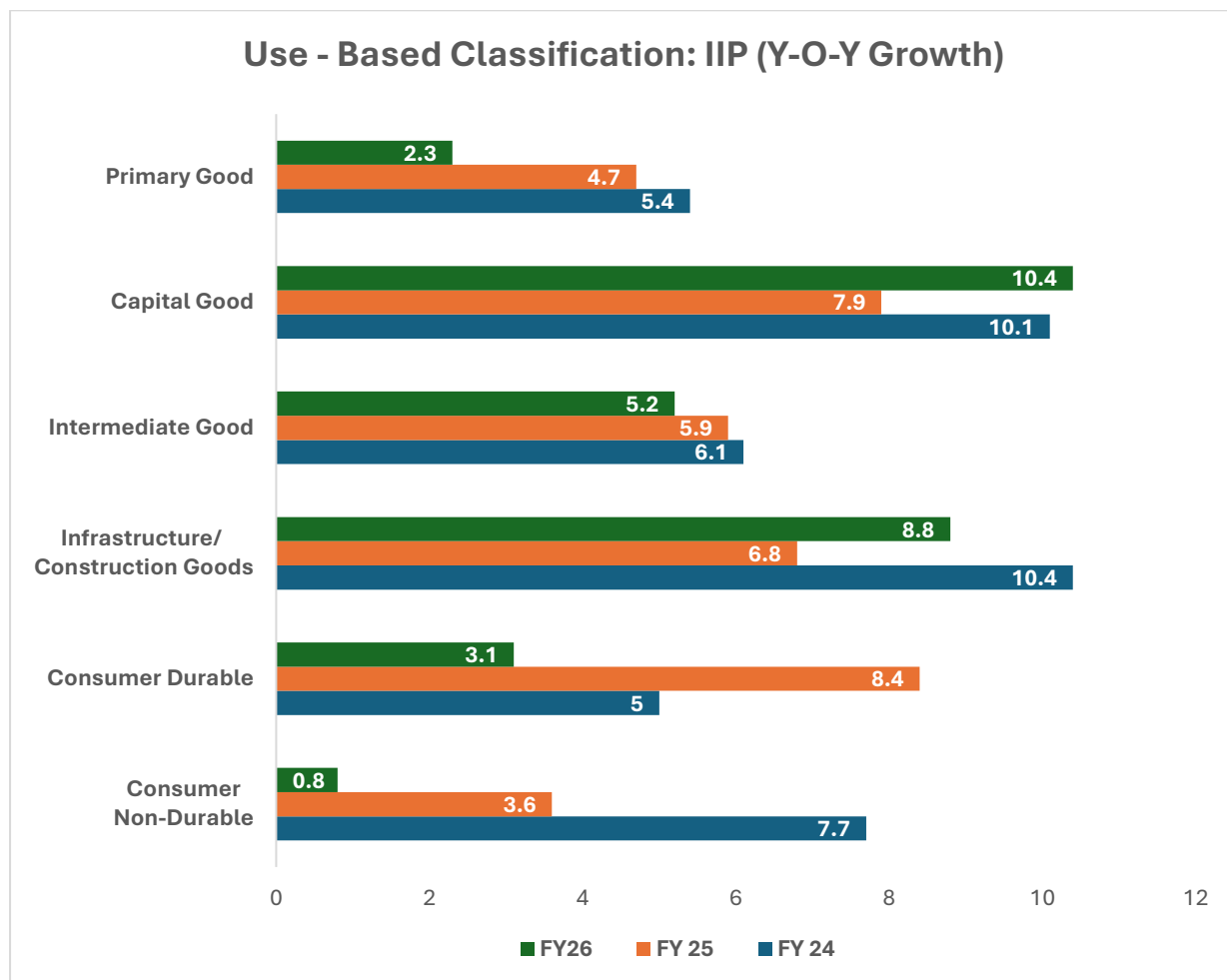
- Manufacturing, which carries a 77.6% weight in the IIP, recorded 4.8% growth in FY 2026, compared with 6.0% growth in FY 2025, following 7.1% in FY 2024, indicating a moderation in manufacturing activity during FY 2026.
- Mining recorded 3.7% growth in FY 2026, compared with 2.8% growth in FY 2025 and 2.2% in FY 2024, indicating an improvement in mining activity during FY 2026.
- Electricity registered 0.8% growth in FY 2026, compared with 5.2% in FY 2025 and 7.4% in FY 2024, reflecting a significant moderation in electricity output during FY 2026.
- Overall IIP growth stood at 4.3% in FY 2026, compared with 5.7% in FY 2025 and 6.8% in FY 2024, indicating a broad moderation in industrial activity during FY 2026.

This slowdown indicates tightening domestic demand and spillover effects from a weaker global industrial cycle.



Source: Ministry of Statistics & Programme Implementation (MOSPI); Base Year 2022-23

Use-Based Classification Trends:



Source: Ministry of Statistics & Programme Implementation (MOSPI); Base Year 2022-23. Link: <https://www.mospi.gov.in/themes/product/54-index-of-industrial-production>, last accessed on 10 August 2026.

According to the use-based classification:

- Capital Goods growth improved to 10.4% in FY 2026 from 7.9% in FY 2025, following 10.1% in FY 2024, indicating a recovery in investment-oriented industrial activity.
- Primary Goods growth moderated further to 2.3% in FY 2026 from 4.7% in FY 2025, following 5.4% in FY 2024, reflecting a continued deceleration in the segment.
- Intermediate Goods growth moderated to 5.2% in FY 2026 from 5.9% in FY 2025, after recording 6.1% in FY 2024, indicating a slight easing in industrial input demand.
- Infrastructure/Construction Goods recorded the strongest growth among the major use-based categories at 8.8% in FY 2026, improving from 6.8% in FY 2025, following 10.4% in FY 2024, reflecting sustained momentum in infrastructure and construction-related activities.

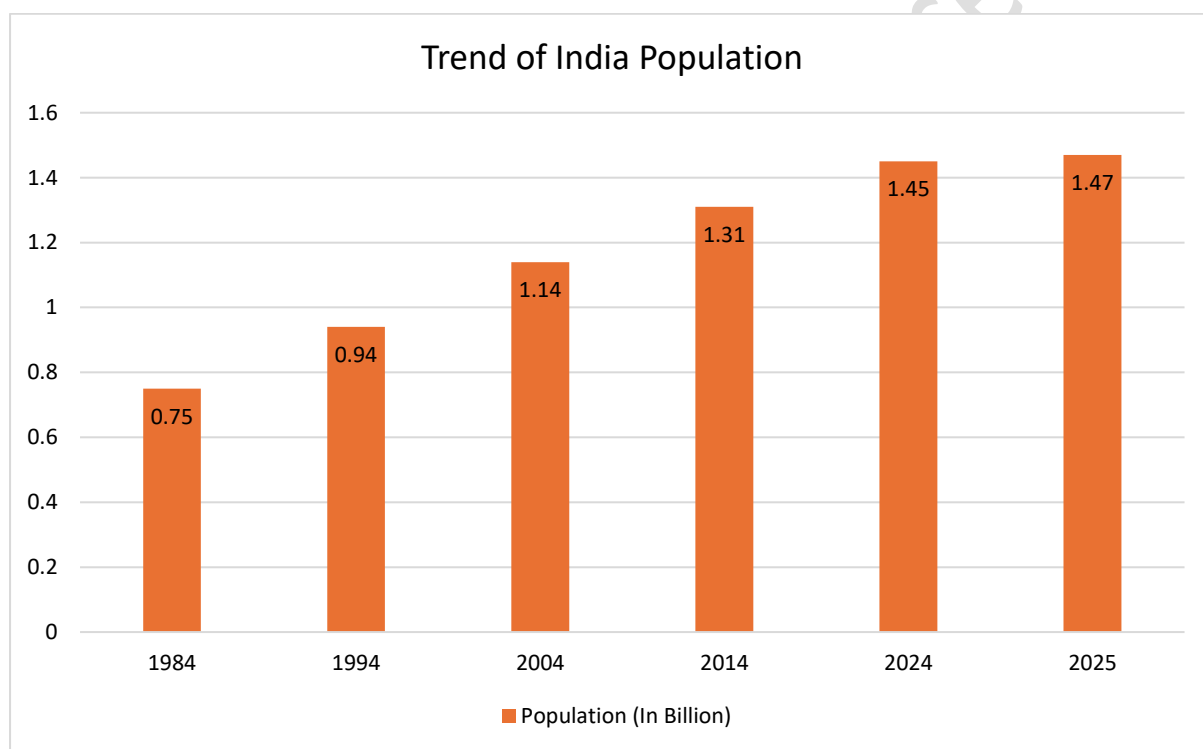
- Consumer Durables growth moderated to 3.1% in FY 2026 from 8.4% in FY 2025, after recording 5.0% in FY 2024, indicating softer demand for durable consumer goods.
- Consumer non-durables registered 0.8% growth in FY 2026, compared with 3.6% growth in FY 2025 and 7.7% in FY 2024, reflecting a significant moderation in demand for non-durable consumer goods.

The use-based classification indicates a broad-based improvement in industrial activity in FY 2026, led by Infrastructure/Construction Goods, Capital Goods and Intermediate Goods. Consumer Durables continued to grow, albeit at a slower pace, while Primary Goods recorded a sustained moderation and Consumer Non-Durables remained subdued.

2.7 Overview on Key Demographic Parameters

2.7.1 Population growth

India's economic trajectory and consumption dynamics are closely tied to its demographic shifts. India's population expanded from approximately 0.75 billion in 1984 to 1.45 billion in 2024 and is further reached around 1.47 billion in 2025, consolidating its position as the world's most populous nation. This sustained growth underlines the emergence of a vast labour force and consumer base, which is essential for driving long-term economic growth, supporting rising consumption demand and strengthening the country's overall economic potential.



Source: World Bank Database. Population Data 2025 - Worldometer, Infomerics Analytics & Research

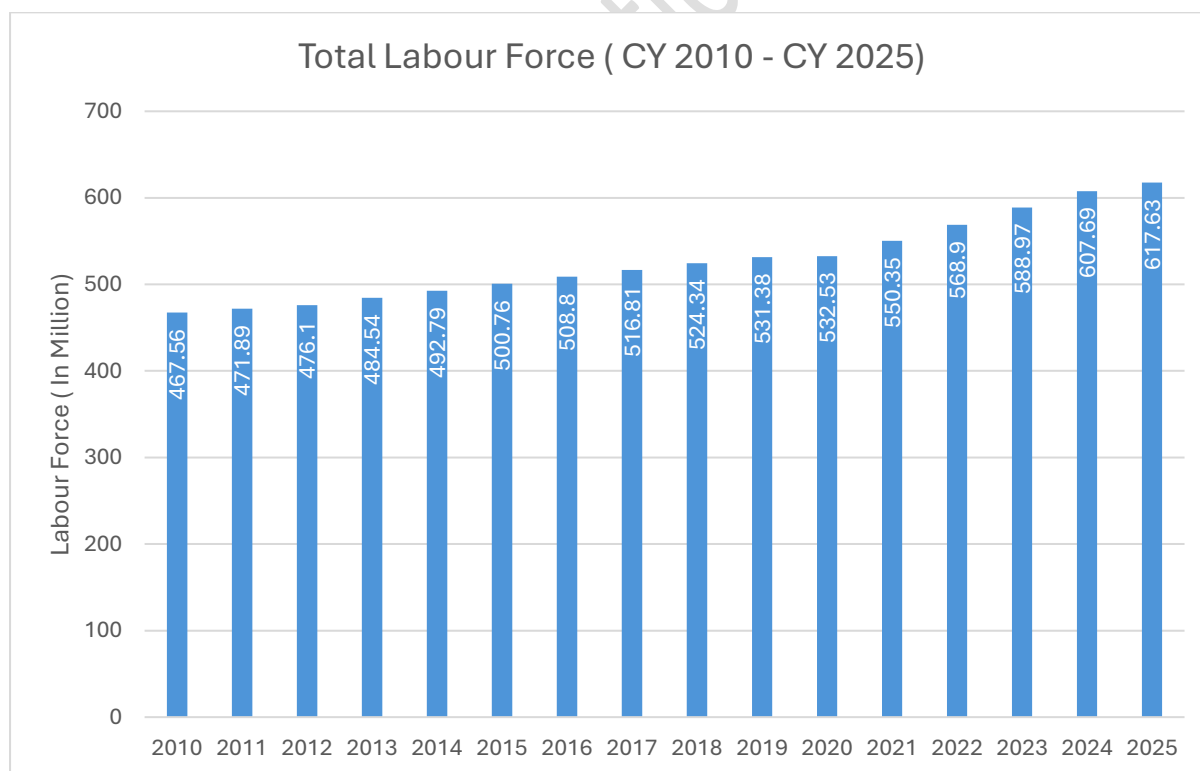
2.7.2 Labour Force in India

India's labour force has experienced steady growth over the past decade. In 2010, the total labour force was approximately 467.56 million. By 2025, this number had increased to 617.63 million.

This upward trend underscores the expanding working-age population, improving labour force participation and gradual recovery in employment post the pandemic period. The sharp increase observed after 2020 highlights the rebound in economic activity and rising workforce engagement across sectors. However, it also emphasizes the need for sustained job creation to effectively absorb the growing labour pool.

The labour force participation rate (LFPR) has also witnessed variations over time due to changing socio-economic conditions, including urbanization, education levels and sectoral employment shifts.

These trends highlight the importance of implementing policies that not only generate employment opportunities but also improve job quality, productivity and inclusivity across key sectors of the economy.



Source: World Bank Database

2.7.3 Labour Laws in India

Labour is a subject under the Concurrent List of the Indian Constitution, enabling both the Central and State Governments to frame relevant legislation. In a major reform initiative, the Government of India has consolidated 29 existing central labour laws into four comprehensive Labour Codes to simplify compliance, reduce multiplicity of definitions, and promote transparency. These include:

- The Code on Wages, 2019
- The Industrial Relations Code, 2020
- The Code on Social Security, 2020
- The Occupational Safety, Health and Working Conditions Code, 2020

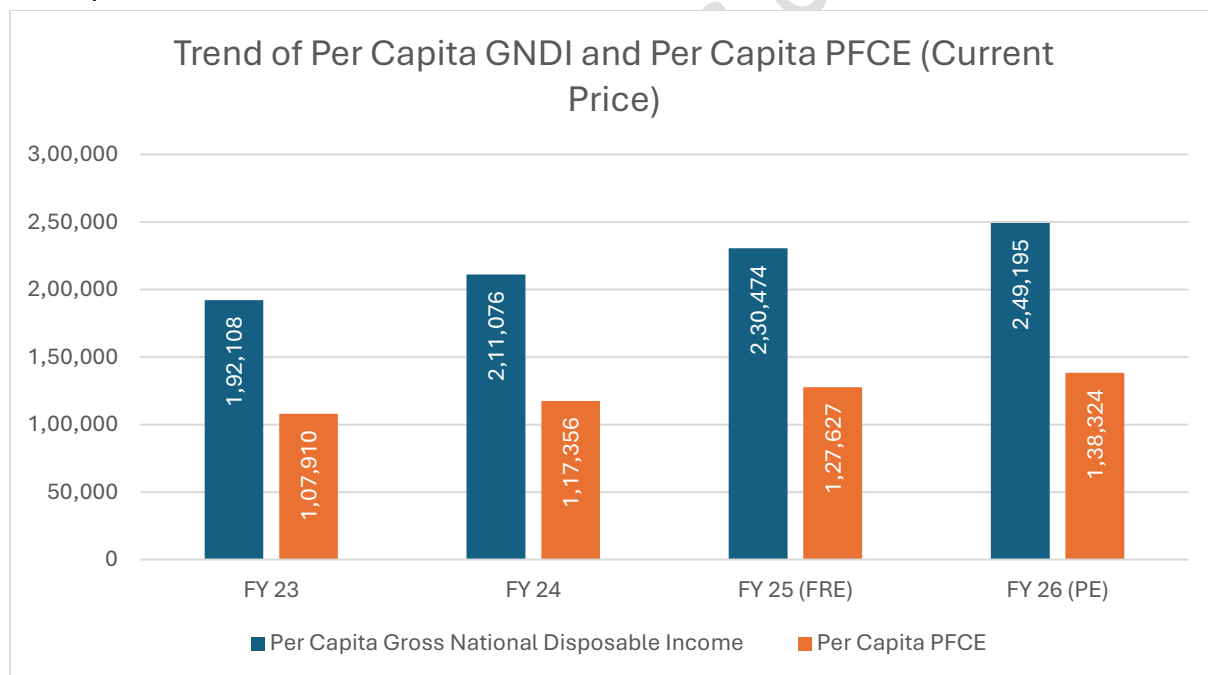
As of 31st December 2024, the Central Government and most States/Union Territories had pre-published draft rules under all four Labour Codes. Regional consultations were held to align state-level rules with the central framework. Once fully implemented, these Codes are expected to harmonize the needs of workers and industry, facilitate ease of doing business, and support employment generation.

Additionally, the Ministry of Labour & Employment is revamping the Shram Suvidha Portal to improve regulatory compliance and has launched the e-Shram Portal to register workers from the unorganised sector. Over 30 crore registrations have been completed, and the portal has been integrated with 12 key social welfare schemes, enabling targeted delivery of benefits.

2.7.4 Disposable Income and Consumer Spending

Gross National Disposable Income (GNDI) represents the total income available to a nation's residents for consumption and saving after accounting for income transfers with the rest of the world. Per Capita GNDI has exhibited a steady upward trend over the recent years, increasing from approximately INR1,92,108 in FY23 to INR 2,11,076 in FY24 and further to INR 2,49,195 in FY26 (PE). It reflects the continued growth in income available to households and businesses, supporting consumption and savings activities within the economy.

The rise in disposable income has been accompanied by higher consumer spending, as reflected in the growth of Private Final Consumption Expenditure (PFCE), which measures the total value of goods and services consumed by households. Per Capita PFCE increased from approximately INR 1,07,910 in FY23 to INR 1,38,324 in FY26 (PE). The growth of approximately 8.0% in FY26 over FY25 indicates sustained consumer demand and continued expansion in household consumption expenditure, supported by rising income levels and economic activity.



Note: Data mentioned is in INR, FRE – First Revised Estimates, PE – Provisional Estimates.

Source: PIB, New Series of Gross Domestic Product (GDP) release date on 5th June 2026. Estimates with Base Year 2022-23

2.8 Union Budget FY26-27 Highlights

The Union Budget FY 2026–27, presented by Finance Minister Nirmala Sitharaman, introduces a comprehensive set of measures aimed at stimulating economic growth, enhancing infrastructure and fostering inclusive development. With a focus on sectors such as agriculture, MSMEs, infrastructure, innovation and exports, the budget seeks to create a conducive environment for sustained economic expansion.

- **Capital Expenditure and Infrastructure Development**

In FY2026-27, the Union Budget has increased the public capex towards to INR 12.2 lakh crore from the previous INR 11.21 lakh crore (3.1% of GDP) which was earmarked in FY 2025–26. To strengthen the confidence of private developers regarding risks during infrastructure development and construction phase, the budget proposed to set up an Infrastructure Risk Guarantee Fund to provide prudently calibrated partial credit guarantees to lenders.

- **Support for MSMEs**

Recognizing the pivotal role of Micro, Small and Medium Enterprises (MSMEs) in India's economic landscape, the budget introduced a three-pronged approach to support the sector. The budget introduced a dedicated INR 10,000 crore SME Growth Fund as well as proposed to top up the Self-Reliant India Fund set up in 2021, with INR 2,000 crore to continue support to micro enterprises and maintain their access to risk capital. With TReDS, more than INR 7 lakh crore has been made available to MSMEs. To leverage its full potential, the budget further proposed four measures: (i) mandate TReDS as the transaction settlement platform for all purchases from MSMEs by CPSEs, serving as a benchmark for other corporates; (ii) introduce a credit guarantee support mechanism through CGTMSE for invoice discounting on TReDS platform; (iii) link GeM with TReDS for sharing information with financiers about government purchases from MSMEs, encouraging cheaper and quicker financing; (iv) introduce TReDS receivables as asset-backed securities, helping develop a secondary market, enhancing liquidity and settlement of transactions. Moreover, Government will facilitate Professional Institutions such as ICAI, ICSI, ICMAI to design short-term, modular courses and practical tools to develop a cadre of 'Corporate Mitras', especially in Tier-II and Tier-III towns, which will help MSMEs meet compliance requirements at affordable costs.

- **Establishment of dedicated Rare Earth Corridors**

A Scheme for Rare Earth Permanent Magnets was launched in November 2025. In line with that, the budget proposed to support the mineral-rich States of Odisha, Kerala andhra Pradesh and Tamil Nadu to establish dedicated Rare Earth Corridors to promote mining, processing, research and manufacturing.

- **Agriculture Related Schemes**

To diversify farm outputs, increase productivity, enhance farmers' incomes and create new employment opportunities, the budget announced support schemes related to high value crops such as coconut, sandalwood, cocoa and cashew in coastal areas. Agar trees in Northeast and nuts such as, almonds, walnuts and pine nuts in hilly regions will also be supported. India is the world's largest producer of coconuts.

About 30 million people, including nearly 10 million farmers, depend on coconuts for their livelihood. To further enhance competitiveness in coconut production, the Budget proposed a Coconut Promotion Scheme to increase production and enhance productivity through various interventions including replacing old and non-productive trees with new saplings/plants/varieties in major coconut growing States. A dedicated programme is proposed for Indian cashew and cocoa to make India self-reliant in raw cashew and cocoa production and processing, enhance export competitiveness and transform Indian Cashew and Indian Cocoa into premium global brands by 2030.

Further, the Central Government will partner with State Governments to promote focused cultivation and post-harvest processing to restore the glory of the Indian Sandalwood ecosystem. To rejuvenate old, low-yielding orchards and expand high-density cultivation of walnuts, almonds and pine nuts, the budget announced to support a dedicated programme to enhance farmer incomes and in bringing value addition by engaging youth.

The Union Budget FY 2026–27 presents a balanced approach to economic growth by addressing immediate consumption needs and laying the foundation for long-term sustainability. Through targeted investments in infrastructure, support for MSMEs and sector-specific initiatives, the budget aims to foster an inclusive and resilient economy. These measures are expected to create new opportunities for financial institutions, as the growing demand for investment products will provide avenues for expansion and innovation in the financial services sector.

2.9 Concluding Remarks about Macroeconomic Scenario

The major headwinds to global economic growth remain significant, including escalating geopolitical tensions, volatility in global energy and commodity markets, persistent inflationary pressures, tighter financial conditions, geoeconomic fragmentation, rising public debt, climate-related disruptions, and uncertainty surrounding the pace and impact of technological transformation. In particular, the ongoing Middle East conflict and associated risks to energy supply chains have heightened downside risks to the global outlook, while weaker trade momentum and structural productivity challenges continue to weigh on medium-term growth prospects.

Despite these challenges, India's economy remains relatively well-positioned compared to other major emerging markets. According to the IMF's April 2026 WEO, India's GDP growth is projected at 6.5% in CY 2026, maintaining its position as one of the fastest-growing major economies globally and significantly above the global growth projection of 3.1%. Key positive factors supporting India's growth include resilient domestic demand, sustained public infrastructure spending, a strengthening investment cycle, expanding digital infrastructure, and continued progress in structural reforms. Inflation, as measured by the Consumer Price Index (CPI), remained contained at 3.4% in March 2026 under the revised base year, supporting household purchasing power, although rising global oil prices and supply disruptions may pose upside risks.

India's strategic position as a manufacturing and investment destination continues to strengthen, supported by government initiatives, supply chain diversification trends, a skilled labour force, and a dynamic innovation ecosystem. Public investment is expected to remain a critical growth driver, with the Union Budget FY 2026–27 increasing capital expenditure to INR 12.21 lakh crore from INR 11.21 lakh crore in the previous year, reinforcing the government's investment-led growth strategy. In addition, the proposed Infrastructure Risk Guarantee Fund is aimed at improving private sector participation in infrastructure by mitigating project-related risks, which is expected to crowd in private investment, enhance infrastructure capacity, and support long-term productivity growth.

Private sector investment intentions are also expected to strengthen alongside public capex, while rising disposable incomes, improving rural demand, and continued policy support are likely to reinforce consumption momentum. Strengthening supply chains, expanding infrastructure capacity, and sustaining inflation stability will be critical in supporting resilience against external shocks. These factors are expected to support India's medium-term growth momentum and strengthen its ability to navigate global uncertainties.

3. Industry Definition and Scope

The steel pipe and tube industry is a critical segment of the broader steel sector, encompassing the production of pipes and tubes for diverse applications across oil and gas, construction, infrastructure, power, water transportation, automotive, and engineering industries. Steel pipes serve as conduits for fluids and gases, as well as structural applications, offering high strength, durability, and cost efficiency.

The industry is broadly classified into seamless pipes, produced without welding and primarily used in high-pressure and high-temperature environments such as oil and gas exploration, refineries, and power generation; welded pipes, fabricated by welding steel sheets or coils, which include Electric Resistance Welded (ERW) pipes commonly used for water supply, construction, and general engineering, and Submerged Arc Welded (SAW) pipes typically used for larger diameter pipelines, industrial fluid transport, and structural applications; and structural hollow sections or value-added pipes, manufactured by forming and welding steel into hollow or specialized profiles engineered for strength and rigidity, widely used in construction, industrial frameworks, bridges, solar mounting structures, and road safety applications, with demand supported by rising urban infrastructure development.

In India, the steel pipe and tube industry has transitioned from being largely import-dependent to a robust domestic manufacturing ecosystem, supported by integrated steel producers and specialized pipe manufacturers, with growth driven by industrialization, government infrastructure initiatives, oil and gas pipeline expansion, and increasing urban water demand.

Globally, demand for steel pipes is linked to energy infrastructure, industrial expansion, urbanization, and modernization of transmission networks, with rising investment in renewable energy projects, city gas distribution (CGD) networks, and pre-engineered modular construction expected to support steady industry growth. Technological advancements in manufacturing, including automated ERW lines and high-strength seamless production, are enhancing product quality, reducing costs, and meeting stringent safety and durability standards.

The steel pipe and tube industry encompasses both standard and value-added products, serving critical industrial and infrastructure needs, and is positioned for sustained growth in India and globally.

4. Market Segmentation

The Steel Pipes and tubes Industry exhibits a structured and diversified landscape, reflecting variations in manufacturing processes, material specifications, end-use applications, and geographic demand. Segmentation of this sector provides insight into demand drivers, informs capacity planning, and highlights opportunities for value-added products and services.

Category	Sub-Category		Description / Insights
By Product Type	Welded		
		Electric Resistance Welded (ERW) Pipes	ERW pipes and tubes, manufactured by cold-forming steel coils and joining the edges through high-frequency electric resistance welding, dominate domestic consumption. They are extensively deployed in structural, water supply, and medium-pressure applications due to their dimensional accuracy, cost efficiency, and adaptability to various coatings such as galvanized or pre-painted finishes.
		Submerged Arc Welded (SAW) Pipes	SAW pipes, produced by forming and welding steel plates with a submerged arc process, are preferred for high-pressure transmission and long-distance pipelines used in oil, gas, and water conveyance systems.
	Seamless Pipes and Tubes		Seamless pipes, on the other hand, are manufactured through extrusion or rotary piercing of solid billets, creating a homogeneous, weld-free product suitable for high-temperature and high-stress applications such as refineries, power plants, and petrochemical installations.
	Structural Hollow Sections / Value-Added Pipes		Manufactured by forming and welding steel into hollow or specialized profiles; engineered for strength and rigidity. Used in construction, industrial frameworks, bridges, solar mounting structures, and road safety applications.

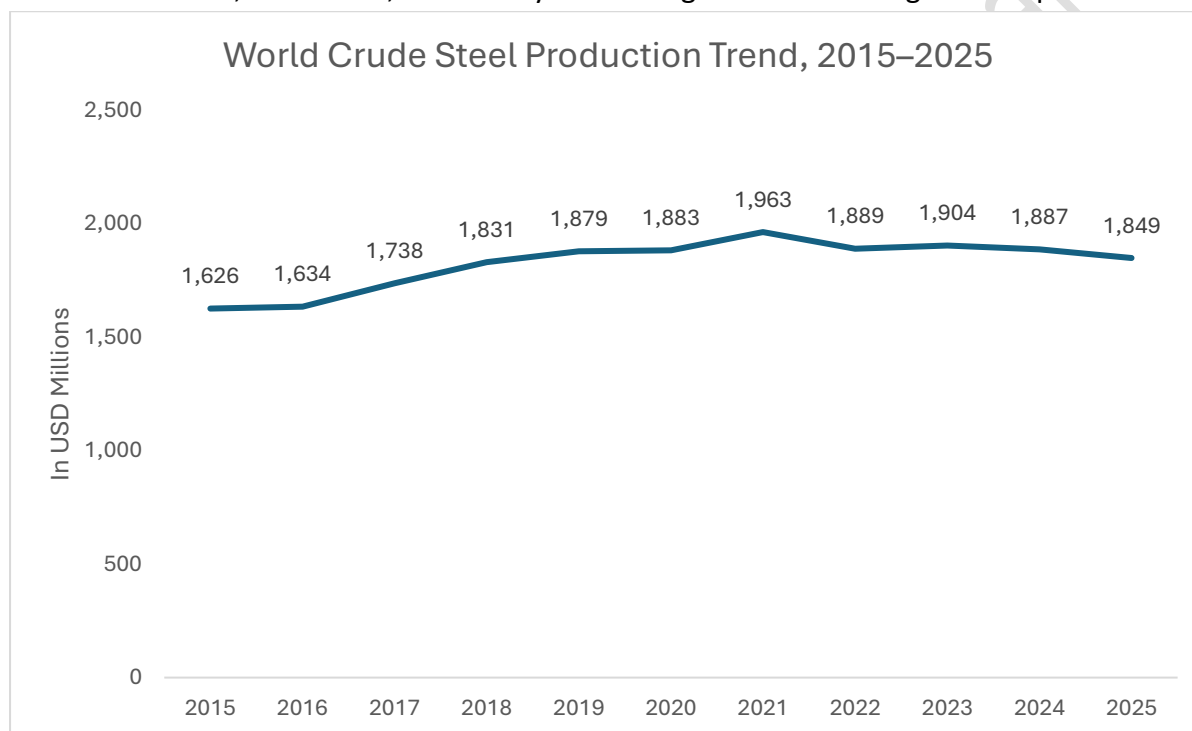
		Demand supported by rising urban infrastructure.
By End-Use Industry	Infrastructure & Construction	Demand driven by residential, commercial, bridges, metro, and highway projects.
	Water Supply & Sanitation	Demand driven by rural and urban water distribution, irrigation schemes, and government initiatives (e.g., Jal Jeevan Mission). ERW and galvanized pipes dominate this segment.
	Oil & Gas	Demand driven by transmission pipelines, refineries, and storage facilities. SAW and alloyed pipes used extensively.
	Industrial & Manufacturing	Demand driven by power generation, petrochemical plants, process industries, and automobile manufacturing. Seamless pipes and specialized alloys dominate.
	Other Applications	Includes renewable energy structures, telecommunications, fencing, furniture, and agricultural use.
By Material Type	Mild Steel (MS)	Cost-effective, versatile, weldable; used in structural frameworks, scaffolding, and general industrial applications. MS accounts for the bulk of domestic pipe production.
	Galvanized Steel	Zinc-coated for enhanced corrosion resistance; used in water pipelines, irrigation, outdoor construction, and agricultural infrastructure.
	Alloyed / Specialty Steel	High-strength, corrosion-resistant, or heat-resistant alloys; used in oil & gas pipelines, high-pressure industrial applications, and petrochemical infrastructure.
By Geography	Domestic Regions	Concentrated in industrial clusters such as Haryana, Maharashtra, Gujarat, Madhya Pradesh, and Tamil Nadu; demand driven by construction growth, urban/rural infrastructure schemes, and industrial corridors.

	Export Markets	Growing exports to Southeast Asia, Middle East, Africa, and select European regions; driven by competitive pricing, adherence to international quality standards, and trade partnerships.
By Manufacturing Process / Technology	Cold-Formed Pipes	Cost-efficient, precise dimensions; primarily used in ERW and structural tubes; supports domestic construction and water supply sectors.
	High-Frequency Welded	Provides superior joint strength; widely used in industrial pipelines and building frameworks.
	Submerged Arc Welded	Handles high-pressure and long-distance applications; used in oil, gas, and power transmission pipelines.
	Seamless / Extruded	Weld-free, capable of withstanding high stress and temperature; used in critical industrial, petrochemical, and automotive applications.

5. Global and Indian Industry Outlook

5.1 Global Steel Industry

The global steel industry is a mature, yet steadily expanding market, shaped by cyclical industrial demand and long-term infrastructure growth. Global crude steel production reached 1,885 million tonnes in CY2024, reflecting a compound annual growth rate (CAGR) of approximately 1.65% between 2015 and 2024. Leading producers include China, India, Japan, the United States, and Russia, collectively accounting for most of the global output.



Source: World Steel Association (June 2026), Infomerics Analytics & Research.

Sustainability and Operational Performance

The steel industry has demonstrated continued focus on sustainability across environmental, social, economic and governance dimensions. Key sustainability and operational performance indicators include:

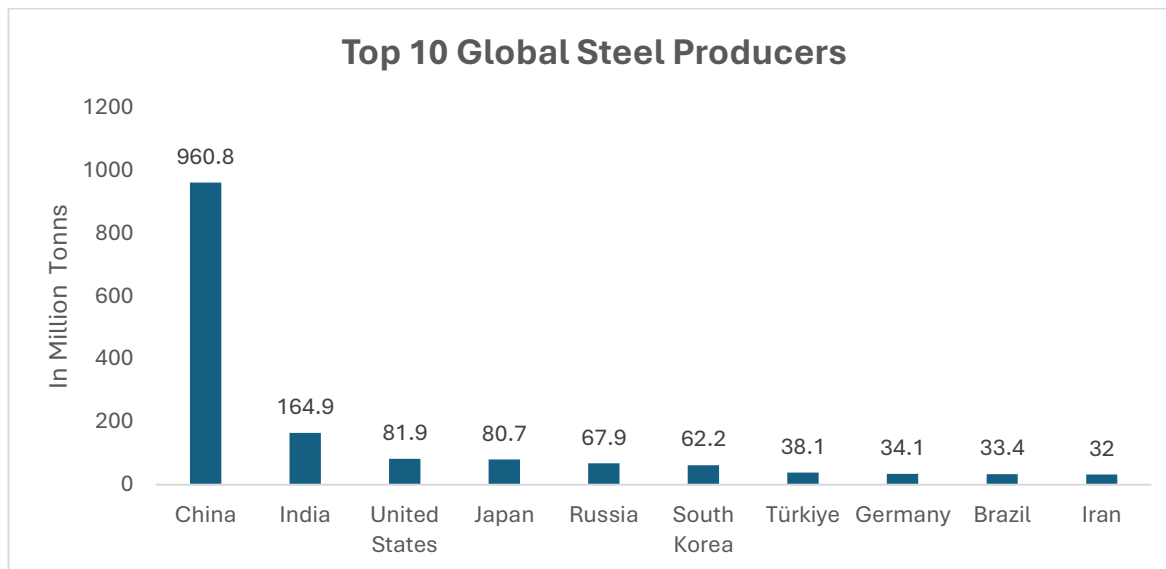
- **GHG Emissions Intensity:** 2.18 tonnes of CO₂e emitted per tonne of crude steel.
- **CO₂ Emissions Intensity:** 1.92 tonnes of CO₂ emitted per tonne of crude steel.
- **Energy Intensity:** 20.95 GJ of energy consumed per tonne of crude steel.
- **Material Efficiency:** 92.79% of steel industry raw materials converted into steel products or co-products.

- **Environmental Management Systems:** 96.08% of employees and contractors worked in EMS-registered facilities.
- **Renewable Energy Consumption:** 1.94% of total energy consumed was sourced from renewable energy.
- **SOX Emissions Intensity:** 0.64 kg of SOX emitted per tonne of crude steel.
- **NOX Emissions Intensity:** 0.66 kg of NOX emitted per tonne of crude steel.
- **Dust Emissions Intensity:** 0.32 kg of particulate matter emitted per tonne of crude steel.
- **Fresh Water Withdrawal:** 8.50 m³ of fresh water withdrawn per tonne of crude steel.
- **Fresh Water Consumption:** 2.30 m³ of fresh water consumed per tonne of crude steel.
- **Workplace Safety:** Lost Time Injury Frequency Rate (LTIFR) stood at 0.68 injuries per million hours worked for employees and contractors.
- **Employee Training:** Employees received an average of 6.77 days of training per year.
- **Women in Workforce:** Women accounted for 11.44% of the workforce.
- **Women on the Board:** Women accounted for 14.06% of Board members.
- **Community Investment:** 0.08% of revenue was invested back into the community.
- **Investment in New Processes and Products:** 8.31% of revenue was invested in new processes and products.
- **Economic Value Distributed:** 100.68% of revenue was distributed to society.
- **Supply Chain Assessment:** 79.72% of the steel supply chain comprised active input-material suppliers assessed under the relevant supply chain framework.
- **Employee Education on Business Ethics:** 88.07% of employees were provided training on business ethics.

These indicators reflect the industry's focus on reducing emissions and resource intensity, improving material and energy efficiency, strengthening environmental management systems, enhancing workplace safety and employee development, and promoting diversity, community investment and responsible business practices. The continued adoption of renewable energy, resource-efficient processes, improved environmental management systems and stronger governance practices remains important for enhancing the sustainability profile of the steel industry.

Global Leading Producers

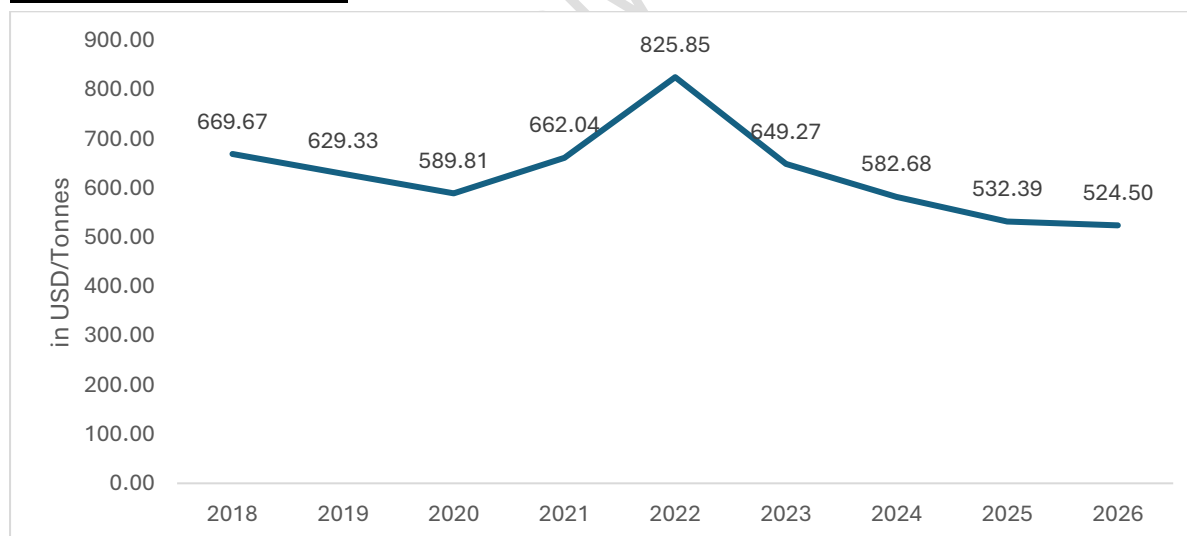
Global crude steel production trends reflect steady expansion, driven by industrialization in emerging economies and infrastructure investment in developed markets. Production data (million tonnes) are as follows:



Source: World Steel Association (June 2026), Infomerics Analytics & Research.

Note: The Data is as per CY-2025. CY denotes Calendar Year

Global Steel Prices Trend:

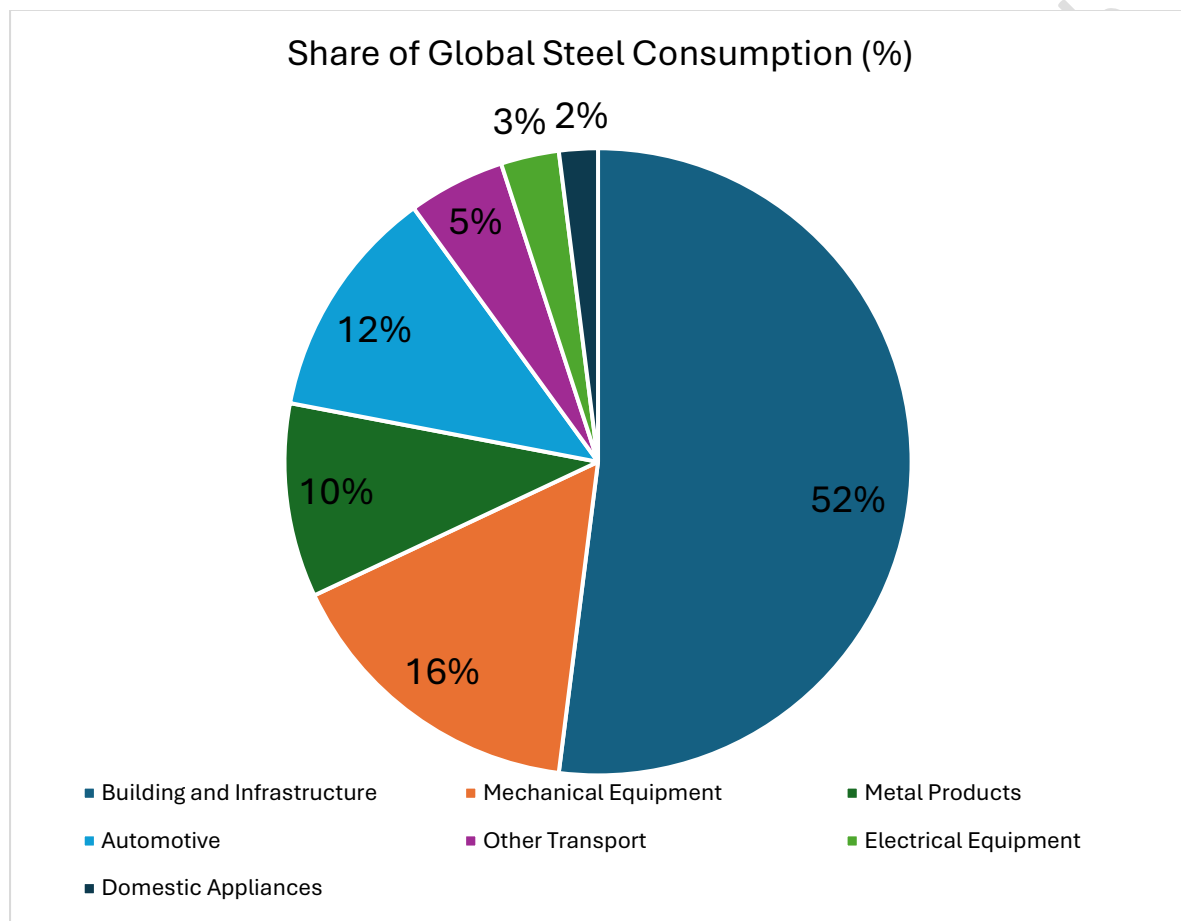


Source: CMIE Outlook, Infomerics Analytics & Research.

Global finished steel prices have exhibited cyclical movements between 2018 and 2026, reflecting changes in global demand, input costs and supply conditions. Prices declined from USD 669.67 per tonne in 2018 to USD 589.81 per tonne in 2020, before increasing to USD 825.85 per tonne in 2022, the highest level during the period under review. Prices subsequently moderated to USD 649.27 per tonne in 2023 and USD 582.68 per tonne in 2024, followed by a further decline to USD 532.39 per tonne in 2025 and USD 524.50 per tonne in 2026.

The moderation in finished steel prices after 2022 indicates a normalization from the elevated price levels observed during the preceding period, with prices declining by approximately 36.5% from 2022 to 2026. Overall, the period reflects the cyclical nature of global steel prices and their sensitivity to changes in demand conditions, raw material costs and global supply dynamics.

Steel Consumption by Sector



Source: World Steel Association (June 2026), Infomerics Analytics & Research.

Steel consumption is closely linked to downstream industries, with building and infrastructure accounting for the largest share at 52% of global steel consumption, followed by mechanical equipment at 16%, automotive at 12%, and metal products at 10%. Building and infrastructure applications include residential, commercial and industrial construction, as well as bridges, ports and metro systems. Mechanical equipment and automotive applications drive demand for steel in machinery, vehicles and other durable components. Other transport accounts for 5%, while electrical equipment, domestic appliances and other applications account for 3%, 2% and 0% respectively. Overall, the sectoral distribution highlights the importance of construction and infrastructure, industrial equipment and automotive applications in global steel consumption.

Trade and Market Dynamics-Steel

Global steel exports reached 455.2 MT in CY 2025, highlighting significant trade flows from leading producers to consumption markets.

Top Importers and Exporters

Country/Region	Exports (MT)	Country/Region	Imports (MT)
 China	133.6	 EU (27)	43.7
 Japan	29.8	 United States	23.9
 South Korea	27.9	 Italy	20.4
 Germany	20.9	 Germany	20.2
 EU (27)	20.5	 Turkey	19.8

Source: World Steel Association (June 2026), Infomerics Analytics & Research.

Trade patterns reflect global interdependencies, with high-volume producers catering to consumption-intensive regions.

Raw Materials and Strategic Production

In steelmaking, Direct Reduced Iron (DRI) is a premium iron material produced from iron ore through a non-melting process. Its form enables direct incorporation into steel furnaces, improving process efficiency and control over steel composition. In 2025, global DRI production reached 153.0 million tonnes, with India contributing 58.9 MT and Iran 37.2 MT, making them the largest producers worldwide. These raw materials underpin both high-volume and value-added steel production, including low-carbon routes and specialty products.

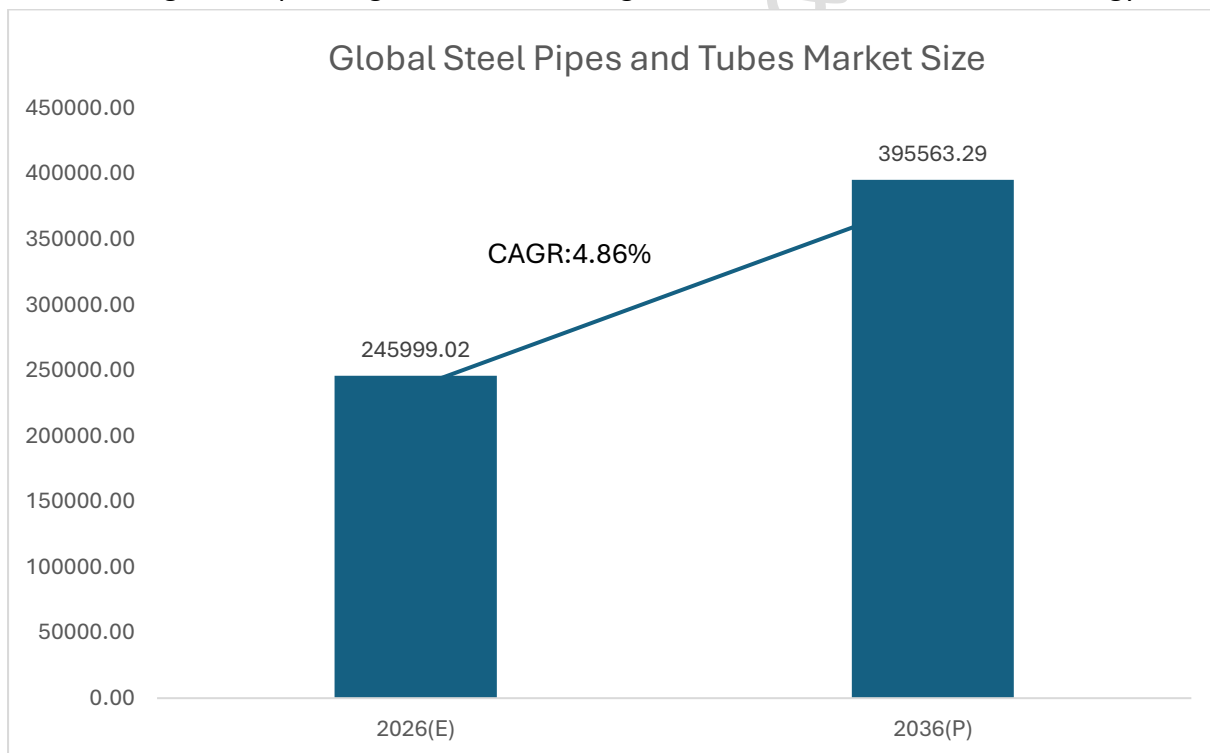
The global steel industry operates within a framework of sustained production growth, evolving sustainability standards, and diversified consumption across downstream industries. Asia-Pacific remains the dominant production and consumption region, with China and India leading global output. Trade, raw material security, and technological innovations continue to shape the competitive landscape, while sustainability initiatives underscore the industry's commitment to environmental, social, and economic performance.

5.2 Global Steel Pipes and Tubes Industry

The global steel pipes and tubes industry has exhibited steady growth, supported by consistent demand from infrastructure development, industrial expansion, and energy transportation networks. Production remains geographically concentrated, with China, India, and Japan collectively accounting for a significant share of both seamless and Electric Resistance Welded (ERW) pipe output. The market structure is characterized by scale-driven competitiveness, technological specialization, and the presence of large integrated manufacturers catering to diverse regional and application-specific needs.

Global Market Overview

The global steel pipes and tubes market is estimated at USD 245999.02 million in 2026 and is projected to reach USD 395563.29 million by 2036, reflecting a CAGR of 4.86%. The market continues to exhibit resilience amid cyclical raw material fluctuations and changing energy dynamics. Growth is primarily supported by demand from sectors including construction, water management, power generation, oil and gas transmission, and renewable energy.

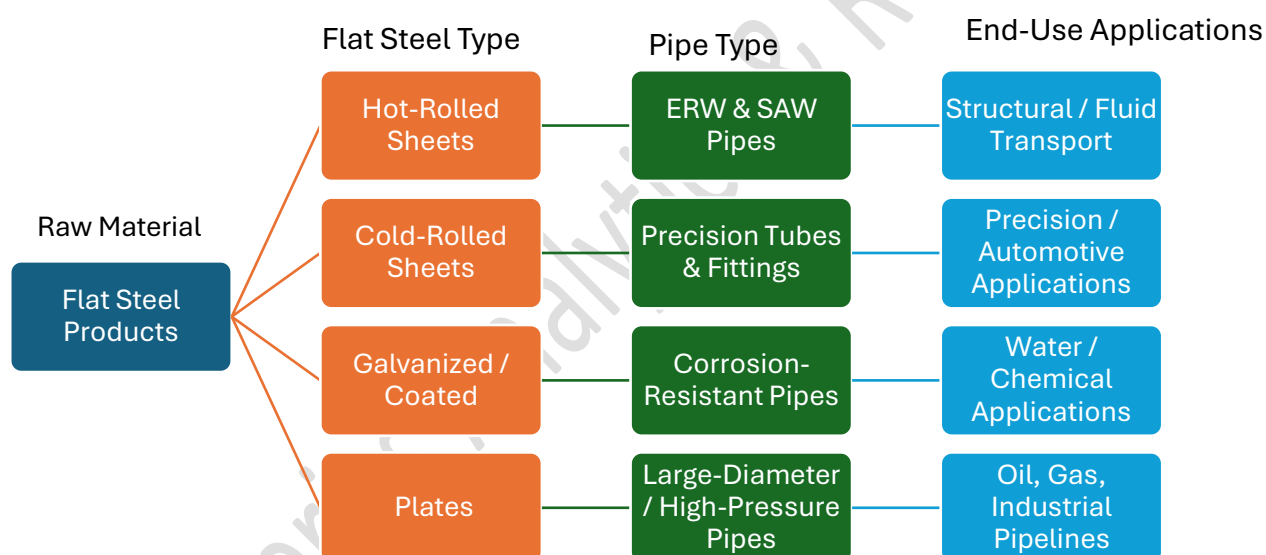


Source: Infomerics Analytics & Research

The overall industry trend reflects a gradual shift toward high-performance and sustainable products, with manufacturers investing in advanced coating technologies, improved metallurgy, and automated production lines. Value-added segments, while representing a smaller volume share, are expanding faster due to higher profitability and alignment with international quality and environmental standards.

Raw Material Linkages in Steel Tubes and Fittings

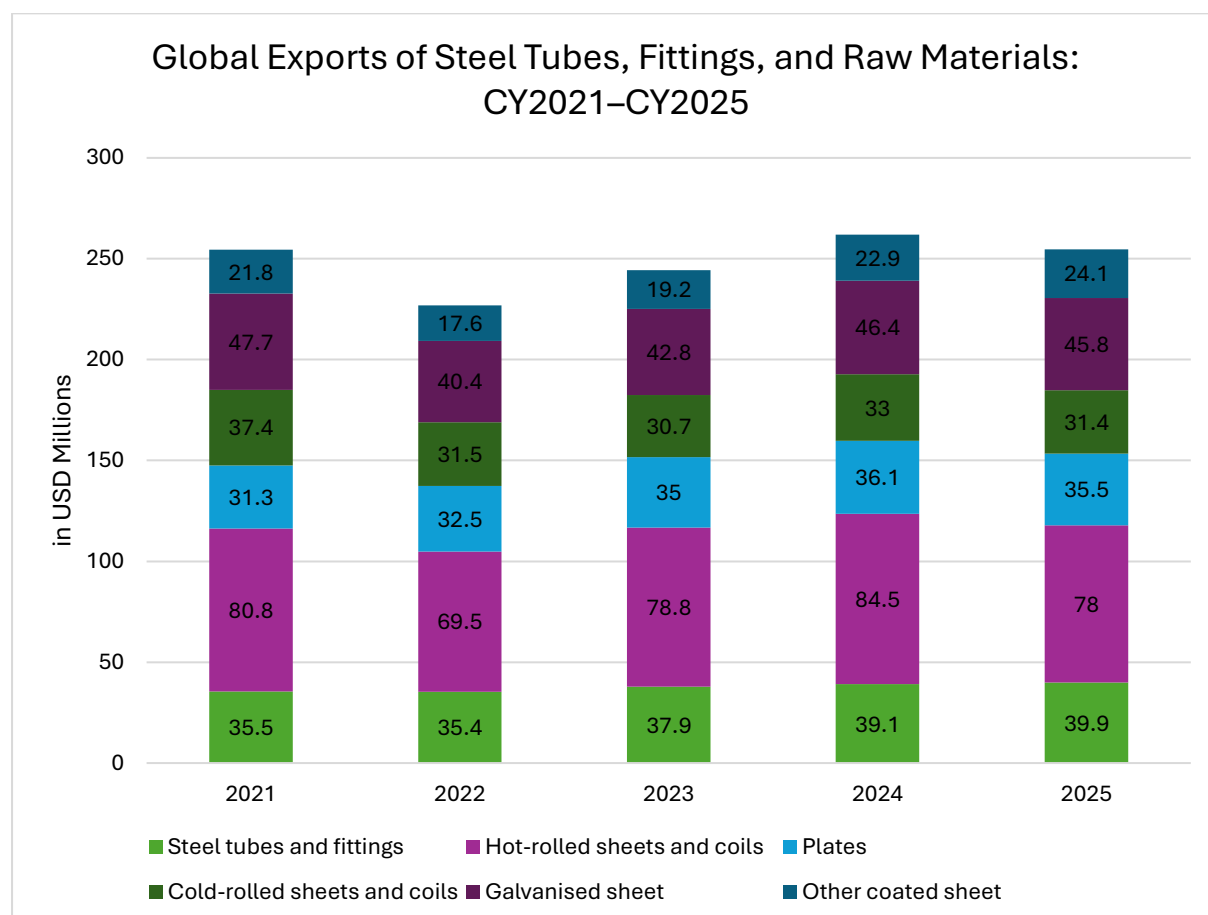
Steel tubes and fittings rely heavily on upstream flat steel products, which form the primary raw material for their manufacture. Hot-rolled sheets and coils provide the bulk material for ERW and SAW pipes, offering the necessary thickness and strength for structural and fluid transport applications. Plates, with their higher gauge and mechanical properties, are essential for producing large-diameter and high-pressure pipes, particularly for oil, gas, and industrial pipelines. Cold-rolled sheets contribute to precision applications requiring tight dimensional tolerances, while galvanized and other coated sheets enhance corrosion resistance, extending the service life of tubes and fittings in outdoor, water, and chemical environments. Collectively, these flat steel products underpin the quality, performance, and versatility of steel tubes and fittings across infrastructure, industrial, energy, and automotive sectors



Global Trade- Steel Pipes and Tubes

The steel pipes and tubes trade ecosystem remains globally integrated, balancing regional disparities in supply and demand through sustained export flows. China, Japan, South Korea, and India collectively account for a substantial share of global exports, while Southeast Asia, the Middle East, Europe, and North America serve as major import destinations. Developing economies exhibit strong demand driven by industrialization and infrastructure expansion, whereas mature markets focus on replacement cycles and technology-intensive applications in energy and utilities.

Export competitiveness is increasingly influenced by product certification and adherence to international technical standards such as ASTM, API, and EN, alongside compliance with sustainability requirements and carbon-footprint monitoring across the value chain. Cost efficiency is further enhanced by logistical integration and port connectivity, which remain decisive factors in maintaining trade margins.



Source: World Steel Association (June 2026), Infomerics Analytics & Research

Despite moderate protectionist trends and raw material price volatility, global trade flows in steel pipes and tubes have remained relatively stable, reflecting the sector's structural role within industrial and infrastructure supply chains. Export data from CY2021 to CY2025 (see accompanying graph) illustrate a gradual recovery across steel tubes and fittings, as well as related flat steel products. Notably, hot-rolled sheets, galvanized sheets, and plates demonstrate parallel upward trends, underscoring the interdependence of upstream and downstream segments in the global steel value chain.

5.3. Indian Steel Industry

India was the second-largest producer of crude steel globally in calendar year 2025, as per provisional data released by the World Steel Association on December 4, 2025. Crude steel production increased from 103.545 MT in Fiscal 2021 to 152.180 MT in Fiscal 2025, registering a 5.4% growth over 144.299 MT in Fiscal 2024. Domestic crude steel capacity increased from 143.914 MTPA in Fiscal 2021 to 218.445 MTPA as of December 2025-26 (provisional).

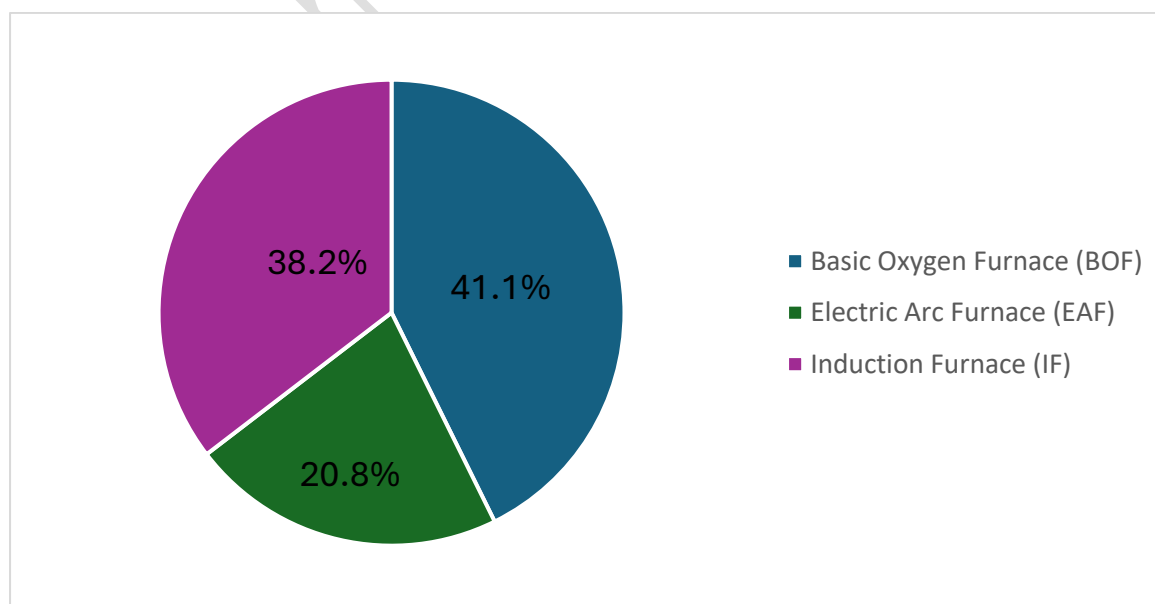
During April–December 2025-26, crude steel production stood at 124.551 MT, while finished steel production and consumption stood at 118.699 MT and 119.574 MT, respectively. Finished steel exports increased 33.3% to 4.799 MT, while imports declined 37.4% to 4.649 MT, making India a net exporter of finished steel in quantity terms.

India's steel industry has demonstrated sustained growth, with finished steel production increasing from 113.597 MT in Fiscal 2022 to 146.688 MT in Fiscal 2025, while consumption increased from 105.752 MT to 152.129 MT over the same period. Continued capacity expansion, infrastructure development, industrial activity and increasing domestic steel consumption are expected to support the sector's medium- to long-term growth.

Raw Material Availability

The Indian steel sector benefits from abundant raw material availability, cost-effective labour, and modernization of mills. Iron ore production reached 275 MT in FY24, while coal-based sponge iron production accounted for a significant portion of total output. India possesses the fifth-largest iron ore reserves globally, providing a cost advantage for domestic steel manufacturing.

Crude Steel Production by Furnace Type

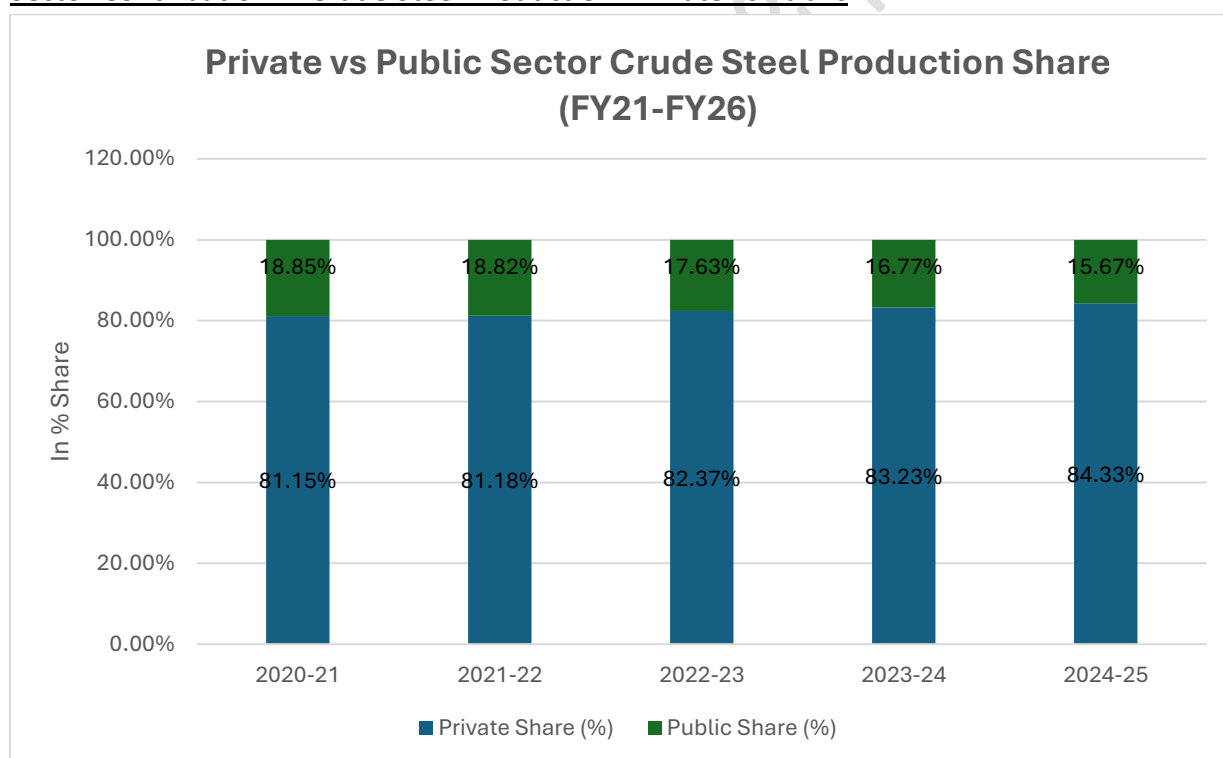


Source: Government of India, Ministry of Steel, Annual Report 2025-26.

In Fiscal 2025–26, the Basic Oxygen Furnace (BOF) route accounted for 41.1% of India’s crude steel production, compared with 43.5% in Fiscal 2020–21. BOFs are predominantly used in large integrated steel plants, where molten iron is converted into steel, supporting high-capacity production for infrastructure and industrial applications. The Electric Arc Furnace (EAF) route accounted for 20.8% of crude steel production in Fiscal 2025–26, compared with 28.4% in Fiscal 2020–21. EAFs primarily use scrap steel as an input and provide flexibility in production and support steel recycling. Induction Furnaces (IFs) accounted for 38.2% of crude steel production in Fiscal 2025–26, increasing from 28.1% in Fiscal 2020–21. IFs are commonly used by smaller steel producers and mini steel plants, particularly for flexible and batch-based production.

The process-route mix reflects India’s combination of integrated BOF-based production, scrap-based EAF production and induction-furnace-based production, providing a diversified production base and flexibility across different scales and operating models.

Sector Contribution in Crude Steel Production: Private vs Public



Source: CMIE Outlook; Infomerics Analytics & Research

India’s crude steel production structure from Fiscal 2022 to Fiscal 2026 reflects a sustained dominance of the private sector. Total crude steel production increased from 120.293 MT in Fiscal 2022 to 152.180 MT in Fiscal 2025, while the private sector’s share increased from 81.18% to 84.08% over the same period. Private sector production increased from 97.658 MT to 127.953 MT, reflecting its expanding contribution to domestic steel production.

The public sector accounted for 18.82% of crude steel production in Fiscal 2022, with its share declining to 15.92% in Fiscal 2025, while production increased from 22.636 MT to 24.227 MT. During Fiscal 2026 (April–December 2025-26), total crude steel production stood at 124.551 MT, with the private sector contributing 104.542 MT (83.94%) and the public sector contributing 20.009 MT (16.06%).

The production mix highlights the increasing role of private sector producers in India's steel industry, while the public sector continues to contribute to domestic steel supply and strategic capacity.

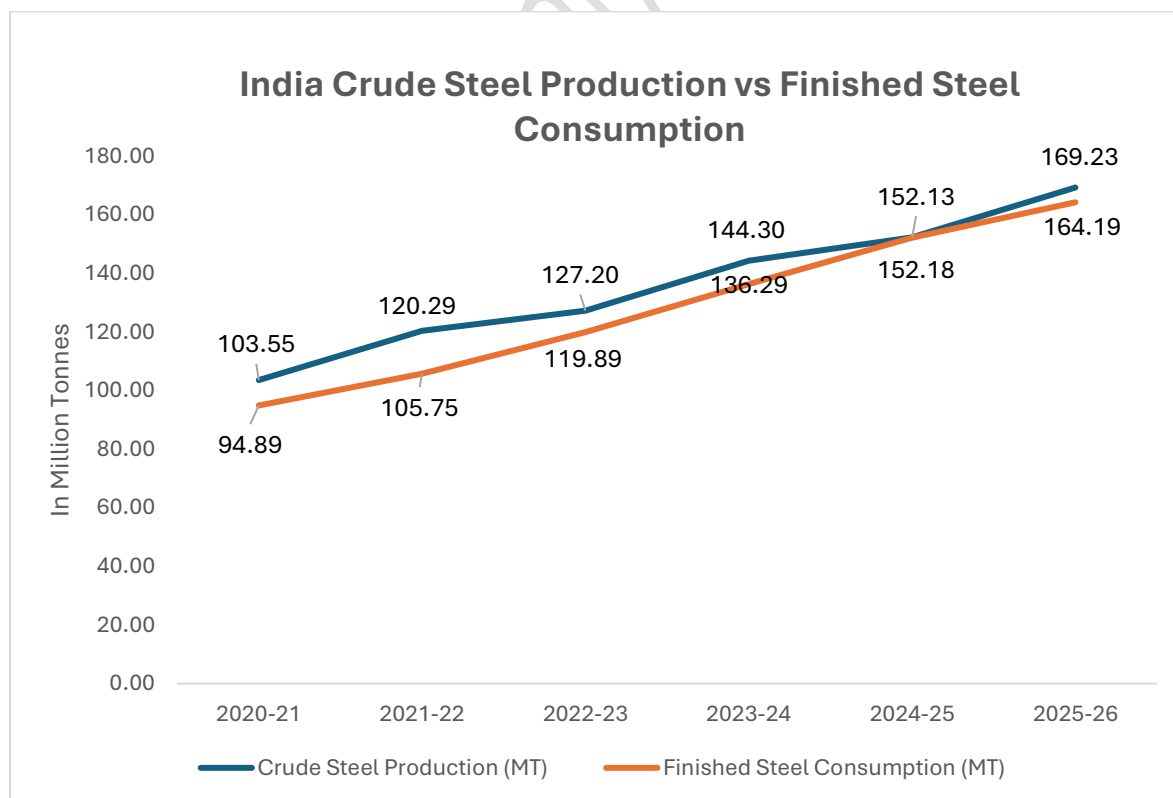
Production, Trade, and Consumption Trends

The table below presents key industry production and trade metrics for the steel sector, including crude steel production, finished steel production, imports and exports of finished steel, opening and closing stock levels, and apparent consumption, measured in million tonnes (MT), for the relevant fiscal years.

Fiscal Year	Crude Steel Production (MT)	Finished Steel Production (MT)	Imports Finished Steel (MT)	Exports Finished Steel (MT)	Finished Steel Opening Stock	Finished Steel Closing Stock	Final Consumption (MT)
FY21	103.55	96.20	4.75	10.78	13.23	8.64	94.89
FY22	120.29	113.60	4.67	13.49	8.64	7.99	105.75
FY23	127.20	123.20	6.02	6.72	7.99	10.60	119.89
FY24	144.30	139.15	8.32	7.49	10.60	14.29	136.29
FY25	152.18	146.69	9.55	4.86	14.29	13.54	152.13
FY 26	169.23	161.73	6.52	6.60	13.54	11.22	164.19

Source: CMIE Outlook; Infomerics Analytics & Research

Imports of finished steel increased from 4.75 MT in FY21 to 9.55 MT in FY25, before declining to 6.52 MT in FY26, while exports declined from 10.78 MT in FY21 to 4.86 MT in FY25, before increasing to 6.60 MT in FY26. Finished steel closing stock increased from 8.64 MT in FY21 to 13.54 MT in FY25, before moderating to 11.22 MT in FY26.

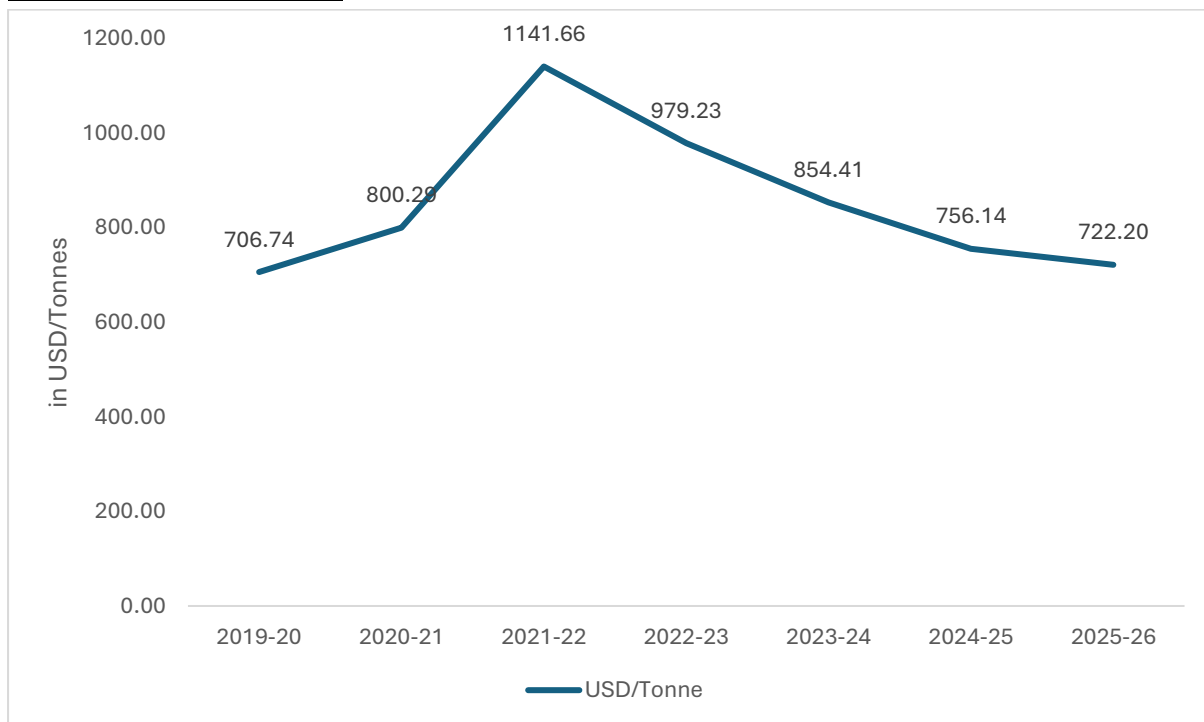


Source: CMIE Outlook; Infomerics Analytics & Research

The Indian finished steel industry recorded sustained expansion during FY2021–FY2026, supported by increasing domestic demand and growth in steel production. Finished steel production increased from 96.20 MT in FY21 to 161.73 MT in FY26, representing a CAGR of approximately 10.9%. Final consumption increased from 94.89 MT to 164.19 MT over the same period, representing a CAGR of approximately 11.6%, reflecting sustained demand from infrastructure, construction, engineering and industrial sectors.

The data indicates sustained expansion in domestic steel production and consumption, accompanied by fluctuations in trade flows and inventory levels, reflecting the evolving domestic demand-supply balance.

Indian Steel Prices Trend:



Source: CMIE Outlook; Infomerics Analytics & Research

Domestic finished steel prices in India have exhibited cyclical movements, increasing from USD 706.74 per tonne in FY2019-20 to USD 1,141.66 per tonne in FY2021-22, before moderating to USD 979.23 per tonne in FY2022-23, USD 854.41 per tonne in FY2023-24, USD 756.14 per tonne in FY2024-25 and USD 722.20 per tonne in FY2025-26. In rupee terms, prices increased from ₹49,818.20 per tonne in FY2019-20 to ₹84,962.55 per tonne in FY2021-22, before declining to ₹63,821.15 per tonne in FY2025-26.

The moderation in prices since FY2021-22 reflects normalization from elevated price levels, while sustained domestic demand from infrastructure, construction and manufacturing continues to support the steel market. The price trend indicates the cyclical nature of steel markets and the sensitivity of domestic prices to exchange rates, input costs, global supply conditions and domestic demand.

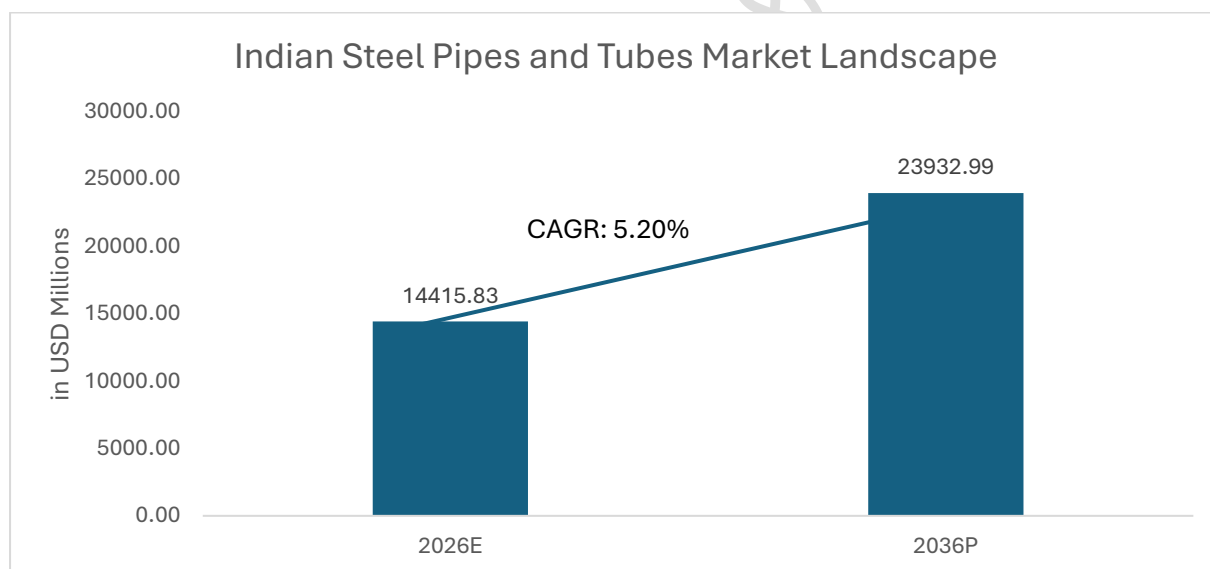
Continued infrastructure development, industrial expansion and increasing steel consumption are expected to support long-term demand for finished steel and downstream products, including steel pipes and tubes used across infrastructure, industrial and urban development applications.

5.4. Indian Steel Pipe and Tubes Industry

The Indian steel pipes and tubes industry is a key downstream segment of the steel value chain, serving diverse sectors including infrastructure, oil & gas, automotive, power, water supply, and general engineering. The sector plays a strategic role, supporting core domestic industries while contributing to India's export basket. Steel pipes and tubes form the vital link between primary steel production and downstream industrial applications, reinforcing India's position as both a domestic infrastructure powerhouse and a growing global manufacturing hub.

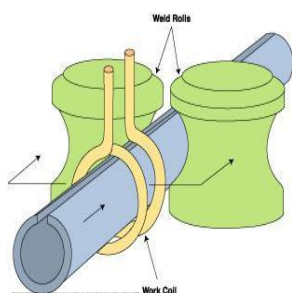
Indian Market Overview

The Indian steel pipes and tubes market was estimated at USD 14415.83 million in 2026 and is projected to reach approximately USD 23932.99 million by 2036, reflecting a compound annual growth rate (CAGR) of 5.20% over the period. This trajectory underscores sustained domestic demand momentum and increasing export integration.

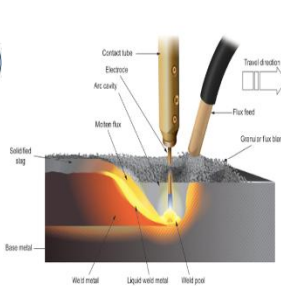


Source: Infomerics Analytics & Research

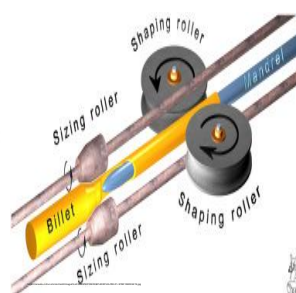
India ranks among the world's largest producers and consumers of steel pipes and tubes. Government infrastructure projects continue to drive demand, particularly in urban water supply, energy, and industrial sectors. Additional capacity expansions in domestic manufacturing units are underway to meet growing demand from core sectors and exports. Utility upgrades and modernization programs have accelerated the adoption of advanced ERW and SAW pipes across urban and rural regions. Rising export orders for premium steel tubes indicate increased competitiveness of Indian manufacturers in global markets. Aligned manufacturing initiatives focusing on product differentiation and value-added solutions are enhancing domestic and international market penetration. Vendor partnerships and consolidation strategies are improving supply chain efficiency, ensuring consistent quality and timely delivery.



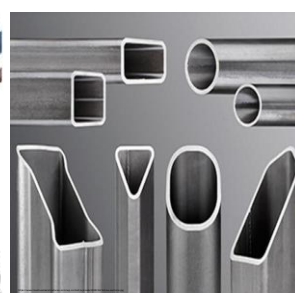
**Electric Resistance
Welded (ERW)**



**Submerged Arc
Welded (SAW)**



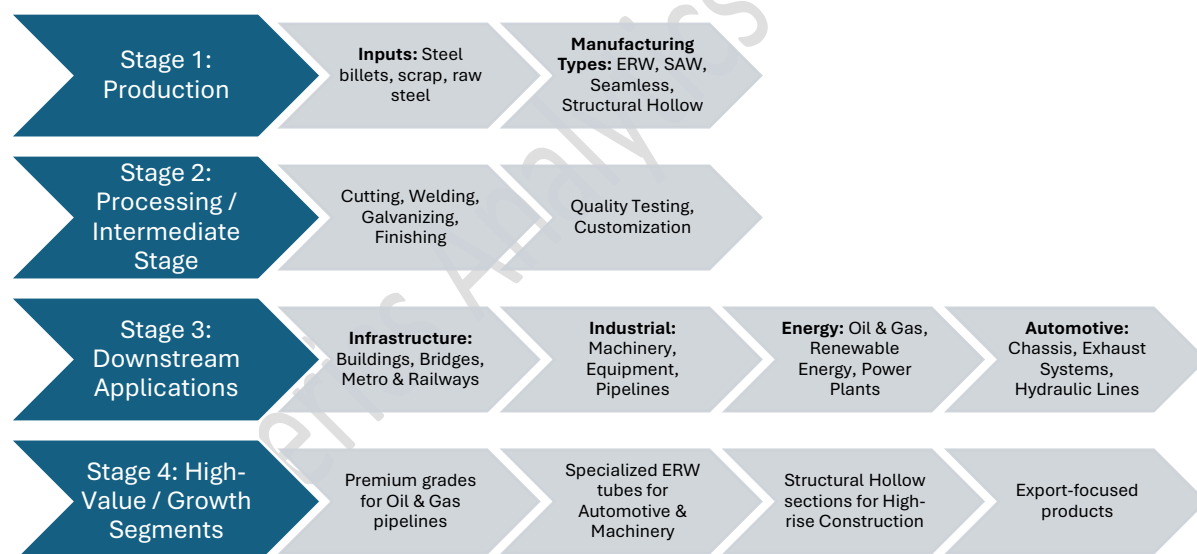
Seamless pipes



**Structural Hollow
Sections**

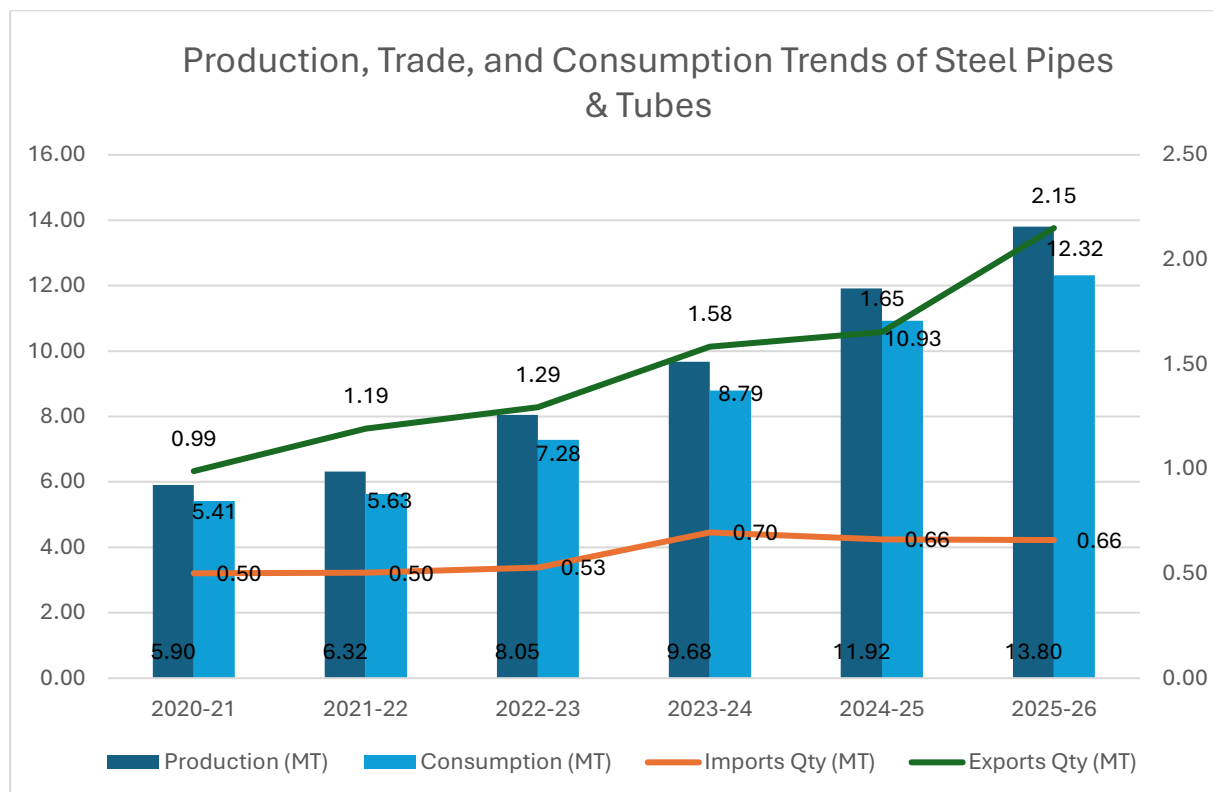
ERW pipes dominate in volume due to cost efficiency and extensive use in water supply, agriculture, and construction, reflecting their cost efficiency and scalability. SAW and seamless pipes, though lower in tonnage, cater to high-value, high-pressure applications in oil & gas, petrochemicals, and power generation. Structural hollow sections are increasingly adopted in modern construction and industrial frameworks, highlighting the sector's capability to serve both commodity-grade and specialized markets.

Value Chain Analysis- Steel Pipes and Industry:



The steel pipes and tubes industry value chain spans from raw material production to high-value, specialized applications. Steel billets, scrap, and raw steel are transformed into ERW, SAW, Seamless, and Structural Hollow pipes, forming the base material for further processing. Products then undergo cutting, welding, galvanizing, finishing, and quality testing, with customization and adherence to standards enhancing performance and durability. These pipes and tubes serve diverse downstream sectors including infrastructure, industrial machinery, energy, and automotive applications. The high-value segment focuses on premium oil and gas pipes, specialized ERW tubes, structural hollow sections for high-rise construction, and export-oriented products, reflecting the industry's move toward product differentiation and global markets.

Production And Consumption Trends of Steel Pipes & Tubes:



Source: CMIE Outlook; Infomerics Analytics & Research

The Indian steel pipes and tubes industry has demonstrated strong growth during FY2020-21 to FY2025-26, with domestic production increasing from 5.90 MT to 13.80 MT, representing a CAGR of approximately 18.5%. Domestic consumption increased from 5.41 MT to 12.32 MT over the same period, representing a CAGR of approximately 17.9%, supported by demand from construction, water supply, oil and gas, and industrial infrastructure.

Imports remained relatively stable, ranging from 0.50 MT to 0.70 MT, with imports at 0.66 MT in FY2025-26, while exports increased from 0.99 MT in FY2020-21 to 2.15 MT in FY2025-26. The increase in exports indicates growing participation in international markets, while the relatively stable import volumes indicate limited dependence on imports. Overall, the sustained increase in production and consumption, coupled with rising exports, reflects expanding domestic demand and strengthening production capabilities in the steel pipes and tubes industry.

Top 5 Countries % Share of Imports & Exports:

Country	% Share of Total Exports	Country	% Share of Total Imports
 USA	12.06%	 China	49.84%
 UAE	9.72%	 Italy	10.77%
 Taiwan	7.35%	 Korean Republic	5.97%
 Qatar	6.79%	 Vietnam	5.30%
 Oman	5.26%	 UAE	5.05%

Source: CMIE Outlook, Infomerics Analytics & Research

The trade profile of India's steel pipes and tubes industry indicates a diversified export base and a relatively concentrated import structure. The USA accounted for the largest share of exports at 12.06%, followed by the UAE at 9.72%, Taiwan at 7.35%, Qatar at 6.79% and Oman at 5.26%. The distribution reflects demand from international markets across infrastructure, construction, energy and industrial applications.

On the import side, China accounted for 49.84% of total imports, followed by Italy at 10.77%, the Republic of Korea at 5.97%, Vietnam at 5.30% and the UAE at 5.05%. The concentration of imports from China, together with imports from other specialised manufacturing markets, indicates continued reliance on international suppliers for certain products and grades.

The trade composition reflects diversified export markets and a comparatively concentrated import base, providing scope for Indian manufacturers to expand exports and increase domestic substitution of imported steel pipes and tubes. Supported by expanding domestic manufacturing capabilities, infrastructure development and increasing export participation, the Indian steel pipes and tubes industry is positioned for continued growth. Its linkages with construction, energy, automotive and engineering applications, along with increasing demand for specialised and value-added products, are expected to support further development of the industry and expansion of its domestic and international market presence.

6. Market Dynamics

6.1 Key Growth Drivers

The Steel Pipes and Tubes industry is positioned for sustained expansion, driven by rising infrastructure investment, industrial activity, and public utility modernization. The segment's evolution from commodity manufacturing toward value-added and application-specific products is reshaping its growth trajectory. Demand is being shaped by multiple structural and policy-linked enablers, spanning construction, energy, mobility, and exports.

Market Drivers and Impact Assessment

(All values represent directional impact based on industry estimates and qualitative analysis)

Drivers	Impact		
	1-2	3-4	5-7
	Years	Years	Years
1. Infrastructure expansion and urban development	High	High	High
2. Water supply, sanitation, and irrigation programs	High	High	High
3. Oil, gas, and energy transmission network expansion	Medium	High	High
4. Real estate, housing, and construction rebound	Medium	High	High
5. Industrial capex and manufacturing growth	Medium	High	High
6. Government initiatives – “Make in India,” PLI, and localization	Medium	High	High
7. Shift toward galvanized and coated pipes for durability	Medium	High	High
8. Automotive, railways, and transport sector linkages	Medium	Medium	High
9. Rising exports and integration into global supply chains	Medium	High	High

10. Technological upgradation and capacity modernization

Medium

High

High

Source: Infomerics Analytics and Research

Detailed Commentary on Key Growth Drivers

1. Infrastructure expansion and urban development

The National Infrastructure Pipeline (NIP), Smart Cities Mission, and state-level infrastructure programs continue to drive demand for structural and hollow-section steel pipes. Over the next 5–7 years, urban expansion and industrial corridor projects will sustain high consumption in bridges, flyovers, and public utilities.

2. Water supply, sanitation, and irrigation programs

Flagship government programs such as Jal Jeevan Mission, AMRUT 2.0, and Pradhan Mantri Krishi Sinchayee Yojana have created consistent demand for galvanized and MS pipes for water distribution, rural pipelines, and irrigation. With targets extending beyond 2027, this segment remains one of the strongest structural demand anchors.

3. Oil, gas, and energy transmission network expansion

Pipeline infrastructure for petroleum products, CNG, and natural gas transmission (under PNGRB and GAIL network expansions) continues to strengthen demand for ERW and seamless pipes. The ongoing shift toward cleaner energy and city gas distribution (CGD) networks is expected to sustain medium-to-high growth over the decade.

4. Real estate, housing, and construction rebound

Affordable housing under PMAY (Urban & Gramin) and private sector housing revival are supporting medium-term demand for structural hollow sections, scaffolding, and pre-fabricated construction. As the real estate cycle strengthens, demand will accelerate across both residential and commercial projects.

5. Industrial capex and manufacturing growth

Renewed industrial investments in cement, steel, power, and engineering sectors are pushing up demand for process pipes, conveyors, and mechanical tubing. India's manufacturing GVA growth and ongoing capex cycle will drive sustained usage in capital goods and industrial equipment.

6. Government initiatives – “Make in India,” PLI, and localization

Policy-led initiatives encouraging domestic manufacturing and import substitution are supporting capacity expansion in downstream steel processing. Localization of inputs and vendor ecosystem strengthening are expected to enhance cost competitiveness and support export-led growth.

7. Shift toward galvanized and coated pipes for durability

Rising quality standards and the preference for long-lasting infrastructure have driven adoption of galvanized and coated pipes. Demand is particularly strong in water distribution, solar structures, and industrial cooling systems. Over time, the market is expected to transition from black ERW pipes to higher-margin coated variants.

8. Automotive, railways, and transport sector linkages

Pipes and tubes are integral to automobile chassis, exhaust systems, railway wagons, and metro construction. As India invests in freight corridors, metro systems, and EV-compatible vehicles, the segment will benefit from increasing lightweight tubular applications.

9. Rising exports and integration into global supply chains

Indian manufacturers are gaining share in global pipe exports, particularly in Asia, Africa, and the Middle East, due to cost competitiveness and product quality. Over the next 3–4 years, expansion of free trade agreements (FTAs) and logistics infrastructure will further support India's emergence as a regional supply hub.

10. Technological upgradation and capacity modernization

Automation, online quality control systems, and energy-efficient galvanizing have improved yield and product consistency. Over 5–7 years, continued modernization and digitization will reduce waste, improve quality, and expand the market for specialized applications such as precision tubes and solar structures.

6.2 Market Restraints

While the Steel Pipes and Tubes industry benefits from a broad-based infrastructure and manufacturing upcycle, it remains exposed to structural constraints that may moderate profitability, competitiveness, and scalability. The sector's heavy dependence on steel coil prices, cyclical demand from core industries, and global pricing pressures can create volatility across both margins and cash flows. In addition, technological, financial, and regulatory bottlenecks continue to shape the pace of long-term expansion.

Market Restraints and Impact Assessment

(All values represent directional impact based on industry estimates and qualitative analysis)

Restraint	Impact		
	1-2 Years	3-4 Years	5-7 Years
1. Volatility in steel coil prices and input cost pass-through	High	High	Medium
2. Overcapacity and pricing pressure in commoditized pipe segments	High	High	Medium
3. High energy and logistics costs affecting competitiveness	Medium	High	High
4. Working capital intensity and margin compression	Medium	High	High
5. Dependence on government and infrastructure spending	High	High	Medium
6. Technological and quality gaps versus global benchmarks	Medium	Medium	High

Source: Infomerics Analytics and Research

Detailed Restraint Commentary

1. Volatility in steel coil prices and input cost pass-through

Steel coils constitute nearly 65–75% of total raw material cost for ERW and galvanized pipe producers. Sharp movements in HRC and CRC prices—linked to global iron ore and coking coal cycles—directly affect profitability. Over the next 1–2 years, such volatility will continue to pressure margins and working capital. Although cost pass-through mechanisms exist, price adjustments often lag by one or two quarters. Over 5–7 years,

greater supply chain integration may smooth fluctuations, but raw material exposure will remain a persistent structural risk.

2. Overcapacity and pricing pressure in commoditized pipe segments

The rapid capacity additions in small and mid-sized ERW pipe units have created supply overhangs in lower-value segments. In the short term, this drives aggressive price competition and erodes utilization rates. Over the medium term, market fragmentation and discount-based competition could restrict profitability. Overcapacity will gradually normalize as weaker units consolidate or exit, but commoditized products will continue to face medium-term price pressure.

3. High energy and logistics costs affecting competitiveness

Pipe manufacturing and galvanizing are energy-intensive processes involving continuous welding and coating lines. Rising electricity and zinc costs, along with elevated freight expenses, weigh on cost competitiveness. Over 3–4 years, logistics bottlenecks—particularly for interstate movement and exports—may offset gains from scale efficiencies. Over 5–7 years, energy-efficient processes and multimodal logistics could reduce exposure, but the near-term impact remains high.

4. Working capital intensity and margin compression

Prolonged receivable cycles in government and EPC projects, coupled with high inventory requirements due to fluctuating coil prices, strain liquidity. Smaller manufacturers face difficulty managing this cycle without increasing debt. Over 3–4 years, as project-based demand expands, cash flow mismatches will remain significant. Over the long term, improved payment discipline under digital procurement systems could reduce but not eliminate this constraint.

5. Dependence on government and infrastructure spending

Nearly half of the domestic demand originates from government-funded projects in water supply, irrigation, and infrastructure. Any delay in tender execution, fund allocation, or policy change directly affects order inflows. Over the medium term, this dependence may limit sector resilience during fiscal tightening phases. Over 5–7 years, diversification toward exports and private infrastructure could reduce exposure, but dependency remains structurally embedded.

6. Technological and quality gaps versus global benchmarks

While Indian manufacturers have achieved scale in ERW and galvanized pipes, adoption of advanced coating technologies, automated inspection, and seamless pipe manufacturing

remains limited. This restricts penetration into high-specification applications such as oil & gas transmission and precision engineering. Over the next 3–4 years, technological collaborations may narrow the gap, but long-term competitiveness will require sustained investment in automation and R&D.

7. Government Initiatives and Policy Support

The Government of India has implemented a range of industrial, infrastructure, and trade policies that directly and indirectly support the Steel Pipes and Tubes industry. These initiatives are aimed at expanding domestic manufacturing capacity, ensuring raw material security, stimulating infrastructure demand, and promoting exports. Together, they form an integrated framework that reinforces the sector's long-term growth, competitiveness, and alignment with national development goals.

1. National Infrastructure Pipeline (NIP) and Public Capex Push

The ₹111 lakh crore National Infrastructure Pipeline (NIP), extended through FY2030, and the Union Budget's continued focus on high public capital expenditure (over 3.4% of GDP) have created structural demand for steel pipes and tubes in water supply, roads, bridges, metro systems, and urban infrastructure. These programs provide sustained project visibility for manufacturers supplying ERW, galvanized, and structural hollow sections to EPC contractors.

2. Jal Jeevan Mission (JJM) and Water Distribution Programs

The Jal Jeevan Mission, with a cumulative outlay exceeding ₹3.6 lakh crore, aims to provide tap water to every rural household. The program, along with AMRUT 2.0 and Smart City Mission, generates steady offtake for galvanized and MS pipes used in potable water distribution, wastewater, and sanitation infrastructure. These long-duration projects form one of the most stable demand bases for the domestic pipes industry.

3. Energy and Gas Infrastructure Expansion (PNGRB and CGD Networks)

The Petroleum and Natural Gas Regulatory Board (PNGRB) and public sector companies such as GAIL and IOCL are expanding city gas distribution (CGD) and national gas grid projects. This policy-backed expansion of oil and gas pipelines significantly boosts demand for ERW, HSAW, and seamless pipes. With more than 300 CGD geographical areas authorized, this segment remains a key long-term growth driver.

4. Make in India, Atmanirbhar Bharat, and PLI Framework

Under Make in India and Atmanirbhar Bharat Abhiyan, the government encourages domestic production of steel products and downstream fabrication. While the current Production Linked Incentive (PLI) scheme covers specialty steel (with an outlay of ₹6,322 crore), it indirectly benefits pipe manufacturers through assured availability of high-

grade hot-rolled and galvanized coils. The emphasis on local value addition and technology adoption strengthens supply-chain resilience.

5. Quality Control Orders (QCOs) and BIS Standardization

The Ministry of Steel and the Bureau of Indian Standards (BIS) have issued Quality Control Orders (QCOs) for steel and steel products, including pipes and tubes, to ensure consistent quality and curb substandard imports. Mandatory BIS certification has improved product reliability and industry reputation, promoting formalization of the sector and enhancing India's competitiveness in both domestic and export markets.

6. Export Promotion and Trade Facilitation Measures

The government's export facilitation through the Remission of Duties and Taxes on Exported Products (RoDTEP) scheme, FTAs with the UAE and Australia, and concessional logistics corridors under PM Gati Shakti have expanded market access for Indian steel pipe exporters. Rationalization of import duties on key inputs like zinc and scrap has further strengthened cost competitiveness and global integration.

7. Green Steel and Sustainable Manufacturing Initiatives

In line with India's 2070 net-zero commitment, the government has launched the Green Steel policy framework promoting decarbonization in steelmaking and downstream fabrication. Adoption of energy-efficient galvanizing, waste heat recovery, and zinc recycling processes in the pipe industry aligns domestic production with global ESG standards and opens new opportunities in renewable, water, and sustainable infrastructure applications.

Taken together, these initiatives establish a coherent policy framework that simultaneously drives demand creation and strengthens the domestic manufacturing ecosystem. Infrastructure and water distribution programs ensure predictable, large-scale consumption, while industrial and energy policies promote capacity expansion and technological modernization. Quality control measures and export facilitation reforms enhance competitiveness, integrating Indian producers more deeply into global value chains. Complementing these, sustainability and green manufacturing mandates position the sector for future regulatory alignment and ESG-driven investment flows. Collectively, this convergence of policy thrust, capability building, and environmental stewardship positions the Indian Steel Pipes and Tubes industry for sustained medium- to long-term growth within a formalized, resilient, and globally competitive landscape.

8. Technology & Digital Transformation

The Steel Pipes and Tubes industry is experiencing a structural transformation driven by automation, digitalization, and advances in metallurgical engineering. These developments are enhancing precision, efficiency, and sustainability while preparing the industry for a more integrated role in global infrastructure, energy, and industrial ecosystems.

1. Advanced Metallurgy and Material Engineering

Manufacturers are increasingly adopting thermo-mechanically controlled processing (TMCP) and micro-alloying technologies to enhance tensile strength, corrosion resistance, and weldability of steel pipes. High-strength low-alloy (HSLA) and duplex stainless steels are replacing conventional grades, enabling lighter yet more durable products suited for critical applications in oil & gas, construction, and water transmission.

2. Process Automation and Smart Manufacturing

Digital process control systems, including Supervisory Control and Data Acquisition (SCADA) and Distributed Control Systems (DCS), are improving operational precision across rolling, welding, and finishing stages. Integration of IoT-enabled sensors allows real-time monitoring of pressure, temperature, and dimensional accuracy, minimizing wastage and ensuring consistent quality across large production runs.

3. Industry 4.0 and Digital Twins

Leading players are deploying digital twin models to simulate pipe performance under various stress and corrosion conditions. These models enable predictive process adjustments and maintenance scheduling, thereby reducing downtime and optimizing yield. The use of machine learning algorithms for defect prediction and automated inspection is strengthening quality assurance in continuous manufacturing lines.

4. Additive Manufacturing and Custom Fabrication

Emerging applications of additive manufacturing (3D printing) and automated bending technologies allow faster prototyping and production of customized pipe fittings, particularly for niche industrial and offshore projects. This flexibility supports just-in-time manufacturing, reducing lead times and inventory costs while catering to increasingly project-specific client requirements.

5. Supply Chain Digitalization and Traceability

Digital platforms are being adopted to improve logistics coordination, inventory control, and supplier traceability. Blockchain-based systems are gaining traction for ensuring end-

to-end transparency in raw material sourcing and quality certification, critical for export compliance and infrastructure procurement under public contracts.

6. Sustainability and Energy Efficiency Technologies

Energy-efficient electric arc furnaces (EAFs), waste heat recovery systems, and process water recycling are being integrated to reduce carbon intensity in production. Green hydrogen-based direct reduced iron (DRI) initiatives and carbon capture pilots are under exploration, positioning the industry to align with India's net-zero commitments and global ESG standards.

7. Digital Customer and Service Platforms

Manufacturers are leveraging digital interfaces—such as e-marketplaces and configurator platforms—to provide clients with real-time inventory visibility, technical support, and order customization. This digital engagement enhances responsiveness and builds stronger OEM and EPC customer relationships across domestic and export markets.

The technological evolution of the Steel Pipes and Tubes industry reflects a dual imperative: achieving operational excellence through automation and digital integration, and meeting sustainability objectives through advanced material science and cleaner production systems. Collectively, these innovations are driving the industry toward higher productivity, global competitiveness, and long-term resilience in a decarbonizing and digitally interconnected economy.

9. PESTLE Analysis of the Industry

A comprehensive PESTLE (Political, Economic, Social, Technological, Legal, and Environmental) analysis helps evaluate the external macro-environmental factors influencing the Steel Pipes and Tubes Industry. These dimensions collectively shape demand outlook, policy direction, investment flows, and competitive positioning in the medium to long term.

Factor	Description	Impact on Steel Pipes and Tubes Industry
Political	- Large-scale government infrastructure programs such as the National Infrastructure Pipeline (NIP), Jal Jeevan Mission, and PM Gati Shakti are generating stable, long-term demand for steel pipes in water supply, sanitation, and logistics. - Production Linked Incentive (PLI) and Atmanirbhar Bharat initiatives promote localization of inputs and downstream manufacturing. - Public investment in oil & gas transmission networks (e.g., Pradhan Mantri Urja Ganga) and city gas distribution (CGD) boosts demand for API-grade and ERW pipes. - Geopolitical trade alignments (e.g., tariff barriers and anti-dumping measures) influence import and export competitiveness. - Steel sector policy reforms, including scrap recycling policy and raw material security, enhance supply stability.	- Strengthens long-term domestic demand visibility through public infrastructure and utilities spending. - Encourages capacity expansion and backward integration. - Reduces import dependence via policy-driven localization. - Geopolitical factors and trade protectionism influence export pricing and market access. - Sustains policy-led demand resilience even amid cyclical downturns.
Economic	- India's GDP growth and industrial capex recovery underpin steady demand from construction, energy, and manufacturing sectors. - Expanding oil & gas exploration, refinery modernization, and renewable energy projects increase usage of seamless and galvanized pipes.	- Multi-sector growth drivers create sustained consumption base. - Input price volatility remains a near-term profitability risk. - Export diversification supports capacity utilization but requires financial resilience.

	• Volatility in steel prices and coking coal costs affects profitability and working capital cycles. • Export potential supported by India's cost competitiveness in mild steel and galvanized pipes. • MSMEs contribute significantly but face liquidity and technology adoption constraints. • Exchange rate fluctuations and global demand cycles impact export realization.	• MSMEs' viability depends on credit access and process modernization. • Long-term economic reforms and infra-led investments favor structural growth.
Social	• Rapid urbanization, housing development, and sanitation programs are increasing water and sewage infrastructure needs. • Rising public awareness on quality and safety drives demand for BIS-certified, corrosion-resistant pipes. • Expansion of city gas networks supports urban household connectivity. • Workforce upskilling programs and industrial training schemes (e.g., Skill India) are improving labor productivity. • Growing ESG awareness among institutional investors and EPC clients is pushing firms toward sustainable production practices.	• Drives organized sector expansion due to compliance and certification demand. • Strengthens preference for durable, high-quality steel pipe solutions. • Enhances productivity and product reliability through skilled workforce participation. • Aligns business practices with evolving stakeholder and consumer expectations
Techno-logical	• Integration of automation, robotics, and real-time process monitoring in rolling, welding, and finishing lines is improving quality and throughput. • Adoption of Industry 4.0 tools, including digital twins and predictive analytics, optimizes plant utilization and reduces defect rates. • Advances in metallurgy (e.g., high-strength low-alloy steels, corrosion-resistant coatings, and fusion-bonded epoxy linings) enhance product lifespan. • Development of hydrogen-ready and carbon steel composite pipelines for emerging energy sectors.	• Improves production efficiency, consistency, and competitiveness. • Supports entry into higher-value segments like oil & gas, renewables, and city gas. • Reduces maintenance costs and quality variability. Enables data-driven process control and customer integration. • Raises entry barriers for smaller players without automation capabilities.

	• Supply chain digitalization enhances logistics traceability and inventory control. • Increasing need for cybersecurity and IP protection in automated manufacturing setups.	
Legal	• Enforcement of Bureau of Indian Standards (BIS) norms for pipes and tubes under the Steel and Steel Products (Quality Control) Orders. • Implementation of anti-dumping duties on imports from select countries to protect domestic industry. • Environmental, Health, and Safety (EHS) norms mandating pollution control, waste disposal, and workplace safety compliance. • Labor codes consolidation under India's new Industrial Relations and Occupational Safety framework. • Trade-related compliance with ISO, ASTM, and API certifications for export eligibility. • Legal scrutiny over project quality in public infrastructure contracts.	• Enforces standardized quality, reducing counterfeit and substandard supply. • Protects domestic players from dumping and unfair competition. • Adds compliance costs but enhances global credibility and export readiness. • Promotes ethical labor and environmental practices. • Increases procurement confidence among institutional and government buyers
Environ-mental	• Steelmaking and pipe fabrication are under rising pressure to decarbonize in line with India's Net Zero 2070 target. • Adoption of energy-efficient furnaces, waste heat recovery, and water recycling systems to lower emissions. • Transition toward green steel production and use of scrap-based EAFs. • Growing emphasis on Life Cycle Assessment (LCA) and carbon disclosure in procurement by EPC and PSU clients. • Environmental clearances and ESG reporting now central to capacity expansion projects. • Circular economy practices such as metal recovery and recycling gaining traction.	• Drives industry shift toward sustainable, low-carbon manufacturing. • Increases capital requirements for compliance but enhances long-term viability. • Positions ESG-compliant firms favourably in financing and export markets. • Encourages innovation in recycling and waste reduction. • Aligns the sector with global green procurement standards and investor expectations.

India's Steel Pipes and Tubes industry operates within a progressively structured policy and regulatory ecosystem. Political and economic factors provide sustained infrastructure-led demand and domestic capacity expansion. Social and environmental dimensions are accelerating the transition toward formalization and sustainability, while technological and legal forces are redefining competitiveness through automation, compliance, and quality assurance. Together, these PESTLE factors create a medium- to long-term outlook characterized by policy stability, technological modernization, and an evolving emphasis on green manufacturing and global market integration.

10. Competitive Landscape

The Indian Steel Pipes and Tubes industry operates in a highly competitive environment influenced by domestic production capabilities, global supply dynamics, regulatory compliance, and technological differentiation. Competition is shaped by cost efficiency, quality standards, distribution reach, process innovation, and alignment with government infrastructure and energy programs. Demand spans construction, water supply and sanitation, oil & gas, industrial machinery, automotive, and renewable energy sectors.

10.1 Key Factors Shaping Competition

- **Cost Efficiency:**

Players leverage scale-driven production, lean manufacturing, and strategic localization of raw material sourcing to optimize costs. For tender-driven procurement by government agencies (e.g., NHAI, Jal Jeevan Mission) and large EPC contractors, cost competitiveness is a critical differentiator. Economies of scale also benefit larger manufacturers in pricing long-length ERW, GI, and seamless pipes.

- **Product Quality and Reliability:**

Compliance with BIS, API, ASTM, and ISO certifications is increasingly a precondition for participating in public infrastructure, industrial, and energy contracts. Quality assurance through advanced metallurgical processes, precision welding, and galvanizing ensures long-term durability, corrosion resistance, and operational safety, providing a competitive edge.

- **Technology and Process Innovation:**

Investment in high-frequency welding, galvanizing lines, automatic coating systems, and digital process monitoring enables operational efficiency and consistency. Advanced metallurgical techniques, such as high-strength low-alloy (HSLA) steel and corrosion-resistant coatings, allow differentiation in niche applications like oil & gas pipelines, renewable energy, and urban infrastructure.

- **Distribution Network and Market Reach:**

Robust dealer networks, regional warehouses, and logistics partnerships improve market penetration, particularly in Tier II and Tier III cities. Integration with EPC contractors and government supply chains enhances visibility and order conversion, while rapid delivery capability strengthens relationships in time-sensitive projects.

- **Government Policy Alignment:**

Manufacturers compliant with PLI schemes, Make in India initiatives, and BIS standards are positioned to access large-scale projects in water supply, urban gas distribution, highways, and industrial corridors. Policy alignment not only ensures preferential participation but also reduces risk exposure in regulated procurement processes.

- **Brand Reputation and Customer Trust:**

Established players with a history of delivering on public and industrial contracts benefit from enhanced credibility. Proven track records in safety, quality, and project delivery reduce reliance on price competition and enable premium positioning in specialized segments.

- **Export and Global Market Access:**

Competitive Indian manufacturers are increasingly exporting ERW, GI, and seamless pipes to Middle East, Southeast Asia, and African markets. Cost advantages, quality compliance, and adherence to international standards drive export competitiveness, while government incentives facilitate trade expansion.

10.2 Competitive Strategies

- **Vertical Integration**

Major manufacturers are investing across the value chain—from upstream sourcing of scrap-based steel or billets to downstream galvanizing, coating, and finishing processes. This integration ensures stable raw material availability, cost optimization, and uniform product quality, particularly for specialized or high-specification pipes used in industrial, energy, and infrastructure applications.

- **Strategic Partnerships and Joint Ventures**

Collaborations with global technology providers facilitate adoption of advanced pipe manufacturing techniques and API-standard designs. These partnerships allow Indian firms to enter high-margin sectors such as oil & gas, renewable energy, chemical transport, and urban infrastructure, while accelerating technology transfer and localization of specialized processes.

- **Capacity Expansion**

Both greenfield and brownfield expansions in ERW, GI, and seamless pipe production lines enable incumbents to scale operations rapidly, enhance cost competitiveness, and fulfill large-volume contracts. Capacity augmentation also positions firms to respond effectively to rising domestic infrastructure demand and export opportunities in global markets.

- **Digitalization and Process Optimization**

Adoption of ERP systems, automated production lines, IoT-enabled process monitoring, and predictive maintenance improves operational efficiency, reduces downtime, and ensures quality consistency. Digital traceability and real-time monitoring enhance customer confidence, enable timely delivery, and provide a foundation for future Industry 4.0 adoption across manufacturing operations.

- **Aftermarket and Service Differentiation**

Firms are increasingly offering value-added lifecycle support services, including corrosion monitoring, scheduled replacements, and technical guidance for pipeline installation and maintenance. These initiatives strengthen long-term client relationships, create recurring revenue streams, and differentiate manufacturers in a competitive market where project reliability and service quality are critical.

10.3 Barriers to Entry

- **Capital-Intensive Infrastructure**

Establishing manufacturing facilities requires substantial investment in ERW mills, seamless pipelines, galvanizing plants, finishing equipment, and quality control laboratories. Beyond machinery costs, significant working capital is needed to maintain raw material inventories and meet project timelines. High fixed costs and long payback periods limit the ability of new entrants to compete effectively in a price-sensitive and tender-driven environment.

- **Technological Expertise**

Production of industrial and API-grade pipes demands specialized knowledge in metallurgy, welding techniques, corrosion-resistant coatings, and process automation. Mastery of advanced processes such as hot-dip galvanizing, cold rolling, and precision ERW or seamless fabrication is essential to meet quality and safety standards. Lack of technical expertise can result in defective products, reduced reliability, and potential regulatory non-compliance.

- **Regulatory Compliance**

New entrants must navigate multiple certification and regulatory requirements, including BIS, API, ASTM standards, environmental clearances, and labor laws. Compliance involves rigorous testing, documentation, and audits, which require both time and investment. Delays in obtaining certifications or approvals can slow market entry and limit participation in large-scale government and industrial contracts.

- **Raw Material and Supply Chain Dependencies**

Steel billets, hot-rolled coils, and high-purity zinc for galvanizing form the backbone of production. Volatile steel and zinc prices, geopolitical uncertainties, and transportation challenges can disproportionately affect new entrants without long-term supply agreements. Established players benefit from secured procurement contracts and integrated supply chains that stabilize costs and ensure uninterrupted production.

- **ESG and Sustainability Compliance**

Energy-efficient processes, waste management protocols, carbon footprint reduction, and adoption of green steel technologies are increasingly required by major infrastructure projects and export markets. Compliance with these environmental, social, and governance (ESG) standards imposes significant costs on new players, creating a competitive edge for well-capitalized firms with established sustainability practices.

- **Market Access and Brand Trust**

Government tenders, EPC contracts, and large industrial clients prioritize reliability, proven delivery track records, and post-installation service capabilities. New entrants face credibility gaps and must demonstrate both product quality and project execution capability. Building brand recognition and trust requires substantial time, marketing investment, and successful project completion, which can delay scale-up and profitability.

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10.4 Consolidation Trend

- **Mergers, Acquisitions, and Strategic Alliances**

Leading manufacturers are actively acquiring smaller regional or niche players to expand production capacity, diversify product portfolios, and achieve economies of scale. Such mergers and acquisitions facilitate integration of complementary technologies—for example, combining ERW, seamless, and galvanizing capabilities under a single entity. This allows firms to optimize resource utilization, reduce per-unit production costs, and enhance operational efficiency while ensuring consistent quality across product lines.

- **Global-Domestic Collaborations**

Joint ventures and strategic partnerships with international pipe manufacturers provide access to advanced manufacturing technologies, global best practices, and high-specification product designs. These collaborations accelerate adoption of API, ASTM, and other international standards, ensuring that Indian firms can compete in export markets and specialized domestic sectors, such as oil & gas, renewable energy, and infrastructure pipelines. Technology transfer through such partnerships reduces R&D lead times and supports faster market penetration.

- **Market Consolidation Impact**

As larger firms consolidate market share, they increasingly dominate government infrastructure projects, EPC contracts, and high-volume industrial orders. Consolidation enhances bargaining power with suppliers, enabling favorable raw material pricing and better inventory management. It also strengthens risk management by diversifying exposure across products, geographies, and customer segments. In volatile steel and zinc markets, consolidated players are better positioned to maintain margin stability and consistent delivery timelines.

- **Focused Specialization**

Consolidation enables the emergence of niche, high-value product segments, such as corrosion-resistant pipes, API-standard pipelines, hydrogen-ready tubing, and high-pressure industrial pipes. By investing in specialized production lines and quality certifications, consolidated players achieve product differentiation and command premium pricing. This focus on high-margin, technically demanding segments also reduces competitive pressures from commoditized products and strengthens long-term sustainability.

- **Technological and Operational Integration**

Integrated entities leverage combined R&D, process automation, and digital tools such as ERP, IoT-enabled monitoring, and predictive maintenance across production lines. This ensures standardization of quality, enhances productivity, and reduces operational downtime. Integrated operations also support better customer service through reliable delivery schedules, technical support, and lifecycle management solutions.

- **Investor and Financial Implications**

Consolidation improves financial robustness, with larger firms able to attract investment for greenfield expansions, technological upgrades, and ESG compliance initiatives. Enhanced balance sheet strength provides flexibility to pursue government tenders, international contracts, and large-scale industrial projects. Investors and lenders view consolidated players as lower-risk partners due to operational scale, diversified product lines, and consistent performance history.

The competitive landscape of the Indian Steel Pipes and Tubes Industry is defined by cost leadership, technological capability, regulatory compliance, and strategic market positioning. Firms investing in vertical integration, process automation, advanced metallurgy, global partnerships, and ESG compliance are best positioned to secure OEM and government contracts, participate in high-value infrastructure and energy projects, and expand into export-driven growth markets. Consolidation and technological adoption are key to maintaining long-term competitiveness in this capital-intensive and quality-sensitive industry.

10.5 Key Industry Players

The Indian Steel Pipes and Tubes industry is led by a combination of large-scale, technologically advanced manufacturers with strong backward integration, diversified product portfolios, and extensive domestic and export networks. The following companies represent the leading players driving the sector's growth:

1. APL Apollo Tubes Limited

APL Apollo Tubes Limited, incorporated in 1986 and headquartered in Noida, Uttar Pradesh, is one of India's leading manufacturers of structural steel tubes, specializing in Electric Resistance Welded (ERW) pipes, hollow sections, and value-added steel profiles. The company serves a broad spectrum of end-use industries, including construction, infrastructure, agriculture, industrial fabrication, and utility applications, while also establishing a strong international presence by exporting products to multiple countries, reflecting its capability to meet global quality and compliance standards.

The company operates multiple state-of-the-art manufacturing facilities across strategic industrial regions in India, equipped with advanced ERW and galvanizing lines, automated finishing units, and in-house quality laboratories. Its production approach emphasizes process standardization, energy efficiency, and continuous modernization, ensuring high throughput, product consistency, and cost optimization. APL Apollo has developed significant backward integration, sourcing billets and semi-finished steel internally or via preferred suppliers to secure raw material quality and manage volatility in steel prices.

The product portfolio spans over 1,500 SKUs, including MS Black pipes, pre-galvanized tubes, structural sections, and specialized profiles such as Apollo DFT, Apollo Bheem, and Apollo Elliptical. These products cater to applications such as scaffolding, plumbing, furniture, electrical conduits, barricades, greenhouses, and infrastructure frameworks. The company also focuses on high-strength, corrosion-resistant variants to meet industrial and export-oriented demands, demonstrating adaptability to sector-specific performance requirements.

Quality assurance and compliance are central to APL Apollo's operations. The company holds multiple domestic and international certifications, including BIS, ISO 9001, ISO 14001, and OHSAS 18001, and has received CE and SGS accreditations, underscoring its credibility for high-integrity applications. Its adherence to environmental and occupational safety standards positions the company as a responsible and sustainable manufacturer.

APL Apollo operates a robust distribution network with warehouses and branch offices in key Indian cities, supported by over 800 dealer partners, facilitating timely supply to urban and semi-urban markets and enabling the execution of large-scale infrastructure and industrial projects. The company's international presence through export channels further strengthens its market reach and brand recognition globally.

Strategically, APL Apollo differentiates itself through integrated manufacturing capabilities, a diverse product portfolio, backward integration, and a focus on innovation and quality. Its capacity to offer customized solutions enhances appeal across institutional and retail segments. Continuous investments in technology, capacity expansion, and process optimization reinforce its market leadership and ability to navigate demand fluctuations, raw material volatility, and competitive pressures.

APL Apollo Tubes is focused on scaling production capacities, expanding value-added products, increasing export penetration, and leveraging digital tools for supply chain efficiency. By aligning operations with sustainability practices and global quality standards, the company is well-positioned to capitalize on long-term growth opportunities in construction, infrastructure, and industrial sectors while maintaining operational resilience and competitive advantage.

2. Hariom Pipe Industries Limited

Hariom Pipe Industries Limited, headquartered in Hyderabad, Telangana, is a key player in India's steel pipes and tubes sector, tracing its legacy to 1962 under the guidance of the late Shri Hariom Gupta and formally incorporated in 2007. Leveraging decades of industry experience, the company has established a strong reputation for producing a comprehensive range of steel pipes and coils, supported by backward-integrated operations that enhance quality control, cost efficiency, and supply reliability.

The company operates multiple advanced manufacturing facilities in Telangana and Tamil Nadu, encompassing integrated capabilities across sponge iron production, hot-rolled (HR) coils, tube mills, and scaffolding tube lines. This vertical integration enables Hariom Pipe Industries to internally manage critical raw materials while maintaining stringent quality standards, optimizing production costs, and ensuring operational efficiency. The facilities employ modern rolling, welding, and galvanizing technologies, producing precision-engineered pipes and tubes that comply with domestic and international specifications.

Hariom Pipe Industries offers a wide-ranging product portfolio, including HR pipes, pre-galvanized (GP) pipes, galvanized (GI) pipes, MS billets, HR/CR coils, and scaffolding tubes. It also manufactures hollow sections in square (12×12 mm to 150×150 mm), rectangular (25×12 mm to 200×100 mm), and circular profiles (12 NB to 175 NB), catering to diverse construction, industrial, and agricultural applications. The company emphasizes high-strength, corrosion-resistant, and value-added steel products to meet evolving market requirements. Quality and compliance are central to operations, with products conforming to ISI and British Standards (BS), and maintaining BIS certification. Stringent raw material inspection, process monitoring, and final product testing ensure durability, performance, and operational sustainability, supported by resource optimization, waste reduction, and recycling initiatives.

Hariom Pipe Industries has a pan-India presence, with particular strength in South and West India, supported by a distribution network combining direct sales, dealer channels, and partnerships with construction and industrial contractors. This enables timely delivery, responsive service, and market reach across diverse sectors. Its export-oriented strategy has begun to gain recognition for meeting technical and quality requirements in international markets.

Strategically, the company's competitive advantages stem from its backward integration, operational efficiency, and diverse product range, allowing it to provide both standardized and customized steel solutions for industrial, infrastructure, and construction clients. Forward-looking initiatives include capacity expansion, development of value-added products, enhancement of distribution networks, and strengthening export capabilities. By investing in technological upgrades, quality compliance, and sustainable manufacturing practices, Hariom Pipe Industries aims to capture long-term growth opportunities while maintaining operational resilience and leadership within India's steel pipes and tubes industry.

3. Hi-Tech Pipes Limited

Hi-Tech Pipes Limited, incorporated in 1985, is a leading Indian manufacturer of steel pipes and tubes, recognized for its extensive range of Electric Resistance Welded (ERW) pipes, hollow sections, and value-added steel products. The company has established a strong presence across infrastructure, construction, automotive, defense, solar, and industrial sectors, serving both domestic demand and export markets. Hi-Tech Pipes operates six strategically located manufacturing facilities across Uttar Pradesh, Gujarat, Andhra Pradesh, and Maharashtra, equipped with modern ERW, galvanizing, and finishing lines. These plants support production of black, galvanized, and pre-galvanized steel pipes, structural hollow sections, and solar torque tubes, utilizing advanced rolling, welding, and finishing technologies to ensure dimensional accuracy, mechanical strength, and surface quality that meet the specifications of diverse industrial and construction applications.

The company's product portfolio is comprehensive, encompassing ERW steel round and section pipes, cold-rolled strips, galvanized coils, and structural metal beams. Products are marketed under recognized brands such as JalShakti, Organic Pipes, FireFighter, and Bahubali, catering to sectors including construction, water supply, agriculture, defense, energy, and telecom. Hi-Tech Pipes also manufactures crash barriers, solar mounting structures, and other specialized sections, reflecting its capability to provide both standard and customized solutions. Quality assurance is central to operations, with stringent protocols applied across raw material sourcing, in-process manufacturing, and finished product stages. Compliance with domestic standards and international best practices ensures durability, corrosion resistance, and structural integrity, reinforcing customer confidence and supporting export-grade specifications.

Hi-Tech Pipes maintains a broad market footprint across India, serving both organized and unorganized sectors through an extensive dealer and distributor network. Its export operations extend to multiple countries, targeting markets with high-quality ERW and galvanized pipe requirements. The company's competitive advantages include manufacturing scale, product diversity, technological adoption, backward integration for quality steel sourcing, and efficient supply chain management, enabling cost competitiveness, operational efficiency, and reliable delivery. Engineering excellence, process optimization, and the ability to produce customized solutions have helped Hi-Tech Pipes sustain its leadership among Indian ERW pipe manufacturers.

Hi-Tech Pipes aims to expand production capacity, introduce higher-value products, and strengthen its domestic and international market presence. Strategic priorities include adopting energy-efficient manufacturing practices, enhancing digitalization across production and logistics, and developing products tailored for infrastructure, renewable energy, and industrial applications. Through continued investment in technology, quality standards, and customer-centric solutions, Hi-Tech Pipes is positioned to reinforce its market leadership and capitalize on long-term growth opportunities within India's steel pipes and tubes industry.

4. JTL Industries Limited

JTL Industries Limited, originally founded as Jagan Tubes in 1991 and rebranded in 2022, is a leading Indian manufacturer of steel pipes and tubes, headquartered in Chandigarh. As the flagship steel tube company of the Jagan Group, JTL combines decades of industry experience with modern manufacturing practices to serve a wide range of sectors, including construction, infrastructure, energy, agriculture, and heavy vehicles, catering to both domestic and international markets. The company operates four state-of-the-art manufacturing facilities equipped with advanced Electric Resistance Welded (ERW) and galvanized pipe production lines, designed to deliver scalable output with consistent quality and dimensional precision. Emphasizing backward integration, JTL manages key raw materials such as billets and hot-rolled coils in-house, ensuring supply reliability, cost control, and superior product quality. The production lines also incorporate finishing processes, including galvanization and coating, enhancing corrosion resistance and durability for diverse industrial applications.

JTL Industries maintains an extensive product portfolio comprising ERW black pipes, galvanized tubes, large-diameter section pipes, solar mounting structures, and crash barriers. This diversified range addresses both standardized and customized client requirements, providing flexibility across various project scales and industrial sectors. The company adheres to rigorous quality standards, holding ISO 9001:2015 certification and Star Export House status, with in-house quality control systems monitoring every stage of production from raw material intake to finished product delivery, ensuring reliability, safety, and durability for critical applications.

JTL leverages a robust domestic distribution network and a presence across multiple Indian states, alongside exports across five continents. This global reach strengthens the company's brand recognition and enhances its competitive positioning in the international steel pipe market. Key competitive advantages include full backward integration, technological adoption, a diversified product portfolio, and efficient inventory and working-capital management, allowing JTL to manage raw material price fluctuations, maintain supply continuity, and ensure timely project delivery. Its high export orientation, focusing on value-added products, positions the company as a cost-competitive yet quality-focused player in domestic and global markets.

JTL Industries aims to scale production capacity to 1,000,000 MTPA by FY26, leveraging Double Flow Technology (DFT) and other process innovations to improve product quality and operational efficiency. The company is focused on expanding its export footprint, introducing higher-value products, and strengthening sustainability and energy-efficiency practices across manufacturing operations. Through targeted investments in technology, capacity expansion, and customer-centric solutions, JTL Industries is strategically positioned to consolidate its leadership in the Indian steel pipes and tubes sector while capitalizing on long-term growth opportunities in both domestic and international markets.

5. Sambhv Steel Tubes Limited

Sambhv Steel Tubes Limited, founded in 2017 and headquartered in Raipur, Chhattisgarh, is a backward-integrated manufacturer of Electric Resistance Welded (ERW) steel pipes and tubes, which has rapidly established itself as a key player in central India. Leveraging a fully integrated production model that spans from raw material processing to finished pipe manufacturing, the company serves industrial, construction, infrastructure, and agricultural sectors across domestic and pan-India markets. Its single-location Raipur facility encompasses the complete value chain—sponge iron, blooms/slabs, hot-rolled coils, ERW pipes and tubes, and galvanized pipes—enabling strict quality control, operational efficiency, and cost optimization. Recent expansions in sponge iron, power, HR coils, and structural tubes have further enhanced production flexibility and scalability, allowing the company to meet diverse project requirements and large-scale orders reliably.

Sambhv's product portfolio includes ERW black and pre-galvanized pipes, structural hollow sections, CRFH pipes, and steel door frames, designed to meet the dimensional accuracy, corrosion resistance, and durability standards demanded by critical infrastructure, residential and commercial construction, industrial installations, and agricultural pipelines. The company adheres to domestic and international quality benchmarks, aligning its processes with BIS guidelines and industry best practices, while its integrated facilities and in-house testing capabilities allow rigorous monitoring throughout production, ensuring consistent output and reliability.

Strategically located in central India, Sambhv leverages logistical advantages for pan-India distribution through an established dealer network, serving multiple industrial and construction hubs with timely delivery and project continuity. Its competitive strengths lie in full backward integration, centralized operational efficiency, and a diversified product portfolio, which collectively ensure consistent quality, cost management, and reliable supply. Modernized production lines and scalable operations position the company to respond effectively to evolving market demands.

Sambhv Steel Tubes aims to consolidate its central India position while expanding nationally, focusing on scaling production capacity, diversifying product offerings, and enhancing energy efficiency and sustainability in its manufacturing processes. By integrating technological upgrades, strengthening distribution networks, and targeting high-value industrial and infrastructure applications, the company is strategically positioned for sustained growth, improved operational margins, and strengthened brand presence across domestic and industrial markets.

Comparative Analysis of Products Offered

Product / Capability	Jindal Supreme India Ltd	Hariom Pipe Industries Ltd	Sambhv Steel Tubes Ltd	JTL Industries Ltd	Hi-Tech Pipes Ltd	APL Apollo Tubes Ltd
ERW Black Pipes	–	✓	✓	✓	✓	✓
Pre-Galvanized Pipes	–	✓	–	✓	✓	✓
Galvanized Pipes	✓	✓	✓	✓	✓	✓
Structural Hollow Sections	✓	✓	✓	✓	✓	✓
Crash Barriers / Road Safety Products	✓	✓	–	✓	✓	–
Solar Mounting Structures / Torque Tubes	–	–	–	✓	–	✓
Large-Diameter Section Tubes	–	–	–	✓	✓	–
Swaged Tubular Poles	–	–	–	✓	–	–
Scaffolding / Construction Tubes	–	✓	–	–	–	–
Custom / Value-Added Profiles	–	–	–	✓	✓	–

10.6 Company Positioning – Jindal Supreme India Limited

The business traces its origins to 1974 with the establishment of a proprietary concern by Mr. Madan Lal Jindal, engaged in the manufacture of buckets. Over the years, the business expanded through diversification, operational growth and restructuring. Jindal Supreme India Limited (“Jindal Supreme” or “the Company”), in its present corporate form, has evolved through subsequent business expansion and organizational changes, with its current Board composition, management structure, manufacturing facilities, product portfolio and governance framework developed over time.

Today, Jindal Supreme is headquartered in Hisar, Haryana, and operates an integrated manufacturing facility spread across approximately 16 acres, specializing in the manufacture of MS Black and Galvanized Pipes and Tubes ranging from 0.5 inch to 10 inch. The Company further diversified its product portfolio with the commencement of commercial production of Metal Beam Crash Barriers in Fiscal 2025 and GI Tubular Poles in April 2025.

The Company operates a fully backward-integrated production model encompassing raw material sourcing, tube forming, ERW welding, galvanization, and finishing. Its production processes begin with stringent selection of mild steel coils and strips, followed by precision slitting, cold forming, and high-frequency ERW welding. Galvanized pipe production incorporates advanced surface preparation, hot-dip zinc coating, and passivation treatments to ensure corrosion resistance and compliance with IS 4736, ASTM A123, and IRC/MoRTH standards. Comprehensive in-house quality control systems, including hydrostatic and non-destructive testing, spectrometer analysis, and mechanical property evaluation, enable consistent dimensional accuracy and structural integrity across product categories.

Over the years, Jindal Supreme has progressively expanded its manufacturing base to an installed capacity of 90,000 MTPA for MS Black Pipes/Tubes, 45,000 MTPA for Galvanized Pipes/Tubes, 24,000 MTPA for Metal Beam Crash Barriers, and 12,000 MTPA for GI Tubular Poles, reflecting steady capacity expansion and diversification into value-added products.

Capacity and Production Performance

During Fiscal 2023–2026 and the period ended June 2026, Jindal Supreme demonstrated progressive operational scaling across its core and value-added product segments:

- **MS Black Pipes/Tubes:** Installed capacity increased from 70,000 MT in Fiscal 2023 to 90,000 MT in Fiscal 2024 and remained at 90,000 MT through Fiscal 2026. Production increased from 41,821 MT in Fiscal 2023 to 58,726 MT in Fiscal 2024, stood at 58,021 MT in Fiscal 2025 and increased marginally to 58,665 MT in Fiscal 2026. Capacity utilisation stood at 59.74%, 65.25%, 64.47% and 65.18%, respectively. For the period ended June

2026, production stood at 13,799 MT against an installed capacity of 22,500 MT, translating into utilisation of 61.33%.

- **Galvanized Pipes/Tubes:** Installed capacity increased from 40,000 MT in Fiscal 2023 to 45,000 MT in Fiscal 2024 and remained at 45,000 MT thereafter. Production increased from 31,488 MT in Fiscal 2023 to 42,521 MT in Fiscal 2024, before declining to 32,368 MT in Fiscal 2025 and 27,112 MT in Fiscal 2026. Capacity utilisation stood at 78.72%, 94.49%, 71.93% and 60.25%, respectively. For the period ended June 2026, production stood at 6,225 MT against an installed capacity of 11,250 MT, translating into utilisation of 55.33%.
- **Metal Beam Crash Barriers:** Commercial production commenced in Fiscal 2025 with an installed capacity of 24,000 MT. Production increased from 8,587 MT in Fiscal 2025 to 15,647 MT in Fiscal 2026, with capacity utilisation improving from 35.78% to 65.20%. For the period ended June 2026, production stood at 3,641 MT against an installed capacity of 6,000 MT, translating into utilisation of 60.68%, indicating continued ramp-up of the product segment.
- **GI Tubular Poles:** Production commenced in Fiscal 2026 with an installed capacity of 12,000 MT. Production stood at 4,017 MT in Fiscal 2026, representing capacity utilisation of 33.48%. For the period ended June 2026, production stood at 1,454 MT against an installed capacity of 3,000 MT, translating into utilisation of 48.47%, reflecting an improvement in capacity utilisation following the commencement of operations.

Operational and Strategic Strength

Jindal Supreme's competitive edge stems from its integrated operations, advanced manufacturing infrastructure, and diversified product mix:

- **Technological Leadership:** Adoption of German ERW and galvanizing technology, coupled with automated crash barrier and tubular pole fabrication lines.
- **Operational Efficiency:** Backward integration ensures consistent input quality, cost control, and supply reliability; ongoing modernization supports project-based scalability.
- **Quality Assurance:** Compliance with IS, ASTM, and BIS standards, supported by multi-stage in-house testing and certification protocols.
- **Market Positioning:** Presence across infrastructure, industrial, and government sectors with strong pan-India distribution, particularly in North India and Tier-II/III expansion markets.
- **Leadership Continuity:** Multi-generational promoter involvement combining legacy expertise and strategic modernization under the leadership of Abhishek Jindal (COO).
- The Company has also commissioned a 5 MW solar power plant, advancing its environmental, social, and governance (ESG) objectives. Its sustainability framework emphasizes renewable energy integration, waste minimization, and process efficiency.

Jindal Supreme plans to further expand tube mill capacity over the medium term, double crash barrier output to meet highway and industrial corridor demand and enhance galvanization throughput. Future focus areas include process automation, Industry 4.0 adoption, and expansion of the distributor network.

Through sustained investments in technology, capacity expansion, and ESG compliance, Jindal Supreme is positioned to strengthen its leadership in the Indian steel pipe and infrastructure solutions market, combining scale, efficiency, and product diversification for long-term growth. With consistent capacity growth, quality focus, and ESG-aligned initiatives, the Company remains well positioned to capture emerging opportunities across India's infrastructure and industrial sectors.

10.7 SWOT Analysis

Strengths	Weaknesses
• Diversified Product Portfolio – Wide range of ERW, seamless, galvanized, and pre-galvanized pipes serving construction, industrial, agricultural, energy, and infrastructure sectors. • Backward Integration – Many leading players control raw material sourcing (billets, HR/CR coils) ensuring cost control and quality reliability. • Technological Capability – Adoption of advanced ERW, galvanizing, and finishing lines, including automation and process optimization. • Regulatory Compliance Expertise – Compliance with BIS, ASTM, API standards enable access to both domestic and export markets. • Strategic Distribution Network – Extensive dealer and distributor networks enable pan-India and global reach. • Strong Brand Recognition – Established players enjoy high credibility in industrial and infrastructure projects. • Operational Efficiency – Use of modern ERP systems, predictive maintenance, and supply chain optimization improves throughput and reduces downtime. • Financial Stability of Key Players – Well-capitalized firms can invest in capacity expansions and technological upgrades. • High Export Potential – Indian steel pipes and tubes meet global standards, creating significant export opportunities. • Alignment with National Infrastructure Initiatives – Direct participation in government programs like PMAY, Ghar Ghar Jal, and highway development increases demand visibility.	• High Capital Intensity – Entry barriers and expansion require significant investment in ERW mills, galvanizing plants, and modern equipment. • Raw Material Price Volatility – Dependence on steel prices and zinc for galvanizing impacts margins. • Energy-Intensive Processes – Manufacturing requires significant power consumption, affecting costs and sustainability targets. • Fragmented Market for Smaller Players – Many unorganized units limit industry consolidation benefits and efficiency improvements. • Skilled Labor Dependence – Technological adoption demands trained workforce; shortages can hinder process efficiency.

Opportunities	Threats
• Rising Urban Infrastructure Projects – Growth in metros, expressways, industrial corridors, and smart city initiatives drives demand. • Renewable Energy Expansion – Solar, wind, and hydrogen-ready infrastructure increases need for specialized pipes and tubes. • Oil & Gas and Chemical Sector Growth – Pipeline infrastructure, refineries, and chemical transport create demand for API and corrosion-resistant pipes. • Government Housing Initiatives – PMAY, Ghar Ghar Jal, and rural electrification projects require large-scale pipe deployment. • Export Market Penetration – Demand from Middle East, Africa, and Southeast Asia offers growth beyond domestic markets. • Technological Upgradation – Adoption of Industry 4.0, digitalization, and automation enhances production quality and efficiency. • Aftermarket Services – Corrosion monitoring, maintenance, and lifecycle support present recurring revenue potential. • Steel Sector Policies & Incentives – PLI schemes, Make in India, and import-substitution policies favour local manufacturers. • Green Construction Trend – Sustainable construction projects encourage the use of high-quality, long-lasting steel tubes. • Public-Private Partnerships (PPP) – Infrastructure development through PPP projects ensures long-term volume demand.	• Global Steel Price Fluctuations – Import/export price volatility can compress margins. • Competition from Imports – Cheap imports from China and Southeast Asia can undercut domestic players. • Environmental Regulations – Compliance costs for emissions, waste management, and energy efficiency can increase operational expenditure. • Infrastructure Project Delays – Policy delays or funding gaps can temporarily reduce steel pipe demand. • Geopolitical Risks Affecting Supply Chain – Disruption in raw material imports (zinc, billets) can affect production continuity.

8.7 Financial Performance Analysis

The table below presents a comparative analysis of Jindal Supreme India Ltd ("the Company") in the steel manufacturing and pipe industry, based on key financial and operational parameters for FY2026

All financials are consolidated unless stated otherwise. Figures are in ₹ lakhs.

Key Indicators (in INR Lakhs)	Jindal Supreme India Ltd		
	FY 2026	FY 2025	FY 2024
Revenue from Operations	67,538.72	58,639.93	64,543.98
Total Income	67,594.04	60,474.07	65,087.68
EBITDA	4,162.90	2,592.17	2,110.86
EBIT	3,875.49	4,112.07	2,277.89
EBT	3,015.45	3,239.12	1,507.47
PAT	2,252.91	2,426.84	1,287.28
EBITDA Margin	6.16%	4.42%	3.27%
EBIT Margin	5.73%	6.80%	3.50%
EBT Margin	4.46%	5.36%	2.32%
PAT Margin	3.33%	4.01%	1.98%
Share Capital	4,028.26	191.82	191.82
Other Equity	5,654.22	7,271.89	4,839.27
Net Worth	9,682.48	7,463.71	5,031.09
Basic EPS	5.59	6.02	3.20
Diluted EPS	5.59	6.02	3.20
Debt / Equity	1.24	1.28	2.09
RoE	26.28%	38.85%	27.98%
RoCE	16.78%	22.37%	13.92%

Note: Data as per company's Audited Financials. Key financial ratios and their formulas used in this report are as follows:

1. EBITDA (Earnings Before Interest, Tax, Depreciation and Amortisation) is calculated as sum of Profit Before Tax, Finance Cost & Depreciation and Amortization excluding Other Income
2. EBIT (Earnings Before Interest & Tax) is calculated as EBITDA less Depreciation plus other income
3. EBT (Earning Before Tax) is calculated as EBIT less Finance Cost
4. PAT (Profit After Tax) is calculated as EBT less Tax
5. EBITDA Margin is calculated as EBITDA divided by Revenue from operation
6. EBIT Margin is calculated as EBIT divided by Total Income
7. EBT Margin is calculated as EBT divided by Total Income
8. PAT Margin is calculated as PAT divided by Total Income
9. EPS is calculated as PAT divided by weighted number of outstanding equity shares
10. Debt / Equity is calculated as total debt divided by net worth
11. RoE (Return on Equity) is calculated as PAT divided by Average Net worth
12. RoCE (Return on Capital Employed) is calculated as EBIT divided by Capital Employed (Net Worth Plus, Total Debt, Total Lease Liability, Deferred Tax Liability)

Capital Employed = NW + Total Debt + Total Lease Liability + Deferred Tax Liability

Revenue and Scale

Jindal Supreme India Limited reported revenue from operations of ₹67,538.72 lakhs in FY2026, compared with ₹58,639.93 lakhs in FY2025 and ₹64,543.98 lakhs in FY2024. Revenue increased by 15.17% in FY2026 over FY2025, while remaining above the FY2024 level. Total income stood at ₹67,594.04 lakhs in FY2026, compared with ₹60,474.07 lakhs in FY2025 and ₹65,087.68 lakhs in FY2024.

Profitability

The Company recorded EBITDA of ₹4,162.90 lakhs in FY2026, compared with ₹2,592.17 lakhs in FY2025 and ₹2,110.86 lakhs in FY2024. EBITDA margin improved to 6.16% in FY2026 from 4.42% in FY2025 and 3.27% in FY2024, indicating an improvement in operating profitability. PAT stood at ₹2,252.91 lakhs in FY2026, compared with ₹2,426.84 lakhs in FY2025 and ₹1,287.28 lakhs in FY2024. Accordingly, PAT margin stood at 3.33% in FY2026, compared with 4.01% in FY2025 and 1.98% in FY2024. The lower PAT in FY2026, despite higher EBITDA, resulted in a moderation in PAT margin.

Capital Structure and Leverage

The Company's net worth increased to ₹9,682.48 lakhs as of FY2026 from ₹7,463.71 lakhs in FY2025 and ₹5,031.09 lakhs in FY2024. Share capital increased to ₹4,028.26 lakhs in FY2026 from ₹191.82 lakhs in FY2025, while other equity stood at ₹5,654.22 lakhs. The debt-to-equity ratio stood at 1.24x in FY2026, compared with 1.28x in FY2025 and 2.09x in FY2024, indicating a reduction in financial leverage over the period despite the increase in the absolute scale of operations.

Returns and Capital Efficiency

The Company reported RoCE of 16.78% in FY2026, compared with 22.37% in FY2025 and 13.92% in FY2024. RoE stood at 26.28% in FY2026, compared with 38.85% in FY2025 and 27.98% in FY2024. The moderation in RoCE and RoE in FY2026, despite higher revenue and EBITDA, reflects the increase in the Company's capital and net worth base during the period.

Jindal Supreme India Limited operates at a mid-sized scale within the steel pipes and tubes industry. The Company recorded growth in revenue and EBITDA in FY2026, accompanied by an improvement in EBITDA margin and a reduction in the debt-to-equity ratio compared with FY2024. While PAT margin and return metrics moderated from FY2025 levels, the strengthening of the net worth base and improvement in operating profitability provide a basis for continued financial and operational expansion.

8.8 Peer Benchmarking Table (FY2025-26)

The table below presents a comparative analysis of Jindal Supreme India Ltd (“the Company”) against select peers in the steel manufacturing and pipe industry, based on key financial and operational parameters for FY2026.

All financials are consolidated unless stated otherwise. Figures are in ₹ lakhs.

Key Indicators (in INR Lakhs)	Consolidated Jindal Supreme (India) Limited	Standalone Vibhor steel Tubes Limited	Consolidated Sambhv Steel Tubes Limited	Consolidated Hi-Tech Pipes Limited
Revenue from Operations	67,538.72	1,14,935.10	2,41,324.30	4,20,007.42
Total Income	67,594.04	1,15,226.09	2,42,046.10	4,20,266.00
EBITDA	4,162.90	4,349.31	27,620.50	17,355.23
EBIT	3,875.49	2,832.16	24,209.10	14,903.78
EBT	3,015.45	1,238.28	19,018.70	10,146.71
PAT	2,252.91	879.34	14,815.10	7,616.05
EBITDA Margin	6.16%	3.78%	11.45%	4.13%
EBIT Margin	5.73%	2.46%	10.00%	3.55%
EBT Margin	4.46%	1.07%	7.86%	2.41%
PAT Margin	3.33%	0.76%	6.12%	1.81%
Share Capital	4,028.26	1,896.24	29,467.10	2,031.08
Other Equity	5,654.22	17,803.84	75,893.60	1,23,097.71
Net Worth	9,682.48	19,700.08	1,05,360.70	1,25,128.79
Basic EPS	5.59	4.64	1.81	3.77
Diluted EPS	5.59	4.64	1.81	3.77
Debt / Equity	1.24	0.01	0.04	0.02
RoE	26.28%	4.57%	19.13%	6.07%
RoCE	16.78%	7.24%	16.52%	10.50%
Average Net Worth	9,682.48	19256.145	77447.4	125432.13
Debt	9246.07	19249.79	37130.6	11502.4

Source: FY26 Financials submitted on BSE

Revenue and Scale

Jindal Supreme India Limited reported revenue from operations of ₹67,538.72 lakhs and total income of ₹67,594.04 lakhs. The Company operates at a smaller revenue scale compared with Vibhor Steel Tubes Limited at ₹1,14,935.10 lakhs, Sambhv Steel Tubes Limited at ₹2,41,324.30 lakhs and Hi-Tech Pipes Limited at ₹4,20,007.42 lakhs. The Company's comparatively smaller scale indicates scope for further expansion in manufacturing capacity, market coverage and customer base as it seeks to strengthen its position within the steel pipes and tubes industry.

Profitability

The Company reported EBITDA of ₹4,162.90 lakhs and PAT of ₹2,252.91 lakhs, translating into an EBITDA margin of 6.16% and PAT margin of 3.33%. Its EBITDA margin was higher than Vibhor Steel Tubes Limited at 3.78% and Hi-Tech Pipes Limited at 4.13%, but lower than Sambhv Steel Tubes Limited at 11.45%. Similarly, the Company's PAT margin of 3.33% was higher than Vibhor Steel Tubes Limited at 0.76% and Hi-Tech Pipes Limited at 1.81%, but lower than Sambhv Steel Tubes Limited at 6.12%. This indicates a relatively stronger margin profile than certain peers despite the Company's smaller operating scale.

Capital Structure and Leverage

The Company's net worth stood at ₹9,682.48 lakhs, against debt of ₹9,246.07 lakhs, resulting in a debt-to-equity ratio of 1.24 times. This represents a higher leverage position compared with Vibhor Steel Tubes Limited at 0.01 times, Sambhv Steel Tubes Limited at 0.04 times and Hi-Tech Pipes Limited at 0.02 times. The relatively higher leverage indicates greater reliance on debt financing and provides an area for continued balance-sheet strengthening as the Company expands its operations.

Returns and Capital Efficiency

Jindal Supreme India Limited reported RoCE of 16.78% and RoE of 26.28%. Its RoCE was broadly comparable with Sambhv Steel Tubes Limited at 16.52% and higher than Vibhor Steel Tubes Limited at 7.24% and Hi-Tech Pipes Limited at 10.50%. The Company's RoE of 26.28% was also higher than Vibhor Steel Tubes Limited at 4.57%, Sambhv Steel Tubes Limited at 19.13% and Hi-Tech Pipes Limited at 6.07%. These metrics indicate relatively efficient utilisation of capital and equity despite the Company's smaller scale.

In comparison with the selected peers, Jindal Supreme India Limited operates at a smaller revenue and net-worth scale but demonstrates a comparatively favourable profitability and return profile. The Company's EBITDA margin, PAT margin, RoCE and RoE are higher than those of Vibhor Steel Tubes Limited and Hi-Tech Pipes Limited, while remaining below Sambhv Steel Tubes Limited on profitability and broadly comparable on RoCE. The principal area of differentiation remains its higher leverage relative to the selected peers. Accordingly, opportunities for the Company include scaling operations, improving operating efficiencies and strengthening its capital structure while maintaining its existing profitability and return profile.

11. Future Outlook

The Indian steel pipes and tubes industry is positioned for steady growth over the medium to long term, supported by domestic infrastructure development, industrial expansion, and export integration. Government-led initiatives—such as metro networks, Smart Cities, Dedicated Freight Corridors (DFC), Jal Jeevan Mission, and energy pipeline expansion—are expected to drive demand across both commodity-grade and high-value pipe segments. Rapid industrialization, manufacturing growth, and energy transition projects, including city gas distribution and renewable energy infrastructure, provide additional impetus for specialized, durable pipes.

Segment-Specific Outlook: ERW pipes are expected to maintain volume dominance due to cost efficiency and extensive use in water supply, agriculture, and construction. SAW and seamless pipes will see incremental growth in high-pressure applications for oil & gas, refineries, petrochemicals, and power generation, with domestic and export demand supporting expansion. Structural hollow sections and value-added pipes are increasingly adopted in modern construction, industrial frameworks, bridges, and renewable energy projects, reflecting a shift toward higher-margin, specialized products.

Material and Technology Trends: The industry is likely to favour corrosion-resistant, high-strength, and alloyed steel grades for energy, petrochemical, and high-rise construction applications. Technological advancements—including automated production lines, high-frequency welding, advanced coatings, and precision cold-forming—are enhancing operational efficiency, product quality, and global competitiveness. Sustainability measures, targeting reduced carbon intensity, energy consumption, and material waste, are increasingly integrated across production processes.

Trade and Export Potential: India's position as a leading producer and exporter of steel pipes supports growth in global markets, particularly the Middle East, Southeast Asia, the USA, and Africa. Export volumes are expected to benefit from adherence to international standards (ASTM, API, EN) and improved logistics, while selective import substitution will strengthen domestic capabilities.

Growth Projections: Domestic demand for steel pipes is projected to grow at a CAGR of ~5.5% from FY2024–25 to FY2029–30, underpinned by infrastructure, urbanization, and industrial projects. Rising per-capita steel consumption, projected to reach 160 kg by FY2030–31, highlights significant untapped potential for both standard and value-added pipes.

Investment in capacity expansion, technological upgrades, and product diversification will reinforce India's position as a global hub, enabling a competitive, resilient, and export-oriented industry ecosystem.

The sector is expected to focus on dual objectives: meeting domestic infrastructure demand through cost-efficient, high-volume products such as ERW and structural hollow sections, while expanding high-margin, high-specification segments like SAW, seamless, and alloyed pipes for industrial and international markets. Policy support, raw material availability, and technological adoption collectively position the Indian steel pipes and tubes industry for sustainable long-term growth.

Yours Faithfully,



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