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Industry Research Report on Logistics Industry

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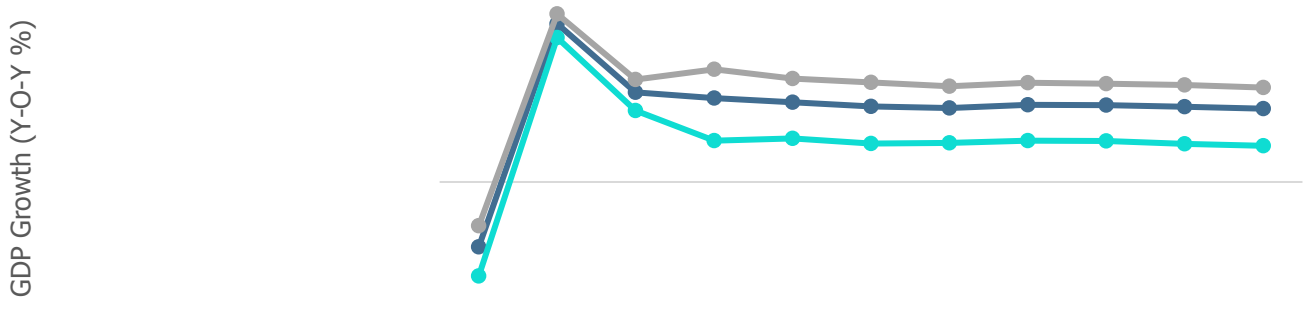
1 Economic Outlook

1.1 Global Economy

Global economic growth expected to sustain at ~3% in near term

Global growth, which reached 3.5% in CY23, stabilized at 3.3% for CY24 and projected to decrease at 3.2% for CY25. Global trade is expected to be disrupted by new US tariffs and countermeasures from trading partners, leading to historically high tariff rates and negatively impacting economic growth projections. The global landscape is expected to change as countries rethink their priorities and policies in response to these new developments. Central banks priority will be to adjust policies, while smart fiscal planning and reforms are key to handling debt and reducing global inequalities.

Chart 1: Global Growth Outlook Projections (Real GDP, Y-o-Y change in %)



	CY20	CY21	CY22	CY23	CY24	CY25P	CY26P	CY27P	CY28P	CY29P	CY30P
World	-2.7%	6.6%	3.8%	3.5%	3.3%	3.2%	3.1%	3.2%	3.2%	3.2%	3.1%
Advanced Economies	-3.9%	6.0%	3.0%	1.7%	1.8%	1.6%	1.6%	1.7%	1.7%	1.6%	1.5%
Emerging Market and Developing Economies	-1.8%	7.0%	4.3%	4.7%	4.3%	4.2%	4.0%	4.2%	4.1%	4.1%	4.0%

Source: IMF – World Economic Outlook, October 2025; Note: P-Projection

Table 1: GDP growth trend comparison - India v/s Other Economies (Real GDP, Y-o-Y change in %)

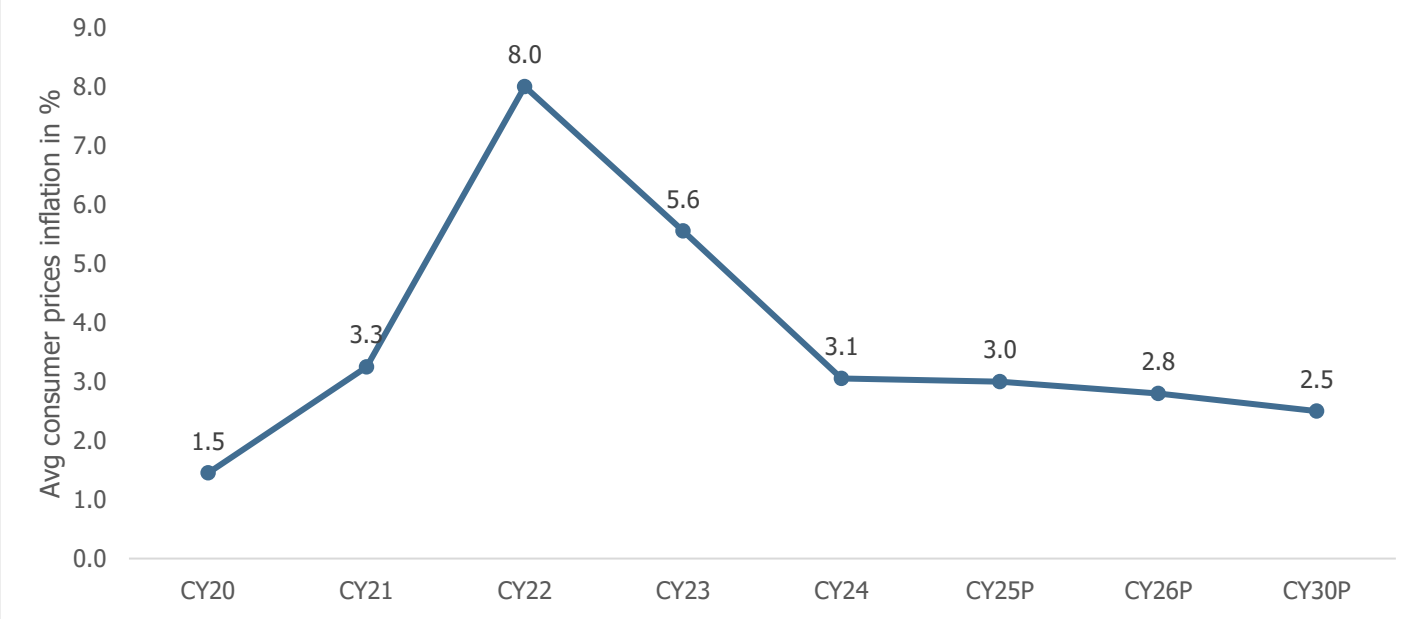
	Real GDP (Y-o-Y change in %)										
	CY20	CY21	CY22	CY23	CY24	CY25P	CY26P	CY27P	CY28P	CY29P	CY30P
India	-5.8	9.7	7.6	9.2	6.5	6.6	6.2	6.4	6.5	6.5	6.5
China	2.3	8.6	3.1	5.4	5.0	4.8	4.2	4.2	4.0	3.7	3.4
Indonesia	-2.1	3.7	5.3	5.0	5.0	4.9	4.9	5.0	5.0	5.1	5.1
Saudi Arabia	-3.8	6.5	12.0	0.5	2.0	4.0	4.0	3.3	3.3	3.3	3.3
Middle East	-2.3	4.7	6.4	2.6	2.6	3.5	3.8	3.8	3.7	3.7	3.7
Latin America	-6.9	7.4	4.3	2.4	2.4	2.4	2.3	2.6	2.7	2.8	2.6
Brazil	-3.3	4.8	3.0	3.2	3.4	2.4	1.9	2.2	2.3	2.4	2.5
Euro Area	-6.0	6.4	3.6	0.4	0.9	1.2	1.1	1.4	1.3	1.2	1.1
United States	-2.1	6.2	2.5	2.9	2.8	2.0	2.1	2.1	2.1	1.9	1.8

Source: IMF- World Economic Outlook Database (October 2025); Note: P- Projections, India's fiscal year (FY) aligns with the IMF's calendar year (CY). For instance, FY24 corresponds to CY23.

1.1.1 Global inflation outlook

According to IMF, global inflation is expected to decline more slowly than expected. It is forecasted to be 3.0% in CY25 and 2.8% in CY26. While inflation is projected to decrease slightly in advanced economies and emerging markets in CY25. The ongoing global trade tensions can be one of the contributing factors for the projections for the global inflation. Central banks are expected to adjust policies, while smart fiscal planning and reforms are going to be the key to handling debt and reducing global inequalities.

Chart 2: Global inflation outlook



Source: IMF – World Economic Outlook, October 2025; Note: P-Projection, E-Estimated

1.1.2 Fiscal Deficit (as a % of GDP)

From CY20 to CY24, fiscal deficits narrowed globally from pandemic highs but remain elevated in the US (6.5% in CY24P) and China (8.6%), with emerging markets and advanced economies excluding the US showing smaller gaps. India's deficit, though declining from 12.9% in CY20 to 6.9% in CY24P, stays among the highest in major economies. Projections to CY29 suggest limited further consolidation, with deficits broadly stabilising rather than returning to pre-pandemic lows.

Table 2 : Fiscal Deficit as a % of GDP - India v/s Other Economies

Fiscal Deficit as a % of GDP											
	CY20	CY21	CY22	CY23	CY24	CY25P	CY26P	CY27P	CY28P	CY29P	CY30P
World	-9.5	-6.3	-3.7	-4.9	-5.0	-5.1	-4.7	-4.5	-4.5	-4.5	-4.6
Advanced Economies excl. US	-7.6	-4.3	-2.3	-2.5	-2.6	-2.5	-2.5	-2.4	-2.5	-2.6	-2.6
United States	-14.1	-11.4	-3.7	-7.2	-7.3	-6.5	-5.5	-5.4	-5.6	-5.5	-5.6
Emerging Markets excl. China	-7.8	-4.2	-2.9	-4.2	-4.3	-4.5	-4.2	-3.8	-3.5	-3.4	-3.3
China	-9.6	-5.9	-7.3	-6.7	-7.3	-8.6	-8.5	-8.1	-8.1	-8.0	-8.1

India	-12.9	-9.4	-9.0	-7.9	-7.4	-6.9	-7.2	-7.1	-7.0	-6.8	-6.7

Source: IMF Data Portal (October 2025)
Note: P- Projections; India's fiscal year (FY) aligns with the IMF's calendar year (CY). For instance, FY24 corresponds to CY23.

1.1.3 Global Gross Value Added (GVA)

Between 2014 and 2024, Gross Value Added (GVA) at basic prices exhibited a consistent upward trend across major economies, reflecting sustained economic expansion over the decade. The increase was more pronounced in larger economies, while smaller and emerging markets recorded moderate yet steady growth. Overall, the data indicates a broad-based rise in productive output, supported by structural growth drivers and gradual recovery from cyclical downturns.

Table 3: Gross Value Added – in current trillion USD- India v/s Other Economies

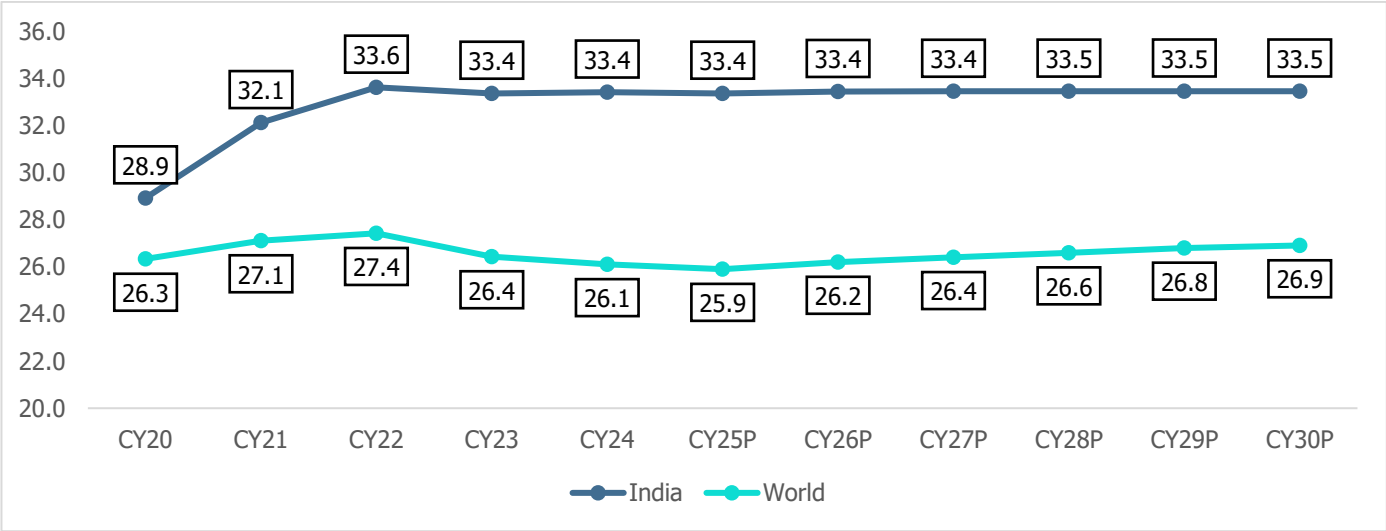
Gross Value Added (in current trillion USD)											
Country Name	CY14	CY15	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23	CY24
Brazil	2.1	1.5	1.6	1.8	1.6	1.6	1.3	1.4	1.7	1.9	1.9
Euro area	12.2	10.6	10.8	11.4	12.4	12.1	11.9	13.3	13.0	14.3	14.8
Indonesia	0.9	0.8	0.9	1.0	1.0	1.1	1.0	1.1	1.3	1.3	1.3
India	1.9	1.9	2.1	2.4	2.5	2.6	2.5	2.9	3.1	3.3	3.5
Saudi Arabia	0.8	0.7	0.7	0.7	0.9	0.9	0.7	0.9	1.2	1.2	1.2
United States	17.2	17.9	18.4	19.2	20.2	21.1	20.9	23.2	25.5	27.1	28.6

Source: World Bank Database

1.1.4 Trend in Investment

Between CY20 and CY23, India's investment rate, measured as a share of GDP, rose from 28.9 % to 33.4 % and is projected to stabilise around this level through 2030. In comparison, the global rate increased modestly from 26.3 % in 2020 to 27.4 % in CY22, before easing to 26.4 % in CY23, with only gradual improvement expected in the coming years.

Chart 3: Total investment trend (as a % of GDP)



Source: IMF – World Economic Outlook, October 2025; Note: P-Projection

1.1.5 Final Consumption Expenditure- India v/s Other Economies

Final consumption expenditure across major economies has demonstrated steady growth from CY19 to CY24, albeit with temporary slowdowns around CY20, reflecting the impact of the global economic downturn during the COVID-19

pandemic. Recovery trajectories vary by country and region, with advanced economies such as the United States and Euro area showing resilience, while emerging markets such as India, Brazil, and Indonesia indicate gradual but sustained increases.

Table 4: Final Consumption Expenditure (in USD trillion)

Country Name	CY19	CY20	CY21	CY22	CY23	CY24
India	1.89	1.81	1.99	2.12	2.56	2.8
China	8.12	8.11	8.86	9.10	10.4	10.2
Indonesia	0.70	0.68	0.70	0.72	0.84	0.8
Saudi Arabia	0.53	0.52	0.54	0.58	0.78	0.8
Brazil	1.54	1.48	1.52	1.58	1.8	1.8
Euro area	9.49	8.99	9.40	9.76	9.84	9.99
United States	16.36	16.10	17.28	17.68	22.5	23.74

Source: World Bank

1.1.6 Growth Drivers Impacting growth of Global Economy

- **Trade Agreements & International Connectivity:** Trade agreements like the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and Regional Comprehensive Economic Partnership (RCEP) are expected to drive international trade, creating opportunities for growth, especially in emerging economies. These agreements ease barriers and streamline policies, supporting GDP growth, while nearshoring and diversifying supply chains reduce tariffs and costs for global businesses.

- **R&D Investment & Technological Innovation:** Increased global R&D spending, particularly in AI, biotechnology, and sustainable technologies, will fuel growth in key sectors. Companies investing in generative AI, robotics, and green tech will not only enhance productivity but also drive new consumer demand, bolstering the global economy through innovation-led expansion.

- **Population Growth & Migration Patterns:** Demographic trends, including population growth in India and immigration in developed nations, will influence labour markets and consumer behaviour. Nations with growing labour forces, such as India and Southeast Asia, will contribute to global economic output, while migration will help address labour shortages in key industries.

- **Green Energy Transition & Climate Investments:** Global commitments to reduce carbon emissions are spurring investments in renewable energy, electric mobility, and sustainable infrastructure. This shift is fostering new industries, generating employment, and creating long-term economic resilience through cleaner and more efficient energy systems.

- **Digitalisation & E-commerce Expansion:** The rapid adoption of digital platforms, cloud computing, and e-commerce is reshaping global trade and consumer habits. Businesses leveraging digital infrastructure gain access to wider markets, enabling faster transactions, cost efficiency, and enhanced global integration.

- **Infrastructure Development in Emerging Markets:** Large-scale infrastructure projects, including transport, urban development, and logistics hubs, are accelerating in emerging economies. These initiatives improve productivity, attract foreign investment, and strengthen domestic supply chains, driving sustainable economic expansion.

1.1.7 Key Issues Impacting growth of Global Economy

- **Geopolitical Tensions and Trade Barriers:** Political conflicts, such as potential US-China trade tariffs and evolving trade agreements, like CPTPP and RCEP, could disrupt global trade, affect supply chains and inflation while offer new market opportunities for countries in the Asia-Pacific region.

- **Technological Innovation and R&D Investment:** Increased global spending on R&D, particularly in AI, robotics, and sustainable technologies, will drive advancements in efficiency and product innovation, creating both challenges for businesses to keep up and opportunities to capitalize on new market demand.

- **Population Growth and Migration Patterns:** Declining fertility rates in developed nations and shifting migration trends will impact labour force availability and economic output. Countries with aging populations, like China, face shrinking workforces, while nations with growing populations, like India, may boost their global economic standing.
- **Climate Change and Extreme Weather Events**: Rising global temperatures, shifting rainfall patterns, and increased frequency of extreme weather events such as floods, droughts, and hurricanes are disrupting agriculture, damaging infrastructure, and raising insurance and adaptation costs, posing risks to economic stability.

- **Transition to Low-Carbon Economies**: Global efforts to reduce greenhouse gas emissions, including stricter environmental regulations and the push for renewable energy, are transforming industries and investment flows. While this creates opportunities in green technology, it also challenges sectors reliant on fossil fuels.

- **High Sovereign Debt Levels**: Several countries are facing historically high public debt burdens, increasing vulnerability to interest rate hikes and limiting fiscal flexibility. Elevated debt servicing costs can crowd out productive investment, slow growth, and raise the risk of financial instability.

1.2 Indian Economic Outlook

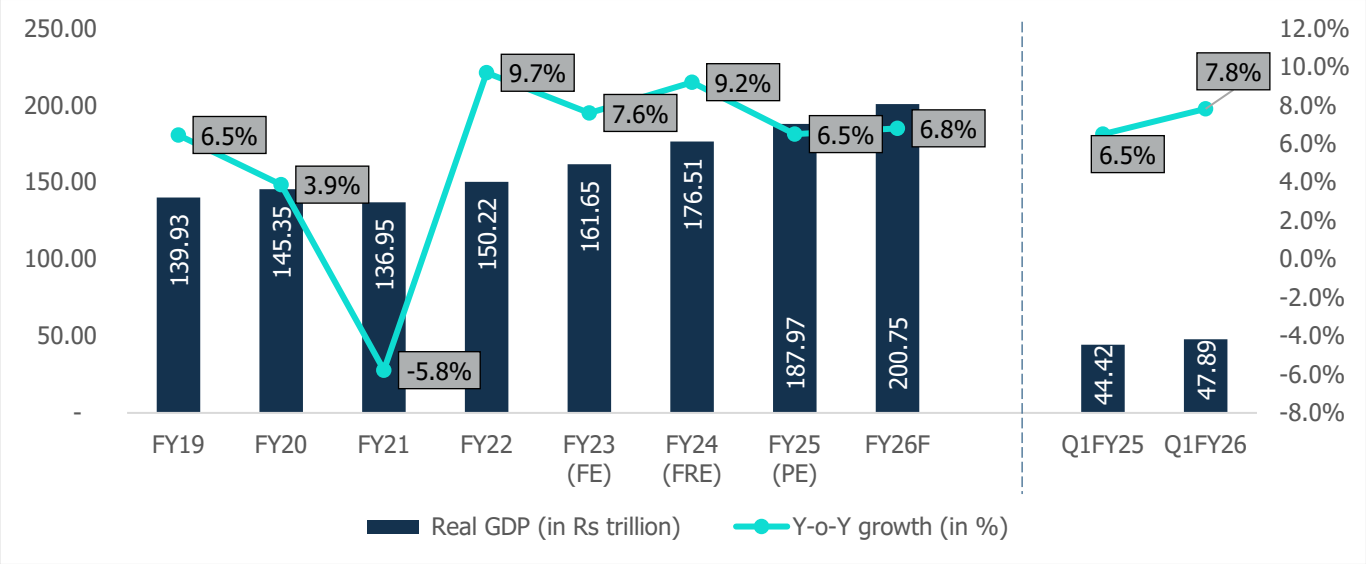
1.2.1 GDP Growth and Outlook

Resilience to External Shocks remains Critical for Near-Term Outlook

India's economy continues to show rapid growth. In the first quarter of FY26, the country's GDP grew by 7.8% compared to the same period last year, which saw a 6.5% increase. For the full year FY26, GDP is expected to grow by 6.8%, supported by rising rural demand, better job opportunities, and active business conditions.

In FY25, provisional estimates show a growth of 6.5% (Rs 187.97 trillion), led by robust performance in manufacturing, construction, and financial services. Consumer spending rose by 7.6%, and government spending increased by 3.8%, both contributing to the overall growth. In FY24, India's GDP grew by 9.2% (Rs 176.5 trillion), the highest in over a decade (excluding the pandemic year).

Chart 4: Trend in Real Indian GDP growth rate



Source: MOSPI, Reserve Bank of India; Note: FE – Final Estimates, FRE- First Revised Estimates, PE – Provisional Estimates, F - Forecasted

GDP Growth Outlook (October 2025)

FY26 GDP Outlook: The RBI projects real GDP growth at 6.8% for 2025-26, driven by strong private consumption, steady investment, and resilient rural and urban demand. A favourable monsoon, robust services sector and improving corporate balance sheets support this outlook.

However, risks from prolonged geopolitical tensions, global trade disruptions, and weather-related uncertainties remain. Taking these into account, the RBI has reaffirmed its growth projections.

Table 5: RBI's GDP Growth Outlook (Y-o-Y %)

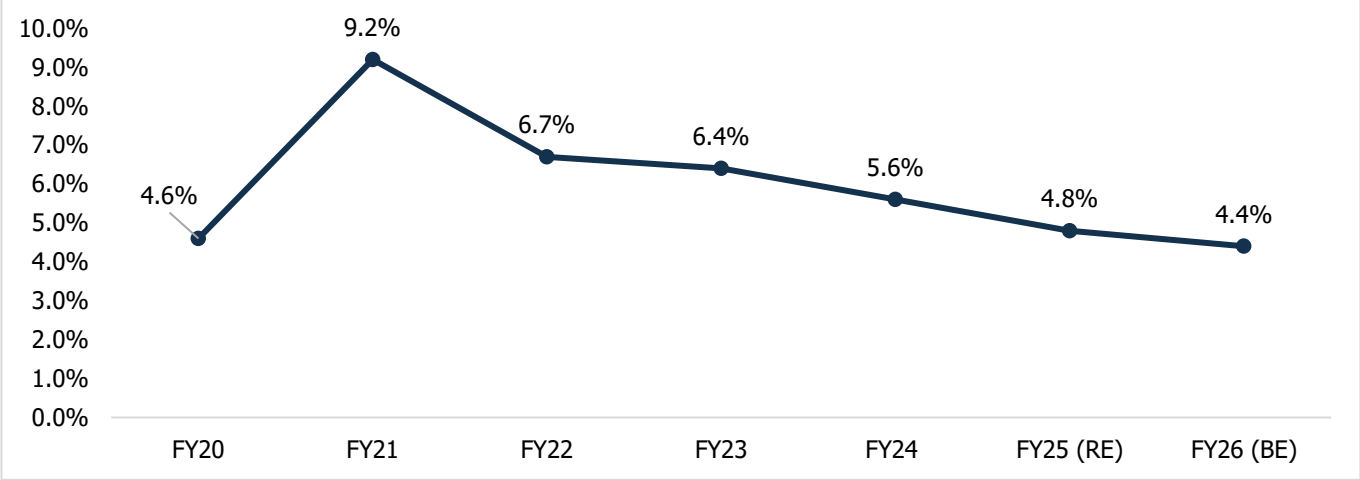
FY26P (complete year)	Q2FY26P	Q3FY26P	Q4FY26P	Q1FY27P
6.8%	7.0%	6.4%	6.2%	6.4%

Source: Reserve Bank of India; Note: P-Projected

1.2.2 Fiscal Deficit (as a % of GDP)

In FY21, India's fiscal deficit was 9.2% due to the impact of COVID-19, since then it has seen a steady improvement is expected to reduce to 4.8% of GDP FY25 (RE), driven by strong economic growth and higher tax and non-tax revenues. The government aims for further fiscal consolidation, setting a target of 4.4% of GDP for FY26 to maintain fiscal prudence.

Chart 5: Gross Fiscal Deficit (% of GDP)

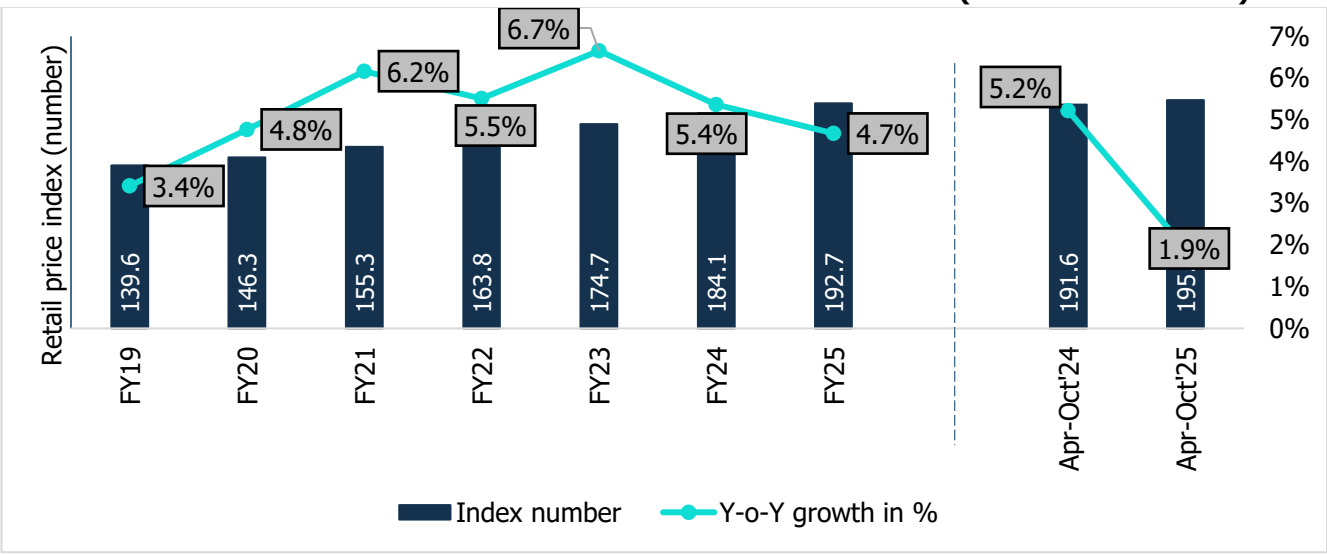


Source: RBI; Note: RE-Revised Estimates, BE-Budget Estimates

1.2.3 Consumer Price Index

The Consumer Price Index (CPI) for the April–October 2025 recorded a combined inflation rate of 1.9%, marking the lowest quarterly retail inflation of the current CPI series. The moderation was driven by the impact of decline in GST, favourable base effect and to drop in inflation of Oils and fats, Vegetables, Fruits, Egg, Footwear, Cereals and products, Transport and Communication etc.

Chart 6: Retail Price Inflation in terms of index and Y-o-Y Growth in % (Base: 2011-12=100)

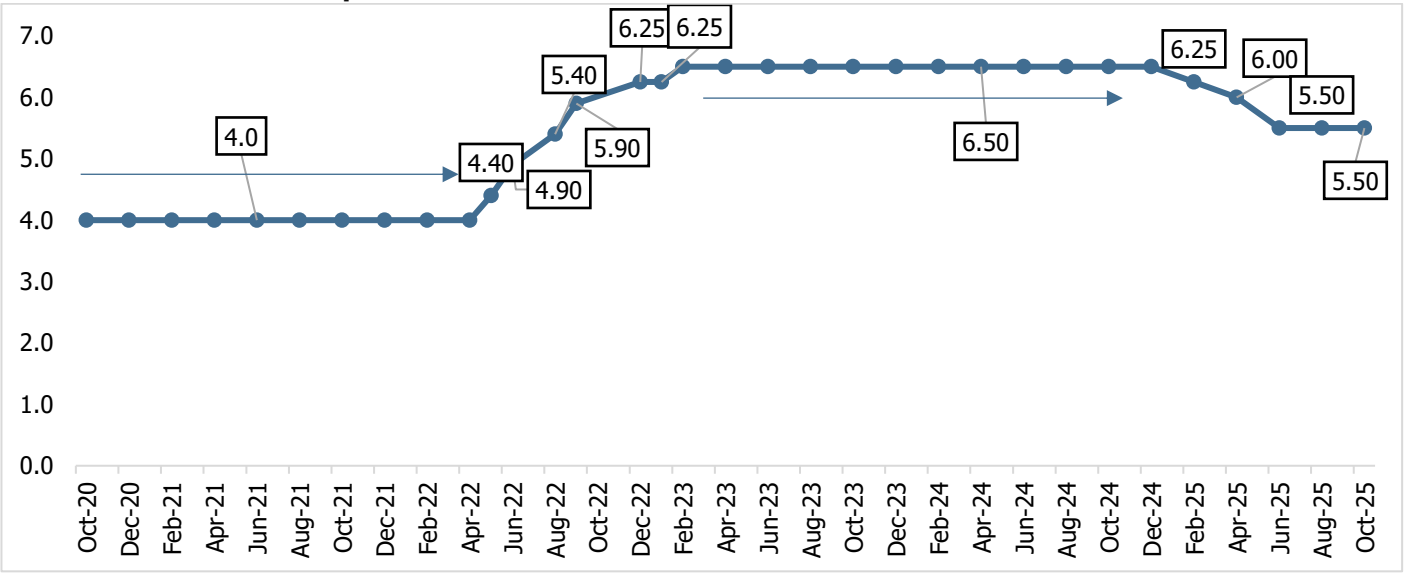


Source: MOSPI

The CPI is primarily factored in by RBI while preparing their bi-monthly monetary policy. At the bi-monthly meeting held in October 2025, RBI projected inflation at 2.6% for FY26 with inflation during Q2FY26 at 1.8% and Q3FY26 at 1.8%, Q4FY26 at 4.0% and Q1FY27 at 4.5%.

Considering the current inflation situation, RBI has maintained the repo rate to 5.5% in the October 2025 meeting of the Monetary Policy Committee.

Chart 7: RBI historical Repo Rate



Source: RBI

Further, the central bank continued it's stance as 'neutral'. The economic growth outlook for India is expected to maintain momentum, supported by private consumption and continued growth in fixed capital formation. The uncertainty has resurfaced as the temporary pause on US tariff hikes has ended and higher duties on some Indian exports now apply, even though trade talks have resumed.

The RBI has adopted for a non-inflationary growth with the foundations of strong demand and supply with a good macroeconomic balance. The domestic growth and inflation curve require the policies to be supportive with the volatile trade conditions.

1.2.4 GVA in the Industrial Sector

India's industrial sector is expected to grow by 10.8% in FY24, reaching Rs. 31.56 trillion, supported by positive business sentiment, falling commodity prices, and government initiatives like production-linked incentives. In FY25, growth is expected to slow down to 5.9% y-o-y, down from 10.8% in FY24. The growth is driven primarily by manufacturing, and utility services. The slowdown can be attributed to the manufacturing segment likely to grow at 4.5%, lower than the previous year's 12.3%.

In Q1FY26, most sectors showed a slowdown in growth, with Industry declining from 8.5% to 6.3% and Mining & Quarrying dropping sharply from 6.6% to -3.1%. However, Manufacturing maintained robust growth, slightly improving to 7.7%.

Table 6: Industrial sector growth (Y-o-Y growth) -at Constant Prices

At constant Prices	FY19	FY20	FY21	FY22	FY23 (FE)	FY24 (FRE)	FY25 (PE)	Q1FY25	Q1FY26
Agriculture, Forestry & Fishing	**2.1**	**6.2**	**4.1**	**4.6**	**6.3**	**2.7**	**4.6**	**1.5**	**3.7**
Industry	**5.3**	**-1.4**	**-0.9**	**12.2**	**2.5**	**10.8**	**5.9**	**8.5**	**6.3**
Mining & Quarrying	-0.9	-3.0	-8.6	6.3	3.4	3.2	2.7	6.6	-3.1
Manufacturing	5.4	-3.0	2.9	10.0	-1.7	12.3	4.5	7.6	7.7
Electricity, Gas, Water Supply & Other Utility Services	7.9	2.3	-4.3	10.3	10.8	8.6	5.9	10.2	0.5

Construction	6.5	1.6	-5.7	19.9	9.1	10.4	9.4	10.1	7.6
GVA at Basic Price	**5.8**	**3.9**	**-4.2**	**9.4**	**7.2**	**8.6**	**6.4**	**6.5**	**7.6**

Source: MOSPI; Note: FRE – First Revised Estimates, FE – Final Estimates, PE- Provisional Estimates

1.2.5 State Domestic Product (SDP)

The State Domestic Product (SDP) reflects the economic output of individual states in India. For FY25, Uttar Pradesh leads with Rs 29,782 billion followed by Maharashtra (Rs 26,123 billion), Tamil Nadu (Rs17,237 billion) and Karnataka (Rs15,703 billion), driven by strong industrial and services sectors. Mid-level economies like Rajasthan, West Bengal, Andhra Pradesh, and Telangana also show steady growth. Smaller states such as Meghalaya and Himachal Pradesh report lower SDPs, highlighting regional disparities. Few major states, including Gujarat have not reported data, limiting full analysis. Overall, the data underscores the concentration of economic activity in southern and western India.

Table 7: State Domestic Product -at Constant Prices

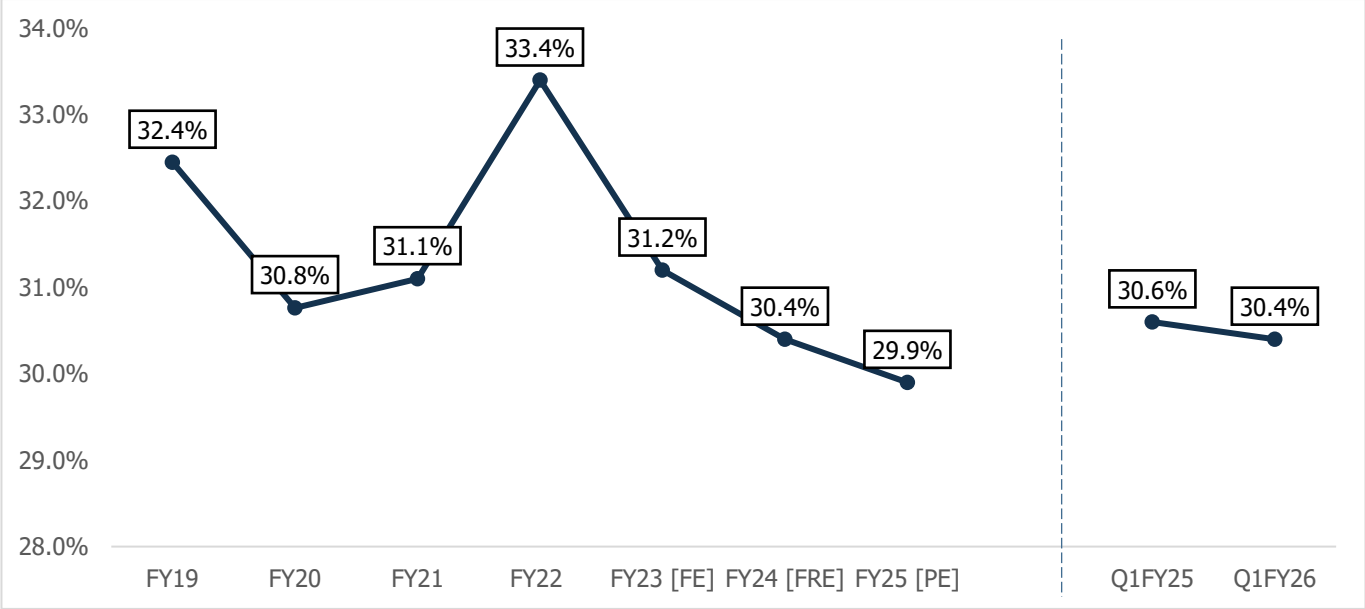
State\UT	FY25
Andhra Pradesh	8,650
Arunachal Pradesh	224
Assam	3,379
Bihar	5314
Chhattisgarh	3,298
Goa	641*
Gujarat	15,970**
Haryana	6,770
Himachal Pradesh	1,466
Jharkhand	3032
Karnataka	15,703
Kerala	6853
Madhya Pradesh	7,123
Maharashtra	26,123
Manipur	225*
Meghalaya	299
Mizoram	217*
Nagaland	206*
Odisha	5,639
Punjab	5,245
Rajasthan	9,063
Sikkim	249*
Tamil Nadu	17,237
Telangana	8,168
Tripura	503
Uttar Pradesh	29,782
Uttarakhand	2,178
West Bengal	9,419
Andaman & Nicobar Islands	81*
Chandigarh	382*
Delhi	7115
Jammu & Kashmir-UT*	1,446
Ladakh	NA
Puducherry	295

Source: MOSPI; Note: *refers to FY24 numbers, **Quick Estimate of FY24 number

1.2.6 Investment Trend in Infrastructure

Gross Fixed Capital Formation (GFCF) is a measure of net increase in physical assets. In FY23, the ratio of investment (GFCF) to GDP remained flat, as compared to FY22 which was at 33.4%. The growth stabilized at 30.4% in FY24 before falling to 29.9% in FY25. The moderation reflects cautious capital spending by both government and private corporations, which has persistently lagged overall GDP growth. In Q1FY26, GFCF as a proportion in GDP, marginally declined to 30.4% as compared to 30.6% in Q1FY25.

Chart 8: Gross Fixed Capital Formation (GFCF) as % of GDP (At current prices)



Source: MOSPI; Note: FRE- First Revised Estimates, FE – Final Estimates, PE- Provisional Estimates

Overall, the support of public investment in infrastructure is likely to gain traction due to initiatives such as Atmanirbhar Bharat, Make in India, and Production-linked Incentive (PLI) scheme announced across various sectors.

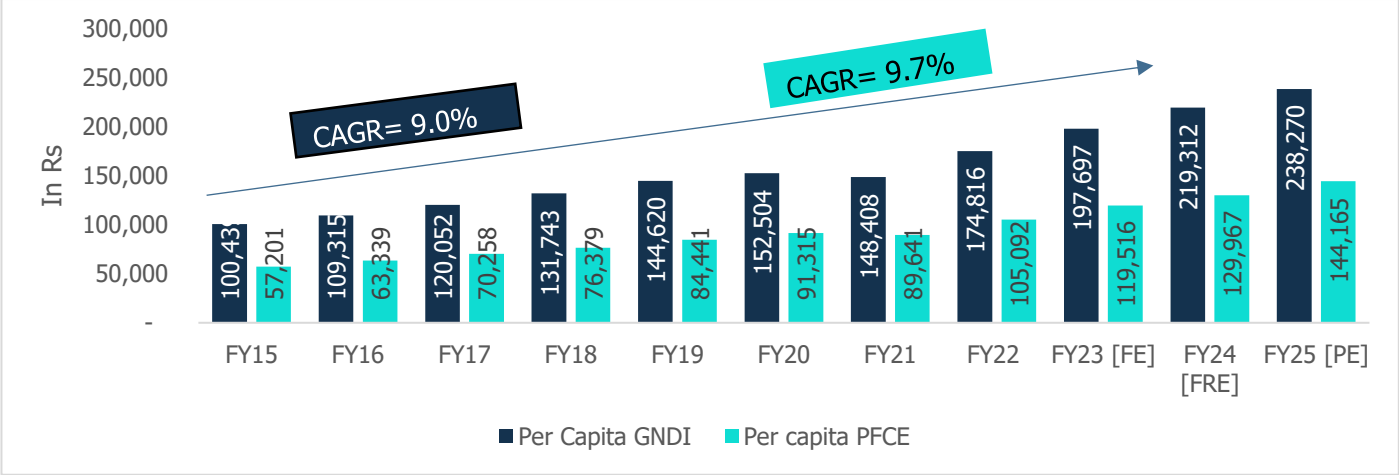
1.2.7 Per capita PFCE and GNDI

- **Increasing Disposable Income and Consumer Spending**

Gross National Disposable Income (GNDI) is a measure of the income available to the nation for final consumption and gross savings. Between the period FY15 to FY25, per capita GNDI at current prices registered a CAGR of 9.0%. More disposable income drives more consumption, thereby driving economic growth.

With increase in disposable income, there has been a gradual change in consumer spending behaviour as well. Per capita Private Final Consumption Expenditure (PFCE) which is measure of consumer spending has also showcased significant growth from FY15 to FY25 at a CAGR of 9.7%.

Chart 7: Trend of Per Capita GNDI and Per Capita PFCE (Current Price)



Source: MOSPI; Note: FRE – First Revised Estimates, FE – Final Estimates, PE- Provisional Estimates

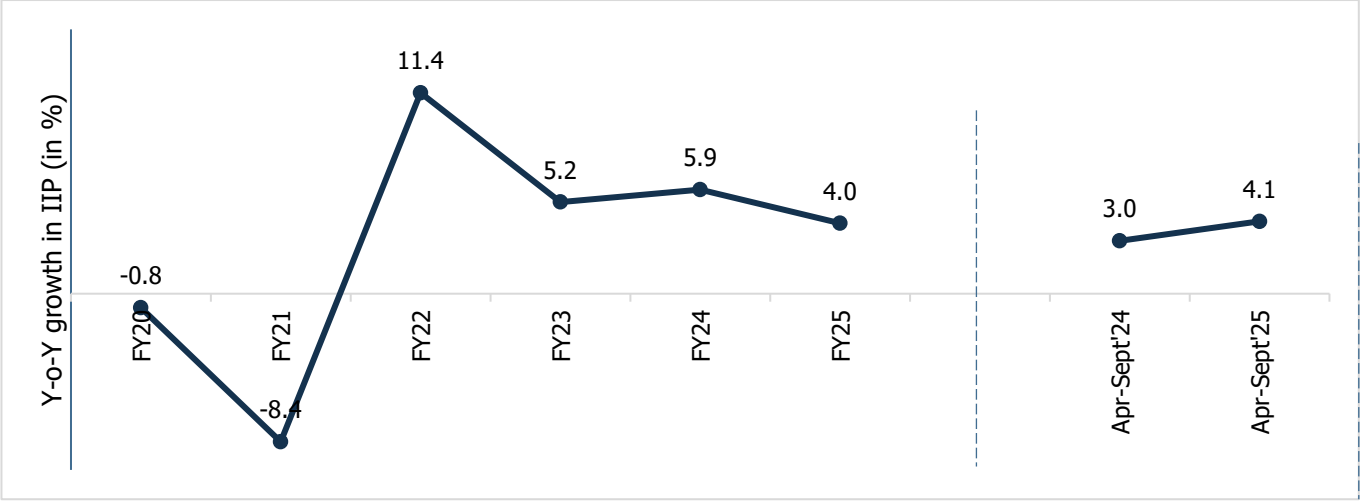
1.2.8 Industrial Growth

The Quick Estimates of the Index of Industrial Production (IIP) for September 2025 show a growth of 4.0%, remaining unchanged from August 2025. The year-on-year moderation reflects weakness across major segments, primarily due to contractions in electricity, mining, and consumer non-durables.

In September 2025, industrial growth was supported by Manufacturing (4.8%) and Electricity (3.1%). Within manufacturing, notable growth was recorded in basic metals, electrical equipment, motor vehicles, trailers and semi-trailers.

Use-based indices reflected mixed trends, with strong growth in Infrastructure Goods (10.5%), but declines in Consumer Durables and Non-Durables indicating subdued consumption and Capital goods. Manufacturing contributed significantly to overall industrial growth. This was primarily driven by strong performance in segments such as pharmaceuticals, motor vehicles, beverages, and electrical equipment.

Chart 9: Y-o-Y growth in IIP (in %)

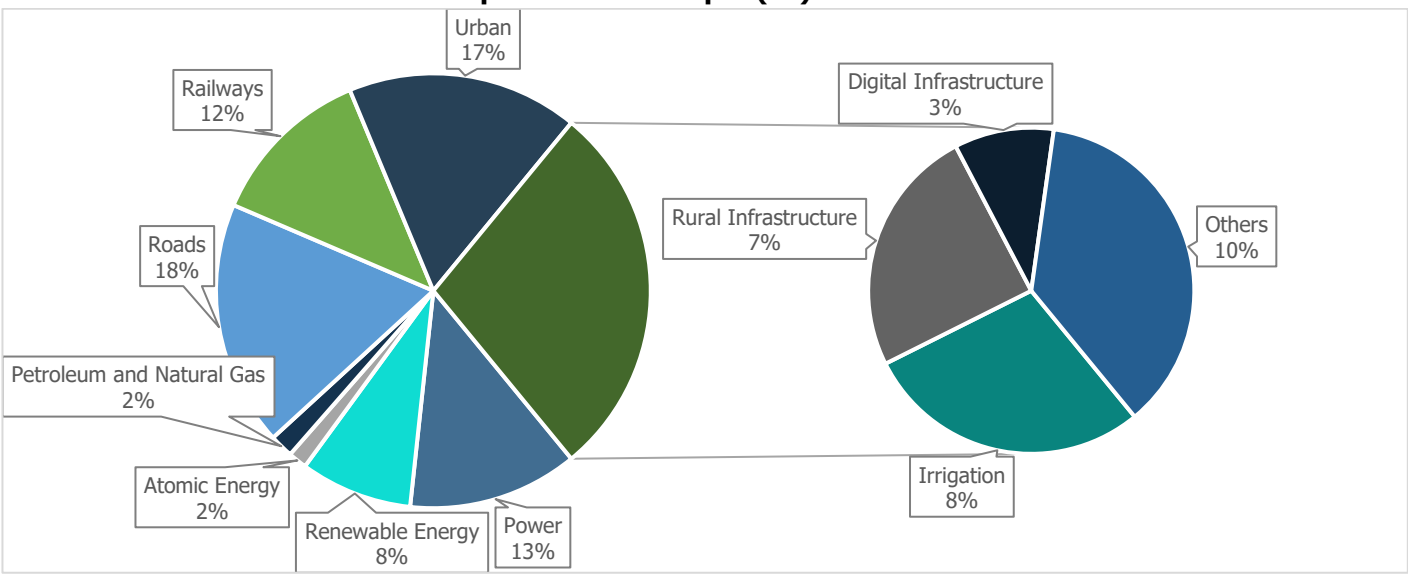


Source: MOSPI

1.2.9 National Infrastructure Pipeline

NIP was launched in December 2019 with a focus on infrastructure development to enable the country to achieve its target of USD 5 trillion economy by FY25 and USD 10 trillion by FY30. Infrastructure to play a major role with 3% contribution to the GDP by FY25 (Rs 11.21 lakh crore) and is expected to remain same or increase its share by FY30 (Rs 25.00 lakh crore).
A taskforce was created to set up the pipeline. In the final report submitted by the task force in April 2020, the pipeline covers multiple sectors, such as urban infrastructure, renewable and conventional energy, roads and railways that constitute 71% of the projected total capex of Rs 11.21 lakh crore. It also includes investments in other sectors such as rural infrastructure, ports, airports among others. The proposed investments will be implemented by both the government and the private sector.

Chart 10: National Infrastructure Pipeline Sectoral Split (%)



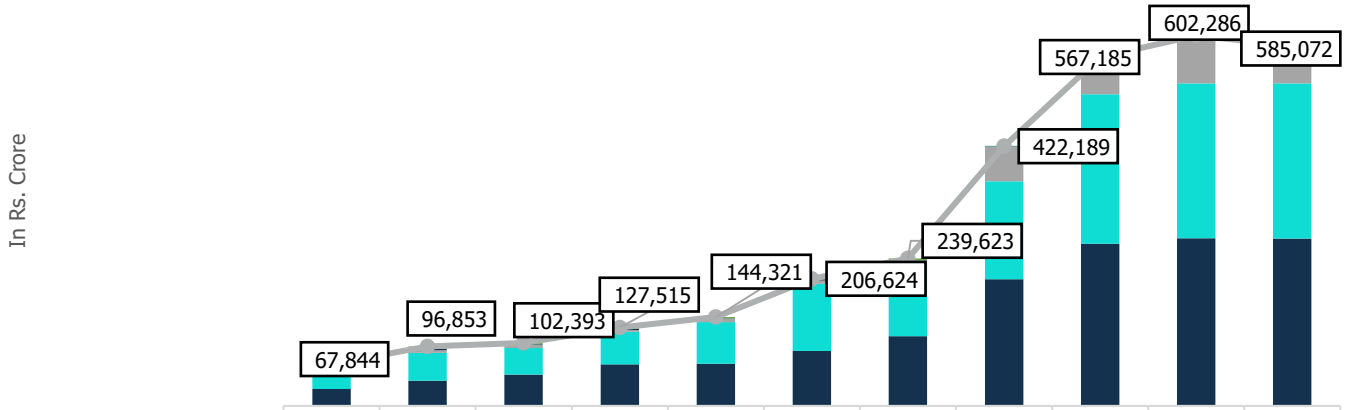
Source: NITI Aayog's report on National Infrastructure Pipeline

During FY20–25, sectors-wise breakup of NIP investment is with energy contributing the highest at Rs 26,900 billion around 24% of the total plan followed by roads Rs. 20,338 billion at 18%, urban Rs. 19,193 billion at 17%, and railways with an investment of Rs. 13,676 billion, which contributes 12% amount to 71% of the projected infrastructure investments in India.

1.2.10 Budgetary expenditure on Infrastructure

With the growing population, the long-term need for robust infrastructure is necessary for economic development. This generates the need for massive investments in the development and modernization of infrastructure facilities, which will not only cater to the growing demand but will also ensure competitiveness in the global market.

Chart 11: Budgetary outlay towards infrastructure



	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Power	1,276	3,816	1,941	2,043	1,615	370	2,827	23	125	1,127	658
Ports	218	330	182	154	259	169	614	678	1,149	1,342	1,761
Oil & Gas	1,153	2,451	1,131	1,908	572	2,313	347	40	41	341	6,626
Telecom	2,657	3,832	4,969	2,926	5,660	5,254	5,254	56,205	59,380	74,995	51,785
Railways	35,008	45,232	43,418	52,838	67,842	109,324	117,271	159,256	242,579	252,000	252,000
Roads and Highways	27,533	41,193	50,752	67,646	68,374	89,195	113,312	205,986	263,912	272,481	272,241
Total	67,844	96,853	102,393	127,515	144,321	206,624	239,623	422,189	567,185	602,286	585,072

Source: Union Budget FY26 document

Some of the key government infrastructure schemes include:

- The government has announced plans for the National Monetization Pipeline (NMP) and Development Finance Institution (DFI) to improve the financing of infrastructure projects
- The government has helped the growth of urbanization through a number of schemes and projects, including the **Smart Cities Mission,** the **Atal Mission for Rejuvenation and Urban Transformation (AMRUT),** and the **Pradhan Mantri Awas Yojana (Urban).**

1.3 Concluding Remarks

Global economic growth faces headwinds from geopolitical tensions, volatile commodity prices, high interest rates, inflation, financial market volatility, climate change, and rising public debt. However, India's economy remains relatively strong, with an IMF forecast of 6.6% GDP growth in CY25 (FY26 according to the fiscal year), compared to the global projection of 3.2%. Key drivers include strong domestic demand, government capital expenditure and moderating inflation.

Public investment is expected to exhibit healthy growth as the government has allocated a strong capital expenditure of about Rs. 11.21 lakh crores for FY26. The private sector's intent to invest is also showing improvement as per the data announced on new project investments and resilience shown by the import of capital goods. Additionally, improvement in rural demand owing to healthy sowing, improving reservoir levels, and progress in south-west monsoon along with government's thrust on capex and other policy support will aid the investment cycle in gaining further traction.

The recent 56th meeting of the Goods and Services Tax (GST) Council announced some major changes in the existing GST structure. The focus is majorly on simplifying it to a two-tiered GST tax structure of 5% and 18%, phasing out the currently existing 12% and 28% slabs. There is also a de-merit tax rate for luxury and 'sin' goods at a 40% tax slab. These changes are typically aimed at increasing the disposable income and in turn boosting consumption, as well as

promoting the ease of doing business. The GST rationalization is expected to be a positive step towards economic growth, stimulating private consumption and ease inflationary pressures. The recent revisions in income tax rates, coupled with the reduction in GST, are expected to result in savings of over Rs 2.5 lakh crore, which is likely to further boost the consumption.

The impact of U.S. tariffs on India's export trade is anticipated to be minimal. The engineering goods sector will have a potential U.S. tariff impact, whereas steel industry is affected by the 50% tariffs although the impact is expected to be minimal given the volume of goods exported is less.

On February 13th, 2025, India and US discussed enhancing the U.S.-India trade relationship, with a target to increase bilateral trade from USD 200 billion to USD 500 billion by 2030. As of September 2025, India and the U.S discussions seem "positive and forward looking"

Thus, while U.S. tariffs may have a limited impact on India's exports, ongoing trade negotiations and India's competitive manufacturing advantage position it well for continued growth in global trade.

2 Overview of Global Logistics sector

2.1 Overview of global logistics scenario

The global logistics scenario is defined by complexity, speed, and constant disruption, shaped by evolving trade patterns, technology adoption, and sustainability imperatives. Supply chains now span continents, relying heavily on just-in-time inventory, real-time data, and multimodal transport networks. Asia continues to serve as the world's manufacturing hub, while North America and Europe remain primary consumption markets, making international shipping routes and chokepoints critical. However, the system faces mounting pressures from geopolitical tensions, port congestion, labour shortages, and rising fuel costs, alongside increasing demand for digital integration and sustainable practices. As businesses push for resilience and flexibility, logistics is shifting from being cost-driven to strategy-driven, with automation, AI, and nearshoring gaining momentum worldwide.

Tensions between major powers, especially the U.S. and China, are compelling firms to rethink sourcing and production strategies. Emerging practices such as "China plus one", nearshoring, and friend-shoring are reshaping global trade flows. At the same time, new logistics corridors like the India-Middle East-Europe Economic Corridor (IMEC) and rising infrastructure investments in Africa aim to diversify supply routes and reduce dependence on traditional nodes such as the Suez Canal and Strait of Malacca. Previously regarded largely as a cost centre, logistics is now positioned as a strategic function tied to customer experience, risk management, and business continuity. Companies are investing in supply chain visibility, multi-sourcing, and adaptive planning, making the goal no longer just efficiency but resilience and agility in the face of global volatility.

2.2 Overview of the trade routes globally

1. Maritime Routes – The Backbone of Global Trade

Over 80% of global trade by volume moves via sea. The most critical maritime routes include:

- **The Strait of Malacca**: A narrow passage between Malaysia and Indonesia, it's the shortest sea route between the Pacific and Indian Oceans and crucial for trade between Asia and the Middle East/Europe.
- **The Suez Canal**: Linking the Red Sea to the Mediterranean, it's a key route for Asia-Europe trade. Its blockage in 2021 showed just how vital and vulnerable it is.
- **The Panama Canal**: Connecting the Atlantic and Pacific Oceans, it's essential for East-West trade across the Americas.
- **The South China Sea**: One of the world's busiest maritime regions, heavily trafficked by vessels moving between China, Southeast Asia, and global markets.
- **The North Atlantic Route**: The historic shipping lane between North America and Europe, still vital for transatlantic trade.

2. Land-Based Corridors and Silk Road Revivals

While maritime routes dominate, land-based corridors are increasingly important, especially for time-sensitive or high-value goods.

- **China-Europe Rail**: As part of China's Belt and Road Initiative (BRI), overland rail links now connect Chinese cities with Europe via Central Asia, offering faster transit than sea and cheaper than air.

- **Trans-Siberian Railway**: A critical rail link across Russia, connecting Asia with Europe, though its importance has shifted due to geopolitical tensions.
- **North American Trade Routes**: The USMCA (formerly NAFTA) framework supports heavy trade flow by road and rail between the U.S., Canada, and Mexico.

3. Air Freight Corridors

Air routes handle high-value, low-volume, and time-sensitive goods. Major hubs include:

- **Asia–North America**: Heavy flows between China, Japan, Korea, and U.S. tech and retail markets.
- **Europe–North America**: Pharmaceutical, automotive, and luxury goods are key exports.
- **Intra-Asia**: A fast-growing region for electronics, garments, and perishable goods.

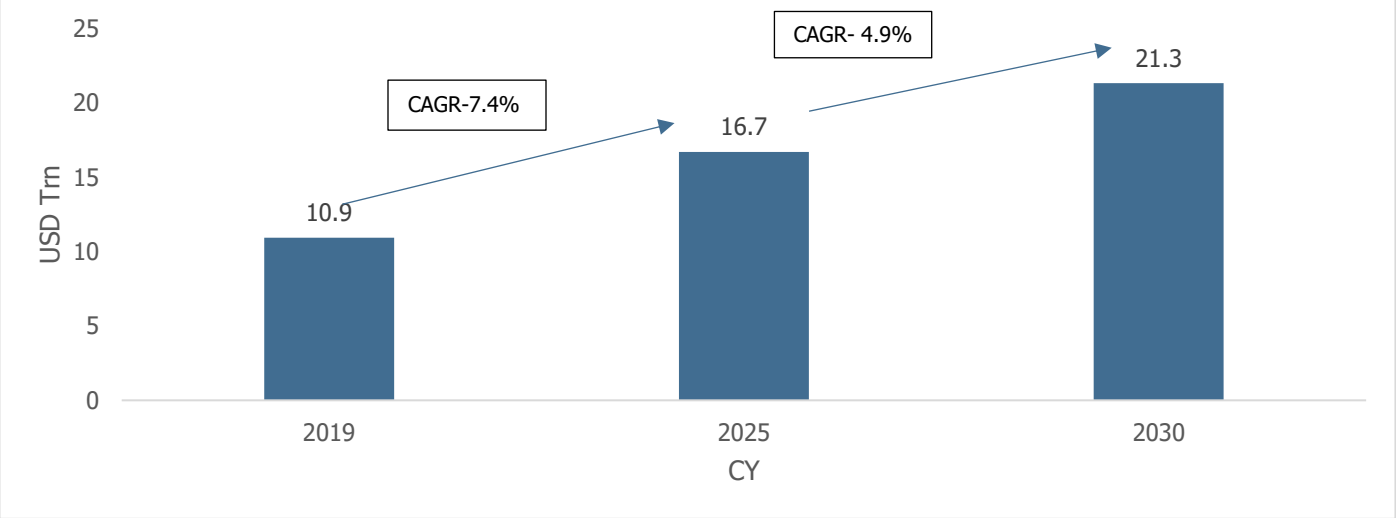
4. Emerging and Strategic Routes

New and strategic trade routes are gaining ground:

- **The Arctic Route**: Climate change is opening navigable paths along Russia's Northern Sea Route (NSR), shortening transit between Europe and Asia. However, environmental and political concerns make it controversial.
- **India–Middle East–Europe Corridor (IMEC)**: Launched as a potential alternative to China's BRI, this route aims to connect India to Europe via the UAE, Saudi Arabia, and Mediterranean ports.
- **Africa's Trade Corridors**: Investment in East-West and North-South corridors like the LAPSSET project in East Africa is enhancing regional connectivity and access to global markets.

2.3 Market Size of Global Logistics Service sector

Chart 12: Market Size of Global Logistics service sector



Source: Logistics Skill Council, Care Edge Research

The growth trajectory of the global logistics market, with market size expanding from USD 10.9 Trn in 2019 to a projected USD 21.3 Trn by 2030.

Key growth drivers include the surge in e-commerce and cross-border trade, which have intensified the need for efficient last-mile delivery and supply chain optimization. Additionally, the integration of digital technologies such as AI, IoT, and blockchain is enhancing transparency, automation, and operational efficiency across logistics networks. Infrastructure investments, particularly in emerging markets, and supportive government policies like national logistics and warehousing strategies are also playing a pivotal role. Furthermore, the growing emphasis on sustainability is pushing the sector toward green logistics solutions, including electric fleets and multimodal transport systems. Collectively, these dynamics are expected to keep the logistics sector on a robust growth path through 2029.

2.4 Overview of areas of collaboration between India and Bangladesh

India and Bangladesh enjoy a deep-rooted and evolving bilateral relationship anchored in shared history, culture, geography, and strategic interests. The areas of collaboration between the two nations are diverse and far-reaching. Connectivity and infrastructure form a critical pillar, with operationalization of multiple cross-border rail links such as Akhaura-Agartala and the revival of five pre-1965 railway routes improving sub-regional transport. Road connectivity is also important through the Petrapole-Benapole land border, providing road transport services, moving freight (including industrial goods, agricultural produce, and manufactured items) and facilitating efficient clearance via Integrated Check Posts (ICPs). The Petrapole (India)-Benapole (Bangladesh) crossing handles a large share of overland trade value between the two countries. Additionally, road connectivity has been enhanced through five international bus services and a network of Integrated Check Posts (ICPs), while inland waterways under the Protocol on Inland Water Transit and Trade (PIWTT) have enabled cost-effective cargo movement and cruise tourism. The usage of Chittagong and Mongla Ports by India for transit to its northeastern states marks a strategic leap in regional logistics. In power and energy, Bangladesh imports over 1,100 MW of electricity from India, facilitated by institutional frameworks like the Joint Steering Committee. Joint energy projects like the Maitree Super Thermal Power Plant and the India-Bangladesh Friendship Pipeline underscore energy interdependence, while cooperation extends to petroleum product supply and offshore oil exploration through ONGC Videsh and IOCL.

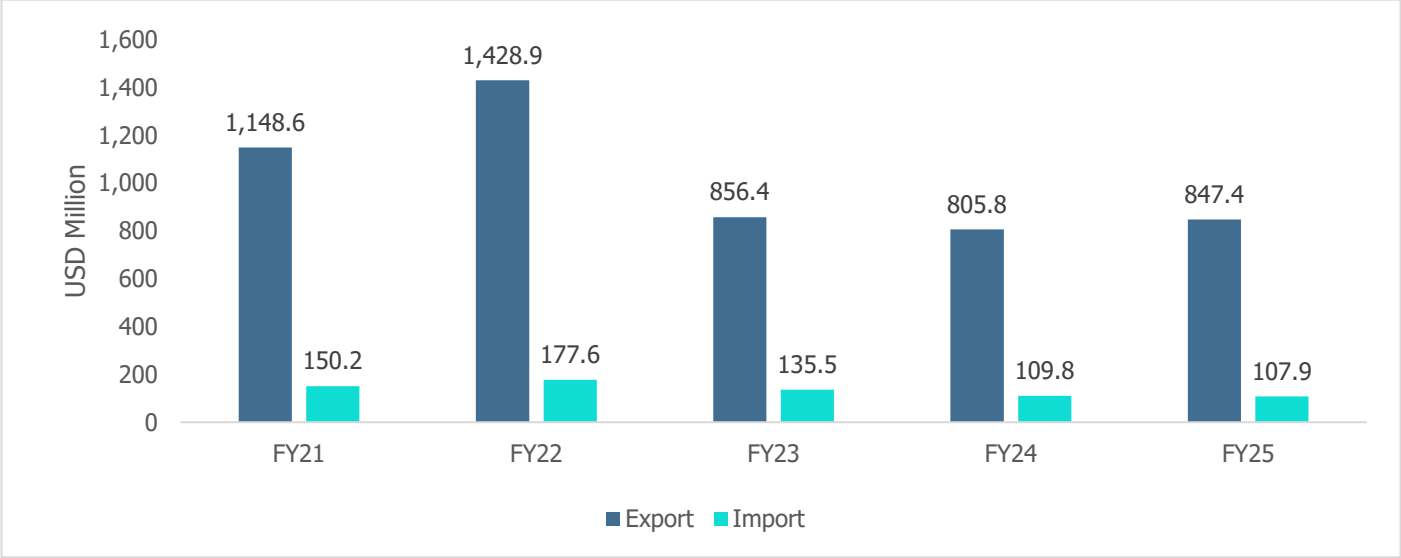
In terms of economic and trade engagement, Bangladesh is India's largest trading partner in South Asia, with bilateral trade reaching nearly USD 16 billion in FY 2022–23. India exports industrial machinery, chemicals, and agricultural products, while importing garments, jute, and leather. Indian investments in Bangladesh have been steadily increasing, especially in infrastructure and energy, and Free Trade Agreement (FTA) discussions signal a deepening commercial alignment. India also remains Bangladesh's largest development partner, having extended USD 8 billion in Lines of Credit for infrastructure development across transport, energy, and ports, in addition to numerous grant-based assistance projects and High Impact Community Development Projects (HICDPs). Defence cooperation is growing, with annual defence dialogues, tri-services talks, and reciprocal high-level military visits. Bangladesh participates in joint training programs, military exchanges, and maritime security initiatives, including naval cooperation in the Bay of Bengal.

On the security and border management front, both nations collaborate actively to address challenges such as illegal migration, human trafficking, fake currency circulation, and drug smuggling. Mechanisms like DG-level talks between border forces and anti-drug agencies, joint patrolling, and boundary demarcation initiatives have enhanced coordination across the 4,096-km-long shared border. Intelligence sharing and coordinated operations have also curbed insurgency and ensured stability, especially in India's northeastern states. The cultural and people-to-people ties are another vibrant dimension, nurtured through institutions like the Indira Gandhi Cultural Centre, language and dance training, youth delegations, and exchange programs. Over 800 Bangladeshi nationals participate annually in India's ITEC training programs, while more than 1,000 Suborno Jayanti Scholarships have been offered to Bangladeshi students for higher education in premier Indian institutions.

The two countries also maintain strong collaboration in regional and multilateral forums such as SAARC, BIMSTEC, BBIN, and IORA. Together, they champion initiatives like the BIMSTEC Coastal Shipping Agreement and BBIN transport

corridors, while working on climate change, regional security, and disaster resilience. The resolution of the maritime boundary dispute in 2014 has enabled joint efforts to harness the Blue Economy, including fishing, energy, and environmental protection. Joint efforts in disaster management, flood control, and early warning systems continue to evolve, as do collaborations in solar, hydro, and wind energy development. Meanwhile, water-sharing issues, especially of the Teesta and Ganga rivers, remain sensitive but critical areas of negotiation, with efforts being made through the Joint Rivers Commission. Despite increasing Chinese influence in Bangladesh through the Belt and Road Initiative, India maintains strategic engagement through infrastructure investments, Act East Policy, and digital, agricultural, and startup cooperation. Overall, the Indo-Bangladesh relationship stands as a model of South-South cooperation, balancing bilateral interests, regional integration, and global partnerships across all key domains of diplomacy, development, and security.

Chart 13: Trade Dynamics of India with Bangladesh



Source: Ministry of Trade and Commerce

2.5 Overview of express transport between India and Bangladesh

India and Bangladesh have significantly enhanced express transport connectivity in recent years, aimed at promoting regional integration, facilitating trade, and easing passenger mobility. In the railway sector, three international express train services are operational:

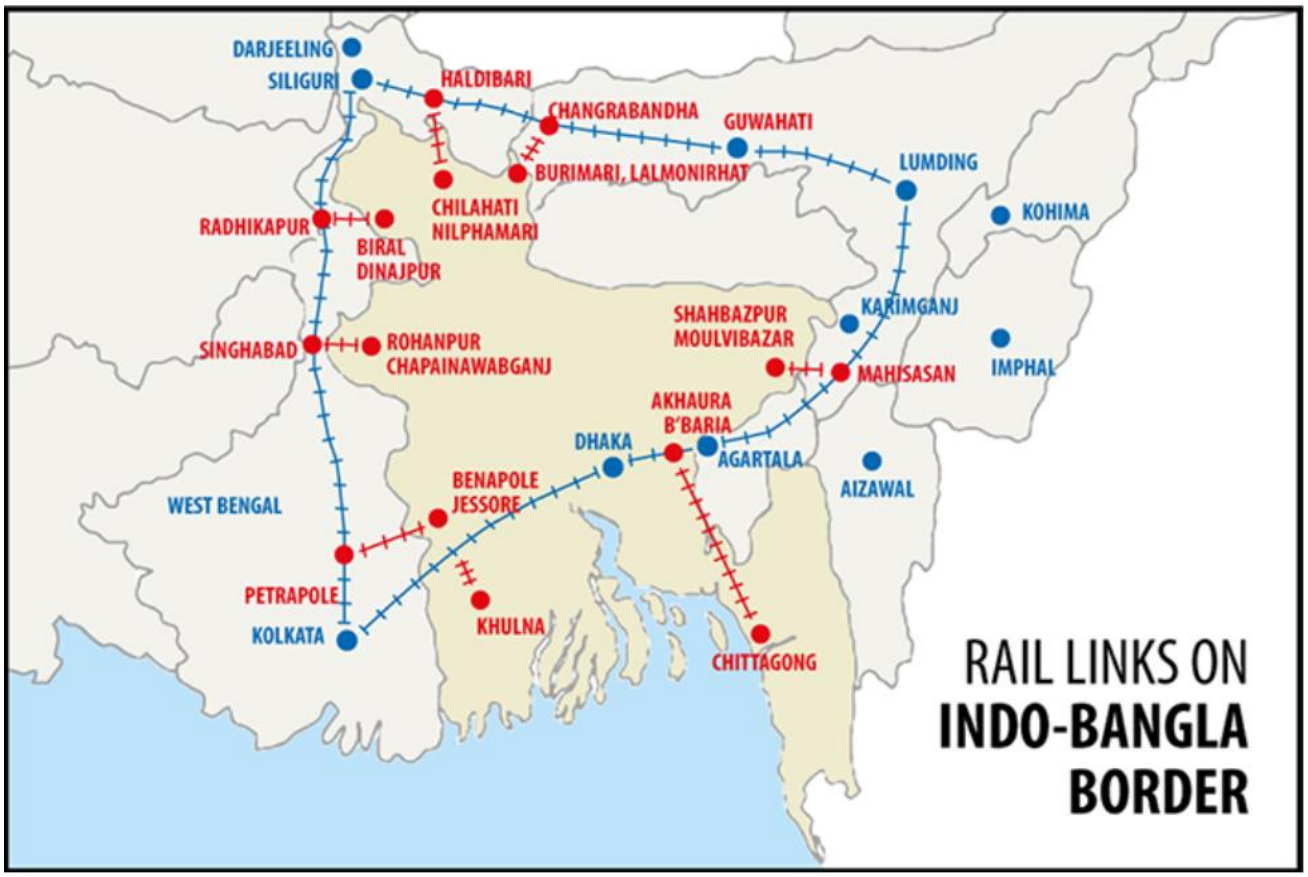
- Maitree Express (since 2008) connects Kolkata and Dhaka,
- Bandhan Express (since 2017) links Kolkata and Khulna,
- Mitali Express (since 2022) operates between New Jalpaiguri and Dhaka

These trains offer streamlined customs and immigration procedures at designated terminals and serve as critical people-to-people links. Additionally, the Akhaura–Agartala rail link, inaugurated in 2023, provides the first direct rail connection between Northeast India and Bangladesh, reducing travel time and supporting faster cargo movement.

On the roadways, five international bus services are currently operational between major cities such as Kolkata, Agartala, and Guwahati in India to Dhaka and Khulna in Bangladesh, offering reliable, scheduled express road transport. These bus services are operated through bilateral agreements and offer convenience to tourists, students, and business travellers.

In terms of waterway express transport, both countries operate cruise services and inland cargo routes under the Protocol on Inland Water Transit and Trade (PIWTT), including express riverine cargo movement on select routes. With the operationalization of Chittagong and Mongla ports for Indian use, express cargo connectivity has been enhanced between mainland India and its northeastern states, bypassing the long Siliguri Corridor.

Overall, express transport links have helped reduce travel time, enhance cross-border logistics efficiency, and support broader regional integration under frameworks like BBIN and BIMSTEC.



The Maitree Express (Dhaka–Kolkata), Bandhan Express (Kolkata–Khulna), and Mitali Express (New Jalpaiguri–Dhaka) marks a significant milestone in bilateral connectivity. These services are part of a broader rail network that includes key freight and passenger links such as Petrapole-Benapole, Gede-Darshana, Singhabad-Rohanpur, Radhikapur-Birol, Haldibari-Chilahati, and Agartala-Akhaura, many of which have been restored to boost trade and mobility between the two nations.

Beyond transport, India and Bangladesh share a rich historical, strategic, and economic relationship, rooted in India's support for Bangladesh's liberation in 1971. Defence ties are solidified through regular joint military exercises such as SAMPRITI (Army), Bongosagar and IN-BN CORPAT (Navy), and multilateral HADR exercises like SAMVEDNA. With the longest land border of 4,096.7 km, both countries have developed cooperative mechanisms for border management, though challenges like illegal migration and border incidents remain.

Economically, Bangladesh is India's largest trading partner in South Asia with bilateral trades, India contributing over 85% of that through its exports. Initiatives such as the India-Bangladesh CEO's Forum and SAFTA's Duty-Free Quota-Free access for Bangladeshi goods have supported trade liberalization. Major infrastructure projects, like the Maitri Setu

Bridge and investments via over USD 8 billion in Lines of Credit, reflect India's commitment to Bangladesh's development, especially in roads, railways, and port connectivity.

Multilateral engagement through forums like SAARC, BIMSTEC, BBIN, and IORA strengthens regional cooperation. India's Protocol on Inland Water Transit and Trade (PIWTT) and the forthcoming BBIN Motor Vehicle Agreement further reinforce cross-border mobility and integration. In the health sector, India's COVID-19 assistance to Bangladesh including vaccine supply and medical collaboration positioned it as Bangladesh's largest vaccine partner.

However, emerging challenges such as concerns over India's NRC (National Register of Citizens) in Assam, Bangladesh's strategic balancing through Chinese defence imports and BRI projects, and unresolved water-sharing issues like that of the Teesta River have introduced friction points in bilateral diplomacy.

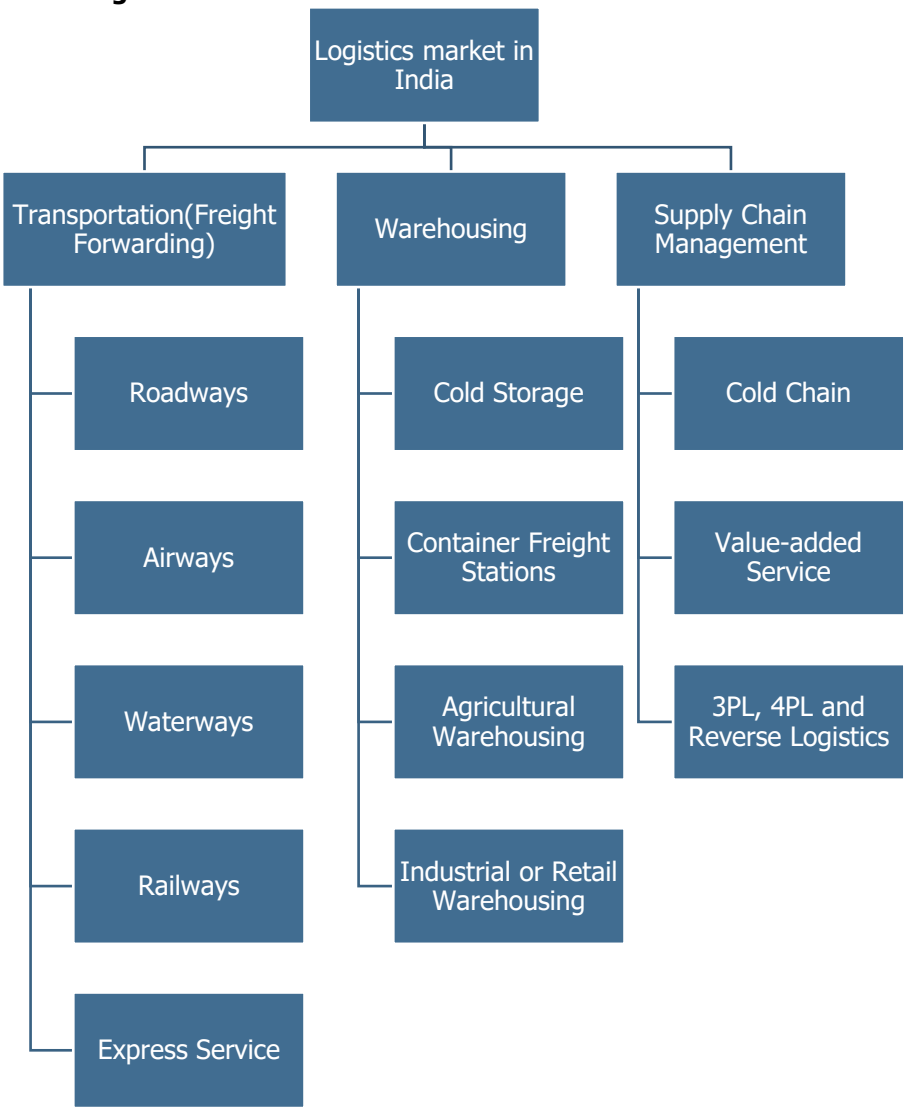
Going forward, both nations need to prioritize resolving these differences and reimagine the border as a connector zone for inclusive prosperity. Enhancing cooperation in sustainable development, human capital exchange, climate resilience, and promoting tourism and cultural ties will further solidify this multifaceted partnership. Regular exchanges between entrepreneurs, youth, and civil society, alongside institutional mechanisms to prevent misinformation and border conflicts, are essential for nurturing a future-ready relationship.

2.6 Challenges in India- Bangladesh relations

Border and Security Issues:	The 4,096 km shared border sees challenges like illegal immigration, smuggling, and occasional clashes between border forces, despite mechanisms for coordination.
Water Sharing Disputes:	The long-pending Teesta River agreement remains unresolved due to political resistance in India, while overall river water management suffers from poor coordination and climate variability.
Trade Imbalance and Connectivity Delays:	India dominates bilateral trade (~85% exports), while Bangladesh faces tariff barriers and slow infrastructure project execution, limiting market access and seamless connectivity.
China's Strategic Footprint:	Bangladesh's growing defense imports and infrastructure investments from China under the Belt and Road Initiative (BRI) pose strategic concerns for India.
Political Instability and Public Sentiment:	Changes in Bangladesh's leadership, anti-India rhetoric, and communal incidents have occasionally strained diplomatic ties.
NRC and Migration Concerns:	India's NRC exercise has raised fears of forced migration in Bangladesh, affecting trust and diplomatic engagement.
Media Distortion and Misinformation:	Sensationalist media coverage on both sides can inflame tensions and misrepresent facts, undermining public trust.
Stalled Regional Cooperation:	Frameworks like SAARC, BBIN, and BIMSTEC face slow implementation, reducing regional integration prospects.
Climate and Environmental Gaps:	Despite shared climate risks, joint disaster management and cross-border environmental efforts remain limited.

3 Indian Logistics Sector

3.1 Value Chain for Logistics



Logistics Value Chain in India

1. Transportation (Freight Forwarding) – Primary Movement of Goods

This is the first stage of the logistics value chain, enabling the physical movement of goods.

- **Roadways –** Provides last-mile and regional connectivity, crucial for retail, FMCG, and e-commerce distribution.
- **Airways –** Adds speed to the chain, moving high-value or urgent shipments, often used in pharma, electronics, and perishables.
- **Waterways –** Moves bulk commodities (coal, cement, fertilizer) at lower costs, suitable for long-distance port-based trade.

- **Railways –** Ensures large-volume cargo movement, linking industrial production hubs with consumption centres.
- **Express Service –** Supports fast delivery requirements, particularly in the e-commerce and courier segment.

2. Warehousing – Storage & Inventory Management

Warehousing forms the backbone of the value chain by holding goods until they are required for production or consumption**.**

- **Cold Storage –** Maintains product quality of perishable goods, extending their shelf life within the chain.
- **Container Freight Stations (CFS) –** Provides intermediate storage and customs clearance for export-import cargo, easing port congestion.
- **Agricultural Warehousing –** Safeguards harvested crops, supporting food supply stability and farmer income.
- **Industrial or Retail Warehousing –** Serves as distribution hubs, consolidating inventory for factories, wholesalers, and retailers.

3. Supply Chain Management (SCM) – Integration & Optimization

SCM brings together transportation and warehousing to create an efficient, end-to-end logistics ecosystem.

- **Cold Chain –** Extends cold storage into transportation, ensuring unbroken temperature-sensitive delivery across the chain.
- **Value-added Services –** Activities like packaging, labelling, assembly, and kitting add efficiency and customer-centric flexibility.
- **3PL, 4PL, and Reverse Logistics –**
    - 3PL manages outsourced logistics functions.
    - 4PL acts as a supply chain orchestrator, integrating multiple providers for end-to-end optimization.
    - Reverse logistics closes the loop by managing returns, refurbishments, and recycling.

3.2 Cost Comparison of Logistics for key countries

India has been the world's fastest-growing major economy for four of the past five years, due to rising demand for goods and services.

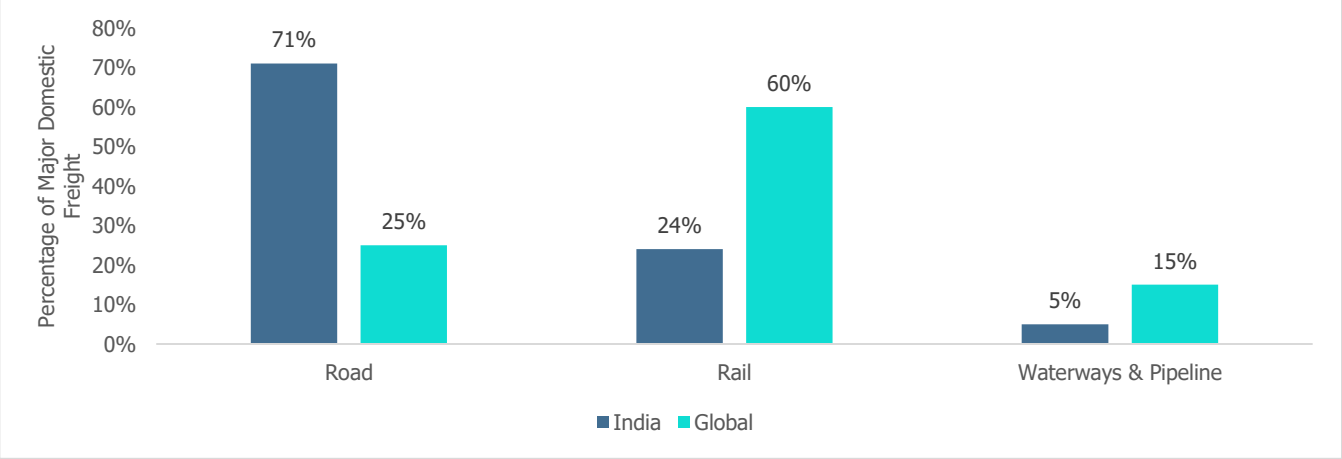
In 2023-24, merchandise exports stood at USD 437.10 billion, while services exports contributed USD 341.11 billion, demonstrating a well-balanced expansion. Key sectors like electronics, pharmaceuticals, engineering goods, iron ore, and textiles played a vital role in this surge. The momentum has continued into FY 2024-25, with cumulative exports during April-December 2024 estimated at USD 602.64 billion, a 6.03% increase from USD 568.36 billion in the same period of 2023. India is inching closer to breaking into the top three trading partners in the world. To achieve that, it would require well integrated logistics policies.

India handles 4.6 billion tonnes of goods each year, amounting to a total annual cost of INR 9,50,000 crore. These goods represent a variety of domestic industries and products - 22% are agricultural goods, 39% are mining products and 39% are manufacturing-related commodities. Trucks and other vehicles handle most of the movement of these goods. Railways, coastal and inland waterways, pipelines, and airways account for the rest. Major domestic freight is

still transported by road which accounts for 71% (25% globally) followed by rail - 24% (60% globally), waterways - 5% and balance through pipelines.

Rail and road are the primary mode of logistics for the domestic trade. Road is the dominant mode of transport which accounts for more than 70% of freight movement in India. Trucks are the most widely used mode of transportation in India. At present, around 1.5 million trucks operate on the Indian roads, and the number of trucks increases by around 10% per year. Railways are considered a relatively cheaper mode of transport and are used mainly for transporting bulk materials over long distances.

Chart 14: Share of Major Domestic Freight by Mode of Transport (FY22)



Source: Ministry of Railways, Report of the Committee on Mission 3000 million tonnes, Industry Sources

As per the revised data, India's logistics costs for the FY25 are estimated at 7.97% of the total GDP, according to a report by the National Council of Applied Economic Research (NCAER) for the Department for Promotion of Industry and Internal Trade (DPIIT).

Logistics industry connects other industries to domestic and international markets, it affects the efficiency of the manufacturing global value chains, and competitiveness of a country's economy within these value chains. Higher cost of logistics adversely affects the global competitiveness of the industry and consequently hampers the overall economic prosperity of the nation. The Indian Government is focusing on means to reduce the logistics cost to developed economies average of 8-10%. India being a large subcontinent, efficient and low-cost transportation of minerals, food grains, industrial goods, export consignments etc. to and from interiors is vital for its healthy, evenly spread and balanced economic growth. To address this issue, the National Logistic Policy was introduced in 2022 to enable shift of logistic movement away from over dependence on roads. It also concentrates on improving efficiency and reduce cost of freight movement in the country. To increase the share of rail in freight transport, Indian Railways has prepared National Rail Plan (NRP) which envisages creation of a 'future ready' railway system by 2030. NRP aims to increase modal share of the Indian Railways in freight to 45% by 2030 from the current 26% by augmenting the freight volumes from 1,418 million tonnes in FY2022 to 3,600 million tonnes by FY2031, implying a CAGR of 11%. During FY24, freight volume crossed 1,500 million tonne mark. The objective of the Plan is to create capacity ahead of demand, which in turn would also cater to future growth in demand up to 2050.

Also, Dedicated Freight corridor is being prepared which will provide faster movement of good. Dedicated Freight Corridor is broad-gauge high-capacity railway corridor under construction by the Indian Railways that is exclusively meant for the transportation of goods and commodities. It was conceptualized in around 2005 with an aim to increase share of railways in total domestic freight transportation and Dedicated Freight Corridor Corporation of India (DFCCIL)

was set up to undertake planning & development, mobilization of financial resources, construction, operation & maintenance, and business development of the dedicated freight corridors. To develop the ports and improve the movement of goods by inland waterways, government have come up with Sagarmala programme. It also aims to convert the existing ports into modern world class ports and integrate the creation of the ports, industrial clusters and hinterland, and efficient evacuation systems through road, rail, inland and coastal waterways resulting in ports becoming the drivers of economic activity in coastal areas.

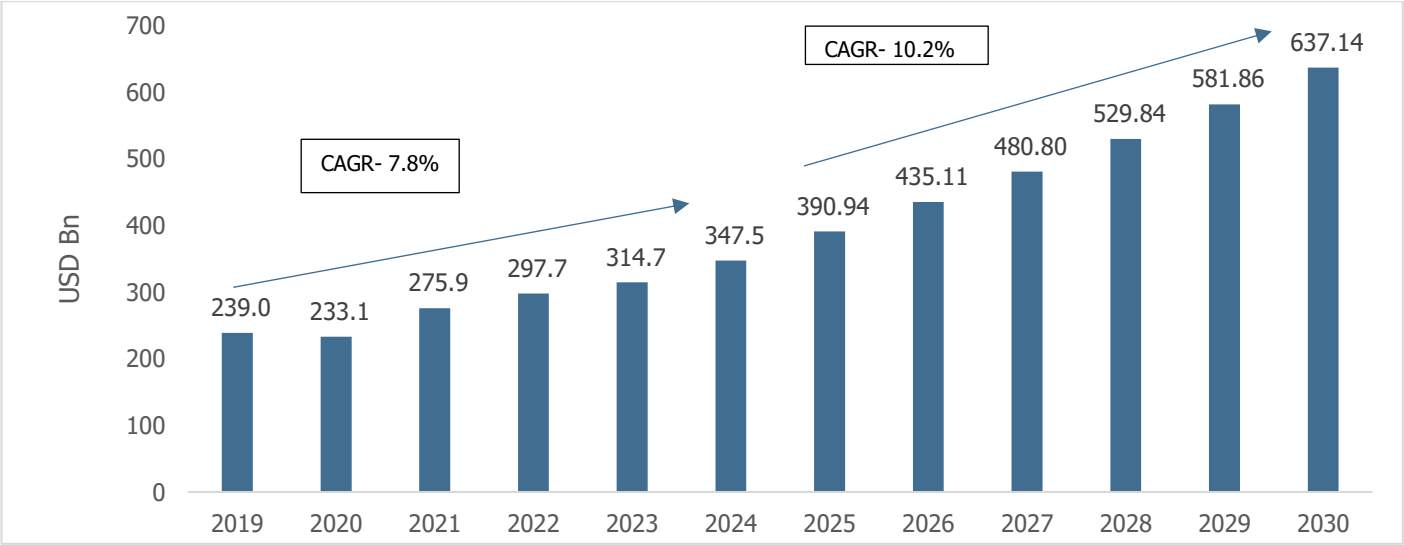
The government has launched major road-infrastructure programmes to reduce logistics cost and strengthen connectivity. Under Bharatmala Pariyojana, a large network of economic corridors, inter-corridors, feeder routes, border & international connectivity roads, coastal & port connectivity roads and expressways are being constructed to improve freight flow and reduce journey times. In addition, India plans to expand its high-speed/controlled-access road network, with thousands of kilometres of access-controlled roads to allow higher travel speeds, more reliable transit, and lower operating costs for freight vehicles. The National Highways Development and other such initiatives focus on widening existing highways, improving road quality, removing bottlenecks such as state check posts, and ensuring better last-mile connectivity. Together with Multi-Modal Logistics Parks (MMLPs), which connect road networks with warehousing, intermodal facilities, and value-added services to reduce time-in-transit and handling cost, these road-focused reforms aim to complement the rail & waterway push under NLP.

3.3 Market Size of Logistics Service Sector in India

The growth of India's logistics sector is being propelled by multiple structural and demand-side drivers. Government policy support through the National Logistics Policy, PM Gati Shakti, and Dedicated Freight Corridors is reducing bottlenecks and targeting lower logistics costs as a share of GDP. E-commerce expansion and the rapid rise of omni-channel retail have significantly boosted demand for express delivery, warehousing, and last-mile logistics. At the same time, infrastructure upgrades across highways, ports, airports, and multimodal logistics parks are improving connectivity and efficiency.

Technological adoption, including automation, IoT, AI, and blockchain, is transforming supply chain visibility and optimization. The rising need for cold chain and value-added services is driven by growth in pharmaceuticals, food processing, and organized retail. Finally, increasing reliance on 3PL and 4PL services reflects greater formalization and outsourcing, enabling companies to scale efficiently while focusing on core operations.

Chart 15: Market Size of Logistics Sector in India



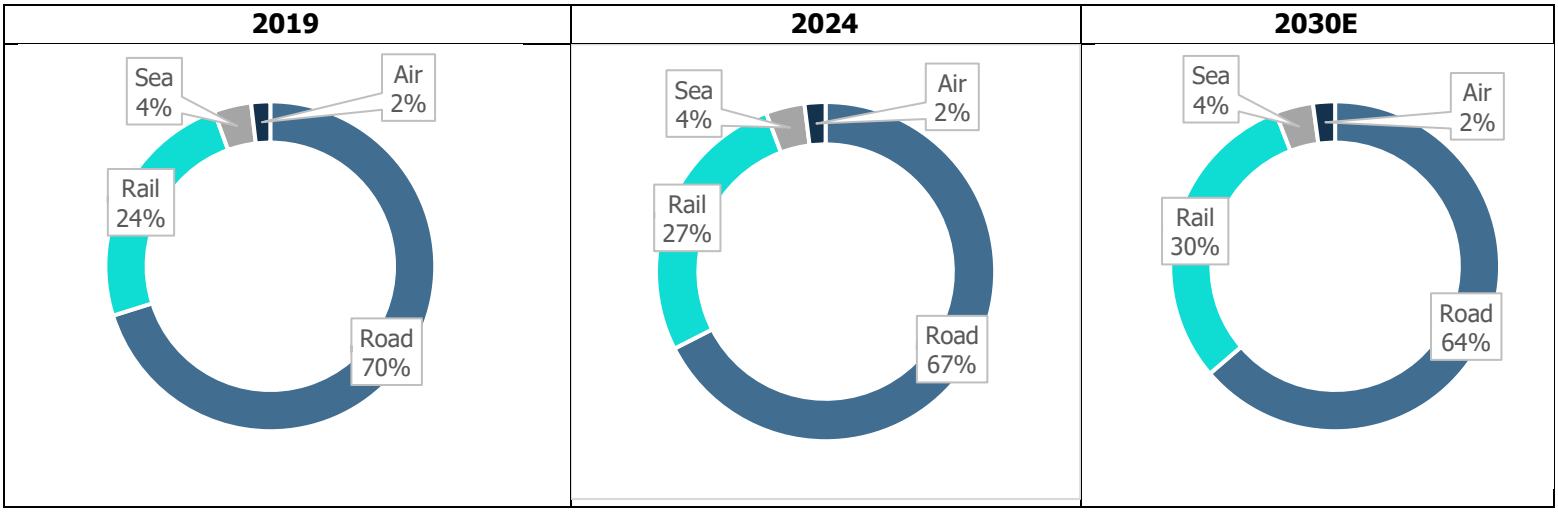
Source: IMAARC, Care Edge Research

The Indian logistics market witnessed moderate yet steady growth between 2020 and 2024. After a slight dip in 2020 due to pandemic-related disruptions, the sector rebounded strongly, rising to USD 347.5 Bn in 2024. This recovery was driven by revival in economic activity, accelerated e-commerce penetration, and government focus on improving transport infrastructure.

From 2025 onwards, the logistics market is projected to enter a high-growth trajectory, expanding from USD 390.94 Bn in 2025 to USD 637.14 Bn in 2030. This represents a CAGR of 10%, highlighting the sector's growing importance in India's economic framework. The rising demand will be fuelled by technology-driven supply chain integration, formalization of the sector, and enhanced multimodal connectivity under the Gati Shakti and National Logistics Policy.

3.4 Logistics markets in terms of-

i. Roads, Rails, Air and Sea as % of total transportation Market



Source: IMAARC, Care Edge Research; Note: E refers to Estimate

- **Road transport** remains dominant, but its share declines from 70% in 2019 to 64% by 2030. This shows gradual diversification but also highlights India's continued dependence on road freight for flexibility and last-mile connectivity.
- **Rail transport** rises from 24% in 2019 to 30% in 2030, a significant gain driven by policy focus on freight corridors, electrification, and modernization. Rail is emerging as a cost-efficient and low-emission backbone for long-haul movement.
- **Sea transport** stays stable at 4%, reflecting India's limited coastal shipping and inland waterways utilization, though it represents a large untapped potential for bulk commodities.
- **Air transport** remains marginal at 2%, consistent with its niche role in high-value, time-sensitive cargo.

Policy that is driving the trend-

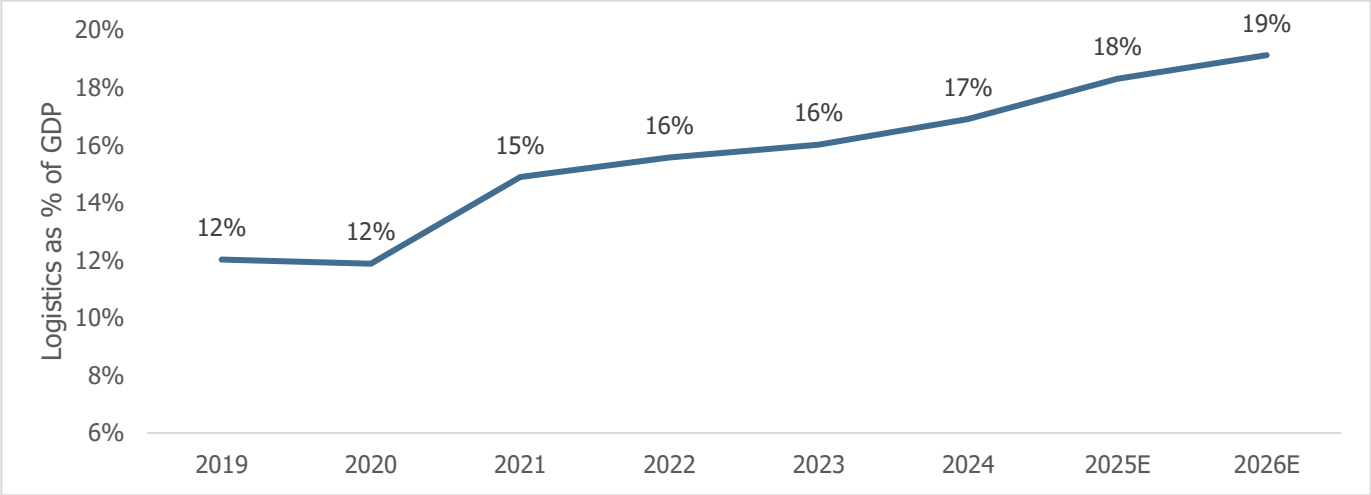
- **Reducing logistics costs:** The gradual modal shift toward rail supports the National Logistics Policy objective of cutting logistics costs.
- **Investment priorities:**
  - **Rail:** Continued investment in Dedicated Freight Corridors (DFC), multimodal logistics parks, and digital freight systems is critical.

- **Roads:** Focus shifts from capacity expansion to improving quality, reducing bottlenecks, and integrating with multimodal hubs.
- **Sea/Waterways:** Coastal shipping and inland waterways need policy push (lower port charges, incentives for container movement by sea) to unlock efficiency gains.
- **Air Cargo:** Investments in cargo terminals, cold chains, and e-commerce logistics hubs could gradually raise air freight's share.

- **Private sector & PPP opportunities:** Modal diversification opens avenues for private players in rail freight operators, port logistics, cold chain infra, and tech-driven multimodal platforms.

ii. Percentage of the total GDP

Chart 16: Logistics Cost as a Percentage of India GDP



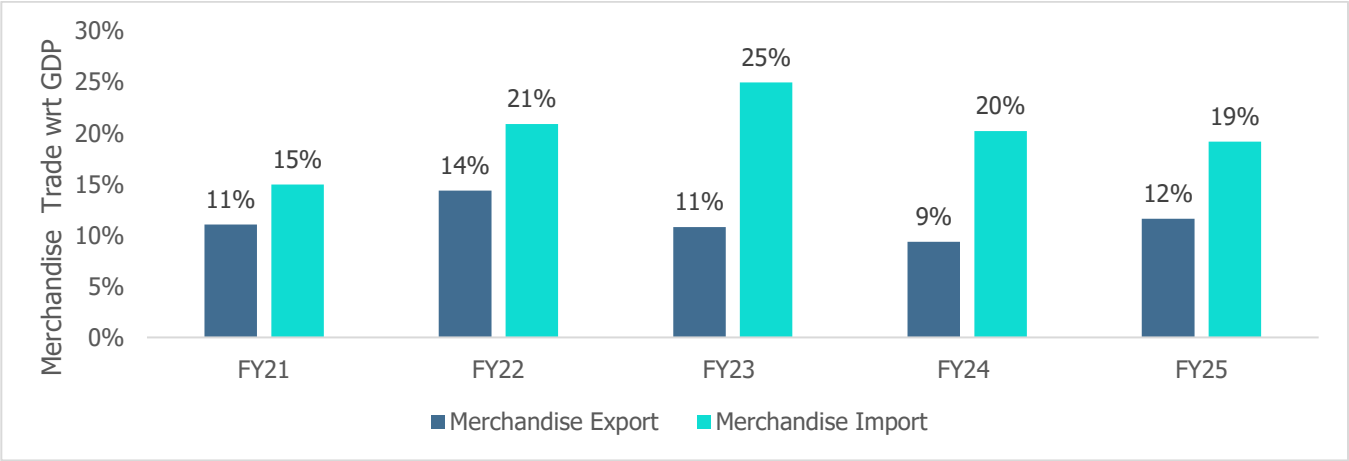
Source: MOSPI, IMAARC, Care Edge Research; Note: E refers to Estimate

India's logistics sector was valued at USD 347.5 billion in 2024. It is well-positioned for strong growth with an expected compound annual growth rate (CAGR) of 10% till 2030. The government's decision to grant the sector infrastructure status has enabled access to cheaper, long-term funding, like roads and railways, further solidifying its significant role in the growth story of India.

This consistent growth underscores the sector's increasing importance as a critical enabler of trade, manufacturing, and e-commerce expansion in India. The data reflects both the rising demand for efficient supply chains and the sector's role as a driver of employment and economic activity. However, it also points to the need for modernization, multimodal infrastructure, and technology adoption to ensure that the growing size of the sector translates into enhanced efficiency and global competitiveness.

3.5 Merchandise export import as percentage to GDP

Chart 17: Merchandise export import as percentage to GDP



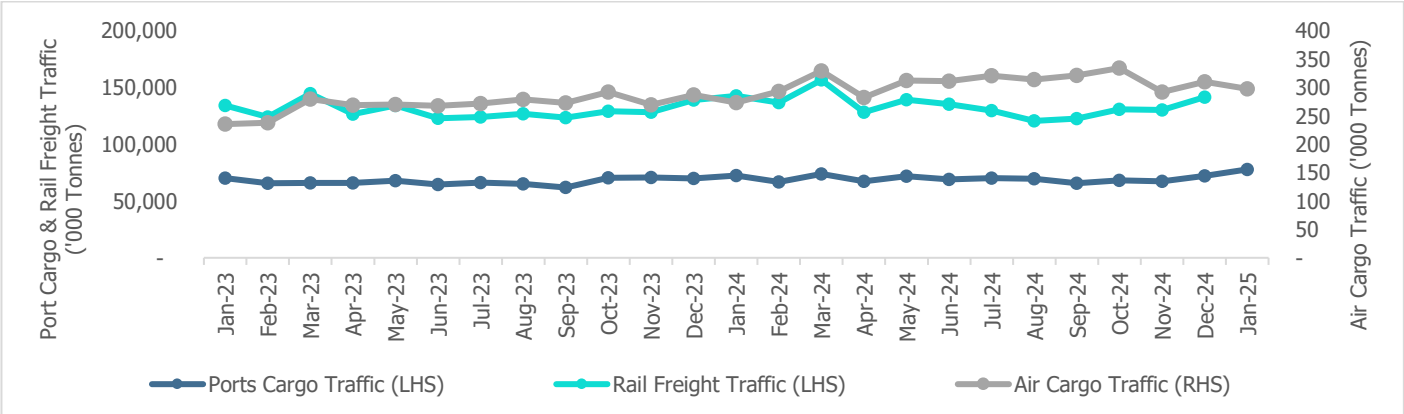
Source: Ministry of Commerce & Trade, Care Edge Research

Merchandise imports consistently exceeded exports throughout the period, peaking in FY23 at 25% of GDP compared to exports at only 11%, reflecting a widening trade gap. While exports showed moderate fluctuations, ranging between 9% and 14% of GDP, imports displayed sharper volatility, rising from 15% in FY21 to a peak in FY23 before moderating to 19% by FY25. This trend underscores India's structural dependence on imports, particularly for energy, electronics, and capital goods, while export growth has not kept pace. The divergence between import and export shares indicates continued pressure on the current account balance, necessitating policy interventions to boost export competitiveness, diversify product baskets, and reduce critical import dependencies to ensure greater trade sustainability.
For logistics players, elevated import intensity implies sustained pressure on port capacity and container rail/road flows even if export growth is softer.

3.6 Logistic sector on the Fast Track

The rail freight increased slightly by 2% in YTD FY25 as compared y-o-y. Container volumes handled by Indian Railways grew by only 4.1% year-on-year during the first eleven months of FY25, lagging the 10% growth in total container volumes handled by ports. Port Traffic during YTDFY25 registered growth of 3.5% y-o-y while Air cargo traffic grew by 12.5% y-o-y respectively.

Chart 18: Freight Traffic



Source: CMIE

In FY25, India's logistics sector demonstrated significant growth, propelled by strategic infrastructure developments, favourable government policies, and a burgeoning e-commerce industry.

In FY24, growth in the logistics market was driven by moderate domestic demand, stable investment, expansion of rural markets reducing gap between rural and urban demand, and improvement in e-commerce sales. Additionally, the government's thrust on various infrastructure projects involving construction of dedicated freight corridors to improve rail freight in the country are further providing boost to the sector.

The sector's growth is further supported by favourable government policies, such as the Trade and Economic Partnership Agreement (TEPA) with the European Free Trade Association, which aims to reduce tariffs and enhance market access.

The logistic sector in India plays a vital role in facilitating economic activity and trade movement in the country. With the consumer base of the sector encompassing a wide range of industries including retail, automobile, telecom, pharmaceuticals and heavy industries, the logistics industry has been increasingly attracting investments in the last decade.

The logistics industry faces challenges such as under-developed material handling infrastructure, fragmented warehousing, multiple regulatory & policy making bodies, lack of seamless movement of goods across modes and minimal integrated IT infrastructure. To develop this sector focus on new technology, improved investment, skilling, removing bottlenecks, improving inter-modal transportation, automation, single window system for giving clearances, and simplifying processes would be required.

3.7 Projected Freight Activity

India's logistics sector plays a vital role in the economy and handles the movement of more than 10,000 different kinds of products. The demand for freight transport has been rising as the population has grown and standards of living have improved, leading consumers and business to demand and consume more goods.

As income levels rise, exports grow, and sectors like e-commerce expand, goods movement is projected to increase at a 7% annual growth rate, reaching 15.6 trillion tonne-km by 2050 according to NITI Aayog. The increase in activity is expected to drive the freight movement in all kinds of mode especially in Indian Roads mode by 2050.

India's logistics infrastructure has improved, evidenced by a rise in Logistics Performance Index (LPI), 2023 India moved up to 22nd Rank in the Global Ranking in International Shipments category and the Overall 38th Rank in Logistics Performance Index score. The average turnaround time for the Major Ports has reduced from 93.59 hours (4 days) in FY14 to 48.06 hours (2 days) in FY24, a reduction of 48.65%. As on February 2025, the "turnaround time" for Indian Ports is 0.9 Days which is better than USA (1.5 days), Canada (2.0 days), Germany (1.3 days), UAE (1.1 days), Singapore (1.0 days), Russian Federation (1.8 days), Indonesia (1.1 days), New Zealand (1.1 days) and South Africa (2.8 days).

3.8 Key Market Drivers

1. **Government Initiatives & Policy Push** – National Logistics Policy (2022), PM Gati Shakti Masterplan, Bharatmala, Sagarmala, and Dedicated Freight Corridors are improving efficiency and reducing costs.
2. **E-commerce & Retail Growth** – Explosive growth in online shopping, quick commerce, and omni-channel retail is creating demand for express delivery and last-mile logistics.
3. **Infrastructure Development** – Expansion of highways, ports, airports, multimodal logistics parks, and warehousing clusters strengthening connectivity.
4. **Technological Adoption** – Integration of AI, IoT, robotics, and blockchain is enhancing real-time tracking, route optimization, and inventory management.
5. **Cold Chain Expansion** – Rising demand from pharmaceuticals, agriculture, and food processing for temperature-controlled logistics.

6. **Outsourcing & Formalization** – Increasing reliance on 3PL/4PL players and formal sector logistics providers to bring scalability and cost-efficiency.

3.9 Key Opportunities

1. **Integrated Supply Chains** – Growing need for end-to-end logistics providers offering warehousing, transport, and value-added services under one umbrella.
2. **Green & Sustainable Logistics** – EV adoption, renewable-powered warehouses, and carbon-efficient supply chains create scope for sustainable logistics solutions.
3. **Digital Platforms & Logistics Tech** – Rising opportunities for startups and platforms in freight matching, last-mile optimization, and digital warehousing.
4. **Tier-II & Tier-III City Expansion** – Logistics demand is shifting beyond metros with rising consumption in smaller cities, boosting warehousing and transport needs.
5. **Multimodal Logistics** – Growing emphasis on integrating road, rail, air, and waterways to reduce costs and enhance efficiency.
6. **Reverse Logistics & Circular Economy** – Increasing returns from e-commerce and sustainability mandates creating scope for reverse logistics and recycling-oriented models.

3.10 B2B Logistics Growth Drivers

The B2B logistics segment in India is being fuelled by rapid industrialization, manufacturing expansion, and the need for efficient supply chain networks. Government initiatives such as the Dedicated Freight Corridors, PM Gati Shakti, and multimodal logistics parks are reducing transit time and costs for bulk cargo movement. Industries like automotive, steel, cement, FMCG, and pharmaceuticals increasingly rely on 3PL and 4PL service providers to manage warehousing, transportation, and value-added services, leading to greater outsourcing and sector formalization. Technology adoption ranging from IoT-enabled fleet tracking to AI-based demand forecasting further improving supply chain efficiency. The growing focus on specialized logistics such as cold chain for pharmaceuticals and agri-produce is also expanding opportunities in the B2B logistics ecosystem.

3.11 B2C Logistics Growth Drivers

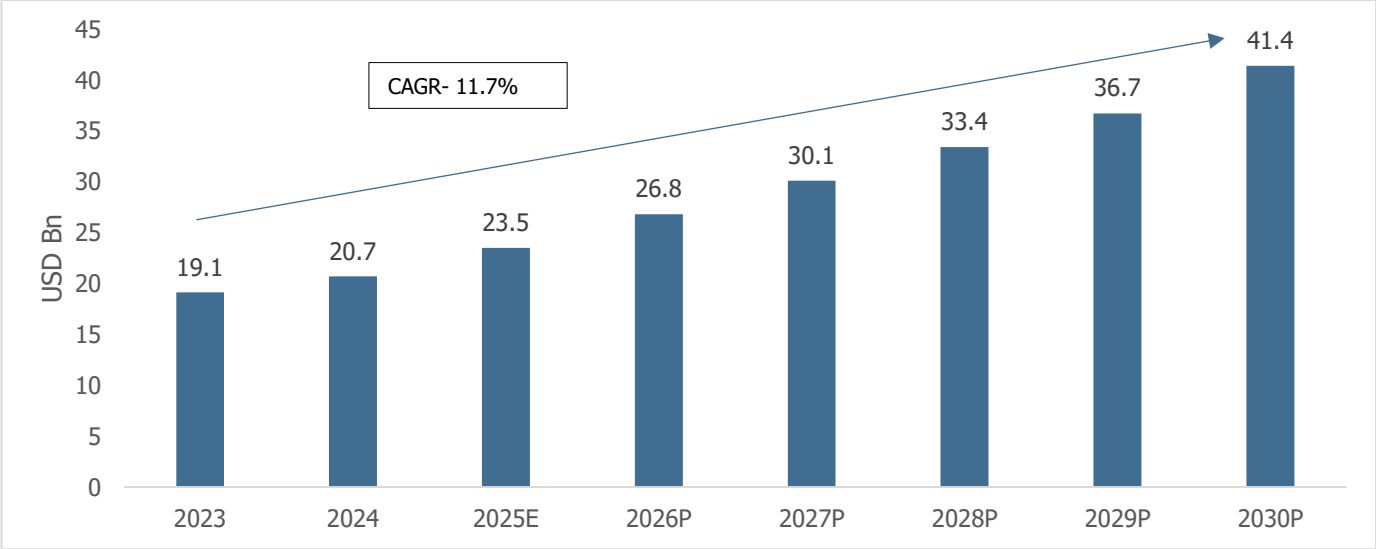
The B2C logistics market in India is primarily driven by the explosive rise of e-commerce, quick-commerce, and D2C brands. Consumers increasingly expect fast, reliable, and transparent deliveries, often within 24 hours, which is pushing logistics providers to invest heavily in last-mile connectivity, urban warehouses, and express delivery services. Reverse logistics has emerged as a critical growth area due to high product return rates in online retail. Technology plays a central role in enhancing customer experience, with real-time tracking, automated fulfilment centres, and AI-powered route optimization becoming industry standards. In addition, the rise of cold chain-enabled B2C deliveries for fresh groceries, frozen foods, and medicines is creating new specialized demand pockets. Overall, B2C logistics growth reflects the shift toward a consumer-driven economy, where speed, flexibility, and convenience are paramount.

4 Overview of Warehousing sector in India

4.1 Overview and market Size of warehousing sector in India.

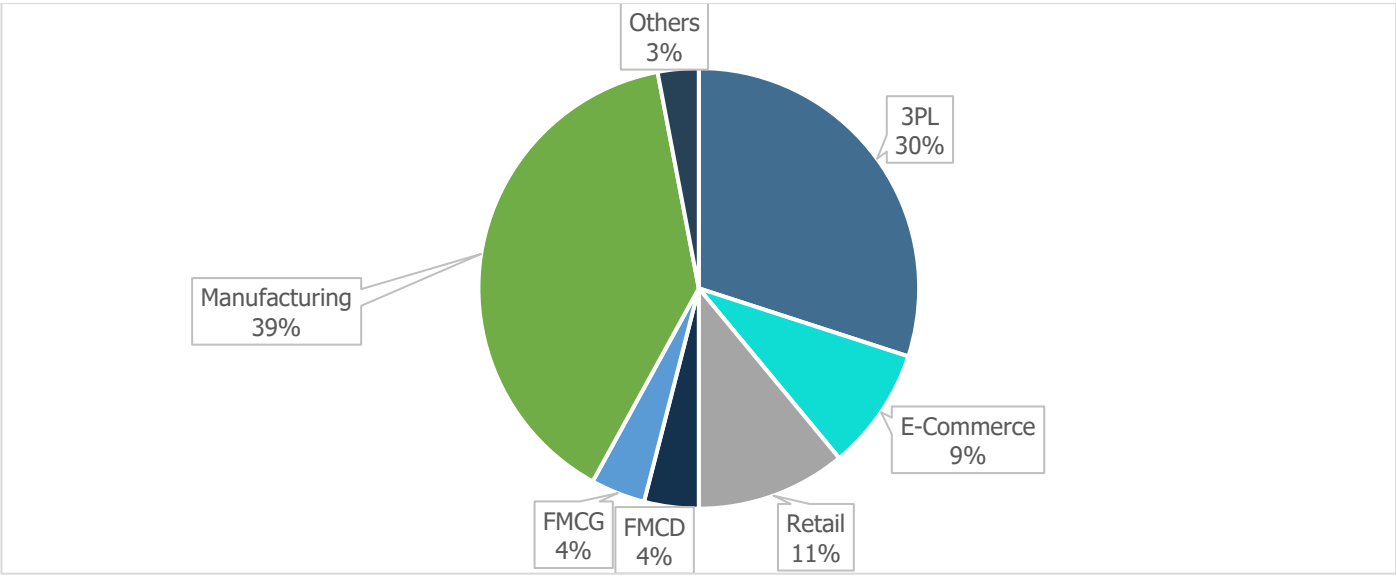
The warehousing sector in India is witnessing robust growth, driven by structural reforms, evolving consumption patterns, and technological advancements. In 2023, the market was valued at USD 19.1 billion and is projected to more than double to USD 41.4 billion by 2030, expanding at a CAGR of approximately 11.7 % between 2023 and 2030. This growth is underpinned by the rapid rise of e-commerce, organized retail, and the positive impact of the Goods and Services Tax (GST), which has streamlined inter-state logistics and encouraged the development of large, centralized warehouses. Additionally, India's expanding domestic and international trade has significantly increased the demand for modern storage and distribution facilities. In response to the need for improved operational efficiency, cost reduction, and enhanced customer service, companies are increasingly adopting advanced technologies such as warehouse management systems (WMS), automation, robotics, and AI-enabled micro-fulfilment centres. The sector has also attracted growing interest from global investors, with notable inflows during 2023 and 2024 from countries such as the United States and the UAE, further reinforcing India's position as a fast-growing and strategic warehousing hub in Asia.

Chart 19: Market Size of Warehousing sector in India



Source: EMIS, Care Edge Research

Chart 20: Industry- wise Share of Organized Warehousing Transaction (%) (2024)



Source: EMIS, Care Edge Research

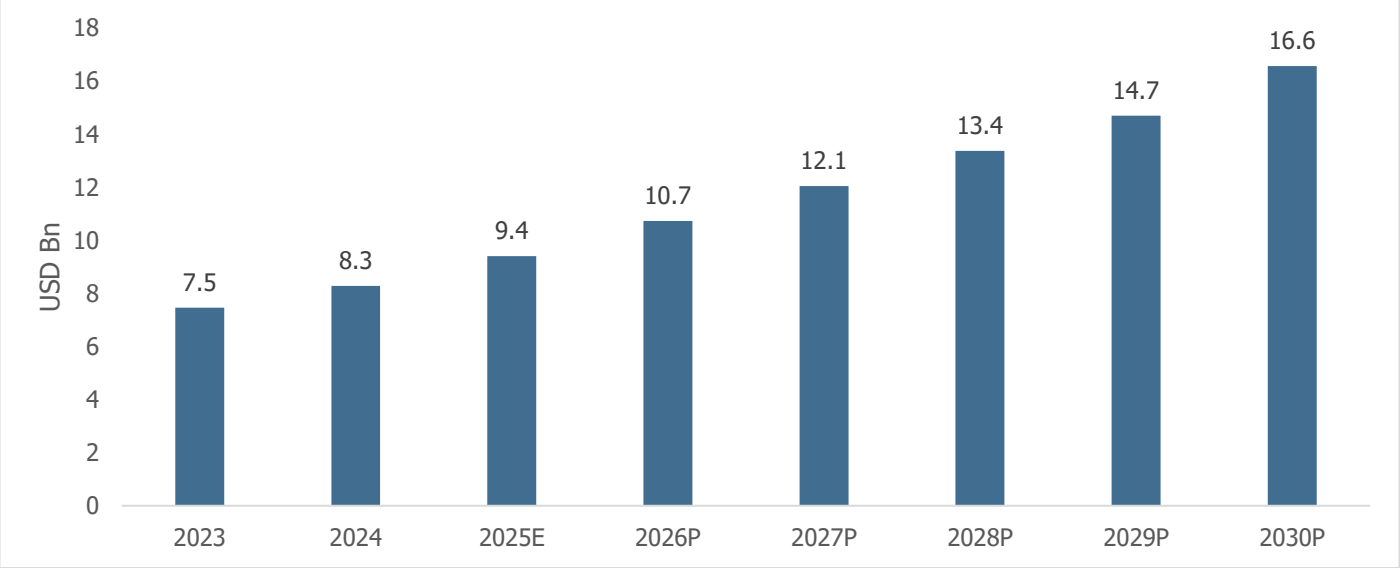
Manufacturing consists of the largest segment in the warehousing transaction volume at 39% followed by 3PL players driven by the growing need for ecommerce logistics and the increasing tendency of enterprises to outsource their logistics services.

4.2 Market size of Industrial Warehousing sector

The industrial warehousing sector in India has emerged as a critical pillar supporting the country's manufacturing, logistics, and trade ecosystems. This segment has experienced significant expansion, driven by factors such as the Make in India initiative, PLI (Production Linked Incentive) schemes, and increased demand from sectors like automotive, electronics, pharmaceuticals, and FMCG. Industrial warehousing in key corridors such as NCR, Mumbai, Pune, Chennai, Bengaluru, and Hyderabadis seeing heightened activity due to better infrastructure, multimodal connectivity, and availability of Grade A facilities.

The shift toward consolidated, automated, and large-format warehouses to support just-in-time manufacturing and export logistics has led to rising interest from both domestic developers and global investors. Moreover, the sector is adopting technologies like IoT-based asset tracking, warehouse automation, and energy-efficient designs, enhancing operational efficiency and sustainability. As supply chains become more integrated and the demand for contract logistics grows, the industrial warehousing segment is expected to play a vital role in positioning India as a global manufacturing and export hub.

Chart 21: Market Size of Industrial Warehousing sector in India



Source: EMIS, Care Edge Research

Outlook for Industrial Warehousing

In the short term, Indian industrial warehousing will grow consistently as companies remain focused on supply chain efficiency and proximity to consumption hubs. The transition to organized warehousing is gaining traction, with companies shifting away from disintegrated, traditional storage models to purpose-built facilities that are scalable, automation-ready, and equipped with improved safety standards. Demand is particularly high from industries such as e-commerce, retail, and pharma, where speed of delivery and stock management are of prime importance. Shippers are now favouring locations with high road and rail connectivity, as a sign of a more strategic warehouse location selection process. Though the developments have been made, developers continue to encounter practical issues like land acquisition, regulatory approvals, and availability of skilled manpower in far-off locations.

In the medium term, India's warehousing sector will be more specialized, and technology focused. With increasingly complex supply chains, companies will seek warehouses providing not only space but value-added services such as integrated cold storage, packing zones, and on-line inventory monitoring. The shift towards multi-modal transport and greener, energy-efficient logistics will generate demand for sustainable facilities. Concurrently, institutional investors and real estate funds will increasingly move into the space driven by secure rental returns and long-term tenancy patterns. These developments will progressively drive warehouse standards in Tier 1 and Tier 2 cities to make industrial warehousing an increasingly mature and strategic asset class in the Indian real estate sector.

4.3 Favourable Government initiative for Warehousing in India

Atmanirbhar Bharat	PM Gati Shakti Yojna	National Logistics Policy	New Warehousing Policy
•The Atmanirbhar Bharat campaign was drafted on May 13, 2020, and is aimed at transforming India into a global hub of manufacturing, design, and innovation through initiatives such as simplified policies, infrastructure push, incentivizing research and innovation, and aggressive investments in trade promotion. •-The scheme is focused on five components: economy, infrastructure, systems, vibrant demography, and demand. •Sectors like electronics Components, defence, pharma, medical evices, bulk drugs etc are focused upon in 2025 under the scheme	- The scheme was launched in October 2021 for improving multimodal logistic capabilities and lowering transportation costs. - The scheme focuses on combining the following 7 segments to facilitate economic transformation, seamless multimodal connectivity, and logistics efficiency. These segments include • Railways • Roads • Ports • Waterways • Airports • Mass Transport • Logistics Infrastructure - As of June, 2025 the scheme unified planning across 44 ministries and 36 States/UTs on a GIS-based platform	- The National Logistics Policy (NLP) aims to streamline and strengthen India's logistics sector, promote the seamless movement of goods across the country, and make it easier for logistic players to onduct business. - Through the scheme, the government aims to introduce centralized platforms and singlewindow solutions for easing supply chain processes and bringing logistics costs down. - The National Logistics Policy was formulated by the Commerce and Industry Ministry and is improving India's trade competitiveness, creating more jobs, and enhancing the country's global logistics position	- The policy was drafted in 2021 by the National Highways Authority of India (NHAI) to help lower transportation and logistics costs. - The policy lays the roadmap for developing exclusive warehousing zones through public-private partnerships (PPP). - The main objectives of the policy are: • Supporting the logistics sector • Supply chain management • Decongesting cities • Fuel efficiency • Curbing air pollution As on March 2025, a capex plan of INR 1,000 crore for FCI and Rs280 crore for CWC to upgrade warehousing facilities via the Depot Darpan digital portal.

4.4 Key Market drivers and opportunities

Key Market Drivers

E-commerce Boom	The exponential growth of e-commerce platforms such as Amazon, Flipkart, Meesho, and others has created a sharp rise in demand for last-mile delivery hubs, fulfillment centers, and dark stores across both metros and Tier 2/3 cities.
Implementation of GST	The Goods and Services Tax (GST) has removed inter-state check-posts and created a unified national market, encouraging the development of centralized, larger-format warehouses instead of fragmented state-wise storage units.
Growing Demand from Organized Retail & FMCG	Expansion of organized retail chains and FMCG companies has boosted the need for temperature-controlled, efficiently managed warehouses, especially in urban consumption clusters.
Growth in Manufacturing & Industrial Output	Initiatives like Make in India and PLI schemes have increased manufacturing activity, driving demand for industrial-grade warehousing in logistics parks, SEZs, and near key industrial corridors.
Infrastructure Push (PM Gati Shakti, Bharatmala, Dedicated Freight Corridors)	Improved connectivity through rail, road, ports, and multimodal logistics parks is making warehousing hubs more viable and integrated into national and global supply chains.
Technology Adoption	Companies are increasingly deploying Warehouse Management Systems (WMS), robotics, RFID, and IoT-based asset tracking, resulting in higher operational efficiency and reduced costs.
Foreign & Institutional Investments	The sector has attracted significant FDI and private equity from global players like Blackstone, ESR, LOGOS, and IndoSpace, indicating confidence in long-term demand and scalability.

Key Opportunities

Tier 2 & 3 City Expansion	Rising consumption and digital penetration in Tier 2/3 cities are creating opportunities for regional fulfillment centers, cold storage, and retail warehousing, especially in places like Lucknow, Coimbatore, Bhubaneswar, and Surat.
Specialized Warehousing (Cold Chain, Pharma, Agro, Electronics)	High-growth sectors like pharmaceuticals, agri-products, perishables, and electronics need temperature-controlled and compliant storage solutions, creating niche opportunities.
Urban Micro-Fulfillment Centers	With growing expectations for same-day or next-day deliveries, companies are investing in small, tech-enabled warehousing spaces within cities to serve as hyperlocal delivery hubs.
Built-to-Suit (BTS) & Grade A Warehousing	There is rising demand for customized warehouse facilities with global design standards, sustainability certifications, and automation compatibility from corporates and 3PLs.
Logistics-as-a-Service (LaaS)	Startups and large players are offering integrated warehousing + logistics + technology services, enabling asset-light models for SMEs and D2C brands looking to scale quickly.
Green Warehousing and Sustainability	Eco-friendly practices such as solar roofs, rainwater harvesting, energy-efficient lighting, and carbon-neutral operations are emerging as competitive differentiators, especially for MNC clients.

5 Overview of Integrated Logistic Supply chain in India

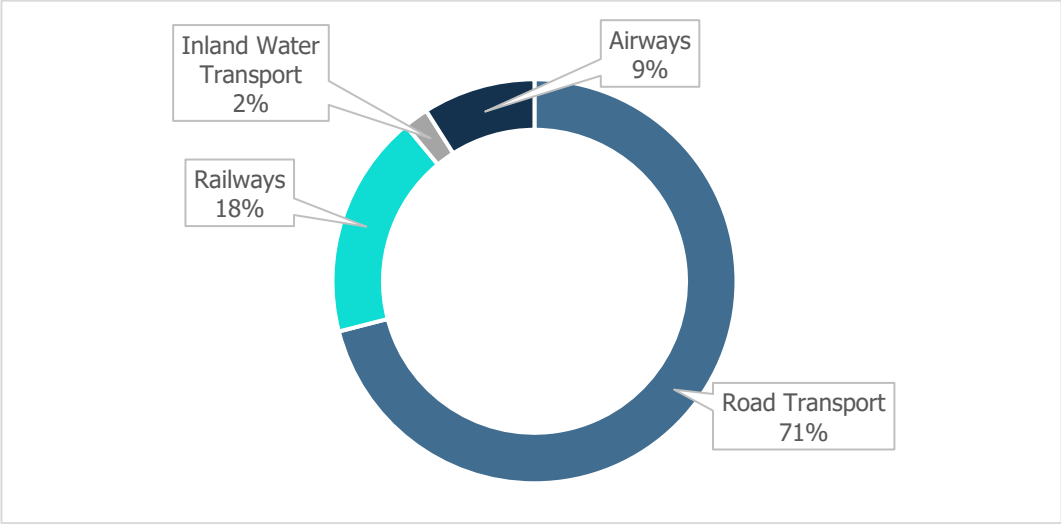
5.1 Overview and Review of the Supply Chain Industry

The backbone of the country's economy, the supply chain industry, is a system utilized by companies across various sectors to oversee processes from raw material procurement to delivering the final product to consumers. Despite a temporary setback caused by the Covid-19 pandemic, it remains one of India's fastest-growing industries, driven by robust movement of goods and a surge in domestic consumption fuelled by e-commerce. A resilient supply chain industry not only supports manufacturing, fostering self-reliance, but also attracts global companies to establish a unified production base and market in India.

The Indian supply chain and logistics sector has experienced substantial growth, attributed to increased government expenditure, improved infrastructure, and enhanced global market access. In the logistics market, online freight platforms and aggregators are gaining prominence due to low entry barriers and lower capital investment compared to capital intensive business models. Manufacturing in India has the potential to contribute 25%–30% of the GDP by 2025, a factor likely to drive further growth in the supply chain industry. The transport of raw materials and finished goods plays a pivotal role in supply chain management, and the increased logistics and freight movement across the country serves as an indicator of the industry's expansion.

5.2 Share of Major Domestic Freight by Mode of Transport

Chart 22: Share of Major Domestic Freight in India (FY25)



Source: PIB

The chart shows that road transport dominates India’s domestic freight movement with a 71% share, followed by railways at 18%, airways at 9%, and inland water transport at just 2%. This heavy reliance on road transport underlines the fragmented and road-centric nature of India’s logistics sector. While roads provide flexibility, connectivity to remote locations, and faster door-to-door service, the overdependence also results in higher logistics costs due to fuel expenses, congestion, and inefficiencies in long-haul cargo movement.

Railways, with an 18% share, remain an important mode for bulk and long-distance cargo such as coal, cement, and steel, but its share has not kept pace with rising freight volumes due to limited multimodal integration, capacity bottlenecks, and competition from trucks. The government’s initiatives like Dedicated Freight Corridors (DFC) and private

container train operations are expected to improve railway freight competitiveness, particularly for industrial and long-haul cargo.

Airways, which accounts for 9% of domestic freight, reflects the growing demand for express and time-sensitive logistics, especially in sectors like e-commerce, pharmaceuticals, electronics, and perishables. Although expensive, air cargo has seen strong growth post-pandemic, supported by the Express Cargo Clearance System (ECCS) and expansion of regional airports under UDAN. This growth indicates an increasing premium placed on speed and reliability in supply chains.

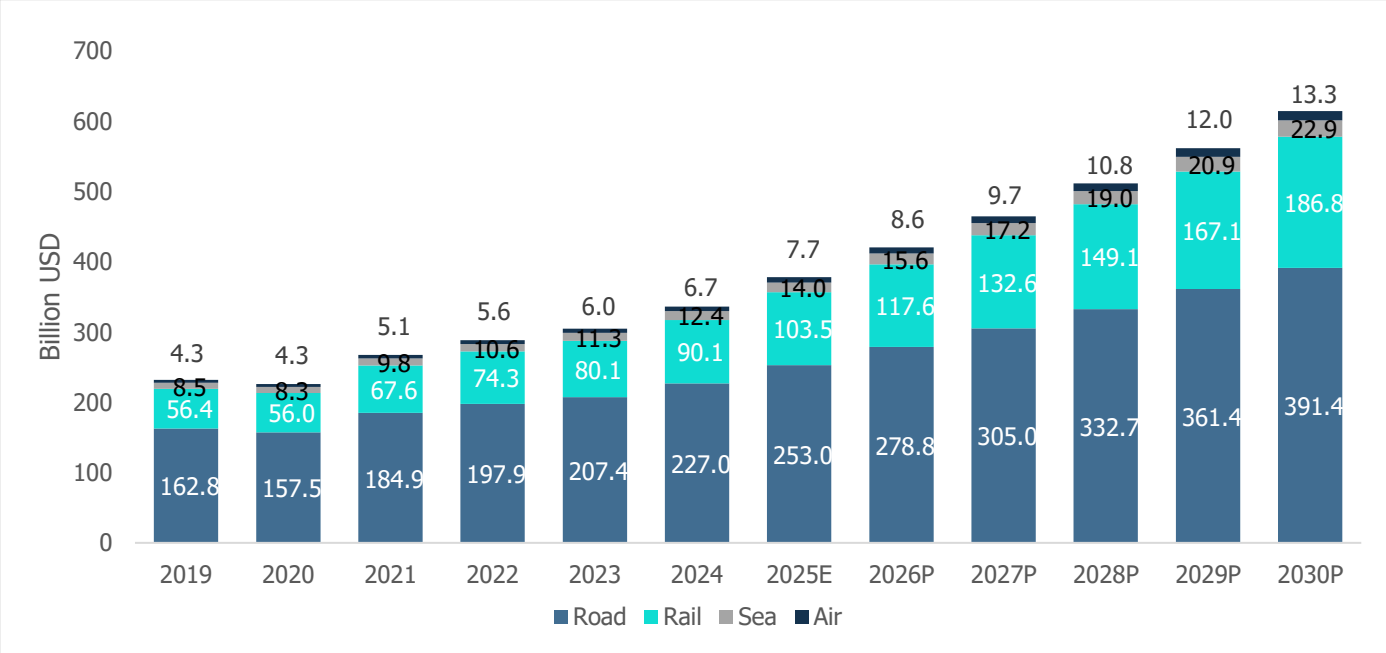
Inland water transport, despite being the most cost-efficient and sustainable mode, accounts for only 2% of domestic freight. This minimal share highlights India's underutilization of its extensive river network. However, government projects such as Jal Marg Vikas Project (National Waterway-1) and development of multimodal terminals are aimed at expanding this mode's role over the medium to long term.

Overall, the chart reflects that India's logistics services market is still road-dominated and cost-heavy, but structural shifts are underway. With policy support for multimodal logistics parks, rail freight corridors, and inland waterways, along with growing demand for air cargo from e-commerce and healthcare sectors, the market is gradually moving towards diversification. The future trend points to a more balanced modal mix that will enhance efficiency, reduce costs, and align India's logistics ecosystem with global benchmarks.

5.3 Overview and market size of key sectors in Logistics services in India.

India's domestic freight market will triple between 2019 and 2030, supported by GDP growth, government infrastructure push, and supply chain modernization. The sector is gradually moving from a road-dominated system to a multimodal ecosystem, with rail gaining momentum and sea & air emerging as niche but important contributors. Policy interventions like the National Logistics Policy (2022), PM Gati Shakti, and increased private sector investment in multimodal logistics parks will accelerate efficiency and cost reduction across the supply chain.

Chart 23: Market Size of Domestic Freight by mode of transport.



Source: EMIS, Care Edge Research

The Indian logistics services market demonstrates sustained and robust growth across all modes of transport, with the total domestic freight market expected to expand from around USD 232 billion in 2019 to nearly USD 614.4 billion by 2030. This reflects the country's rapid economic expansion, industrial output growth, and increasing trade integration.

Road Freight – Core Growth Driver

Road remains the backbone of India's freight movement, rising from USD 162.8 billion in 2019 to a projected USD 391.4 billion in 2030. The strong growth is linked to last-mile connectivity, flexibility, and infrastructure expansion through Bharatmala, expressways, and PM Gati Shakti initiatives. Despite diversification, road transport will continue to account a major share of total freight in 2030.

Rail Freight – Strong Secondary Contributor

Rail freight grows significantly from USD 56.4 billion in 2019 to USD 186.8 billion in 2030, marking it as the second-largest freight mode. Growth is driven by Dedicated Freight Corridors (DFCs), electrification, modernization, and policy incentives for modal shift. Rail's share is projected to expand steadily, improving competitiveness against roads, especially for bulk cargo, containers, and long-haul freight.

Sea Freight – Gradual Uptick

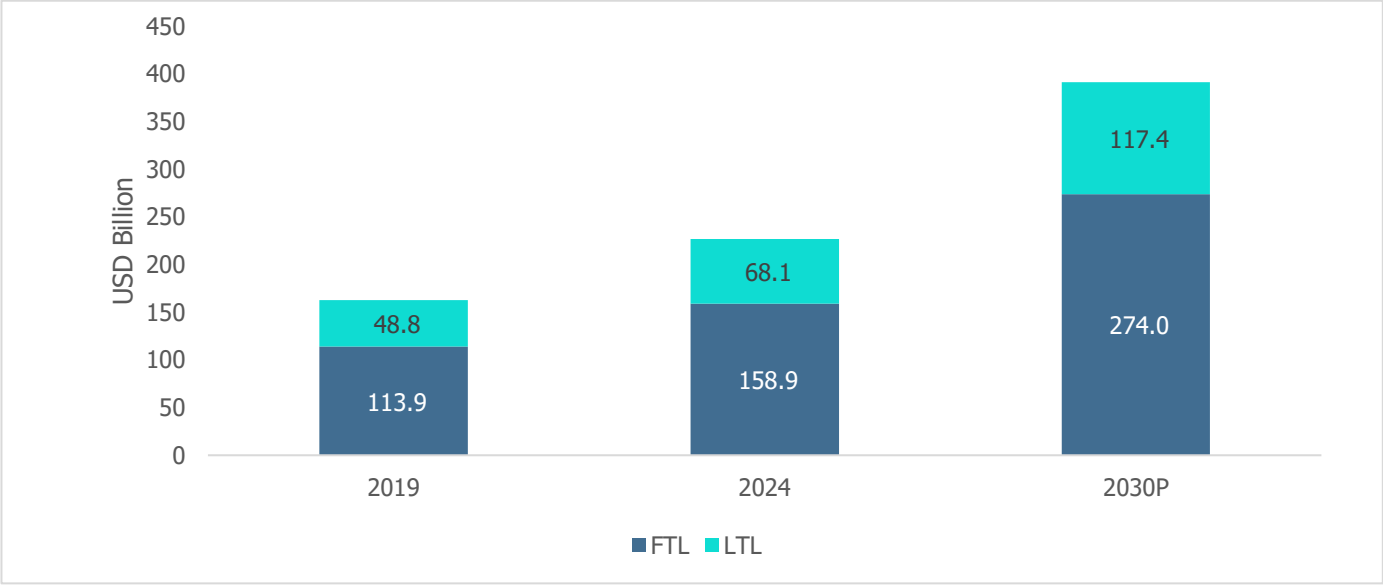
Coastal and inland waterway freight (sea) shows a rising trend, from USD 8.5 billion in 2019 to USD 22.9 billion by 2030. The Sagarmala Programme, port modernization, and promotion of inland waterways are enabling cost-effective transport of coal, cement, fertilizers, and bulk commodities. While the base remains small, sea transport is emerging as a strategic low-cost alternative for bulk cargo.

Air Freight – Niche but High-Growth

Air cargo nearly doubles from USD 4.3 billion in 2019 to USD 13.3 billion by 2030. Growth is driven by e-commerce, express delivery, pharma, perishables, and high-value electronics requiring time-sensitive movement. Air remains the smallest contributor, but its strategic importance is growing rapidly in the logistics chain.

5.4 Overview and market size of road transport

Chart 24: Market Size of road transport.



Source: IMAARC, Care Edge Research

The Indian Road freight market is experiencing sustained expansion, with both Full Truck Load (FTL) and Less-than-Truck Load (LTL) segments showing strong growth. The combined market size is projected to more than double, from USD 162.7 billion in 2019 to nearly USD 391.4 billion in 2030.

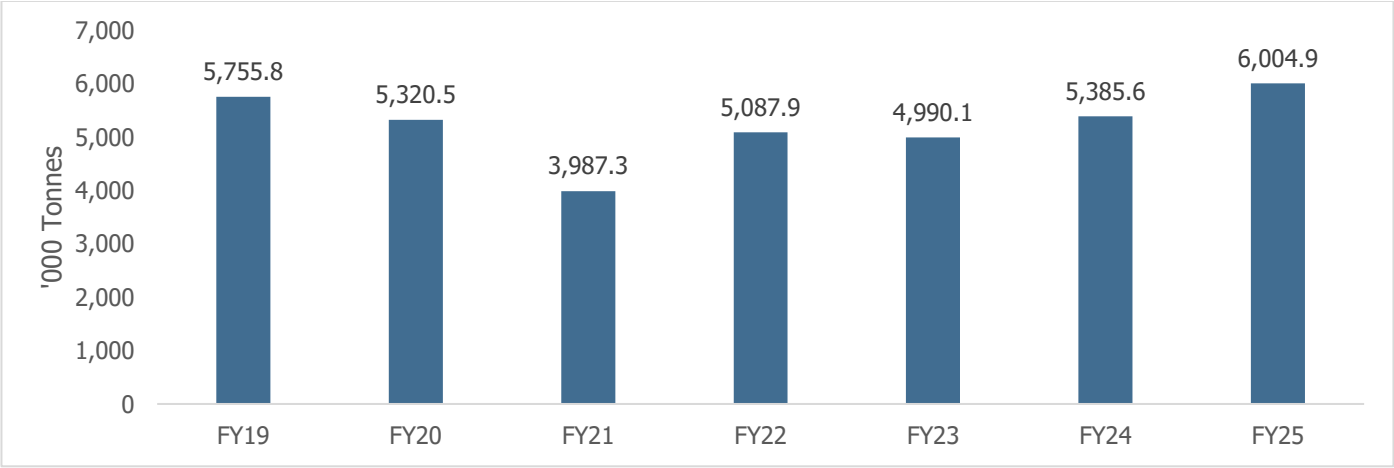
1. **Full Truck Load (FTL) – Dominant Segment**
   - FTL remains the largest contributor, expanding from USD 113.9 billion in 2019 to USD 274.0 billion by 2030.
   - The segment benefits from:
     - High-volume movement of goods for manufacturing, retail, agriculture, and FMCG sectors.
     - Improved road infrastructure (expressways, logistics parks) that reduces transit times.
     - Expansion of hub-and-spoke models, where FTL plays a critical role in long-haul movement.
   - By 2030, FTL will continue to account for around 70% of the total truck freight market, maintaining its dominance.
2. **Less-than-Truck Load (LTL) – Fastest Growing Segment**
   - LTL grows sharply from USD 48.8 billion in 2019 to USD 117.4 billion in 2030, a 2.4x increase.
   - Growth drivers include:
     - E-commerce and digital retail expansion, boosting demand for fragmented, small-batch deliveries.
     - SME participation in logistics, requiring shared truck space at affordable rates.
     - Growth of 3PL and express logistics players, who are increasingly providing LTL solutions.

India's truck freight market is expanding rapidly and diversifying. While FTL will dominate, LTL will be the disruptor, reshaping the logistics services market through e-commerce, SME integration, and tech-enabled freight solutions.

5.5 Overview and market size of Air Cargo

The Indian air cargo market is experiencing rapid and sustained growth, as reflected in the chart. The market size has expanded significantly from INR 313.3 billion in 2019 to an estimated INR 1,023.7 billion by 2024, marking more than a threefold increase within just five years.

Chart 25: Air Cargo Traffic at Indian Airports



Source: CMIE, Care Edge Research

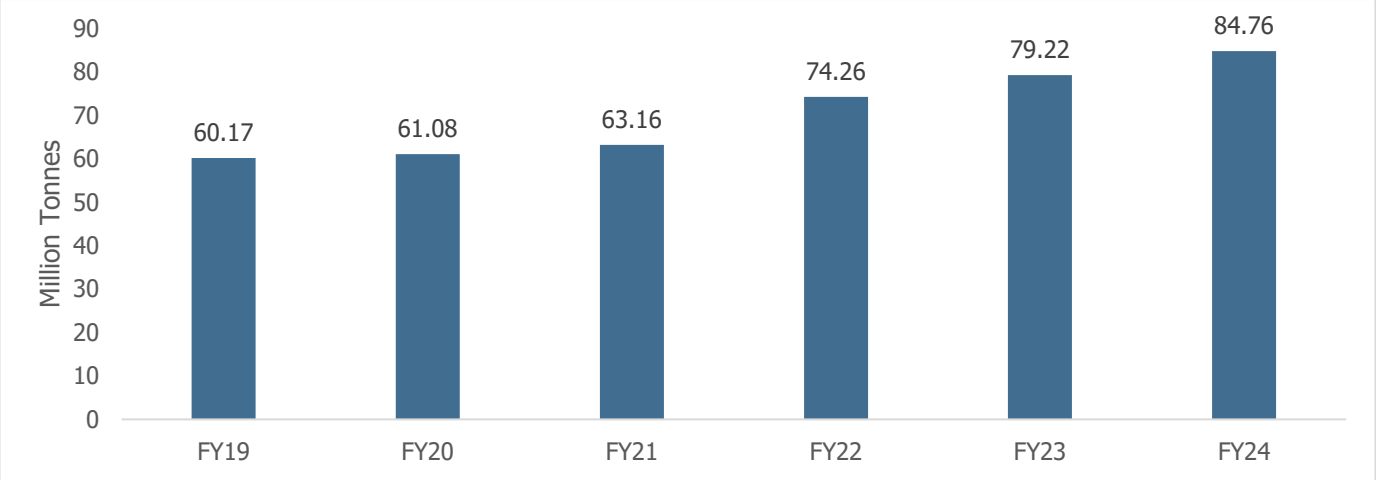
The rise is supported by multiple factors, including the surge in e-commerce, growing pharmaceutical and perishable exports, the need for faster logistics solutions, and increasing integration of India into global value chains. Government initiatives such as the UDAN scheme, investments in airport cargo infrastructure, and the National Logistics Policy are further catalysing growth by enhancing capacity and efficiency. Overall, air cargo is set to become a critical pillar of India's logistics sector, enabling high-value and time-sensitive trade while contributing to the country's global competitiveness.

5.6 Overview and market size of multimodal logistics.

5.6.1 Rail Container

The chart highlights the steady rise in EXIM (Export-Import) container traffic handled by Indian Railways over the past six years. Starting at 60.17 million tonnes in FY19, volumes have grown consistently, reaching 84.76 million tonnes in FY24. The growth was gradual between FY19 and FY21, with only marginal increases, reflecting a period of subdued trade momentum and pandemic-related disruptions. However, from FY22 onwards, there has been a sharper uptick, with volumes jumping from 63.16 million tonnes in FY21 to 74.26 million tonnes in FY22 and continuing to expand robustly through FY23 and FY24.

Chart 26: Number of Railways Containers carried



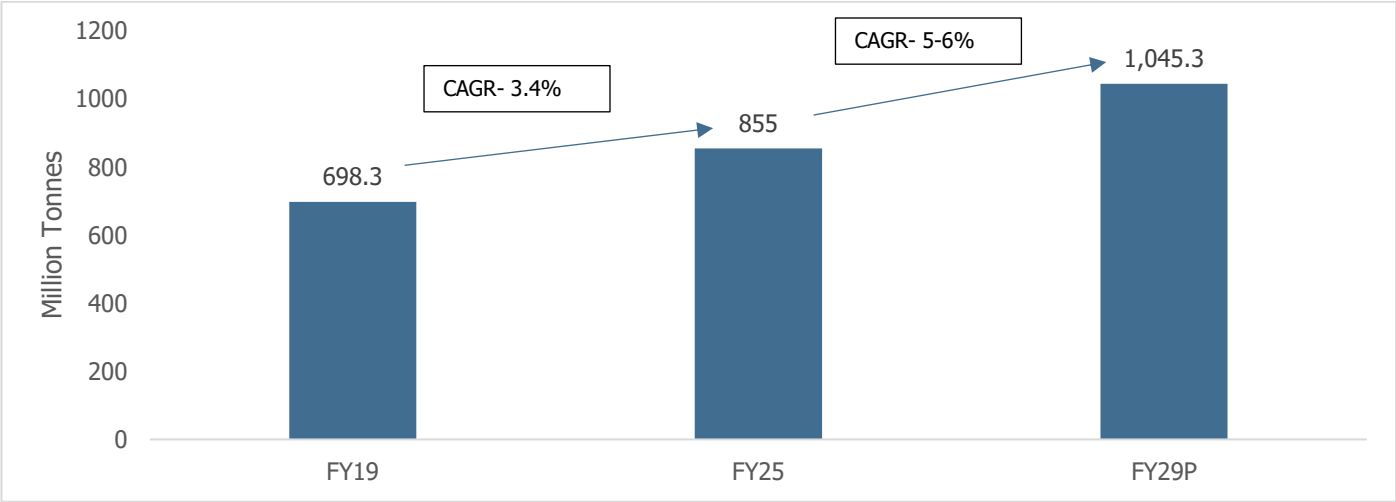
Source: Indian Railway Yearbook, Care Edge Research

This strong growth momentum reflects India's rising trade activity, greater adoption of rail-based container transport due to cost-effectiveness, and government initiatives such as Dedicated Freight Corridors (DFC) and investments in multimodal logistics parks. The upward trajectory indicates the growing role of Indian Railways in facilitating efficient and sustainable EXIM logistics, reducing dependence on road transport, and enhancing India's global trade competitiveness.

5.7 Overview and market size of Coastal Transport

The growth of coastal traffic handled at Indian ports, showing a strong upward trend over the years. In FY19, coastal traffic stood at 698.3 million tonnes, which expanded significantly to 855 million tonnes by FY25. This represents a 3.4% cagr increase in six years, reflecting rising coastal shipping activity supported by policy initiatives and growing industrial as well as trade demand. The projection for FY29 indicates an even sharper increase, reaching 1,045.3 million tonnes, which would mark a growth of over 5-6% cagr compared to FY24 levels. This consistent expansion underscores the increasing role of coastal shipping as an efficient and sustainable mode of domestic cargo movement, driven by government initiatives under the Sagarmala Programme, infrastructure upgrades at ports, and the emphasis on reducing logistics costs. The trend also highlights the growing shift towards multimodal transportation, where coastal shipping is expected to complement rail and road networks in strengthening India's logistics ecosystem.

Chart 27: Coastal Traffic Handled at Indian Ports



Source: PIB, Care Edge Research

5.8 Key Market drivers

1. **Policy & Institutional Drivers**

- **PM Gati Shakti – National Master Plan (since Aug 2021)**

  A Rs 100 lakh crore+ multimodal infrastructure initiative integrating 16 ministries (e.g., Road, Rail, Shipping, Power) for holistic planning via a GIS-based digital platform.

  - Enables synchronized multi-stakeholder infrastructure implementation and last-mile connectivity improvements.

- **National Logistics Policy (NLP, launched Sep 2022)**

  - Aims to reduce logistics costs to global benchmarks (8–10% of GDP) by 2030 and improve India's Logistics Performance Index (LPI) ranking into the top 25.
  - Mandates asset standardization, digital system integration, state-level logistics policies (26 states/UTs onboarded), and the Unified Logistics Interface Platform (ULIP).

- **Logistics Data Bank (LDB)**

  - A centralised, real-time container-tracking system using RFID and IoT that has tracked over 75 million EXIM containers, contributing to India's LPI improvement from 44 (2018) to 38 (2023)

2. **Infrastructure & Modal Development**

- **Expansion of Multi-Modal Logistics Parks (MMLPs)**

  - The Ministry of Road Transport & Highways has initiated MMLP projects to enhance freight hubs incorporating rail, road, water, and air logistics.
  - Over 279 port-rail-road connectivity projects under Sagarmala (via the Ministry of Shipping) and several Inland Container Depots under Bharatmala ensure enhanced hinterland linkages.

- **Bharatmala & Sagarmala Initiatives**
    - Bharatmala aims to connect 550 district headquarters via 4-lane national highways and 50 industrial corridors to shift 80% of freight traffic to high-capacity roads.
    - Sagarmala focuses on port-led development, with 114 port-rail connectivity projects aimed to reduce logistical overhead and enable coastal shipping growth.

3. Digital Integration & Efficiency

- **Unified Logistics Interface Platform (ULIP)**
    - A central API-driven digital gateway launched in 2021, integrating 39 government systems across 11 ministries with 1,800+ data fields and 125 APIs for cargo tracking.
- **LEADS index and State Logistics Plans**
    - The LEADS report (2023) benchmarks logistics ease across states, and 26 states/UTs have enacted policies aligned to NLP.

4. Sustainability & Green Logistics

- **ZET (Zero-Emission Trucks) Strategies**
    - NITI Aayog-backed report emphasizes that transportation forms 62% of logistics cost and underscores government support via EV infrastructure, subsidies, and green zones.
- **Green Credentials via LDB & ULIP**
    - Initiatives like LDB, ULIP, and adoption of green performance metrics (e.g., "Rail Green Points") indicate government backing for environmentally sustainable freight operations.

5.9 Opportunities in the segment

Multimodal Logistics Parks (MMLPs)	35+ MMLPs being developed to integrate road, rail, air, and waterways logistics – offers real estate, infra, and tech opportunities.
Cold Chain Expansion	India faces ~10% produce loss annually due to inadequate cold storage; vast opportunity in reefer trucks, pharma logistics, and agri supply chains.
Smart Warehousing	Demand for Grade A warehouses with automation, robotics, vertical storage, and WMS in NCR, Mumbai, Pune, Bengaluru, Hyderabad.
Tier 2 & Tier 3 Logistics Hubs	Rising consumption and D2C commerce is creating demand for integrated logistics hubs in Lucknow, Coimbatore, Indore, Guwahati, etc.
Green Logistics & EV Fleets	100% EV adoption goal for urban logistics fleets (Delhi, Maharashtra, Gujarat) creating demand for charging infra, swappable batteries, and electric LCVs.
SaaS-based Supply Chain Platforms	Huge scope for India-based TMS, WMS, demand forecasting, and AI route planning platforms tailored to fragmented Indian market.
Integrated SEZ-Ports-DC Corridors	GIFT City, Vizag, Chennai-Bengaluru, Dholera etc. are developing connected economic zones with dedicated logistics corridors – offers cross-border logistics opportunities.
Public-Private Partnerships (PPPs)	Opportunities for PPPs in freight corridors, ICDs, cargo airports, and inland terminals under Sagarmala, UDAN Cargo, etc.

5.10 Key challenges in the sector

Fragmented Infrastructure	Despite investments India's logistics ecosystem remains fragmented with underdeveloped multimodal transport (rail, road, waterways, air), leading to inefficiencies and higher costs.
Inefficient Intermodal Connectivity	Lack of seamless integration across rail, road, ports, and air cargo hampers cargo movement. Dry ports, ICDs, and multimodal hubs are unevenly distributed and underutilized.
Regulatory and Policy Bottlenecks	Multiple regulatory bodies across states, overlapping compliances, and slow clearances (e.g., customs, environment) delay freight movement and increase paperwork.
Digital Gaps and Low-Tech Adoption	Though progress has been made with e-Way Bills and FASTag, many small players lack digital capabilities, leading to limited visibility, tracking, and route optimization.
Urban Logistics and Congestion	With rapid urbanization, last-mile delivery faces bottlenecks due to traffic congestion, limited parking, and restrictive delivery time windows, especially in metro cities.
Limited Warehouse Standardization	A large share of Indian warehouses are unorganized and non-compliant with modern storage, safety, and technology standards, limiting scalability and efficiency.

6 Overview of Custom House Agent Service in India

6.1 Review of custom House Agent Service in India

Custom House Agent (CHA) services in India, now formally recognized as Customs Brokers under the Customs Brokers Licensing Regulations (CBLR) 2018, form a critical backbone of the country's international trade and logistics ecosystem. Their primary role is to act as licensed intermediaries between importers/exporters and the Indian Customs authorities, ensuring compliance with the Customs Act, Foreign Trade Policy, DGFT, RBI regulations, and other allied laws. A CHA typically manages the entire customs clearance process, which includes preparing and filing Bills of Entry and Shipping Bills, classifying goods under the correct tariff codes, facilitating duty payment, and handling drawbacks and refund claims. Beyond documentation, they also coordinate with port terminals, container freight stations, airlines, shipping lines, and other government agencies, ensuring smooth movement of cargo and helping businesses avoid costly delays and demurrage. For small and medium enterprises, CHAs play an indispensable role as these businesses often lack the internal compliance expertise needed to navigate India's complex customs regime.

The strengths of CHA services lie in their deep regulatory knowledge, established working relationships with port and customs officials, and their ability to expedite clearance processes. These qualities allow importers and exporters to focus on their core business while entrusting compliance and procedural aspects to experienced professionals. However, the sector faces a period of rapid transformation. Over the last decade, the Indian government has accelerated the digitalization of customs processes through platforms such as ECCS, ICES, e-Sanchit, and the introduction of faceless assessments. While these reforms have improved transparency and efficiency, they also reduce the traditional manual intervention where CHAs once held a strong operational edge. As a result, the role of CHAs is shifting from paperwork handlers to compliance consultants and strategic advisors who must stay updated on tariff changes, free trade agreement (FTA) provisions, and evolving customs regulations.

At the same time, the CHA industry is grappling with competitive pressures. India has many licensed Customs Brokers, which has led to price undercutting and commoditization of basic services. Moreover, compliance responsibilities have become stricter under CBLR 2018, with enhanced KYC requirements, mandatory record-keeping, and accountability for misdeclarations or fraudulent documents. These regulatory demands increase operational risk for CHAs and require significant investment in compliance management systems and skilled manpower. Smaller brokers often find it difficult to invest in technology and specialized staff, making them vulnerable to being edged out by larger logistics companies.

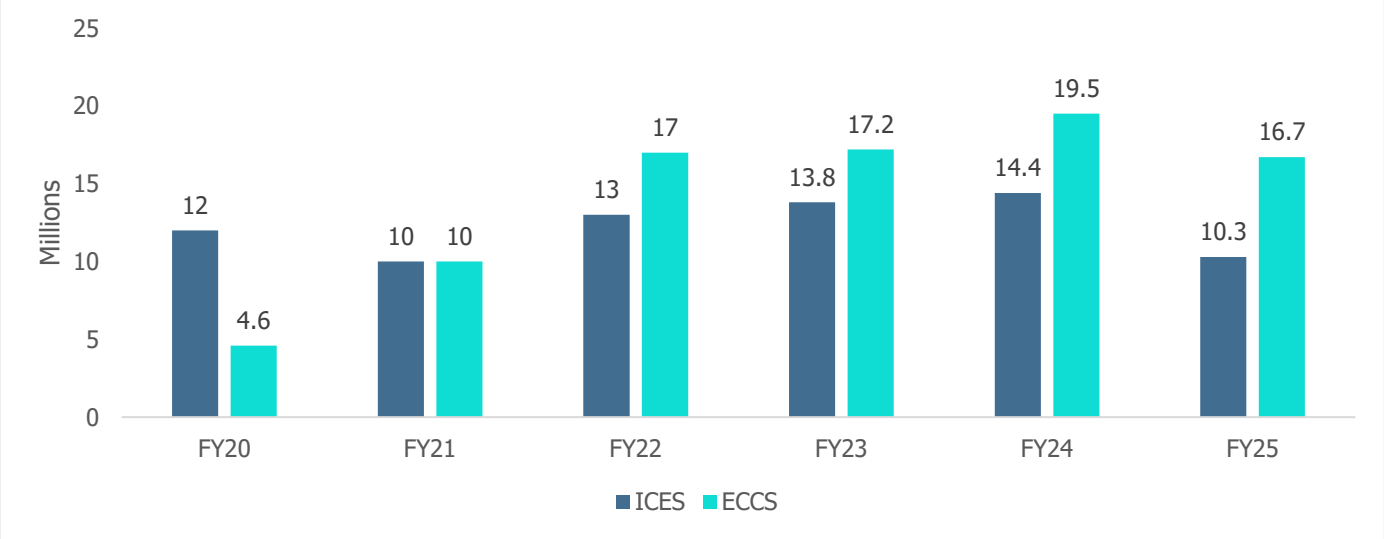
Despite these challenges, there are strong opportunities for growth. The rise of cross-border e-commerce is creating new demand for quick customs clearance of small parcels, while sectors like pharmaceuticals, healthcare, and perishables are increasingly relying on express and time-bound customs handling. India's active engagement in trade agreements, such as those with the UAE and Australia, and ongoing negotiations with the EU and UK, further increases the need for expert advisory on preferential duty benefits, rules of origin compliance, and FTA-linked opportunities. Many large freight forwarders and third-party logistics providers (3PLs) are integrating CHA services into their broader offerings, creating end-to-end logistics solutions that appeal to exporters and importers seeking efficiency and reliability.

Looking ahead, the outlook for CHA services in India is positive but evolving. With India's trade volume expected to grow significantly, the demand for customs clearance and compliance advisory will continue to expand. However, the role of CHAs will no longer be confined to documentation; instead, it will centre on value-added services such as trade compliance consulting, technology-enabled filing solutions, and integration with multimodal logistics and supply chain management. The industry is also likely to see consolidation, with smaller CHAs aligning with or merging with larger logistics companies to stay competitive. The winners in this sector will be those who embrace technology, build strong compliance capabilities, and reposition themselves as strategic partners in international trade rather than mere intermediaries in paperwork.

6.2 EXIM Filings Handled by ECCS and ICES

EXIM (Export- Import) filings in India are handled electronically through the Indian Customs Electronic Data Interchange System (ICES) which accepts documents like Shipping Bills and Bills of Entry online via the Ice gate portal. The Express Cargo Clearance System (ECCS) is a specialized platform within this framework for fast-tracking express cargo through features like bulk filing and real time status updates, support.

Chart 2: EXIM Filings Handled by ECCS and ICES



Source: Express Industry Council of India, Care Edge Research

The chart highlights a clear shift in the pattern of EXIM (export-import) filings between ICES (Indian Customs EDI System) and ECCS (Express Cargo Clearance System) over FY20–FY25. In FY20, ICES dominated with 12 million filings compared to just 4.6 million in ECCS. However, from FY21 onwards, ECCS filings rose sharply, equalling ICES by FY21 (10 million each) and then surpassing it consistently in subsequent years. By FY24, ECCS filings had grown to 19.5 million against ICES's 14.4 million, reflecting ECCS's growing dominance in handling filings. Although FY25 shows a marginal decline in ECCS filings (16.7 million) compared to FY24, it still outpaced ICES significantly, which dropped to 10.3 million.

This trend illustrates the growing importance of express cargo and courier clearances in India's trade ecosystem, driven by the rapid rise of e-commerce, cross-border retail shipments, and increasing reliance on time-sensitive consignments such as healthcare products, perishables, and high-value electronics. The fact that ECCS overtook ICES filings within just two years underlines how digital and specialized systems are becoming central to India's customs clearance landscape. For Custom House Agents (CHAs) and Customs Brokers, this shift signals a transformation in service demand: traditional bulk cargo handled through ICES is plateauing, while express shipments are surging and require faster, tech-enabled clearance processes.

The broader implication is that Indian Custom House services are evolving towards agility, digitization, and express handling capabilities. ECCS's growth reflects Customs' efforts to streamline express cargo clearances through paperless, automated systems, aligning with global standards and facilitating the needs of new-age trade. For CHAs, this means building competencies in digital filing, express clearance procedures, and compliance for smaller but high-frequency shipments, as opposed to relying solely on conventional cargo volumes. The dip in FY25 filings across both systems could be attributed to global trade volatility, currency fluctuations, or a correction post-pandemic surge, but the long-term trajectory indicates ECCS will remain a growth driver in India's customs services.

6.3 Key drivers and challenges

Key Drivers

- **Growth in Trade Volumes**
  Rising imports and exports, driven by India's role in global supply chains and new Free Trade Agreements (FTAs), directly increase the demand for customs clearance and advisory services.
- **Complex Regulatory Environment**
  India's customs procedures involve multiple laws (Customs Act, FTP, DGFT, RBI, FSSAI, etc.). Businesses, especially SMEs, rely on CHAs for expertise in classification, valuation, and compliance.
- **Digital Transformation of Customs**
  Initiatives like ICEGATE, e-Sanchit, Faceless Assessment, and the Express Cargo Clearance System (ECCS) require professional handling and digital proficiency, encouraging clients to depend on CHAs with tech capabilities.
- **E-commerce and Express Shipments**
  The surge in cross-border e-commerce and express cargo has expanded the scope of CHA services beyond bulk cargo into time-sensitive clearances for retail, healthcare, and perishables.
- **Global Supply Chain Diversification**
  "China+1" and "Make in India" strategies are bringing new manufacturing and sourcing flows into India, boosting the need for efficient CHA services to handle rising imports of components and exports of finished goods.

Key Challenges

- **Increasing Digitalization**
  While digitization enhances efficiency, it also reduces manual interventions that were once CHA strongholds, compelling them to shift from paperwork to value-added advisory roles.
- **Regulatory Stringency & Accountability**
  Under the Customs Brokers Licensing Regulations (CBLR) 2018, CHAs face strict KYC, record-keeping, and compliance obligations. Errors or misdeclarations can result in heavy penalties, suspension, or cancellation of licenses.
- **High Competition & Price Pressure**
  The large number of licensed Customs Brokers creates intense competition, leading to fee undercutting and commoditization of services. Smaller CHAs often struggle to differentiate themselves.
- **Need for Skilled Manpower & Technology**
  Modern customs clearance demands knowledge of HS codes, trade agreements, and digital platforms. Many smaller CHAs lack the resources to invest in training, compliance tools, or IT systems.
- **Global Trade Uncertainty**
  Fluctuations in global demand, protectionist policies, and geopolitical tensions can cause volatility in cargo volumes, directly affecting CHA revenues.

7 Overview of Express Cargo Market in India

7.1 Overview and market size of domestic express.

The domestic express logistics market in India has exhibited robust and sustained growth across road, rail, and air modes from 2019 to 2023, with a clear trajectory toward accelerated expansion through 2030. The market size stood at approximately USD 5.8 billion in 2023, with road express services forming the backbone of the industry, complemented by rail and air express segments.

Road express dominates the landscape, accounting for 70% of the market, rising from USD 3.1 billion in 2019 to USD 4.0 billion in 2023, and is projected to more than double to USD 8.5 billion by 2030. This dominance reflects India's reliance on its expanding national and state highway networks, last-mile connectivity advantages, and cost competitiveness. Growth is being further reinforced by the rise of e-commerce, omnichannel retail, and the increasing adoption of digital logistics solutions by SMEs and large corporates.

Rail express, though smaller in comparison, is emerging as a high-potential growth driver. The segment expanded from USD 1.1 billion in 2019 to USD 1.5 billion in 2023, with projections of reaching USD 4.0 billion by 2030. This surge is closely aligned with the Government of India's policy focus on reducing logistics costs through modal diversification. The rollout of Dedicated Freight Corridors (DFC), multimodal logistics parks, and public-private partnerships in container train operations is expected to significantly boost rail express adoption, particularly for bulk, industrial, and long-haul time-bound cargo.

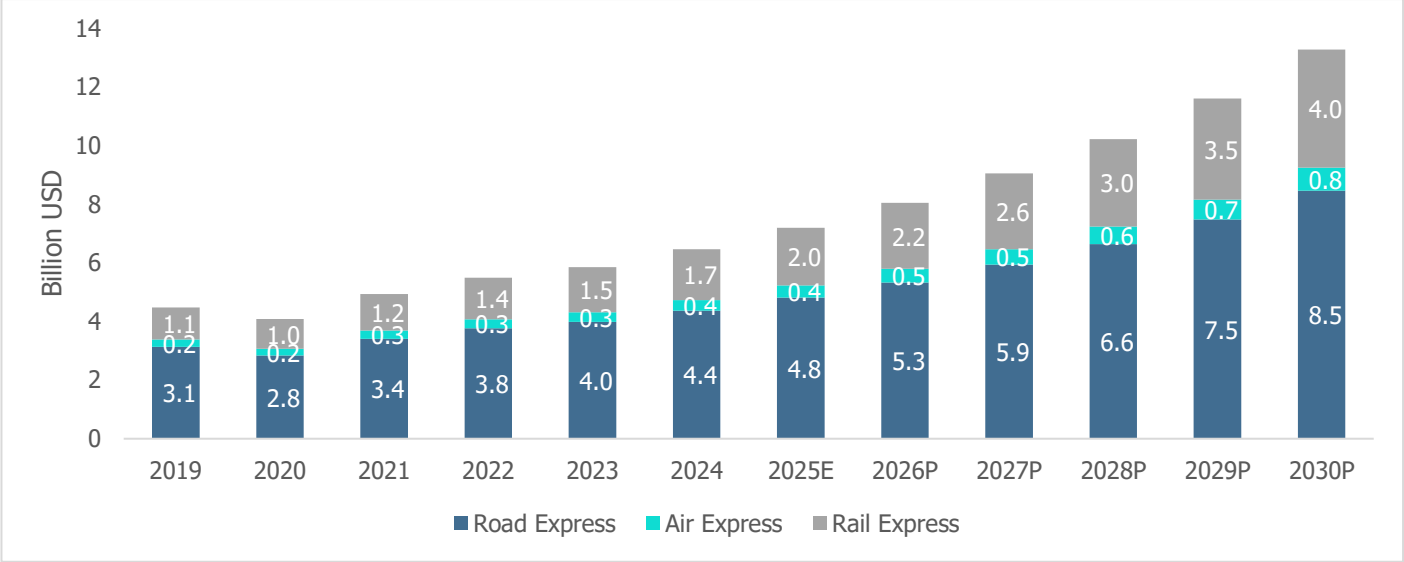
Air express, while the smallest segment, serves as the premium logistics channel catering to high-value, time-sensitive goods such as pharmaceuticals, perishables, and electronics. The segment grew marginally from USD 0.2 billion in 2019 to USD 0.3 billion in 2023 but is projected to touch USD 0.8 billion by 2030. Growth here will be supported by rising demand for same-day and next-day deliveries, expansion of regional air cargo infrastructure, and policy support through the UDAN scheme and cargo terminal development.

Collectively, the domestic express market is forecast to expand from USD 5.8 billion in 2023 to USD 13.3 billion in 2030, reflecting a CAGR of over 11%. This expansion is underpinned by three critical forces:

1. **E-commerce and B2C delivery boom** – with online retail penetration rising sharply across Tier-II and Tier-III cities.
2. **Policy and infrastructure push** – including DFCs, Bharatmala, Sagarmala, and multimodal hubs.
3. **Technology integration** – with AI, IoT, and GPS-driven platforms optimizing route planning, fleet management, and last-mile delivery.

In conclusion, while road express will remain the dominant mode, rail express is set to be the fastest-growing segment, supported by structural policy shifts, while air express will consolidate its niche in premium, time-critical logistics. The overall trajectory positions the domestic express logistics sector as a key enabler of India's consumption-driven growth and supply chain modernization agenda.

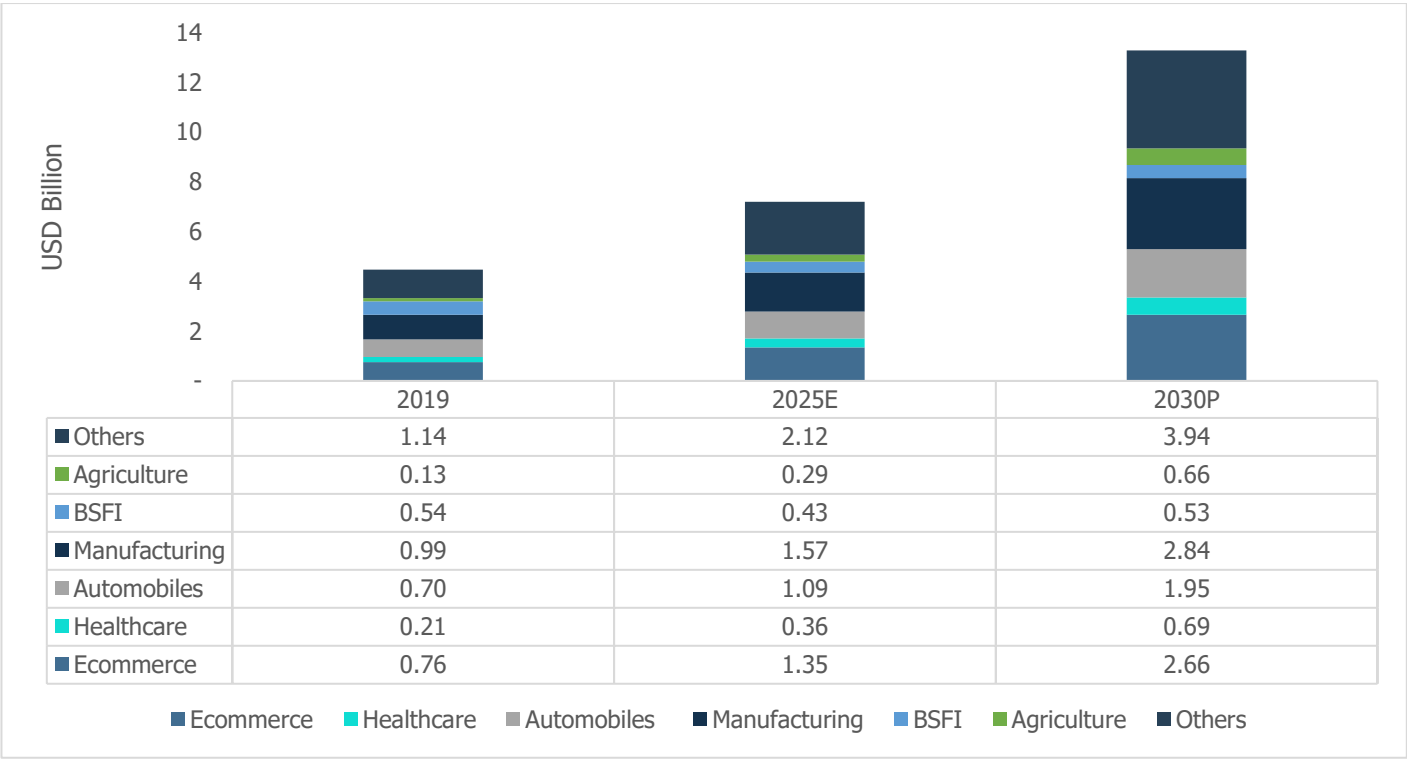
Chart 28: Market Size of Domestic Express



Source: IMAARC, Care Edge Research

7.2 Overview and market size of domestic express (CY19- CY30) – by end users.

Chart 29: Market Size of Domestic Express – by end users.



	2019	2025E	2030P
Others	1.14	2.12	3.94
Agriculture	0.13	0.29	0.66
BSFI	0.54	0.43	0.53
Manufacturing	0.99	1.57	2.84
Automobiles	0.70	1.09	1.95
Healthcare	0.21	0.36	0.69
Ecommerce	0.76	1.35	2.66

Source: IMAARC, Care Edge Research

E-commerce

E-commerce shows the sharpest growth trajectory, expanding from a small base in 2019 to becoming one of the dominant verticals by 2030. This surge reflects India's booming online retail ecosystem, deeper penetration of internet and smartphones, and the rise of D2C brands. Express logistics is a natural beneficiary, as customer expectations shift to faster delivery timelines across Tier 2+ cities. By 2030, e-commerce is positioned as a major demand driver, shaping network expansion and last-mile innovation.

Healthcare

Healthcare's share remains small but steadily rising over the years. The demand is driven by increasing e-pharmacy adoption, diagnostics deliveries, and higher reliance on temperature-controlled express networks for vaccines and sensitive products. The growth between 2025 and 2030 is notable, reflecting the industry's shift towards digitization of healthcare access and the government's push for telemedicine and last-mile health services.

Automobiles

Automobile logistics shows consistent growth, with express networks increasingly handling spare parts, aftermarket distribution, and just-in-time deliveries. While not as fast-growing as e-commerce, the sector maintains strong relevance as auto manufacturing scales in India and export hubs grow. By 2030, the automobile segment remains a stable contributor, supported by higher vehicle sales, EV adoption, and demand for faster supply of components.

Manufacturing

Manufacturing displays healthy expansion, with a significant jump by 2030, second only to e-commerce. The growth is linked to India's "Make in India" initiative, global supply chain diversification, and rising industrial production. Express logistics in this sector is used for B2B shipments of electronics, engineering goods, and semi-finished materials. The increasing reliance on time-bound movement of components is strengthening this segment's role in express logistics.

BFSI

BFSI (Banking, Financial Services, and Insurance) shows a declining share over time, though absolute volumes grow modestly. This trend reflects the digital transformation of the sector, with reduced reliance on physical document movement. From being a large component in the early years of express logistics, BFSI is gradually becoming less prominent, although compliance-related paperwork and premium document handling continue to sustain a base demand.

Agriculture

Agriculture and perishables remain a niche but steadily growing segment. Their inclusion in express logistics is primarily linked to high-value, time-sensitive perishables such as dairy, seafood, and floriculture. Growth by 2030 reflects better adoption of cold chain express networks and government incentives to boost Agri-exports. However, bulk agriculture movement remains outside express logistics, limiting its overall share.

Others

The "Others" category remains significant throughout and shows growth in absolute terms, but its share declines as e-commerce and manufacturing expand faster. This segment includes education, government, professional services, and general documents. Its growth is driven by increasing urbanization and business activity, but structurally it gets overshadowed by the rapid rise of consumer and industrial verticals.

7.3 Key Market drivers and opportunities

1. E-Commerce Boom

Massive growth in online retail (Flipkart, Amazon, Meesha, etc.) is driving demand for fast, reliable express delivery.

Tier II & III cities are becoming key demand centres, boosting regional express cargo needs.

2. Rising MSME & D2C Businesses

MSMEs and Direct-to-Consumer brands increasingly rely on express logistics for nationwide distribution. These businesses need fast and trackable logistics to meet customer expectations.

3. Increased Demand for Time-Bound Deliveries

B2B and B2C customers are demanding same-day/next-day delivery, especially in urban areas. Industries like pharmaceuticals, electronics, auto parts, and perishables depend on reliable express services.

4. Government Infrastructure Push

Gati Shakti, Bharatmala, Sagarmala, and Dedicated Freight Corridors (DFCs) are improving road and rail connectivity. Development of multimodal logistics parks and integrated freight zones is facilitating quicker movement.

5. Technology Adoption

Widespread use of real-time tracking, route optimization, AI-driven warehouse automation, and digital freight matching enhances reliability and efficiency. Digitization by startups and traditional players is transforming operations.

6. GST & e-Way Bill Implementation

Unified tax regime under GST enables seamless interstate logistics. e-Way bills reduce checkpoint delays, improving turnaround time for express cargo.

7. Rising Per Capita Incomes & Consumer Expectations

A growing middle class with increased disposable income is fuelling demand for premium delivery services and faster shipping.

8 Overview of India Freight Forwarding Market

Freight forwarding in India has evolved into a cornerstone of the nation's logistics landscape, playing a crucial role in managing the complex flow of goods across domestic and international markets. Forwarders act as vital intermediaries, coordinating warehousing, cargo consolidation, insurance, customs clearance, and multimodal transport to ensure seamless, end-to-end movement of freight. With the rise of globalization, the rapid growth of e-commerce, and increasing digital adoption, freight forwarding has transformed from a traditional coordination function into a tech-enabled, value-added service that is central to efficient trade and supply chain operations.

As part of a logistics ecosystem that underpins significant portions of the Indian economy, freight forwarders are now leveraging advanced technologies such as artificial intelligence, IoT, and blockchain. These tools are driving real-time visibility, automating documentation, and enhancing operational efficiency, making the entire freight process more transparent and scalable.

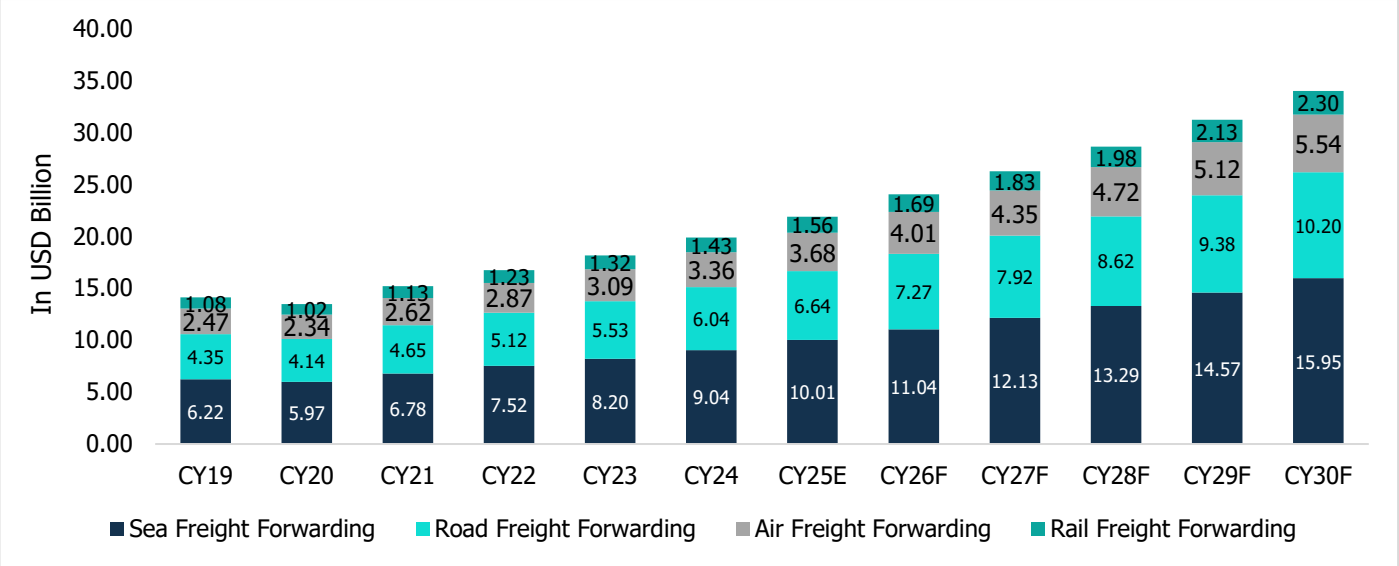
Simultaneously, large-scale government initiatives including the development of dedicated freight corridors, multimodal logistics parks under PM Gati Shakti, and infrastructure programs like Sagarmala and Bharatmala are dramatically improving connectivity and reducing logistics costs. A significant enabler in this transformation is the Indian Railways, the fourth-largest rail system globally, which is being heavily modernized to boost freight capacity. With 96.4% of both the Eastern and Western Dedicated Freight Corridors now operational, Indian Railways is set to raise its share of freight transport from 26% to 45% by 2030. Freight volumes are expected to reach 3,000 million tonnes by FY2027, and rail freight movement in Net Tonne Kilometres (NTKM) is projected to double to 1,695 billion by FY27 from 820 billion in FY22.

Such developments not only strengthen multimodal connectivity but also support India's broader logistics modernization goals. Additionally, the Railways' station redevelopment program and the manufacturing of advanced trains like Vande Bharat and Amrit Bharat are stimulating demand for steel-based components, further linking freight growth to sectors like construction and metallurgy. Alongside sustainability efforts including a modal shift from road to rail India's freight forwarding market is moving toward a more integrated, digital, and environmentally resilient future.

8.1 Market Size of Freight Forwarding in India by Type

India's freight forwarding market is divided into air, sea, rail, and road freight forwarding, and others each playing a critical role in supporting the country's growing trade and supply chain ecosystem. While air freight forwarding handles high-value, time-sensitive goods such as pharmaceuticals, electronics, and express cargo, sea freight forwarding caters to bulk shipments like machinery, chemicals, metals, and agricultural commodities. With rapid advancements in infrastructure, policy reforms, digital technologies, and increased global integration, both segments have witnessed stable growth trajectories and are positioned for continued expansion.

Chart 30: Market Size of Freight Forwarding in India By Type



Source: Imarc, Care Edge Research; Note: CY refers to Calendar year, E-Estimated, F-Forecasted

8.1.1 Sea Freight Forwarding in India: Driving Bulk Trade Efficiency via Port Expansion and Global Realignment

Sea freight forwarding encompasses the movement of cargo by ocean vessels, ideal for heavy, bulk, or non-urgent shipments. It plays a pivotal role in India's foreign trade, with around 95% of total trade volume transported via maritime routes. This segment has gained significant momentum due to increased port capacity, improved connectivity through the Sagarmala and Maritime India Vision projects and rising exports of manufactured and intermediate goods. The government's push for port modernization, mechanization, and public-private partnerships is also enhancing operational efficiency and reducing turnaround times. With India's coastline spanning over 7,500 km and more than 200 ports, sea freight is positioned for long-term growth. Additionally, the shift in global sourcing away from China is creating new opportunities for Indian exporters, especially in consumer electronics, textiles, and machinery. Domestic riverine transport is also gaining traction as a green and cost-effective mode for short-haul freight movement.

The sea freight forwarding market was valued at USD 9.04 billion in CY24, and is projected to reach USD 15.95 billion by CY30, growing at a CAGR of 9.9%, over the period. Its market share is expected to reach 46.9% in CY30, reflecting relatively faster growth in the sea freight segment.

8.1.2 Road Freight Forwarding in India: Expansion driven by sustainability and technology

Road freight forwarding involves the planning, coordination, and execution of inland goods movement by road, covering services like groupage, full truckload, consolidation, and multimodal connections between ports, airports, warehouses, and final destinations. It remains the most widely used mode for domestic logistics in India due to its flexibility, reach, and ability to handle diverse cargo types. Growth in urban consumption, expansion of e-commerce, and manufacturing activity in industrial corridors have created continuous demand for timely and cost-effective road transport. Forwarders are increasingly integrating technology for route optimization, load consolidation, and real-time tracking, enabling faster and more reliable deliveries even in complex urban networks. Looking ahead, road freight forwarding in India will be shaped by sustainability imperatives, evolving consumer expectations, and policy support. The government's identification of high-impact highway segments for exclusive use of zero-emission trucks under the PM E-DRIVE scheme signals a major shift toward cleaner freight transport. The rapid development of micro-fulfilment centres and urban consolidation hubs will allow forwarders to manage last-mile distribution more efficiently, reducing congestion and

emissions. Adoption of electric, LNG/CNG, and eventually hydrogen-powered trucks will not only address environmental concerns but also help forwarders position green logistics as a premium service offering.

The road freight forwarding market was valued at USD 6.04 billion in CY24, and is projected to reach USD 10.2 billion by CY30, growing at a CAGR of 9.1%, over the period. Its market share is expected to reach 30% in CY30.

8.1.3 Air Freight Forwarding in India: Fast-growing segment powered by e-commerce and express logistics

Air freight forwarding involves the transport of goods via air carriers, providing the fastest and most efficient mode for long-distance cargo delivery. In India, this segment has seen robust growth, driven by the expansion of e-commerce, greater demand for express logistics, increasing international connectivity, and the pivot of domestic airlines toward dedicated cargo services. Infrastructure upgrades, such as new cargo terminals and cold chain facilities, combined with digital tools like real-time tracking and paperless documentation, are further boosting efficiency and reliability. As of June 2025, 3.5 million metric tonnes of cargo is transported by air. Key carriers like Air India, Blue Dart, IndiGo, and others are expanding freighter fleets to meet rising demand. Additionally, global supply chain shifts and India's growing status as a manufacturing hub are expected to enhance volumes, particularly in high-value sectors.

The air freight forwarding market was valued at USD 3.36 billion in CY24, and is projected to reach USD 5.54 billion by CY30, growing at a CAGR of 8.7%, over the period. Its market share is expected to reach 16.3% in CY30.

8.1.4 Rail Freight Forwarding in India: Modernizing long-haul logistics through DFCs and digital integration

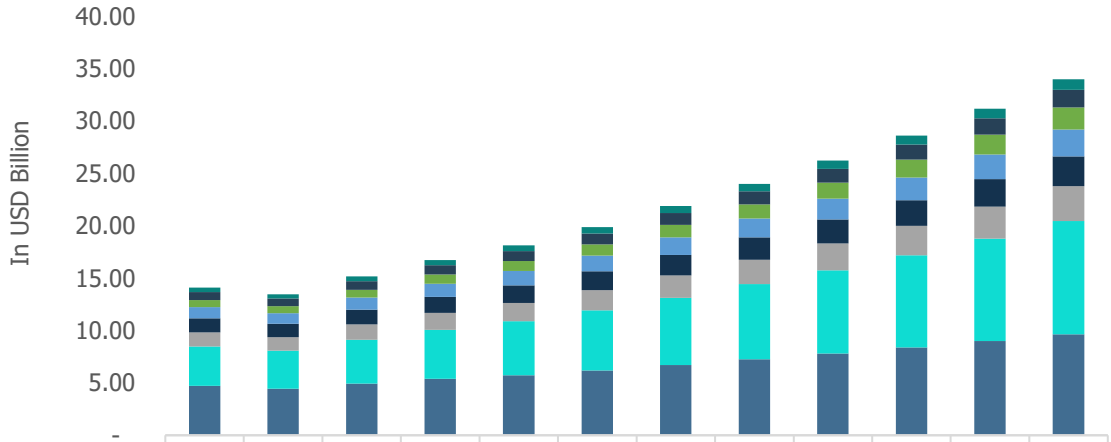
Rail freight forwarding manages the movement of goods through India’s extensive rail network, encompassing intermodal transfers, booking, customs clearance support, and end-to-end tracking for containerized, bulk, and project cargo. This mode is highly suited for heavy, long-distance, and bulk shipments due to its cost and volume efficiency, while also being more environmentally sustainable than road. Historically, reliance on rail forwarding has been driven by industrial sectors such as steel, coal, and agriculture, as well as by exporters needing consistent and economical long-haul transport. The Dedicated Freight Corridor (DFC) project, spearheaded by the Dedicated Freight Corridor Corporation of India Limited (DFCCIL), is nearing full operational capacity and promises to transform rail logistics by decongesting passenger routes and setting new benchmarks for freight speed and reliability. In the coming years, the operationalization of the Eastern, Western, North–South, and East–West DFCs will greatly enhance capacity and efficiency in rail forwarding. Integration with Multi-Modal Logistics Parks will enable seamless transfer between rail, road, and coastal shipping, allowing for hybrid transport models tailored to specific cargo needs. The growing adoption of IoT, AI, and blockchain in rail logistics will provide forwarders with tools for real-time visibility, predictive scheduling, and automated operations, making rail forwarding more competitive and reliable. This shift will support the government’s vision for modern, sustainable, and globally competitive freight infrastructure.

The rail freight forwarding market was valued at USD 1.43 billion in CY24, and is projected to reach USD 2.3 billion by CY30, growing at a CAGR of 8.2%, over the period. Its market share is expected to reach 6.8% in CY30.

8.2 Market Size of Freight Forwarding in India by End-User Industry

The Indian freight forwarding market is intricately linked to the country’s diversified industrial ecosystem. Freight forwarders serve a critical function by enabling the movement of goods across sectors like manufacturing, agriculture, energy, pharmaceuticals, and trade. With growing international trade, digitization, and policy interventions such as the National Logistics Policy and Gati Shakti, the sector has witnessed dynamic shifts. Among end-user segments, Manufacturing & Automotive holds the largest share (31% in CY24), followed by Distributive Trade and Others. Growth across segments is being shaped by infrastructure enhancements, export competitiveness, e-commerce, and global supply chain diversification.

Chart 31: Market Size of Freight Forwarding in India By End-User Industry



	CY19	CY20	CY21	CY22	CY23	CY24	CY25E	CY26F	CY27F	CY28F	CY29F	CY30F
Textile	0.42	0.40	0.46	0.50	0.54	0.60	0.66	0.72	0.79	0.86	0.94	1.02
Construction	0.77	0.73	0.82	0.89	0.96	1.05	1.14	1.24	1.34	1.44	1.56	1.68
Healthcare and Pharmaceuticals	0.67	0.66	0.76	0.86	0.96	1.07	1.20	1.35	1.51	1.69	1.88	2.09
Oil and Gas, Mining, and Quarrying	1.06	1.02	1.14	1.26	1.37	1.50	1.66	1.82	1.99	2.17	2.37	2.58
Others	1.36	1.28	1.42	1.54	1.66	1.80	1.96	2.12	2.28	2.44	2.62	2.82
Agriculture, Fishing, and Forestry	1.36	1.30	1.46	1.62	1.76	1.93	2.13	2.34	2.57	2.81	3.06	3.34
Distributive Trade	3.73	3.63	4.17	4.68	5.15	5.74	6.42	7.16	7.95	8.82	9.77	10.81
Manufacturing and Automotive	4.73	4.45	4.95	5.38	5.74	6.19	6.72	7.27	7.81	8.39	9.00	9.65

Source: Mordor Intelligence, EMIS, Care Edge Research; Note: CY refers to Calendar year, E-Estimated, F-Forecasted

8.2.1 Policy and Demand Backed Growth in Manufacturing and Automotive

This segment dominates the freight forwarding market with a projected increase from USD 6.19 billion in CY24 to USD 9.65 billion by CY30, growing at a CAGR of 7.7% over the period. Its market share is expected to decline slightly from 31.2% in CY24 to 28.4% in CY30. Freight demand from this sector is driven by the expansion of India's automotive industry, machinery exports, and policy boosts under Make in India and the Production Linked Incentive (PLI) schemes. Increasing adoption of process automation, digital logistics platforms, and industrial corridors (like DMIC) are expected to further reduce costs and increase throughput. Growth in EVs, electronics manufacturing, and rural industrialization also augur well for long-term freight expansion.

8.2.2 Rapid Growth driven by e-commerce and retail tech adoption in Distributive Trade (Wholesale, Retail, E-Commerce)

This is the second-largest segment with freight forwarding revenue expected to grow from USD 5.74 billion in CY24 to USD 10.81 billion in CY30, at a CAGR of 11.1%. Its share is expected to rise from 28.9% in CY24 to 31.8% in CY30. A surge in organized retail, digitized B2B platforms, and exponential e-commerce growth is creating small-parcel, high-frequency freight demand. Tech platforms offering real-time tracking, inventory syncing, and last-mile services have enabled cost-efficient solutions, especially for SMEs and omnichannel businesses.

8.2.3 Steady rise in Agriculture, Fishing, and Forestry

Valued at USD 1.93 billion in CY24, this segment is projected to reach USD 3.34 billion by CY30, registering a CAGR of 9.6%. Its share is expected to rise from 9.7% (CY24) to 9.8% (CY30). Growth drivers include increased agri-exports, food processing, and cold chain logistics. Government schemes supporting agri-infrastructure, such as Kisan Rail and agri-logistics parks, have catalysed freight requirements. The demand for multimodal connectivity in remote and semi-urban areas further supports the growth of this segment.

8.2.4 Driven by Energy Infrastructure, Oil and Gas, Mining, and Quarrying grows robustly

Growing from USD 1.5 billion in CY24 to USD 2.58 billion by CY30, this segment is expanding at a robust CAGR of 9.4%, with market share expected to remain steady at 7.6% in CY30. Freight activity in this sector is heavily influenced by India's energy import needs, infrastructure such as LNG terminals and pipelines, and massive investments in upstream oil and gas. The ongoing expansion of gas grids and refinery capacity, along with energy security strategies and mineral resource development, will boost demand for heavy and bulk freight forwarding solutions.

8.2.5 Healthcare and Pharmaceuticals growth led by pharma exports and cold logistics

Growing from USD 1.07 billion in CY24 to USD 2.09 billion in CY30, this is the fastest-growing segment with a CAGR of 11.8%, with market share expected to rise from 5.4% in CY24 to 6.2% in CY30. The COVID-19 pandemic accelerated investment in temperature-controlled logistics and compliance-heavy international supply chains. India's rising exports of generics, biologics, and vaccine logistics underpin this growth. Pharma supply chain resilience and GDP-linked expansion of domestic healthcare services will drive future demand.

8.2.6 Sustained Urban Development drives growth in Construction segment

From USD 1.05 billion in CY24 to USD 1.68 billion in CY30, this segment grows at a CAGR of 8.2%. The market share is expected to reach 4.9% in CY30. Rising demand from urbanization, smart cities, metro and highway expansion, and industrial parks sustain freight movement. Cement, steel, and heavy machinery shipments are key drivers. Projects under the PM Gati Shakti master plan are likely to boost coordinated logistics for this sector.

8.2.7 Growth driven by exports, policy, and connectivity in Textile segment

From USD 0.6 billion in CY24 to USD 1.02 billion in CY30, this segment grows at a CAGR of 9.4%. The market share is expected to reach 3% in CY30. The textile industry is a major contributor to India's freight forwarding market, handling raw materials like cotton and yarn to manufacturing hubs and distributing finished goods to domestic and global markets. Its reliance on timely shipments for production cycles and exports makes efficient logistics critical. Growth has been driven by India's strong production base, rising exports, organised retail, and integration into global value chains. Future momentum will come from demand for sustainable and technical textiles, government support through schemes like PLI and Mega Textile Parks, and improved multimodal connectivity with digital tracking, enhancing efficiency and global competitiveness.

8.2.8 Other End Users grow steadily

The others segment (including education, textiles, electronics, etc.) is expected to grow from USD 1.8 billion in CY24 to USD 2.82 billion in CY30, at a CAGR of 7.8%. Its market share is projected to stand at 8.3% in CY30. Growth is driven

by customized logistics solutions, cross-border exports in niche segments (like fashion and education kits), and tech-enabled tracking and consolidation services. Expanding MSME participation in global supply chains is a major opportunity for freight forwarders here.

8.3 Key Market Drivers and Opportunities

- **Digital-first platforms reshape freight forwarding**

The Indian freight forwarding industry is experiencing a digital revolution. Startups and established logistics players leverage AI, machine learning, blockchain, and IoT to simplify shipment bookings, automate documentation, and offer real-time visibility across the supply chain. These digital freight marketplaces are reducing dependence on intermediaries, bringing down operational costs, and increasing access to logistics services for MSMEs - especially in tier 2 and tier 3 cities. Additionally, automated documentation systems, e-way bills, and e-invoicing reduce human error, speed up customs clearance, and facilitate trust-based ecosystems that are crucial for B2B and cross-border logistics operations.

- **Infrastructure synergy via multimodal logistics integration**

Major government initiatives such as the Dedicated Freight Corridors (DFCs), Sagarmala, Bharatmala, and PM Gati Shakti are enabling seamless freight movement by integrating ports, inland waterways, rail, and road infrastructure. The Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL) has completed 96.4% of its sanctioned route of 2,843 km under the Eastern and Western DFCs. These corridors have significantly decongested passenger lines and enabled freight trains to run faster, more frequently, and with higher axle loads boosting reliability and logistics efficiency.

Under the Sagarmala Programme, 839 projects worth Rs. 5.79 lakh crore have been identified, with 272 completed as of March 2025. These include port modernization, new terminals, road–rail connectivity, and green shipping corridors. Over 230 MTPA of new port capacity and 1,500 km of connectivity have been added.

The PM Gati Shakti National Master Plan integrates more than 44 central ministries and 36 states/UTs on a single digital platform, enabling coordinated infrastructure development across transport modes. It has helped in planning 13,500 km of national highways.

Additionally, the government is developing 35 Multimodal Logistics Parks (MMLPs) to reduce freight costs and dwell times. Five major parks (Chennai, Bengaluru, Nagpur, Indore, and Jogighopa) are under active development and expected to become operational between FY26 and FY27. Several more are at bidding or feasibility stages in Anantapur, Patna, Nashik, and Coimbatore. These MMLPs will serve as integrated hubs for warehousing, handling, and multimodal transport, particularly near industrial corridors.

- **E-commerce and export-driven demand explosion**

India's digital commerce boom fuelled by growing internet penetration, digital payment adoption, and rural consumer reach has increased demand for last-mile, express, and bulk freight services. Forwarders are now adapting to smaller, time-sensitive cargo in addition to traditional B2B loads. Simultaneously, export sectors like pharmaceuticals, electronics, and engineering goods have scaled up under Make in India and Production Linked Incentive (PLI) schemes. This has generated more outbound cargo and intermodal transport requirements. The increased diversity in shipment types is shaping new growth strategies for Indian forwarders, who are building vertical-specific capabilities and regional delivery networks.

- **Policy-driven logistics modernization**

The National Logistics Policy (NLP), launched in 2022, focuses on reducing logistics costs to single digit by improving first and last-mile connectivity, digitizing supply chains, and promoting sustainability. The Unified Logistics Interface Platform (ULIP), a key digital initiative under NLP, brings together 30 systems across different ministries and departments, enabling end-to-end tracking, digital approvals, and reduced paperwork. Reforms like Goods and Services

Tax (GST) have streamlined inter-state logistics and port clearance processes. Together, these efforts are reducing transit delays, cutting hidden costs, and fostering a more integrated national logistics grid that supports exporters and small forwarders alike.

Near to Medium Term Outlook

The near to medium term perspective for India's freight forwarding segment is positive, underpinned by consistent growth in volumes of trade, modernization of infrastructure, and the formalization of the logistics segment. Initiatives such as PM Gati Shakti, the National Logistics Policy, and investment in multimodal transport corridors are improving operational efficiency and decreasing turnaround times, which favors freight forwarders through better supply chain integration and cost-effectiveness.

Also driving demand are the ongoing growth of e-commerce, manufacturing, and export industries. The move toward digitization, such as the use of electronic documents, real-time tracking, and logistics automation, is revolutionizing the way freight forwarding companies do business. Technology investment, solid global network partnership, and adherence to regulatory regimes will serve those companies well in capturing opportunities for growth in both domestic and international freight flow.

9 Overview of 3PL/4PL Market in India

9.1 India's 3PL Market Set to Grow 9% CAGR, Driven by Digitalization and Manufacturing Boom

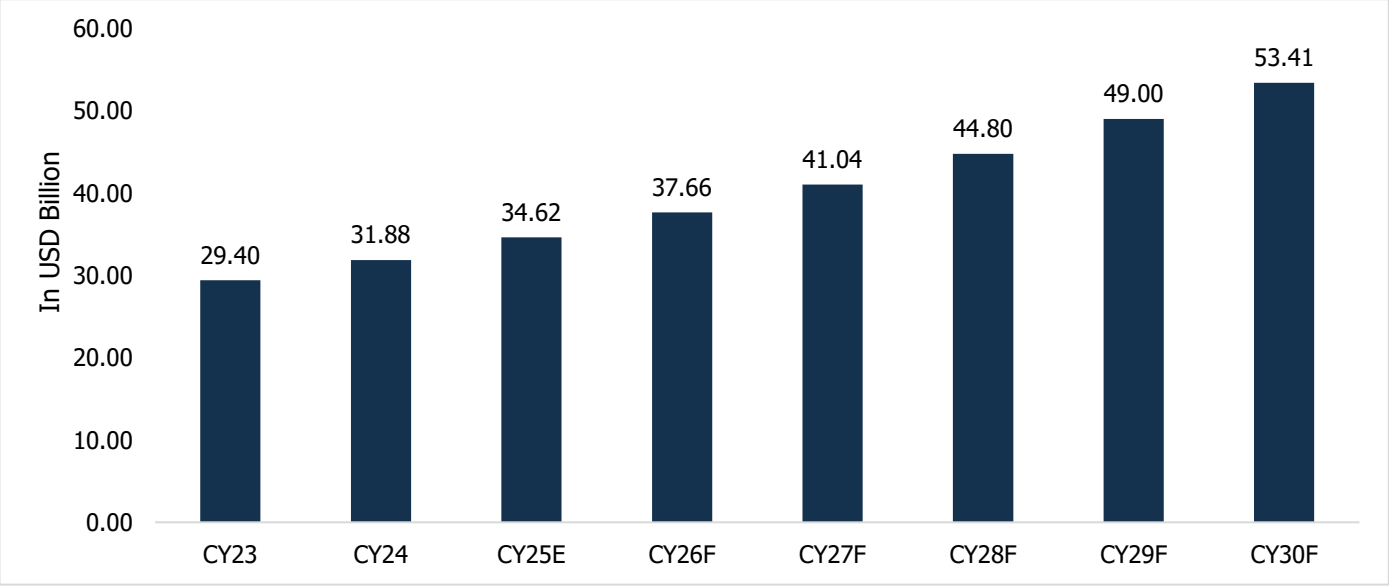
The Third-Party Logistics (3PL) market in India has evolved into a critical enabler of modern supply chains. 3PL involves outsourcing logistics functions such as transportation, warehousing, inventory management, and value-added services to specialized service providers. These providers offer integrated solutions that help businesses streamline operations, reduce costs, and focus on core activities while gaining access to advanced infrastructure and expertise.

The Indian third-party logistics (3PL) market is experiencing robust momentum, with its size estimated at USD 31.88 billion in CY24 and projected to reach USD 53.41 billion by CY30, growing at a CAGR of 9% between CY24 and CY30. Over the past decade, the sector has undergone significant transformation, fuelled by rising industrial activity, the expansion of organized retail, rapid e-commerce adoption, and sustained government investment in logistics infrastructure.

Historically, the demand for 3PL services in India has been driven by the need to improve operational efficiency, navigate a fragmented supply chain landscape, and manage increasing complexities in inventory and distribution. Companies increasingly turned to 3PL providers to streamline logistics operations, reduce capital expenditure on in-house infrastructure, and improve service agility.

Looking ahead, the future of India's 3PL market appears even more promising. Key growth drivers include the accelerating digitalization of logistics networks, proactive policy support through initiatives like the National Logistics Policy and PM Gati Shakti, and India's rising prominence as a global manufacturing and export hub. Additionally, the surge in cross-border trade, innovations in last-mile delivery, and the evolution of omni-channel retail models are expected to drive demand further. High-growth sectors such as pharmaceuticals, FMCG, and automotive are deepening their reliance on tech-enabled, responsive logistics partners. As businesses scale and supply chains become increasingly dynamic, the strategic role of 3PL providers in enabling efficiency, resilience, and growth will only continue to strengthen.

Chart 32: Market Size of 3PL Market in India



Source: EMIS, Care Edge Research; Note: CY refers to Calendar year, E-Estimated, F-Forecasted

9.2 India's 4PL Market Grows on Back of E-Commerce, Digital Push, and Supply Chain Integration

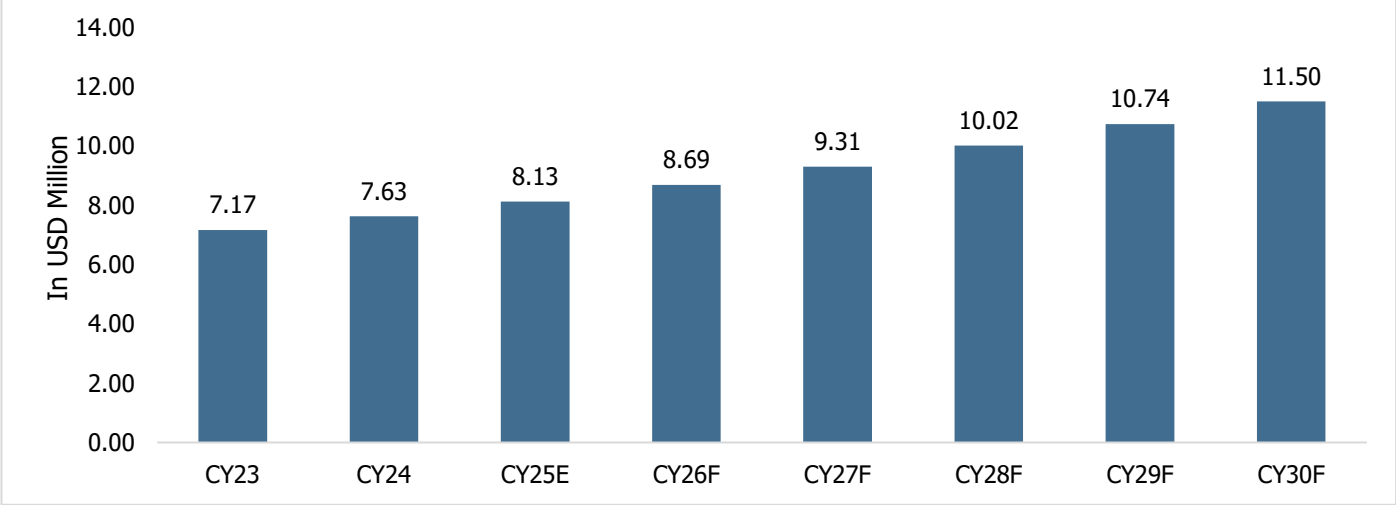
Fourth-Party Logistics (4PL) represents a step beyond traditional logistics outsourcing integrating and orchestrating end-to-end supply chain processes across multiple service providers and technologies. Unlike 3PL, which handles transport, warehousing, or inventory services, 4PL acts as a strategic partner managing the entire logistics ecosystem as a single point of accountability. In India, this model is gaining strong traction due to increasing supply chain complexity driven by globalization, manufacturing growth, and omnichannel retail.

The Indian fourth-party logistics (4PL) market is experiencing robust momentum, with its size estimated at USD 7.63 million in CY24 and projected to reach USD 11.5 million by CY30, growing at a CAGR of 7% between CY24 and CY30.

Historically, the rise of 4PL in India has been driven by the rapid expansion of e-commerce, which exposed the limitations of fragmented logistics networks. Businesses especially in retail, technology, and consumer goods began seeking integrated partners capable of offering visibility, efficiency, and scalability across end-to-end logistics. This demand has been bolstered by public initiatives like the National Logistics Policy, PM Gati Shakti, and Digital India, which promote digital infrastructure and multimodal connectivity.

Looking forward, India's 4PL market is set to accelerate further. Digital technology adoption including AI, IoT, blockchain, and advanced analytics is enabling more dynamic and responsive supply chains, while sustainability pressures introduce green logistics as a key value proposition. Additionally, startups and global 4PL players are entering the market through strategic partnerships and infrastructure investments, increasing competitive options. As Indian businesses scale globally and domestic supply chains become more integrated, 4PL providers are uniquely positioned to capture greater value helping companies become more agile, resilient, and future-ready.

Chart 33: Market Size of 4PL Market in India

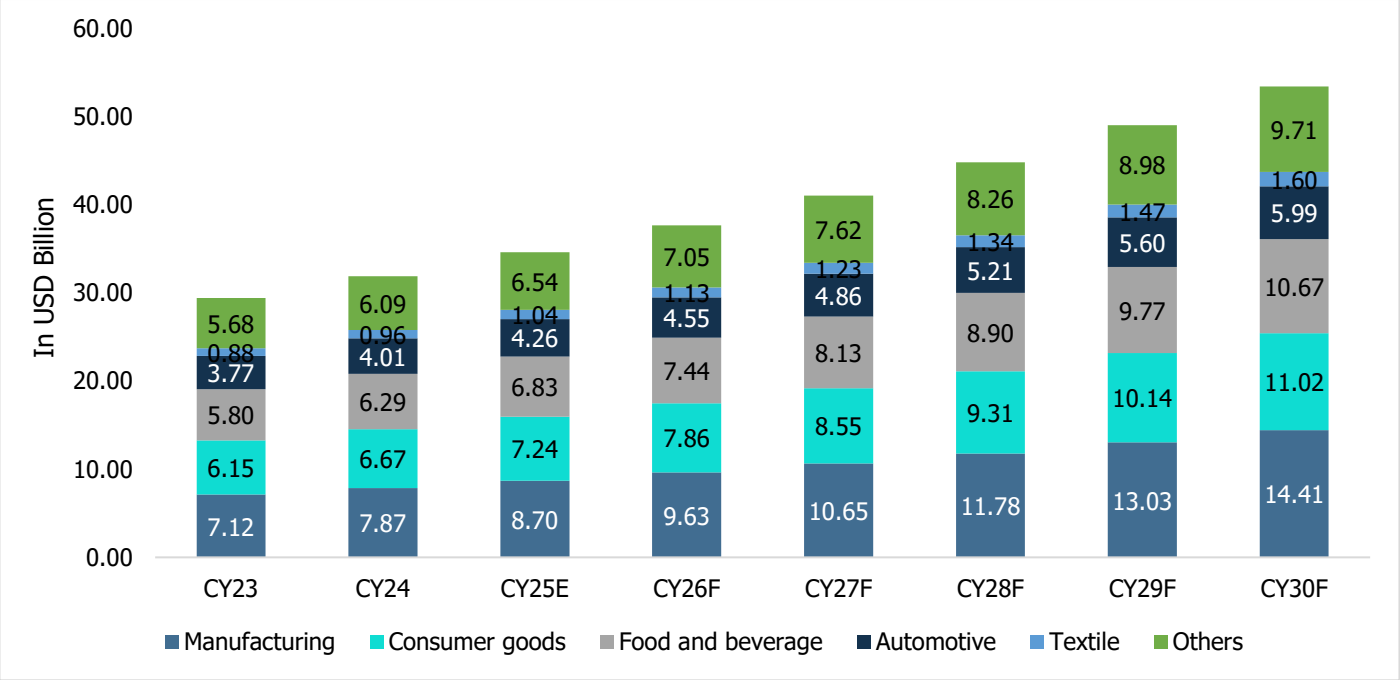


Source: EMIS, Care Edge Research; Note: CY refers to Calendar year, E-Estimated, F-Forecasted

9.3 Trend in Market Size of 3PL Market in India by Segment

India's third-party logistics (3PL) sector has grown into a vital support system across industries, providing tailored logistics solutions ranging from warehousing and transportation to order fulfilment and cold chain management. With rising complexity in supply chains, demand fluctuations, and geographic diversification of customer bases, end-user industries increasingly rely on 3PL providers for cost efficiency, flexibility, and scalability. Segments like manufacturing, consumer goods, food and beverages, and automotive are all experiencing rising logistics needs, further propelled by e-commerce growth, policy reforms, and technology integration.

Chart 34: Market Size of 3PL Market in India by Segment



Source: EMIS, Care Edge Research; Note: CY refers to Calendar year, E-Estimated, F-Forecasted

9.3.1 Integrated Logistics Backbone for India's Expanding Manufacturing Base

The manufacturing sector represents the largest share of India's 3PL market. Freight forwarders and 3PL providers offer integrated solutions such as inbound logistics, inventory management, cross-docking, and vendor-managed inventory, allowing manufacturing companies to focus on core production. Demand is especially strong in industrial hubs and economic corridors, where reliable logistics partners are essential for just-in-time delivery and raw material flow.

India's "Make in India" initiative increased foreign direct investment (FDI), and export growth have significantly boosted manufacturing activity. This, in turn, drives the need for professional logistics support, including multimodal transport, bonded warehousing, and customs facilitation. In the future, demand will be reinforced by the growth of high-tech and electronics manufacturing, industrial corridor development, and adoption of smart factory logistics models.

Between CY24 and CY30, the manufacturing segment is projected to grow at a strong CAGR of 10.6%, maintaining a stable market share rising from 25% to 27% over the period.

9.3.2 Fast and Flexible Distribution Support for Evolving Consumer Goods Demand

Consumer goods especially in the FMCG segment depend on fast, reliable, and widespread distribution. 3PL providers enable stock movement from centralized warehouses to retail outlets and homes, ensuring that brands can meet demand in both metros and remote rural areas. Services include inventory management, last-mile delivery, secondary distribution, and return logistics.

Historically, the sector's logistics needs have grown in tandem with urbanization, rural market expansion, and organized retail growth. E-commerce and modern trade channels have further transformed the landscape, with 3PL providers increasingly offering omni-channel support, real-time visibility, and agile stock movement. The rise of D2C brands and personalized consumer experiences will continue to drive tailored logistics services, warehousing automation, and tech-enabled transport routing.

The segment is expected to grow at a CAGR of 8.7% from CY24 to CY30, and its market share is expected to be around 21% in CY29.

9.3.3 Cold Chain and Compliance-Centric Logistics for Perishable Food Supply

The food and beverage industry is logistics-intensive, requiring time-sensitive, often temperature-controlled transportation. 3PL providers manage end-to-end cold chain logistics, handle compliance for food safety standards, and optimize route planning for perishable inventory. Increasing demand for packaged foods, health-based diets, and organized food retail has elevated the need for reliable and hygienic freight movement.

Previously, growth came from increased domestic food processing and exports of commodities like spices, seafood, and dairy. Moving forward, improved cold storage infrastructure, warehouse standardization, and integration of real-time monitoring technologies will be key. Additionally, expanding international trade and consumer demand for traceable and sustainably sourced products will make 3PL providers indispensable to this industry.

The segment is projected to grow at a CAGR of 9.2% between CY24 and CY30. Despite this healthy pace, its market share is expected to remain relatively stable at around 20% in CY30.

9.3.4 Supply Chain Agility Amidst EV and Component Localization in Automotive

The automotive industry has traditionally relied on 3PLs for inbound logistics (raw materials and components), outbound transport of finished vehicles, and aftermarket parts distribution. 3PLs manage large-scale transport operations between OEMs, suppliers, and dealerships, often involving just-in-time or just-in-sequence deliveries. The growing complexity of global sourcing and increasing pressure to shorten delivery cycles have made efficient logistics essential.

Earlier growth in this segment was tied to production expansion by both domestic and global OEMs. However, rising EV production, localization of components, and the need for temperature-controlled logistics for batteries are reshaping demand. In the years ahead, 3PL firms with integrated warehousing, smart tracking systems, and scalable transport solutions will be critical enablers of automotive supply chain agility.

However, due to relatively moderate expansion, this segment is expected to grow at a CAGR of 6.9% from CY24 to CY30. Consequently, its share of the overall 3PL market is expected to decline from about 13% to 11% over the same period.

9.3.5 Logistics Driving Growth and Competitiveness in India's Textile Sector

In India's 3PL market, the textile industry depends heavily on efficient logistics for the smooth movement of raw materials such as cotton, yarn, and synthetic fibres to manufacturing hubs, as well as the timely distribution of finished apparel, home textiles, and technical fabrics to domestic and export destinations. 3PL providers enable this through multimodal transportation, warehousing, customs clearance, and value-added services like packaging and labelling. Historically, growth has been driven by India's robust textile production capacity, competitive export position, and the expansion of organised retail and e-commerce. In the future, demand will be boosted by government-backed initiatives such as the Production Linked Incentive (PLI) scheme and Mega Textile Parks, along with increasing adoption of sustainable and technical textiles. The integration of technology such as digital tracking, automated inventory management, and optimised routing will further improve efficiency, reduce lead times, and strengthen the sector's global competitiveness.

The segment is forecasted to grow at a CAGR of 9% between CY24 and CY30. Importantly, its market share is projected to stand at 3% in CY30.

9.3.6 Specialized and Adaptive Logistics for Diverse, High-Growth Industries

This segment encompasses a wide range of industries such as electronics, pharmaceuticals, and chemicals. 3PL usage here is diverse, ranging from handling regulatory documentation, secure and sensitive cargo (e.g., in pharma), and flexible shipping for fluctuating export volumes. Many businesses in this group rely on multimodal transport and third-party customs handling to serve both domestic and international markets.

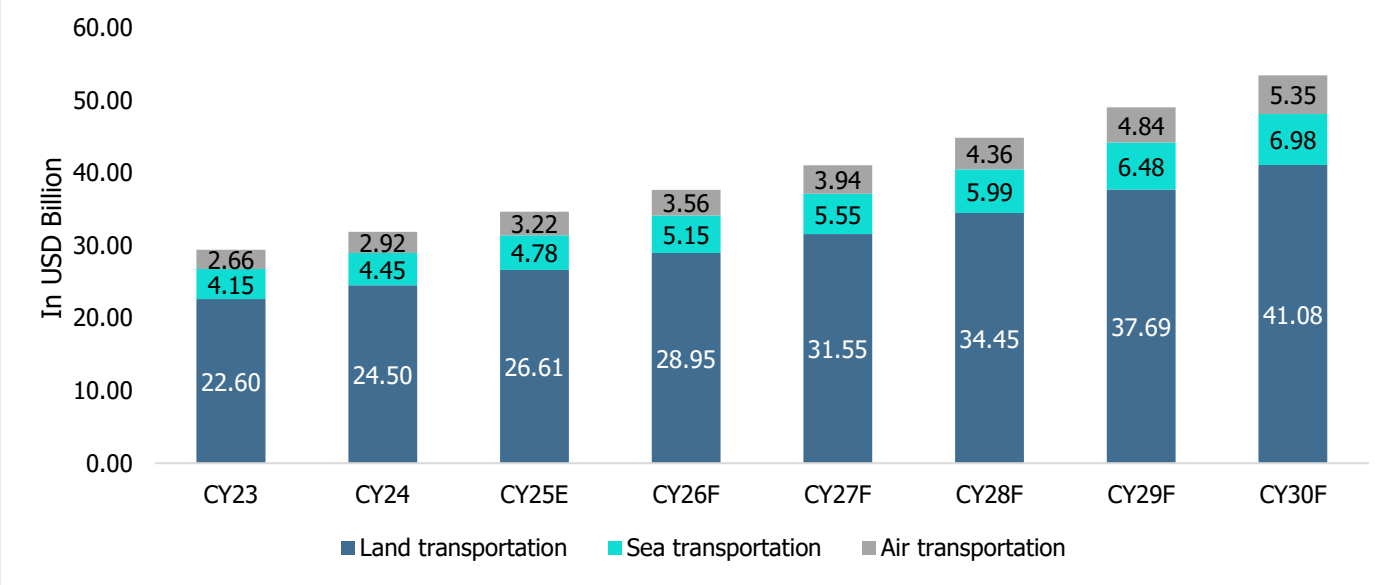
Growth in this category is driven by the rise of specialized logistics needs such as for hazardous materials, temperature-controlled storage, or export compliance. Increased MSME participation in global trade and strong policy support for sectors like pharma and electronics will further drive reliance on agile and technology-integrated 3PL services.

The segment is forecasted to grow at a CAGR of 8.1% between CY24 and CY30. Importantly, its market share is projected to decrease meaningfully from 19% in CY24 to 18% by CY30.

9.4 Trend in Market Size of 3PL Market in India by Mode of Transportation

The third-party logistics (3PL) market in India is increasingly diversifying by mode of transportation, encompassing land, sea, and air-based logistics. Each mode plays a critical role depending on the nature of goods, delivery timelines, and reach. With expanding industrial activity, infrastructure development, and technological adoption, the transport landscape in 3PL is undergoing structural transformation. As of CY24, land transportation holds the largest share of the logistics movement, followed by sea and air modes. However, with rising cross-border e-commerce, just-in-time manufacturing, and increasing demand for speed, air and sea transportation are growing swiftly and transforming the competitive dynamics within 3PL.

Chart 35: Market Size of 3PL Market in India By Mode of Transportation



Source: EMIS, Care Edge Research; Note: CY refers to Calendar year, E-Estimated, F-Forecasted

9.4.1 Widespread Reach and Dominance of Land Transport in India's 3PL Sector

Land transportation forms the backbone of India's domestic 3PL services, enabling connectivity between production hubs, warehouses, and end users. It is most used for first mile and last-mile delivery, supported by trucks, railways, and multimodal logistics parks. The expansion of national highways, freight corridors, and government initiatives like Bharatmala and Gati Shakti have significantly enhanced efficiency and reduced transit times. Demand is further boosted by the FMCG, manufacturing, and e-commerce sectors that rely heavily on land routes for timely distribution.

The market for land transportation within India's 3PL segment is projected to grow at a CAGR of 9.0% between CY24 and CY30, increasing from USD 24.50 billion in CY24 to USD 41.08 billion in CY30. Despite the presence of modern alternatives, land logistics will continue to dominate the market, with its share projected to stay at 77% in CY30, due to its wide reach and cost-effectiveness.

9.4.2 Sea Transport as a Strategic Enabler for Bulk and International Logistics

Sea transportation is pivotal for the movement of bulk commodities and export-import cargo. India's strategic coastline, comprising over 7,500 km and numerous major and minor ports, makes it well-positioned for sea logistics. Sectors like oil and gas, steel, and heavy manufacturing rely heavily on maritime shipping due to cost and volume advantages. With rising containerization, digital port ecosystems, and Sagarmala-linked projects improving port infrastructure, the mode is gaining traction in long-haul and international freight forwarding.

The sea transportation segment of the 3PL market is expected to grow from USD 4.45 billion in CY24 to USD 6.98 billion by CY30, registering a CAGR of 7.8%. Its market share remains moderate, but ongoing investment in port modernization and multimodal connectivity is likely to increase its role, especially for export-heavy industries and bulk cargo. It is expected to hold a market share of 13% in CY30.

9.4.3 Air Transport Driving Growth in High-Speed and High-Value 3PL Deliveries

Air transportation is the fastest-growing mode in India's 3PL market, driven by time-sensitive deliveries in sectors such as pharmaceuticals, electronics, high-value retail, and e-commerce. While high costs and limited cargo capacity have historically limited its scale, improvements in air cargo terminals, growing cargo airline fleets, and the digitization of customs and documentation processes are making air freight more viable. Increased demand for express delivery and international trade is also fuelling growth.

From USD 2.92 billion in CY24, the air transportation segment is anticipated to reach USD 5.35 billion by CY30, marking the highest CAGR among all modes at 10.6%. Although it accounts for a smaller market share, its strategic importance is growing rapidly, particularly in B2B express and cross-border e-commerce logistics. It is expected to hold a market share of 10% in CY30.

9.5 Key Market drivers and opportunities

- **Infrastructure Modernization & Multimodal Facilities**
  India's 3PL market is being powered by dramatic improvements in logistics infrastructure. The rollout of national projects such as expressways, the Bharatmala highway network, dedicated freight corridors, and the development of multi-modal logistics parks (MMLPs) has shifted the landscape significantly. These integrated hubs offer combined road, rail, and warehousing facilities, helping 3PL providers reduce transit times and improve cargo handling. Government targets, such as reducing logistics cost to single-digit GDP levels, underscore sustained public-sector investment. As a result, logistics operators can offer localized, cost-efficient solutions, enabling businesses to extend reach into tier-2 and tier-3 markets. Moving forward, these upgraded networks present significant growth opportunities, especially as industrial activity decentralizes and smart logistics ecosystems grow increasingly data-driven and sustainable.

- **Digitalization & Unified Policy Frameworks**
  Technology adoption and logistics-friendly policies are redefining the competitive dynamics of 3PL in India. With frameworks like the National Logistics Policy and PM Gati Shakti introducing unified digital platforms (such as ULIP) and multi-agency coordination, seamless tracking, documentation, and customs processes are becoming the norm. This modernization aligns with logistics-sector digitization trends using RFID, cloud-native ERP systems, and automated warehousing that enable real-time visibility, end-to-end optimization, and error reduction. As a result, enterprises can better manage complex supply chains, especially those involved in global trade or regulatory-heavy sectors like pharma. The downstream benefit is lower cost, higher reliability, and better alignment with sustainability metrics, solidifying the role of tech-enabled 3PL solutions in the future.

- **E-commerce & Omnichannel Retail Boom**
  The expansion of e-commerce and organized retail which now penetrate deep into smaller urban and rural areas is a powerful driver of India's 3PL ecosystem. These sectors demand rapid, high-frequency deliveries and sophisticated order tracking capabilities typically beyond the scope of in-house logistics. 3PL partners have risen

to the challenge, offering parcel consolidation, last-mile delivery, warehouse-to-consumer routing, and reverse-logistics solutions. As digital marketplaces, D2C brands, and urbanization accelerate, 3PL providers can capitalize on the need for agile and adaptive distribution frameworks. This offers continued momentum for 3PLs to develop deeper omni-channel integrations, hyperlocal logistics, and rapid delivery models key forces in meeting consumers' evolving expectations and fuelling segment growth.

- **Sector Diversification & Specialized Logistics Services**
  India's 3PL market is benefiting from growing demand in specialized verticals particularly in industries with strict temperature control or regulatory needs. Pharmaceuticals, food & beverage, fast-moving consumer goods, automotive, and industrial goods are increasingly outsourcing their logistics to providers with tailored capabilities. Cold chain infrastructure for vaccines and premium food, customs expertise for pharma, and just-in-time inventory for automotive are now standard expectations. Government incentives like PLI schemes for manufacturing and evolving export ambitions elevate market professionalism. These niche segments not only fuel demand but also allow 3PL firms to differentiate through value-added services. As regulatory complexity and technological adoption increase, opportunities in these verticals will strengthen leading to higher margins, long-term client ties, and greater innovation in logistics capabilities.

9.6 Near to Medium Term Outlook: India's 3PL Adapts to E-Commerce Shift; 4PL Set to Rise with Smart Supply Chains

In the near term, India's third-party logistics (3PL) industry is witnessing major changes with big e-commerce players in-house logisticians, putting pressure on conventional providers. This transformation is forcing 3PL companies to change by investing in technology, enhancing service specialization, and hunting for partnerships in industries such as FMCG, pharma, and auto. Notwithstanding cost-of-operation issues, the government's steady push for infrastructure such as building logistics parks and freight corridors is likely to provide respite and growth options. The industry is gradually shifting towards more integrated and technology-enabled service offerings to stay competitive and in the game.

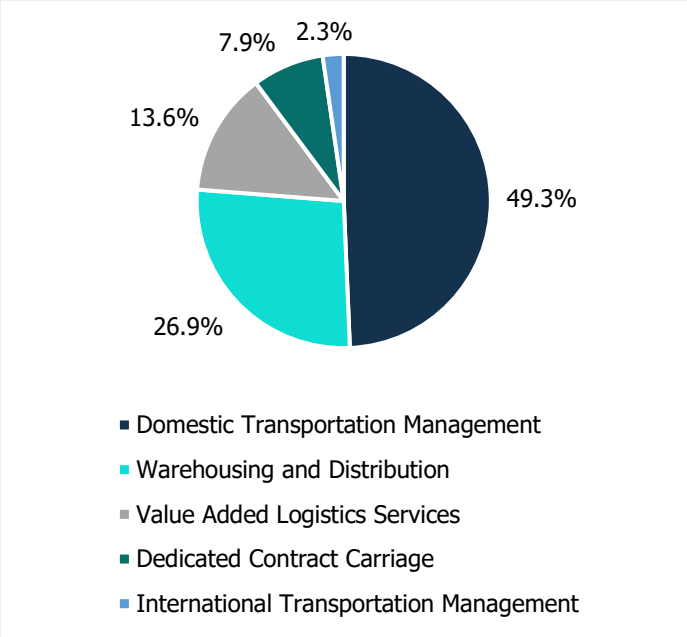
In the future, 4PL (fourth-party logistics) will emerge as a dominant force as supply chains become more complex and companies pursue end-to-end coordination of logistics. 4PL players are likely to play the role of strategic partners more, juggling several logistics providers, consolidating data and analytics, and ensuring supply chain performance efficiency. The adoption of national logistics reforms and warehousing policies at state levels is likely to facilitate the growth of centralized, smart logistics hubs, which can be accessed by 4PL providers. Environmental factors, sustainability concerns, and demands for more transparent, data-driven operations will continue to drive both 3PL and 4PL companies to invest in digital tools, collaboration platforms, and more sustainable practices.

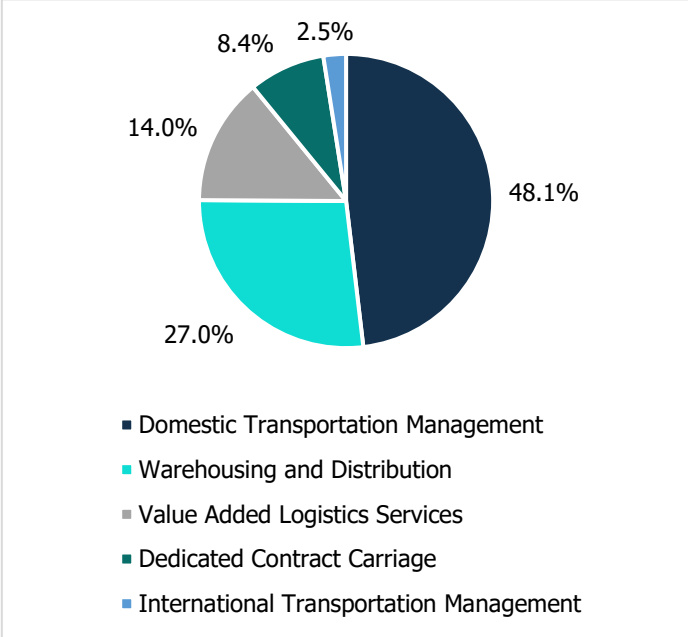
10 Market Size of the Industry by Type of Service in India

By type of service, India third party logistics market can be divided into Dedicated Contract Carriage, Domestic Transportation Management, International Transportation Management, Warehousing and Distribution, and Value-Added Logistics Services. As of CY24, Domestic Transportation Management dominated the industry with a market share of 49.3%. This is followed by Warehousing and Distribution (26.9%), Value Added Logistics Services (13.6%), Dedicated Contract Carriage (7.9%), and International Transportation Management (2.3%).

By CY30, top two dominant segments in the market are still expected to be Domestic Transportation Management and Warehousing and Distribution with market share of 48.1% and 27% respectively. This is going to be followed by Value Added Logistics Services, Dedicated Contract Carriage, and International Transportation Management with marginally higher market shares, as compared to CY23, of 14%, 8.4%, and 2.5% respectively.

Chart 36: Market Share by Type of Service (CY24) **Market Share by Type of Service (CY30E)**





Source: IMARC Group, Care Edge Research

10.1 Domestic Transportation Management

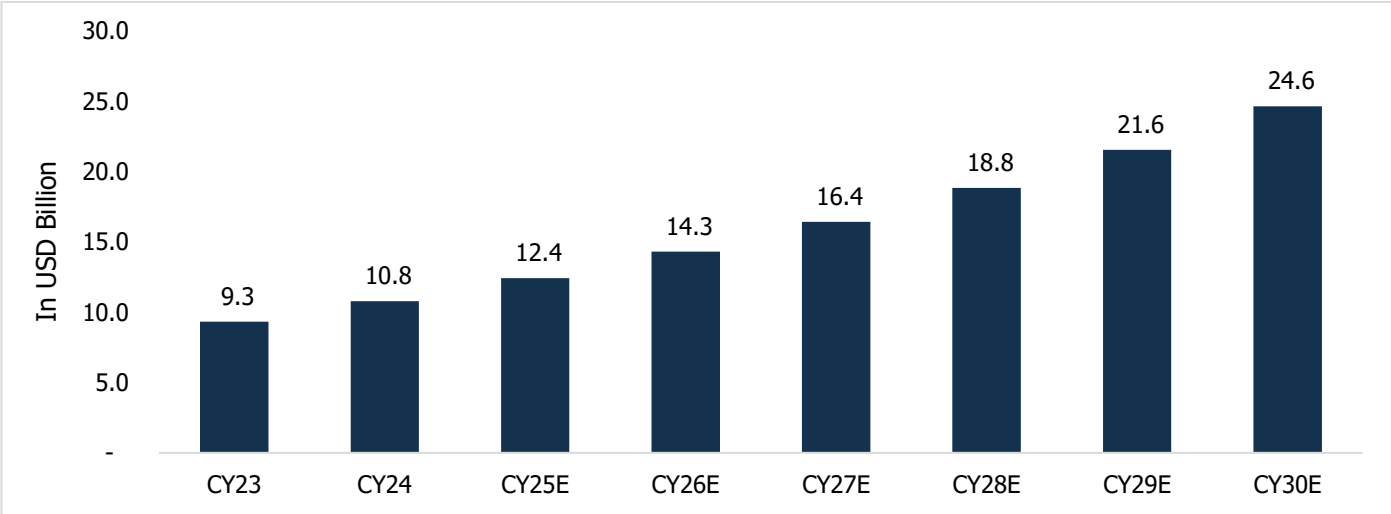
In the Indian 3PL market, Domestic Transportation Management (DTM) involves coordinating and optimizing transportation services within India. DTM services generally encompass the planning, execution, and monitoring of goods movement between various locations, both within the country and across international borders.

In CY24, the market size of DTM was 10.8 USD billion. Domestic transportation management (DTM) is growing in the Indian 3PL market due to the surge in e-commerce, rising consumption from rural markets, increasing disposable income, manufacturing sector boom, and a focus on optimizing supply chains. Enhanced infrastructure, supportive government policies, and advancements in technology also play significant roles. Together, these factors drive the need for efficient and effective domestic transportation solutions to meet the rising demand and logistical challenges.

Additionally, over time, numerous companies have entered the 3PL sector through acquisitions and other strategic moves. The DTM segment is projected to grow at a CAGR of 11.8% from CY24-30. It is projected to reach a market size of 24.6 USD billion by CY30. Numerous operators are increasingly using transportation management systems (TMS), telematics, and other digital tools to optimize their operations, enhance visibility, and improve decision-making. Consequently, this rising adoption of advanced technologies will improve operational efficiency incentivising more

businesses to use 3PL services further driving demand for domestic transportation management services in the Indian 3PL logistics market in the future.

Chart 37: Market Size of Domestic Transportation Management



Source: IMARC Group, Care Edge Research, Note: E-Estimate

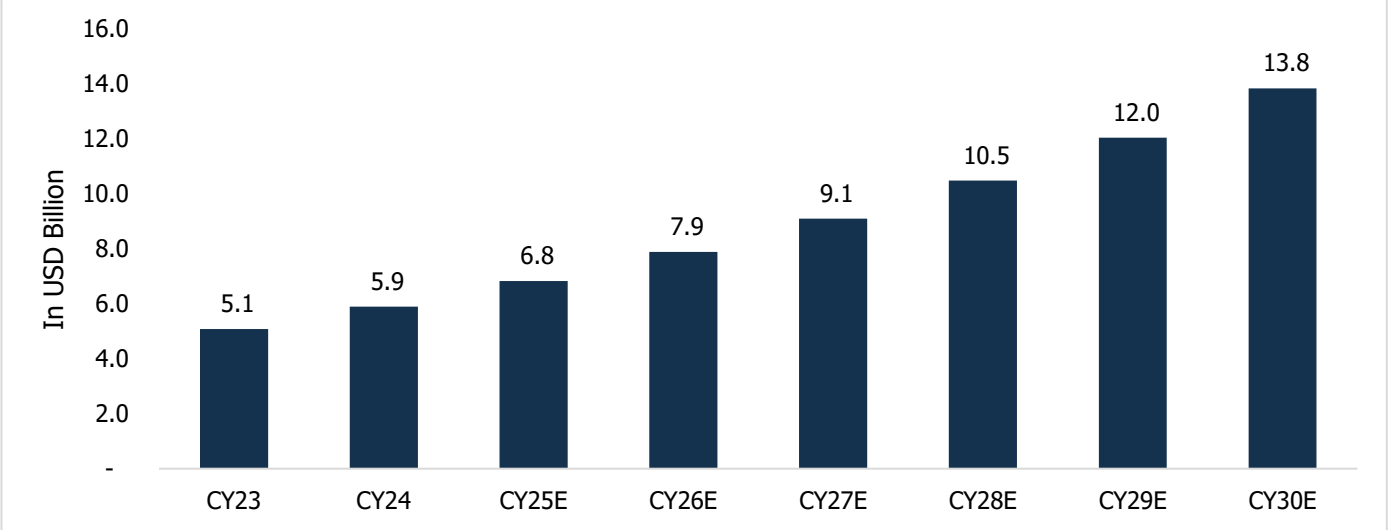
10.2 Warehousing and Distribution

Warehousing involves all processes related to storing and managing these items, including receiving, offloading, forklifting, and stacking. Distribution, meanwhile, focuses on making these goods available to businesses and consumers. Together, warehousing and distribution encompass acquiring goods from manufacturers, storing them, and then delivering them to end users.

In CY24, the market size of Warehousing and Distribution was 5.9 USD billion. In India, the 3PL logistics market for warehousing and distribution has been growing rapidly due to several factors, including the rise of e-commerce, growth in manufacturing sector, increase in consumption, a growing need for efficient supply chain management, enhancements in infrastructure, adoption of technology to optimize operations, and overall industrial expansion. The infrastructure status given by the government to the logistics industry also strategically puts it in an appealing position in the investment landscape. Additionally, many international 3PL companies are entering the Indian market due to its expanding opportunities across various industries further driving growth in this segment

The Warehousing and Distribution segment is projected to grow at a CAGR of 12.4% from CY24-30. It is projected to reach a market size of 13.8 billion by CY30. In India, businesses in retail, e-commerce, manufacturing, and FMCG sectors are increasingly turning to 3PL providers to handle their warehousing and distribution needs efficiently. These providers offer customized services to help clients optimize inventory, cut costs, and enhance supply chain performance. As these sectors continue to expand, they are expected to create growth opportunities for this segment under 3PL logistics providers in India over the coming years. Moreover, warehouse automation will enhance productivity and efficiency along with reduction in labour costs, minimising and optimising inventory management, further driving the growth in the industry.

Chart 38: Market Size of Warehousing and Distribution



Source: IMARC Group, Care Edge Research, Note: E-Estimate

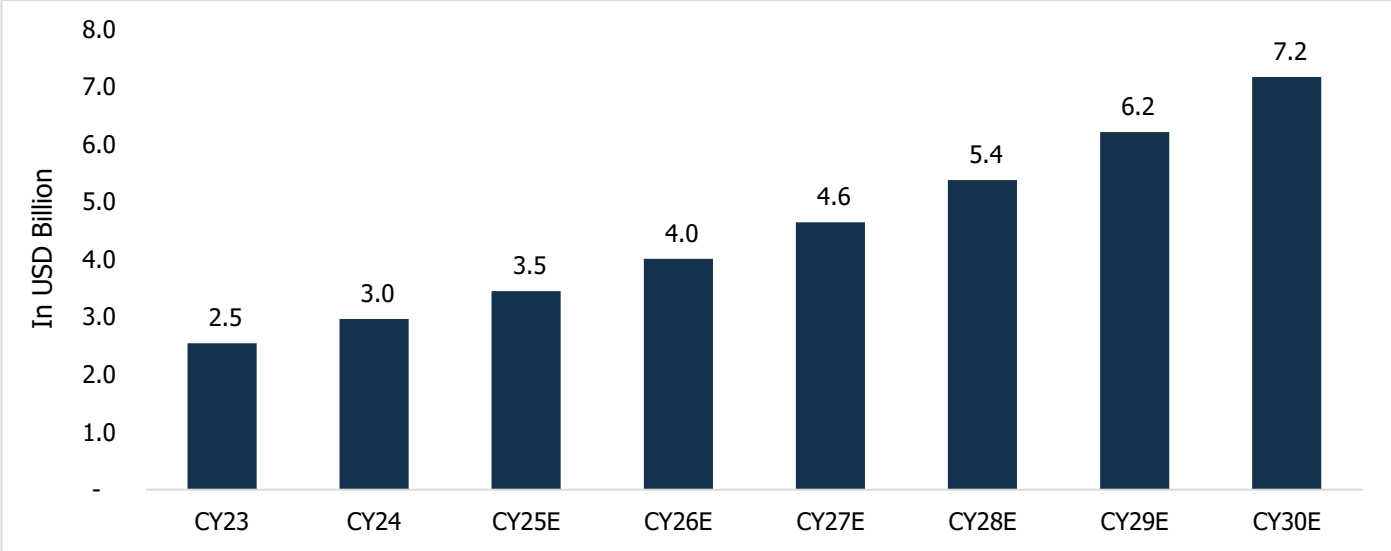
10.3 Value Added Logistics Services

In the Indian 3PL market, value-added logistics services (VALS) refer to additional offerings that go beyond basic logistics functions like transportation, warehousing, and distribution. These services enhance the supply chain by improving efficiency, reducing costs, and adding extra value. Examples include inventory management, assembly, reverse logistics, and more. VALS provide businesses with comprehensive benefits, boosting customer satisfaction and giving companies a competitive edge in the highly competitive logistics sector.

In CY24, the market size of VALS was 3 USD billion. The Indian supply chain industry is increasingly seeking different such services to boost profitability and improve efficiency by managing operational costs more effectively. Technologies such as predictive inventory management, warehouse robots, distribution network planning, and reverse logistics are gaining traction. Inventory software is one such key tool, enabling businesses to track inventory, support omni-channel inventory management, automate order processing, handle payments and returns, access inventory data remotely, and perform order-level accounting by monitoring real-time inventory information. Many Indian companies have begun offering such services to gain a competitive advantage in the market leading to growth in this segment.

The VALS segment is projected to grow at a CAGR of 12.9% from CY24-30. It is projected to reach a market size of 7.2 USD billion by CY30. Many established players are focusing on enhancing their operations by innovating their overall layout to gain a competitive edge in the market, thus, further augmenting growth in this segment.

Chart 39: Market Size of Value-Added Logistics Services



Source: IMARC Group, Care Edge Research, Note: E-Estimate

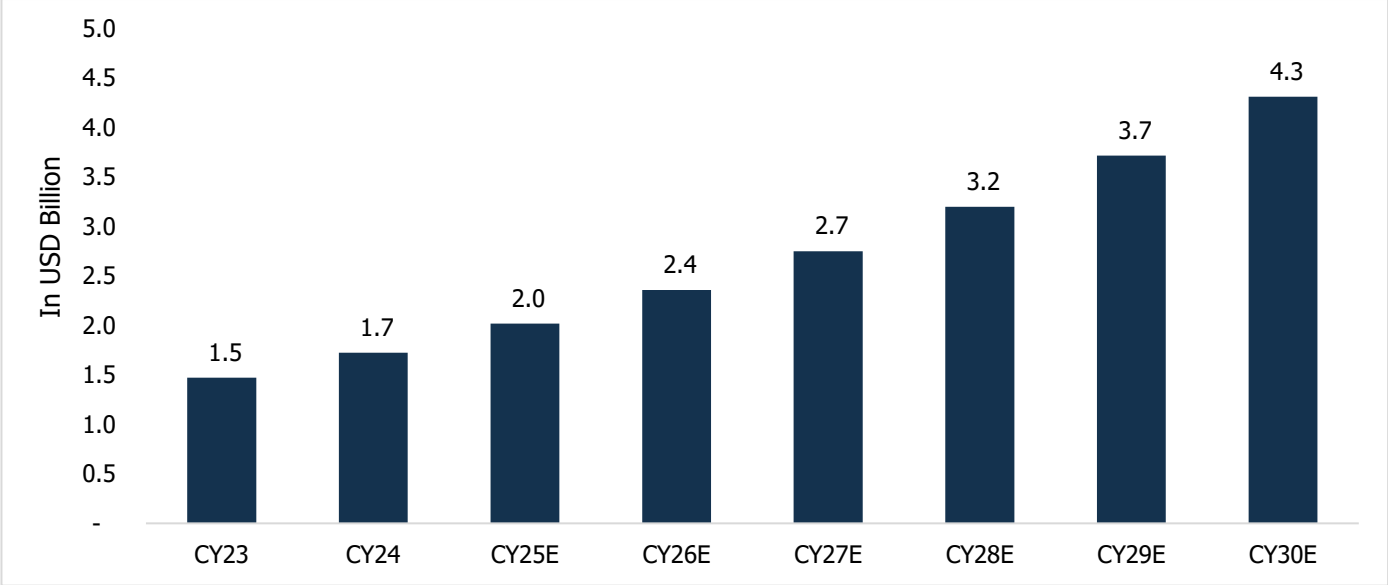
10.4 Dedicated Contract Carriage

Dedicated Contract Carriage (DCC) is a service where shippers pay a fixed rate per truck and select the duration for which they need the vehicles, ranging from a day to a month. In a DCC arrangement, the logistics provider leases vehicles or a fleet exclusively for the transportation needs of a single client. This means the vehicles, drivers, and operational tasks are dedicated solely to that client according to the contract. The DCC model offers benefits such as customized solutions, cost savings through optimized routes, and enhanced scalability and flexibility. These benefits further augment growth in this category.

In CY24, the market size of DCC was 1.7 USD billion. This prominence has been due to various factors such as rise in e-commerce, growth in manufacturing sector led by strong economic growth and key initiatives for manufacturing sector like Make in India, and the rise in digitalisation. Additionally, as companies seek to improve service levels and optimize supply chain operations, DCC has started gaining importance in the India 3PL market.

The DCC segment is projected to grow at a CAGR of 13.5% from CY24-30. It is projected to reach a market size of 4.3 USD billion by CY30. Clients can concentrate on their core business activities by relying on specialized 3PL providers for transportation and dedicated contract carriage services. This approach enhances the overall efficiency and competitiveness of the client companies. As a result, many end-use industries are expected to leverage the dedicated contract carriage services offered by 3PL providers, thus, augmenting growth in this segment.

Chart 40: Market Size of Dedicated Contract Carriage



Source: IMARC Group, Care Edge Research, Note: E-Estimate

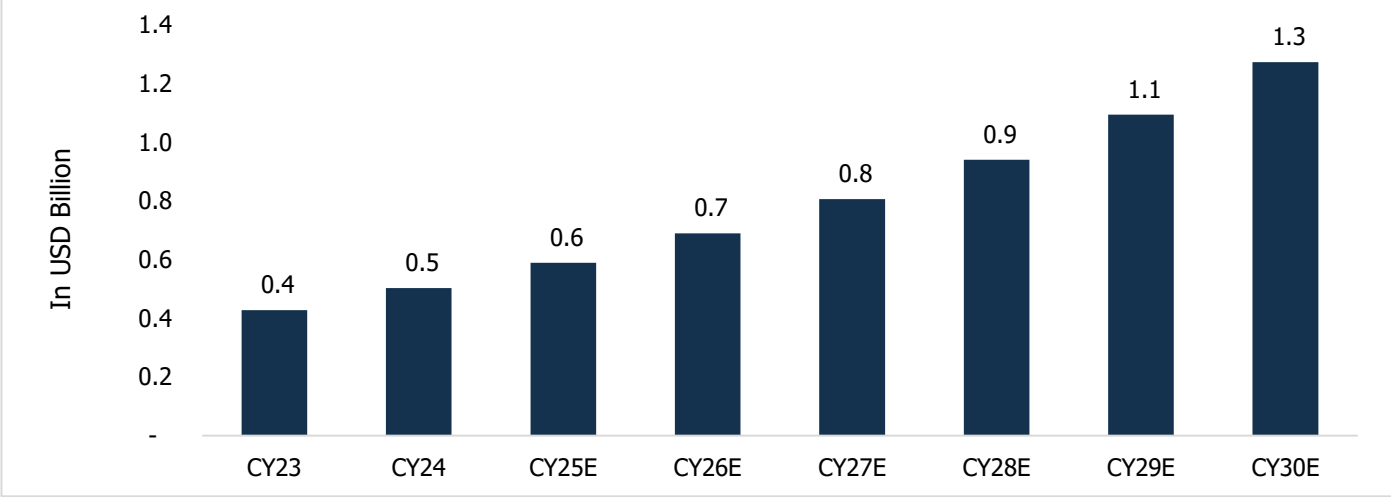
10.5 International Transportation Management

ITM is the end-to-end discipline of planning, executing, coordinating, and overseeing the movement of goods across countries. It covers everything from when a product leaves the origin (factory or warehouse) to when it arrives at its destination in a foreign market. The goal is to move goods efficiently, cost-effectively, compliantly, securely, and on time, despite the complexity of international borders, regulations, multiple transport modes, and diverse stakeholder interests.

In CY24, the market size of ITM was USD 0.5 billion. One of the key drivers responsible for this growth is rise in globalization. As global trade has surged significantly with merchandise exports increasing, International Transportation Management (ITM) provided by 3PLs becomes essential for facilitating the movement of goods to and from global markets.

The ITM segment is projected to grow at a CAGR of 13.8% from CY24-30. It is projected to reach a market size of 1.3 USD billion by CY30. In addition to facilitating movement of goods to and from global markets, ITM handles customs regulations and the necessary documentation for importing and exporting goods, ensuring compliance with each country's import and export laws, tariffs, duties, and other specific regulations.

Chart 41: Market Size of International Transportation Management



Source: IMARC Group, Care Edge Research

10.6 Over-Dimensional Cargo

The Overall Dimension Cargo (ODC) services industry in India comprises specialized logistics operations focused on the transportation of cargo that exceeds standard legal dimensions and weight thresholds. This segment plays a critical role in supporting infrastructure development, industrial manufacturing, and energy projects by facilitating the movement of oversized equipment and components. Governed by a multi-agency regulatory framework including the Ministry of Road Transport and Highways, Indian Railways, and the Directorate General of Shipping, the industry is characterized by fragmented market participation and multimodal service offerings. Key demand drivers include growth in sectors such as power generation, oil and gas, heavy engineering, and renewable energy, alongside government-led initiatives like PM Gati Shakti and the National Logistics Policy. Despite its strategic importance, the sector faces operational challenges including infrastructure constraints, regulatory delays, and high capital intensity.

10.7 In-Plant Logistics

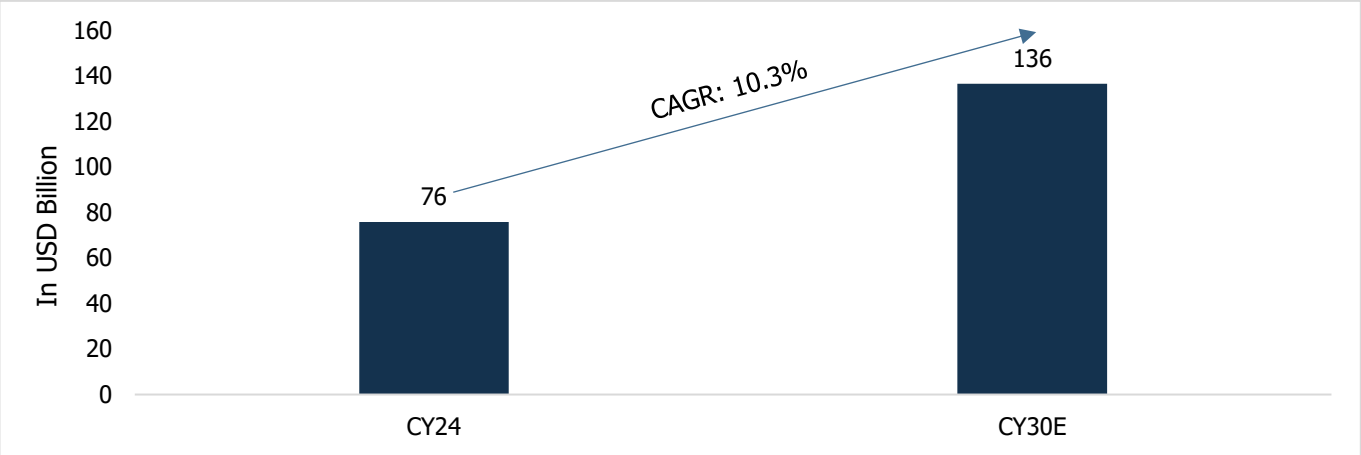
The In-Plant Logistics industry in India encompasses the internal movement, handling, and management of materials, components, and finished goods within manufacturing plants, warehouses, and industrial facilities. This segment plays a vital role in optimizing production workflows, reducing operational downtime, and enhancing supply chain efficiency. Services typically include material feeding, line-side delivery, inventory control, packaging, and waste management, often supported by automation and digital tracking systems. The industry is witnessing increased adoption across sectors such as automotive, pharmaceuticals, FMCG, and heavy engineering, driven by the need for lean manufacturing, just-in-time delivery, and integrated logistics solutions. While the sector benefits from advancements in industrial automation and smart factory initiatives, it continues to face challenges related to labour dependency, process standardization, and integration with external logistics networks.

11 End-User Industries for Logistics

11.1 Manufacturing

The market size of logistics in the manufacturing sector has expanded significantly over the years, driven by India's industrialization, policy support, and global trade integration. As manufacturing output surged due to initiatives like Make in India and the PLI schemes, the demand for efficient logistics grew to manage complex supply chains. The sector has witnessed the growth of specialized logistics solutions such as just-in-time (JIT) delivery, multimodal transport, and automation in warehousing to meet the sector's evolving needs. Additionally, exports from sectors like automotive, pharmaceuticals, and engineering goods have necessitated robust logistics infrastructure. The rise of industrial corridors, dedicated freight corridors (DFC), and improved connectivity have also scaled the market, making logistics a strategic enabler for manufacturing competitiveness.

Chart 42: Market Size for Logistics across Manufacturing



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

Logistics in the manufacturing sector is a structured, multi-stage process designed to ensure the seamless movement of raw materials, intermediate goods, and finished products. The setup begins with inbound logistics, where raw materials and components are sourced globally or domestically and transported to factories via road, rail, or sea. Manufacturers often establish central warehouses near production units to optimize supply chain efficiency and minimize downtime.

Within the production facility, internal logistics ensures that materials are supplied to various production lines in a synchronized manner, often through automated systems like AGVs (Automated Guided Vehicles) or conveyor belts. Post-manufacturing, outbound logistics kicks in, where finished goods are distributed to distribution centres, wholesalers, or directly to customers via multimodal transport systems.

Manufacturers also deploy technology-driven systems, including ERP, Warehouse Management Systems (WMS), and real-time tracking to enhance visibility and reduce costs. As supply chains globalize, many manufacturing firms integrate third-party logistics (3PL) providers to handle specialized warehousing, freight forwarding, and customs clearance.

Growth Drivers

- **Industrial Policy Support**

Government initiatives like the Production Linked Incentive (PLI) scheme, Make in India, and Atmanirbhar Bharat have significantly boosted the manufacturing landscape in India. These policies incentivize both domestic and foreign players to set up large-scale production units across various sectors. As manufacturers scale up operations, there is an amplified need for efficient, reliable, and tech-enabled logistics solutions to handle increased production volumes, raw material

sourcing, and distribution across domestic and international markets. This policy-driven manufacturing growth has led to the development of logistics parks, integrated supply chain services, and specialized handling for sector-specific requirements like cold chain for pharmaceuticals and secure transport for electronics.

- **Infrastructure Development**

India's focus on infrastructure development is reshaping the logistics landscape for the manufacturing sector. Initiatives like the Bharatmala Pariyojana, Sagarmala Project, and the establishment of Dedicated Freight Corridors (DFCs) are enhancing connectivity across highways, railways, ports, and inland waterways. These projects reduce transit time, minimize transportation costs, and improve the reliability of cargo movement, all of which are crucial for manufacturers that operate on tight production schedules and just-in-time inventories. The development of Multi-Modal Logistics Parks (MMLPs) further integrates different transportation modes, enabling smoother flow of goods across the supply chain. Improved warehousing infrastructure, including automated and temperature-controlled facilities, supports better inventory management for manufacturers. Such infrastructure modernization not only enhances domestic supply chain efficiency but also strengthens India's positioning in global manufacturing and export markets by enabling faster and more cost-effective logistics solutions.

- **Technology and Automation**

The infusion of technology and automation in logistics has transformed supply chain management in the manufacturing sector. The adoption of technologies like Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), and Blockchain has enhanced real-time visibility, predictive analytics, and transparency across the logistics value chain. Automation in warehousing through Automated Guided Vehicles (AGVs), robotic sorting, and smart inventory systems reduces human error, improves efficiency, and optimizes space utilization. Transport Management Systems (TMS) and Warehouse Management Systems (WMS) help manufacturers monitor shipment status, forecast demand, and streamline dispatch planning. Additionally, digital platforms enable seamless collaboration with third-party logistics providers and suppliers. As manufacturers increasingly focus on optimized and adaptive supply chains, technology-driven logistics becomes indispensable in ensuring speed, accuracy, and cost-effectiveness.

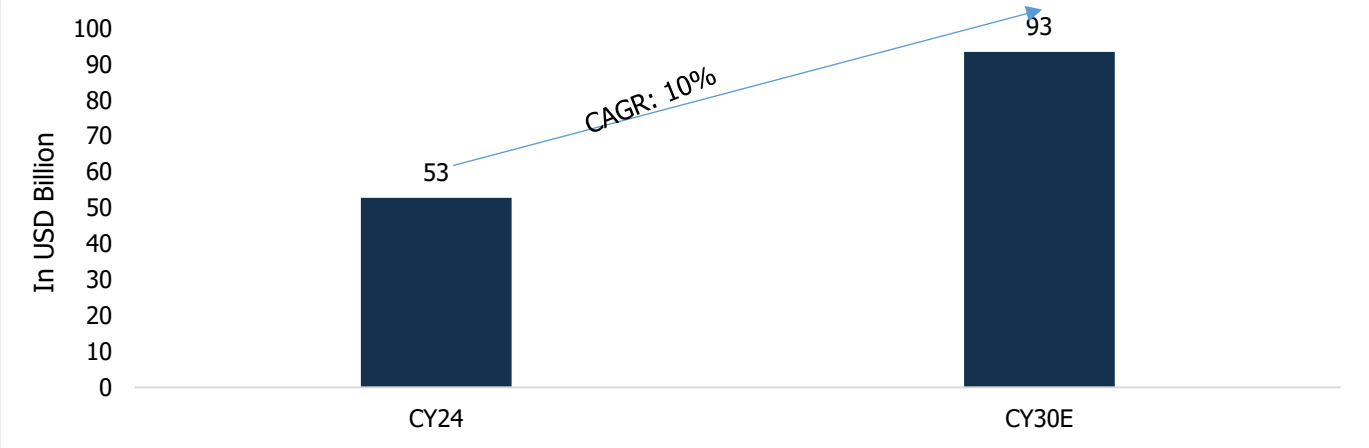
- **Global Supply Chain Integration**

With the rise of globalization and India's deeper integration into global value chains (GVCs), manufacturers need advanced logistics solutions to meet stringent international standards for quality, compliance, and delivery timelines. Sectors like automotive, electronics, and pharmaceuticals increasingly export components and finished products worldwide, necessitating specialized logistics capabilities such as customs brokerage, cold chain logistics, secured transport, and multimodal freight solutions. Global supply chain integration demands agility in responding to geopolitical shifts, tariff changes, and supply disruptions emphasizing the need for resilient, tech-enabled, and diversified logistics networks. Furthermore, as international companies establish manufacturing bases in India under the China+1 strategy, there is growing reliance on third-party logistics (3PL) and fourth-party logistics (4PL) partners to manage complex global supply chains. This integration enhances not only India's manufacturing exports but also stimulates investments in logistics infrastructure, technology, and skilled workforce development.

11.2 Automobiles

The logistics market serving the automobile sector has grown significantly, driven by the rapid expansion of vehicle production, increasing exports, and the diversification of product lines including electric vehicles (EVs). As automotive manufacturing scaled, especially in India, the need for specialized, efficient logistics systems covering raw materials, components, and finished vehicles intensified. Growth in domestic demand, particularly from emerging urban and rural markets, coupled with OEMs' expansion into global supply chains, has further boosted logistics requirements. The sector has also witnessed the rise of specialized transport solutions like car carriers, CKD/SKD kits handling, and spare parts distribution networks. Additionally, evolving consumer expectations for faster deliveries and after-sales support have led to significant investment in multi-modal logistics infrastructure, technology integration, and supply chain optimization in the automotive logistics space.

Chart 43: Market Size for Logistics across Automobiles



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

The logistics setup for the automobile sector is highly structured and specialized due to the complexity of vehicle manufacturing, which involves thousands of components sourced globally and domestically. Inbound logistics focuses on transporting raw materials, components, and subassemblies from a network of Tier 1, Tier 2, and Tier 3 suppliers to Original Equipment Manufacturers (OEMs). Just-in-Time (JIT) and Just-in-Sequence (JIS) supply models are commonly adopted to optimize inventory levels and streamline production schedules.

Post-manufacturing, outbound logistics entails the transportation of finished vehicles through dedicated car carriers, rail networks, and sometimes even coastal shipping for domestic and export markets. Efficient CKD/SKD logistics solutions are deployed for international markets where vehicles are assembled locally. Additionally, a robust aftermarket logistics system ensures the distribution of spare parts to dealerships and service centres, supporting maintenance and repairs.

The entire ecosystem is supported by advanced supply chain management systems, including Transport Management Systems (TMS), real-time tracking, and data analytics for route optimization and inventory visibility. This structured and technology-driven logistics setup ensures the efficient, cost-effective, and timely movement of both parts and finished vehicles across a global footprint.

Growth Drivers

- **Rising Vehicle Production and Exports**

Growth in domestic vehicle production across cars, commercial vehicles, and two-wheelers has significantly expanded logistics needs. India is emerging as a global manufacturing hub for automobiles, especially under government initiatives like Make in India and the PLI scheme. Exports of vehicles and auto components have seen substantial growth, requiring specialized logistics for international shipping, customs clearance, and regulatory compliance. The demand for seamless and cost-efficient logistics solutions is further amplified by the need to serve diverse export destinations across Africa, Latin America, and Southeast Asia. This surge is driving investments in multimodal logistics networks, port infrastructure, and digital supply chain management systems to support large-scale production and global outreach.

- **Growth of Electric Vehicles (EVs) and New Mobility Solutions**

The automotive sector's shift towards electric vehicles (EVs) is transforming logistics requirements. EV manufacturing involves specialized components like batteries, which require temperature-controlled, secure logistics, given their hazardous nature. Additionally, the growth of battery swapping networks and charging infrastructure demands an agile supply chain that can support rapid deployment across regions. Logistics providers are adapting with specialized EV transport solutions, compliant storage facilities, and trained handling personnel. Furthermore, the broader trend of connected, autonomous, shared, and electric (CASE) mobility solutions is influencing logistics setups, requiring higher

precision, real-time tracking, and more adaptive distribution models to support this fast-evolving segment of the auto industry.

- **Expansion of Tier 2 & Tier 3 Supplier Ecosystem**

As the automobile manufacturing process becomes increasingly complex, there is a growing reliance on a wider network of Tier 2 and Tier 3 suppliers for parts and subassemblies. This expansion necessitates a highly coordinated inbound logistics system to ensure timely delivery of components from multiple geographies to centralized manufacturing units. Efficient logistics networks are critical to maintain synchronization between various suppliers and OEMs, especially when operating under JIT and JIS models. Additionally, the growth of auto clusters and industrial parks around manufacturing hubs has spurred demand for local warehousing, transport services, and supply chain visibility solutions. This ecosystem expansion is directly driving the need for more sophisticated and integrated logistics services.

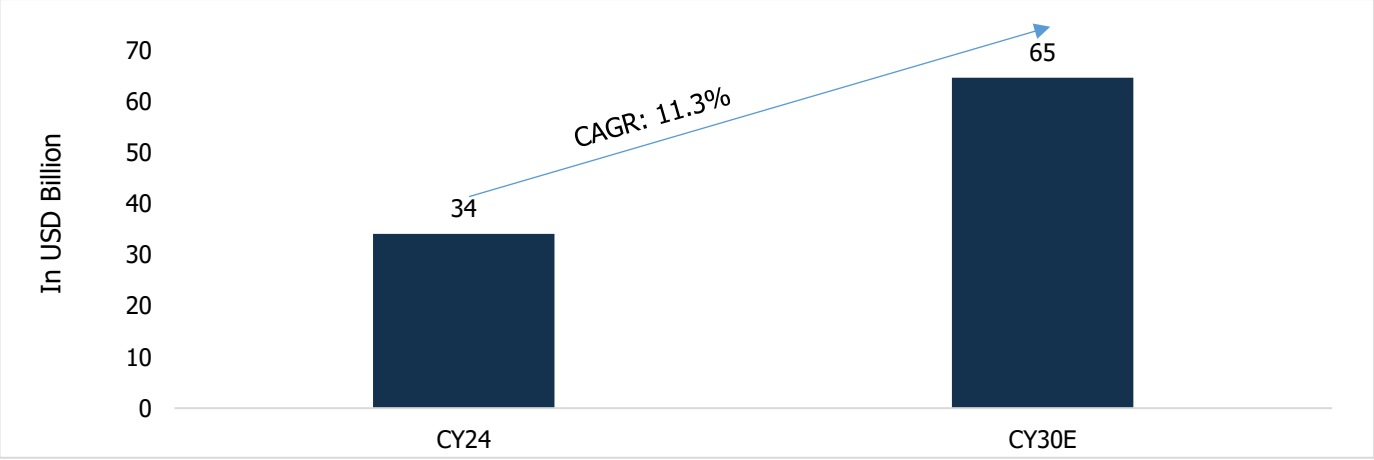
- **Spare Parts and Service Logistics**

The rising vehicle population has significantly increased the demand for aftermarket services and spare parts logistics. Automotive OEMs and aftermarket players need robust logistics networks to ensure timely and reliable delivery of parts to dealers, service centres, and retailers across urban and rural regions. As customers increasingly expect quicker service turnaround times, logistics providers are investing in regional distribution centres, automated warehouses, and advanced inventory management systems. The growth of e-commerce in auto parts has also necessitated last-mile delivery solutions and real-time tracking. Efficient aftermarket logistics not only enhances customer satisfaction but also supports brand loyalty and revenue streams for manufacturers, making it a critical growth area within the automotive logistics sector.

11.3 Retail

The logistics market in the retail sector has expanded rapidly over the past decade, driven by the proliferation of organized retail, e-commerce, and evolving consumer preferences for faster deliveries. The rise of large retail chains, supermarkets, and omni-channel strategies has necessitated highly efficient logistics solutions capable of serving diverse and geographically dispersed customer bases. Moreover, the boom in e-commerce platforms, especially post-pandemic, has led to an exponential increase in demand for last-mile delivery services, fulfilment centres, and automated warehouses. Retailers now require sophisticated supply chain networks that seamlessly integrate inventory management, warehousing, and distribution to keep up with dynamic market trends and customer expectations. This has propelled significant investment in logistics infrastructure, digital technologies, and supply chain optimization, fuelling consistent growth in the sector's logistics market size.

Chart 44: Market Size for Logistics across Retail



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

Logistics in the retail sector is a multi-layered, technology-driven system designed to ensure product availability across various sales channels physical stores, online platforms, and hybrid models. The setup typically begins with inbound logistics, where goods are sourced from manufacturers or suppliers and transported to centralized warehouses or distribution centres. These hubs act as stock consolidation points, enabling efficient inventory management and stock replenishment strategies tailored to consumer demand patterns.

Retailers employ regional distribution centres (RDCs) to serve specific geographies, minimizing lead times and transportation costs. For perishables, an integrated cold chain network ensures product freshness throughout the supply chain. Cross-docking methods are also used to reduce storage time by directly transferring inbound shipments to outbound vehicles.

For e-commerce and omni-channel retailers, fulfilment centres equipped with automation, robotics, and real-time inventory tracking systems support order processing, packaging, and last-mile delivery. The logistics setup also includes reverse logistics capabilities to handle returns efficiently, especially critical in online retail. Advanced technologies such as Warehouse Management Systems (WMS), AI-driven demand forecasting, and Transport Management Systems (TMS) further enhance agility and responsiveness in retail logistics, ensuring a seamless customer experience across all channels.

Growth Drivers

- **Growth of E-Commerce and Omni-Channel Retail**

The surge in e-commerce, especially post-pandemic, has been a primary catalyst for the expansion of retail logistics. Consumers increasingly prefer online shopping for its convenience and variety, compelling retailers to build robust logistics networks capable of handling high volumes of orders. The integration of omni-channel retail strategies, which blend online and offline experiences, requires seamless coordination between warehouses, fulfilment centres, and last-mile delivery partners. Retailers are investing in automated fulfilment centres, real-time inventory management, and AI-driven logistics planning to meet fast delivery expectations. This shift has not only expanded logistics demand but has also elevated the need for speed, transparency, and flexibility in retail supply chains.

- **Expansion into Tier 2 and Tier 3 Cities**

As disposable incomes rise and internet penetration deepens in Tier 2 and Tier 3 cities, retail consumption patterns are diversifying beyond metro areas. Retailers are expanding their presence in these emerging markets, which creates the need for localized logistics networks to ensure timely product availability. Establishing regional warehouses, micro-fulfilment centres, and efficient transport links in these regions becomes essential to cater to growing demand. Additionally, the complexity of managing diverse consumer preferences across varied geographies necessitates more agile and decentralized logistics solutions. This regional expansion is driving investment in logistics infrastructure and technology, enabling retailers to optimize delivery costs while ensuring consistent service levels across urban and semi-urban locations.

- **Technological Advancements and Supply Chain Digitization**

The adoption of advanced technologies has transformed retail logistics from traditional supply chains into dynamic, data-driven ecosystems. Technologies such as AI, Machine Learning, IoT, and Blockchain are enhancing supply chain visibility, improving demand forecasting, and enabling predictive analytics for better inventory planning. Automation in warehousing, through robotics and smart sorting systems, accelerates order processing and reduces errors. Digital platforms for transport management and route optimization enhance delivery efficiency, especially for last-mile services. These innovations help retailers respond swiftly to changing market dynamics, optimize operational costs, and provide real-time tracking to customers, which is increasingly becoming a standard expectation. The digital transformation of retail logistics is thus a critical growth enabler for the sector.

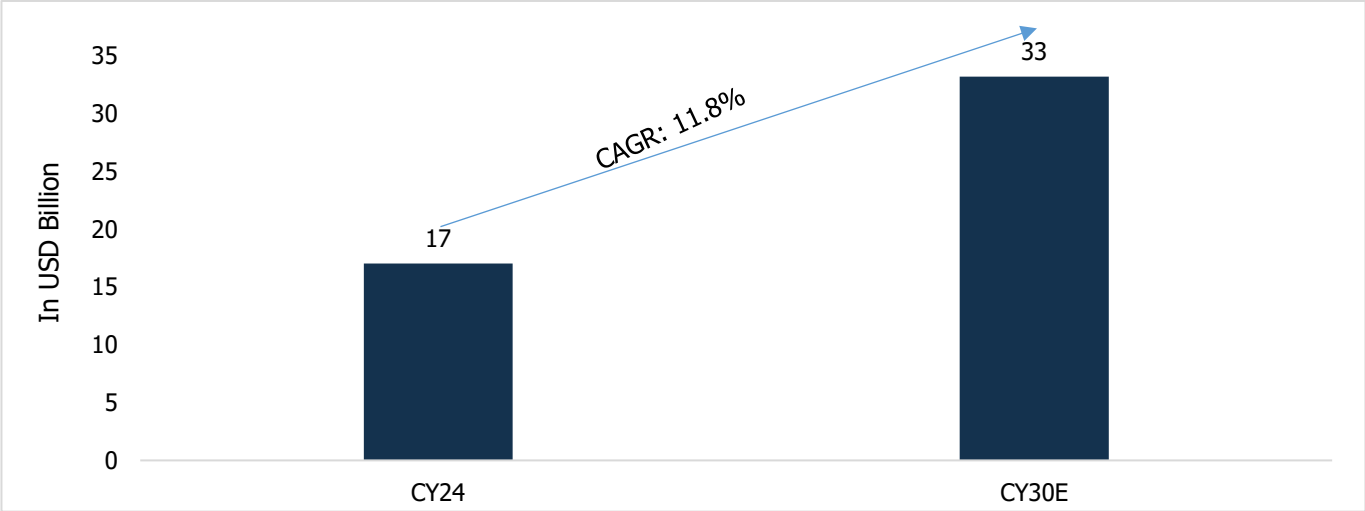
- **Increased Consumer Expectations for Speed and Convenience**

Modern consumers expect faster deliveries, real-time tracking, and flexible service options such as same-day or next-day delivery. This shift in expectations is pressuring retailers to revamp their logistics strategies to enhance speed, accuracy, and reliability. To meet these demands, retailers are deploying last-mile delivery solutions, engaging hyperlocal logistics providers, and adopting technologies like dynamic route optimization and automated sorting. Some are investing in dark stores and micro-fulfilment centres located closer to customer clusters to shorten delivery times. These evolving consumer expectations are pushing the boundaries of retail logistics, leading to greater innovation, partnerships with logistics tech startups, and expanded infrastructure to ensure a seamless and satisfying customer experience.

11.4 Pharmaceuticals

The logistics market in the pharmaceuticals sector has expanded significantly over the years, driven by the sector's growth, rising global exports, and increasingly stringent regulatory requirements. The surge in pharmaceutical production, especially in generics, vaccines, and biologics, has necessitated highly specialized logistics services such as cold chain solutions, temperature-controlled storage, and real-time tracking systems. Additionally, the COVID-19 pandemic highlighted the critical importance of robust pharmaceutical logistics, particularly in the distribution of vaccines and medical supplies. India's position as the pharmacy of the world has further amplified the need for secure, compliant, and efficient logistics networks to manage both domestic distribution and exports. This has led to substantial investments in infrastructure, supply chain technology, and regulatory-compliant practices, driving consistent growth in the pharmaceutical logistics market globally and within India.

Chart 45: Market Size for Logistics across Pharmaceuticals



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

Logistics in the pharmaceuticals sector is a highly specialized and compliance-driven setup designed to maintain product integrity, safety, and efficacy throughout the supply chain. The logistics process begins with the inbound movement of raw materials and active pharmaceutical ingredients (APIs) from suppliers to manufacturing facilities, often requiring controlled storage conditions.

Once production is completed, pharmaceuticals are stored in Good Distribution Practice (GDP)-compliant warehouses equipped with temperature and humidity control systems to preserve product quality. For sensitive products like vaccines, biologics, and insulin, dedicated cold chain logistics are deployed, utilizing refrigerated trucks, temperature-controlled containers, and real-time monitoring devices to ensure compliance with stringent global standards.

The distribution network includes regional hubs and specialized carriers for both domestic markets and international exports. Real-time tracking and IoT-enabled sensors monitor environmental conditions during transit to prevent spoilage or degradation. Additionally, pharmaceutical logistics incorporate reverse logistics processes for expired or defective products, ensuring safe disposal in accordance with regulatory norms.

Technology-driven solutions, including blockchain for traceability and advanced data analytics for demand forecasting, further strengthen the pharmaceutical supply chain, ensuring compliance, security, and operational efficiency.

Growth Drivers

- **Rising Global Demand and Export Growth**

India's prominence as a global leader in generic drugs, vaccines, and active pharmaceutical ingredients (APIs) has significantly bolstered the demand for specialized pharmaceutical logistics. The country supplies a substantial portion of the world's medicines, necessitating robust logistics capabilities for export compliance, cold chain management, and real-time tracking. Emerging markets in Africa, Latin America, and Southeast Asia are creating new demand corridors, while stringent international regulations require logistics providers to ensure end-to-end quality assurance. The expansion of pharmaceutical exports has led to investments in GDP-certified warehouses, specialized freight solutions, and enhanced visibility tools, enabling manufacturers to maintain product integrity across diverse and distant markets.

- **Growth in Biologics, Vaccines, and Specialty Drugs**

The increasing production of biologics, vaccines, and specialty drugs has elevated the need for advanced cold chain logistics. These products are highly temperature-sensitive and require precise handling under strict environmental conditions to preserve their efficacy. The logistics infrastructure must include temperature-controlled warehouses, refrigerated transportation, and monitoring systems that provide real-time visibility into shipment conditions. The global vaccine distribution efforts post-COVID-19 further accelerated the development of specialized logistics capabilities. As pharmaceutical companies innovate in personalized medicine and complex biologics, logistics providers must evolve with more sophisticated cold chain solutions and regulatory-compliant processes, ensuring that sensitive medicines reach end-users without compromising quality or safety.

- **Stringent Regulatory Requirements and Compliance Standards**

Pharmaceutical logistics is governed by strict regulatory frameworks such as Good Distribution Practices (GDP), which mandate proper storage, handling, and transportation of medicines. Regulatory authorities in key markets, including the US FDA, EMA (Europe), and WHO, enforce compliance to prevent contamination, spoilage, or counterfeiting. Logistics providers are therefore required to implement validated storage conditions, controlled transport environments, and thorough documentation across the supply chain. Technologies like IoT sensors, blockchain traceability, and electronic data logging help ensure compliance with these standards. Adhering to such stringent requirements not only minimizes risks but also enhances the reliability and reputation of pharmaceutical companies in international markets, driving demand for advanced logistics solutions.

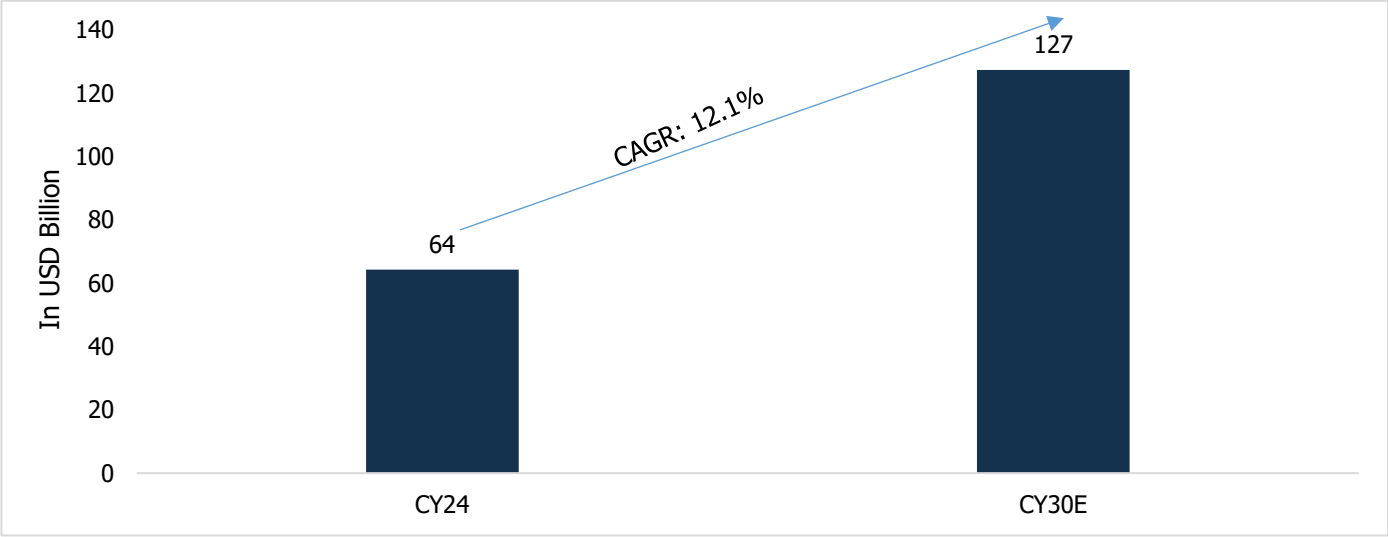
- **Technological Advancements in Supply Chain Management**

Advancements in supply chain technologies have transformed pharmaceutical logistics, enabling greater efficiency, transparency, and risk management. The adoption of IoT devices, real-time tracking systems, and AI-based analytics helps monitor shipments, predict potential disruptions, and optimize routes for timely delivery. Blockchain technology is increasingly being used to ensure traceability and combat counterfeit drugs, while cloud-based platforms facilitate better collaboration across stakeholders. These technologies provide end-to-end visibility, ensuring adherence to regulatory standards while reducing operational inefficiencies. With the growing complexity of pharmaceutical products and supply chains, tech-driven solutions are becoming essential for maintaining the integrity of sensitive shipments and enhancing the agility of pharmaceutical logistics operations worldwide.

11.5 E-Retail

The logistics market in the E-Retail sector has witnessed exponential growth over the past decade, driven by the rapid expansion of online shopping and changing consumer preferences for faster, more convenient deliveries. The surge of e-commerce giants, coupled with the entry of traditional retailers into the digital space, has transformed logistics into a critical backbone for the sector. Growth in internet penetration, smartphone usage, and digital payment adoption have further accelerated demand for robust logistics solutions tailored to e-retail requirements. This includes not just warehousing and transportation but also last-mile delivery, reverse logistics, and real-time tracking. Additionally, the rise of quick commerce and hyperlocal deliveries has added new dimensions to logistics infrastructure and service capabilities, resulting in sustained investment and continuous scaling of the market.

Chart 46: Market Size for Logistics across E-Retail



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

The logistics setup in the E-Retail sector is a highly integrated, technology-driven system designed to handle large volumes, rapid deliveries, and wide geographic coverage. The process begins with inbound logistics, where goods are sourced from suppliers and transported to centralized fulfilment centres or dark stores. These facilities use advanced Warehouse Management Systems (WMS), automation, and robotics to manage inventory, picking, and packing efficiently.

Once an order is placed online, products are dispatched from fulfilment centres to regional sortation hubs or distribution centres, strategically located to minimize delivery time. The next phase is last-mile delivery, a critical component ensuring products reach customers quickly and accurately. Companies employ dedicated delivery fleets, third-party logistics partners, and increasingly, hyperlocal couriers for same-day or next-day delivery in urban areas.

Additionally, robust reverse logistics systems are in place to manage returns, exchanges, and refunds efficiently, enhancing customer satisfaction. Real-time tracking, predictive analytics, and AI-driven route optimization further enhance operational efficiency. For premium services, some platforms integrate cold chain logistics for perishables. Overall, the logistics setup in e-retail is dynamic, responsive, and continuously evolving to meet the demands of a fast-paced digital marketplace.

Growth Drivers

- **Surge in Online Shopping and Digital Payments**

The sharp increase in online shopping, fuelled by widespread internet access, smartphone penetration, and digital payments, has been a fundamental driver for e-retail logistics growth. Consumers now expect convenience, wide product choice, and seamless purchasing experiences, which require efficient and scalable logistics networks. Digital payment systems have simplified transactions, enabling higher order volumes that logistics providers must handle reliably. This has led to the expansion of fulfilment centres, last-mile delivery networks, and real-time tracking systems. As e-commerce platforms continue to penetrate Tier 2 and 3 cities, logistics providers are enhancing infrastructure and capabilities to meet this growing demand, ensuring faster and more reliable deliveries across a broader geography.

- **Growth of Quick Commerce and Hyperlocal Deliveries**

The emergence of quick commerce platforms offering deliveries within 10 to 30 minutes has redefined logistics in the e-retail sector. This model relies on a dense network of micro-fulfilment centres, dark stores, and partnerships with hyperlocal delivery providers. Logistics operations are optimized for speed, requiring precise inventory management and real-time data analytics to forecast demand and ensure stock availability close to consumer locations. Companies are also leveraging technology for dynamic route optimization and efficient dispatching. The growing consumer preference for instant gratification, especially for groceries and daily essentials, is driving investments in hyperlocal logistics infrastructure, making this a pivotal growth driver for the e-retail logistics landscape.

- **Expansion into Tier 2 and Tier 3 Markets**

As e-commerce platforms penetrate deeper into Tier 2 and Tier 3 cities, logistics networks are expanding beyond metropolitan hubs to serve these emerging markets. Rising disposable incomes, better internet connectivity, and growing digital literacy in smaller cities are increasing online shopping volumes from these regions. To cater to this demand, logistics providers are developing regional warehouses, localized delivery networks, and enhancing supply chain visibility in remote areas. This expansion requires overcoming challenges such as limited infrastructure and fragmented delivery networks, prompting innovations in cost-effective and scalable logistics solutions. Serving these markets effectively ensures sustained growth for both e-commerce platforms and the associated logistics ecosystem.

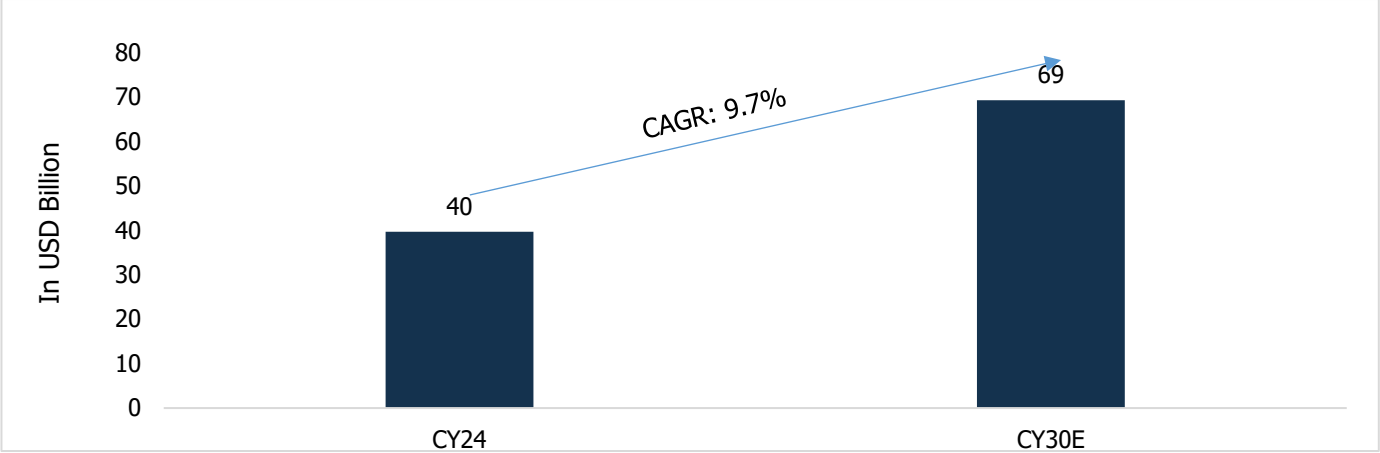
- **Technological Innovations in Supply Chain and Delivery**

Technological advancements are central to the efficiency and scalability of e-retail logistics. The adoption of Artificial Intelligence (AI), Internet of Things (IoT), robotics, and blockchain enhances visibility, traceability, and automation across the supply chain. AI-driven demand forecasting, inventory optimization, and route planning improve operational accuracy and reduce delivery times. IoT devices enable real-time monitoring of shipments, ensuring better handling and accountability. Additionally, automation in warehousing, including robotic picking and automated sorting systems, significantly increases throughput and reduces errors. As e-retail continues to grow, these technological innovations are enabling logistics providers to scale operations efficiently while meeting the increasing expectations of speed, transparency, and reliability in deliveries.

11.6 Bulk Commodities (Steel/Cement)

The logistics market for bulk commodities like steel and cement has expanded significantly over the years, driven by growth in infrastructure development, construction, and industrial manufacturing. Government initiatives such as Make in India, Smart Cities Mission, and Bharatmala have fuelled demand for steel and cement, leading to higher production volumes and complex supply chain needs. Bulk commodities require specialized logistics solutions, including rail transport, coastal shipping, and dedicated freight corridors, to efficiently handle large, heavy loads over long distances. Additionally, the push for multi-modal transportation and the development of integrated logistics parks have enhanced the capacity and efficiency of bulk commodity logistics. Increased exports of steel and diversification into value-added products have further expanded logistics requirements, prompting significant investments in transportation infrastructure, material handling systems, and digital tracking technologies.

Chart 47: Market Size for Logistics across Bulk Commodities (Steel/Cement)



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

The logistics setup for bulk commodities such as steel and cement is designed to handle high-volume, heavy-weight, and time-sensitive shipments across vast distances. The supply chain begins with the transportation of raw materials, such as iron ore, coal, and limestone, to manufacturing plants, primarily using railways, dedicated freight corridors, and in some cases, inland waterways.

Post-production, the distribution of finished products steel coils, bars, cement bags, and bulk cement is executed through a combination of rail, road, and coastal shipping, based on proximity to consumption centres. Steel producers often use rake loads for long-distance transport, while cement companies deploy bulk carriers, silo trucks, and bagged consignments for varied customer requirements.

Logistics hubs and stockyards near consumption clusters facilitate quick turnaround and reduce last-mile delivery challenges. For exports, ports with specialized handling facilities cater to the efficient loading and shipment of bulk commodities. Advanced Material Handling Equipment (MHE), automated tracking systems, and weighbridges ensure operational efficiency and minimize pilferage. Integrated logistics planning with technology support, including GPS tracking and supply chain visibility platforms, is critical to managing the cost, time, and environmental impact of transporting bulk goods.

Growth Drivers

- **Infrastructure and Construction Growth**

The sustained growth in infrastructure development, driven by government initiatives like Bharatmala, Sagarmala, and Smart Cities Mission, has led to a sharp increase in demand for steel and cement. This surge has directly expanded the need for robust and scalable logistics solutions capable of moving bulk materials efficiently to project sites across the country. Major infrastructure projects, including highways, metro systems, and industrial corridors, require continuous and timely supplies of bulk commodities. As project sizes grow and timelines tighten, the demand for reliable multi-modal logistics networks, including railways and coastal shipping, continues to rise. This trend has prompted investments in logistics hubs, dedicated rail infrastructure, and specialized freight corridors to support seamless movement.

- **Adoption of Multi-Modal Transportation**

The push towards multi-modal transportation integrating rail, road, and water ways is transforming bulk commodity logistics by enhancing efficiency and reducing costs. Railways are preferred for long-distance, high-volume movement of steel and cement, while road transport handles last-mile connectivity. Coastal shipping is gaining traction, especially for cement and steel exports, owing to its cost-effectiveness for heavy cargo. The development of Dedicated Freight Corridors (DFCs) and improved port infrastructure enables faster, safer, and more sustainable transport of bulk

commodities. Multi-modal logistics also reduces carbon emissions, aligning with sustainability goals. This integrated approach not only optimizes transit times but also mitigates risks related to capacity constraints and road congestion.

- **Technological Advancements in Supply Chain Visibility**

Technological innovation is playing a pivotal role in improving the logistics of bulk commodities. Companies are increasingly adopting GPS tracking, IoT devices, and advanced supply chain visibility platforms to monitor the movement of steel and cement in real time. These technologies provide insights into transit times, route optimization, and handling conditions, enabling better coordination across the supply chain. Weighbridge automation, digital documentation, and predictive maintenance systems for transport fleets further enhance efficiency and reduce operational delays. By leveraging data analytics, manufacturers and logistics providers can forecast demand, manage inventory more effectively, and streamline dispatch planning. This technology-driven transformation ensures more reliable, transparent, and cost-efficient logistics for bulk commodity movement.

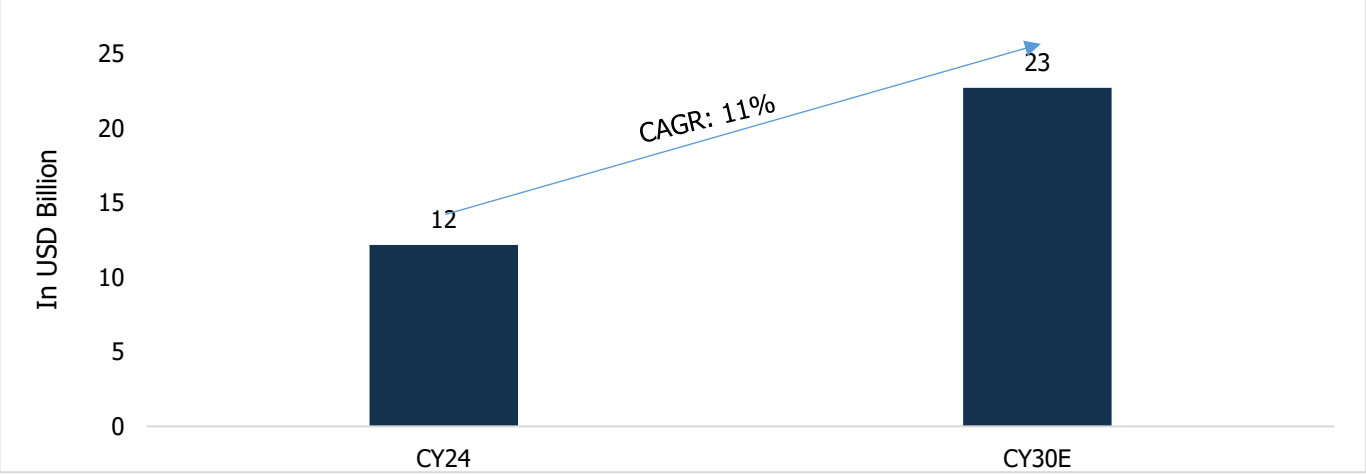
- **Growth in Steel and Cement Exports**

India's position as a leading exporter of steel and cement has significantly bolstered logistics demand in the bulk commodities space. The expansion into international markets, particularly in Africa, the Middle East, and Southeast Asia, requires specialized export logistics solutions, including port handling capabilities, bulk carriers, and dedicated storage facilities. Ports are being upgraded with specialized cargo terminals to handle large consignments of steel products and cement in both bagged and bulk formats. Additionally, logistics providers are adopting global compliance standards and digital tracking systems to meet international trade requirements. This export-driven growth enhances the need for coordinated inland transportation, port connectivity, and efficient freight management, ensuring India's competitive positioning in the global bulk commodities market.

11.7 Project Cargo

The Project Cargo logistics market has expanded significantly over the years, driven by the growth of large-scale infrastructure, energy, and industrial projects in India and globally. Project cargo refers to the transportation of over-dimensional, heavy-lift, and high-value equipment, often critical for sectors like power, oil & gas, renewable energy, and heavy engineering. With India's emphasis on building renewable energy capacity, smart cities, and industrial corridors, the demand for specialized logistics capable of handling complex, non-standard shipments has surged. The growth of global EPC (Engineering, Procurement, and Construction) contracts has further expanded opportunities in this segment. Investments in multimodal transport capabilities, dedicated equipment like cranes and modular trailers, and improved port infrastructure have supported this growth. Project cargo logistics now demands tailored solutions, risk management, and regulatory expertise, contributing to its increasing market size.

Chart 48: Market Size for Logistics across Project Cargo



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

The logistics setup for Project Cargo is highly specialized, designed to transport heavy-lift, over-dimensional cargo (ODC), and critical machinery that cannot be containerized. The process begins with detailed route surveys and feasibility assessments to identify the most viable transportation path, considering road conditions, bridge capacities, and port infrastructure.

Project cargo logistics often require customized equipment such as hydraulic modular trailers, self-propelled modular transporters (SPMTs), heavy-duty cranes, and barges for coastal or inland waterway transport. The supply chain is multimodal, combining road, rail, sea, and sometimes air transport to deliver cargo to remote or challenging project sites. Ports with specialized handling equipment and customized jetties are used for safe loading and unloading of cargo.

Further, comprehensive project planning, risk assessments, and regulatory compliance are integral to the process, including obtaining permissions for movement of ODCs. End-to-end project management teams coordinate with multiple stakeholders from suppliers to EPC contractors ensuring adherence to timelines and safety standards. The use of real-time tracking, heavy-lift engineering solutions, and advanced logistics planning software enables efficient execution of complex, high-value logistics projects.

Growth Drivers

- **Surge in Infrastructure and Energy Projects**

The increase in infrastructure and energy projects, such as highways, metro rail, power plants, and renewable energy installations, has driven demand for project cargo logistics. These projects involve transporting turbines, reactors, boilers, and other oversized equipment requiring specialized handling and transportation solutions. Government-led initiatives like the National Infrastructure Pipeline (NIP) and emphasis on clean energy have further expanded this requirement. The scale and complexity of these projects necessitate end-to-end logistics planning, risk mitigation, and precision in execution. As infrastructure development accelerates across India and other emerging markets, logistics companies specializing in project cargo are witnessing sustained growth opportunities, backed by investments in equipment, skilled personnel, and multimodal transport capabilities.

- **Growth of Renewable Energy Sector**

The rapid expansion of the renewable energy sector, particularly in wind and solar power, has significantly contributed to the growth of project cargo logistics. Wind energy projects require the transportation of long turbine blades, massive towers, and nacelles, all of which are oversized and sensitive. Similarly, solar power plants involve heavy transformers, inverters, and specialized components. These installations are often located in remote or geographically challenging areas, necessitating customized logistics planning and execution. Specialized transport equipment, route surveys, and careful handling are essential to ensure safe delivery without damage. The government's commitment to expanding renewable capacity under climate goals is expected to sustain and grow the need for project cargo logistics in this domain.

- **Advancements in Specialized Transport Equipment**

The availability and adoption of advanced specialized transport equipment have been pivotal in enhancing project cargo logistics. Equipment such as hydraulic modular trailers, SPMTs, and heavy-lift cranes enable the safe and efficient movement of extremely heavy and oversized loads. These technologies allow logistics providers to navigate infrastructural constraints, such as narrow roads or low-capacity bridges, with greater flexibility. Additionally, innovations in engineering, like modular transportation systems and automated load distribution, improve safety and reduce transit times. As project requirements become more complex and the value of cargo increases, the investment in cutting-edge transport equipment is not just facilitating growth but is also enabling logistics companies to undertake more challenging and diverse projects globally.

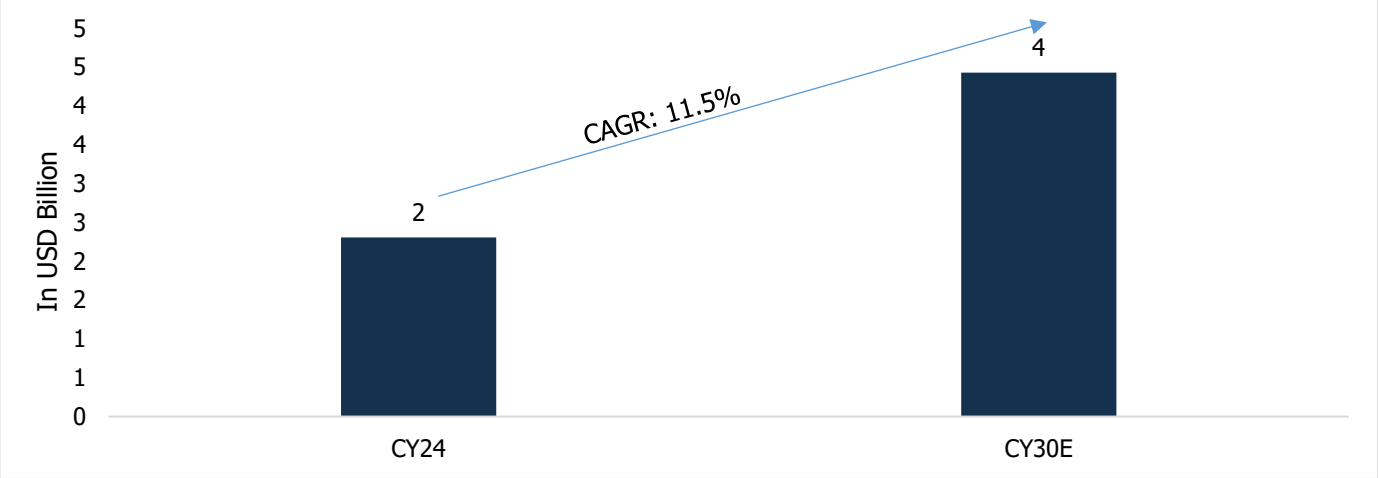
- **Policy and Regulatory Support for Infrastructure Development**

Government policies supporting infrastructure and industrial growth, including faster project clearances and easier permissions for ODC transport, have accelerated the growth of project cargo logistics. Initiatives like the Gati Shakti Master Plan and focus on multimodal connectivity reduce logistical bottlenecks for transporting large cargo. Improved coordination between ministries and agencies for issuing movement permits and upgrading road and port infrastructure makes it feasible to transport heavy and oversized equipment more efficiently. This policy-driven facilitation encourages private investments in infrastructure and industrial projects, thereby boosting the demand for specialized logistics services. Regulatory streamlining coupled with infrastructure upgrades ensures a more conducive environment for scaling project cargo logistics in India and abroad.

11.8 Energy Solar Modules

The logistics market for the energy solar modules sector has expanded significantly in recent years, driven by the global and domestic push toward renewable energy. With India targeting 500 GW of renewable capacity by 2030, solar energy has emerged as a critical contributor, leading to a sharp rise in the production and deployment of solar modules. The increase in large-scale solar parks, rooftop solar projects, and hybrid renewable installations has elevated the demand for specialized logistics services. Solar modules, being fragile and voluminous, require careful handling, customized packaging, and safe transportation over long distances, often to remote project sites. The expansion of solar exports, especially to emerging markets, further amplifies the need for secure, multimodal, and traceable logistics. Consequently, the sector is witnessing sustained investment in tailored logistics solutions, enhancing efficiency and reducing transit risks.

Chart 49: Market Size for Logistics across Energy Solar Modules



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

The logistics setup in the energy solar modules sector is designed to handle fragile, high-value, and voluminous equipment with precision and care. The process begins with the sourcing and transportation of solar panels, inverters, mounting structures, and associated components from manufacturing units, often located in industrial hubs or ports, to project sites across the country. Given the delicate nature of solar modules, packaging solutions involve shock-absorbent, temperature-resistant materials to minimize the risk of damage during transit.

The transportation network primarily utilizes road freight for last-mile delivery, complemented by rail and sea freight for inter-state or international movement, particularly for exports. Specialized carriers with customized racking systems are employed to securely stack and transport panels without causing micro-cracks or abrasions.

At the destination, coordinated unloading and inventory verification systems ensure components are accounted for and stored appropriately until installation. Logistics providers also manage reverse logistics for damaged goods and recycling of packaging materials, promoting sustainability. Real-time tracking, route optimization, and compliance with environmental and safety standards are integral to the logistics chain, ensuring timely and damage-free deliveries essential for the success of solar energy projects.

Growth Drivers

- **Expansion of Renewable Energy Targets and Policy Support**

India's ambitious target of 500 GW of renewable energy by 2030, driven by policies like the National Solar Mission and PLI schemes for solar manufacturing, is a major catalyst for the growth of solar module logistics. These policies incentivize large-scale solar installations, requiring efficient and scalable logistics to move equipment across vast geographies. Government initiatives supporting grid connectivity and solar parks further fuel demand for specialized logistics services. The scale of these projects mandates precise planning, secure transportation, and optimized warehousing. This policy-driven momentum ensures continuous expansion of logistics infrastructure tailored for solar modules, fostering innovation in packaging, handling, and transportation solutions.

- **Growth in Domestic Manufacturing and Exports**

With increasing emphasis on domestic solar manufacturing under Aatmanirbhar Bharat, India is ramping up its production of solar modules, cells, and related equipment. This growth fuels logistics demand both for domestic distribution and exports to international markets in Africa, Southeast Asia, and the Middle East. Solar modules are delicate and need specialized transport solutions to prevent damage during transit. The rise in export-oriented production necessitates integration with ports, customs clearance processes, and multimodal logistics networks. Investments in dedicated warehouses, export packing standards, and traceable logistics systems are key enablers supporting the seamless movement of solar modules globally, positioning India as a competitive hub for solar solutions.

- **Need for Specialized Handling and Packaging Solutions**

Solar modules are prone to damage from shocks, vibrations, and temperature variations, making specialized handling and packaging solutions crucial in their logistics. The development of customized racking systems, anti-static packaging, and climate-resistant materials ensures the safe transport of modules over long distances. Logistics providers offer trained personnel for careful loading and unloading, minimizing risks of micro-cracks or breakage. Additionally, advanced inventory management and tracking technologies enhance supply chain visibility and control. The increasing value of solar installations and the technical complexity of new-generation modules amplify the importance of secure logistics, driving continuous improvement and investment in tailored packaging and transport solutions across the solar energy value chain.

- **Infrastructure Growth and Multimodal Connectivity**

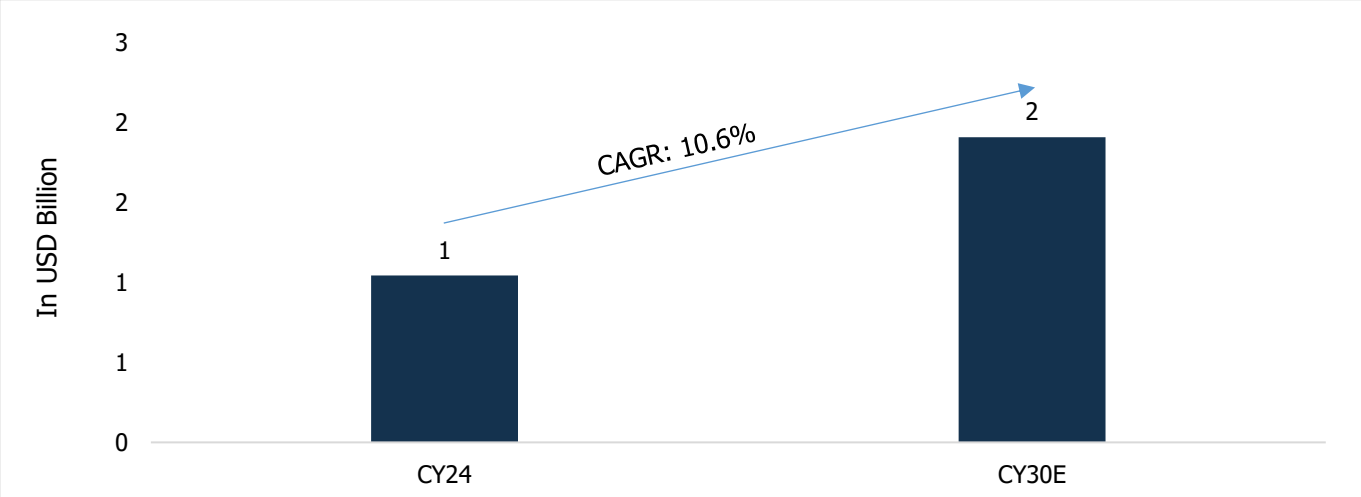
The expansion of infrastructure and multimodal connectivity in India, including highways, rail networks, and port modernization under the Gati Shakti Master Plan, is enabling more efficient logistics for the solar modules sector. Improved infrastructure allows for smoother, faster, and safer transportation of bulky and fragile solar components to remote and varied project sites. The integration of road, rail, and sea transport ensures cost-effective logistics options for both domestic installations and exports. Enhanced connectivity reduces transit times and risks associated with multiple handling, which is critical for sensitive equipment like solar panels. This infrastructural development supports the scalability of solar projects while making logistics operations more reliable and economical.

11.9 Critical Logistics – Gold

The critical logistics market for the gold sector has expanded steadily over the years, driven by the increasing scale of gold imports, exports, and domestic consumption in India one of the world's largest gold markets. The surge in jewellery demand, investment-grade gold, and bullion trading has heightened the need for secure, compliant, and efficient logistics solutions. The emergence of organized retail, digital gold platforms, and gold refineries has further increased the

frequency and volume of high-value gold shipments. Additionally, regulatory frameworks around compliance, traceability, and tax governance (like GST and hallmarking) have necessitated specialized logistics capabilities that can ensure safety, confidentiality, and regulatory adherence. This has led to substantial investments in secure transport systems, armoured vehicles, vaulting services, and technology-enabled tracking, enhancing the overall market size for critical gold logistics.

Chart 50: Market Size for Logistics across Critical Logistics – Gold



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

The logistics setup for the gold sector is designed around maximum security, compliance, and traceability, given the high value and sensitivity of the cargo. The process typically begins with the secure transportation of gold imports from airports to vaults or refineries, often using armoured vehicles and armed escorts. Logistics providers employ tamper-proof packaging, real-time GPS tracking, and secure communication channels to mitigate risks.

Once refined or processed, gold is transported to jewellery manufacturers, retailers, bullion traders, or banks, with strict adherence to regulatory and audit protocols. Facilities such as high-security vaults, bonded warehouses, and specialized storage sites comply with international security standards like ISAE 3402 and SOC certifications. The logistics chain also includes insurance coverage, compliance checks, and KYC norms, ensuring full regulatory adherence.

Digital tools are widely integrated, offering real-time shipment tracking, electronic proof of delivery, and secure chain-of-custody documentation. Reverse logistics, where required, is managed with the same level of control. In essence, the logistics setup for gold is a highly specialized ecosystem combining physical security, technology, and governance frameworks to protect both the asset and the stakeholder interests.

Growth Drivers

- **Rise in Gold Consumption and Jewellery Exports**

India's growing demand for gold jewellery, coupled with rising exports to global markets, has been a significant growth driver for critical gold logistics. As India remains a top global consumer and refines substantial quantities of imported gold, the need for secure, frequent, and compliant logistics solutions has increased. The growing number of organized jewellery retailers and branded outlets necessitates systematic logistics support to distribute gold securely across regions. Additionally, participation in global jewellery exhibitions and rising export demand, especially from the Middle East and the USA, have intensified the requirement for international-standard logistics services, including specialized air freight, secure customs handling, and insured transport.

- **Expansion of Digital Gold and E-Commerce Platforms**

The emergence of digital gold investment platforms and e-commerce-driven jewellery sales has created new avenues for gold logistics. These platforms offer customers the ability to buy fractional quantities of gold online, which requires robust back-end logistics to ensure secure storage, real-time inventory management, and traceable deliveries for physical redemption. Logistics providers are integrating with fintech and e-commerce ecosystems to deliver highly secure, efficient services that align with digital business models. As consumers increasingly turn to digital channels for gold investments, logistics players must ensure that delivery, storage, and transaction security standards are seamlessly upheld, further driving demand for sophisticated, tech-enabled logistics solutions in the gold sector.

- **Stricter Regulatory and Compliance Requirements**

The gold sector is subject to stringent regulatory and compliance frameworks, including hallmarking mandates, GST compliance, and anti-money laundering (AML) regulations. These evolving standards necessitate transparent and accountable logistics operations to ensure traceability of every shipment. Logistics providers have had to invest in secure documentation processes, KYC-compliant handling, and real-time audit capabilities to meet these requirements. Compliance with international standards is particularly critical for bullion transport and exports, further raising the bar for logistics providers in terms of operational rigor. As regulatory frameworks tighten, companies specializing in critical gold logistics gain a competitive edge by offering integrated solutions that ensure full compliance, risk mitigation, and audit-ready processes.

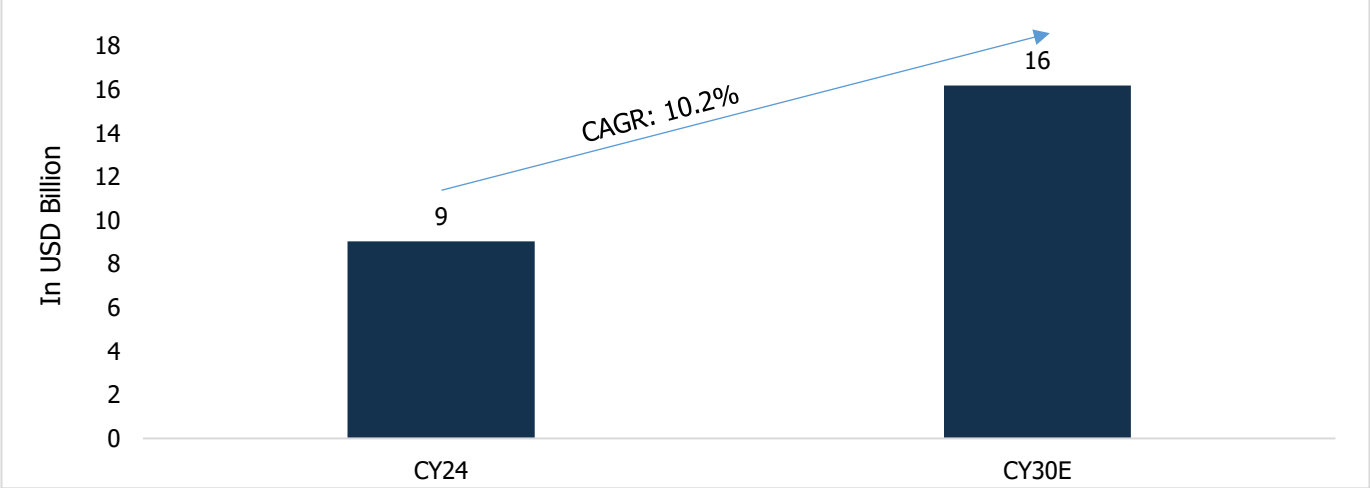
- **Advancements in Secure Transport Technology**

Innovations in secure transport technologies have significantly enhanced the efficiency and reliability of gold logistics. Armoured vehicles with advanced security features, tamper-proof seals, biometric access controls, and GPS-enabled tracking systems ensure that gold shipments are safeguarded throughout their journey. Additionally, the integration of blockchain for chain-of-custody tracking and real-time communication platforms provides added transparency and security for stakeholders. These technological advancements allow for continuous monitoring, predictive risk assessment, and rapid response protocols, minimizing the risks of theft or tampering. As the value of shipments grows alongside demand, investing in cutting-edge secure transport solutions becomes essential, driving growth in the specialized logistics segment tailored for precious metals like gold.

11.10 Textile

The logistics market in the textile sector has grown steadily over the years, supported by the sector's expanding domestic production and strong export demand. India's position as a major global textile and apparel supplier has necessitated efficient logistics networks for transporting raw materials like cotton, yarn, and synthetic fibres to manufacturing hubs, as well as distributing finished goods to domestic markets and international buyers. Increased penetration of organized retail, e-commerce platforms, and fast-fashion trends has further driven demand for agile, time-bound delivery systems. Modernization of supply chains, adoption of technology for inventory tracking, and government initiatives such as the PM MITRA parks have strengthened logistics efficiency. As textile manufacturing clusters expand and global trade linkages deepen, logistics services in the sector have transformed from basic transport solutions to integrated, technology-enabled operations.

Chart 51: Market Size for Logistics across Textile



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

The textile sector's logistics setup encompasses a complex, multi-tiered supply chain involving raw material sourcing, production, warehousing, and distribution. It starts with inbound logistics for transporting cotton, yarn, wool, silk, and synthetic fibres from agricultural and industrial zones to spinning and weaving facilities. Manufacturing hubs are often concentrated in clusters such as Tiruppur, Surat, Ludhiana, and Bhilwara, necessitating region-specific transport arrangements. Post-production logistics focuses on warehousing, sorting, quality checks, and packaging before goods are dispatched to domestic markets, retail chains, and export ports.

Exports, a major segment, require specialized logistics to meet international compliance, customs clearance, and containerized shipment needs. With fast-fashion models and e-commerce retail channels gaining prominence, supply chains are increasingly adopting just-in-time delivery systems, digitized inventory management, and multi-modal transportation. Cold chain facilities are less critical here, but temperature and moisture-controlled environments may be necessary for high-value fabrics. Integration with freight forwarders, last-mile delivery partners, and technology-driven logistics platforms ensures timely order fulfilment, reducing lead times. Overall, the textile logistics setup is shifting towards more collaborative, technology-optimized, and demand-responsive systems to support both mass production and niche, high-value orders.

Growth Drivers

- **Rising Export Demand**

The steady growth of textile exports to markets in the US, EU, and Asia-Pacific has significantly increased demand for efficient logistics solutions. Export-oriented units require time-bound, compliant, and cost-effective transportation to meet buyer deadlines. Logistics providers are increasingly integrating customs clearance, container tracking, and multi-modal transport solutions to ensure minimal delays. Trade agreements and preferential tariff arrangements are also boosting shipment volumes, compelling companies to strengthen their logistics infrastructure. As global buyers demand quicker replenishment cycles and diversified sourcing, Indian textile exporters are relying on logistics partners who can deliver both speed and consistency, enhancing competitiveness in international markets.

- **Expansion of Domestic Apparel and Retail Market**

The growth of organized retail and e-commerce in India has expanded the domestic distribution network for textiles and apparel. Fast-fashion trends and seasonal collections require quick turnaround times and smaller, frequent shipments. This has led to the adoption of advanced warehouse management systems, automated sorting facilities, and regional distribution centres for faster last-mile delivery. The domestic market's shift towards branded and ready-to-wear clothing

has increased the need for specialized packaging and handling. Additionally, integration of reverse logistics for returns management in e-commerce has become a critical operational area, further expanding logistics scope in the textile sector.

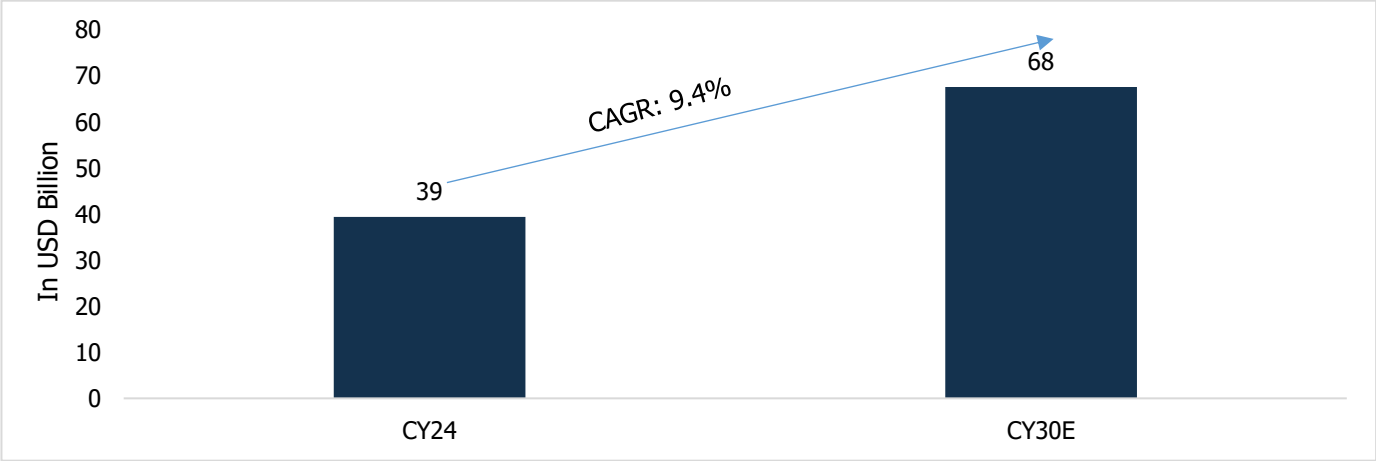
- **Technological Integration in Supply Chains**

Digital tools such as RFID tagging, blockchain-enabled tracking, and AI-powered demand forecasting are transforming textile logistics operations. These technologies improve transparency, reduce losses, and optimize route planning, enabling cost savings and efficiency. Textile manufacturers are increasingly collaborating with tech-enabled logistics firms to monitor shipments in real time and streamline customs documentation for exports. Predictive analytics helps in anticipating seasonal demand spikes, allowing better inventory management. The adoption of IoT sensors in storage facilities also ensures fabric quality is maintained during warehousing and transit. This technology-driven evolution is enabling more reliable and customer-centric textile supply chains.

11.11 Other End-Use sectors

The logistics market for other end-use sectors, including chemicals, FMCG, electronics, and agro products, has expanded consistently due to diversified industrial growth, rising consumption, and globalization of supply chains. As India industrializes and urbanizes, these sectors have experienced heightened production and distribution demands, requiring agile and specialized logistics solutions. The rise of organized retail, export growth in electronics and agro-products, and complex chemical supply chains have driven the need for multi-modal, temperature-controlled, and compliant logistics services. Additionally, the spread of manufacturing clusters across India has created new logistics corridors, while technology adoption has improved supply chain visibility and efficiency. This broad-based growth, combined with policy support like the National Logistics Policy, has significantly expanded the logistics market for these diverse sectors, fostering continuous infrastructure and service enhancements.

Chart 52: Market Size for Logistics across Other End-Use sectors



Source: IMARC Group, Care Edge Research; Note: E-Estimate

Logistics Setup

Logistics for other end-use sectors is diverse and customized to meet the specific requirements of industries like FMCG, chemicals, electronics, and agriculture. The logistics setup typically includes a combination of primary transportation from production sites to regional distribution centres (RDCs) and secondary distribution to retailers, exporters, or end-users.

For FMCG and agro-products, speed and freshness are crucial, necessitating cold chain solutions, time-bound deliveries, and high-frequency shipments. Electronics logistics demands secure, anti-static packaging and real-time tracking to prevent pilferage and damage. The chemical industry requires hazardous material handling protocols, including specialized containers, compliance with safety norms, and dedicated storage facilities.

Infrastructure includes multi-modal transport options, automated warehouses, and specialized material handling equipment tailored to each sector's needs. Technology integration such as Warehouse Management Systems (WMS), Transport Management Systems (TMS), and IoT-enabled tracking ensures supply chain visibility and operational efficiency. Reverse logistics is also critical, especially in electronics and FMCG, for managing returns and recycling. This sector-specific logistics approach ensures safe, compliant, and cost-effective supply chain management across a diverse range of industries.

Growth Drivers

- **Expansion of Organized Retail and FMCG Demand**

The rapid growth of organized retail and FMCG consumption, especially in urban and semi-urban India, has been a key driver for logistics services. With evolving consumer preferences for variety, freshness, and timely delivery, FMCG companies rely on efficient, time-bound, and multi-tier distribution networks. The proliferation of supermarkets, online grocery platforms, and convenience stores has created a demand for agile supply chains that ensure product availability with minimal stockouts. Cold chain logistics for perishables and faster replenishment cycles are also expanding. This demand is driving investments in warehousing infrastructure, automation, and last-mile delivery capabilities, ensuring that logistics networks can keep pace with the dynamic and fast-moving nature of FMCG products.

- **Growth in Electronics and High-Value Goods Manufacturing**

India's emergence as a hub for electronics manufacturing, driven by initiatives like PLI schemes and Make in India, has elevated the need for specialized logistics solutions for high-value and sensitive goods. Electronics logistics require secure transportation, specialized packaging to prevent electrostatic discharge, and real-time tracking to minimize pilferage risks. As production scales up, especially in smartphones, semiconductors, and consumer electronics, logistics networks are being tailored to handle precision shipments and just-in-time deliveries. The growth in exports further adds complexity, requiring compliant documentation, customs facilitation, and global transport connectivity. This sector's sensitivity to damage and theft drives continuous innovation in secure, technology-enabled logistics solutions tailored for high-value goods.

- **Specialized Logistics for Chemicals and Hazardous Materials**

The expanding chemical and petrochemical industries in India demand specialized logistics capable of handling hazardous and sensitive materials. Transporting chemicals requires adherence to stringent safety, environmental, and regulatory norms, including the use of dedicated tankers, specialized containers, and compliant storage facilities. The growth in exports of specialty chemicals and pharmaceuticals amplifies the need for globally certified logistics providers. The sector also benefits from multi-modal transport, combining road, rail, and sea to optimize costs and mitigate risks. Logistics providers are investing in safety training, advanced monitoring systems, and emergency response protocols to manage the complexities of chemical logistics. As the chemical industry grows, especially in states like Gujarat and Maharashtra, the demand for expert logistics solutions continues to rise.

- **Agro-Product Logistics and Supply Chain Modernization**

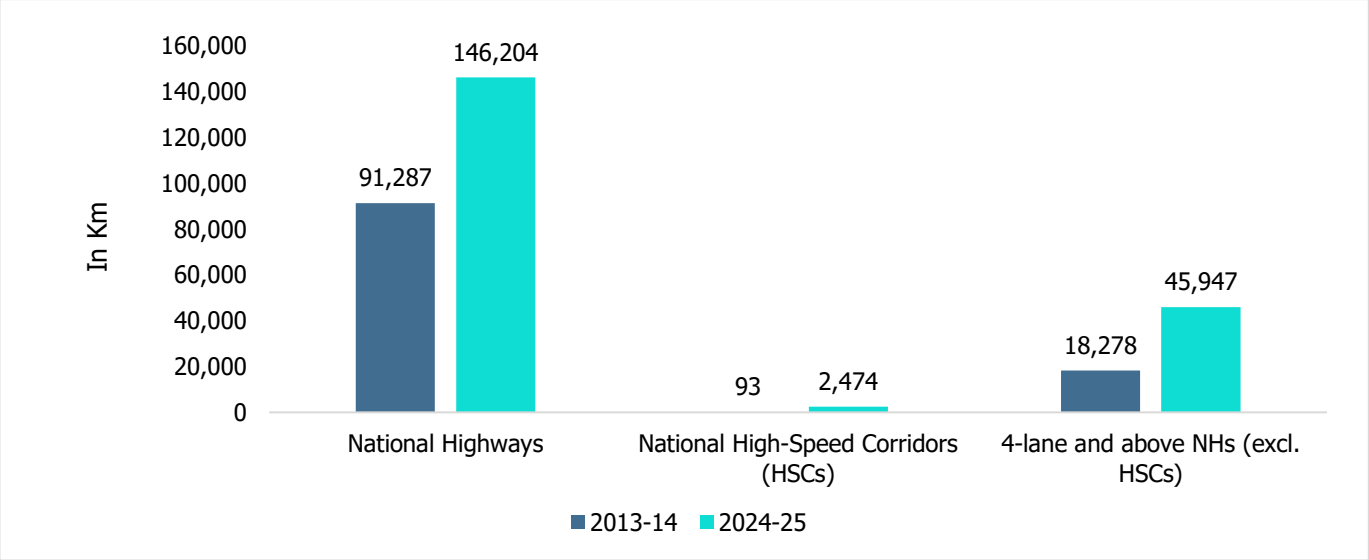
The modernization of the agriculture supply chain and the rise of agro-exports have driven demand for efficient and specialized agro-logistics. Agricultural produce, including fruits, vegetables, and grains, requires cold storage, temperature-controlled transportation, and rapid market access to preserve quality and reduce wastage. With increasing exports of organic and processed foods, logistics networks are evolving to include international-grade packaging, compliance with food safety standards, and integrated supply chain management. The growth of food processing industries and farm-to-fork models is further enhancing logistics sophistication in this sector. Public and private investments in agri-logistics infrastructure, rural connectivity, and warehouse modernization are critical growth enablers, ensuring that agricultural produce reaches markets domestically and internationally in optimal condition.

12 Major Trends and Growth Drivers of Indian Logistics Market

12.1 Growth Opportunity in Road Freight Market

India's road freight sector, accounting for approximately 71% of total freight tonne-km, is the backbone of the country's logistics network. This dominant modal share reflects the sector's critical role in enabling trade, supporting industries, and connecting rural and urban economies. The rapid rise in e-commerce, manufacturing output, and urban consumption especially in Tier II and III cities is driving an unprecedented surge in freight demand. As of March 31, 2025, India's road network exceeded 63 lakh km, including 1,46,204 km of National Highways, positioning it as the second-largest road network globally and offering immense capacity for freight expansion. It is projected that India's road freight movement will surge to approximately 9.6 trillion tonne-km by 2050.

Chart 53: Expansion of National Highways over the past decade



Source: PIB

To unlock this potential, the government has implemented transformative infrastructure initiatives. The PM Gati Shakti National Master Plan integrates 44 ministries and 36 states/UTs through a unified digital platform for coordinated infrastructure development. It complements policies like the National Logistics Policy 2022 and systems such as FASTag, E-way bills, and the VAHAN/SARATHI portals, all of which aim to reduce logistics costs and turnaround time through digitization and automation.

The Bharatmala Pariyojana, with a Rs. 5.35 lakh crore outlay is a cornerstone for freight corridor development. It targets the construction of 34,800 km of roads, including expressways, economic corridors, and feeder routes. As of March 2025, 26,425 km have been awarded and 20,378 km completed, boosting inter-regional freight movement and reducing supply chain inefficiencies.

Additionally, 35 Multimodal Logistics Parks (MMLPs) are being developed to enable efficient cargo handling and modal shift. FASTag adoption has streamlined tolling operations, while highway construction rates have risen to 34 km/day as of June 2025, up from 11.6 km/day in 2014. These physical and digital advancements are paving the way for a more agile, cost-effective, and scalable road freight ecosystem in India positioning it for sustained long-term growth.

12.2 Growth Opportunity in Rail Freight Market

Rail freight in India accounts for a significant portion of goods movement but has seen a decline in its share over time due to a policy preference for road transport. Still, with about 11,724 freight trains operating per day in FY24, rail remains critical. The challenge is restoring modal balance for long-haul, bulk cargo transport to reduce carbon and cost penalties on highways.

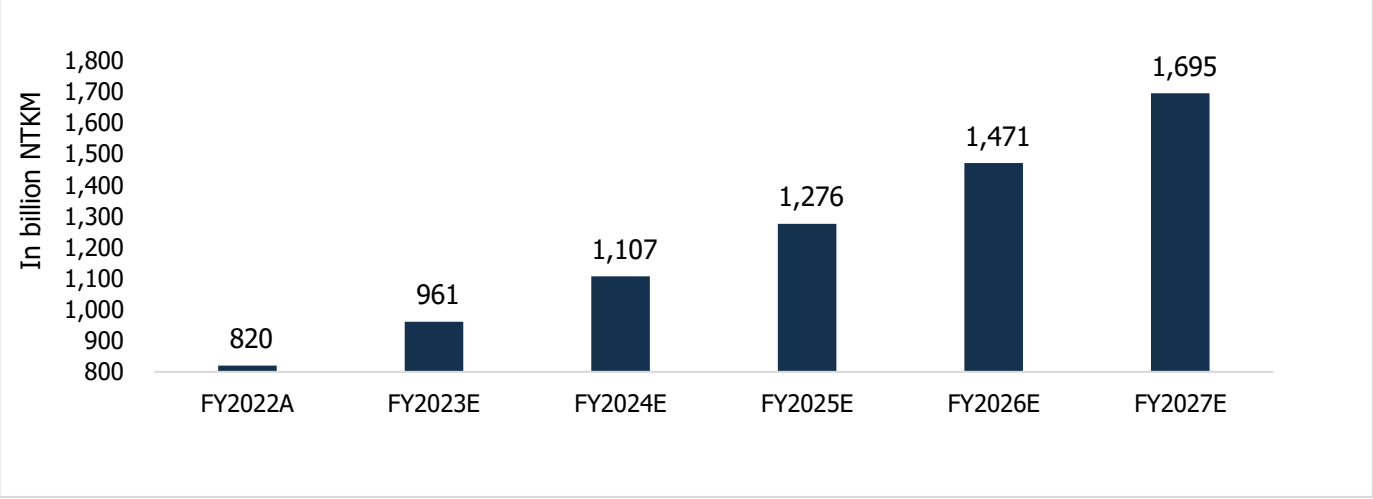
To reverse the modal imbalance, the government is aggressively investing in dedicated infrastructure. The Dedicated Freight Corridor (DFC) program comprising Eastern and Western corridors is nearly complete, with 96.4% of the sanctioned 2,843 km constructed by DFCCIL. These corridors have significantly decongested passenger lines and enabled freight trains to run faster, more frequently, and with higher axle loads. As a result, turnaround times, logistics reliability, and capacity utilization have all improved.

Further bolstering rail's freight capacity is the National Rail Plan (NRP), preparing the rail network to meet freight demands up to 2050. It targets increasing rail's modal share from around 27% to 45%, raising average freight speeds to 50 km/h, achieving full electrification, expanding track capacity, and encouraging private sector participation in rolling stock, terminals, and infrastructure. It promotes private sector participation in rolling stock, mechanised cargo handling, and terminal development, with policy measures aimed at operational flexibility and digital transformation. Automation, AI-driven traffic management, and predictive maintenance are part of this modernisation drive.

As of April–February FY25, Indian Railways transported 1.47 billion tonnes of freight, marking a 4.6% increase year-on-year. This growth reflects enhanced operational efficiency and a strong push toward multimodal logistics development across the country.

The Indian Railways' long-term vision aims for a green, tech-forward logistics network. It envisions 100% electrified routes, enhanced multimodal integration, and significant modal shift from road to rail. These steps are critical not just for economic competitiveness but also for environmental sustainability and achieving India's net-zero goals.

Chart 54: Trend in Indian Railway Freight Traffic



Source: Indian Railways, Report of the Committee on Mission 3000 million Tonnes

12.3 Importance of adoption of EV in freight market

Electrifying India's freight sector is essential to reduce emissions, cut fossil fuel dependency, and modernize logistics. With freight vehicle numbers expected to rise sharply especially trucks, projected to reach 17 million by 2050 adoption

of electric vehicles (EVs) in the freight market has become increasingly important. E-trucks offer a promising pathway to decarbonize long-distance and last-mile delivery while lowering operating costs and improving urban air quality.

The government is actively promoting this transition through targeted initiatives. The FAME-II scheme, with an outlay of Rs 11,500 crore, plays a foundational role by incentivizing EV adoption and charging infrastructure. While the majority of the 16.15 lakh vehicles supported so far are two- and three-wheelers, the scheme's ecosystem development is paving the way for heavier freight vehicles like e-trucks to scale. Charging infrastructure along national highways and logistics hubs is also being ramped up to support future electric freight fleets.

To further accelerate electrification in freight, the PM E-DRIVE scheme focuses on enabling the commercial adoption of e-trucks and e-buses. It aims to resolve key barriers such as high upfront costs, limited range, inadequate testing infrastructure, and grid integration challenges. This initiative provides a strategic framework to support mass deployment of zero-emission freight vehicles, particularly in high-density transport corridors and industrial zones.

Supporting this push is the PLI Scheme for Advanced Chemistry Cell (ACC) Battery Storage, which strengthens domestic battery manufacturing. By reducing reliance on imported batteries, this scheme enhances cost competitiveness for commercial EVs, making electric freight more viable and scalable.

The environmental and economic advantages of electric freight adoption are significant. Zero-emission trucking (ZET) can substantially lower particulate and greenhouse gas emissions compared to diesel, reducing health risks in urban freight corridors. Moreover, e-trucks offer reduced maintenance needs, improved energy efficiency, and stable operational costs. Together, these factors make the shift to EVs not just a green option but a strategic necessity for the future of India's freight market.

However, widespread adoption still faces critical challenges. The limited availability of fast-charging infrastructure especially for heavy-duty trucks restricts long-haul operations. High upfront vehicle costs, long payback periods, and limited model availability in the medium and heavy commercial segment deter fleet operators. Financing options for commercial EVs also remain underdeveloped, increasing perceived risk for logistics players. Without coordinated action to address these constraints, adoption in freight may remain slow despite policy support.

12.4 Adoption of AI in the Indian Logistics Segment

Artificial Intelligence (AI) is steadily transforming India's logistics sector, emerging as a key enabler of efficiency, agility, and cost optimisation in an increasingly complex supply chain landscape. Though the sector is still in the early stages of wide-scale AI deployment, the groundwork is being laid through national initiatives like the National AI Strategy (2018) and the Digital India Mission, which promote data-centric governance and digital infrastructure. These frameworks have been further reinforced by logistics-specific policies such as the Logistics Efficiency Enhancement Programme (LEEP) and the National Logistics Policy (2022), both of which emphasize AI integration to streamline transport, warehousing, and freight movement.

In practical terms, Indian logistics companies are increasingly turning to AI for real-time route optimisation, demand forecasting, predictive maintenance, and dynamic fleet management. AI-powered platforms enable businesses to anticipate disruptions, adjust routes on the fly, and optimise fuel usage directly impacting delivery timelines and operational costs. For instance, predictive analytics tools are helping firms fine-tune inventory planning by analysing historical trends, customer behaviour, and seasonal shifts, significantly reducing stock-outs and excess holding.

Moreover, IoT-enabled devices, paired with AI algorithms, are now being deployed for real-time asset tracking, temperature-sensitive shipment monitoring, and driver behaviour analysis. These technologies not only improve visibility across the supply chain but also enhance safety and reduce risk. In warehouses, AI-driven robotics and automated guided vehicles (AGVs) are gaining traction to streamline order picking, packing, and dispatch operations especially in large fulfilment centres catering to e-commerce and FMCG.

Industrial policy thinks tanks and strategy papers increasingly advocate the development of Smart Industrial Parks and Multimodal Logistics Parks (MMLPs) equipped with embedded AI capabilities, including digital twins for virtual infrastructure simulation. These digital environments enable planners and operators to test logistics flow scenarios, predict capacity constraints, and optimise facility usage before physical deployment, offering significant time and cost savings.

The adoption of AI in Indian logistics is not merely about automation; it represents a shift toward data-driven, responsive logistics ecosystems capable of self-learning and continuous optimisation. As policies mature and digital infrastructure deepens, AI will be central to making India's logistics sector globally competitive, resilient, and future-ready.

13 Favourable Government initiative for Logistics

13.1 Gati Shakti Scheme

PM Gati Shakti – National Master Plan for multimodal Connectivity is a digital platform to bring the 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of Infrastructure connectivity Projects. As per policy guidelines / Standard Operating Procedure (SoP) of this Ministry for development of the National Highway/Expressway under PM Gati Shakti National Master plan, all the Projects having total capital cost of more than Rs. 500 cr are presented before the Network Planning Group (NPG) for their comments/suggestion and overall assessment of the proposal.

Six Principles of PM Gati Shakti-

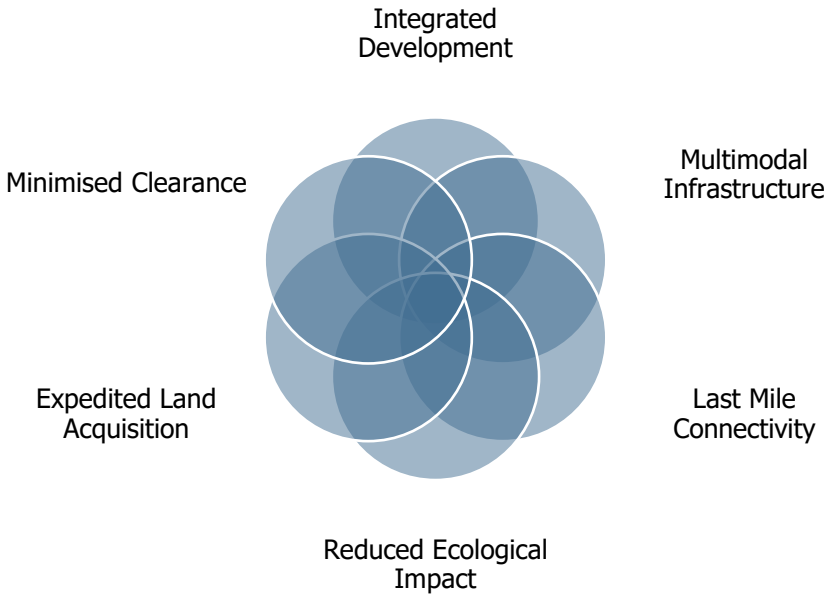


Table 8 : The state wise details of Expressways being developed:

	Corridor Name	Length (in Km)	Status	States
1	Delhi - Mumbai EXP	1,386	Partially Completed	Delhi, Haryana, Uttar Pradesh, Rajasthan, Madhya Pradesh, Gujarat, Dadra and Nagar Haveli, Maharashtra
2	Ahmedabad – Dholera	109	Under Implementation	Gujarat
3	Bengaluru – Chennai	262	Under Implementation	Karnataka, Andhra Pradesh, Tamil Nadu

4	Delhi - Amritsar - Katra	669	Under Implementation	Haryana, Punjab, Jammu and Kashmir
5	Kanpur - Lucknow EXP	63	Under Implementation	Uttar Pradesh
	Total	2489		

Source: PIB, Care Edge Research

Indian Logistics and transportation sector is undergoing significant transformation driven by expansion in infrastructure, digital integration and economic policies under the PM Gati Shakti Scheme. This initiative along with real- time freight monitoring by ISRO and advancement in warehousing and customs clearance are key to development of the logistics and warehousing sector. The PM Gati Shakti initiative is a major infrastructure development plan designed to enhance logistics efficiency in India. The initiative focuses on bridging infrastructure gaps and improving multi-modal connectivity through public-private collaboration and technology-driven solutions. This also include a dedicated elevated corridor At Delhi Airport for cargo transport and expansion if the inland waterways in the northeastern states of India.

13.2 National Logistics Policy

The National Logistics Policy (NLP) 2022, launched by the Government of India on 17th September 2022, aims to enhance the efficiency and competitiveness of the Indian logistics sector. The policy provides a comprehensive framework to address the challenges of high logistics costs, fragmented infrastructure, and complex regulatory processes.

The primary objective of NLP is to reduce the logistics cost in India by fostering an integrated, technology-enabled, and multimodal logistics ecosystem. The policy focuses on four main pillars: Integration of Digital Systems (IDS), Unified Logistics Interface Platform (ULIP), Ease of Logistics (ELOG), and System Improvement Group (SIG).

Key features include the development of multimodal logistics parks, standardization of warehousing, digitization of documentation, improved last-mile connectivity, and the promotion of sustainability through green logistics solutions. NLP 2022 is expected to support India's vision of becoming a global manufacturing hub by enhancing supply chain resilience and reducing turnaround times.

The policy is aligned with initiatives like PM Gati Shakti, Make in India, and Atmanirbhar Bharat, and is being implemented through a whole-of-government approach, with active participation from state governments and industry stakeholders.

The Comprehensive Logistics Action Plan (CLAP) is a critical implementation framework under the National Logistics Policy (NLP) 2022.

Components of CLAP

1. **Integrated Digital Logistics Systems**
    - Development and scaling of Unified Logistics Interface Platform (ULIP).
    - Seamless data sharing across government and private logistics stakeholders.
    - Creation of national logistics dashboards and e-logs monitoring systems.
2. **Standardization of Physical Assets and Benchmarking**
    - Standardization of warehousing infrastructure, freight vehicles, and material handling equipment.
    - Guidelines for multimodal logistics parks (MMLPs) and freight villages.

3. **Logistics Human Resource Development and Capacity Building**
    - Sector-specific skilling and training programs through the Logistics Skill Council.
    - Certification of logistics professionals and promotion of formal workforce.
4. **State and City Logistics Plans**
    - Support to States/UTs in preparing State Logistics Policies, city-level logistics masterplans, and logistics parks.
    - Identification and removal of local-level logistics bottlenecks.
5. **Facilitation of Development of Logistics Services**
    - Promotion of multimodal transport solutions, last-mile delivery services, and 3PL/4PL models.
    - Encouraging use of electric and green logistics fleets.
6. **Logistics Services Improvement Framework (LSIF)**
    - Performance-based assessment of logistics services and infrastructure across states.
    - Annual evaluation using indicators like cost, time, process, and infrastructure quality.
7. **Sectoral Plans for Efficient Logistics (SPEL)**
    - Action plans developed in consultation with infrastructure and user ministries (e.g., Steel, Coal, Fertilizers).
    - Sector-specific logistics optimization strategies.

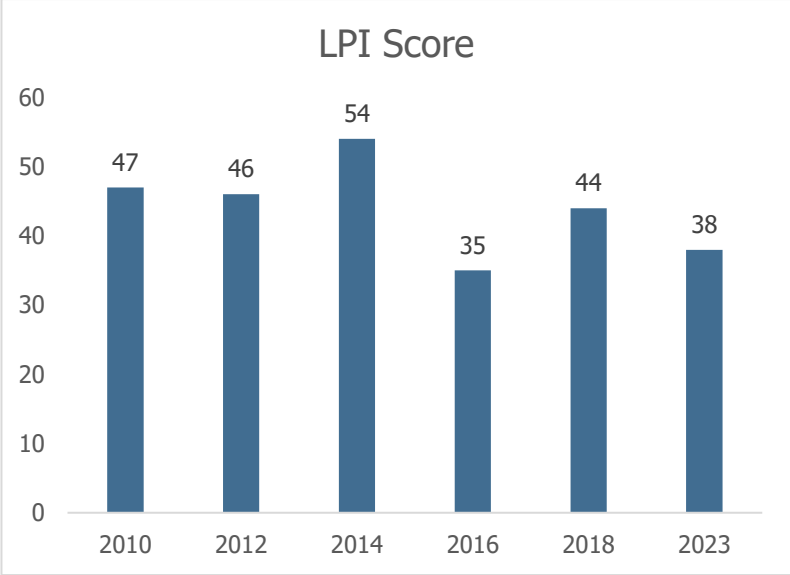
13.3 Gati Shakti Multimodal Cargo Terminal (GCT) 2021

To boost investment from industry in development of additional terminals for handling rail cargos, a new 'Gati Shakti Multi-Modal Cargo Terminal (GCT)' policy has been launched in December 2021.

The salient features of Gati Shakti Cargo Terminals (GCTs) are as under –

- Simplified application and approval process, for quick and hassle-free approvals.
- No departmental charges will be levied on the applicant.
- No Land License Fees to be charged for the Railway land used for connectivity.
- No cost of commercial staff to be charged.
- All common-user traffic facilities at the serving station to be constructed and maintained by Railway.
- For Terminals giving 1 MT or more outward traffic, cost of mid-section Block Hut/ Block station to be reimbursed as 10% freight rebate.
- Maintenance of all assets (track, signalling, OHE) by Railway at its own cost, excluding the yard and loading/unloading lines
- Railway will reserve the right to grant connectivity to another Terminal(s) from such portions of track being maintained by Railway.

Chart 55: LPI Score for India



India has demonstrated notable progress in the Logistics Performance Index (LPI), advancing from the 44th position in 2018 to 38th in 2023 is a significant leap from its 54th rank in 2014.

This improvement is attributed to strategic policy interventions that have enhanced infrastructure, facilitated international shipments, strengthened logistics competence and service quality, and improved tracking and tracing capabilities. Specifically, India's infrastructure ranking rose from 52nd in 2018 to 47th in 2023, while its position in international shipments saw a significant jump from 44th to 22nd. Additionally, the country climbed four places to 48th in logistics competence and equality and improved its tracking and tracing rank by three places to 38th.

Source: World Bank

The State-wise details of the provisionally identified locations in the country are as under:

Table 9 : State-wise details of the provisionally identified locations in the country

Sr. No	Name of State	Locations for GCTs identified
1	Andhra Pradesh	4
2	Assam	2
3	Bihar	8
4	Chhattisgarh	1
5	Delhi	1
6	Gujarat	3
7	Haryana	2
8	Jharkhand	4
9	Karnataka	3
10	Kerala	1
11	Madhya Pradesh	1
12	Maharashtra	11
13	Odisha	4
14	Punjab	6
15	Tamil Nadu	3
16	Telangana	5
17	Uttar Pradesh	10
18	Uttarakhand	1
19	West Bengal	4

13.4 Impact of GST and e-Way Bill on road transportation

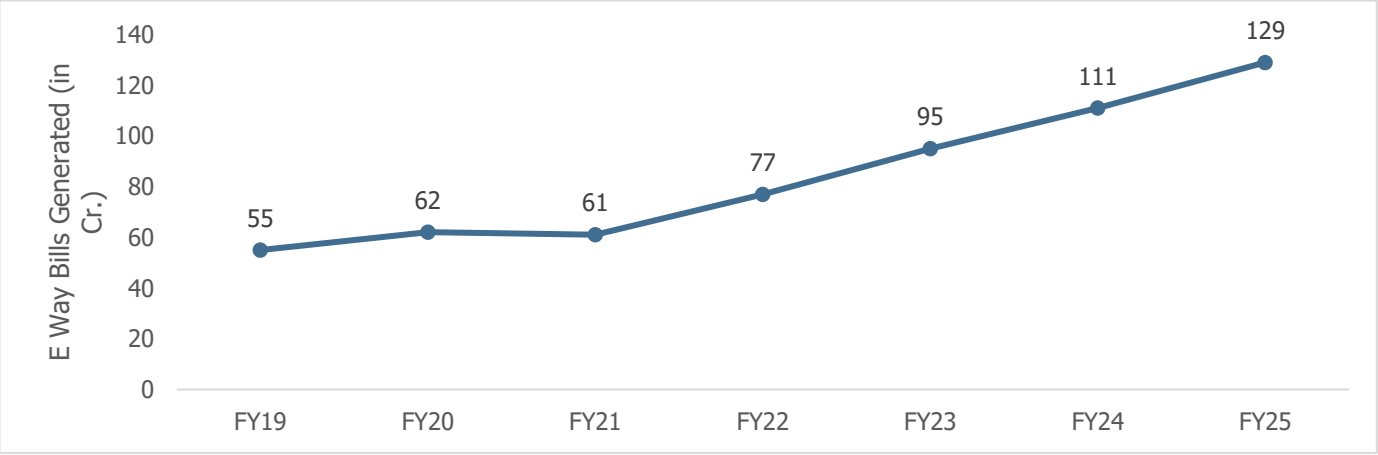
The implementation of GST and the subsequent introduction of the e-Way Bill system have significantly transformed India's logistics and road transportation landscape. Earlier, logistics companies and transporters faced bottlenecks due to varied state-level taxation systems, cumbersome documentation, and multiple checkpoints. GST unified these into a

single tax regime, simplifying compliance and removing inter-state tax barriers. Complementing this, the e-Way Bill system ensures seamless and real-time tracking of goods in transit.

By mandating electronic documentation for consignments exceeding Rs50,000, it reduces paperwork, curbs tax evasion, and enhances transparency in movement. The introduction of a second portal from July 2025 and recent rule updates further supports real-time synchronization, especially useful during high-volume movement. Additionally, features like mobile SMS-based bill generation and two-factor authentication for large enterprises have improved operational ease. While transporters and enterprises must adapt to evolving compliance norms, the overall impact of GST and e-Way Bills has been a more efficient, digitally enabled logistics network with reduced transit delays and greater regulatory oversight.

Optimisation in truck running	•Removal of trade barriers - reduced transit time •De-bottlenecking at state borders, improved TAT between warehouses •10-15% improvement in truck running
Reduction in document processing time	•Significant reduction in paper work •Reduced processing and clearing time
Reduced transportation costs	•Faster and efficient transportation •Improved vehicle utilisation •Reduced fuel and trasportation-related costs
Warehouse consolidation	•Shift to hub-and-spoke model •Reduction in number of warehouses •Increased operational efficiency

Chart 56: E Waybills Generated (in Cr.)



Source: Goods and Services Tax E - Waybill System, Care Edge Research

The number of E-Way Bills generated (in crore) in India from FY19 to FY25, shows a consistent upward trend after a brief dip in FY21. Starting at 55 crores in FY19, the figure rose to 62 crores in FY20 but slightly declined crores crore in FY21, due to the impact of the COVID-19 pandemic. However, the trend reversed sharply post-pandemic, with robust

growth in logistics and trade activity, leading to 77 crores in FY2crores crore icrores3, 111 crores in FY24, and reaching a peak of 129 crore in FY25. This steady rise reflects increasing formalization and digitization of the transport sector under GST, improved compliance, and stronger post-COVID economic recovery.

13.5 Bharatmala Pariyojana

Bharatmala Pariyojana was approved by the Government in 2017 covering a length of 4,800 km across the country. As of February 2025, projects covering a total length of 26,425 km have been awarded and out of this, 19,826 km have already been constructed.

Table 10 : State Wise details of Awarded and Constructed length under Bharatmala Pariyojana Phase – I

State	Length of Awarded Projects (km)	Length Constructed (km)
Andhra Pradesh	1,936	1,070
Assam	431	381
Bihar	1,159	672
Chhattisgarh	471	291
Delhi	203	183
Goa	26	26
Gujarat	1,194	977
Haryana	1,058	940
Himachal Pradesh	167	115
Jammu & Kashmir	251	131
Jharkhand	801	481
Karnataka	1,603	1,109
Kerala	708	443
Madhya Pradesh	2,017	1,586
Maharashtra	2,174	1,878
Manipur	635	417
Meghalaya	170	112
Mizoram	593	461
Nagaland	208	157
Odisha	967	909
Punjab	1,553	692
Rajasthan	2,360	2,251
Tamil Nadu	1,476	1,230
Telangana	1,026	793
Tripura	94	68
Uttar Pradesh	2,496	1,964
Uttarakhand	264	163
West Bengal	385	324
Total	26,425	19,826

The Bharatmala Pariyojana India's flagship road infrastructure initiative is revolutionizing logistics by easing cargo flow and reducing travel distances across economic corridors. According to recent PIB data (March 2025), over 19,800 km of roads have been completed and approximately 6,700 km of greenfield expressways built, forming a comprehensive network under Bharatmala Phase I.

By adopting a corridor-based strategy, encompassing economic corridors, feeder routes, inter-corridor links, ring roads, bypasses, and expressways, Bharat Mala directly addresses freight bottlenecks and route inefficiencies. For instance, the Delhi-Mumbai Expressway has cut the Delhi–JNPT distance by 180 km and halved transit times.

Moreover, 35 multimodal logistics parks are planned to significantly cut logistics costs enhancing freight aggregation and modal transfers.

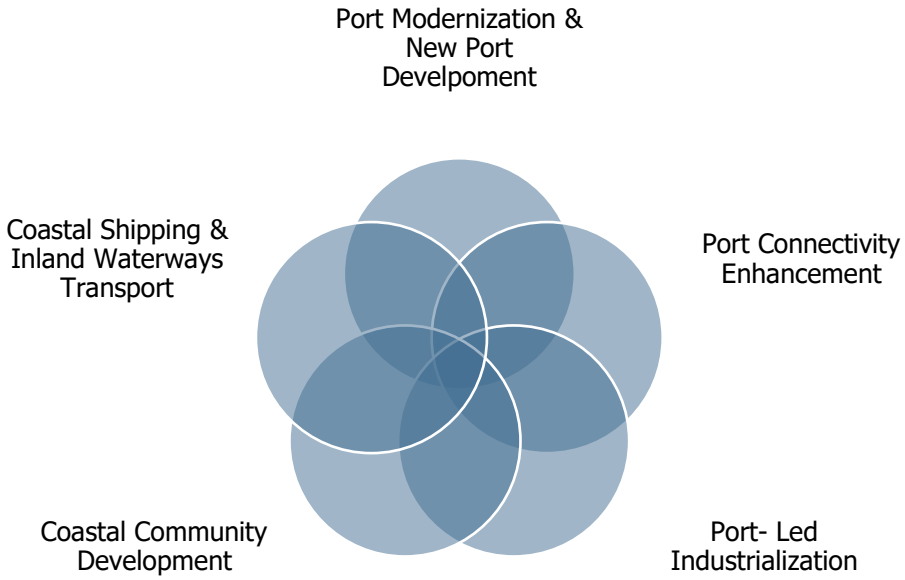
In sum, Bharatmala is reshaping Indian logistics by enabling faster freight movement, bridging vital infrastructure gaps, enhancing connectivity to ports/border areas, and lowering costs thus laying the physical foundation for a more efficient, multimodal logistics ecosystem.

13.6 Sagarmala

Sagarmala was rolled out in April 2016 to reduce the logistics cost for domestic as well as EXIM cargo with optimized infrastructure investment. The port-led development focuses on logistic-intensive industries, which would be supported by efficient and modern port infrastructure and seamless multi-modal connectivity.

The primary objective of Sagarmala is to promote port-led direct and indirect development, and ensure quick, efficient and cost-effective evacuation of cargo.

Components of Sagarmala Programme



The Sagarmala Programme is transforming India's maritime sector by driving port-led economic growth, infrastructure modernization, and global trade competitiveness. With 839 projects worth Rs 5.5 lakh crore, it has delivered remarkable outcomes, including 118% growth in coastal shipping, a 700% surge in inland waterway cargo movement, and nine Indian ports ranking among the world's top 100. Building on this success, Sagarmala 2.0 and the Sagarmala Startup Innovation Initiative (S2I2) will unlock Rs 12 lakh crore in investments, strengthen shipbuilding, repair, and recycling, and position India as a hub for maritime innovation and sustainability. Anchored in Viksit Bharat and Atmanirbhar Bharat 2047, the Government of India is steering towards a future-ready, globally competitive maritime ecosystem that fuels economic growth, job creation, and leadership in the Blue Economy.

13.7 Multimodal logistics parks

Multi-Modal Logistics Parks (MMLPs) are being developed by various public and private entities across the country, depending on their feasibility. Government has approved 35 locations for development of Multi-Modal logistics Parks across India to improve the logistics efficiency which is also expected to enable reduction in the logistics cost.

Out of the approved locations, (05) MMLPs at Jogighopa, Chennai, Bengaluru, Nagpur and Indore are under development and expected to be operational in FY 2025-26 and FY 2026-27.

Table 11 : Estimated Volume of cargo handled in the approved locations

Sr. No.	MMLP's Locations	Designed Volume of Cargo handled (in MMTA)	Total Project Estimated Cost (Rs)
1	Chennai	7.17	1,423.50
2	Bengaluru	29.46	1,769.70
3	Indore	12.79	1,110.69
4	Nagpur	11.26	673.12
5	Jogighopa	13.32	693.97 (Phase I)

13.8 FAME: Faster Adoption and Manufacturing of Electric Passenger vehicles (FAME I and II)

The FAME (Faster Adoption and Manufacturing of Electric Vehicles) initiatives encompassing Phase I (2015–19) and Phase II (2019–24) have begun reshaping Indian logistics, especially in eco-friendly public and last-mile transport.

Phase I of the FAME-India scheme, launched on 1 April 2015 under the National Electric Mobility Mission Plan, aimed to catalyse India's transition to cleaner transport through targeted incentives, pilot projects, and infrastructure support. Initially funded with Rs. 795 crore including allocations across demand incentives, pilot schemes, technology development, and public charging infrastructure, the scheme was later extended through March 2019, fully utilizing Rs. 529 crore to benefit approximately 278,000 electric and hybrid vehicles, with subsidies totalling Rs. 343 crores.

The program also sanctioned 465 electric buses and backed the development of charging networks including AC/DC stations in major cities and smart chargers in the NCR region.

Through its four strategic pillars- technology development, demand creation, pilot projects, and charging infrastructure FAME I helped lay the groundwork for India's EV ecosystem, reducing fuel consumption, curbing emissions, and building confidence in electric mobility.

Phase II of the FAME-India scheme, rolled out on 1 April 2019 with an initial outlay of Rs10,000 crore (later enhanced to Rs11,500 crore), marks a strategic pivot toward electrifying public and shared transportation. As per PIB updates, the scheme targets deployment of 7,090 e-buses, 5 lakh e-3 wheelers, 55,000 e-4 wheelers, and 10 lakh e-2 wheelers with incentives focused on lithium-ion or advanced battery-equipped vehicles. It also supports the establishment of 2,700 urban charging stations and 1,576 stations along highways, plus 2,877 city chargers and OMC-led fast chargers, to alleviate range anxiety. Recent PI B data confirms that by July 2023, 6315 e-buses had been sanctioned across 65 cities/STUs and around 740,722 e-2Ws sold under FAME II. With its four-pronged strategy demand creation, infrastructure rollout, pilot adoption, and technology push FAME II has significantly bolstered India's EV ecosystem, paving the way for cleaner, more sustainable mobility.

In September 2024, the government approved the PM E-Drive scheme with a budget of Rs.10,900 crore over two years, providing Rs.3,679 crore in subsidies to incentivize E2Ws, E3Ws, e-ambulances, e-trucks, and other emerging EVs. The scheme aims to support 24.79 lakh E2Ws, 3.16 lakh E3Ws, and 14,028 e-buses, while also allocating Rs.780 crore to enhance vehicle testing infrastructure. It also includes e-vouchers, and a streamlined EV buying process. The scheme proposes the installation of 22,100 fast chargers for E-4 Ws, 1800 fast chargers for e-buses and 48,400 fast chargers for e2W/3Ws. A notable feature is the scheme's promotion of electric ambulances, marking a key step in integrating EVs into the healthcare sector. Also, Battery-as-a-Service (BaaS) will also play a vital role in EV adoption.

Vehicle Segment	Maximum number of vehicles to be supported	Total fund support from MHI (In Crores)
E2W	24,79,120	1,772
E3W	3,15,988	907
E Ambulance	To be notified separately	500
E Trucks	To be notified separately	500
E Buses	14,028	4,391
EV PCS	72,300	2,000
Testing Agencies upgradation	-	780
Administration expenses	-	50

14 Key Threats and Challenges to the services offered by the issuer company.

The following risks are specific to the business and operations of the Company and may adversely impact its performance. The Company has implemented certain measures to address these risks.

Cargo Theft and Security Risks

Cargo theft is a continuing concern in India's road logistics sector, particularly for high-value consignments. Trucks may be vulnerable during highway halts, in unmonitored loading zones, or while parked at terminals. Despite monitoring tools, risks of tampering or organized theft remain. Inadequate policing and delayed response times in certain regions may increase exposure, leading to financial losses, disruptions in supply chain timelines, and potential impact on customer relationships.

Mitigants implemented by the Company include sealing of containers with seal numbers mentioned on the lorry receipt and acknowledged at delivery; GPS tracking devices on trucks; SIM-based tracking linked to drivers and conductors; monitoring through FASTag data; oversight by branch offices with dedicated personnel; a nationwide branch network enabling regional intervention; and training programs for drivers, including defensive driving.

Accidents and Vehicle Downtime

India records a high number of road accidents involving commercial vehicles. Accidents can result in damage to vehicles, delay in deliveries, increased insurance claims, and safety risks to personnel and cargo. Operational downtime may also arise from mechanical failures, poor road conditions, or overloading, affecting business continuity and operating costs.

Mitigants implemented by the Company include leveraging its nationwide branch network to provide immediate regional assistance; use of subcontracted fleet operators, whereby the liability for loss or damage to vehicles rests with the subcontractor; and goods insurance generally obtained by consignors, which limits the Company's direct liability.

Market Fragmentation and Informal Competition

The Indian trucking industry is highly fragmented, with several small and informal operators. Such operators may offer services at lower prices without adhering to compliance and regulatory requirements. Competitive pricing pressure from these participants may adversely impact the Company's margins and ability to retain customers.

Mitigants implemented by the Company include leveraging compliance with client requirements, including provision of bank guarantees, which acts as a barrier to entry for informal operators.

Challenges in Scaling Project Cargo and Over-Dimensional Consignment (ODC) Logistics

Handling project cargo and ODC requires specialized vehicles, equipment, and approvals. Expansion in this segment involves significant capital requirements, regulatory clearances, and availability of skilled manpower. Inconsistent state-level permit procedures, route constraints, and delays in approvals may adversely impact operations.

Mitigants implemented by the Company include existing experience in handling ODC consignments above standard government-defined sizes (7–8 feet), supported by the Company's current fleet and operational expertise.

Resource Constraints During Peak Seasons

Transportation demand in India is cyclical, with seasonal peaks during festivals, harvest cycles, and pre-monsoon stocking. During such periods, vehicle availability may reduce, and freight costs may rise. The Company's ability to secure adequate fleet capacity during these times may be constrained, which could impact service delivery.

Mitigants implemented by the Company include: a nationwide branch network that enables resource mobilisation; long-standing market presence, which assists in securing outsourced fleet support; outsourcing arrangements for trucks to

supplement capacity; and maintaining flexibility in driver engagement, as drivers for the Company's own fleet are paid on a trip basis rather than fixed payroll, thereby supporting scalability.

Other Operational Risks

The Company is exposed to risks related to subcontracted fleet operators, where liabilities for accidents or losses may not be fully within its control. Insurance coverage for goods is generally taken by consignors, and delays or disputes in claims could affect customer relationships. The Company also faces risks associated with receivables recovery, which may impact its working capital cycle. Mitigants implemented by the Company include insurance coverage arrangements for consignments, reliance on subcontracted operators for part of the fleet to reduce direct exposure to asset risks.

15 Peer Comparison Analysis

Financial Benchmarking

Table 12: Financial Benchmarking

FY25	Revenue Growth	EBITDA Margin	EBIT Margin	PAT Margin	Debt Equity	Return on Equity	Return on Assets	Return on Capital Employed	Current Ratio	Interest Coverage Ratio
Ritco Logistics ltd	27.5%	7.5%	6.7%	3.4%	1.0	16.1%	6.2%	24.4%	1.9	3.6
North Eastern Carrying Corporation Ltd	-1.9%	6.9%	6.1%	3.1%	0.5	4.9%	3.0%	9.3%	2.7	2.8
VRL Logistics	9.4%	18.9%	10.9%	5.8%	0.4	18.0%	7.1%	17.1%	0.6	3.6
TCI Express Ltd	-3.6%	11.4%	9.6%	7.1%	-	11.7%	9.3%	15.5%	3.2	88.9
Yatayat Corporation India Limited	28.6%	9.4%	9.3%	6.7%	0.8	89.1%	27.6%	62.8%	1.5	21.9

FY24	Revenue Growth	EBITDA Margin	EBIT Margin	PAT Margin	Debt Equity	Return on Equity	Return on Assets	Return on Capital Employed	Current Ratio	Interest Coverage Ratio
Ritco Logistics ltd	24.3%	8.5%	7.1%	3.5%	1.4	19.7%	7.2%	32.9%	1.6	3.1
North Eastern Carrying Corporation Ltd	9.5%	6.7%	5.7%	2.4%	0.5	5.4%	2.5%	11.8%	2.7	2.1
VRL Logistics	9.1%	14.4%	6.9%	3.1%	0.3	9.2%	4.0%	11.7%	0.5	2.6
TCI Express Ltd	1.0%	15.5%	14.0%	10.5%	-	20.3%	15.5%	26.3%	3.0	119.3
Yatayat Corporation India Limited	29.5%	6.1%	6.0%	4.3%	1.4	133.1 %	18.5%	62.9%	1.3	30.6

FY23	Revenue Growth	EBITDA Margin	EBIT Margin	PAT Margin	Debt Equity	Return on Equity	Return on Assets	Return on Capital Employed	Current Ratio	Interest Coverage Ratio
Ritco Logistics ltd	26.6%	7.0%	6.7%	3.2%	1.4	17.8%	6.7%	33.0%	1.5	3.0
North Eastern Carrying Corporation Ltd	22.2%	6.6%	5.7%	1.9%	1.1	5.7%	2.4%	13.7%	1.9	2.2
VRL Logistics	22.4%	15.7%	9.7%	6.3%	0.2	20.4%	8.8%	18.1%	0.9	4.7
TCI Express Ltd	14.8%	16.2%	15%	11.2%	0.001	24.6%	19.0%	32.3%	2.4	103.0
Yatayat Corporation India Limited	9.7%	3.7%	3.5%	2.4%	4.0	190.2%	10.6%	49.7%	1.0	22.8

Source: Annual Reports, CareEdge Research

The financial performance of Yatayat Corporation India Limited ("the Company") over FY23 to FY25 is set out below in comparison with select listed peers in the logistics sector. The comparison is based on publicly available financial data of the respective peer companies.

1. Revenue Growth

- In FY25, the Company recorded revenue growth of 28.6%, compared with 27.5% for Ritco Logistics and 9.4% for VRL Logistics.
- The Company's growth in FY24 was 29.5%. Data for FY23 is not available for comparison.
- The revenue trend indicates sustained growth in scale of operations over the last two years.

2. Profitability Margins

- EBITDA Margin (FY25): The Company reported 9.4%, compared with 7.5% for Ritco Logistics and 6.9% for NECC.
- EBIT and PAT Margins (FY25): The Company reported EBIT margin of 9.4% and PAT margin of 6.7%.
- Margins have shown an improving trend from FY23 to FY25, reflecting cost management and operating leverage.

3. Return Ratios

- Return on Equity (FY25): The Company reported 89.1%, higher than and VRL (16.1%).
- Return on Assets (FY25): The Company reported 27.6%.
- Return on Capital Employed (FY25): The Company reported 62.8%, higher relative to peer companies.
- These return metrics indicate efficiency in utilization of capital and assets during the period.

4. Leverage and Liquidity

- Debt-Equity Ratio (FY25): The Company reported 0.8, comparable with industry peers.
- Interest Coverage Ratio (FY25): The Company reported 21.9x, indicating earnings capacity to meet finance costs.
- Current Ratio (FY25): The Company reported 1.5, indicating adequate short-term liquidity.

Brief Profile of Company and its Peers

Yatayat Corporation India Ltd

Yatayat Corporation India Limited (YCIL) is a leading logistics and supply chain solutions provider with a strong PAN-India presence supported by 34 branches and 1 warehouse across to 12 states. With over 14 years of experience, the Company has evolved into an integrated logistics solutions provider with capabilities across express deliveries, multimodal operations, long-haul transport, vendor coordination and project logistics. Our operations are supported by a technology-driven framework, a skilled execution team and a pan-India network that enables reliable first mile and last-mile connectivity.

The company has a track record of executing time-sensitive and complex assignments, including Over Dimensional Cargo (ODC), which requires specialised planning, regulatory coordination and precise handling. The company operates on asset-light, and the scalable business model enhances their operational agility, allowing to expand capacity, optimise costs and deliver customised logistics solutions.

The company has built dependable cross-border capabilities, including transit road export services to select SAARC countries such as Bangladesh, Nepal and Bhutan and EXIM offering supported by subsidiary company, which provides ocean and air freight solutions to international markets including China, Turkey, Colombo, Iraq, the UAE and Brazil.

The company has multimodal integration, ODC handling expertise, technology-enabled operations. The company operates on asset-light model with regional cross-border reach and provider of comprehensive and efficient end-to-end logistics solutions. The company has received ISO certification, IBA approval, and EHS compliance, while also pioneering digital logistics solutions with real-time GPS and FASTag tracking, ERP-SCM integration, and 100% digital proof of delivery. Serving diverse industries such as Energy & Power, Agriculture & Agri Inputs, Metals & mining, Building Materials & Construction, Textiles & Apparels, FMCG, Pharmaceuticals & Healthcare, Engineering, Automotive & Auto Components and other sectors. YCIL has built a reputation for reliability, innovation, and operational excellence, earning recognition through awards like the Cargo & Logistics Award (2022) and the Gaurav Shree Samman (2023). Additionally, they provide services to 28 states and 6 Union Territories.

The company delivers end-to-end logistics solutions as a GTA to carry out the movement of goods for the services such as (i) Full truck Load services (FTL); (ii) Part Truck Load (PTL)/ Cargo services; (iii) Express freight services; (iv) Over Dimensional Cargo (ODC);(V) Exim Freight Services; (vi) Multimodal operations along with its wholly owned subsidiary.

Business Model and Dynamics of the Company

The Company operates an integrated logistics model which includes:

- Supply Chain Solutions: End-to-end logistics including transportation and reverse logistics.
- Multimodal Operations: Comprehensive solutions for the movement of goods across domestic and international markets through multiple modes of transport, including air, sea, and road.
- Digital Infrastructure: ERP-SCM platforms, real-time tracking systems, and API integrations.
- Freight Forwarding: Customized solutions including customs clearance.

The Company as group generates revenue from logistics contracts, freight forwarding is expanding into segment like warehousing services.

Service and Product Mix with End-Use Application Areas

Core Services

- Domestic and cross-border transportation (including Indo-Bangla operations) by navigating complex regulatory frameworks, bilateral trade agreements and operational challenges.
- Full truck load (FTL), Part truck load (PTL), Cargo services, Express freight services, Over dimensional cargo, Exim freight services and Multi modal services

End-Use Sectors Served

Energy & Power, Agriculture & Agri Inputs, Metals & Mining, Building Materials & Construction, Textiles & Apparels, FMCG, Pharmaceuticals & Healthcare, Engineering, Automotive & Auto Components and other sectors.

Geographic Presence and Operational Footprint

The Company operates through 34 branches across 12 states to cover 28 states and 6 union territories delivery destinations.

International operations are supported through an asset-light model, scalable framework with contracted facilities positioned at key border points such as Petrapole, Kolkata, Bangaon and Benapole (Bangladesh). This structure enables us to efficiently manage cross-border road logistics to SAARC countries including Bangladesh, Nepal and Bhutan.

Future Expansion Plans

- Provide customised, integrated supply chain solutions tailored to each customer's operational needs.
- Leverage cross-industry insights to streamline logistics processes and improve service delivery.
- Increase share of customer logistics spend across multiple plants, group companies and geographies.
- Strengthen retention by aligning our solutions with customers' strategic supply chain goals.
- Expand engagement to affiliates, new facilities and additional locations of existing customers.

Future Expansion Plans through subsidiary

The company is expanding its existing services like Third-party logistics (3PL) activities, Customs House Agent (CHA) services, Freight forwarding through wholly owned subsidiary of YCIL i.e. Transwave Logistics Private Limited. Opportunities particularly in Forth- party logistics (4PL), warehousing, rail transport, tankers and air cargo are upcoming streams of services explored under this subsidiary.

Competitive Positioning of YCIL

YCIL positions itself as a technology-enabled logistics and supply chain services company with emphasis on compliance, operational reliability, and safety. The Company's positioning in the logistics sector is derived from the following factors:

1. **Technology Integration**: The Company has deployed ERP-SCM systems, real-time vehicle tracking, and API-based integrations to enhance visibility and control across its logistics operations. These systems are intended to ensure greater transparency for clients and facilitate compliance with e-way bill and other regulatory requirements.
2. **Specialization in Agro and Hazardous Goods Logistics**: YCIL has developed expertise in handling agrochemicals, pesticides, and hazardous cargo, where regulatory compliance and safety requirements are stringent. The Company's certifications and operational protocols enable it to serve clients in these specialized sectors.

3. **Pan-India Operational Reach**: YCIL has a presence across more than 12 states in India and provides multimodal transportation solutions. Its network enables the Company to serve clients across diverse industries such as infrastructure, renewable energy, pharmaceuticals, and consumer goods.
4. **Cross-Border Logistics Capability**: The Company has dedicated operations at Petrapole, Kolkata, Bangaon, and Benapole (Bangladesh), facilitating Indo-Bangla trade routes. This represents an early-stage international footprint and provides the Company with an opportunity to support clients in regional trade flows across SAARC countries.
5. **Certifications and Regulatory Compliance**: The Company has certification of ISO 9001:2015 (Quality Management Systems from Euro Swiss Certification Inc,), IBA-approved, and registered under the Carriers Act,2007. These certifications support its ability to operate within regulatory frameworks and are intended to instil confidence among clients and financial institutions.
6. **Client-Centric Service Approach**: YCIL provides value-added services including packaging review, MIS reporting, and emergency response support. The ability to provide customized services tailored to client-specific needs differentiates the Company within a competitive industry.

Table 13 : Yatayat Corporation India Ltd Financials (Rs. Lakh)

Yatayat Corporation Ltd	FY23	FY24	FY25	Q1FY26
Revenue	26,908.5	34,833.5	44,813.3	11,968.5
Other Income	67.5	69.1	90.1	5.0
Total Income	26,976.1	34,902.6	44,903.3	11,973.5
EBITDA	994.2	2,123.3	4,226.9	1,172.9
Depreciation	60.4	44.1	19.9	62.9
Finance Cost	41.0	68.0	191.9	45.7
Profit Before Tax	892.7	2,011.1	4,015.2	1,064.4
EBIT	933.8	2,079.1	4,207.0	1,110.1
PAT	639.0	1,494.0	3,001.1	783.4
Debt	1,524.0	2,692.0	3,780.2	3575.1
Inventories	0.0	0.0	0.0	-
Average Inventories	0.0	0.0	0.0	-
Accounts Payable	3,696.2	2,894.5	1,944.7	2,109.2
Average Accounts payable	4,548.1	3,295.3	2,419.6	-
COGS	24,247.8	31,199.9	39,415.9	10,449.4
Accounts Receivable	4,543.4	6,703.4	8,501.0	9,392.8
Average Accounts Receivable	5,259.8	5,623.4	7,602.2	-
Working Capital	253.9	1,763.5	2,980.6	3,827.4
Average Working Capital	178.3	1,008.7	2,372.0	-
Equity	379.2	1,866.6	4,868.2	5,653.9
Average Equity	336.4	1,122.9	3,367.4	-
Current Assets	5,849.6	7,880.9	8,877.9	9,772.9
Current Liabilities	5,595.7	6,117.4	5,897.3	5,945.4
Total Assets	6,058.6	8,076.9	10,872.7	11,725.7
Ratios				
Revenue Growth	9.7%	29.5%	28.6%	NA
EBITDA Margin	3.7%	6.1%	9.4%	NA
EBIT Margin	3.5%	6.0%	9.3%	NA
PAT Margin	2.4%	4.3%	6.7%	NA
Debt Equity	4.0	1.4	0.8	NA
Return on Equity	190.2%	133.1%	89.1%	NA
Return on Assets	10.6%	18.5%	27.6%	NA
Return on Capital Employed	49.7%	62.9%	62.8%	NA
Current Ratio	1.0	1.3	1.5	NA
Interest Coverage Ratio	22.8	30.6	21.9	NA

Note: For Return on Capital Employed, short term borrowings have been added back to Current Liability in the denominator since the company only has short term borrowings.
Average numbers aren't considered for Q1FY26, since the financials presented are prepared for 3 months period ended in June,2025.

Ritco Logistics Ltd

Ritco Logistics Ltd, incorporated in 2001 and headquartered in Gurgaon, is an integrated multimodal logistics and 3PL provider with a pan-India presence across 46 branches and 8 warehouses covering 3.75 lakh sq. ft. The company operates through a mix of owned and aggregated fleet and offers a full suite of services including full truckload (FTL), less-than-truckload (LTL), multimodal rail-road freight, contract logistics carrying over 15,50,000 tpa and warehousing with value-added services such as inventory management, packaging, and cold chain solutions. Ritco serves a diverse client base across FMCG, pharmaceuticals, steel, automotive, e-commerce, and consumer durables, with long-standing relationships with companies like Reliance, Tata Steel, ITC, JSW Steel, and Mother Dairy.

Leveraging digital platforms such as its proprietary ERP "RIT-Now" and IoT-enabled fleet management, Ritco emphasizes efficiency, transparency, and safety in its operations. With consistent revenue growth, strong industry partnerships, and expansion in multimodal and 3PL segments, Ritco positions itself as a scalable, technology-driven logistics player aligned with India's growing demand for efficient supply chain solutions.

Table 14 : Ritco Logistics Ltd Financials (Rs. Lakh)

Ritco Logistics ltd	FY23	FY24	FY25	Q1FY26
Revenue	75,114.6	93,330.3	118,968.6	35,432.9
Other Income	290.1	383.8	592.6	135.8
Total Income	75,404.7	93,714.1	119,561.2	35,568.7
EBITDA	5,226.8	7,893.2	8,978.7	2,517.4
Depreciation	520.5	1,240.0	1,640.6	650.8
Finance Cost	1,648.1	2,172.8	2,233.0	667.7
Profit Before Tax	3,348.2	4,480.4	5,697.8	1,334.7
EBIT	4,996.3	6,653.2	7,930.8	2,002.4
PAT	2,431.9	3,264.7	4,063.2	895.4
Debt	20,595.3	25,876.8	31,336.5	NA
Inventories	-	-	-	NA
Average Inventories	-	-	-	NA
Accounts Payable	399.1	337.1	376.5	NA
Average Accounts payable	369.2	368.1	356.8	NA
COGS	67,073.0	81,940.2	104,867.5	NA
Accounts Receivable	24,243.0	29,512.4	37,475.1	NA
Average Accounts Receivable	22,132.5	26,877.7	33,493.8	NA
Equity	14,858.4	18,337.6	32,268.4	NA
Average Equity	13,626.4	16,598.0	25,303.0	NA
Current Assets	29,312.6	34,653.8	45,610.8	NA
Current Liabilities	19,657.1	21,723.0	23,853.5	NA
Total Assets	36,453.5	45,342.3	65,205.1	NA
Ratios				
Revenue Growth	26.6%	24.3%	27.5%	NA
EBITDA Margin	7.0%	8.5%	7.5%	NA
EBIT Margin	6.7%	7.1%	6.7%	NA
PAT Margin	3.2%	3.5%	3.4%	NA

Debt Equity	1.4	1.4	1.0	NA
Return on Equity	17.8%	19.7%	16.1%	NA
Return on Assets	6.7%	7.2%	6.2%	NA
Return on Capital Employed	33.0%	32.9%	24.4%	NA
Current Ratio	1.5	1.6	1.9	NA
Interest Coverage Ratio	3.0	3.1	3.6	NA

North Eastern Carrying Corporation Ltd

North Eastern Carrying Corporation Limited (NECC), incorporated in December 1984 and headquartered in Delhi, is a pan-India integrated logistics provider with deep roots in the North-East and Eastern regions of India. NECC operates a network of 250 offices across 28 Indian states and the neighbouring countries Nepal, Bhutan, and Bangladesh, supported by 1,000+ employees and over 5,000+ vendor partners. The company offers a comprehensive logistics suite including Part Truck Load (PTL), Full Truck Load (FTL), Over-Dimensional Cargo (ODC), bulk and mining logistics, container shipments, and 3PL warehousing over 1.5 million sq. ft. NECC's leadership, headed by Chairman & MD Sunil Kumar Jain, has steered the firm from its origins as a PTL specialist in difficult terrains to a full-service multimodal logistics player renowned for reliable delivery across challenging geographies.

Its marquee clients span sectors such as FMCG, mining, consumer durables, auto, and steel comprising names like Tata Steel, Hindustan Unilever, Godrej, PepsiCo etc

Table 15 : North Eastern Carrying Corporation Ltd Financials (Rs. Lakh)

North Eastern Carrying Corporation Ltd	FY23	FY24	FY25	Q1FY26
Revenue	30,599.2	33,511.5	32,872.5	6,909.9
Other Income	41.8	161.1	71.1	14.9
Total Income	30,641.0	33,672.6	32,943.5	6,924.8
EBITDA	2,016.9	2,237.3	2,267.7	546.5
Depreciation	284.3	312.6	256.2	61.0
Finance Cost	792.6	907.1	707.8	245.2
Profit Before Tax	940.0	1,016.8	1,303.7	240.3
EBIT	1,732.6	1,923.9	2,011.5	485.5
PAT	577.1	802.2	1,025.3	178.0
Debt	11,892.9	10,314.2	10,551.1	NA
Inventories	0.0	0.0	0.0	NA
Average Inventories	0.0	0.0	0.0	NA
Accounts Payable	292.5	302.4	569.3	NA
Average Accounts payable	322.6	297.5	435.8	NA
COGS	26,490.7	27,880.1	26,946.7	NA
Accounts Receivable	11,535.2	11,988.9	12,470.8	NA
Average Accounts Receivable	11,060.6	11,762.1	12,229.9	NA
Equity	10,486.1	19,396.1	21,906.1	NA
Average Equity	10,189.8	14,941.1	20,651.1	NA
Current Assets	22,645.9	29,475.9	32,351.9	NA
Current Liabilities	11,859.9	11,040.1	11,968.0	NA

Total Assets	23,966.8	31,682.3	34,489.4	NA
Ratios				
Revenue Growth	22.2%	9.5%	-1.9%	NA
EBITDA Margin	6.6%	6.7%	6.9%	NA
EBIT Margin	5.7%	5.7%	6.1%	NA
PAT Margin	1.9%	2.4%	3.1%	NA
Debt Equity	1.1	0.5	0.5	NA
Return on Equity	5.7%	5.4%	4.9%	NA
Return on Assets	2.4%	2.5%	3.0%	NA
Return on Capital Employed	13.7%	11.8%	9.3%	NA
Current Ratio	1.9	2.7	2.7	NA
Interest Coverage Ratio	2.2	2.1	2.8	NA

VRL Logistics Ltd

VRL Logistics Ltd, founded in 1976 headquartered in Hubballi, Karnataka. The company is LTL (less-than-truckload) logistics provider, operating over 5,900 owned vehicles and a hub-and-spoke network comprising 1,241 branches and 50 transhipment hubs across 24 states and 5 Union Territories. The company's core focus is surface transportation with 90% of revenues from LTL freight; it leverages an in-house ERP/automation platform and owns fuel pumps, enabling efficient operations and significant cost control., RL is positioned strongly within India's logistics sector, with continued geographic expansion, technological integration, and sustainability initiatives as evidenced by modern, efficient fleet operations and zero reliance on low-margin contracts.

Table 16 : VRL Logistics Ltd Financials (Rs. Lakh)

VRL Logistics	FY23	FY24	FY25	Q1FY26
Revenue	264,852.2	288,862.0	316,094.8	74,433.6
Other Income	1,434.5	2,109.8	2,545.9	649.5
Total Income	266,286.7	290,971.9	318,640.7	75,083.0
EBITDA	41,599.8	41,502.7	59,841.8	15,810.4
Depreciation	15,914.3	21,616.3	25,362.5	6,466.1
Finance Cost	5,433.9	7,786.5	9,483.8	2,621.4
Profit Before Tax	20,251.7	12,099.9	24,995.6	6,722.8
EBIT	25,685.6	19,886.4	34,479.3	9,344.2
PAT	16,613.8	8,885.0	18,293.3	5,004.3
Debt	17,909.4	27,927.9	44,711.8	NA
Inventories	5,279.3	4,119.1	4,290.3	NA
Average Inventories	4,932.4	4,699.2	4,204.7	NA
Accounts Payable	1,421.2	1,525.7	1,306.7	NA
Average Accounts payable	1,713.5	1,473.4	1,416.2	NA
COGS	179,902.5	196,675.5	199,936.3	NA
Accounts Receivable	8,169.4	8,848.7	9,287.4	NA
Average Accounts Receivable	7,447.6	8,509.1	9,068.1	NA

Equity	97,584.2	94,579.0	1,08,455.6	NA
Average Equity	81,373.6	96,081.6	1,01,517.3	NA
Current Assets	27,886.6	20,880.4	25,246.2	NA
Current Liabilities	30,615.4	38,645.1	39,154.1	NA
Total Assets	1,89,172.6	2,21,396.4	2,58,568.0	NA
Ratios				
Revenue Growth	22.4%	9.1%	9.4%	NA
EBITDA Margin	15.7%	14.4%	18.9%	NA
EBIT Margin	9.7%	6.9%	10.9%	NA
PAT Margin	6.3%	3.1%	5.8%	NA
Debt Equity	0.2	0.3	0.4	NA
Return on Equity	20.4%	9.2%	18.0%	NA
Return on Assets	8.8%	4.0%	7.1%	NA
Return on Capital Employed	18.1%	11.7%	17.1%	NA
Current Ratio	0.9	0.5	0.6	NA
Interest Coverage Ratio	4.7	2.6	3.6	NA

TCI Express Limited

TCI Express Ltd, formed in April 2016 following its demerger from TCI and headquartered in Gurugram, is a B2B express logistics company offering Surface Express, Domestic & International Air Express, Rail Express, E-commerce Express, Cold Chain Express and C2C services across India and select global lanes. During FY2025, the company expanded its footprint to 970+ branches and 60,000+ service locations, supported by 28 sorting centres, reinforcing nationwide reach and time-definite delivery capability while maintaining a debt-free balance sheet.

Table 17 : TCI Express Ltd Financials (Rs. Lakh)

TCI Express Ltd	FY23	FY24	FY25	Q1FY26
Revenue	1,24,101	1,25,382	1,20,827	28,675
Other Income	717	715	1,344	376
Total Income	1,24,818	1,26,097	1,22,171	29,051
EBITDA	20,165	19,437	13,811	2,572
Depreciation	1,531	1,895	2,162	526
Finance Cost	181	147	131	26
Profit Before Tax	18,453	17,395	11,518	2,020
EBIT	18,634	17,542	11,649	2,046
PAT	13,928	13,167	8,581	1,947
Debt	73	296	0	-
Inventories	-	-	-	NA
Average Inventories	-	-	-	NA
Accounts Payable	8,841	8,937	9,441	NA
Average Accounts payable	8,107	8,889	9,189	NA
COGS	-	-	-	NA

Accounts Receivable	21,147	23,176	22,589	NA
Average Accounts Receivable	20,051	22,162	22,883	NA
Equity	59,637	70,397	76,441	NA
Average Equity	56,628	65,017	73,419	NA
Current Assets	29,930	38,212	43,112	NA
Current Liabilities	12,424	12,909	13,476	NA
Total Assets	73,494	85,042	91,865	NA
Ratios				
Revenue Growth	14.8%	1.0%	-3.6%	NA
EBITDA Margin	16.2%	15.5%	11.4%	NA
EBIT Margin	15.0%	14.0%	9.6%	NA
PAT Margin	11.2%	10.5%	7.1%	NA
Debt Equity	-	-	-	NA
Return on Equity	24.6%	20.3%	11.7%	NA
Return on Assets	19.0%	15.5%	9.3%	NA
Return on Capital Employed	32.3%	26.3%	15.5%	NA
Current Ratio	2.4	3.0	3.2	NA
Interest Coverage Ratio	103.0	119.3	88.9	NA

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Table 18: Formula Sheet

Parameter	Formula
Revenue	Revenue from Operations
EBITDA	Depreciation + Finance Cost+ Profit (Loss) before exceptional item and tax
EBIT	Profit before tax + Finance Cost
EBITDA Margin	EBITDA/ Revenue from operations
EBIT Margin	EBIT/ Revenue from operations
PAT Margin	Profit after Tax/ Revenue from operations
Debt	Long term Borrowings + Short term Borrowings
Debt to Equity	Debt/ Total Equity
Return on Equity (ROE)	PAT/ Average Equity
Return on Assets (ROA)	PAT/ Total Assets
Return on Capital Employed (ROCE)	EBIT/ Average Capital Employed
Current Ratio	Current Assets/ Current Liabilities
Interest Coverage Ratio (ICR)	EBIT/Finance Cost
Working Capital	Total Current Asset – Total Current Liabilities
Capital Employed	Total Assets- Total Current Liabilities

Table 19: Abbreviation Table

Abbreviation	Full Form
AI	Artificial Intelligence
API	Application Programming Interface
CBLR	Customs Brokers Licensing Regulations
CASE	Connected, Autonomous, Shared, and Electric
CHA	Custom House Agent
CPI	Consumer Price Index
CY	Calendar Year
DFC	Dedicated Freight Corridor
DFCCIL	Dedicated Freight Corridor Corporation of India Ltd.
DG	Director General
DLT	Distributed Ledger Technology
DTM	Domestic Transportation Management
ECCS	Express Cargo Clearance System
ERP	Enterprise Resource Planning
EXIM	Export-Import
EV	Electric Vehicle
FTA	Free Trade Agreement
FTL	Full Truck Load
FY	Financial Year
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation

GNDI	Gross National Disposable Income
GST	Goods and Services Tax
ICEGATE	Indian Customs Gateway
ICES	Indian Customs EDI System
IIP	Index of Industrial Production
IMF	International Monetary Fund
IN	Indian Navy
INR	Indian Rupee
JIS	Just-in-Sequence
JIT	Just-in-Time
LDB	Logistics Data Bank
LEADS	Logistics Ease Across Different States
LPI	Logistics Performance Index
LTL	Less-than-Truck Load
ML	Machine Learning
NIP	National Infrastructure Pipeline
NITI	National Institution for Transforming India
NLP	National Logistics Policy
NMP	National Monetization Pipeline
NRC	National Register of Citizens
ODC	Over Dimensional Cargo
PLI	Production Linked Incentive
PM	Prime Minister
RBI	Reserve Bank of India
RDCs	Regional Distribution Centres
RE	Revised Estimates
RCEP	Regional Comprehensive Economic Partnership
RFID	Radio Frequency Identification
SAARC	South Asian Association for Regional Cooperation
SAMPRITI	Joint Military Exercise (India-Bangladesh)
SDP	State Domestic Product
TMS	Transport Management System
ULIP	Unified Logistics Interface Platform
USA	United States of America
USD	United States Dollar
USMCA	United States-Mexico-Canada Agreement
VRL	VRL Logistics Ltd
WMS	Warehouse Management System
ZET	Zero-Emission Trucks

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