Industry Report on Indian Steel Pipes & Tubes

Prepared For: R.K. STEEL MANUFACTURING COMPANY LIMITED

19th September 2025

Disclaimer

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Contents

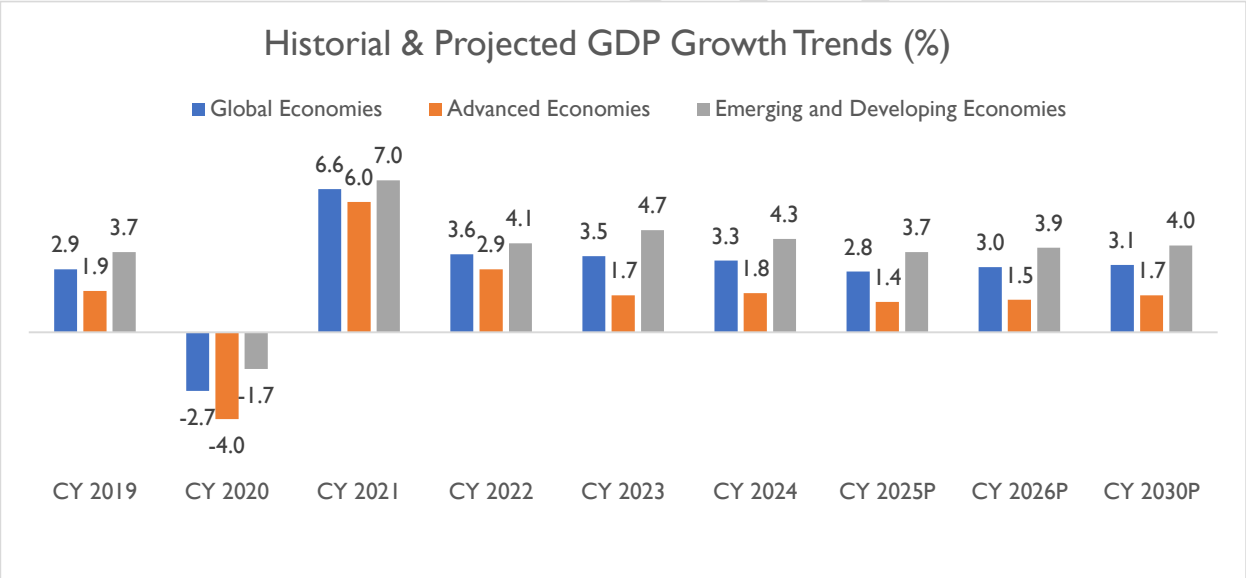
Global Macroeconomic Landscape 5
Global Economic Overview 5
Historical and Projected GDP Growth 6
Global Economic Outlook 7
Global Growth Projection 8
India Macroeconomic Analysis 9
Historical GDP and GVA Growth trend 10
Sectoral Contribution to GVA and annual growth trend 11
Annual & Monthly IIP Growth 12
Annual and Quarterly: Investment & Consumption Scenario 13
Inflation Scenario 15
Growth Outlook 17
Product Profile: Steel Tubes & Pipes 18
Attributes and Technical Specifications of Steel Tubes and Pipes 21
Types of Pipes 21
Size of Pipes 21
Global Steel Industry 22
International Trade in Steel Tubes & Pipes Industry 28
Overview on Global Export Trade: 28
The top 10 ranking for total exports and net exports are listed below: 30
Indian Steel Industry 34
Domestic Production & Consumption Scenario 35
Mild Steel Pipes & Tubes Overview 44
Key Applications: 48
Global Scenario: 50
Indian Market scenario: 53
Export & Import of Steel Pipes & Tubes 56
Historical Trend Analysis of Exports 56
Key Export Markets 57
Historical Trend Analysis of Imports 58
Key Import Markets 60
Demand Drivers – Mapping Demand Pattern in Key End-user Industries 61
Oil & Gas Industry: 61
Construction Industry 63
Water Infrastructure 65

Automobile 66
Railways 67
Capital Expenditure Projects in Indian Steel pipes & tubes market and Its Impact 70
Regulatory Scenario 73
Regulatory Policy/Initiative Impacting Steel Pipe & Tube Industry in India 73
Trade Restrictions 75
Initiatives to Strengthen Domestic Manufacturing Infrastructure 77
Key Risks & Challenges 82
Growth Outlook 85
Expected Growth in Indian Steel Pipes and Tubes Industry 85
Expected growth of Global MS pipe & tube segment 86
Expected growth of Indian MS pipe & tube segment 88
Competitive Landscape 90
Analysis of Nature of Competition in Indian Steel Pipe and Tube Industry 90
Analysis of Entry Barriers Existing in the Industry 91
Company Profiling: RK Steels Manufacturing Company Limited 93
Peers Profiling 96
Financial Analysis of Peers: 100

Global Macroeconomic Landscape

Global Economic Overview

The global economy, which recorded GDP growth at 3.3% in CY 2024, is expected to show resilience at 2.8% in CY 2025. This marks the slowest expansion since 2020 and reflects a -0.5%point downgrade from January 2025 forecast. Moreover, the projection for CY 2026 has also reduced to 3.0%. This slowdown is majorly attributed due to numerous factors such as high inflation in many economies despite central bank effort to curb inflation, continuing energy market volatility driven by geopolitical tensions particularly in Ukraine and Middle East, and the re-election of Donald Trump as US President extended uncertainty around the trade policies as well as overall global economic growth. High inflation and rising borrowing costs affected the private consumption on one hand while fiscal consolidation impacted the government consumption on the other hand. As a result, global GDP growth is estimated to moderation by 2.8% in CY 2025 as compared to 3.3% in CY 2024.

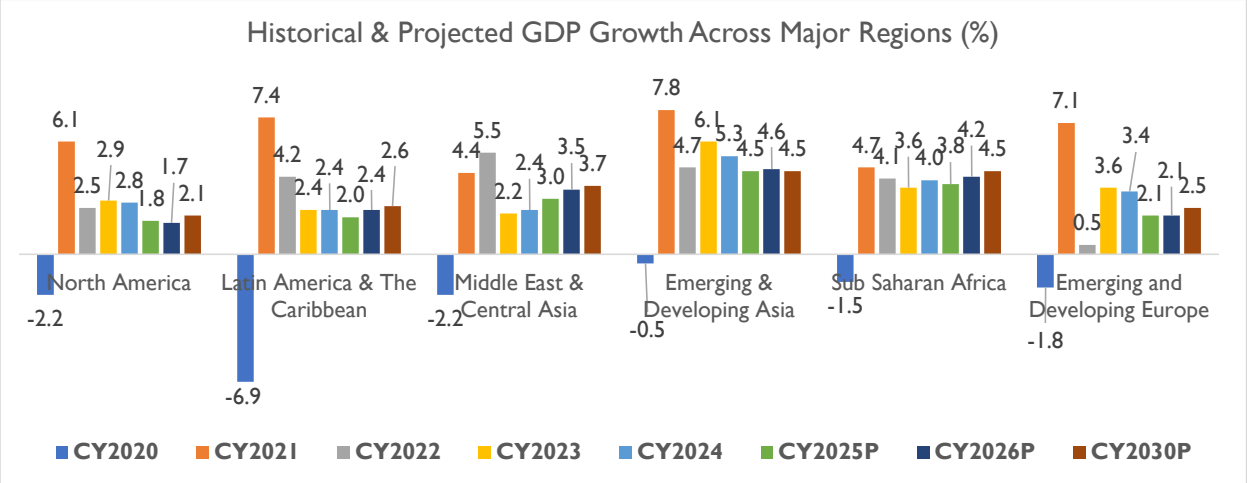


Source – IMF Global GDP Forecast Release April 2025

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

Historical and Projected GDP Growth

GDP growth across major regions exhibited a mixed trend between 2022-23, with GDP growth in many regions including North America, Emerging and Developing Asia, and Emerging and Developing Europe slowing further in 2024. In 2025, GDP growth rate in Emerging and Developing Asia (India, China, Indonesia, Malaysia, etc.) is expected to moderate further to 4.5% from 5.3% in the previous year, while in the North America, it is expected to moderate to 1.8% in CY 2025 from 2.8% in CY 2024.



Source-IMF World Economic Outlook April 2025 update.

Except Middle East & Central Asia, all other regions like Emerging and Developing Asia, Emerging and Developing Europe, Latin America & The Caribbean, Sub Saharan Africa and North America, are expected to record a moderation in GDP growth rate in CY 2025 as compared to CY 2024. Further, growth in the United States is expected to come down at 2.71% in CY 2025 from 2.80% in CY 2024 due to lagged effects of monetary policy tightening, gradual fiscal tightening, and a softening in labour markets slowing aggregate demand.

Global Economic Outlook

The global economy is navigating a period of exceptional uncertainty. Policy shifts, particularly those reshaping trade, have alarmed financial markets and bruised business sentiment. The U.S.'s reciprocal tariffs, which represent additional costs for businesses from almost all countries with which the U.S. trades, charge trade partners an import duty at a discounted rate of approximately half the rate that the trade partner currently imposes on the U.S. According to U.S. President Donald Trump, reciprocal tariffs, ranging from 10% to 50%, are meant to address trade barriers limiting U.S. exports. The effective tariff rate includes other tariffs imposed at an earlier date and cumulatively may now be higher than duties charged on U.S. imports. It is unclear whether the reciprocal tariffs represent a negotiating tool, and may therefore be temporary, or form part of broader long-term protectionist measures and industrial strategy.

Responses to reciprocal tariffs have been varied, with some economies promising swift countermeasures. More than 50 markets have sought negotiations with the US. While Malaysia is seeking a united response across ASEAN, the Chinese Mainland has retaliated with duties on all imports from the U.S., declaring it will "fight to the end". In early April 2025, the U.S. confirmed the most aggressive steps yet, with a cumulative 145% tariff on some products imported from the Chinese Mainland. Brazil has readied itself by passing a bill allowing for retaliation, Australia has ruled out retaliatory levies, and the EU remains open to negotiation while preparing a package of countermeasures.

Tariffs and their unpredictable application have weighed on consumer and business sentiment, sunk global stock markets, raised recession risks, and made a global slowdown more likely. Our latest Global Business Optimism Insights report indicates a further decline in business optimism as firms continue to grapple with trade-related policy uncertainty and its broader economic implications. Export-driven sectors reported sharp declines in optimism. Financial risk perceptions remain elevated as businesses contend with high borrowing costs and persistent inflation expectations. More broadly, the uncertainty is reflected in delayed capital expenditure and a pullback in hiring.

Tariffs have begun to exert pressure on central banks by contributing to inflationary pressures and increasing financial market volatility. Central banks are adjusting forward guidance and policy frameworks and may begin to consider the likelihood of softer growth being a bigger priority than high inflation by starting to cut interest rates to support economies. For businesses, this uncertainty translates into unpredictable cost structures, fluctuating credit availability, and the management of operational costs through diversified supply networks.

The latest Dun & Bradstreet Global Business Optimism Insights report reveals a further decline in business optimism, though at a more moderate pace than in the prior quarter, as businesses continued to grapple with trade-related policy uncertainty and its broader economic implications. Export-driven

sectors such as automotives, electricals, and metals saw sharp declines in optimism, particularly in the U.S., Mexico, South Korea, and Japan, where rising tariffs and shifting trade policies have fueled cost pressures and demand volatility. Financial risk perceptions remain elevated.

Global Growth Projection

At broader level, the global economy is expected to experience a slowdown in 2025, with GDP growth projected to decline to 2.8%, down from 3.3% in 2024. This deceleration reflects persistent inflationary pressure, geopolitical uncertainties and tightened monetary policies. However, a sightly recovery is anticipated in 2026, with growth projected to improve to 3.0%. Global inflation is expected to decline steadily, to 4.3% in 2025 and to 3.6% in 2026. Inflation is projected to converge back to the target earlier in advanced economies, reaching 2.2% in 2026, whereas in emerging market and developing economies, it is anticipated to decrease to 4.6% during the same period. Trade tariffs function as a supply shock for the countries imposing them, leading to a decrease in productivity and an increase in unit costs. Countries subject to tariffs experience a negative demand shock as export demand declines, placing downward pressure on prices. In each scenario, trade uncertainty introduces an additional layer of demand shock since businesses and households react by delaying investment and spending, and this impact could be intensified by stricter financial conditions and heightened exchange rate volatility. Moreover, Global trade growth is expected to slow down in 2025 to 1.7%. This forecast reflects increased tariff restrictions affecting trade flows and, to a lesser extent, the waning effects of cyclical factors that have underpinned the recent rise in goods trade. Geopolitical tensions as seen in the past such as the wars in Ukraine and the Middle East could exacerbate inflation volatility, particularly in energy and agricultural commodities.

India Macroeconomic Analysis

India emerged as one of the fastest growth economies amongst the leading advanced economies and emerging economies. In CY 2024, even amidst geopolitical uncertainties, particularly those affecting global energy and commodity markets, India continues to remain one of the fastest growing economies in the world and is expected to grow by 6.2% in CY 2025 and 6.3% in CY 2026.

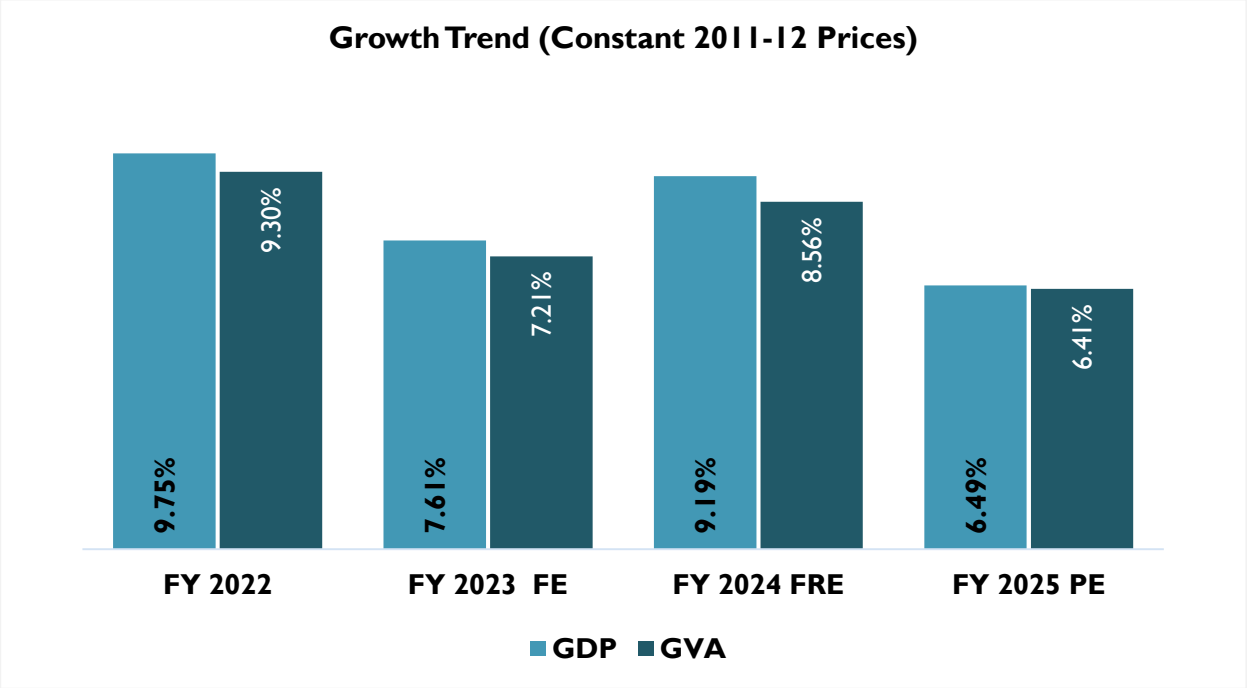
Country	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026 P	CY 2030 P
India	–5.8%	9.7%	7.6%	9.2%	6.5%	6.2%	6.3%	6.5%
China	2.3%	8.6%	3.1%	5.4%	5.0%	4.0%	4.0%	3.4%
United States	-2.2%	6.1%	2.5%	2.9%	2.8%	1.8%	1.7%	2.1%
Japan	-4.2%	2.7%	0.9%	1.5%	0.1%	0.6%	0.6%	0.5%
United Kingdom	-10.3%	8.6%	4.8%	0.4%	1.1%	1.1%	1.4%	1.4%
Russia	-2.7%	5.9%	-1.4%	4.1%	4.1%	1.5%	0.9%	1.2%

Source: World Economic Outlook, April 2025

The Government stepped spending on infrastructure projects to boost the economic growth had a positive impact on economic growth. The capital expenditure of the central government increased by average 26.52% during FY 2023-24 which slowed to 7.27% in FY 2025 which is expected to translate in moderating GDP growth of 6.5% in 2024. In the Union Budget 2025-2026, the government announced INR 11.21 trillion capex on infrastructure (10.12% higher than previous year revised estimates) coupled with INR 1.5 trillion in interest-free loans to states. This has provided much-needed confidence to the private sector, and in turn, expected to attract the private investment.

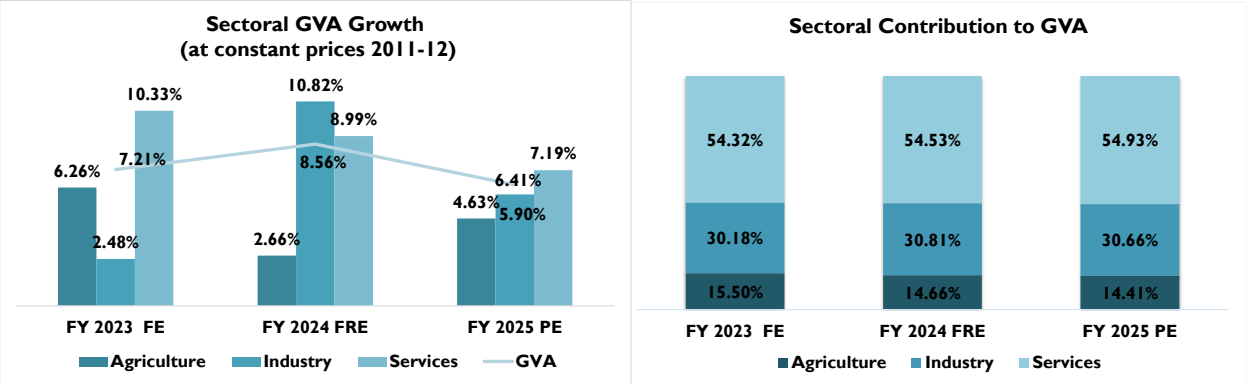
Historical GDP and GVA Growth trend

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



Source: Ministry of Statistics & Programme Implementation (MOSPI), National Account Statistics: FY2025.
FE is Final Estimates, FRE is First Revised Estimate and PE is Provisional Estimates

Sectoral Contribution to GVA and annual growth trend



Source: Ministry of Statistics & Programme Implementation (MOSPI)
FE is Final Estimates, FRE is First Revised Estimate and PE is Provisional Estimates

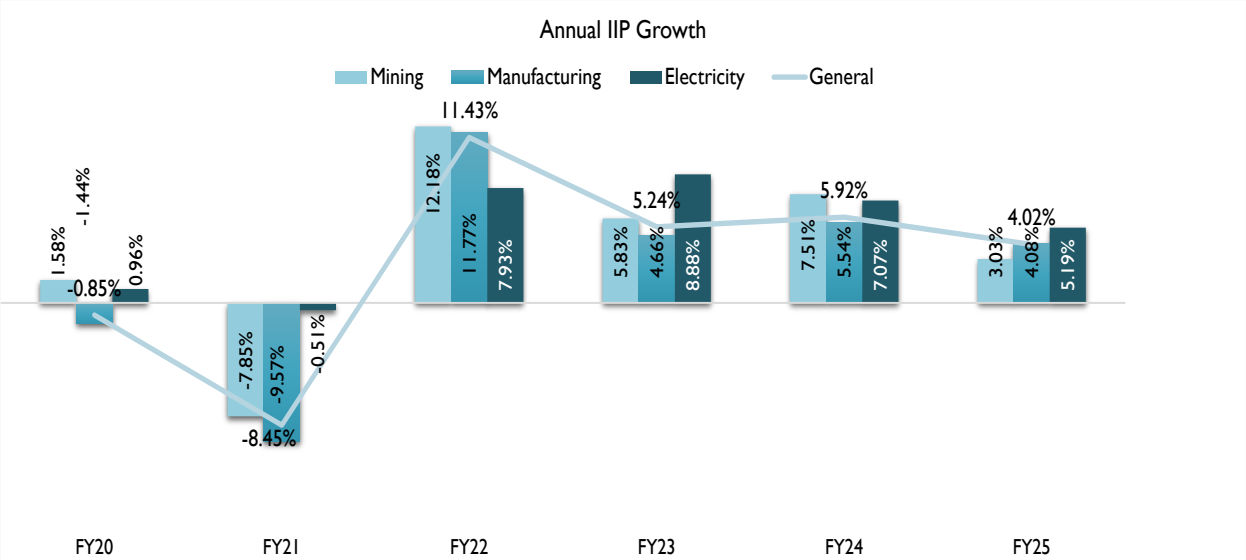
Sectoral analysis of GVA reveals that the industrial sector experienced a moderation in FY 2025, recording a 5.90% y-o-y growth against 10.82% year-on-year growth in FY 2024. Within the industrial sector, growth moderated across sub sector with mining, manufacturing, and construction activities growing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

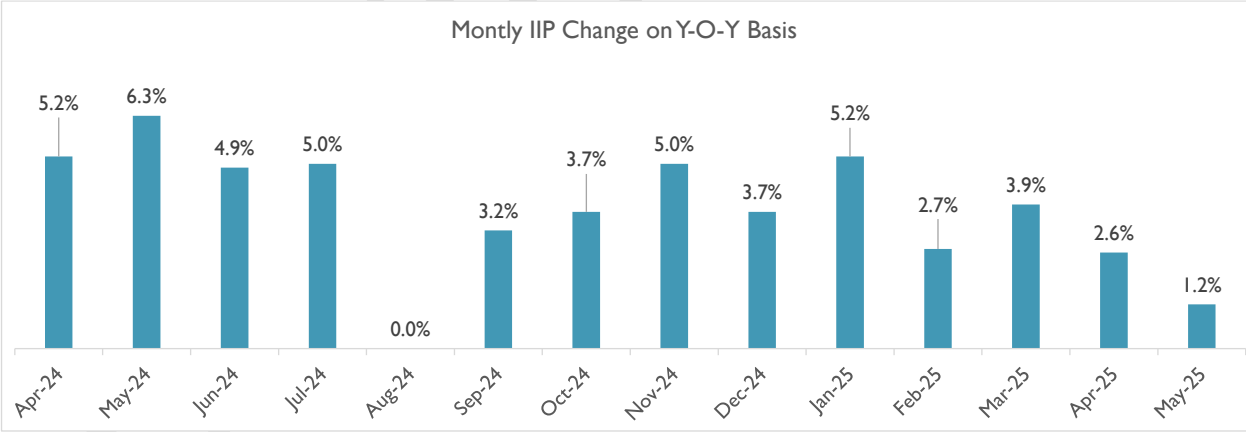
The services sector continued to be the main driver of economic growth, although its pace moderated. It expanded by 7.19% in FY 2025 from 8.99% in FY 2024. The services sector retained its position as the largest contributor to GVA, rising from 54.32% in FY 2023 to 54.53% in FY 2024, with a further increase to 54.93% in FY 2025.

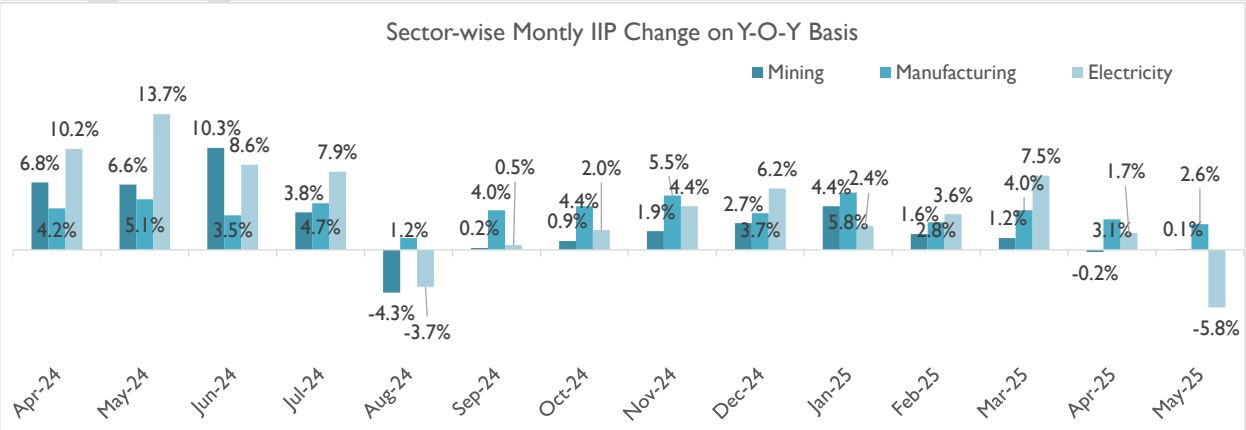
The agriculture sector saw an acceleration, with growth increasing from 2.66% in FY 2024 to 4.63% in FY 2025. However, its contribution to GVA declined marginally from 14.66% in FY 2024 to 14.41% in FY 2025. Overall, Gross Value Added (GVA) growth moderated to 6.41% in FY 2025 from 8.56% in FY 2024

Annual & Monthly IIP Growth

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





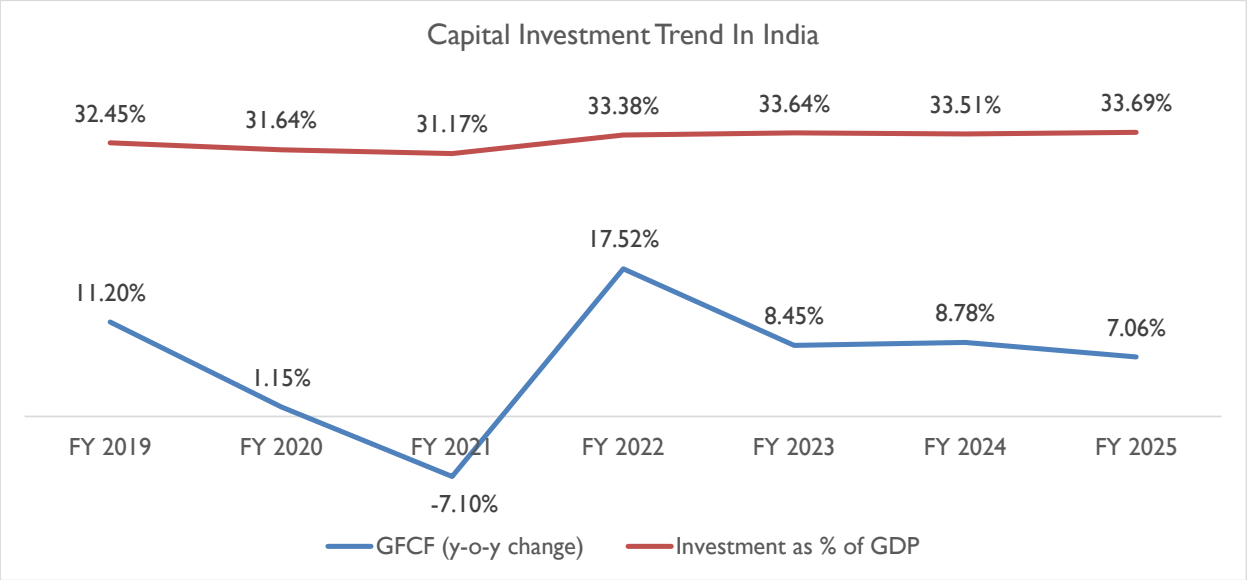


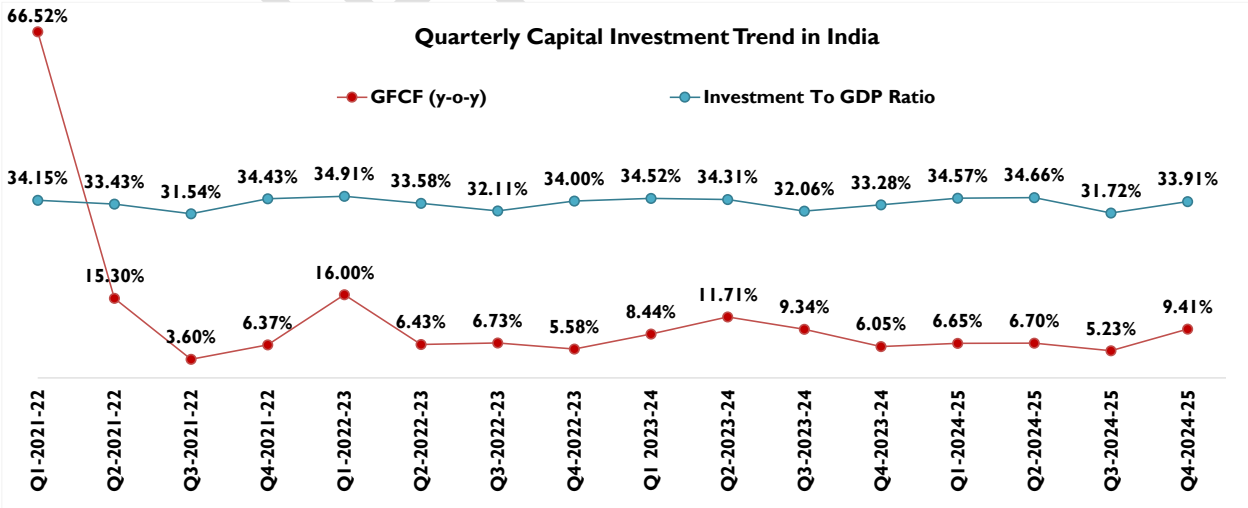
Source: Ministry of Statistics & Programme Implementation (MOSPI)

The IIP growth rate for the month of May 2025 is 1.2% which was 2.6% in the month of April 2025. The growth rates of the three sectors, Mining, Manufacturing and Electricity for the month of May 2025 are (-)0.1%, 2.6% and (-)5.8% respectively.

Annual and Quarterly: Investment & Consumption Scenario

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



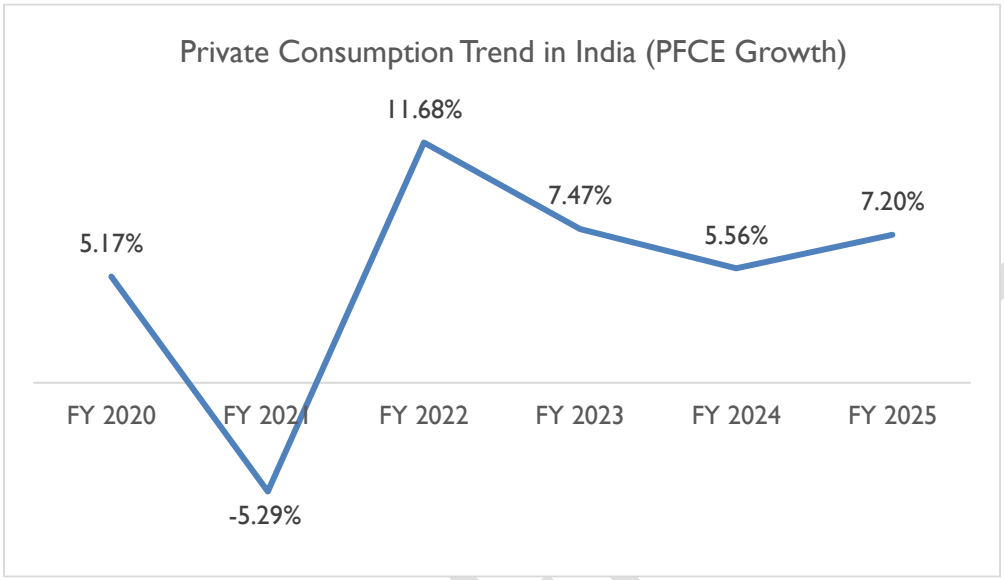


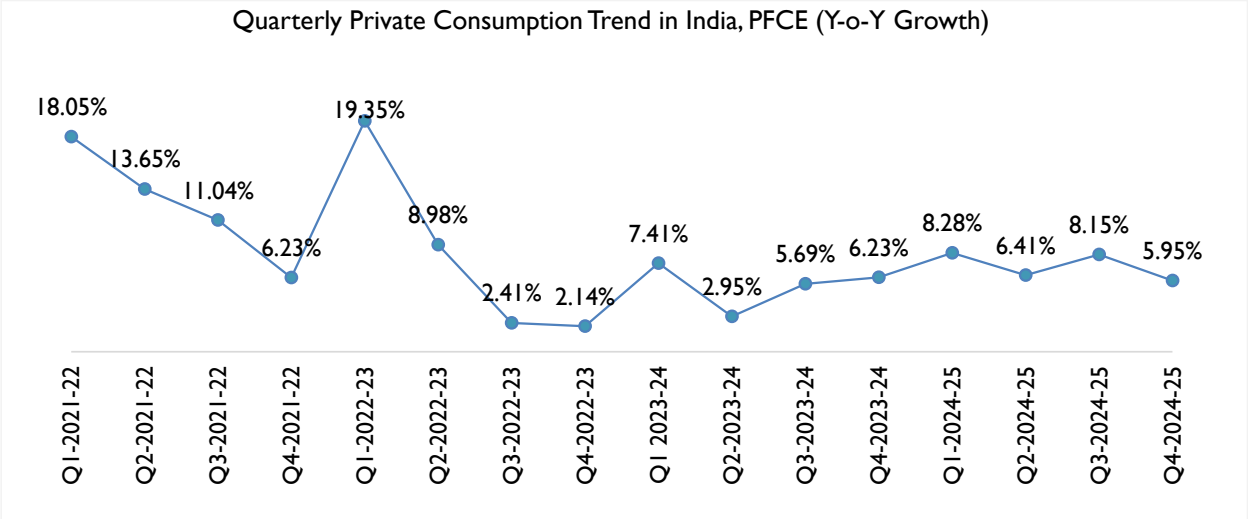
Source: Ministry of Statistics & Programme Implementation (MOSPI)

On quarterly basis, GFCF exhibited a fluctuating trend in quarterly growth over the previous year same quarter. In FY 2024, the growth rate moderated to 6.05% in March quarter against the previous two quarter as government went slow on capital spending amidst the 2024 general election while it observed an improvement in Q1 FY 2025 by growing at 6.65% against 6.05% in the previous quarter

and moderated in the subsequent two quarter. On yearly basis, the growth rate remained lower compared to the same quarter in the previous year during FY 2025. The GFCF to GDP ratio measured 33.91% in Q4 FY 2025.

Private Consumption Scenario





Sources: MOSPI

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

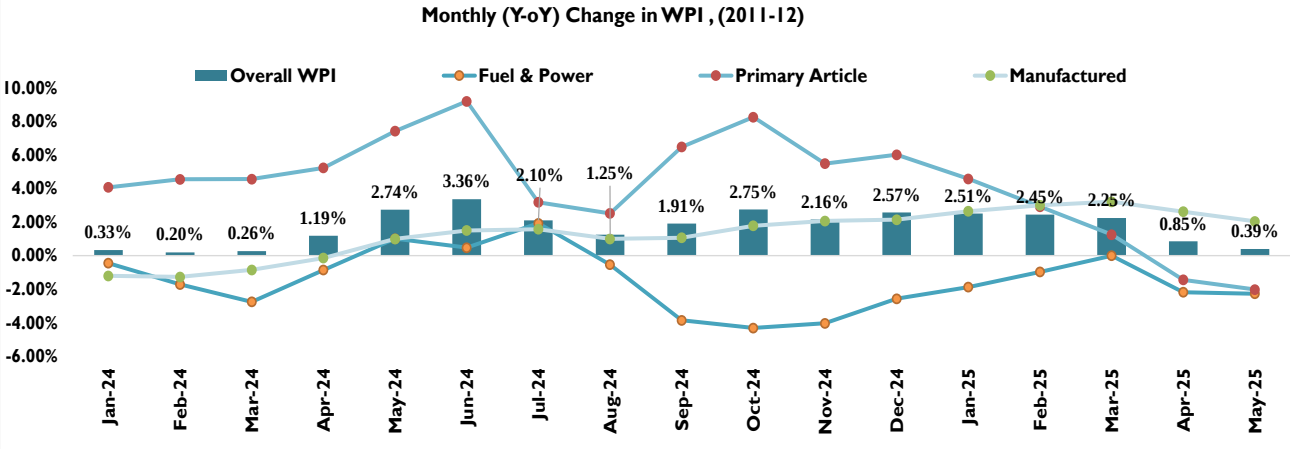
Inflation Scenario

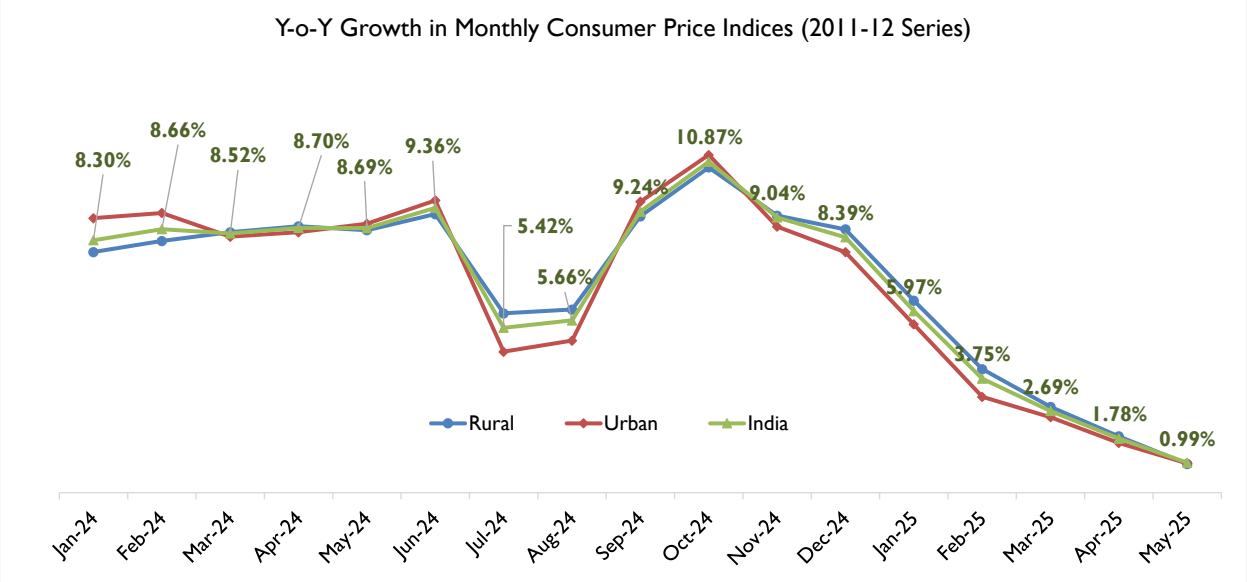
The inflation rate based on India's Wholesale Price Index (WPI) exhibited significant fluctuations across different sectors from January 2024 to May 2025. The annual rate of inflation based on All India Wholesale Price Index (WPI) number is 0.39% (provisional) for the month of May 2025 (over May 2024). Positive rate of inflation in May 2025 is primarily due to increase in prices of manufacture of food products, electricity, other manufacturing, chemicals and chemical products, manufacture of other transport equipment and non-food articles etc.

By May 2025, Primary Articles (Weight 22.62%), The index for this major group decreased by 0.05 % to 184.3 (provisional) in May 2025 from 184.4 (provisional) for the month of April 2025. Price of minerals (-7.16%) and non-food articles (-0.63%) decreased in May 2025 as compared to April 2025. The price of food articles (0.56%) increased in May 2025 as compared to April 2025.

Moreover, power & fuel, the index for this major group declined by 0.95% to 146.7 (provisional) in May 2025 from 148.1 (provisional) for the month of April 2025. Price of mineral oils (-2.06%) decreased in May 2025 as compared to April 2025. The price of coal (0.81%) and electricity (0.80%) increased in May 2025 as compared to April 2025.

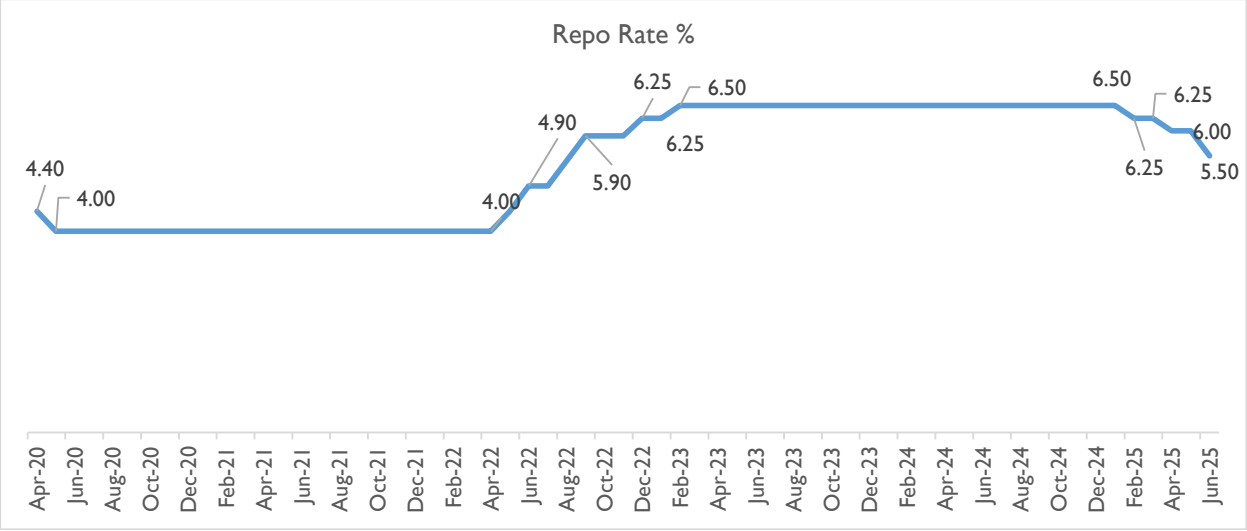
Furthermore, Manufactured Products (Weight 64.23%), The index for this major group remained unchanged at 144.9 (Provisional) in May 2025. Out of the 22 NIC two-digit groups for manufactured products, 10 groups witnessed an increase in prices, 9 groups witnessed a decrease in prices and 3 groups witnessed no change in prices. Some of the important groups that showed month-over-month increase in prices were other manufacturing; manufacture of other non-metallic mineral products; computer, electronic and optical products; pharmaceuticals, medicinal chemical and botanical products and textiles etc. Some of the groups that witnessed a decrease in prices were manufacture of food products, basic metals; rubber and plastics products, chemical and chemical products and electrical equipment etc. in May 2025 as compared to April 2025.





Source: MOSPI, Office of Economic Advisor

Retail inflation rate (as measured by the Consumer Price Index) in India showed notable fluctuations between January 2024 and May 2025. Overall, the national CPI inflation rate moderated to 0.99% by May 2025, indicating a gradual easing of inflationary pressures across both rural and urban areas. Rural CPI inflation peaked at 10.69% in October 2024, declining to 0.95 % in May 2025. Urban CPI inflation followed a similar trend, rising to 11.09% in October 2024 and then dropping to 0.96% in May 2025. CPI measured above 6.00% tolerance limit of the central bank since July 2023. As a part of an anti-inflationary measure, the RBI has hiked the repo rate by 250 bps since May 2022 and 8 Feb 2023 while it held the rate steady at 6.50 % till January 2025. On 6th June 2025, RBI reduced the repo rate by 50 basis points which currently stands at 5.50%.



Sources: CMIE Economic Outlook

Growth Outlook

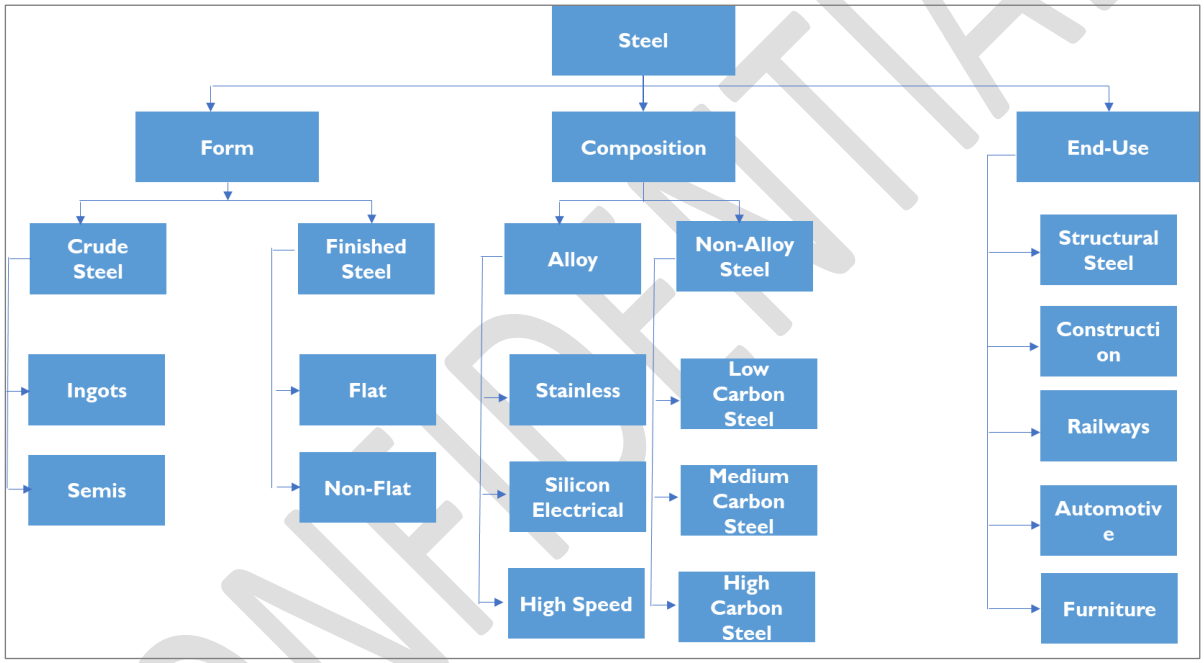
The Union Budget 2025-26 has laid the foundation for sustained growth by balancing demand stimulation, investment promotion and inclusive development. Inflation level is reaching within the central bank's target; the RBI may pursue further monetary easing that will support growth. The medium-term outlook is bright, fueled by the emphasis on physical and digital infrastructure spending. With a focus on stimulating demand, driving investment and ensuring inclusive development, the budget introduces measures such as tax relief, increased infrastructure spending and incentives for manufacturing and clean energy. These initiatives aim to accelerate growth while maintaining fiscal discipline, reinforcing India's long-term economic resilience. The expansion of tax relief i.e zero tax liability for individuals earning up to INR 12 lacs annually under the new tax regime is expected to strengthen household finances and, consequently, boost consumption.

The external sector remains resilient, and key external vulnerability indicators continue to improve. However, tariff-related uncertainty is likely to weigh on exports and investment, prompting us to cut our FY26 GDP growth forecast to 6.3%.

Product Profile: Steel Tubes & Pipes

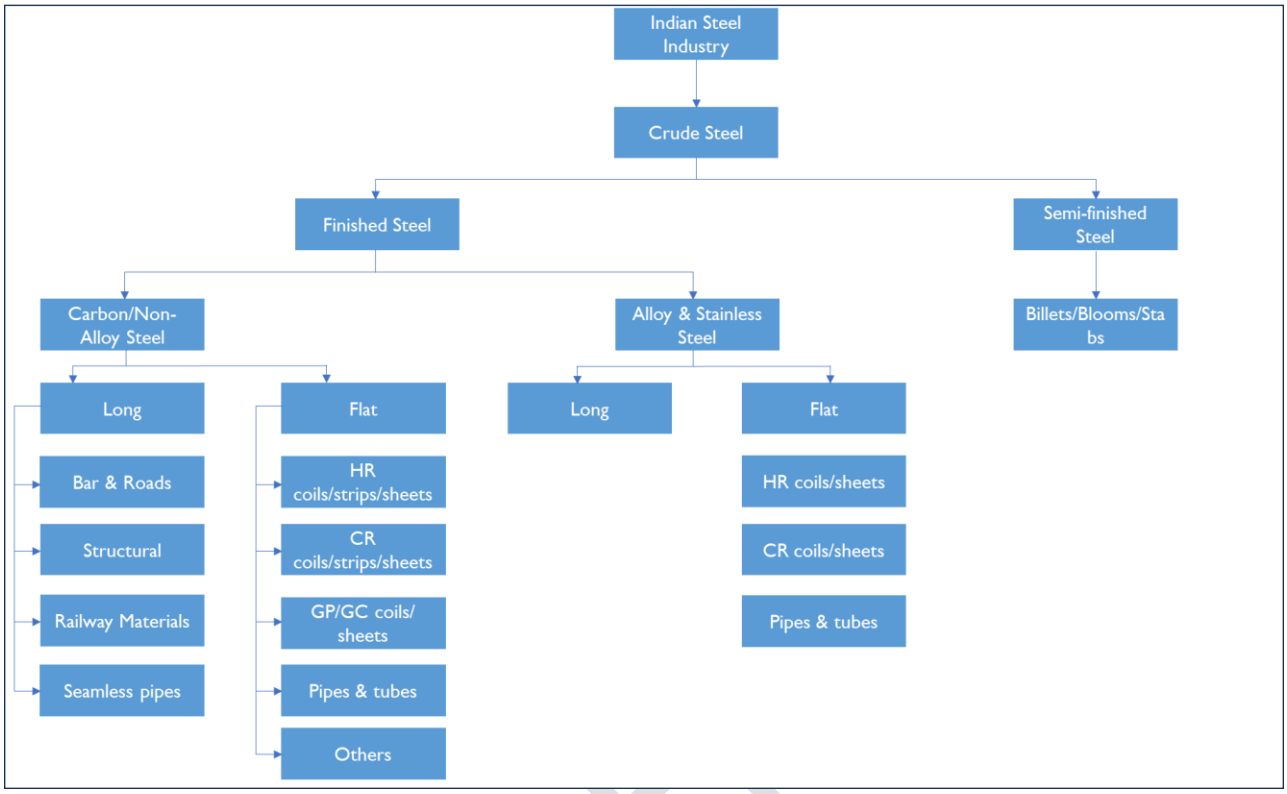
Steel is the primary force behind industrialization, and manufacturing sector. Without steel most of the products in day today life would be impossible, such is the extent of steel usage in every equipment used across the world. Steel production and consumption is one of the key parameters for evaluating a country's economic progress as this metal is an important raw material and yet it is an important intermediate product.

Steel is categorized as liquid, crude and finished based on the form in which it is produced, while based on composition, steel is segmented as alloy and non-alloy steel. When steel is in its alloy form, it becomes stainless steel, while in a non-alloy form carbon is added in varying quantities. The key types of steel in its composition, form and end-use is listed below:



Source: Ministry of Commerce and Industry

Structure of Indian Steel Industry:

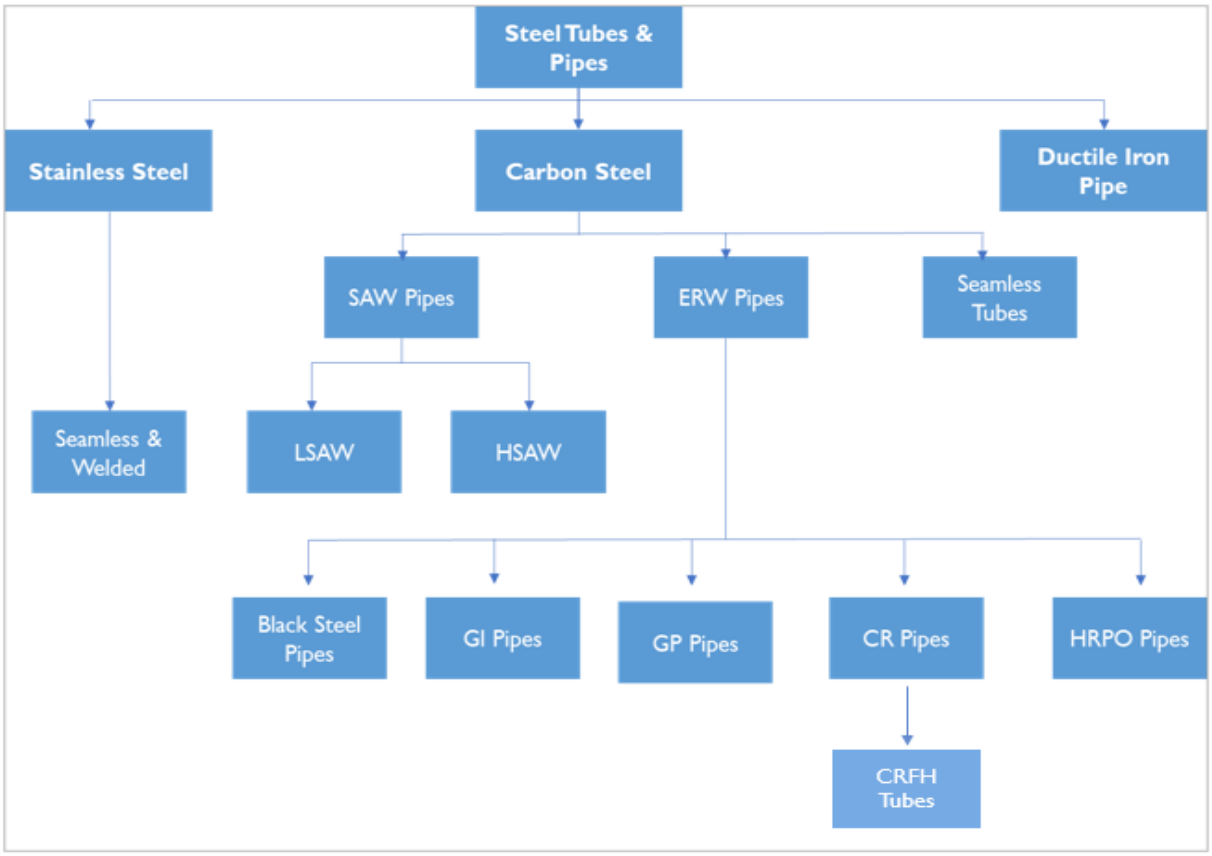


Source: D&B Analysis

The Indian steel industry produces a diverse range of long and flat steel products. ***Long or Non Flat products***, primarily manufactured through hot rolling or forging of blooms, billets, or ingots, are typically supplied in straight lengths or cut lengths, with wire rods being a notable exception as they are supplied in coiled form. This segment encompasses various types such as bars and rods, including high-strength thermo-mechanically treated (TMT) bars widely used in construction, and structural steel, comprising angles, channels, beams, and fabricated sections essential for infrastructure development. Railway materials also fall under this category, catering to the growing Indian rail network. ***Flat products***, on the other hand, are produced from slabs or thin slabs in rolling mills utilizing flat rolls. This segment includes hot-rolled (HR) coils and cold-rolled (CR) coils, with CR coils undergoing further processing to achieve enhanced surface finish, reduced thickness, and tailored mechanical properties.

Types of Steel Tubes and Pipes:

Steel tubes and pipes are a type of steel product that possess a hollow interior with varying diameters. These products are made of diverse shapes, sizes and grades to suit a wide variety of industrial end-user applications. Steel tubes and pipes are made of stainless steel, in its alloy form, carbon steel in its non-alloy form and ductile iron pipe, which is available as a type of pipe for specific applications. A detailed categorization on the types of steel tubes and pipes are captured in the chart below:



Source: Indian Brand Equity Foundation, Ministry of Commerce and Industry.

Attributes and Technical Specifications of Steel Tubes and Pipes

Types of Pipes	Size of Pipes	Manufacturing Process	Key Applications
Seamless	0.5"- 14"	Piercing ingots/billets of steel at a high temperature	High pressure conditions in Oil & Gas exploration, drilling, boiler, automobiles, pipelines and refineries
Spiral HSAW	18"- 120"	Spirally welding hot rolled coils	Low pressure applications in cross-country line pipes for Oil & Gas transportation
LSAW	16"- 50"	Longitudinally submerged arc-welding of steel plates	High-pressure application, cross-country line pipes for Oil & Gas transportation
ERW	0.5"- 22"	Hot rolled steel coils using an electrical resistance welding process	Low/medium pressure application, application in urban and rural infrastructure, industrial application in engineering, automobile and process industry
Black Steel Pipe	Diameter: 0.5"-20" Thickness: 1mm – 12.7 mm	Forged and Threaded	Water, gas, air, steam, sewage, water wells, mechanical hot water circulation in a boiler system, general engineering purpose
GI Pipe	15mm – 200mm	Coated with zinc layers. Generally screwed & socketed plain beveled cut ends in the pipe are used	Carrying water in homes and commercial buildings, structural applications
Ductile Iron Pipe	100mm – >300mm	Manufactured in multiple grades to achieve high ductility and tensile strength	Transporting water for drinking water application, sewage treatment, and industrial water supply.

Source: D&B Analysis

Global Steel Industry

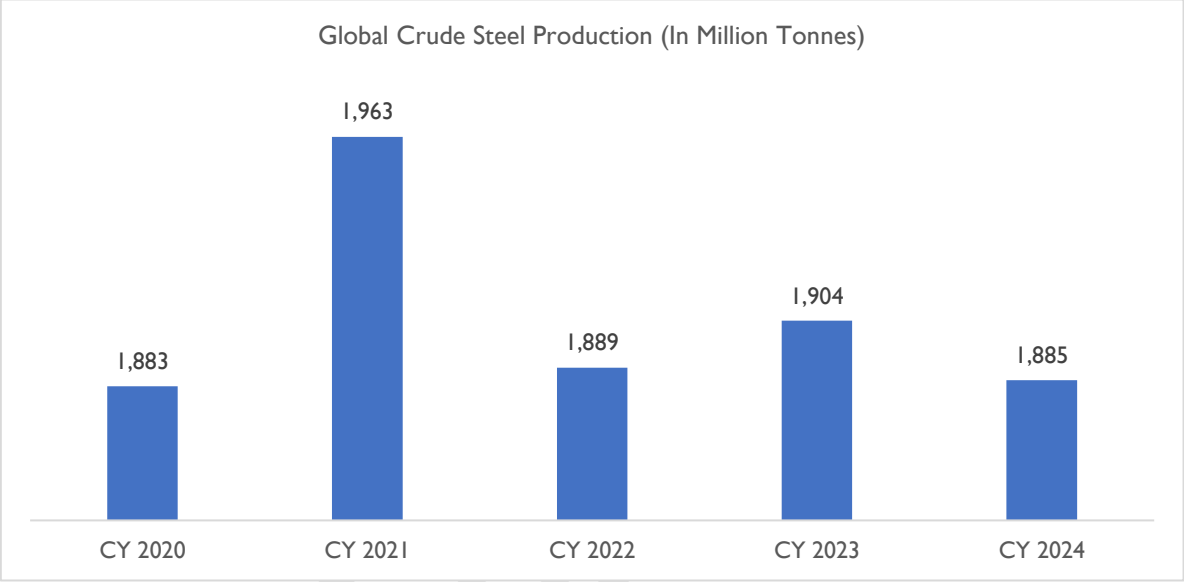
The global steel sector continues to grapple with enduring challenges, many of which are expected to worsen through 2025 and beyond. Despite modest demand growth, numerous capacity expansion plans are underway, potentially exacerbating global oversupply. This could lead to lower capacity utilisation rates, placing further downward pressure on steel prices and industry profitability. Regional demand dynamics remain mixed, while markets in ASEAN and MENA are witnessing robust growth, demand is weakening in China and staying largely stagnant in OECD nations.

Market competition is increasingly distorted by government subsidies, especially in regions like China, ASEAN, and MENA. Notably, Chinese subsidies represent a significantly larger share of company revenues, reportedly ten times greater than those in OECD countries, encouraging inefficient capacity expansion and investments with limited commercial viability. Concurrently, China's steel exports have surged, sparking a wave of trade defense measures and heightened concerns over circumvention tactics. These developments highlight the pressing need to address non-market practices contributing to global market imbalances.

Moreover, the oversupply problem is hindering progress in steel decarbonization. Although several companies are investing in cleaner technologies, advancement varies widely due to inconsistent access to renewable energy and high-grade raw materials. Over time, these disparities could reshape both production locations and global trade flows in the steel industry.

Global Crude Steel Production:

The global crude steel industry appears to have entered a phase of maturity, with production largely stabilizing around 1,880–1,960 million tonnes over the past five years. This steady trend suggests that the rapid growth driven by post-pandemic recovery has tapered off, giving way to a more balanced supply-demand environment. Factors such as slowing industrial expansion in key regions, rising energy costs, and structural adjustments—especially in China's steel sector—are shaping a cautious outlook. The minimal year-on-year fluctuations indicate a shift from aggressive output growth to efficiency and sustainability-focused strategies.

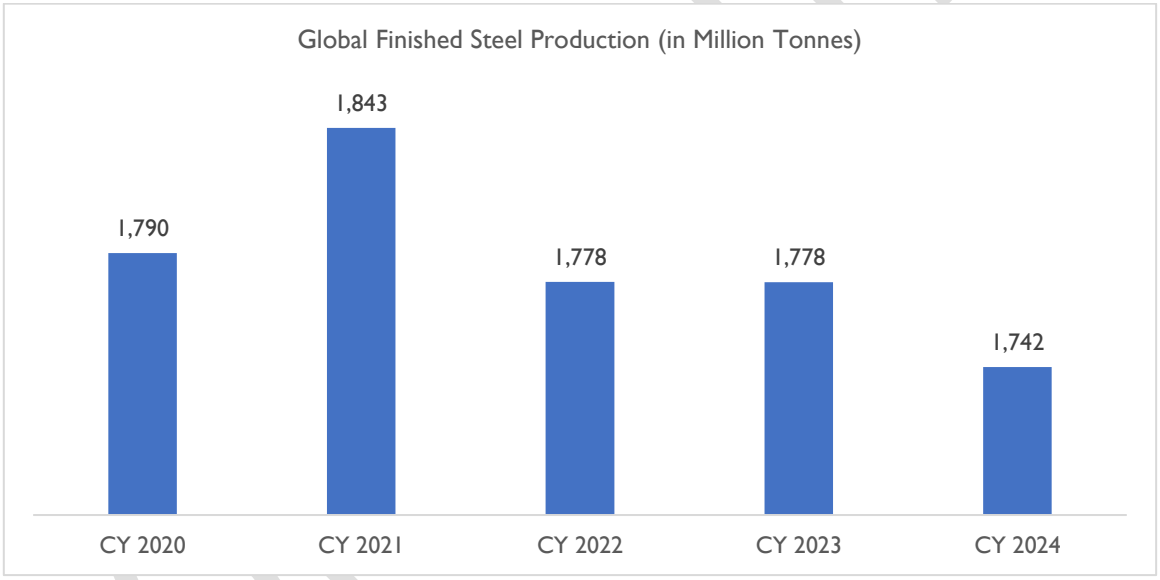


Source: World Steel Association

Global crude steel production has remained largely stable over the past five years, ranging between 1,883 and 1,963 million tonnes. The post-pandemic surge in 2021 was short-lived, with output gradually softening in subsequent years, reaching 1,885 million tonnes in 2024, down 1% from 2023. This moderation reflects not only economic uncertainties and high energy costs but also slowing construction demand, rising environmental regulations, and global overcapacity concerns. The trend signals a mature market, increasingly focused on sustainability and efficiency over expansion.

Global Finished Steel Production:

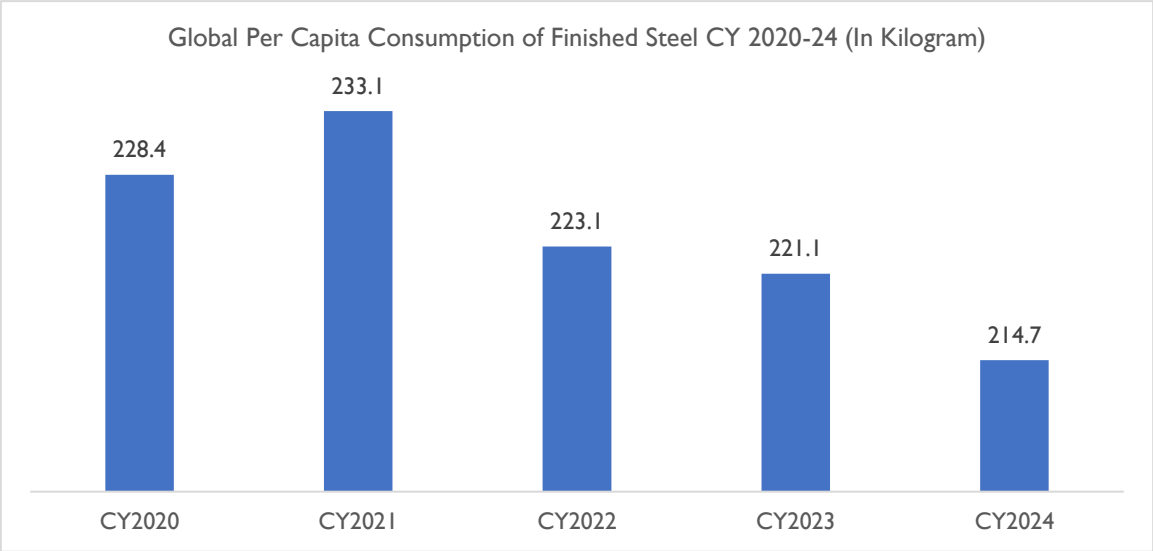
Finished steel production serves as a key indicator of downstream industrial activity, as it directly reflects the health and momentum of end-use sectors such as construction, automotive, infrastructure, consumer durables, and heavy machinery. Unlike crude steel, which primarily indicates upstream capacity, finished steel production captures actual demand and consumption readiness across value chains. Its trends are closely intertwined with global economic cycles, investment flows, and industrial output in both developed and emerging economies. Fluctuations in finished steel output can signal broader shifts in macroeconomic conditions, trade policies, raw material availability, and the intensity of infrastructure or housing development. Moreover, as countries pursue decarbonization, digitization, and re-shoring strategies, the structure of steel demand is evolving—often favoring higher-quality, customized, or lighter steel grades, further influencing production patterns. Thus, tracking finished steel production provides a more refined lens into global economic resilience, policy direction, and sector-specific transformations.



Source: World Steel Association

Global finished steel production has shown a fluctuating trend over the five-year period from CY 2020 to CY 2024. After recovering from the pandemic-induced slowdown in CY 2020 (1,790 MT) and peaking in CY 2021 at 1,843 MT, production has been on a consistent decline. The output dropped to 1,778.3 MT in CY 2022, further to 1,778.1 MT in CY 2023, and reached 1,742 MT in CY 2024. This downward trajectory post-2021 suggests a combination of factors such as reduced demand from key sectors like construction and automotive, economic slowdowns in major producing regions, supply chain disruptions, and a growing global focus on decarbonization and energy efficiency, which may have impacted capacity utilization and production planning.

Global Per Capita Consumption of Finished Steel:



Source: World Steel Association

The per capita consumption has shown a declining trend from 2021 to 2024 after a slight rise in 2021. Starting at 228.4 in CY2020, it peaked marginally at 233.1 in CY2021 but has since dropped consistently to 214.7 in CY2024. A decline of nearly 8% over four years. This downward trajectory may indicate weakening consumer demand, a possible economic slowdown, or shifts in consumption patterns, warranting closer examination of sectoral and macroeconomic factors that influence this trend.

Region Wise Comparison of Crude Steel, Finished Steel, and Per Capita Consumption in CY 2024:

Region	Crude Steel Production (Million Tonnes)	Finished Steel Production (Million Tonnes)	Per Capita Consumption (Kg)
European Union (27)	126.3	130.1	290.7
Other Europe	45.0	53.3	285.5
Russia & Other CIS + Ukraine	72.4	59.1	203.2
North America	104.4	134.2	220.7
South America	41.7	42.3	95.5
Africa	28.1	37.9	25.4
Middle East	54.8	56.6	196.7
Asia	1,359.7	1221.8	283.2
Oceania	5.3	7.1	153.2

Source: World Steel Association

Asia stands out as the dominant force in global steel production, with an overwhelming 1,359.7 million tonnes of crude steel and 1,221.8 million tonnes of finished steel produced. Despite its massive output, Asia's per capita consumption (283.2 kg) remains slightly lower than that of the European Union (290.7 kg) and Other Europe (285.5 kg). This suggests that a significant portion of Asia's production might be exported or used in industrial capacities rather than directly reflecting domestic per-person usage. In contrast, the European Union, while producing a comparatively modest 126.3 million tonnes of crude steel, exhibits the highest per capita consumption, indicating a more intensive domestic utilization of steel in infrastructure, automotive, and manufacturing sectors.

North America, with 104.4 million tonnes of crude steel and 134.2 million tonnes of finished steel, showcases a notable divergence between crude and finished steel volumes. This gap suggests North America likely imports semi-finished products or places greater emphasis on value-added processing. Its per capita consumption of 220.7 kg is moderate, reflecting a well-developed but possibly plateauing industrial demand. Meanwhile, regions like Russia & Other CIS + Ukraine and the Middle East show

strong production figures (72.4 Mt and 54.8 Mt respectively), but lower per capita consumption (203.2 kg and 196.7 kg), hinting at either export-driven production or limited domestic industrial utilization.

On the lower end of the spectrum, **Africa and South America** register the smallest steel outputs, with Africa producing only 28.1 million tonnes of crude steel and consuming just 25.4 kg per capita, the lowest globally. This highlights significant gaps in industrial development and infrastructure usage across the continent. Oceania, while producing a marginal 5.3 million tonnes of crude steel, shows a relatively higher per capita consumption of 153.2 kg, suggesting efficient domestic usage or higher living standards and infrastructure demands relative to its population size. Overall, the data reveals stark regional disparities, shaped by differences in industrial maturity, population size, and economic structure.

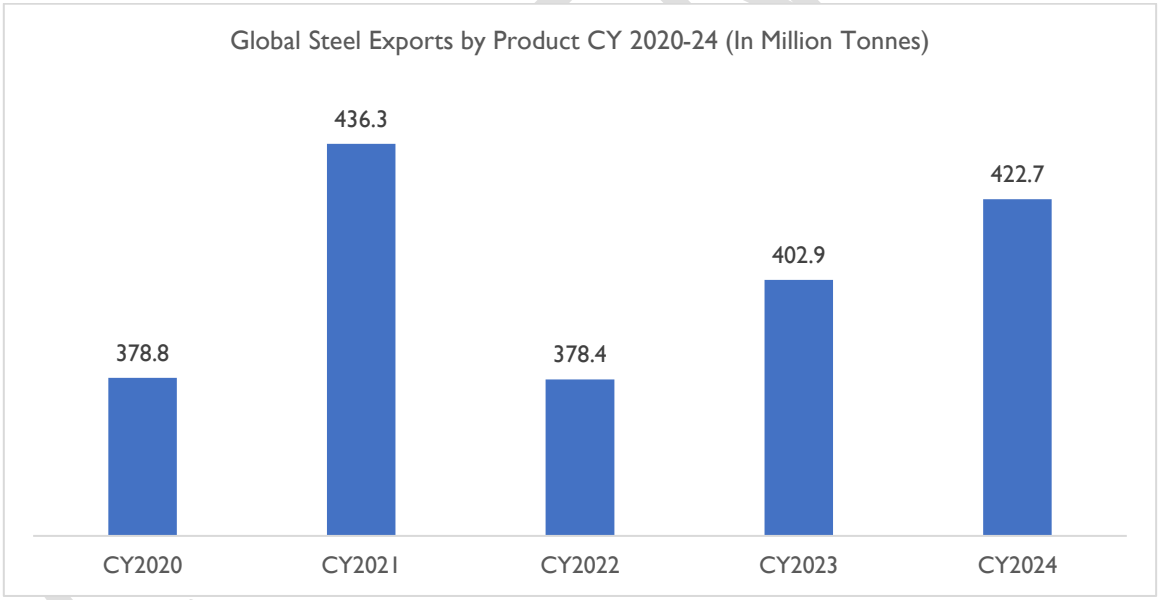
International Trade in Steel Tubes & Pipes Industry

Overview on Global Export Trade:

In recent years, steel exports from Europe and the Commonwealth of Independent States (including Ukraine) have seen significant declines. In contrast, exports from Asia and the Africa/Middle East regions have risen sharply, largely driven by China's rapid expansion in overseas shipments. In fact, China's steel exports reached an all-time high of 118 million tonnes in CY 2024.

The impact of low-cost steel exports has triggered a surge in trade protection measures. In CY 2024, 19 governments launched 81 antidumping investigations targeting steel products—five times more than the number initiated in CY 2023 and approaching the levels seen during the CY 2016 steel crisis. Nearly 80% of these cases were directed at Asian suppliers, with China alone being the subject of over one-third. Alongside these product-specific actions, many countries have also implemented broader trade measures, such as blanket tariff hikes across the steel sector. These developments highlight the growing influence of global overcapacity on international steel trade patterns.

The overall exports of steel products globally is captured below:



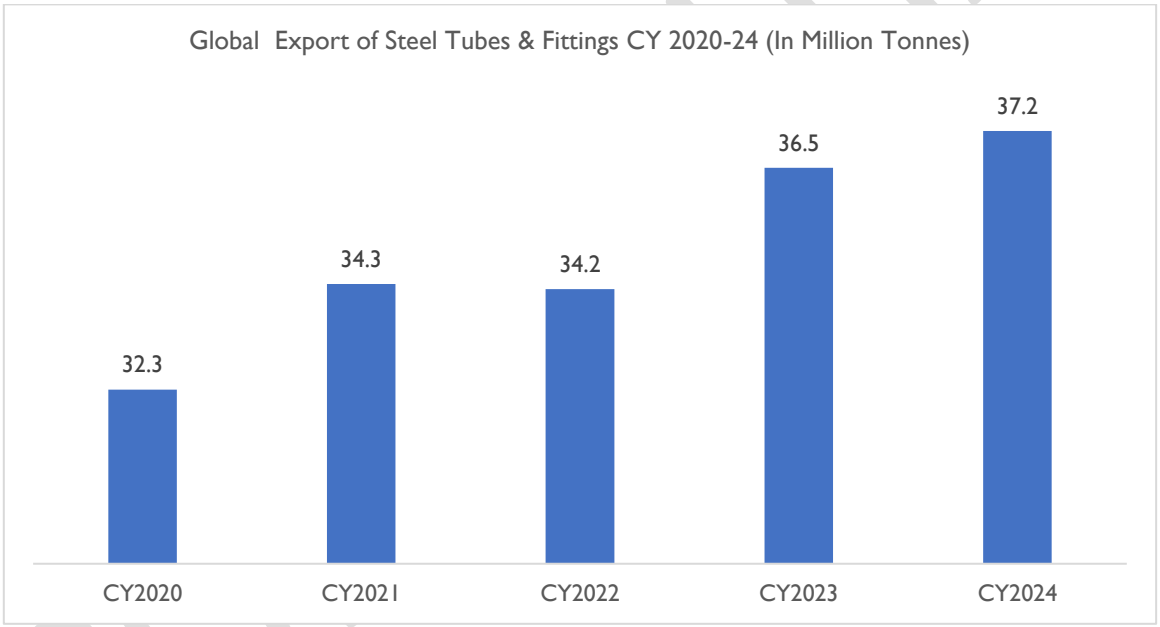
Source: World Steel Association

Between CY 2020 and CY 2024, global steel exports by product exhibited notable fluctuations, reflecting both market volatility and shifting trade dynamics. In CY 2020, exports stood at 378.8 million tonnes, a figure influenced by the pandemic-related disruptions. The sector rebounded strongly in CY 2021, reaching 436.3 million tonnes—the highest in the five-year period—driven by post-pandemic recovery and restocking demand. However, this momentum slowed in CY 2022, with exports falling back to 378.4 million tonnes, likely due to global inflationary pressures and geopolitical uncertainties. The following years showed a gradual recovery, with exports rising to 402.9 million tonnes in CY 2023

and further to 422.7 million tonnes in CY 2024. This recovery trend suggests improved demand, particularly in infrastructure and construction sectors, along with aggressive export strategies by major producers like China. Overall, while the period was marked by fluctuations, the latter years point toward a stabilizing global trade environment for steel products.

Global Exports of Steel Tubes & Fittings:

Steel tubes and fittings are critical components across sectors such as construction, oil & gas, water infrastructure, and renewable energy. Their demand is closely tied to global infrastructure investment, energy transitions, and industrial expansion. As economies recover and reorient post-pandemic, these products serve as essential enablers of large-scale pipeline networks, structural frameworks, and energy systems. The sector also reflects broader shifts in global trade patterns, with exports acting as a barometer of international project activity and geopolitical realignments.



Source: World Steel Association

Between CY2020 and CY2024, global exports of steel tubes and fittings rose from 32.3 million tonnes to 37.2 million tonnes, registering a growth of approximately 15%. This increase was driven by infrastructure stimulus measures in countries like the U.S., which allocated over $1 trillion under the Infrastructure Investment and Jobs Act, and similar investments by the EU and China. The renewable energy sector also played a pivotal role—global solar and wind capacity additions exceeded 500 GW during this period, requiring significant volumes of steel components. Additionally, the Russia-Ukraine conflict accelerated diversification of energy supply routes, prompting new pipeline projects and increasing steel tube demand. Exports from Asian countries, particularly China, surged to meet demand in Africa, the Middle East, and Southeast Asia under initiatives like the Belt and Road. These

data points reflect a resilient and steadily expanding global trade environment for steel tubes and fittings, despite challenges such as rising input costs and trade restrictions.

The top 10 ranking for total exports and net exports are listed below:

Major Global Exporters:

The global steel export landscape in 2024 was dominated by China, which led both total and net exports by a significant margin. With total exports of 117.1 million tonnes and net exports of 108.4 million tonnes, China alone accounted for nearly a third of global steel trade. This surge is driven by the country's massive overcapacity and relatively lower domestic demand growth, prompting Chinese steelmakers to aggressively push volumes into global markets. Japan and South Korea followed, with 31.2 and 28.0 million tonnes of total exports respectively, although their net exports (25.0 and 13.8 million tonnes) were much lower due to high import volumes, particularly in South Korea. The European Union collectively exported 27.8 million tonnes, but when looking at net exports, the region falls behind countries like Russia, Iran, and Brazil, indicating a more balanced trade flow within EU borders and between trading partners.

Total Exports CY 2024			Net Exports CY 2024		
Rank	Country	Million Tonnes	**Rank**	Country	Million Tonnes
1	China	117.1	**1**	China	108.4
2	Japan	31.2	**2**	Japan	25.0
3	South Korea	28.0	**3**	South Korea	13.8
4	European Union (27)	27.8	**4**	Russia	9.8
5	Germany	22.6	**5**	Iran	9.0
6	Turkiye	17.0	**6**	Germany	4.3
7	Belgium	15.4	**7**	Brazil	3.9
8	Italy	15.0	**8**	Belgium	3.5
9	Viet Nam	13.4	**9**	Austria	3.5
10	Russia	12.3	**10**	Ukraine	3.4

Source: World Steel Association

Interestingly, some countries appear on both the total and net export lists, but with very different rankings, reflecting differences in domestic consumption and import dependency. For example, Germany ranked fifth in total exports with 22.6 million tonnes but dropped to sixth in net exports with just 4.3 million tonnes, suggesting a strong internal demand and significant import reliance. Similarly, Belgium and Italy had substantial total exports (15.4 and 15.0 million tonnes respectively), but much lower net export positions, reflecting their role as both importers and exporters within tightly integrated regional markets like the EU. In contrast, countries like Iran and Brazil showed strong net export positions relative to their overall volumes, indicating a more outward-facing steel industry and possibly lower internal consumption.

Russia and Ukraine also present notable cases. Despite facing geopolitical and economic challenges, Russia remained a top net exporter (9.8 million tonnes), supported by its resource-rich base and reduced domestic demand due to sanctions and economic contraction. Ukraine, though much lower on the total export scale (not in the top 10), still managed to achieve 3.4 million tonnes in net exports an impressive figure considering ongoing conflict and infrastructure destruction. These figures highlight how steel export dynamics are not only shaped by production capacity but also by domestic demand, geopolitical developments, trade policy shifts, and regional integration, all of which continue to reshape the global steel trade map.

Major Global Importers:

The ranking of top 10 countries involved in total imports and net imports of steel products are listed in the below table:

Total Imports CY 2024			Net Imports CY 2024		
Rank	Country	Million Tonnes	**Rank**	Country	Million Tonnes
1	European Union (27)	42.8	**1**	United States	18.6
2	United States	27.3	**2**	European Union (27)	15.0
3	Turkiye	19.7	**3**	Mexico	14.3
4	Italy	18.5	**4**	Thailand	12.0
5	Germany	18.3	**5**	United Arab Emirates	8.6
6	Mexico	17.6	**6**	Philippines	7.5
7	Vietnam	17.2	**7**	Poland	6.7
8	South Korea	14.2	**8**	Iraq	5.0
9	Thailand	13.5	**9**	Saudi Arabia	4.6
10	Indonesia	12.8	**10**	United Kingdom	4.1

Source: World Steel Association

The data reveals a nuanced picture of the global steel trade landscape, particularly when comparing total imports to net imports. The European Union (EU) leads in total steel imports with 42.8 million tonnes in 2024, significantly higher than any other region, indicating the bloc's vast industrial consumption and cross-border trade within its member states. However, in terms of net imports which measure imports minus exports the EU ranks second with 15.0 million tonnes, highlighting the region's strong re-export capabilities. The United States, despite importing less overall at 27.3 million tonnes, tops the net import chart at 18.6 million tonnes, reflecting its heavy reliance on foreign steel for consumption with relatively lower outbound trade.

Another notable insight is the role of emerging and mid-sized economies such as Mexico, Thailand, and the UAE. While Mexico ranks sixth in total imports (17.6 million tonnes), it ranks third in net imports at 14.3 million tonnes, indicating limited re-export or domestic production to offset imports.

A similar pattern appears with Thailand and the Philippines, both of which have moderate import volumes but rank high in net imports. This suggests rising domestic demand driven by construction, infrastructure, and manufacturing growth, but an underdeveloped domestic steel industry that remains heavily dependent on imports.

On the other hand, traditional industrial powers like Germany, Italy, and South Korea feature high in total imports but are absent from the net import top 10. This suggests a strong balance between imports and exports These nations likely act as both major consumers and processors or re-exporters of steel. This dynamic points to competitive domestic industries with established steel production and value-added processing capabilities. It also highlights the strategic role these countries play in global steel supply chains not just as end users, but as key players in trade, production, and distribution.

Indian Steel Industry

India continues to stand out as a key growth market in the global steel sector, with steel demand projected to rise by 8.5% in CY 2025, significantly outpacing the global average of 1.2%, as per the latest Short-Range Outlook by the World Steel Association. Since 2021, India has consistently led global steel demand growth, and this momentum is expected to persist into 2025. The anticipated surge is being driven by sustained expansion across all major steel-consuming industries, particularly infrastructure, where ongoing public and private investments are playing a crucial role. This positions India as a major contributor to global steel market stability amid slower growth elsewhere.

Item	Performance of Indian Steel Industry		
	FY 2025	FY 2024	% Change
Crude Steel Production	151.967	144.299	5.3%
	Total Finished Steel (Alloy / Stainless Steel and Non-Alloy)		
Production	146.560	139.151	5.3%
Consumption	152.001	136.290	11.5%

Source: Ministry of Steel, Government of India.

India's crude steel production witnessed a 5.3% year-on-year increase in FY 2024-25, rising from 144.30 million tonnes to 151.97 million tonnes, while finished steel production grew by 5.3% to reach 146.56 million tonnes. This growth reflects the sector's strong response to rising demand from infrastructure, construction, engineering goods, and capital equipment segments. Additionally, capacity additions by major steel producers, improved plant utilization rates, and technological upgrades have contributed to the consistent rise in output. Government-led capital expenditure programs and investments in railways, roads, and housing also created a steady demand base, justifying sustained production momentum.

Steel consumption in FY 2024-25 rose sharply by 11.5% to 152.00 million tonnes from 136.29 million tonnes in the previous fiscal, outpacing both crude and finished steel production growth. This indicates a strong post-pandemic recovery in industrial activity and a demand-led pull across sectors like real estate, manufacturing, and clean energy projects. Additionally, increased offtake by MSMEs, coupled with rural demand in sectors like agri-infrastructure and warehousing, further accelerated consumption. The widening gap between consumption and production also points to temporary import dependency or inventory drawdown, highlighting the need for further capacity augmentation and supply chain efficiency to meet domestic needs more effectively.

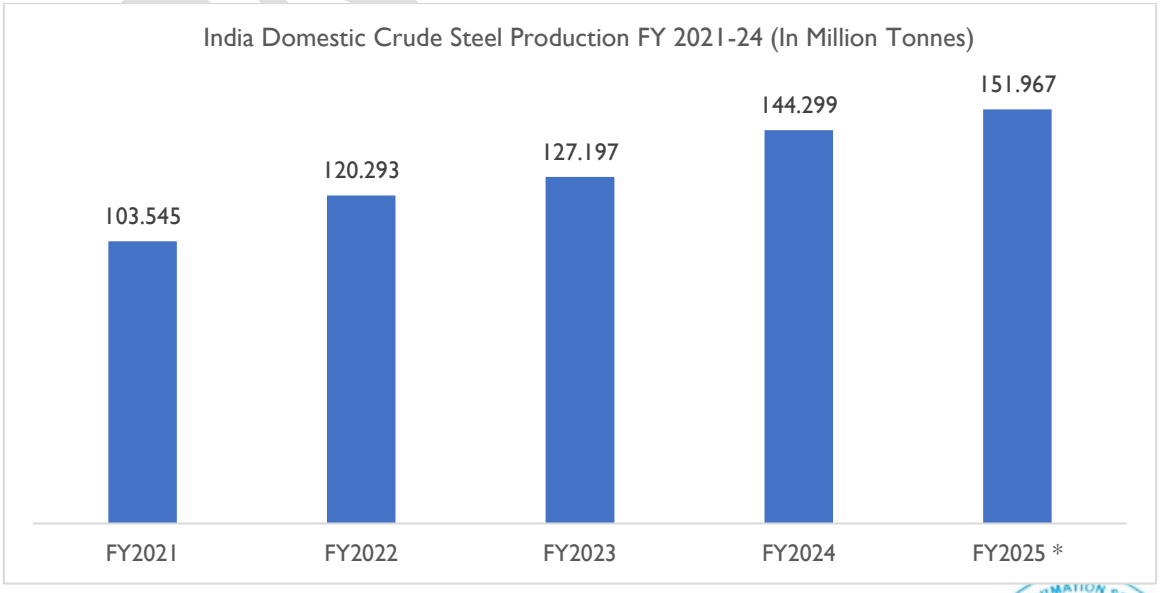
Domestic Production & Consumption Scenario

India's crude steel production has demonstrated steady growth over recent years, driven by rising infrastructure development, industrial expansion, and government initiatives like the National Steel Policy and Make in India. The country has emerged as the world's second-largest steel producer, with consistent investments in capacity expansion, modernization of existing plants, and enhanced raw material security. Growth has also been supported by strong domestic demand, particularly from construction, railways, and capital goods sectors.

Finished steel production and consumption in India have largely kept pace with crude steel output, reflecting robust downstream demand. While consumption dipped briefly during the pandemic, it rebounded strongly, supported by increased spending on infrastructure, real estate revival, and growth in sectors such as automotive and engineering. Ongoing urbanization, rural connectivity projects, and PLI schemes for steel-intensive industries continue to drive demand, positioning India as a key growth market amid global steel demand stagnation.

Historical Crude Steel Production Trends in India

India ranked as the world's second-largest crude steel producer in CY 2024, according to provisional data released by the World Steel Association on January 24, 2025. India's domestic crude steel production is a vital indicator of its industrial growth and infrastructure development. As one of the fastest-growing major economies, India's steel sector plays a central role in supporting key sectors like construction, transportation, automotive, and capital goods. The government's policy push through initiatives like the National Infrastructure Pipeline (NIP), Production Linked Incentive (PLI) scheme for specialty steel, and Make in India has further catalyzed capacity expansion and modernization across public and private sector steelmakers.



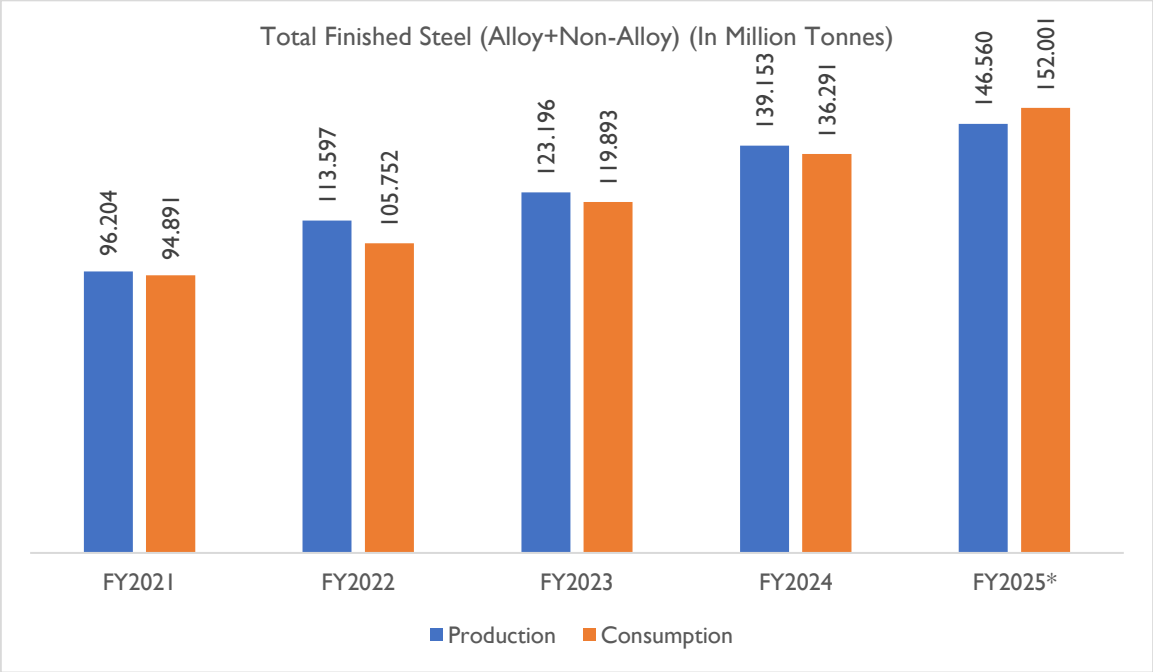
Source: Ministry of Steel, Government of India

*= Provisional

Between FY 2021 and FY 2025, India's crude steel production grew at a strong CAGR of 10.07%, rising from 103.545 MT to 151.967 MT. This sharp growth reflects a robust post-pandemic recovery, improved capacity utilization, and increased capital investments in steel plants. The upward trend highlights India's expanding domestic demand, strong government-led infrastructure spending, and rising self-reliance in steel production to meet both domestic and export needs.

Historical Finished Steel Production & Consumption Trends in India

The growth in finished steel production has been backed by a rise in domestic steel consumption on account of growing economic activities in the country, supported by an increase in infrastructure and construction spending by the government, a rise in automobile and consumer durable demand, among others.



Source: Ministry of Steel, Government of India

*= Provisional

Total Finished Steel Production –

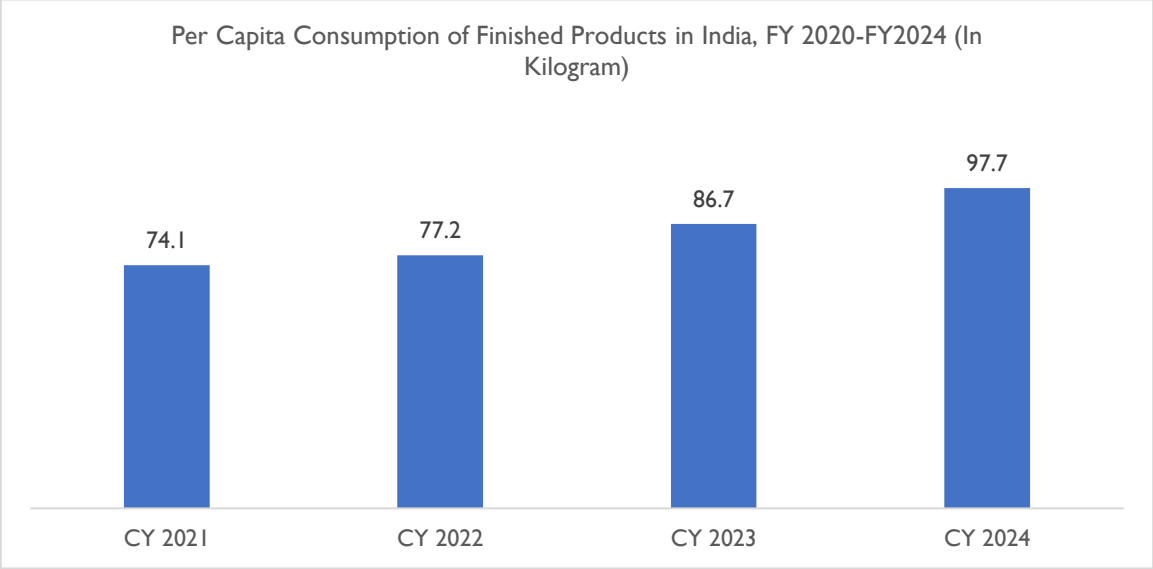
- India's finished steel production has witnessed strong growth over the past five years, rising from 96.20 million tonnes in FY 2021 to 146.560 million tonnes in FY 2025, reflecting a 34.36% increase over the period.
- This translates to a healthy Compound Annual Growth Rate (CAGR) of approximately 11.10% between FY 2021 and FY 2025. The growth has been driven by rising demand from sectors like construction, capital goods, railways, and automotive, supported by government infrastructure spending and industrial recovery post-pandemic.

- Despite global uncertainties and cost pressures, the production trend indicates continued strength in domestic manufacturing, with Indian steelmakers scaling up capacity and operating efficiency. This robust growth reflects the sector's central role in India's industrial expansion and economic development.

Total Finished Steel Consumption-

- India's finished steel consumption has shown a consistent upward trajectory over the last five years, highlighting the country's expanding industrial and infrastructure base. Starting at 94.89 million tonnes in FY 2021, consumption rose to 152.00 million tonnes in FY 2025, marking a 37.57% increase during the period.
- This translates to a Compound Annual Growth Rate (CAGR) of approximately 12.50% between FY 2021 and FY 2025. The sharp rise reflects increasing demand from construction, automotive, railways, engineering, and capital goods sectors.
- The sustained demand growth reinforces India's position as one of the fastest-growing steel-consuming economies globally, supported by a broad-based industrial push, government infrastructure programs, and the growing emphasis on domestic manufacturing across sectors.

Historical Per Capita Consumption of Finished Products Trends in India



Source: World Steel Association

India's per capita steel consumption has exhibited a steady upward trajectory from **74.1 kg in CY 2021** to **97.7 kg in CY 2024**, reflecting a cumulative growth of nearly **32% over three years**. This surge underscores the rising intensity of steel usage across critical sectors like infrastructure, construction, automotive, capital goods, and rural development. The recovery in 2021, marked by a

rebound from pandemic disruptions, was driven by pent-up demand and accelerated execution of government-funded infrastructure projects.

Growth continued in subsequent years, bolstered by flagship programs such as the **National Infrastructure Pipeline (NIP)**, **PM Gati Shakti**, **Bharatmala**, **Smart Cities Mission**, and affordable housing initiatives under **PMAY**. These policy thrusts created large-scale demand for steel in highways, urban transit, power transmission, and residential segments.

India's industrial and manufacturing base has also been expanding under schemes like **Production Linked Incentives (PLI)** and **Make in India**, stimulating steel-intensive sectors. The rural economy's gradual shift toward mechanization and better connectivity has further added to steel uptake. Importantly, the rise to **97.7 kg per person in 2024** signifies India's transition toward a more urbanized and industrialized economy, although still trailing the global average of **~230–240 kg**, highlighting substantial room for growth.

Looking ahead, as India moves toward its **USD 5 trillion GDP target**, per capita steel consumption is projected to rise further, supported by mega infrastructure projects, growing real estate needs, rapid urban expansion, and a stronger focus on logistics and manufacturing competitiveness. To sustain this momentum, ensuring adequate domestic production capacity, improving supply chains, and promoting low-carbon steel technologies will be critical.

Steel Production by Major Producers

Steel Type	Key Manufacturers	Production (Mn ton)	% Share	Y-o-Y Growth (%)	Other Players Contribution (Mn Ton)	Y-o-Y Growth (%)
Crude Steel	• Steel Authority of India • Rashtriya Ispat Nigam Limited • TSL Group • AM/NS • JSWL Group • JSPL	86.221	57%	0.4%	65.746	12.6%
Finished Steel	• Steel Authority of India • Rashtriya Ispat Nigam Limited • TSL Group • AM/NS • JSWL Group • JSPL	80.046	55%	2.3%	66.513	9.2%

Source: Ministry of Steel, Government of India

Crude Steel Production :

In the Indian steel industry, key integrated producers—comprising Steel Authority of India (SAIL), Rashtriya Ispat Nigam Limited (RINL), Tata Steel Group (TSL), ArcelorMittal Nippon Steel (AM/NS), JSW Steel (JSWL), and Jindal Steel & Power Ltd. (JSPL)—accounted for **86.22 million tonnes** of crude steel production, representing **57%** of the total national output. However, the year-on-year (Y-o-Y) growth in production from these major players was a modest **0.4%**, indicating a near stagnation in capacity expansion or operational output during the period. This slowdown could be attributed to factors such as maintenance shutdowns, global price corrections, or cautious production strategies amid economic uncertainties.

Conversely, **other players**—mainly comprising secondary producers, mini-mills, and re-rollers—contributed a significant **65.75 million tonnes**, reflecting a robust **12.6%** Y-o-Y growth. This rapid

expansion among non-integrated producers suggests a growing decentralization of steel production in India. It also highlights the agility of small and mid-sized units in ramping up production to meet rising domestic demand, especially in regional markets and construction-led segments. The strong growth in this segment is a clear indicator of India's maturing steel ecosystem, where smaller players are becoming increasingly relevant in the supply chain.

Finished Steel Production

In finished steel, the same group of leading steel manufacturers accounted for **80.05 million tonnes**, or **55%** of total output. This segment witnessed a **2.3%** Y-o-Y growth from the top producers—an improvement over crude steel growth but still moderate when compared to the surge in overall demand. This suggests that while large players maintained stable output, they may have prioritized higher value-added products, downstream integration, or export diversification over volume growth. Given the increase in consumption in FY 2025, this limited production rise from top producers may also reflect supply-side constraints or a deliberate shift in product mix toward higher-margin segments.

Meanwhile, other producers contributed **66.51 million tonnes** of finished steel with a solid **9.2%** Y-o-Y growth. This again underlines the importance of secondary and regional mills in bridging the demand-supply gap, particularly in segments like long products, TMT bars, structural steel, and standard pipes, which are essential for infrastructure and construction projects. These smaller mills, often operating closer to end-use markets, have demonstrated higher responsiveness to short-term demand spikes and lower input cost structures. Their expanding role emphasizes the need for policy support and formalization to further enhance their capacity and integration into the national steel framework.

Overview of Indian Steel Pipes & Tubes Industry

The consumption of steel tubes and pipes in India is on a promising upward trajectory, driven by various factors including infrastructure development, industrial growth, and increasing adoption of sustainable construction practices. The basic understanding of steel tubes and pipes are cylindrical structures made of steel that are generally in hollow shape. However, different shapes, sizes and grades are used to cater the requirements of various industries. Steel pipes are classified as tubes depending on specific diameters and application requirement. India is one of the established manufacturers of steel pipes globally, which is one of the most important sub-industries of the Indian steel sector. Construction, Railways, Oil & gas, agriculture, real estate, engineering, automobile and process industry are some of the key consumers of steel pipes and tubes. Various types of steel tubes and pipes along with its suitable applications are given in the following chart.

Type of Steel Tubes & Pipes	End-user Sector
Seamless & Welded Tubes & Pipes	Power Plants, Fertilizer Plants, Automobile Sector, Oil & Gas Industry, Construction Sector.
Longitudinal SAW	Oil & Gas Industry, Chemicals Plants
Helical SAW	Transportation Sector, Water Infrastructure, Pipeline Network
Seamless Tubes & Pipes	Chemical & Petrochemical Facilities, Shipbuilding, Oil & Gas Industry
ERW Black Pipes	Oil & Gas Industry, Agriculture, Automobile Sector, Telecom Network and Engineering Process Lines
Galvanized Pipes (GP/GI Pipes)	Construction Sector, Mechanical and Engineering Process Plants, Telecom Network and Water Infrastructure
Hollow Section Tubes	Transportation, Automobiles, Construction and Furniture

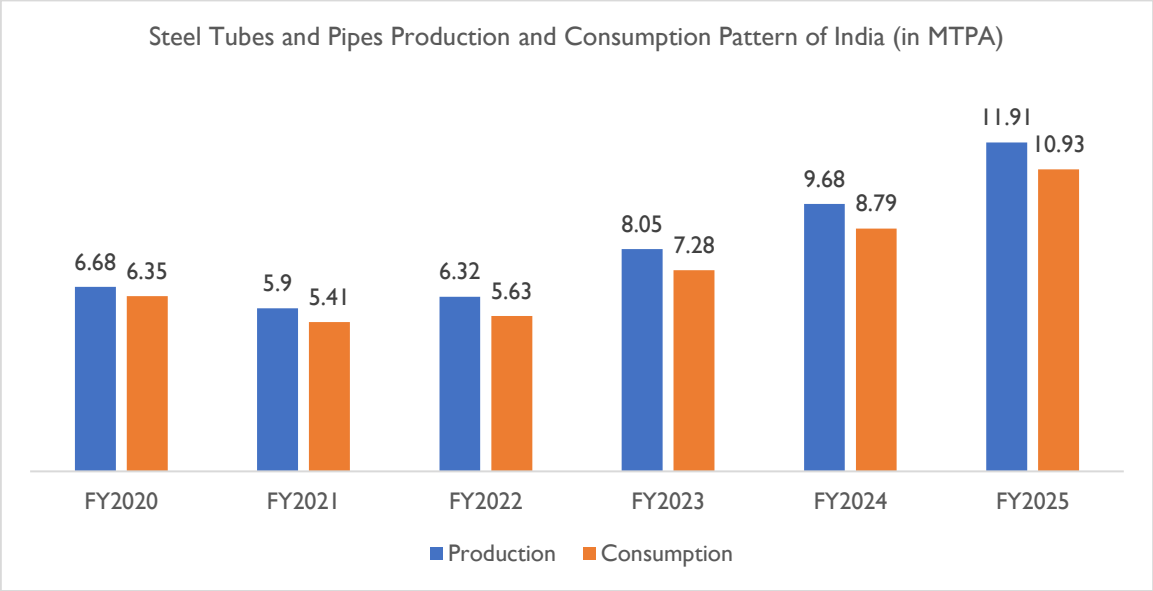
The usage of steel tubes and pipes is significant in construction activities and building infrastructure. These materials are used in the construction sector for creating structural elements such as columns, beams, and trusses in order to provide strength and support the formation of building. They are also used in water infrastructure such as water supply for drinking water, plumbing, drainage, and sewerage systems. Apart from this, they are also used by manufacturing sector including oil and gas pipelines, agricultural equipment, automobile components, furniture, electrical cable conduits and process industry.

The demand for structural steel tubes is increasing significantly, fueled by government initiatives such as the Viksit Bharat program aimed at infrastructural development, along with other initiatives such as Jal Jeevan (aimed at water pipeline infrastructure), Atal Mission for Rejuvenation and Urban Transformation - AMRUT, Pradhan Mantri Krishi Sinchayee Yojana - PMKSY (pipelines for irrigation of farm land), Command Area Development & Water Management - CADWM, National Gas Grid (providing pipeline infrastructure for natural gas transportation), Bharatmala (highway construction with boundaries and barricades) and so on. The series of multiple projects supports the growing trend towards pre-engineered buildings and sustainable construction methods, which favour the use of steel tubes over traditional materials like concrete. The increasing emphasis on sustainable construction practices is likely to enhance the role of steel tubes and pipes in modern infrastructure projects. Their lightweight nature and superior strength-to-weight ratios make them an attractive alternative to conventional material.

While the outlook for steel tubes and pipes consumption remains positive, challenges such as fluctuating raw material prices and competition from imports may impact domestic producers. However, the ongoing push for self-reliance (Atmanirbhar Bharat) in manufacturing presents opportunities for local manufacturers to expand their market share. Overall, the increase in demand for steel tubes and pipes will contribute towards the country's growth and development, making them an important element of the country's infrastructure and manufacturing sectors.

Production and Consumption Pattern of Steel Tubes and Pipes

Between FY2020 and FY2025, India's steel tubes and pipes industry witnessed a strong resurgence, with production increasing from **6.68 MTPA to 11.91 MTPA** and consumption rising from **6.35 MTPA to 10.93 MTPA**. This substantial growth, especially post-FY2021, underscores the structural shift towards industrial recovery, supply chain localization, and enhanced investment in midstream manufacturing capabilities. The five-year trend shows consistent year-on-year growth, driven by evolving domestic demand, particularly from sectors requiring high-performance piping solutions..



Source: CMIE, D&B Analysis

A key factor influencing this upward trajectory has been the **broadening application of steel tubes across process and precision-driven industries**, such as oil refining, shipbuilding, fertilizer plants, HVAC systems, and fluid transport engineering. These industries demand varied specifications, from spiral-welded and ERW tubes to cold-drawn seamless pipes, contributing to diversified production output. In particular, the shift towards higher-grade steel pipes for structural and fluid-handling use has boosted tonnage as well as value realization for manufacturers.

From the supply perspective, **capacity expansion by private and integrated steel players**, along with the rising presence of MSME fabricators, has significantly contributed to meeting rising domestic demand. Advances in pipe-forming technology, quality control standards, and customization capabilities have allowed Indian manufacturers to cater to niche industrial requirements. At the same time, better logistics networks and improved distributor ecosystems have supported consumption growth, especially in Tier II and Tier III cities where urbanization and industrialization are accelerating steadily.

Mild Steel Pipes & Tubes Overview

MS pipes and tubes, short for Mild Steel pipes and tubes, are essential components in various industrial and domestic applications. MS pipes are made from mild steel, which is a low carbon steel containing less than 0.25% carbon. This low carbon content makes the steel easier to weld and shape, allowing it to be manufactured into various forms suitable for piping and tubing purpose. Prominent properties of mild steel are its ductility – where mild steel can be bent without breaking, weldability – where it can be easily welded into different shapes and affordability – available at lesser pricing that other types of steel due to its lightweight and lower production costs. MS steel pipes are manufactured using two main processes: seamless and welded, with welded pipes further classified into ERW and SAW types. Both methods are widely used in industries such as oil & gas, water distribution, and offshore projects.

Manufacturing Process

MS Steel pipes and tubes are made through proper material selection, where the quality and performance of the product is based on the quality of MS steel used in this process. Therefore, material selection is the most important process. This selected material, which is available in different grades of steel are then shaped into pipes through extrusion or rolling process to make a seamless pipe and tube. When the sheets are welded to form a pipe, it becomes welded MS steel pipe. These pipes are checked for quality control, where each batch undergoes rigorous testing to ensure it meets industry standards for strength, durability, and corrosion resistance.

Based on the Manufacturing Process MS steel pipes and tubes are classified into

- **Seamless Pipes**: Manufactured without welding seams, providing greater strength and uniformity, suitable for high-pressure applications.
- **Welded Pipes**: Welded pipes are manufactured by rolling a steel plate or strip into a cylindrical shape and then joining the edges using various welding techniques. The edges are welded together using heat and pressure to create a strong and continuous seam. After welding, the pipe undergoes processes like seam trimming, heat treatment, sizing, and quality inspection to ensure durability and uniformity. There are three main methods of welded pipe manufacturing; however, we have focus on two types: ERW (Electric Resistance Welding) and SAW (Submerged Arc Welding)

  ERW (Electric Resistance Welding): The process begins with hot-rolled steel coils or strips, which are uncoiled, levelled, and cut into the required widths for pipe formation. Using precision forming rollers, the steel strip is gradually shaped into a circular tube. The edges of the formed tube are then heated using high-frequency electric current and pressed together under controlled pressure, creating a strong and seamless-looking weld without the need for filler material. After welding, the excess weld bead is trimmed, and the pipe undergoes heat treatment to relieve

stresses and enhance its mechanical properties. The pipe is then passed through sizing rollers to achieve the desired dimensions before being cut to the required lengths. ERW pipes are widely used in the steel industry for applications such as water pipelines, structural frameworks, furniture, fencing, and oil & gas transportation due to their cost-effectiveness, consistent quality, and efficient production process.

SAW (Submerged Arc Welding): In the steel manufacturing industry, the Submerged Arc Welding (SAW) process is an essential method for producing high-strength welded pipes used in critical applications such as oil & gas pipelines, water transmission, and structural projects. The process starts with steel plates or coils, which are shaped into a cylindrical form either longitudinally (LSAW – Longitudinal Submerged Arc Welding) or helically (SSAW or HSAW – Spiral Submerged Arc Welding). Welding is performed using the submerged arc technique, where an electrode and welding arc are covered by a flux layer, protecting the weld from contamination and ensuring deep penetration for a strong, defect-free joint. After welding, the pipes undergo heat treatment to improve mechanical properties, followed by thorough inspection and testing to meet industry standards. The final step involves sizing the pipes to precise specifications, making them ideal for demanding applications such as offshore projects and large-scale fluid transportation. The SAW process is widely utilized in the steel industry due to its capability to produce thick-walled, durable, and high-performance pipes.

The classic difference between seamless and welded MS pipes are captured below:

Parameter	Seamless Pipes	Welded Pipes
Manufacturing Process	Made from a single piece of metal without seams, through extrusion or piercing.	Formed by welding together metal sheets or strips, creating a seam.
Strength	Absence of seams offer high strength, ability to withstand high pressure and loads.	Welded seam can be a weak point, so has lesser strength, with the ability to withstand about 20% less pressure than seamless pipes.
Length	Shorter due to manufacturing constraints.	Can be produced in long continuous lengths without limitation.
Size Availability	Usually available in smaller nominal sizes (up to 24 inches).	Available in a wider range of sizes, including larger diameters.

Corrosion Resistance	More resistant to corrosion as there are no welds that can corrode.	More prone to corrosion at the weld areas, which may reduce overall corrosion resistance.
Surface Quality	Rougher surface finish due to the extrusion process.	Smoother surface finish as the sheets are welded and finished post-manufacturing.
Cost	More expensive due to complex manufacturing processes.	More economical, especially for larger sizes due to simpler production methods.
Testing Requirements	Do not require testing for weld integrity since there are no seams.	Must undergo testing for weld integrity before use to ensure safety and reliability.
Applications	Suitable for high-pressure, high-temperature, and corrosive environments (e.g., oil and gas industries).	Commonly used in low-pressure applications such as water supply systems and structural applications where cost is a concern. Electric Resistance Welded (ERW) pipes are replacing seamless pipes in the high-pressure, high-temperature and corrosive environment applications.
Wall Thickness	Often has inconsistent wall thickness, which can be thicker overall.	Has more consistent wall thickness across the length of the pipe.
Ovality and Roundness	Provides better roundness and ovality due to uniform manufacturing process.	May have poorer roundness compared to seamless pipes due to the welding process.

Seamless pipes are preferred in applications requiring high strength and resistance to pressure and corrosion, making them suitable for critical environments like oil and gas transportation. In contrast, welded pipes offer cost advantages and are ideal for general-purpose uses where high strength is not as critical. Choosing between seamless and welded MS pipes depends on specific project requirements such as pressure ratings, size availability, cost considerations, and the intended applications.

Parameter	Pipes Made Using HR Coil	Pipes Made Using Narrow Width HR Coil	Pipes Made Using Patra Coil
Quality	Highest quality due to uniform properties from the hot rolling process at high temperature.	Quality lies between HR coil and patra coil pipes. Depends on slitting precision and original coil quality.	Lowest quality compared to HR and narrow width coils. Thinner and narrower coils may contain secondary materials.
Physical Properties	High strength, consistent thickness and width. Rough surface finish due to hot rolling process.	Strength depends on original coil properties. Rough surface finish.	Lower strength than HR coil pipes. Rough surface finish.
Applications	Suitable for high-pressure applications like oil and gas pipelines, industrial pipelines, construction, and infrastructure projects.	Suitable for applications requiring smaller diameter pipes with precise dimensions but not high strength. Examples: automotive components, water supply, irrigation systems, infrastructure components.	Suitable for non-critical applications where low cost is prioritized over high performance. Examples: fencing, low-pressure liquid transportation pipes.
Raw Material Specifications	Width >1200 mm, thickness 2-6 mm.	Width <500 mm.	Thickness <3-4 mm, width <400 mm.

Key Applications:

Welded MS Steel Pipes & Tubes Applications	Details
Water and Sewage Systems	Welded MS pipes are commonly used for transporting potable water, irrigation water, and sewage, benefiting from their corrosion resistance when properly coated
Fire Protection Systems	They are essential in fire sprinkler systems and hydrants, providing reliable water flow for firefighting.
HVAC Systems	Utilized in heating, ventilation, and air conditioning systems for transporting air and water, both hot and cold.
Construction and Infrastructure	Welded MS pipes serve as structural supports in building frameworks, bridges, pre-engineered buildings, and other infrastructure projects due to their strength and durability.
Industrial Fluid Transport	They are used to transport various fluids, chemicals, and slurries in industrial settings, making them suitable for processing plants.
Agriculture Applications	Welded MS pipes are employed in irrigation systems and drainage solutions within the agricultural sector.
Marine and Offshore Structures	These pipes are also used in constructing platforms, jetties, and other structures exposed to harsh marine environments.
Automotive Applications	Welded MS pipes find use in exhaust systems and fuel lines due to their ability to withstand high temperatures.
Mining Operations	Utilized for slurry conveyance and mine dewatering processes thanks to their durability.
Chemical Processing	Welded MS pipes transport chemicals within processing plants, ensuring safe handling of corrosive substances.
Furniture	Welded MS pipes are used to make variety of furniture, including bed frames, chairs, and book shelves, which is cost-effective than wooden furniture, offering similar durability.

Welded MS pipes play a crucial role in various sectors due to their adaptability and strength, making them a popular choice for both structural and fluid transport applications.

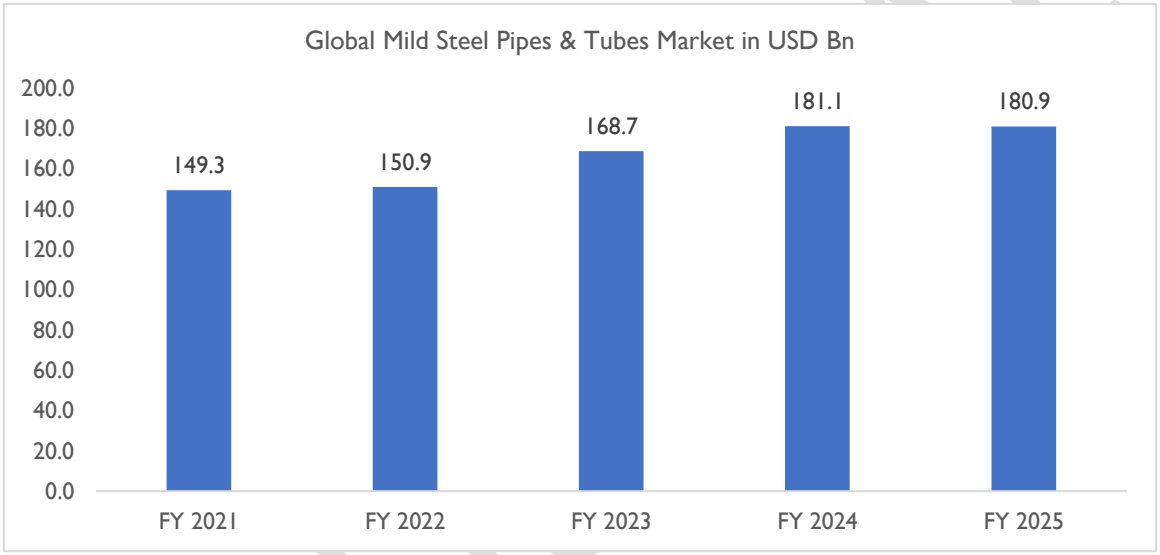
Application of Seamless MS Steel Pipes

Seamless MS Steel Pipes & Tubes Applications	Details
Oil and Gas Industry	Seamless MS pipes are extensively used for transporting crude oil, natural gas, and other fluids. Their seamless construction ensures reliability in high-pressure environments, making them suitable for both offshore and onshore drilling operations.
Petrochemical Industry	In petrochemical plants, these pipes are employed for the transportation of chemicals and raw materials. Their resistance to corrosion and high-pressure capabilities make them ideal for handling hazardous substances.
Power Generation	Seamless pipes are crucial in power generation facilities, used for steam generation, heat exchangers, and condensers. They facilitate efficient heat transfer and reliable operation under extreme conditions.
Construction and Infrastructure	These pipes serve various roles in construction, including structural support, plumbing systems, and HVAC applications. Their strength and durability make them suitable for load-bearing structures.
Manufacturing	Seamless pipes are employed in manufacturing processes across industries such as aerospace and machinery for conveying fluids and gases efficiently.
Marine Applications	Their durability and corrosion resistance make seamless MS pipes a popular choice in marine applications, including shipbuilding.
Fertilizer Industry	Used in high-pressure piping systems within fertilizer production processes, particularly in urea synthesis plants.
Heat Exchangers	Seamless MS pipes are commonly found in heat exchangers due to their efficiency in transferring heat between fluids.

In summary, the versatility of seamless MS pipes makes them essential in various sectors where strength, reliability, and performance under demanding conditions are critical

Global Scenario:

The global mild steel pipes and tubes market grew from USD 149.3 billion in FY 2021 to USD 180.9 billion in FY 2025, registering a moderate CAGR of 4.9%. This growth was primarily supported by the post-pandemic recovery in industrial activity and steady expansion in construction and infrastructure development, particularly in Asia, the Middle East, and parts of Africa. Investment in energy transport infrastructure—such as oil, gas, and water pipelines—also contributed to market demand, alongside a rise in prefabricated structures and lightweight construction practices in both residential and commercial sectors. The increasing demand for durable and cost-effective steel solutions in midstream applications bolstered market stability throughout the period.



Source: Primary Research, D&B Analysis

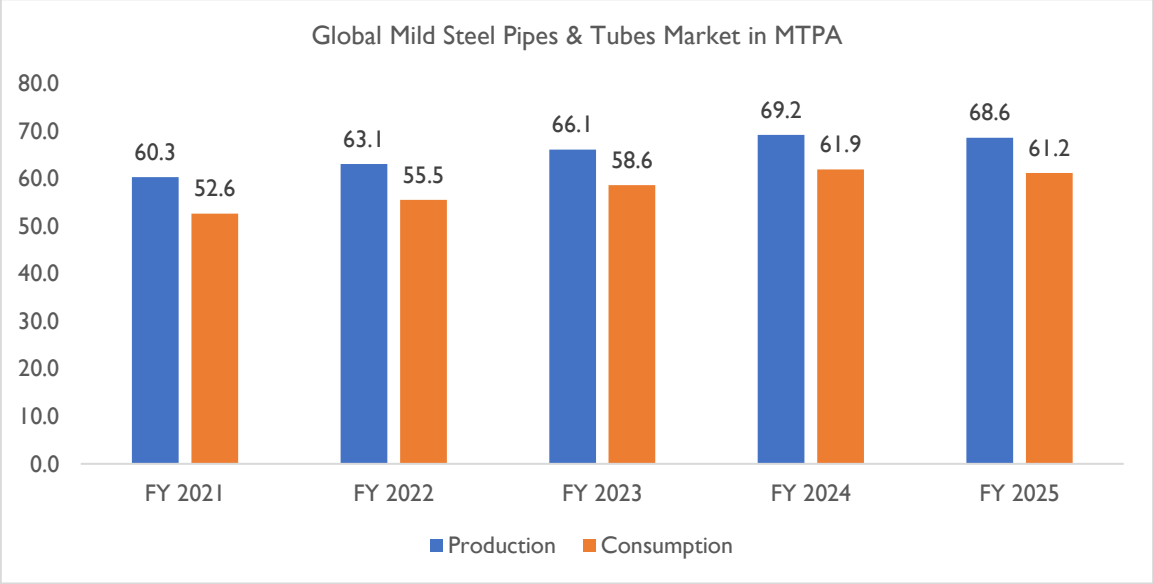
However, the market experienced a slight deceleration in FY 2025, with the value marginally declining from the previous year. This softening is likely linked to global economic uncertainties, trade realignments, and temporary oversupply conditions in some regions. Additionally, fluctuating raw material costs and rising environmental compliance costs in steel production may have impacted pricing dynamics and short-term demand cycles. Despite this, the long-term fundamentals remain positive, with continued urbanization, energy infrastructure needs, and replacement of aging pipeline networks expected to sustain demand for mild steel pipes and tubes globally.

Annual Production and Consumption of Global MS Pipe Production

The global mild steel pipes and tubes industry plays a critical role in enabling infrastructure, energy transport, water supply, and industrial processing across both developing and developed economies. As a foundational component in sectors such as oil & gas, construction, automotive, and utilities, the market's production and consumption trends are closely tied to macroeconomic cycles, capital investments, and regional industrial policies. The period from FY 2021 to FY 2025 reflects a phase of

post-pandemic recovery, stabilization, and gradual restructuring in global supply chains. The following overview examines production and consumption dynamics during this period, highlighting key regional developments, growth patterns, and underlying drivers.

Between FY 2021 and FY 2025, global production of mild steel pipes and tubes rose from **60.3 million tonnes to 68.6 million tonnes**, marking a CAGR of **3.3%**, while consumption increased from **52.6 million tonnes to 61.2 million tonnes**, growing at a slightly higher CAGR of **3.9%**. This steady growth reflects the normalization of industrial activity post-COVID and increasing demand from infrastructure rehabilitation, municipal pipeline upgrades, and manufacturing expansions. Importantly, the narrowing gap between production and consumption over this period indicates greater demand-supply alignment, improving operational efficiencies across global markets and reducing surplus capacity pressures.



Source: Primary Research, D&B Analysis

Asia-Pacific continued to dominate both production and consumption, driven by strong industrial bases in China and India. China's domestic consumption remained stable despite moderating construction growth, while India's demand surged due to large-scale government investment in roads, railways, and water infrastructure. Vietnam and Indonesia also saw increased demand due to expanding manufacturing footprints. In the Middle East, pipeline infrastructure expansion, especially in UAE, Saudi Arabia, and Qatar, sustained demand growth. These developments made Asia and the Gulf key consumption hubs during the period.

In Europe, while consumption grew moderately due to infrastructure modernization and green building initiatives, production faced structural constraints. High energy costs, stricter carbon regulations, and industry consolidation limited supply growth. North America saw sustained demand from sectors like oil & gas, commercial construction, and municipal water systems, particularly in the U.S., where

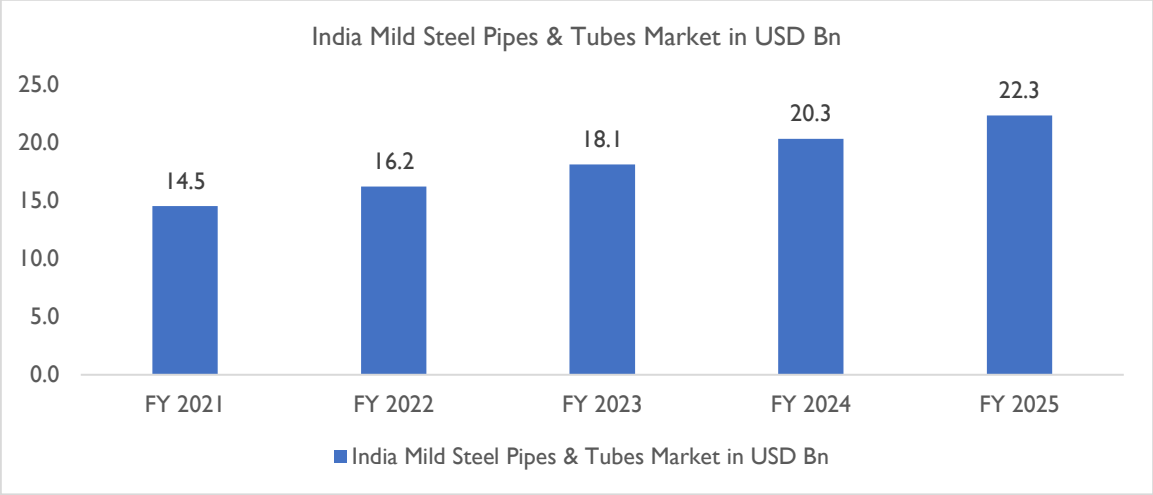
infrastructure stimulus packages played a crucial role. However, local producers contended with challenges such as supply chain bottlenecks and rising production costs, affecting competitiveness and output volumes.

Africa and Latin America exhibited slower yet consistent consumption growth, with rising demand in water infrastructure, agriculture, and power distribution. Countries such as Nigeria, Kenya, and South Africa reported increasing use of mild steel pipes for irrigation and water delivery, while Brazil and Argentina gradually revived public works spending. However, due to limited manufacturing capabilities, these regions remained largely import-dependent. Initiatives to localize pipe production through new facilities and foreign investment are still in early stages but signal long-term potential for supply diversification.

Overall, the period FY 2021–25 marked a phase of cautious recovery and incremental growth in the global mild steel pipes and tubes market. The stronger CAGR in consumption compared to production reflects robust end-use demand, particularly in emerging markets and energy-intensive sectors. Looking ahead, the focus will likely shift toward technology integration, sustainability, and regional capacity expansion to support rising infrastructure and utility demands. With ongoing geopolitical shifts and energy transitions reshaping global steel trade flows, the mild steel pipe industry is expected to evolve with more localized supply chains and product specialization, reinforcing its importance in global infrastructure development.

Indian Market scenario:

India's mild steel pipes and tubes market expanded from USD 14.5 billion in FY 2021 to USD 22.3 billion in FY 2025, achieving a robust CAGR of **11.4%**. This strong growth trajectory was supported by rising demand from midstream and downstream applications such as fabrication units, pre-engineered buildings (PEBs), and industrial sheds. The increasing shift toward modular and prefabricated construction methods—driven by time and cost efficiencies—further accelerated the use of mild steel pipes in commercial and semi-industrial infrastructure projects. In particular, the growing presence of logistics parks, warehousing hubs, and agri-processing facilities created consistent demand beyond core sectors like oil & gas or construction.



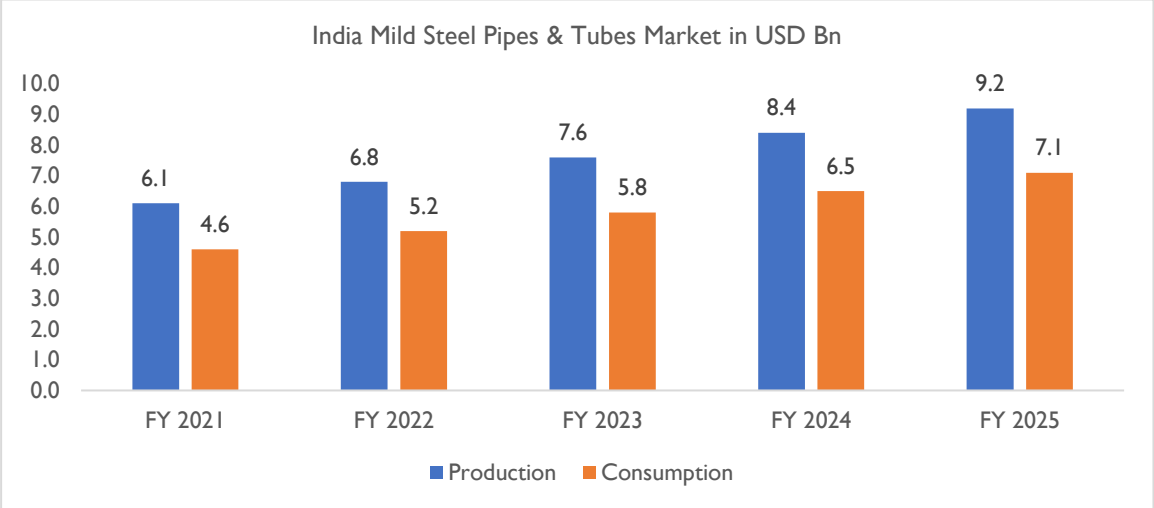
Source: Primary Research, D&B Analysis

The market expansion was fueled by the rise of industrial activity in Tier II and Tier III cities, where improved access to finance, land, and transport infrastructure supported small and mid-sized enterprises. Utility infrastructure upgrades in rural and semi-urban regions—including irrigation networks, small-scale water supply lines, and renewable energy support structures—also drove consumption. Unlike traditional metro-driven growth, this phase saw broader regional dispersion of demand, highlighting the evolving nature of India's industrial landscape and the increasing relevance of mild steel pipes across diverse applications.

Annual Production & Consumption of MS Pipes & Tubes in India

India's mild steel pipes and tubes production increased from **6.1 million tonnes to 9.2 million tonnes**, registering a **CAGR of 10.8%** between FY 2021-25, while consumption rose from **4.6 million tonnes to 7.1 million tonnes**, reflecting a slightly faster CAGR of **11.5%**. This parallel growth indicates strong alignment between domestic capacity expansion and rising end-user demand. Notably, increased private investments in industrial estates, logistics corridors, and process industries

(like food, chemical, and textiles) fueled consistent offtake of mild steel tubes, especially in medium-pressure fluid transport and structural applications.



Source: Primary Research, D&B Analysis

The consumption side was further supported by the adoption of mild steel pipes in various secondary applications like scaffolding systems, greenhouse structures, and material handling setups across SME and MSME segments. As small manufacturers pursued capacity upgrades, the demand for cost-effective yet durable structural components such as ERW (electric resistance welded) and GI (galvanized iron) pipes witnessed steady growth. Additionally, government efforts to modernize agri-water distribution and rural electrification also bolstered offtake in non-urban geographies, contributing to a wider geographic spread in consumption patterns.

From the production perspective, Indian pipe manufacturers increasingly adopted automated forming and welding technologies, enabling better yield and faster production cycles. This shift helped domestic players not only match rising domestic demand but also improve product consistency and quality, reducing reliance on imports. Additionally, the introduction of BIS certification norms across various categories helped standardize production while encouraging investment in compliance-ready manufacturing units. Overall, India's mild steel pipe and tube market in this period displayed a healthy and scalable growth model, balancing demand pull and production readiness.

Key Demand Drivers

The growth drivers for the Mild Steel (MS) pipes and tubes industry in India are multifaceted, influenced by infrastructure development, government initiatives, and sectoral demand. The key factors promoting production and consumption of MS pipes and tubes in India are listed as below:

- **Infrastructure Development**

- **Government Initiatives** – Programs such as the Jal Jeevan Mission, Nal Se Jal, Namami Gange, AMRUT, PMKSY (pipelines for irrigation of farm land), Command Area Development & Water Management - CADWM, National Gas Grid (providing pipeline infrastructure for natural gas transportation), Bharatmala (highway construction with boundaries and barricades) are significantly boosting demand for MS pipes. These initiatives focus on providing safe drinking water, improving sanitation, and pipeline infrastructure for natural gas which require extensive piping systems.
- **Transportation Projects** – Investments in roads, railways, and urban infrastructure are driving the need for robust piping solutions, contributing to increased consumption of MS pipes.

- **Rising Demand in Key Sectors**
  - **Oil and Gas Industry** – The oil and gas sector is a major consumer of steel pipes, with 7-12% of capital expenditure allocated to steel pipes for refining and distribution. The expansion of city gas distribution networks further fuels this demand.
  - **Construction Sector** – With over 50% of the total demand for steel pipes coming from the construction industry, ongoing residential and commercial projects continue to drive consumption.
- **Technological Advancements**

  Continuous improvements in manufacturing processes have enhanced productivity and quality, allowing Indian manufacturers to compete effectively on a global scale. This includes advancements in welding technologies for producing high-quality ERW (Electric Resistance Welded) pipes.
- **Geographical Advantages**

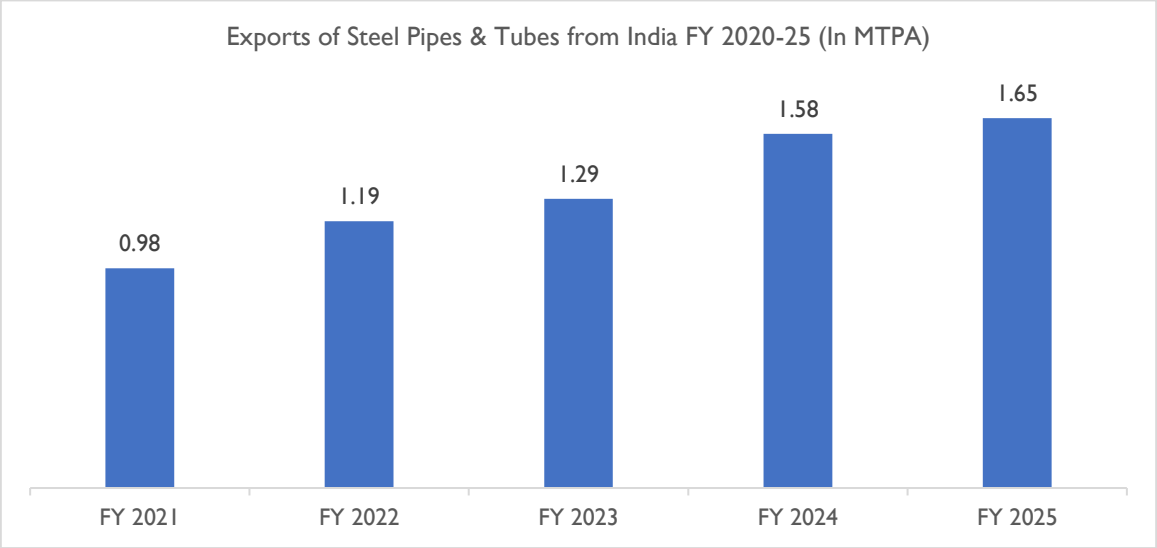
  India benefits from abundant raw materials, a skilled workforce, and relatively low production costs. These factors contribute to making India one of the leading manufacturing hubs for steel pipes globally.
- **Sustainability Trends**

  There is a growing emphasis on sustainable practices within the industry, including the use of recycled materials and eco-friendly production methods. This trend aligns with global movements towards reducing carbon footprints in manufacturing.

Export & Import of Steel Pipes & Tubes

Historical Trend Analysis of Exports

India has maintained strong export volumes of steel pipes & tubes, including both alloy and non-alloy variants, with steady demand from international markets. From FY2020 to FY2025, exports recorded a healthy 7.5% CAGR, driven by rising global demand and enhanced production capacities by Indian manufacturers. This upward trend underscores India's growing stature as a reliable exporter in the global steel pipe and tube market.

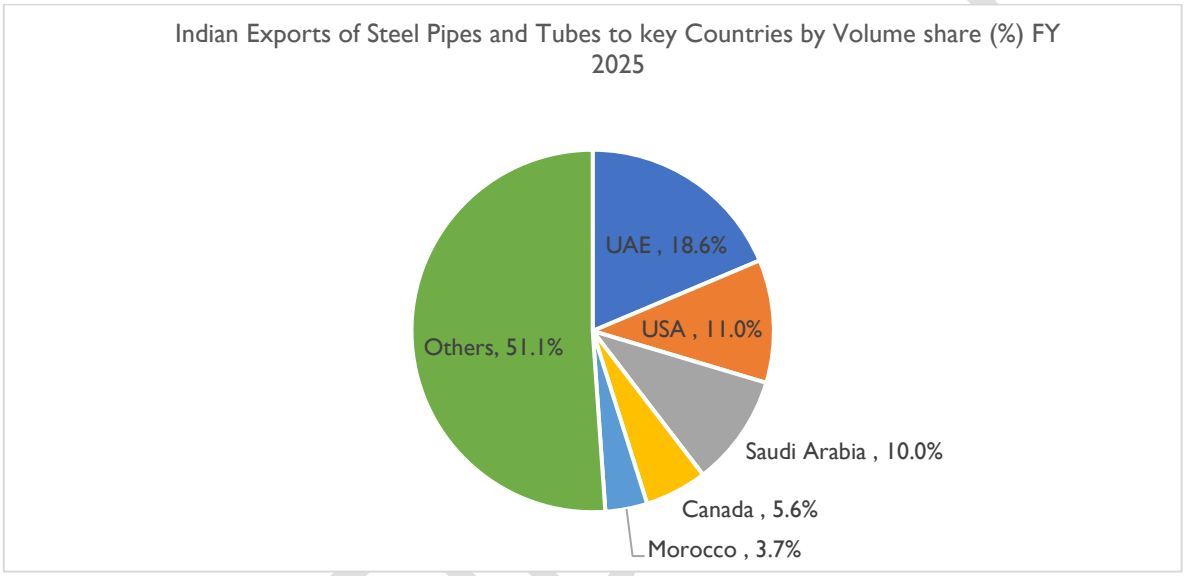


Source: CMIE Industry Outlook

The export market remained on a consistent upward trajectory except in FY2021, when outbound shipments declined to 0.9 MTPA due to the pandemic-induced disruptions. However, exports rebounded strongly with a 32% y-o-y growth in FY2022, reaching 1.19 MTPA. In FY2023, exports rose further by 8.4% y-o-y to 1.29 MTPA. This momentum carried into FY24, with a robust 22.5% y-o-y increase to 1.58 MTPA, and continued into FY2025 with exports touching 1.65 MTPA. The steady growth despite global uncertainties highlights the resilience and competitiveness of Indian steel pipe and tube exports.

Key Export Markets

In FY 2025, India's steel pipes and tubes exports reflected a strong and diversified global footprint, highlighting the country's growing relevance in the international steel trade. Rather than being concentrated in a single market, India's exports were strategically distributed across a mix of developed economies, infrastructure-intensive Middle Eastern nations, and emerging markets across Africa and Asia. This distribution not only indicates healthy global demand but also reflects India's capability to cater to a wide spectrum of end-use requirements, from construction and energy to water management and industrial applications.

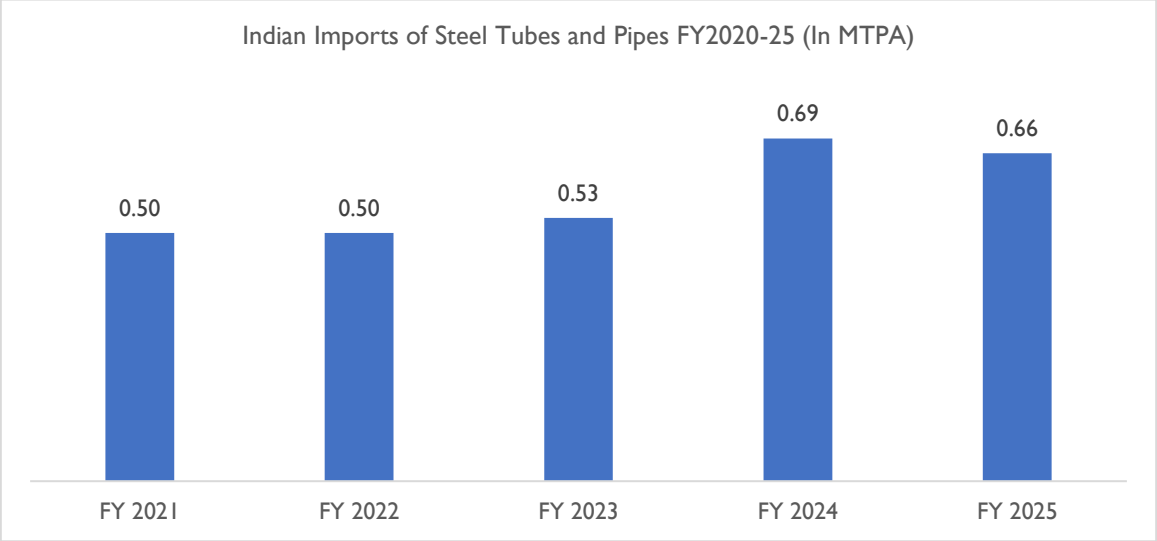


Source: CMIE Industry Outlook

In FY2025, the United Arab Emirates (UAE) emerged as the leading importer of Indian steel pipes and tubes by volume, followed closely by the USA and Saudi Arabia, reflecting strong demand from regions with significant infrastructure and industrial activity. These three countries formed the core of India's export strategy, supported by Canada and Morocco, which secured the fourth and fifth positions respectively. The volume-based ranking highlights India's strong presence in markets undergoing major construction, energy, and development projects. However, the ranking shifts when measured by export value, influenced by factors such as product specifications, grade, and logistics costs. Countries like the USA, UAE, and Indonesia often rank higher in value terms due to their preference for specialized or high-end steel pipes and tubes, resulting in better per-unit realization and showcasing India's versatility in serving both bulk and premium markets.

Historical Trend Analysis of Imports

India continues to import steel tubes and pipes to bridge the demand-supply gap in specialized applications where domestic capabilities are either limited or still maturing. These imports cater to critical sectors such as oil and gas exploration, petrochemicals, and heavy engineering, where high-performance and corrosion-resistant pipes are essential. In addition, emerging demand from industries such as power generation (including nuclear and thermal), renewable energy (notably wind energy structures), aerospace, shipbuilding, chemical processing, and precision medical equipment has contributed to the need for technically advanced steel tubes and pipes. These segments often require customized grades, superior metallurgical properties, or global certifications—features not yet fully developed or widely produced in the domestic market. As a result, imports remain a vital supplement to India's steel ecosystem, particularly for high-spec, application-specific requirements.



Source: CMIE Industry Outlook

In FY 2025, India imported 0.66 million tonnes per annum (MTPA) of steel tubes and pipes, marking a 5.7% decline from 0.7 MTPA in FY 2024. This seemingly modest drop reflects a deeper structural shift toward self-reliance, as domestic manufacturing capabilities continue to evolve in response to both policy support and market demand. The Indian steel industry has been gradually enhancing its technological capabilities, product range, and quality standards, particularly in segments like seamless, alloy, and corrosion-resistant tubes, thereby reducing the need for imported alternatives. This progress is driven by government initiatives such as 'Make in India' and the Production Linked Incentive (PLI) scheme, which are incentivizing investment in capacity expansion and value-added production. Furthermore, increasing adoption of domestic products by core industries like oil & gas, power, chemicals, construction, automotive, and engineering indicates rising confidence in local suppliers. Factors such as global shipping disruptions, extended delivery timelines, and import compliance challenges (including quality certifications like BIS) have further strengthened the case for local

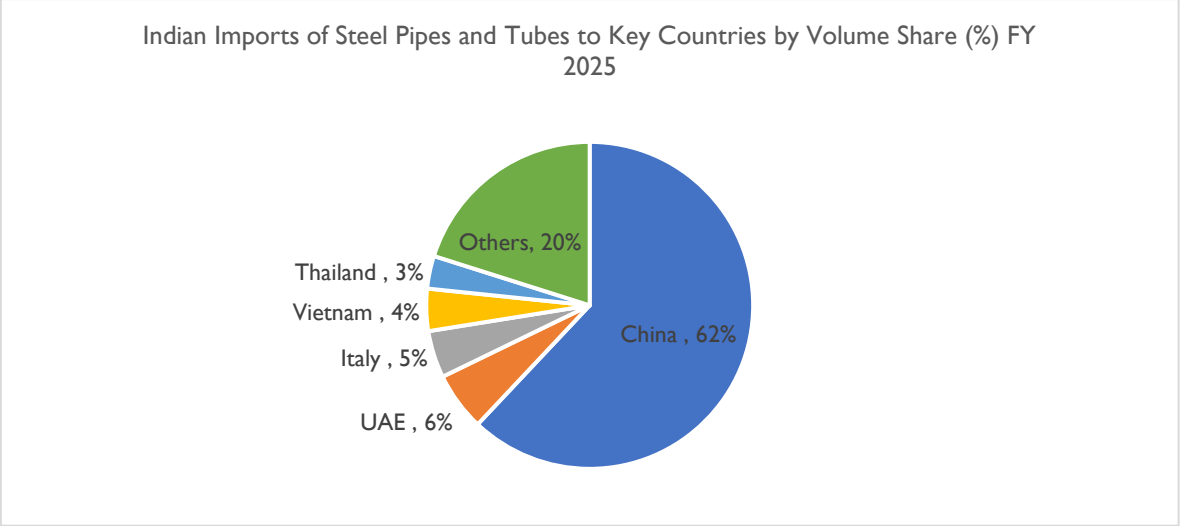
sourcing. While imports still play a key role in meeting niche and highly specialized requirements particularly for sectors like aerospace, defense, and nuclear energy the overall decline in FY2025 underscores a positive trajectory toward reducing foreign dependence and building a more resilient, self-sufficient steel ecosystem in India.

Although imports remain crucial for select applications, multiple factors are beginning to moderate the reliance on foreign suppliers:

- Improved Domestic Product Range and Quality:
  Indian manufacturers have significantly expanded their product offerings, including advanced and high-grade steel tubes, which were earlier dependent on imports. This development has started substituting for a portion of the import demand.
- Rising Investment in Indigenous Capabilities:
  With support from PLI schemes and a push for import substitution, several domestic steel makers have invested in upgrading their plants to produce seamless and high-pressure pipes, reducing the technology gap with global players.
- Supply Chain Localization Initiatives:
  Key sectors such as defense, automotive, and energy are under government directives to increase domestic sourcing. This has led to closer collaborations between user industries and domestic steel suppliers, thereby reducing foreign procurement.
- Improved Infrastructure and Logistics Ecosystem:
  India's growing steel clusters and upgraded logistics networks have reduced lead times and costs, making local sourcing more attractive and reliable for time-sensitive industrial projects.
- Import Licensing and Quality Control Measures:
  Tighter BIS certification norms and mandatory quality checks for imported steel products have created compliance hurdles for foreign suppliers, naturally encouraging the adoption of domestic alternatives.
- Volatile Global Shipping and Geopolitical Risks:
  Frequent disruptions in global shipping routes and rising geopolitical tensions have highlighted the risks associated with over-dependence on imports. Domestic sourcing now offers a more stable and predictable supply chain.

As India continues to strengthen its domestic manufacturing base for steel tubes and pipes, FY2025 marks a potential inflection point. While imports will likely persist for niche and high-spec requirements, broader trends point towards a gradual tapering of inbound volumes in favor of competitive and strategically resilient domestic supply chains.

Key Import Markets



Source: CMIE Industry Outlook

In FY2025, three countries together accounted for 71% of India's steel pipes and tubes imports, underscoring a high level of concentration in sourcing. China remained by far the largest supplier, commanding a dominant 62% share, driven by its vast production capacity, aggressive export pricing, and established supply chains. The UAE and Italy followed at a distant second and third, contributing 6% and 5%, respectively. Their presence reflects both proximity advantages and specialized product offerings. This import structure highlights India's continued dependence on a few key markets for its steel pipe and tube requirements.

The remaining 20% of imports were widely dispersed across various countries, none holding a major individual share. These include imports from both advanced economies and developing nations, where the share is spread thinly among countries such as Japan, Saudi Arabia, the USA, and others. Given China's unparalleled production base and export competitiveness, its dominance in India's import basket is expected to continue in the near future, although India may seek to diversify sourcing in response to evolving trade policies and domestic capacity ramp-up efforts.

Demand Drivers – Mapping Demand Pattern in Key End-user Industries

The demand for steel in the various end-user sector is driven by several key factors that highlight the material's essential role in various applications within the industry. The inherent desirable features of steel that offers durability and strength, corrosion resistance, long life span and recyclability drive demand for steel in these diverse end-user applications.

Oil & Gas Industry:

Oil and gas industry is the largest end-user that is driving the demand for steel tubes and pipes. Refineries, pipelines, gas terminals, storage capacity, gas cylinders bottling plans, retail outlets etc., require large amount of steel pipes. Oil and gas are generally transported through steel pipelines. Further, steel tubes and pipes are widely used in this sector for drilling and extraction operations.

The Overall consumption of Petroleum products in the nation saw an increment of 4.6% to reach 233.3 MMT in FY 2024 from 223 MMT in FY 2023.

The LPG consumption increased by 4% from 28 MMT during FY 2023 to 29 MMT in FY 2024. As on 01.06.2024, there are 326 Mn active LPG domestic connections by PSUs. Public-sector oil and gas companies have spent over INR 38,419 crore as capex in the first four months of the current financial year 2024-25, nearly 32.4% of the annual capex target of Rs 1.2 lakh crore, according to provisional data from the Petroleum Planning and Analysis Cell. Acknowledging the importance of oil and gas segment as a vital sector and directly contributing to energy security of the country, the government remain committed towards strengthening the oil & gas industry. It has gradually moved towards investor friendly and liberalized policies and reforms in the sector. Government of India's recent initiatives to boost demand in domestic E&P sectors includes 100% FDI in E&P Projects, NELP & CBM Policies and Freight Subsidy Scheme. While substantial investment worth USD 36.53 billion is planned in Oil & Gas sector under the National Infrastructure Pipeline (NIP) for the next five years.

Growth Scenario in Natural Gas Infrastructure Development

ERW pipes are finding increasing application in city gas distribution network which is one of the fastest growing end-user segments of natural gas infrastructure. In India, city gas distribution sales were dominated by the CNG (Compressed Natural Gas) segment, owing to stringent environmental regulations and rapidly growing penetration of CNG fitted vehicles in India. It is predominantly used as auto-fuel and is CNG is economical and eco-friendly than conventional liquid auto fuels.

Another area which finds its application is Piped Natural Gas (PNG). PNG is used in domestic, commercial, and Industrial segments. Natural Gas termed as PNG when it is supplied through an integrated network of Steel and PE (Poly ethylene) pipeline to end consumers. A phased wise development of CGD networks in different identified cities of the country including the cities approved

under SMART Cities program is proposed by Petroleum and Natural Gas Regulatory Board (PNGRB), depending on the natural gas pipeline connectivity/natural gas availability

Natural Gas Infrastructure in India is expected to witness substantial growth over the next decade. Driven by increasing usage across various end-user customer segments, the Government of India has come up with multiple reforms as they target to raise the share of Natural Gas in the primary energy mix to 15% by 2030 from around 7% currently (in 2019-20). This is a CAGR of around 7% for the projected period through 2030.

The sector requires significant investments in the coming years to build up terminals, pipelines, etc. As per GAIL, India will be needing an investment of about Rs. 1.6 lakh crores over the next 5-8 years to expand the natural gas infrastructure. The capacity of RLNG terminals in India is expected to increase from 42.7 MMTPA in 2021-2023 to around 83 MMTPA by 2029-30, assuming all the existing and planned terminals in India would set up as planned. Moreover, India is expected to have its first floating LNG terminals at Chhara and Jafrabad, which will possibly commence operations in the second half of FY24. Further, the increase in production and exploration activities will drive the requirement of steel pipes in the industry.

To create the National Gas Grid (One Nation, One Gas Grid) and increase the availability of natural gas across the country, PNGRB has authorised approximately 33,592 km natural gas pipeline network across the country. As per Ministry of Petroleum and Natural Gas (MoPNG), 23,173 km natural gas pipelines including spur lines, tie-in connectivity, Sub-Transmission Pipelines (STPL) and dedicated pipelines are operational in India currently and a total of 12,206 km length of pipelines are under various stages of construction.

As of 2024, India has made significant progress with five interconnected regional grids, forming a national grid with an inter-regional transmission capacity exceeding 150 GW.

One Nation One Grid

The One Nation One Grid initiative in India aims to create a unified and interconnected electricity transmission network across the country. This initiative is crucial for enhancing the efficiency and reliability of power supply, particularly as India transitions towards a greater reliance on renewable energy sources. One of the primary objectives is to facilitate the evacuation of power generated from renewable energy sources, such as solar and wind, especially from remote locations to areas with high demand. This is essential for achieving the government's target of 500 GW of renewable energy capacity by 2030.

During the 26th session of the Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC), which took place in Glasgow, United Kingdom, in November 2021, the Government of India has taken a target to reduce the carbon intensity of the economy by 45% and reduce the total projected carbon emission by 1 billion tonnes by 2030. The ultimate objective is to achieve a net-zero emissions target by the year 2070. The use of natural gas is also expected to receive significant impetus from the Government's commitment towards clean energy under COP26. This is facilitated by the infrastructure based on One Nation One Grid policy.

This policy will also facilitate the growth of transmission lines, where the Central Electricity Authority (CEA) has projected that India will need to add about 50,000 circuit kilometers (ckm) of transmission lines by 2029-30 to meet the growing renewable energy capacity. This expansion is vital for ensuring that the grid can handle increased loads and variable energy sources.

City Gas Distribution

The CGD network in India has expanded significantly in the past decade. As on December 2022, post completion of 11A CGD bidding round, 295 Geographical Areas (GAs) covering about 98% of the population and 88% of total geographical area of the country spread over around 630 districts in 28 States/UTs including all cities under these GAs, have been covered under the CGD network.

As of September 2024, there are 7,259 CNG stations, 13.64 million domestic piped natural gas connections (PNG), 43,281 commercial PNG connections and 19,669 industrial PNG connections. This infrastructure keeps growing which directly has an influence on the demand for steel pipes and tubes.

Construction Industry

The construction sector and real estate development are significant drivers of demand for steel pipes and tubes in India. The industry can be further segmented into four sub-sections – housing, commercial, retail and hospitality. Of these, the residential segment contributes a majority share in the overall sector. The growth of the overall real estate industry also depends upon the growth in the corporate environment and the demand for office space, urban and semi-urban accommodations.

Construction in the residential sector witnessed a slowdown during the pandemic, but bounced back within two years post-pandemic. The push for affordable housing leads to a surge in construction projects, which inherently increases the demand for various construction materials, including steel pipes and tubes. These materials are essential for plumbing, HVAC systems, and structural applications within residential buildings. To support this trend, both private housing developers and government policies are keen on increasing the number of household units in the country to accommodate the influx of population due to rapid urbanization.

The Indian government has implemented several incentives designed to promote construction across various sectors, particularly focusing on infrastructure development, housing, and sustainable practices. These policies drive demand for construction and infrastructure development.

Policy Initiative / Government Incentives	Details
Pradhan Mantri Awas Yojana (PMAY) – U 2.0	Approved on 9th Aug'24, this scheme aims to construct 100,000 new houses within 1st Sep2029, with financial subsidy of INR 250,000 per house
Urban Infrastructure Development Fund (UIDF)	Established with an annual allocation of around USD 1.2 billion, the UIDF aims to enhance infrastructure in Tier-2 and Tier-3 cities. This initiative supports projects that improve urban infrastructure, thereby driving construction activities in smaller cities
Bharatmala Pariyojana and Sagarmala Project	These ambitious infrastructure initiatives focus on improving road connectivity and port infrastructure across the country. They involve substantial investments that stimulate construction activities related to highways, roads, and transportation networks.
Green Building Incentive	The government promotes sustainable construction practices through initiatives like the Eco-Niwas Samhita and the Green Rating for Integrated Habitat Assessment (GRIHA), that assess buildings based on 34 criteria. States offer incentives such as increased floor-to-area ratio (FAR), property tax reductions, and subsidies for projects achieving green certifications.
State Incentives for Green Buildings	• Maharashtra leads in Green Building Incentives, with 373 LEED-Certified projects, totalling 10 million sq.meters

	• Karnataka ranks second with 301 LEED-Certified projects, covering 9.7 million sq.meters • Haryana has 139 LEED-Certified projects, followed by Telangana at 106 LEED-Certified projects. • Uttar Pradesh has 95 LEED-Certified projects and actively growing.

The Indian government's incentives for promoting construction encompass a range of financial support mechanisms, regulatory simplifications, and initiatives focused on sustainability and skill development. These measures aim to stimulate growth in the construction sector, enhance infrastructure development, and promote affordable housing while addressing environmental concerns. As these incentives continue to evolve, they play a crucial role in shaping the future landscape of India's construction industry.

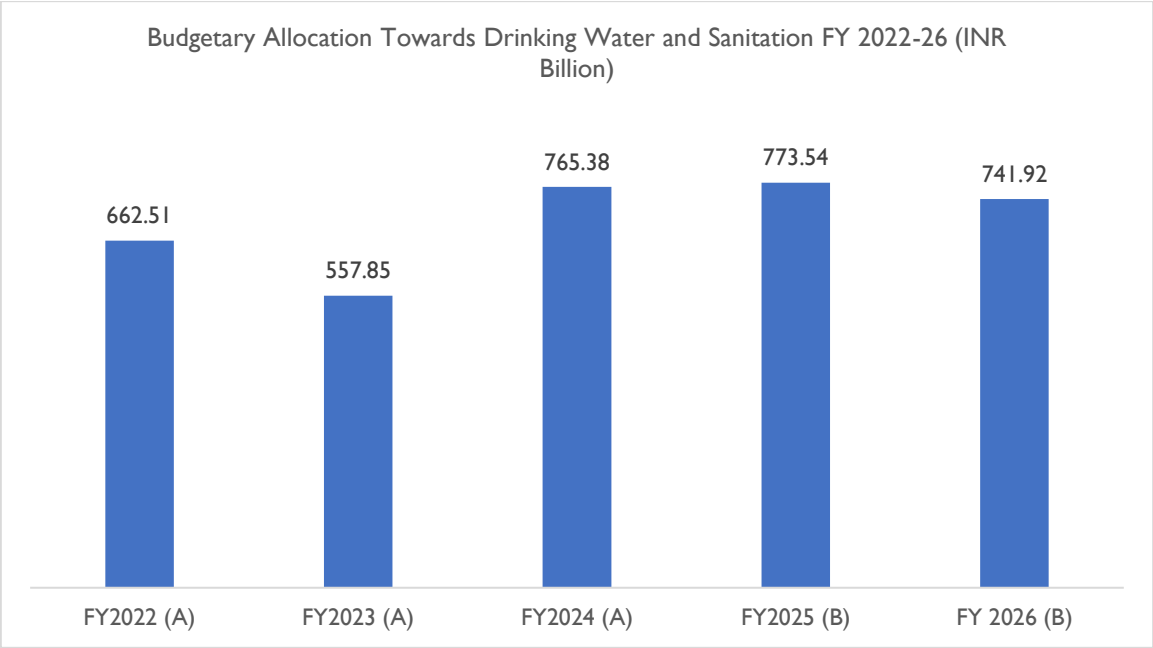
Water Infrastructure

Water infrastructure remains one of the most critical end-use sectors for steel tubes and pipes in India. This sector encompasses a wide range of applications including potable water supply systems (treatment plants, overhead tanks, and distribution pipelines), sewage networks, stormwater drainage, irrigation systems, and large-scale storage facilities such as reservoirs and dams. Steel pipes, particularly galvanised and seamless variants, are widely preferred for their durability, resistance to corrosion, and ability to withstand high pressure—qualities essential for both urban and rural water distribution systems.

The increasing strain on India's water infrastructure is evident, especially with rapid urbanization and rising per capita water consumption. In rural regions, steel pipes are extensively used in borewells, irrigation canals, and drip irrigation systems to support agricultural productivity. Meanwhile, urban areas are witnessing growing demand for corrosion-resistant piping in sewerage, greywater recycling, and rainwater harvesting systems. The expansion of smart cities and urban utilities is further accelerating investments into high-performance pipeline infrastructure, contributing to the growing usage of ERW and galvanized steel pipes.

A looming water crisis is also pushing structural reforms and technological upgrades in India's groundwater and surface water systems. With projections indicating that water demand will outpace supply by 2030, there's a significant push toward sustainable infrastructure. Programs like the *Atal Bhujal Yojana*—aimed at improving groundwater management through community-led interventions—highlight the urgency. Additionally, new digital monitoring systems, sensor-based water flow controls, and smart metering technologies are emerging, which in turn demand precision-grade steel tubing. As the country intensifies efforts toward efficient and resilient water ecosystems, the role of steel tubes

and pipes will continue to deepen, especially in regions facing acute water stress and infrastructural gaps.



Source: Ministry of Jal Sakthi, Government of India

*A=Actual, B=Budgetary

On 15th August, 2019, "Jal Jeevan Mission" programme has been launched by the Government to provide safe and adequate drinking water to all households in rural India by 2024. The functional household tap connections as on 15th August 2019 were about 3.23 crore. This program has already connected taps to more than 19.5 crore rural households and established 12.6 crore rural household tap connections within a span of 4 years. As of 12th August 2024, this programme has provided tap connection to 11.82 crore additional rural households, that has led to a 77.98% coverage of all rural households in India. This programme will further enhance the water infrastructure and aid in the demand for pipes in the country.

Automobile

The rise in automobile production and sale in India over the last couple of decades have translated into positive demand for steel pipes & tubes in automobiles. Apart from the natural growth in demand due to rise in automobile production, the regulatory changes that is happening across global automobile industry too have positive implication on increasing usage of stainless steel in the sector. The stringent emission norms and efficiency standards are forcing automobile manufacturers to increase the proportion of special stainless steel used in vehicles. The high strength to weight ratio, high durability, tolerance, and good corrosion resistance attributes have also contributed to an increasing usage of stainless steel in automobiles. To list diesel spark plugs, motor block reheating, fuel

lines, diesel particulate filters systems, and exhaust gas recirculation systems are few components which find SS tube application in automobile which is attributed to its.

The overall domestic production and sales of automobile surged to 28.4 Mn units and 23.8 Mn units in FY 2024 before plummeting for two consecutive years . The COVID-19 pandemic worsened the vehicle demand in FY 2021 as industry lost 2 months in FY 2021 because of Government enforced lockdown. The electric vehicles (EV) industry at a nascent stage in India. It is less than 1% of the total vehicle sales however has the potential to grow to more than 5% in a few years. At present there are more than 5 lac electric two-wheelers and few thousand electric cars on Indian roads. The auto component industry in India had a turnover of INR 6.14 trillion for the fiscal year 2023-24, which is a 9.8% increase from the previous year. This is the highest turnover ever recorded for the industry. The automobile demand got major push from the pent-up demand and accelerating vaccination drive.

In long term, the automobile industry has seen the introduction of several policy measures, starting with the Auto Policy in 2002, Automobile Mission Plan 2006-2016 Phase-1, Automobile Mission Plan 2016-26 Phase-II, National Automotive Testing and R&D Infrastructure (NATRiP), National Electric Mobility Mission Plan 2020 (NEMMP 2020), and Faster Adoption & Manufacturing of Electric Hybrid Vehicles (FAME) Scheme (I & II), Vehicle Scrappage Policy 2021, Corporate Average Fuel Efficiency (CAFÉ) Norms 2022. Together, these policies have helped in improving the manufacturing practices, quality standards, and efficiency standards in Indian automobile industry while vehicle Scrappage Policy it is likely to encourage new vehicle purchases thereby driving OEMs (Original Equipment Manufacturers) sales, benefitting allied industries and help in improving overall capacity utilization.

Railways

Indian Railways is among the world's largest rail networks. It is the 4th largest railway system in the world behind US, Russia and China with total track length of 1,26,611 km over 68,103 km of the route along with 7,337 stations as of FY21. Steel tubes or pipes are used in applications such as rails, wagons, and coaches. The Indian railway sector has seen multiple developments in the last decade such as introduction of high-speed trains, modernization of railway stations, increase in rolling stock inventories etc.

The government has been increasing its focus on augmentation of railways to reduce cost and time of logistics and to reduce the overall carbon footprint of the country as railways are more environment friendly compared to road transport.

The key focus areas have been decongestion of overutilised rail network, con- struction of new lines, doubling, tripling, quadrupling of rail lines and purchase of rolling stock such as wagons, locomotives, coaches, etc.

The government proposes to launch 400 new Vande Bharat trains in the next 3 years along with development of 100 Cargo Terminals over next few years. Additionally, construction of Dedicated Freight Corridor (DFC) which are broad gauge rail networks to be utilized exclusively for freight trains will lead to in- crease in Railway's share in domestic freight movement. The western and eastern DFCs are 86% and 90% complete, respectively, and are expected to be commissioned by FY25, while the East Coast Corridor, East- West Corridor and North-South Corridor are under the planning stage.

Additionally, Railways Station Redevelopment Programme which was launched in February 2017 to modernize the infrastructure across the nation will enhance the experience of the passengers by providing concept of intelligent building, and state of the art facilities. For this, the Government has launched 'Amrit Bharat Station Scheme' where in a total of 1,275 railway stations under 32 different states have been identified for development. This will further boost the demand for steel pipes in the economy.

Under the National Rail Plan (NRP), the railway's share in freight transport is expected to increase to 45% by 2030 from existing 26%. This implies that the total freight transported by Indian Railways will increase to 3,000 million tonnes by FY2027 and 3,600 million tonnes by FY2030 from 1,418 million tonnes in FY2022. Further, railway freight traffic measured in Net Tonne Kilometres (NTKM) is expected to double to 1,695 billion NKTM by FY2027 from 820 billion NKTM in FY2022.

Metro Rail Network

Metro rail coaches and network has high dependence on steel tubes and pipes, where an increasing expansion of this network is a direct influence to the demand for steel tubes and pipes.

The Union Budget 2024-25 allocated approximately INR249.32 billion for metro rail and Mass Rapid Transit System (MRTS) projects, marking a 7.8% increase from the previous year. This funding is crucial for expanding metro networks across various cities. As of December 2024, Metro Rail network in India is operational for around 900Km across 23 cities. This is world's third largest network next only to China and the U.S.

Apart from these operational lines, nearly 970 Km is under construction across 28 cities, which could make the country world's second largest network.

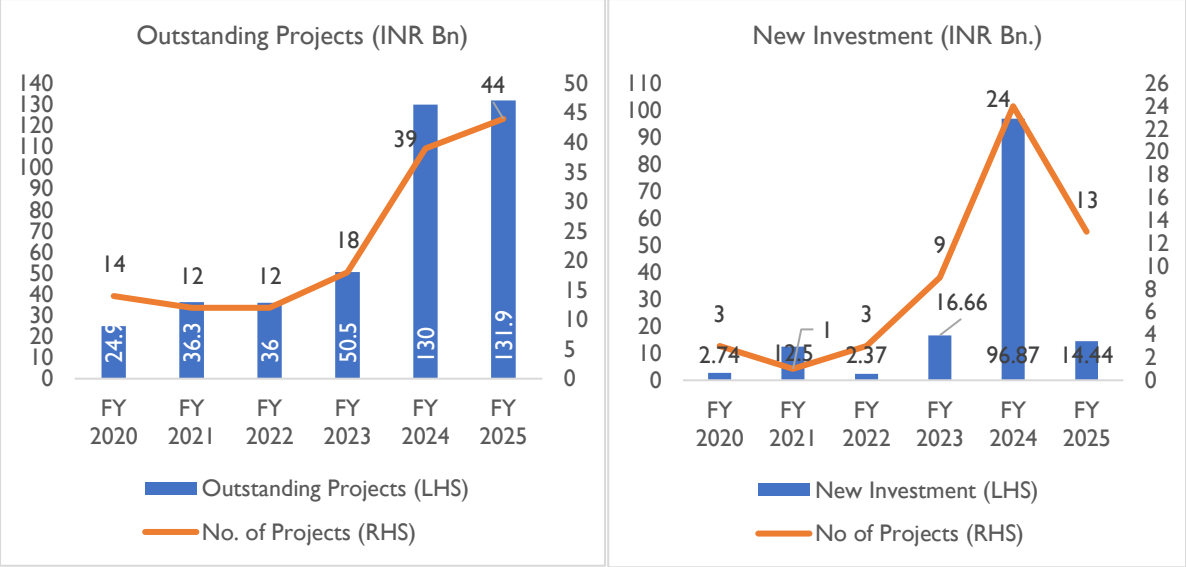
In FY25, government has approved many new metro line projects including:

- Bengaluru Metro Phase-3: Estimated cost of INR 156.11 billion.
- Thane Integral Ring Metro: Estimated cost of INR 122 billion.
- Pune Metro Extension: Estimated cost of INR 29.54 billion.

The list of under construction metro lines, which directly creates demand for steel pipes and tubes are:

City	Distance (Km)
Delhi-NCR	154.65
Mumbai Metro	176.05
Namma Metro – Bengaluru	143.425
Chennai Metro	118.9
Kolkata Metro	75.2
Nagpur Metro	43.8
Pune Metro	33.133
Patna Metro	32.507
Surat Metro	40.35
Indore Metro	31.55
Thane Metro	29
Bhopal Metro	27.87
Agra Metro	24.1
Kanpur Metro	23.657
Kochi Metro	11.2
Ahmedabad Metro	8.884

Capital Expenditure Projects in Indian Steel pipes & tubes market and Its Impact



Source: CMIE, D&B analysis

The Indian steel pipes and tubes sector has entered a high-investment phase, marked by a steady rise in capital expenditure and project activity. From FY 2020 to FY 2025, outstanding projects in the sector more than quintupled from INR 24.4 billion to INR 131.9 billion. Equally significant is the rise in the number of such projects, which jumped from 14 in FY 2020 to 44 by FY 2025. This indicates not only a strong investor appetite but also broader institutional and private sector confidence in the long-term fundamentals of the steel pipe industry, driven by rising demand from infrastructure, oil & gas, water supply, and urban development sectors.

New investments followed a similar upward trajectory, with capital inflows surging from INR 2.74 billion in FY 2020 to a peak of INR 96.87 billion in FY 2024, before moderating slightly to INR 14.42 billion in FY 2025. This is mirrored in the number of new projects initiated, which rose from 3 in FY 2020 to 24 in FY 2024, settling at 13 in FY 2025. The spike in FY 2024 reflects a strategic buildup in manufacturing capacity and modernization projects, likely driven by India's renewed focus on domestic self-reliance in industrial raw materials and intermediate goods. The dip in FY 2025 could reflect a temporary normalization after an exceptional year of announcements, possibly indicating project execution and consolidation phases.

Prominent ongoing and planned projects further validate the capital surge. Under-implementation projects as of March 2026 include Maharashtra Seamless Ltd.'s Mangaon Cold-Drawn Pipeline and OCTG Line Project and Electrosteel Castings Ltd.'s Srikalahasti DI Pipe Plant Expansion (Phase 2). On the announcement front, key developments include Jindal Saw Ltd.'s Haresamudram DI Pipe Plant and Tech AIC DRI Pellets Pvt. Ltd.'s Keonjhar Integrated Steel Products Plant. Together, these large-scale

investments—particularly in Odisha and Karnataka—highlight a regional concentration of steel tube capacity expansion, driven by logistical proximity to mineral belts and port infrastructure.

A major catalyst for this investment momentum is the sharp rise in downstream consumption from sectors such as water infrastructure, agriculture, urban sanitation, and power transmission. Additionally, technological shifts like ERW (Electric Resistance Welded) and seamless pipe demand in oil & gas and renewable energy are compelling manufacturers to upgrade production lines. Export opportunities have also played a role, especially with anti-dumping measures by global players creating room for Indian producers in overseas markets.

Company Name	Project Name	Status	Expected Timeline	Project Cost (INR Mn)
GOODLUCK INDIA LTD.	Bulandshar Hydraulic Tubes Manufacturing Plant	Under Implementation	FY 2025	2,000
ELECTROSTEEL CASTINGS LTD.	Srikalahasti DI Pipe Plant Capacity Enhancement Project (Phase-I)	Under Implementation	FY 2025	640
TUBE INVESTMENTS OF INDIA	Pune Precision Steel Tube Manufacturing Plant	Announced	FY 2025	2,110
TUBE INVESTMENTS OF INDIA	Tiruttani Precision Steel Tube Manufacturing Plant Expansion	Announced	FY 2025	1,410
VIBHOR STEEL TUBES LTD.	Sundergarh ERW Black & GI Pipes Manufacturing Plant	Under Implementation	FY 2025	600
WELSPUN DI PIPES LTD.	Anjar Ductile Iron Pipe Plant Expansion	Announced	FY 2025	3,000
A P L APOLLO TUBES LTD.	Gorakhpur Steel Tubes Unit Project	Announced	FY 2025	2,500

MAHARASHTRA SEAMLESS LTD.	Narketpally De-Bottlenecking Project	Announced	FY 2025	1,840
SCODA TUBES LTD.	Kadi Seamless Tubes And Pipes Capacity Expansion Project	Announced	FY 2025	554.4
SCODA TUBES LTD.	Kadi Welded Tubes And Pipes Plant Expansion Project	Announced	FY 2025	445.4
ELECTROSTEEL CASTINGS LTD.	Srikalahasti DI Pipe Plant Capacity Expansion Project (Phase-2)	Under Implementation	FY 2026	8,690
MAHARASHTRA SEAMLESS LTD.	Mangaon Cold-Drawn Pipeline And OCTG Line Project	Under Implementation	FY 2026	1,950
MAHARASHTRA SEAMLESS LTD.	Nagothane Hot Mill Upgradation Project	Announced	FY 2026	3,500
RAMA STEEL TUBES LTD.	Raipur ERW Black Pipe & Hot Dip Galvanising Manufacturing Plant Project	Under Implementation	FY 2026	2,500
A P L APOLLO TUBES LTD.	Ahmadabad Steel Tube Plant Project	Announced	Post 2026	1,000
B M W INDUSTRIES LTD.	Kalinganagar ERW Pipe, HR Pickled Oiled Coil, TMT Bars & Slitting Unit	Announced	Post 2026	10,948.20
JINDAL SAW LTD.	Haresamudram DI Pipe Plant And CPP Expansion Project	Announced	Post 2026	12,149.10
WELSPUN CORP LTD.	Sambalpur ERW, DI, HSAW Pipes &	Announced	Post 2026	31,370

	Pipe Coating Plant Project			

Regulatory Scenario

Regulatory Policy/Initiative Impacting Steel Pipe & Tube Industry in India

The regulatory policies and initiatives impacting the steel pipe and tube industry in India are primarily driven by standards set by the Bureau of Indian Standards (BIS), government initiatives, and compliance with international norms.

- **Bureau of Indian Standards (BIS) Regulations**

  The BIS plays a crucial role in establishing quality standards for steel pipes and tubes. These standards ensure that manufacturers comply with quality and safety requirements, promoting consumer confidence in products. Recent notifications include:

  - **IS 17875**: Specification for Stainless Steel Seamless Pipes and Tubes for General Services, established on April 19, 2022.
  - **IS 17876**: Specification for Stainless Steel Welded Pipes and Tubes for General Services, also established on April 19, 2022.
  - **IS 1239**, **IS 4923**, **IS 3601, IS 1161, IS 1875:** Specification for Stainless Steel Electric Resistant Welded (ERW) Pipes and Tubes for General Services, also established on April 19, 2022.

- **Quality Control Orders (QCO)**
  - The Ministry of Steel has implemented Quality Control Orders that mandate compliance with specific Indian Standards for various steel products, including pipes and tubes.
  - This initiative aims to ensure that only high-quality products enter the market, enhancing overall safety and reliability.
  - This order bans sub-standard/ defective steel products supplied to the market both from the domestic & by imports to ensure the availability of quality steel to the industry. This measure is taken to enchance the availability of quality steel to the users. According to the Order, it is ensured that only quality steel conforming to the relevant BIS standards is made available to the end users.
  - As of March 2024, the QCO covers an overall 550 products, including 145 categories of steel and steel products including carbon steel, alloy steel and stainless steel. In addition, goods & articles made up of steel such as stainless-steel pipe & tubes, laminations/ cores of transformers, products of tin plate & tin free steel etc have also been notified to prevent circumvention of the Steel Quality Control Order.

- **Environmental Regulations**

The steel industry is subject to environmental regulations that govern emissions and waste management. Compliance with these regulations is essential for sustainable operations and can influence production practices within the MS pipe sector. The prominent environmental regulations in place includes:

- **Emission Standards** – The steel industry is subject to strict emission norms set by the Central Pollution Control Board (CPCB) and state pollution control boards. These regulations aim to limit air pollutants and greenhouse gas emissions from steel manufacturing processes.
- **Energy Efficiency Regulations** – The Bureau of Energy Efficiency (BEE) promotes energy conservation in industrial processes, including steel production. Manufacturers are encouraged to adopt energy-efficient technologies and practices to reduce overall energy consumption and carbon footprint.
- **National Steel Policy (2017)** – This policy emphasizes sustainable development in the steel sector, promoting cleaner technologies and practices. It encourages the use of electric arc furnaces (EAF) and other methods that minimize environmental degradation compared to traditional blast furnace methods.
- **Recycling Initiatives** – The Indian government supports recycling initiatives that encourage the use of scrap metal in steel production. This not only reduces reliance on virgin raw materials but also lowers energy consumption and emissions associated with steel manufacturing.

- **Safety Standards**

  Regulations related to safety in construction and industrial applications require the use of certified materials. This drives demand for MS pipes that meet stringent safety standards, ensuring they are suitable for high-pressure applications.

The regulatory landscape governing the steel pipe and tube industry in India is shaped by BIS standards, quality control measures, environmental regulations, government initiatives promoting infrastructure development, adherence to international standards, and safety requirements. These factors collectively influence production practices, product quality, and market dynamics within the MS pipe sector.

Trade Restrictions

Anti-Dumping Duty

The anti-dumping duty on steel in India is a critical regulatory measure aimed at protecting domestic manufacturers from unfair competition posed by imported steel products sold at prices below their production costs. The imposition of anti-dumping duties on steel in India significantly impacts the overall steel market, influencing pricing, competition, and the dynamics between domestic producers and importers.

Overview of Anti-Dumping Duties

- The primary goal of anti-dumping duties is to safeguard domestic industries from the adverse effects of subsidized imports that can disrupt the market and harm local manufacturers.
- In September 2024, the Indian government extended the anti-subsidy duty on imports of welded stainless-steel pipes and tubes from China and Vietnam for an additional five years. This decision follows an investigation by the Directorate General of Trade Remedies (DGTR), which found that these products were being exported at prices below their production costs due to subsidies provided by their governments.
- The anti-dumping investigations are initiated in response to complaints from domestic industry associations. In October 2021, a notification was passed by Ministry of Finance, Government of India based on the recommendation made by Directorate General of Trade Remedies (DGTR) to extend the anti-dumping duty on Stainless Steel Seamless Tubes and Pipes from China for a period of 5 years.
- In December 2022, the Indian Government has imposed an anti-dumping duty on Stainless Steel Seamless Tubes and Pipes from China which is the top exporting country for India with a share of 60% in total imports, to protect the domestic players.
- The custom duty was placed on Stainless-Steel Seamless Tubes and Pipes with diameter up to and including 6 NPS, or comparable thereof in other unit of measurement, whether manufactured using hot extrusion process or hot piercing process and whether sold as hot finished or cold finished pipes and tubes, including subject goods imported in the form of defectives, non- prime or secondary grades originating in or exported from China.
- The duties levied on the products are in range from USD 114 to USD 3,801 per tonne. This act came effective because of continuous and massive dumping of goods from the import country despite the duties that were in effect and affected the domestic market.
- The imposition of anti-dumping duties aims to create a level playing field for Indian manufacturers, allowing them to compete more effectively against subsidized foreign products. While these duties

may increase import costs, officials have assured that they will not significantly affect product availability in the Indian market.

- The Indian government has also been considering increasing import duties on steel from the current 7.5% to between 10% and 12% as part of its strategy to combat dumping practices further.

The anti-dumping duty framework in India plays a vital role in shielding domestic steel manufacturers from unfair trade practices associated with subsidized imports. Recent extensions and proposed increases in duties indicate a continued commitment by the Indian government to protect local industries while navigating the challenges posed by global market dynamics. These measures are crucial for ensuring the sustainability and competitiveness of India's steel sector amidst rising imports and geopolitical tensions.

Initiatives to Strengthen Domestic Manufacturing Infrastructure

Domestically Manufactured Iron & Steel Products (DMI&SP)

- Domestically Manufactured Iron & Steel Products (DMI&SP) are those iron and steel products which are manufactured by entities that are registered and established in India, including in Special Economic Zones (SEZs).
- In addition, such products shall meet the criteria of domestic minimum value-addition. On 8 May, 2017, the policy was approved by Government which mandates to provide preference to DMI&SP, in Government Procurement in which a minimum value addition of 15% have taken place domestically. This has been revised to 20% in the revised policy dated 31 December, 2020.
- The policy is intended to encourage domestic production and consumption of steel as well as import substitution and promote growth in the industry. The DMI&SP policy applies to government procurement where the estimated value of iron and steel products is INR 500 Million (approximately USD 6 million) or more. This includes tenders issued by various ministries, departments, and public sector undertakings.
- A Standing Committee headed by the Secretary of Steel was established to address clarifications and issues raised by stakeholders regarding the implementation of the policy.
- The DMI&SP policy has been extended beyond its initial deadlines to ensure continued support for domestic manufacturers, reflecting ongoing government commitment to bolster the local steel industry.

National Steel Policy (NSP), 2017

The National Steel Policy 2017 serves as a strategic roadmap for India's steel industry, focusing on enhancing production capacity, improving self-sufficiency, promoting sustainability, and fostering technological advancements. By setting ambitious targets and encouraging investment, the NSP aims to position India as a leading player in the global steel market while meeting rising domestic demand.

NSP was introduced in 2017 with the objective to increase domestic steel production and consumption, produce high-quality steel and increasing India's competitiveness globally. It also focuses on cost efficiency, raw material availability and research & development to achieve the overall objectives laid out under the policy. The mission defined under NSP, 2017 is as below:

- Self-sufficiency in steel production by providing policy support & guidance to private manufacturers, MSME steel producers, and CPSEs & encourage adequate capacity additions
- Development of globally competitive steel manufacturing capabilities.
- Cost-efficient production and domestic availability of iron ore, coking coal, and natural gas

- Facilitate investment in overseas asset acquisitions of raw materials
- Enhance domestic steel demand

Parameter	Projections (FY2031)
Total Crude Steel Capacity (in MTPA)	300
Total Crude Steel Demand/Production (in MTPA)	255
Total Finished Steel Demand/Production (in MTPA)	230
Sponge Iron Demand/Production (in MTPA)	80
Pig Iron Demand/Production (in MTPA)	17
Per Capita Finished Steel Consumption (in Kg)	160

Source: Ministry of Steel, Government of India

Atma Nirbhar Bharat Policy

The Atmanirbhar Bharat Policy, or the "Self-Reliant India" initiative, is a comprehensive strategy launched by the Government of India to promote self-sufficiency across various sectors, including the steel industry. Initiatives such as Make in India and Atmanirbhar Bharat which consists of 5 pillars (Economy, Infrastructure, System, Vibrant Demography and Demand) has been playing a significant role in economic development.

The policy emphasizes increasing crude steel production capacity from 154 million tonnes (MT) to 300 MT by 2030. This ambitious target aims to make India one of the largest steel producers globally and reduce dependency on imports. Atmanirbhar Bharat encourages the use of domestically produced steel in infrastructure projects and public procurement. This initiative is designed to boost local manufacturing capabilities and create jobs within the sector.

The policy aligns with significant investments in infrastructure development, which is a major consumer of steel products. Enhanced infrastructure projects, such as roads, railways, and housing, are expected to drive demand for steel.

The introduction of the PLI scheme under Atmanirbhar Bharat aims to incentivize manufacturers to increase production and enhance quality standards. This scheme is expected to create new avenues for growth in the steel sector.

This initiative also addresses concerns regarding surges in steel imports, particularly from countries like China. Industry stakeholders have raised alarms about predatory pricing and unfair competition, urging for trade remedial actions to protect domestic producers.

In steel tubes and pipes sector, the demand for seamless and ERW pipe sectors is increasing because of these policies. According to this policy, any purchases made by PSUs must include at least 35% local value addition in the supply of pipes. This will eventually support domestic manufacturers in the country.

Under this policy, a stimulus of Rs. 20 lakh crore was announced by the Government to aid the country to fight against Covid-19 pandemic.

The Atmanirbhar Bharat Policy represents a strategic approach to achieving self-reliance in the steel sector by focusing on production targets, promoting domestic manufacturing, investing in infrastructure, and encouraging sustainable practices. By addressing challenges related to imports and fostering a conducive environment for growth, this initiative aims to strengthen India's position as a global leader in steel production while ensuring that local industries thrive.

Production-Linked Incentive Scheme

- The Production-Linked Incentive (PLI) Scheme for the Steel Sector in India, specifically targeting specialty steel, was introduced to enhance domestic manufacturing capabilities, reduce import dependency, and promote the production of high-value-added steel products
- The PLI scheme for specialty steel was announced in July 2021 with a budgetary outlay of INR 6,322 crore (approximately USD 848.93 million) over a five-year period.
- The scheme aims to boost the production of specialty steel from 18 million tonnes (MT) in FY2021 to 42 MT by FY2027.
- By increasing local production, the policy seeks to decrease India's reliance on imported specialty steel, which accounted for a significant portion of total imports. The PLI scheme is designed to make Indian steel products more competitive both domestically and internationally.
- The scheme focuses on five categories of specialty steel:
    - Coated/plated steel products
    - High strength / wear-resistant steel
    - Speciality rails
    - Alloy steel products and steel wires
    - Electrical steel
- The incentives under the PLI scheme vary based on the category of specialty steel produced, with rates ranging from 4% to 12% on incremental sales.

- Any company registered in India that manufactures the identified grades of specialty steel can apply for the incentives. A key requirement is that the input materials must be melted or poured in India to ensure end-to-end manufacturing within the country.
- 67 applications from 30 companies have been selected under the Production Linked Incentive (PLI) Scheme for Specialty Steel. This will attract committed investment of INR 425 billion (USD 5.19 billion) with a downstream capacity addition of 26 million tonnes and employment generation potential of 70,000.
- The PLI scheme aims to benefit both large integrated steel producers and smaller manufacturers, particularly Micro, Small, and Medium Enterprises (MSMEs), by providing them access to high-quality specialty steel products at competitive prices.
- By promoting the production of specialty steel, India aims to align itself with advanced steel-making countries like Japan and South Korea and reduce its foreign exchange outgo related to imports.
- The PLI scheme for specialty steel is a strategic initiative that aims to transform India's steel sector by enhancing domestic production capabilities, reducing import dependency, and creating a competitive manufacturing environment. By focusing on high-value-added products, this policy not only supports economic growth but also aligns with broader goals of self-reliance under the Atmanirbhar Bharat initiative.

Budget Initiatives [1]

The budget initiatives in steel pipes production in India reflect the government's commitment to enhancing domestic manufacturing capabilities, promoting infrastructure development, and ensuring the growth of the steel sector.

- In February 2024, the government has implemented various measures to promote self-reliance in the steel industry.
- Union the Union Budget 2023-24, the government allocated INR 701.5 Milion (USD 8.6 million) to the Ministry of Steel. The government removed the 2.5% basic customs duty (BCD) on the import of ferronickel. Ferronickel is a key raw material for stainless steel and other specialty alloys. Ferrous scrap will continue to be exempt from BCD for another two years, until till 31 March 2026. Steelmakers use ferrous scrap as a minor input material.
- In addition, an investment of INR 75,000 crore (USD 9.15 billion) (including INR 15,000 crore (USD 1.83 billion) from private sources) has been allocated for 100 critical transport infrastructure projects for last and first mile connectivity for various sectors such as ports, coal, and steel.

[1] Indian Brand Equity Foundation, Ministry of Commerce and Industry & Ministry of Steel, Government of India

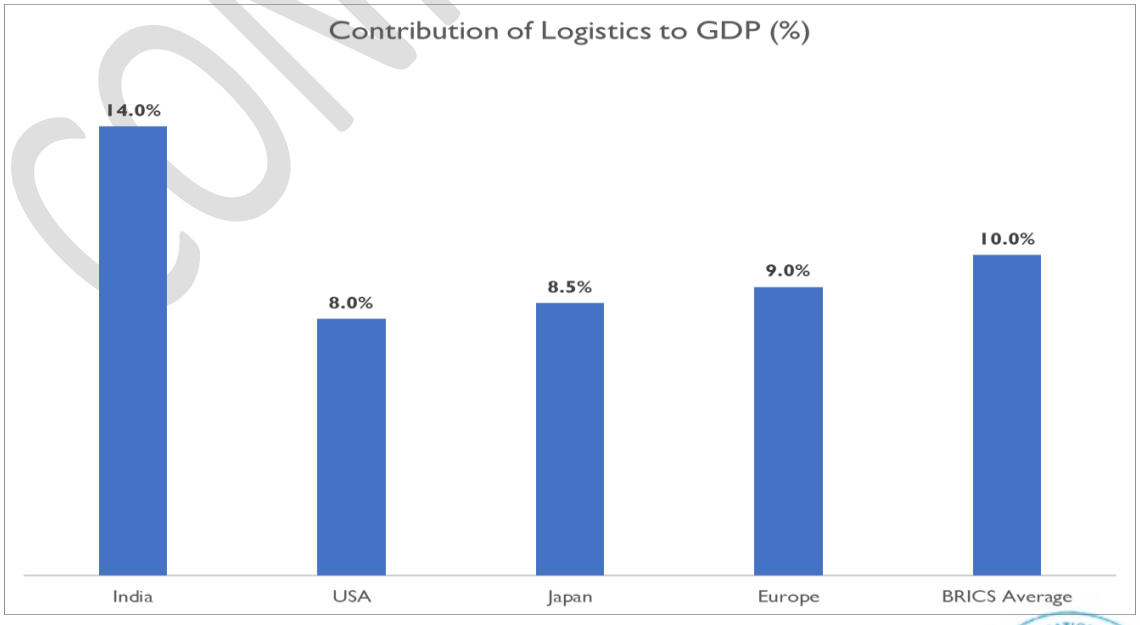
- The Union Cabinet, Government of India approved the National Steel Policy (NSP) 2017, as it intends to create a globally competitive steel industry in India. NSP 2017 envisage 300 million tonnes (MT) steel-making capacity and 160 kgs per capita steel consumption by 2030-31.
- The Ministry of Steel is facilitating the setting up of an industry driven Steel Research and Technology Mission of India (SRTMI) in association with the public and private sector steel companies to spearhead research and development activities in the iron and steel industry at an initial corpus of INR 200 crore (USD 30 million).
- The Government of India raised import duty on most steel items twice, each time by 2.5% and imposed measures including anti-dumping and safeguard duties on iron and steel items.

The budget initiatives related to steel pipes production in India highlight a comprehensive approach to fostering growth in the sector through incentives like the PLI scheme, significant investments in infrastructure, support for SMEs, and a focus on sustainability. These measures are expected to enhance domestic manufacturing capabilities, increase demand for steel products, and position India as a competitive player in the global steel market.

Key Risks & Challenges

The steel pipes and tubes market in India faces several threats and challenges that can impact its growth and competitiveness. The key challenges of steel pipes and tube market include:

- The market is significantly affected by stiff competition from imported steel pipes, particularly from countries with established manufacturing capabilities and cost advantages. This influx of cheaper imports can pressure domestic prices, impacting the profitability of local manufacturer. The year FY2024 witnessed steel pipes and tubes imported from just three countries of China, Korea and Vietnam catering to nearly 70% of import volume. This high dependence and flooding of products from countries with cost advantages challenge growth opportunities of domestic participants and thus the revenue growth of Indian market.
- The growing availability of alternative materials, such as PVC and plastic pipes, especially for non-critical applications, poses a challenge to the demand for steel pipes. These alternatives are often perceived as more cost-effective and easier to install, which can limit market share for steel product. Increasing penetration of PVC and plastic pipes is a real threat to the market demand in a price sensitive country like India.
- **High Logistics Cost** – Logistics accounts to 14% of India's GDP and the costs are comparatively higher than the global countries. Since logistics is the lifeline for supply of materials, high logistics cost result in higher cost of production, thus affecting the cost-competitiveness of the country. One reason for high logistic cost could also be high dependence on road network through trucks with smaller fleet, compared with global competitors. For example, Indian trucks have a capacity in the range of 16 and 25 tonne for transporting high-capacity volumes, while in China, high capacity truck is in the range of 25 to 40 tonne.

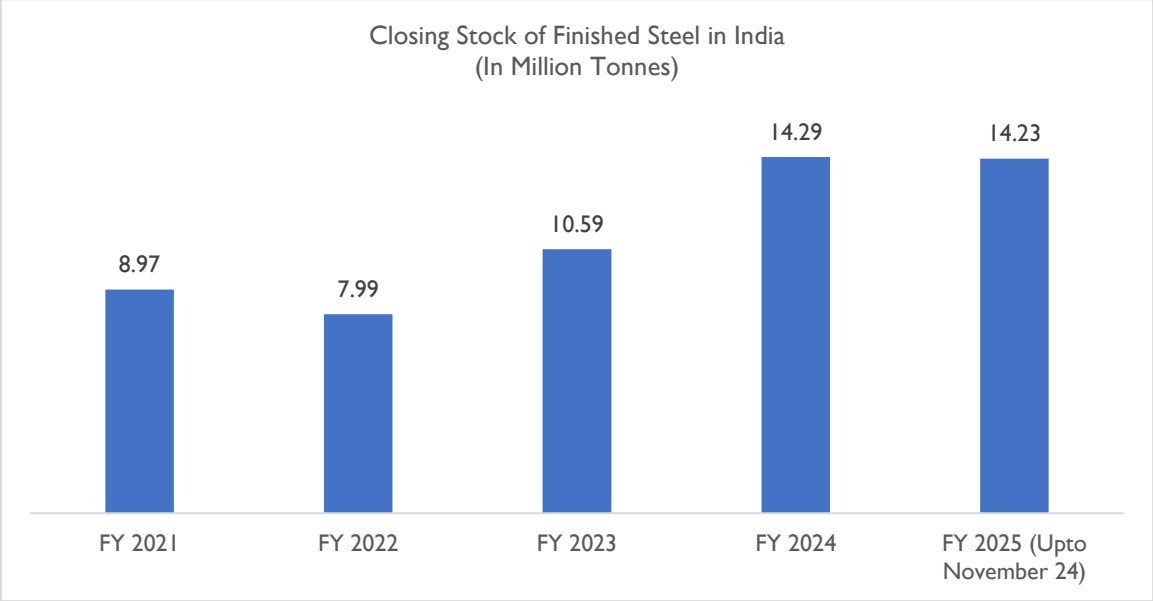


Source: Ministry of Railways, Government of India

- **Impact of Decarbonisation and CBAM on the Steel Sector**
  - The Indian steel industry is responsible for roughly 12% of India's carbon dioxide (CO2) emissions, surpassing the global average of 7-9%[2]. The emission intensity in the Indian steel industry stands at 2.55 T/TCS[3], while the global average emission intensity is 1.91 T/TCS.
  - India has made a commitment to decrease the emissions intensity of its Gross Domestic Product (GDP) by 45% by 2030, compared to 2005 levels and achieve Net Zero by 2070.
  - To support this target, the Ministry of Steel has committed to achieve a Net-Zero by 2070 and has taken a medium-term target to reduce the emission intensity of the steel sector to 2.4 T/TCS by 2030.
  - These targets remain critical for steel industry players including steel pipes and tubes manufacturers for reducing the emissions within the set timelines. The reduction of emissions is also vital for the industry to maintain its competitiveness in export markets which is becoming increasingly environment conscious.
  - European Union (EU) is implementing Carbon Border Adjustment Mechanism (CBAM) – a tariff on carbon-intensive imports, which is aimed at preventing carbon leakage from 1st January 2026. The first phase of CBAM will cover iron & steel, cement, aluminum, fertilizer, electricity and hydrogen sectors.
  - Thus, Indian steel manufacturers and finished steel products manufacturers exporting into the European Union needs to pay a tax of 25% to 30% or work towards reducing its emissions. This is a challenge to Indian steel manufacturers to either pay the tax, which would make their products expensive or invest towards reducing emissions.
- **Increasing Protectionism and Threat of Trade Diversion into India** – As the global economy is slowing down, many countries are posing barriers to imports from China and other countries to protect its domestic manufacturers. Although raw material pricing is hedged, frequent fluctuation would escalate cost of production and make the final product expensive.
  - The European Union has imposed anti-dumping duties on cold and hot rolled stainless steel, with rates reaching up to 25.30%, and a 25% safeguard tariff on steel imports exceeding set quotas.
  - Similarly, Brazil, Mexico, and the USA have implemented duties to protect their domestic markets. The USA has imposed particularly high duties on stainless steel sheets and coils, with anti-dumping and countervailing duties as high as 190.71%.

[2] World Steel Organization Report on Climate Change and the Production of Iron and Steel
[3] Tonne of CO2 equivalent per tonne of crude steel

- Asian countries including Vietnam, Thailand, and Malaysia are also safeguarding their domestic industries against imports from China and India. This trend is primarily due to increasing competition and excess capacity in steel market.
- This is leading to an increase in inventory in India, which is posing a challenge to domestic finished steel manufacturers.



Source: Ministry of Steel, Government of India

Note: * Data upto 30th November 2024

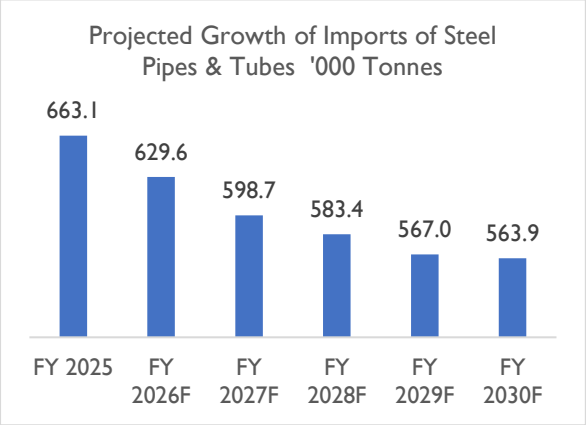
The government has not published data for the year 2025.

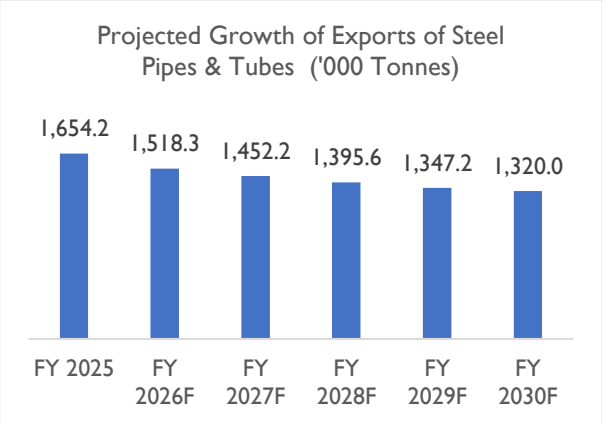
The closing stock of finished steel in India has shown a fluctuating yet generally upward trend from FY 2021 to FY 2024, rising significantly from 8.97 million tonnes in FY 2021 to 14.29 million tonnes in FY 2024. This surge—nearly 60% over four years—indicates both a substantial increase in production and possible mismatches in demand absorption, especially in the recent years. The decline seen in FY 2022 to 7.99 million tonnes was largely a result of strong post-COVID demand recovery and inventory liquidation, but the sharp build-up thereafter suggests that supply has been outpacing near-term consumption, particularly in sectors like construction and infrastructure where offtake can be cyclical. The FY 2025 figure (14.23 million tonnes as of November 2024) suggests inventory levels are stabilizing but remain elevated, pointing to cautious market sentiment and slower-than-expected demand pick-up despite healthy economic growth projections. Rising inventory levels may also reflect stockpiling ahead of anticipated policy changes or price movements. If the stock-to-consumption ratio continues to climb, it could exert downward pressure on steel prices and may prompt producers to moderate output or seek more export avenues to manage surplus.

Growth Outlook

Expected Growth in Indian Steel Pipes and Tubes Industry

India's steel pipes and tubes industry is poised for strong domestic growth, but with a gradual decline in both imports and exports over the FY 2025–FY 2030 period. Imports are projected to fall from 663.1 thousand tonnes in FY 2025 to 563.9 thousand tonnes by FY 2030, while exports are expected to reduce from 1.65 million tonnes to 1.32 million tonnes in the same period. This trend highlights a shift in the industry's focus toward meeting rising internal demand and building self-reliant supply chains.





Source: CMIE, D&B analysis

F= Forecasted

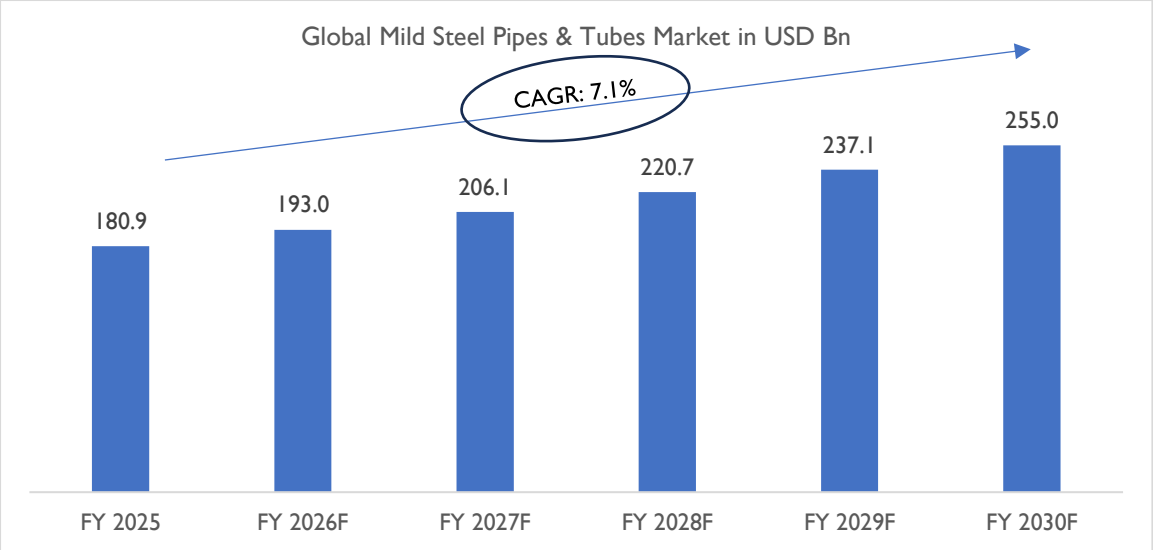
The declining import volumes suggest increased domestic manufacturing capabilities, improved product quality, and import substitution in segments previously reliant on foreign suppliers, such as seamless and precision tubes. Strengthening domestic policies, including quality control orders (QCOs), and incentives under PLI and Make in India, are further reducing India's dependence on imports. This is aligned with the broader national objective of boosting indigenous manufacturing and ensuring supply chain security.

On the export front, the downward trend is more nuanced. While India remains a key exporter of steel pipes, especially to the Middle East, Africa, and Southeast Asia, the reduction in export volumes could be attributed to tightening global competition, shifting trade dynamics, and rising domestic consumption priorities. Additionally, global geopolitical uncertainties and protectionist measures in key markets may limit overseas opportunities. The focus going forward will likely be on enhancing value-added exports and capturing niche global demand, rather than maximizing bulk volumes.

Expected growth of Global MS pipe & tube segment

Market Size Overview:

The global mild steel pipes and tubes market is expected to expand from USD 180.9 billion in FY 2025 to USD 255.0 billion by FY 2030, registering a CAGR of 7.1%. This growth reflects rising demand across multiple sectors, including infrastructure, oil & gas, construction, and automotive, supported by ongoing industrialization and urban development globally.

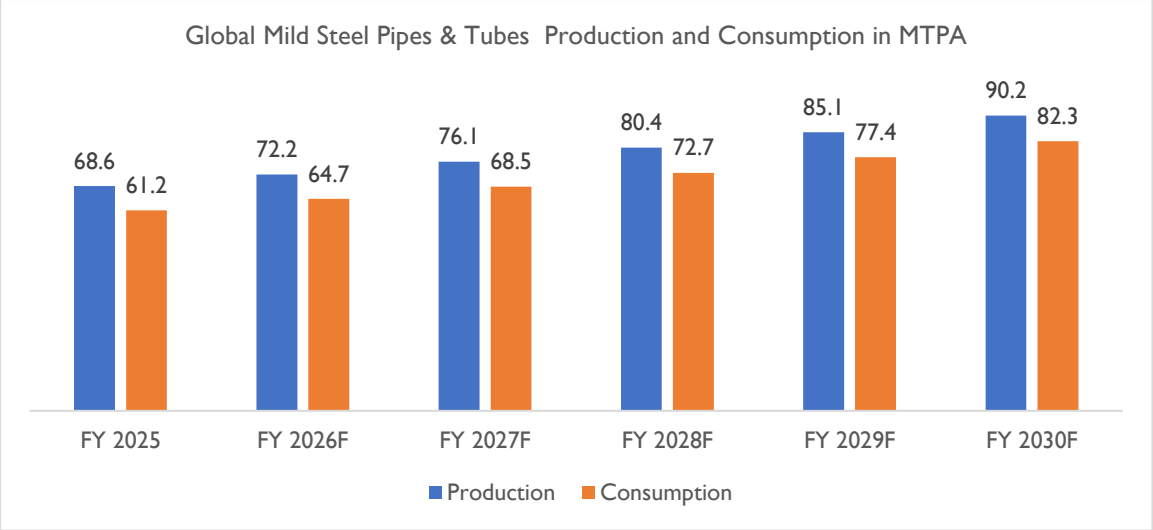


Source: Primary Research, D&B analysis

F= Forecasted

Production & Consumption Overview:

Global production is projected to increase from 68.6 million tonnes in FY 2025 to 90.2 million tonnes by FY 2030, at a CAGR of 5.6%. Meanwhile, consumption is anticipated to grow from 61.2 million tonnes to 82.3 million tonnes during the same period, at a slightly higher CAGR of 6.1%, indicating strong end-use market pull and narrowing trade gaps.



Source: Primary Research, D&B analysis

F= Forecasted

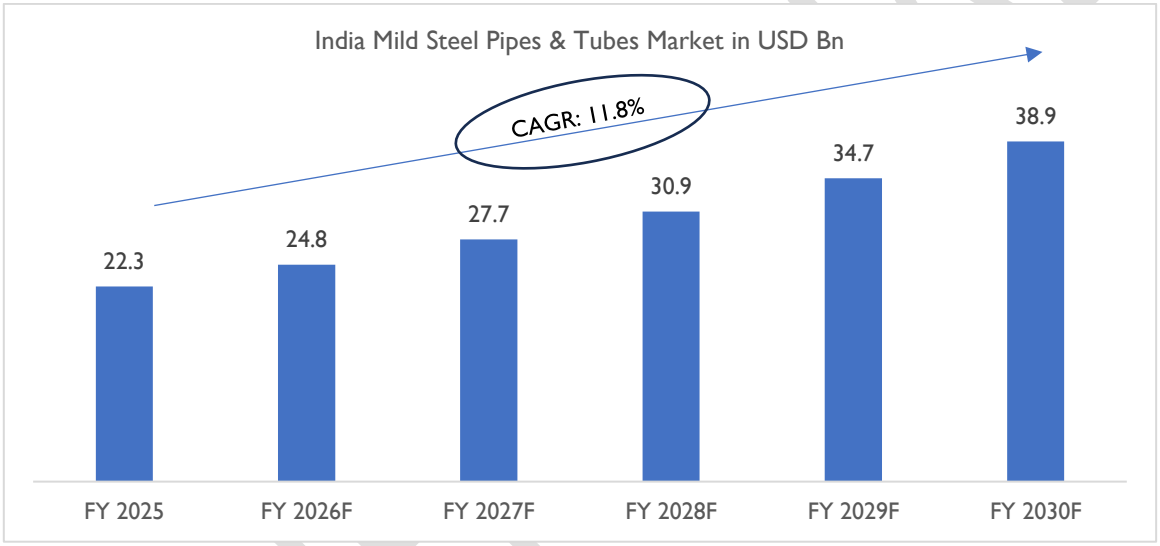
The projected 7.1% CAGR in market value outpacing the volume growth (5.6% for production and 6.1% for consumption) highlights an important trend: the global mild steel pipes and tubes market is not only expanding in quantity but also evolving in quality and pricing. This divergence indicates an increasing demand for value-added products such as coated, precision, or customized tubes used in specialized applications like automotive, construction machinery, and energy transmission. Additionally, rising input costs, including iron ore, energy, and logistics, are likely to contribute to a higher average selling price (ASP) across the forecast period, further inflating market value.

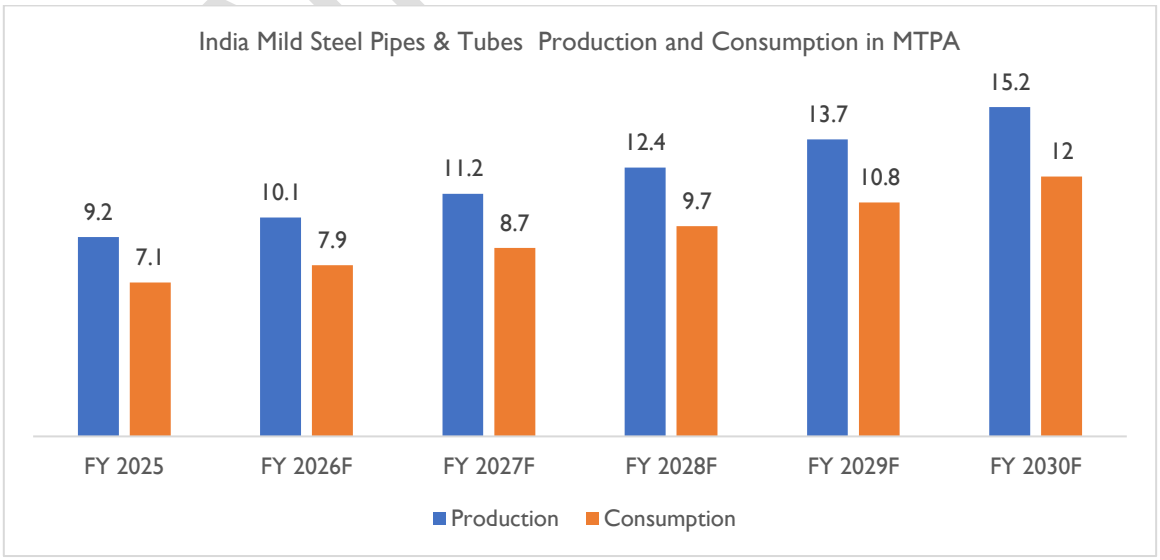
The relatively faster growth in consumption compared to production suggests a gradual narrowing of the supply-demand gap. This implies that demand centers—especially in emerging economies in Asia, Africa, and parts of Latin America—are ramping up their usage of steel tubes faster than their domestic output, potentially creating new trade opportunities or investments in local production. At the same time, developed markets like North America and Europe may witness slower volume growth but a significant shift toward high-specification and sustainable products, backed by stricter regulatory standards and industrial upgrades.

Moreover, with the global push toward infrastructure modernization, energy transition (such as pipelines for hydrogen and natural gas), and clean mobility, the industry is likely to witness a transformation in product requirements and supply chain dynamics. Countries are also investing in decarbonized steel production methods—such as electric arc furnaces and hydrogen-based steelmaking—which may lead to capex-heavy modernization in the supply base, impacting pricing, cost structures, and regional competitiveness. These shifts signal a long-term, value-driven evolution of the mild steel pipes and tubes market.

Expected growth of Indian MS pipe & tube segment

India's mild steel pipes and tubes market is projected to grow from USD 22.3 billion in FY 2025 to USD 38.9 billion by FY 2030, registering a strong CAGR of 11.8%. This growth is fueled by rising investments in infrastructure, urban development, housing, water distribution networks, and the rapid expansion of end-use sectors like oil & gas, automotive, and renewables. At the same time, domestic production is set to increase from 9.2 million tonnes to 15.2 million tonnes (CAGR of 11.1%), while consumption is expected to grow from 7.1 million tonnes to 12 million tonnes (CAGR of 11.8%). The narrowing gap between production and consumption reflects improving domestic capacity, enhanced self-sufficiency, and strong internal demand. Government initiatives such as "Make in India" and the National Infrastructure Pipeline (NIP) are playing a pivotal role in sustaining this growth trajectory.





Source: Primary Research, D&B analysis

F= Forecasted

India's mild steel pipes and tubes market is poised for one of the fastest growth trajectories globally, both in terms of value and volume. The market's growth significantly exceeds the global average, reflecting strong domestic demand across core sectors, especially in water pipeline infrastructure, metro rail, roadways, smart cities, and industrial corridors. This surge is also supported by public and private sector capex in sectors like construction equipment, oil and gas pipeline distribution, and rural infrastructure development.

The parallel rise in both production and consumption, with a slight edge in consumption growth, suggests increasing reliance on domestic capacity to meet growing demand while keeping import dependence in check. This will likely drive capacity expansions and modernization efforts across Indian manufacturers, particularly in the ERW (electric resistance welded) and seamless segments. Additionally, export opportunities may emerge as India strengthens its position as a competitive steel pipe exporter to markets in Asia, the Middle East, and Africa.

India's policy ecosystem—focused on import substitution, infrastructure development, and clean energy—will continue to create strong tailwinds for the sector. However, this growth also demands significant investment in quality, compliance with international standards, and supply chain efficiency to ensure global competitiveness in both domestic and export markets.

Competitive Landscape

Analysis of Nature of Competition in Indian Steel Pipe and Tube Industry

The competitive landscape of the Indian steel pipes and tubes sector is predominantly consolidated, with a few major players commanding significant market share. This concentration is largely due to the capital-intensive nature of the industry, which creates high barriers to entry for new companies. To establish a manufacturing facility for steel pipes and tubes, it is a capital-intensive process with multiple approval and regulations to be in place. This substantial upfront cost discourages smaller players and fosters a market environment where established firms dominate.

Steel pipes and tubes are crucial in various demanding industries, including oil and gas, petroleum refining, and pharmaceuticals, which require high-quality materials for their operations. The rigorous testing and certification processes required to meet industry standards further complicate the procurement landscape, making it challenging for new entrants to gain a foothold. Successful incumbents leverage their experience and track record to secure future contracts, thereby reinforcing their competitive advantage. Additionally, the time-intensive nature of product development that meets stringent customer standards acts as a significant deterrent for new players.

As a result, the steel pipes and tubes market remain highly consolidated, benefiting established manufacturers who can exploit the growing demand across key end-user segments. The ability of these players to navigate the capital and operational challenges effectively positions them to capitalize on new opportunities as investments continue to flow into critical industries.

Analysis of Entry Barriers Existing in the Industry

The Indian steel pipes and tubes industry faces several entry barriers that can impact the ability of new players to enter the market. An overview of these entry barriers are provided below:

- **High Capital Requirements**

  Establishing a manufacturing facility for steel pipes and tubes requires substantial capital investment in machinery, technology, and infrastructure. New entrants must be prepared to invest significantly to set up production capabilities that meet industry standards. Additionally, the industry requires a high level of working capital to run operations smoothly. As this is a credit-based industry, companies need to make considerable investments in extending credit to customers, further adding to the overall capital requirement.

- **Approval and Certification Processes**

  Gaining approval from clients is essential in this industry, especially for applications in sectors like oil and gas, where product reliability is crucial. New companies must navigate a lengthy approval process to demonstrate compliance with quality and safety standards, including obtaining mandatory government certifications such as BIS (Bureau of Indian Standards) and ISO (International Organization for Standardization). These requirements demand significant investment and can be a major barrier to entry.

- **Technological Complexity**

  The production of steel pipes involves advanced manufacturing processes that require specialized knowledge and expertise. New entrants may struggle to acquire the necessary technology or develop the expertise needed to produce high-quality products consistently.

- **Customization Requirement**

  Many applications for steel pipes require significant customization to meet specific client needs or industry standards. This necessity complicates the production process and may require additional investment in flexible manufacturing systems, posing a challenge for new entrants without adequate resources.

- **Well Established Competitors**

  The presence of established players like APL Apollo, Surya Roshni, Jindal Industries, and HI-Tech Industries creates a competitive environment where new entrants must differentiate themselves significantly to capture market share. These incumbents benefit from economies of scale, brand recognition, and established customer relationships.

- **Marketing Expenses**

Establishing a presence in the steel pipes and tubes market requires substantial marketing and promotional expenses. New entrants need to invest heavily in building brand visibility, participating in trade shows, engaging with distributors, and creating awareness among potential clients. Without significant marketing efforts, it becomes difficult to penetrate a market dominated by established players with strong brand equity.

- **Technical Manpower Requirement**

  The production of steel pipes and tubes involves advanced machinery and sophisticated processes, which require skilled technical manpower. Recruiting and retaining qualified engineers, technicians, and quality control specialists is essential for ensuring efficient production and maintaining product standards. For new entrants, the high cost and scarcity of such specialized manpower can pose a significant challenge.

- **Strong Distribution Network of Existing Participants**

  Existing players have well-established distribution networks that facilitate efficient delivery of products across various regions. New entrants may struggle to develop similar networks quickly, impacting their ability to compete effectively.

- **Regulatory Compliance**

  Compliance with environmental regulations and safety standards is crucial in the steel industry. New entrants must navigate a complex regulatory landscape, which can be resource-intensive and challenging without prior experience in the sector.

The Indian steel pipes and tubes industry presents several significant entry barriers, including high capital requirements, stringent approval processes, technological complexity, customization needs, established competition, strong distribution networks, market volatility, marketing expenses, technical manpower requirements and regulatory challenges. These factors collectively create a challenging environment for new players looking to enter the market, making it essential for them to develop robust strategies to overcome these barriers if they wish to succeed.

Company Profiling: RK Steels Manufacturing Company Limited

Company Overview

R.K. Steel Manufacturing Company is a manufacturer, wholesaler, and exporter of various steel products, including hot-rolled tubes, black steel tubes, and pre-galvanized tubes. Established on April 17, 2006 and based in Perundurai, Erode District, Tamil Nadu, the company has presence in the Indian steel industry. They are among the few companies in Southern India equipped with tandem cold rolling mills, enabling us to produce high-quality cold-rolled products efficiently. Tandom Cold Rolling Mill also allows the company to have better control on various quality parameters like Thickness Control, Surface Finish and Mechanical Parameters which are critical for Pipe and Tube application. This advanced infrastructure ensures consistency in production and supply, allowing us to meet industry demands effectively. Apart from CRM, the company is also equipped with Coil Galvanizing Unit (CGL) lines. This allows the company to make in-house GP coils providing better quality control on the product. RK Steel has been giving 120GSM coated GP products against the industry standard of 70GSM – 80GSM. This higher zinc coating provides longer protection against rusting when compared with its competitors. The company has significantly enhanced its processing methodology, enabling the galvanization of coils up to 3.60MM in thickness—a capability that remains rare in the industry. This technical advancement positions RK Steel to serve a broader range of OEM customers across both South and North India.. The company has installed 9 tube mills that allow for faster delivery of pipes and tubes. The objective of RK Steel is to provide 24-hour delivery of pipes to their customers. This also helps RK Steel with lower maintenance cost and production cost which is ultimately passed on to the customer in terms of lower pricing. RK Steel always works on ensuring that its customers are benefitted the most. To align with their commitment to environmental responsibility and sustainable energy solutions, they have integrated Compressed Biogas (CBG) as a substitute for conventional furnace oil in their production process. They are also in the process of installing a Solar Park to fulfill their electrical requirement with green energy. The company has already installed 5.5MW of solar energy and is in the process of installing an additional capacity of 5.5MW. The aim of RK Steel is to become a green steel manufacturer in South India. This transition not only reduces their reliance on fossil fuels but also promotes cleaner energy usage. As a result, they have been recognized by Indian Oil Corporation Limited (IOCL) as a pioneer in sustainable industrial practices.

- Incorporation Date: 2006
- Headquarters: Chennai, Tamil Nadu, India
- Total Employees: Approximately 200
- Annual Production Capacity: 2,88,000 MT - CE Certificate can be verified for the number.

Manufacturing Facilities

R.K. Steel operates from its own manufacturing facility located in Perundurai, Erode District, Tamil Nadu. The facility is set up in a total area of 18 acrea and is equipped with state-of-the-art machinery that enables the production of high-quality steel pipes suitable for various applications.

Product Offerings

The company's product portfolio includes:

- Hot Rolled Tubes
- Pre-Galvanized Tubes
- CRFH Tubes
- CR Tubes
- Hot- Dipped Galvanised Tubes
- RK Steel provides the above product categories in Round, Square and Rectangular Sections.

RK Steels offers a wide range of high-quality steel tube products designed to meet the diverse needs of construction, infrastructure, automobile, solar power, engineering, etc.

Apart from this RK Steel is also involved in providing following products

- GP Coil
- CRFH Coil
- HR Coils

Financial Indicators

Particular	Unit	R.K. Steel Manufacturing Company Limited		
		As at end for Fiscal		
		Fiscal 2025	Fiscal 2024	Fiscal 2023
Total Revenue	₹ in Lakhs	1,15,373.05	1,02,851.55	85,880.40
Revenue From Operations	₹ in Lakhs	1,14,779.33	1,02,216.00	84,744.25
Growth in Revenue from Operations (in %)	in %	12.29	20.62	-13.86
Other Income	₹ in Lakhs	593.72	635.55	1,136.14
EBITDA	₹ in Lakhs	4,829.82	5,955.37	4,713.40
EBITDA Margin	in %	4.21	5.83	5.56
PAT	₹ in Lakhs	1,090.63	2,270.41	1,988.15
PAT Margin	in %	0.95	2.22	2.35
Operating Cash Flow	₹ in Lakhs	-4,462.58	2,752.16	2,318.79
Cash Flow from Investing Activities	₹ in Lakhs	-3,889.92	375.00	6,138.3)
Cash Flow from Financing Activities	₹ in Lakhs	5,326.51	1,749.26	8,855.78
Net Worth	₹ in Lakhs	12,068.31	10,980.50	8,703.38
Debt Equity Ratio	In Times	2.91	2.49	2.68
Return on Equity	in %	9.46%	23.07%	27.32%
Return on Capital Employed	in %	8.28%	13.37%	12.68%
Return on Assets	in %	2.01%	5.66%	5.58%
Interest Coverage Ratio	In Times	1.60	2.46	3.01
Fixed Asset Turnover Ratio	In Times	12.63	12.54	20.41
Working Capital Days	in Days	104.00	86.00	93.00
Net Asset Value Per Share	₹	24.43	22.23	17.62

In Fiscal Year 2025, R.K. Steel Manufacturing Company Limited sustained its growth trajectory, registering a 12.29% increase in revenue from operations to INR 1,14,779.33 lakh, driven by continued market demand and operational expansion. Operating within a high production, low margin business model, the company-maintained profitability despite a moderation in EBITDA and PAT margins compared to FY2024. The working capital cycle extended to 104 days from 86 days in the previous fiscal, indicating a longer cash conversion period. Net worth increased to INR 12,068.31 lakh, reinforcing the company's equity base. The rise in the debt-equity ratio to 2.91 reflects the company's strategic use of external financing to support business expansion and operational requirements.

Peers Profiling

Hariom Pipe Industries Limited

Company Overview

Hariom Pipe Industries Limited, founded in 2007 by Mr. Roopesh Kumar Gupta, carries forward the legacy of Shri. Hariom Gupta Ji, a pioneer in the steel industry since 1962. Mr. Roopesh Kumar Gupta, along with Mr. Sailesh Gupta. The company is manufacturer of iron and steel products in India. Today, Mr. Ansh Golas, representing the fourth generation, manages the primary steel manufacturing facilities, continuing the family legacy of trust and reliability.

Based in Southern India, the company offers a diverse range of premium steel products, including Mild Steel (MS) Billets, HR Pipes, CR Pipes, GP Pipes, GI Pipes, Hot Rolled (HR) Coils, Cold Rolled (CR) Coils, Pre-Galvanized (GP) Coils, and Scaffolding systems.

Hariom Pipe Industries has grown into an integrated steel manufacturer with a nationwide presence, especially in South and West India. The company produces pipes under the HARIOM and HPIL brands, which meet Bureau of Indian Standards. These include square hollow sections (12x12 mm to 150x150 mm), rectangular hollow sections (25x12 mm to 200x100 mm), and circular sections (12NB to 175NB) in varying thicknesses.

Head Office- Hyderabad, Telangana

Manufacturing Unit-

- Steel Manufacturing Units:
    1. Mahbubnagar- Telangana
    2. Perundurai- Tamil Nadu
- Sponge Iron Facility: Ananthapur- Andhra Pradesh

Product Offerings:

The product offering of Hariom Pipes are under different brands and are as follows:

- Hariom Veer: HR pipes and tubes
- Dura Edge: CR Pipes (Coled Rolled Pipes)
- Zincon: GI Pipes (Galvanized Iron Pipes), GP (Galvanized Pipes)
- 360 Prime: HR Coils, GP Slit Coils, HRPO Slit Coils, CRCA Slit Coils
- Build Master: Scaffolding
- Billets: M.S. Billets

Key Strengths:

With over 17 years of experience, the company has achieved certifications and awards and recently they got FTCCI excellence award in 2023.

- Team Members: 700+
- Dealers: 800+
- Total manufacturing capacity: 701232 MT
- SMS-Capacity: 104232 MTPA
- HSM Capacity: 124000 MT
- Tube Mill Capacity: 132000 MT
- Scaffolding capacity: 5000 MT
- Sponge Iron Capacity: 36000 MT
- GP/CR Mill Capacity: 300000 MT

Hariom Pipes prioritizes eco-friendly manufacturing by reducing coal and electricity use with hot charging production. They capture pollutants with baghouse filters and sell them instead of disposing them. Usage of solar panels and biogas reduce carbon emissions. They focus on water conservation and sustainable practices, using renewable energy to lower fossil fuel dependency and ensure long-term environmental sustainability.

Hi-Tech Pipes Limited

Company Overview

Established in 1988 and headquartered in New Delhi, **Hi-Tech Pipes Limited** is among the top six pipe manufacturers in India with over 35 years of expertise in the steel pipe industry. The company has built a strong nationwide presence across 17 states, supported by a wide distribution network of more than 500 dealers, 150 OEM partners, and over 90 contractors, offering 1200+ SKUs. With an installed capacity of nearly 1 million MT annually, Hi-Tech Pipes serves a wide spectrum of industries including infrastructure, telecom, defence, railways, airports, real estate, and automotive. The company's consistent focus on R&D, innovation, and sustainable practices enables it to provide high-quality, cost-efficient, and reliable steel solutions that meet both domestic and global industry standards.

Product Offerings

- **ERW Pipes & Tubes** – Electric Resistance Welded pipes used in multiple applications.
- **Mild Steel (MS) Pipes** – Durable and cost-effective pipes for structural and industrial use.
- **Galvanized Iron (GI) Pipes** – Corrosion-resistant pipes suitable for water and fluid transportation.

- **Structural Steel Pipes** – Square, rectangular, and circular hollow sections for construction and infrastructure.
- **Line Pipes** – Designed for transporting fluids, oil, and gases.

Key Strengths

- **Established Legacy** – Over 35 years of experience (since 1988) in the steel pipe industry.
- **Large-Scale Manufacturing** – Installed annual capacity of ~1 million MT.
- **Nationwide Presence** – Strong distribution across 17 states, with 500+ dealers, 150 OEMs, and 90+ contractors.
- **Broad Product Range** – Offers 1200+ SKUs catering to multiple industries.
- **Advanced Testing Facilities** – Equipped with tensile testers, spectrometers, ultrasonic gauges, and other quality equipment.
- **Sustainability Focus** – Uses recycled materials, energy-efficient processes, and eco-friendly waste management.
- **Industry Reach** – Serves critical sectors including infrastructure, telecom, defence, railways, airports, real estate, and automotive.
- **Trusted Partnerships** – Strong relationships with OEMs, contractors, and dealers, ensuring reliability and consistent supply.

Surya Roshni Limited

Company Overview

Surya Roshni Limited, established in 1973, began its operations as a steel tube manufacturer and has since diversified into both **steel pipes & strips** and **consumer durables**. In the steel segment, the company manufactures a wide range of pipes catering to infrastructure, construction, water, and industrial applications. In the consumer segment, it produces and markets **lighting solutions, fans, and home appliances**, which serve both domestic and commercial needs. Through continuous expansion of product categories and manufacturing facilities, Surya has built a presence across multiple industries, offering a combination of industrial materials and consumer products.

Product Offerings

- **Steel Segment**
  - ERW Steel Pipes
  - GI Pipes
  - Hollow Sections
  - Cold Rolled Strips

  - PVC Pipes
- **Consumer Durables Segment**
  - Lighting products (LED lamps, tube lights, street lights, and professional lighting solutions)
  - Fans (ceiling, table, pedestal, wall, and exhaust fans)
  - Home Appliances

Key Strengths

- Established presence in both **steel manufacturing** and **consumer durables**.
- Diversified product portfolio catering to **industrial, infrastructure, and household needs**.
- Longstanding industry experience since **1973**.
- Manufacturing capabilities across steel pipes, lighting solutions, and electrical appliances.
- Nationwide market coverage through its distribution network.

Financial Analysis of Peers:

Particular	Unit	Surya Roshni Limited			Hariom Pipe Industries Ltd.		
		As at end for Fiscal			As at end for Fiscal		
		Fiscal 2025	Fiscal 2024	Fiscal 2023	Fiscal 2025	Fiscal 2024	Fiscal 2023
Total Revenue	₹ in Lakhs	7,46,555.00	7,82,316.00	8,00,206.00	1,35,994.35	1,15,838.47	64,446.03
Revenue From Operations	₹ in Lakhs	7,43,587.00	7,80,927.00	7,99,671.00	1,35,704.88	1,15,318.77	64,371.21
Growth in Revenue from Operations (in %)	in %	-4.78	-2.34	3.44	17.7%	79.1%	49.5%
Other Income	₹ in Lakhs	2,968.00	1,389.00	535.00	289.47	519.71	74.82
EBITDA	₹ in Lakhs	60,889.00	58,631.00	61,951.00	17,832.07	14,379.15	8,263.15
EBITDA Margin	in %	8.19	7.51	7.75	13.1%	12.5%	12.8%
PAT	₹ in Lakhs	34,660.00	32,916.00	33,552.00	6,172.60	5,679.95	4,620.80
PAT Margin	in %	4.66	4.21	4.20	4.55%	4.93%	7.18%
Operating Cash Flow	₹ in Lakhs	39,475.00	54,622.00	28,020.00	7,853.26	495.54	-10,056.84
Cash Flow from Investing Activities	₹ in Lakhs	-32,944.00	-5,146.00	-3,318.00	-8,571.64	-18,159.02	-22,151.88
Cash Flow from Financing Activities	₹ in Lakhs	-8,034.00	-46,088.00	-24,617.00	3,131.69	7,437.18	42,605.74
Net Worth	₹ in Lakhs	2,46,522.00	2,16,639.00	1,86,359.00	57,267.42	46,411.75	37,516.66
Debt Equity Ratio	In Times	0.00	0.00	-	0.70	0.80	0.79
Return on Equity	in %	14.97	16.34	19.67	10.78	12.24	12.32
Return on Capital Employed	in %	19.63	21.55	-	13.16	13.16	10.91
Return on Assets	in %	10.72	11.27	10.97	5.16	6.45	6.52
Interest Coverage Ratio	In Times	23.44	19.50	11.24	2.85	3.38	7.05
Fixed Asset Turnover Ratio	In Times	8.42	9.31	8.79	3.12	3.05	2.72
Working Capital Days	in Days	77.64	62.81	89.88	62.89	61.73	128.50
Net Asset Value Per Share	₹	113.27	199.08	342.52	184.93	160.79	135.85

Particular	Unit	Hi-Tech Pipes Limited		
		As at end for Fiscal		
		Fiscal 2025	Fiscal 2024	Fiscal 2023
Total Revenue	₹ in Lakhs	3,06,952.49	2,70,047.09	2,38,810.94
Revenue From Operations	₹ in Lakhs	3,06,763.62	2,69,929.34	2,38,584.74
Growth in Revenue from Operations (in %)	in %	13.65	13.14	26.98
Other Income	₹ in Lakhs	188.87	117.75	226.20
EBITDA	₹ in Lakhs	16,192.11	11,603.63	9,895.74
EBITDA Margin	in %	5.28	4.30	4.15
PAT	₹ in Lakhs	7,294.91	4,393.08	3,768.14
PAT Margin	in %	2.38	1.63	1.58
Operating Cash Flow	₹ in Lakhs	6,982.93	-9,518.97	13,374.46
Cash Flow from Investing Activities	₹ in Lakhs	-39,007.29	-15,338.26	-9,818.04
Cash Flow from Financing Activities	₹ in Lakhs	35,372.56	24,901.68	-3,457.86
Net Worth	₹ in Lakhs	1,25,735.47	57,637.40	41,810.86
Debt Equity Ratio	In Times	0.15	0.70	0.56
Return on Equity	in %	7.95	8.85	11.17
Return on Capital Employed	in %	9.73	10.27	13.04
Return on Assets	in %	4.16	3.73	4.12
Interest Coverage Ratio	In Times	3.28	2.40	2.41
Fixed Asset Turnover Ratio	In Times	5.24	6.48	7.39
Working Capital Days	in Days	72.11	33.77	26.53
Net Asset Value per share	₹	61.91	38.45	32.71

Note: For All Companies we have considered consolidated Balance Sheet

Formulae

Parameter	Formula
Total Revenue	Total Income includes Revenue from Operations and Other income.
Revenue From Operations	Revenue from operations means the revenue from operations as appearing in the restated statement of profit & loss for the relevant year/period.
EBITDA	PBT+Finance Cost+Depriciation-Other Income
EBITDA Margin	EBITDA/Revenue from Operations
PAT Margin	PAT /Revenue from Operations
Net worth	Shareholder Equity
Debt Equity Ratios	Short term Borrowing +Long Term Borrowing/Shareholder Equity
Return on Equity	PAT /Average Shareholder Equity
Return On Asset	PAT/Total Asset
Interest Coverage Ratio	EBIT/Finance Cost
Return On Investment	PAT/Shareholders fund
	ROI Taken from Balance sheet, above formula is taken from the same
Net Asset Value	(Total Assets - Total Liabilities) / Total number of Outstanding Shares
Working Capital Days	Net Working Capital / Revenue from Operations×365
Fixed Asset Turnover Ratio	Revenue from Operations / Net Fixed Assets
Growth in Revenue from Operation	(Current Revenue – Previous Revenue)/Previous Revenue×100