



Industry Report on Logistics in India

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Prepared for

Skyways Air Services Limited

Commercial in Confidence



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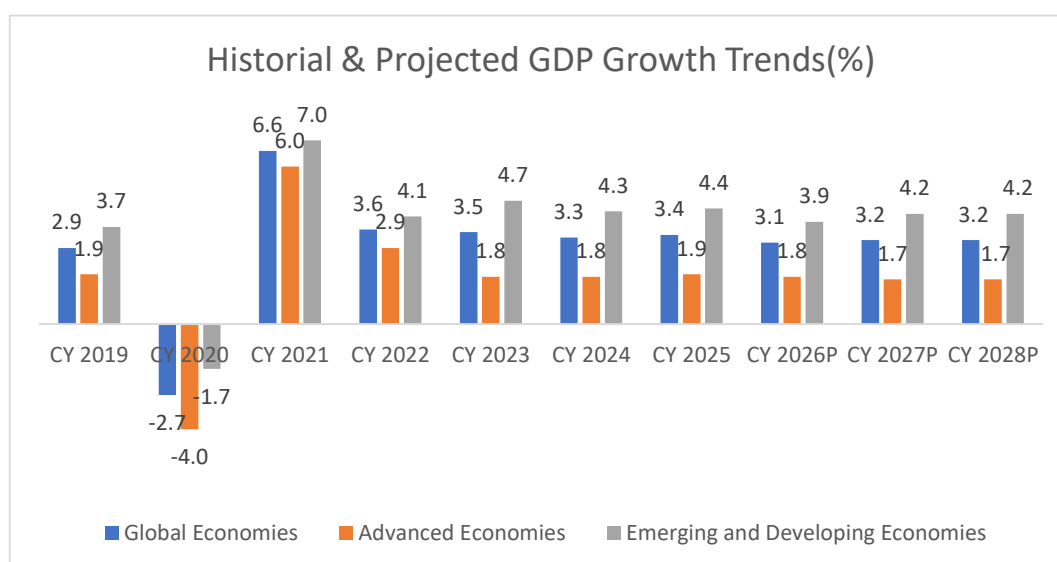


Global Macroeconomic Scenario

Global Economic Overview

According to World Economic Outlook, global growth is projected at 3.1% in 2026 and at 3.2% in 2027 and 2028, slower than the recent pace of about 3.4% in CY 2024–25 and is expected to settle at approximately that rate over the medium term, below the historical average of 3.7% during 2000–19. The forecast for 2026 has been revised downward by 0.2 percentage point, while the forecast for 2027 and 2028 remains unchanged compared with the January 2026 WEO Update. Global headline inflation is expected to rise to 4.4% in 2026 and decline to 3.7% in 2027, reflecting upward revisions for both years.

The conflict involving US, Israel and Iran is increasingly functioning as a global supply and confidence shock. The International Energy Agency (IEA) describes the current situation as the largest oil supply disruption on record, with flows through the Strait of Hormuz reduced to a trickle and the resulting effects spreading across refined fuels and liquefied natural gas (LNG). At the same time, aviation disruptions and elevated risk premia are weakening services activity and increasing uncertainty around investment decisions. A significant share of global energy flows through the Strait of Hormuz, and shipping disruptions and insurance constraints are therefore translating directly into higher landed costs, supply chain delays, and greater output risks for energy-intensive manufacturing. As a result, the policy environment has increasingly become challenging, while growth support is required but renewed cost-push inflation across energy, freight, and eventually food inputs is limiting the scope for faster monetary easing.



Source – IMF Global GDP Forecast Release, April 2026

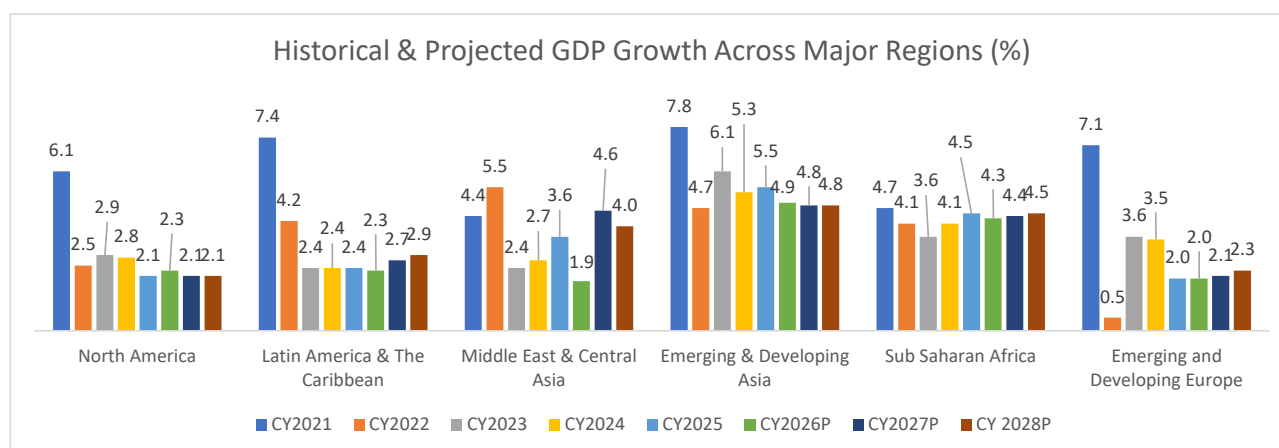
Note: Advanced Economies and Emerging & Developing Economies are as per the classification of the World Economic Outlook (WEO). This classification is not based on strict economic criteria and has evolved over time. It comprises 40 countries in the Advanced Economies category, including the G7 (the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada) and selected Eurozone members (Germany, Italy, France, etc.). The group of emerging and developing economies (156) comprises all economies not classified as Advanced Economies (e.g., India, China, Brazil, Malaysia).

Historical and Projected GDP Growth

GDP growth across major regions showed a mixed trend during 2024–25. While growth in several regions—including Middle East & Central Asia, Emerging and Developing Asia, Sub-Saharan Africa as well as Latin America and the Caribbean—is expected to slow further in 2026, performance remains uneven across geographies.

In the Middle East and Central Asia, economic growth is projected to decline from **3.6% in 2025** to **1.9% in 2026**, before recovering to **4.6% in 2027** and **4.0% in 2028**, reflecting the region's direct exposure to the conflict and the anticipated rebound thereafter. For commodity-exporting economies directly affected by the conflict, reduced production and export activity are expected to result in a significant downward revision to 2026 GDP growth projections.

Growth in emerging and developing Asia is projected to moderate from **5.5% in 2025** to **4.9% in 2026** and is further estimated to grow at **4.8% in 2027 and 2028**. Within the region, China's 2026 growth forecast has been revised upward by **0.2 percentage point** relative to the October estimate, to **4.4%**, despite a **0.1 percentage point downward revision** from January. This upward adjustment reflects the impact of lower effective U.S. tariff rates on Chinese goods, along with stimulus measures that are expected to offset the negative effects of the shock arising from the Middle East conflict. However, China's growth is projected to slow to **4.0% in 2027**, as structural headwinds continue to weigh on the economy, including the prolonged slowdown in the housing sector, a shrinking labor force, declining returns on investment, and weaker productivity growth.



Source- IMF World Economic Outlook, April 2026

In Latin America and the Caribbean, economic growth is projected to remain broadly stable at 2.3% in 2026 before strengthening to 2.7% in 2027 and 2.9% in 2028. The effects of the Middle East conflict across the region are expected to be uneven, with smaller economies likely to experience a more pronounced negative impact due to their relatively greater vulnerability to external shocks.

Growth in sub-Saharan Africa is projected to remain relatively stable at 4.3% in 2026 and 4.4% in 2027 and 4.5% in 2028. However, this regional outlook masks significant variation across countries, with some

economies expected to face more pronounced challenges than others. In particular, oil-importing and non-resource-intensive economies are likely to be adversely affected by the conflict in the Middle East, as heightened external pressures may weigh on economic activity and weaken growth prospects. In emerging and developing Europe, economic growth is expected to slow sharply to 2.0% in 2025 and recover only marginally thereafter, with the region projected to expand at an average rate of 2.0% in 2026, 2.1% in 2027 and 2.3% in 2028.

Global Economic Outlook¹

The conflict between Israel/the United States and Iran, which began in February, has developed into a global shock to transport, trade, and security planning. As a result, periodic airspace closures across Israel and parts of the Gulf, together with severe disruption to shipping through the Strait of Hormuz, have affected the movement of oil, oil products, and LNG. Consequently, businesses have faced longer and less reliable supply lines, higher freight and insurance costs, and more frequent “stop-go” operating conditions.

The near-term growth outlook has softened as the conflict is affecting both demand and costs. Disruption to the oil channel is coinciding with pressure on the non-oil outlook as travel and services weaken and risk premia rise. Airspace disruption has increased operating costs and reduced travel reliability, while higher jet fuel costs have added to pressure on carriers and freight forwarders.

Investment conditions have also tightened as higher regional risk premia have increased insurance, shipping, hedging, and working capital costs. At the same time, logistics disruption and higher input costs are raising inflation risks. Fertilizer and related input disruption is also creating a lagged risk to food prices.

Asia-Pacific: In Asia-Pacific, the conflict has created sustained stress for business continuity. Even with fighting paused, energy availability, shipping disruption, and insurance costs are expected to continue weighing on operations over the next quarter. Oil prices remain well above January levels despite easing from March peaks, while war-risk insurance, tighter tanker availability, and rerouting costs remain elevated. As a result, several fuel-importing economies—including Japan, South Korea, India, and parts of Southeast Asia—have faced power-conservation measures and fuel rationing, increasing the risk of operational downtime in energy-intensive sectors.

Shipping and supply chains are also facing second-round effects. Many Asia–Europe shipments have been diverted via the Cape of Good Hope, thereby extending lead times by 10–14 days. Although some routes have reopened, schedules remain compressed and insurers remain cautious, which has increased delivery deadline risk across manufacturing, particularly in chemicals, electronics, and pharmaceuticals. Input volatility and fertilizer disruption are also adding to inflation risks and thereby complicating the policy outlook.

¹ Source: World Economic Outlook April 2026 release by IMF

Latin America: In Latin America, the U.S.-Israel-Iran conflict has increased energy market pressures, with higher Brent crude prices raising input costs and inflation risks across the region. Consequently, net hydrocarbon exporters such as Brazil, Colombia, and Ecuador are benefiting from stronger external balances, while net energy importers including Panama, Chile, and much of Central America are facing higher import costs. Elevated fertilizer prices are also weighing on agricultural output and margins, including in Brazil and Argentina. In response, governments have introduced fuel subsidies and price controls.

Middle East & North Africa: In the Middle East and North Africa, the conflict continues to affect the region directly, with many countries facing missile and drone attacks from Iran in response to attacks by the United States and Israel on Iran. In the short term, economic growth is expected to slow sharply as exports decline, uncertainty constrains spending, and governments delay investment initiatives. The reduction in food imports is also expected to significantly affect countries with limited domestic production capacity. Bahrain, Qatar, and Kuwait remain highly dependent on imports through the Strait of Hormuz and therefore face risks of food shortages and concerns regarding social stability if disruption persists.

Sub-Saharan Africa: In Sub-Saharan Africa, the conflict continues to disrupt energy and fertilizer supply chains, thereby keeping the region under significant external pressure. Higher global oil prices are sharply rising fuel and transport costs for import-dependent economies such as Kenya, Uganda, Ethiopia, and Ghana. Policy responses have varied across the region. Ethiopia introduced emergency fuel subsidies in mid-March to contain domestic price increases, while Kenya is experiencing stronger pass-through from higher fuel costs, which is weighing on aviation, logistics, and export activity.

Global Growth Projection ²

Growth in advanced economies is projected at 1.8% in 2026 and 1.7% in 2027 and 2028, while the overall impact of the Middle East conflict is expected to remain modest, lowering 2026 growth by 0.2 percentage point relative to the pre-conflict forecast. This limited effect reflects positive terms-of-trade gains in the United States and stronger growth momentum, supported by government measures, in Japan, whereas more significant negative effects are expected mainly in net energy-importing economies, including the euro area and the United Kingdom. In the United States, growth is projected at 2.3% in 2026 and 2.1% in 2027 and 2028, with fiscal policy and the lagged effects of monetary easing in 2025 continuing to support activity, even as higher trade barriers since April 2025 weigh on growth. The 0.1 percentage point downward revision from the January 2026 WEO Update reflects a small negative effect from the war, but this is partly offset by a rebound following the end of the 2025 federal government shutdown, along with stronger productivity growth and positive carryover effects. Although the International Emergency Economic Powers Act (IEEPA) ruling may reduce tariff-related fiscal revenues, its impact on the fiscal balance and activity is expected to remain limited and spread over the forecast horizon. Growth in 2027 is expected to remain solid, supported by tax incentives, including those for corporate investment under the One, Big, Beautiful Bill Act (OBBBA), while technology-driven momentum is projected to moderate and productivity growth is expected to gradually converge toward historical norms.

Growth in emerging market and developing economies is projected to slow to 3.9% in 2026 before recovering to 4.2% in 2027 and 2028, while the Middle East conflict is expected to have a greater impact on this group than on advanced economies, reducing 2026 growth by 0.3 percentage point relative to the pre-conflict forecast. In emerging and developing Asia, growth is expected to moderate from 5.5% in 2025 to 4.9% in 2026 and 4.8% in 2027 and 2028. Within the region, China's 2026 growth forecast has been revised upward to 4.4%, as lower effective U.S. tariffs and stimulus measures offset the impact of the conflict, although growth is projected to slow to 4.0% in 2027 as structural headwinds intensify. India's growth outlook has also improved, with growth revised upward to 7.6% in 2025 and projected to remain at 6.5% in 2026, 2027 and 2028, supported by strong carryover effects and lower additional U.S. tariffs on Indian goods. Meanwhile, several South and Southeast Asian economies are expected to face weaker domestic demand due to lower tourism and remittance inflows, while the Philippines has seen a sharp downward revision for 2026.

In the Middle East and Central Asia, growth is projected to decline from 3.6% in 2025 to 1.9% in 2026, before rebounding to 4.6% in 2027 and 4.0% in 2028, reflecting the region's direct exposure to the conflict. The downturn is expected to be most severe among affected commodity exporters, particularly Bahrain, Iran, Iraq, Kuwait, and Qatar, while the impact is expected to be less severe in other economies. Accordingly, Iran's economy is projected to contract by (-) 6.1% in 2026, before rebounding to 3.2% in 2027 and moderating to 1.5% in 2028. By contrast, Saudi Arabia's growth is projected at 3.1% in 2026, rising to 4.5%

² Source: World Economic Outlook April 2026 release by IMF

in 2027 before easing to 3.6% in 2028. In sub-Saharan Africa, growth is expected to remain broadly stable at 4.3% in 2026, 4.4% in 2027, and 4.5% in 2028, although oil-importing economies are likely to face greater pressure, while Nigeria and South Africa are expected to record moderate but gradually improving growth profiles. In Latin America and the Caribbean, growth is projected at 2.3% in 2026, 2.7% in 2027, and 2.9% in 2028, with Brazil expected to benefit modestly in the near term from its position as a net energy exporter, while Mexico is projected to recover gradually to 1.6% in 2026, 2.2% in 2027, and 2.1% in 2028.

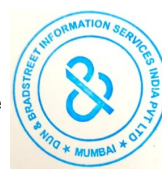
In emerging and developing Europe, the sharp slowdown in growth to 2.0% in 2025 is expected to reverse only marginally, with the region projected to expand at an average rate of 2.0% in 2026, 2.1% in 2027, and 2.3% in 2028. Within the region, Russia's 2026 growth forecast has been revised upward by 0.3 percentage point relative to January, to 1.1%, as higher commodity prices are expected to support activity. This momentum is projected to continue, with growth remaining at 1.1% in 2027 before moderating slightly to 1.0% in 2028. By contrast, Türkiye's 2026 growth forecast has been revised downward by 0.8 percentage point relative to the January 2026 WEO to 3.4%, as weaker-than-expected growth in 2025 and higher oil and gas prices are expected to weigh on activity.

Key factors impacting Global Macroeconomic landscape

- Geopolitics continues to constitute a major source of global macroeconomic and business risk. The Russia–Ukraine war remains a persistent driver of instability, as Russia has intensified large-scale missile and drone attacks on Ukrainian cities and infrastructure, while Ukraine has stepped up strikes on Russian ports, refineries, and export infrastructure, reportedly contributing to a reduction in Russian oil output in April. The Israel–Iran–U.S. confrontation has emerged as the most significant near-term external shock to the global economy, with the IMF warning that disruptions to the Strait of Hormuz and regional energy infrastructure could materially weaken global growth and raise inflation; under its April 2026 reference forecast, global growth has been lowered to 3.1% and inflation raised to 4.4%, with materially worse outcomes under prolonged disruption scenarios. In parallel, the Pakistan–Afghanistan border conflict remains a significant regional flashpoint, although China-mediated talks are seeking to secure a ceasefire and reopen border crossings after months of cross-border attacks and trade disruption. At the same time, U.S. strategic activism continues to influence regional risk perceptions: Washington has removed sanctions on Venezuela's interim leadership and deepened engagement with Caracas, tensions over Greenland have re-emerged amid renewed U.S. rhetoric and ongoing diplomatic discussions with Denmark and Greenland, and U.S.–Nigeria security cooperation has continued to deepen in response to regional instability and counterterrorism concerns. In addition, resource nationalism and strategic competition over rare earths and other critical minerals have become increasingly operational concerns rather than distant strategic risks. The IEA's April 2026 assessment notes that demand for magnet rare earths has doubled since 2015 and is projected to increase by more than 30% by 2030, while supply chains

remain highly concentrated, with China accounting for around 60% of mined output, more than 90% of refining, and nearly 95% of permanent magnet production, thereby heightening global exposure to export controls, supply concentration, and industrial policy interventions

- The period of relatively frictionless trade supported by multilateral liberalisation and free trade agreements is increasingly giving way to regionalisation, nearshoring, friend-shoring, and diversification of production networks. Rising tariffs, policy uncertainty, and strategic realignment are creating a more fragmented trade environment and raising the premium on resilience over pure efficiency
- Technology adoption and sustainability have become core strategic priorities. Organizations are advancing digital transformation by embedding AI, automation, and cybersecurity into their operations to enhance productivity and safeguard critical assets. AI adoption is emerging as a visible driver of optimism, particularly within the information and communications sectors. Growth in cloud computing, streaming, IoT, and AI and Advancements in hardware and cooling technologies aim to reduce energy consumption and improve performance is driving the need for more powerful and scalable data centres.



India Macroeconomic Analysis

India's economic growth outlook for 2025 has been revised upward by 1.0 percentage point from the October estimate to 7.6%, supported by stronger-than-expected performance in the second and third quarters of the fiscal year and sustained momentum in the fourth quarter. For 2026, the growth projection has been moderately increased by 0.3 percentage point (including a 0.1 percentage point upward revision from January) to 6.5%, primarily driven by the carryover effect of the strong 2025 performance and the reduction in additional U.S. tariffs on Indian goods from 50% to 10%, which more than offsets the adverse impact of the Middle East conflict. Growth is expected to remain steady at 6.5% in 2027. Across several South and Southeast Asian economies, disruptions linked to the Middle East conflict are anticipated to reduce tourism activity and remittance inflows, thereby weakening domestic demand and moderating overall economic performance.

Country	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026 P	CY 2027 P	CY 2028P
India ³	-5.8%	9.7%	7.6%	9.2%	6.5%	7.6%	6.5%	6.5%	6.5%
China	2.3%	8.6%	3.1%	5.4%	5.0%	5.0%	4.4%	4.0%	4.0%
United States	-2.2%	6.1%	2.5%	2.9%	2.8%	2.1%	2.3%	2.1%	2.1%
Japan	-4.2%	2.7%	0.9%	1.4%	-0.2%	1.2%	0.7%	0.6%	0.6%
United Kingdom	-10.3%	8.6%	4.8%	0.4%	1.1%	1.3%	0.8%	1.3%	1.6%
Russia	-2.7%	5.9%	-1.4%	4.1%	4.3%	1.0%	1.1%	1.1%	1.0%
Germany	-4.1%	3.9%	1.8%	-0.9%	-0.5%	0.2%	0.8%	1.2%	1.2%

Source: World Economic Outlook, April 2026

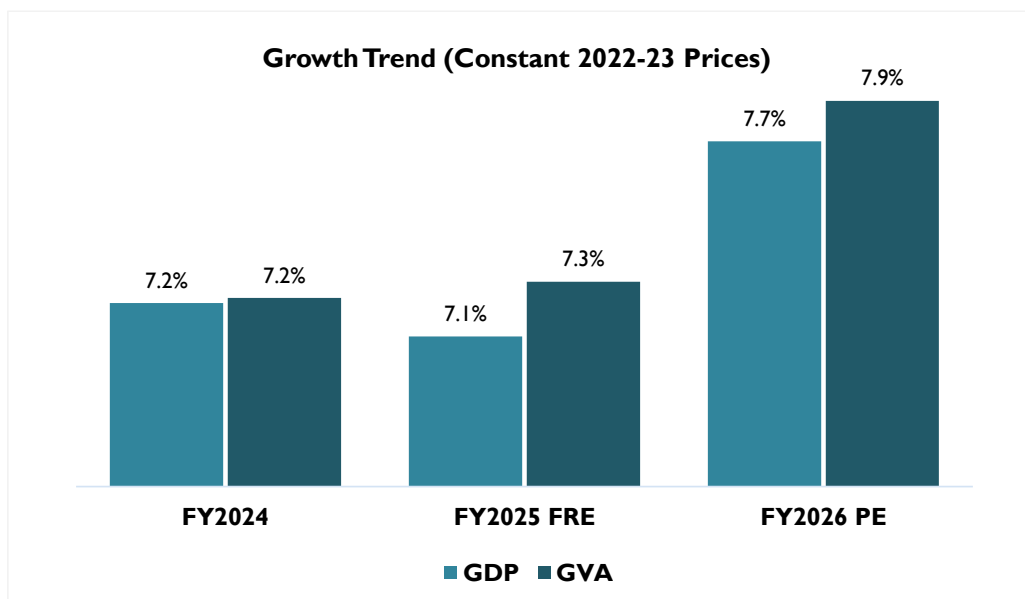
Historical GDP and GVA Growth Trend

As per Provisional Estimates, India Real GDP (GDP at constant prices) for FY 2025–26 is estimated to reach INR 323.12 lakh crore, compared to the First Revised Estimate (FRE) of INR 299.89 lakh crore for FY 2024–25. This represents a growth rate of 7.7% in 2025–26, higher than the 7.1% growth recorded in 2024–25.

Similarly, Real GVA for FY 2025–26 is estimated to reach INR 294.91 lakh crore, up from INR 273.36 lakh crore in FY 2024–25. This indicates a growth rate of 7.9%, compared with the 7.3% growth achieved in the previous year.

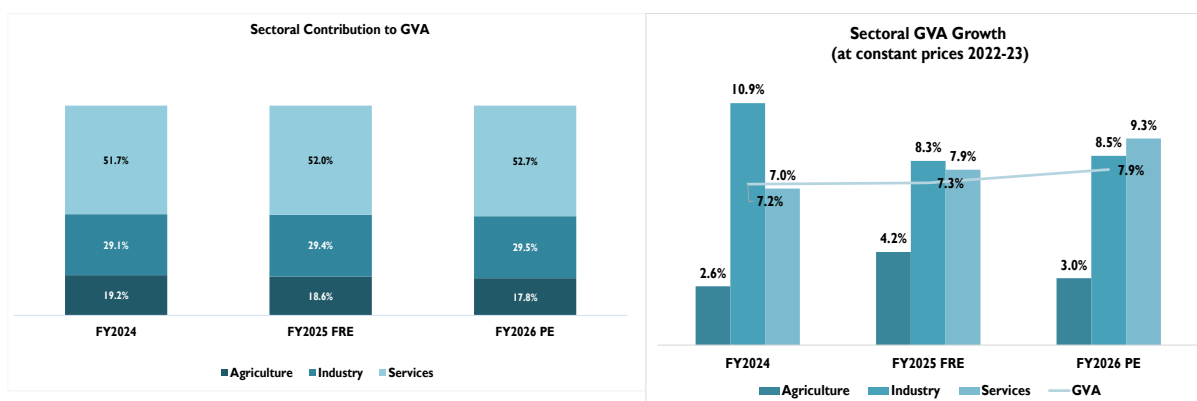
³ For India, data and forecasts are presented on a fiscal year basis, and GDP from 2022 onward is based on GDP at market prices with fiscal year 2022/23 as a base year





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

Sectoral Contribution to GVA and Annual Growth Trend



Source: Ministry of Statistics & Programme Implementation (MOSPI), CMIE Economics Outlook
FRE is First Revised Estimate; PE is Provisional Estimates

Sectoral analysis of GVA reveals that the industrial sector experienced steady growth momentum in FY 2026, recording a 7.9% y-o-y growth against 7.3% year-on-year growth in FY 2025. Within the industrial sector, growth moderated across sub-sectors with mining, and construction activities growing by 5.15%, and 7.36%, respectively in FY 2026, compared to 11.69%, and 7.30% in FY 2025. Growth in the utilities sector too moderated to 1.74% in FY 2026 from 2.87% in the previous year. The industrial sector's contribution to GVA increased marginally from 29.4% in FY 2025 to 29.5% in FY 2026.

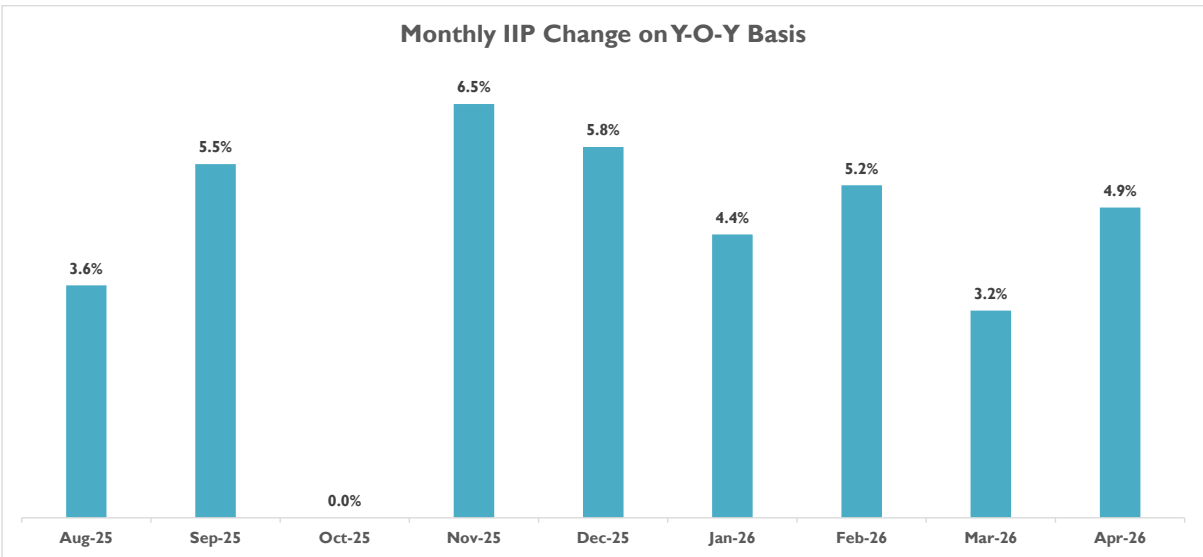
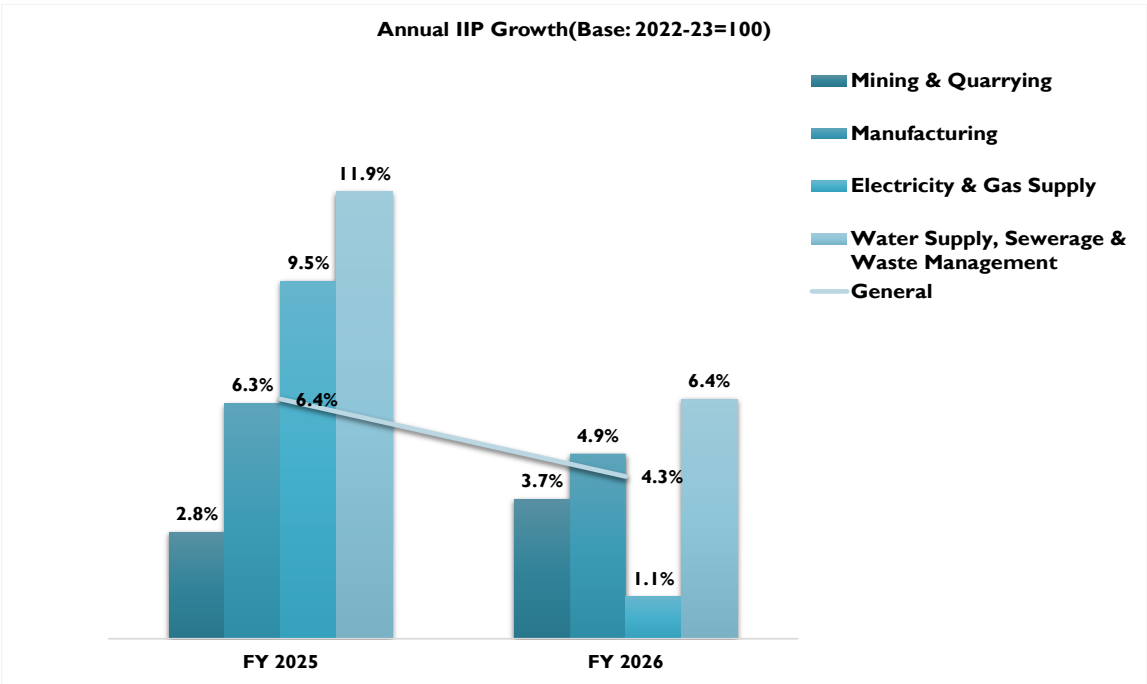
The services sector continued to be the main driver of economic growth. It expanded by 9.3% in FY 2026 from 7.9% in FY 2025. The services sector retained its position as the largest contributor to GVA, rising from 51.7% in FY 2024 to 52.0% in FY 2025, with a further increase to 52.7% in FY 2026.

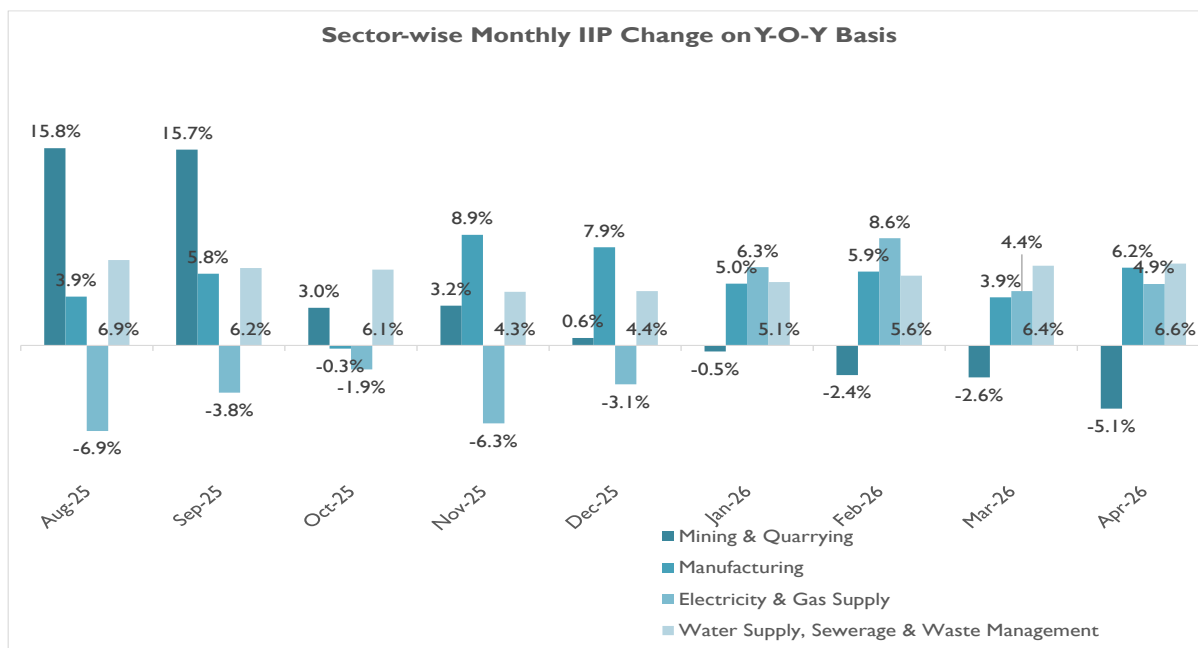
The agriculture sector saw an acceleration in growth, increasing from 2.66% in FY 2024 to 4.18% in FY 2025, before moderating to 3.0% in FY 2026. However, its contribution to GVA declined marginally from 19.2% in

FY 2024 to 17.8% in FY 2026. Overall, Gross Value Added (GVA) growth rose to 7.9% in FY 2026 from 7.3% in FY 2025.

Annual & Monthly IIP Growth

Industrial sector performance as measured by the IIP index exhibited moderation in FY 2026, recording a 4.3% y-o-y growth against 6.4% increase in the previous year. The manufacturing index showed moderation, increasing by 4.9% in FY 2026 compared with 6.3% in FY 2025. The Electricity & Gas Supply sector index also moderated, growing 1.1% in FY 2026 compared with 9.5% in the previous year. Water Supply, Sewerage & Waste Management also moderated by 6.4% in FY 2026 compared with 11.9% in the previous year, while the mining sector index grows by 3.7% in FY 2026 compared with 2.8% in the previous year.



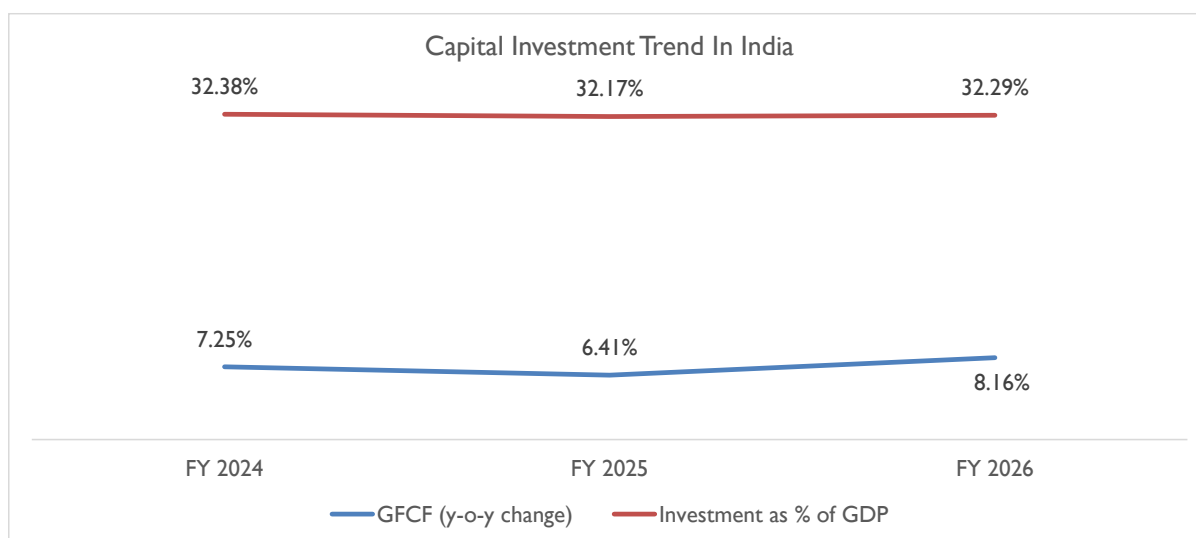


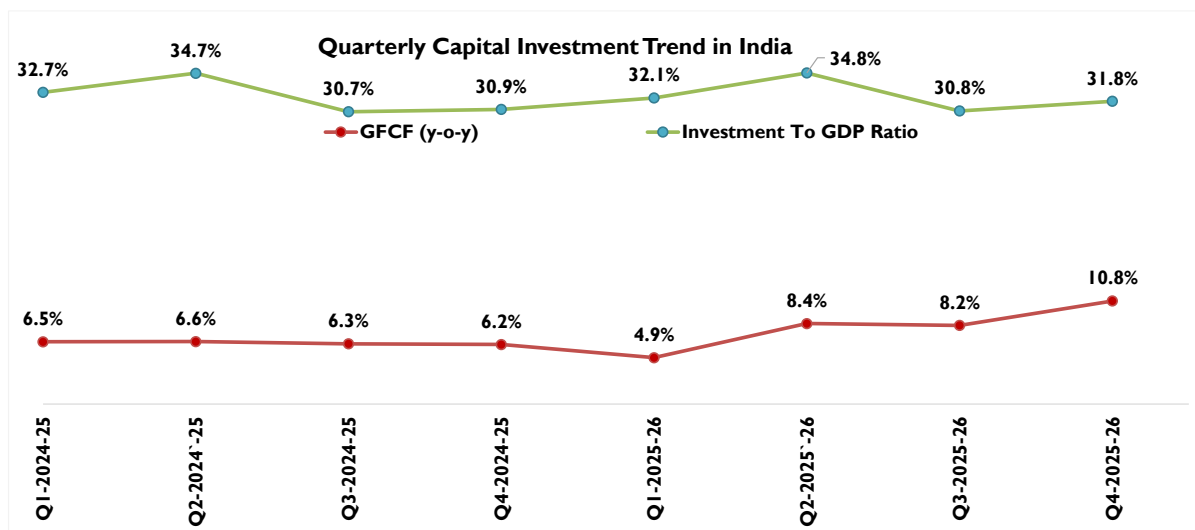
Source: Ministry of Statistics & Programme Implementation (MOSPI)

The IIP growth rate for the month of April 2026 is 4.9 percent as compared to April 2025. The growth rates of the Four sectors, Mining & Quarrying, Manufacturing, Electricity & Gas Supply and Water Supply, Sewerage & Waste Management for the month of April 2026 are (-)5.1 percent, 6.2 percent, 4.9 percent and 6.6 percent respectively

Annual and Quarterly: Investment & Consumption Scenario

Other major indicators, such as Gross Fixed Capital Formation (GFCF), a measure of investment, increased during FY 2026, registering 8.16% year-on-year growth compared with 6.41% in FY 2025, bringing the GFCF-to-GDP ratio to 32.29%.



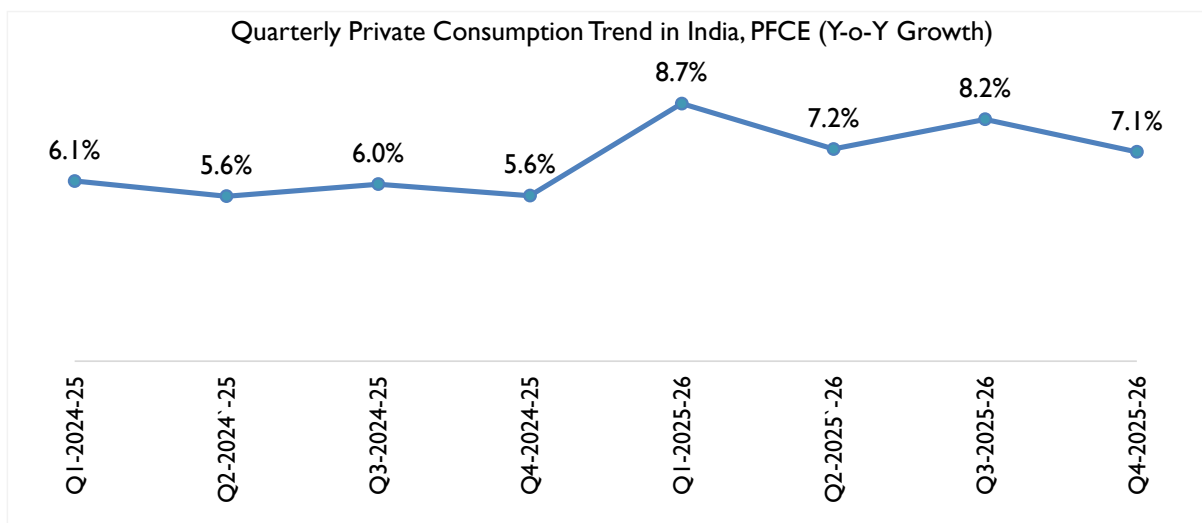
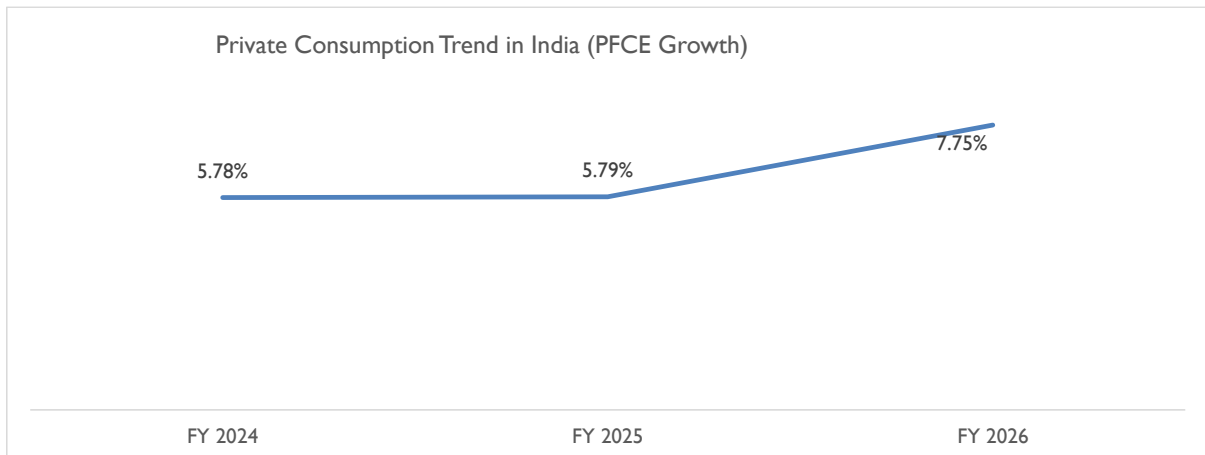


Source: Ministry of Statistics & Programme Implementation (MOSPI), CMIE Economics Outlook

On a quarterly basis, India's capital investment indicators reflect a healthy and improving investment environment, supported by sustained investment intensity and stronger capital formation in recent quarters. The Investment to GDP ratio remained consistently above 30% throughout the period, highlighting continued resilience in capital deployment. The ratio increased from 32.7% in Q1 FY 2024-25 to 34.7% in Q2, before moderating to 30.7% in Q3 and 30.9% in Q4. In FY 2025-26, the ratio improved again to 32.1% in Q1 and further strengthened to 34.8% in Q2, the highest level during the period, before remaining healthy at 30.8% in Q3 and 31.8% in Q4. This indicates that investment activity continued to remain robust despite normal quarterly variations.

GFCF (y-o-y) growth also points toward a positive investment trend, particularly in FY 2025-26. After remaining broadly stable during FY 2024-25, with growth ranging between 6.2% and 6.6%, GFCF growth accelerated meaningfully from 4.9% in Q1 FY 2025-26 to 8.4% in Q2 and 8.2% in Q3, before rising further to 10.8% in Q4. This strong improvement in the second half of FY 2025-26 suggests strengthening fixed capital formation and a revival in investment momentum. Overall, the data indicates that India's capital investment landscape remains on a positive trajectory, with sustained investment levels and improving GFCF growth reflecting stronger capital spending, better investment confidence, and continued support for economic growth.

Private Consumption Scenario



Sources: MOSPI, CMIE Economics Outlook

Private Final Consumption Expenditure (PFCE), a practical proxy for household spending, recorded growth in FY 2026 relative to FY 2025. PFCE recorded healthy growth in FY 2025-26 relative to FY 2024-25. However, quarterly PFCE growth moderated sequentially to 7.1% in Q4 FY 2025-26 from 8.2% in Q3 FY 2025-26

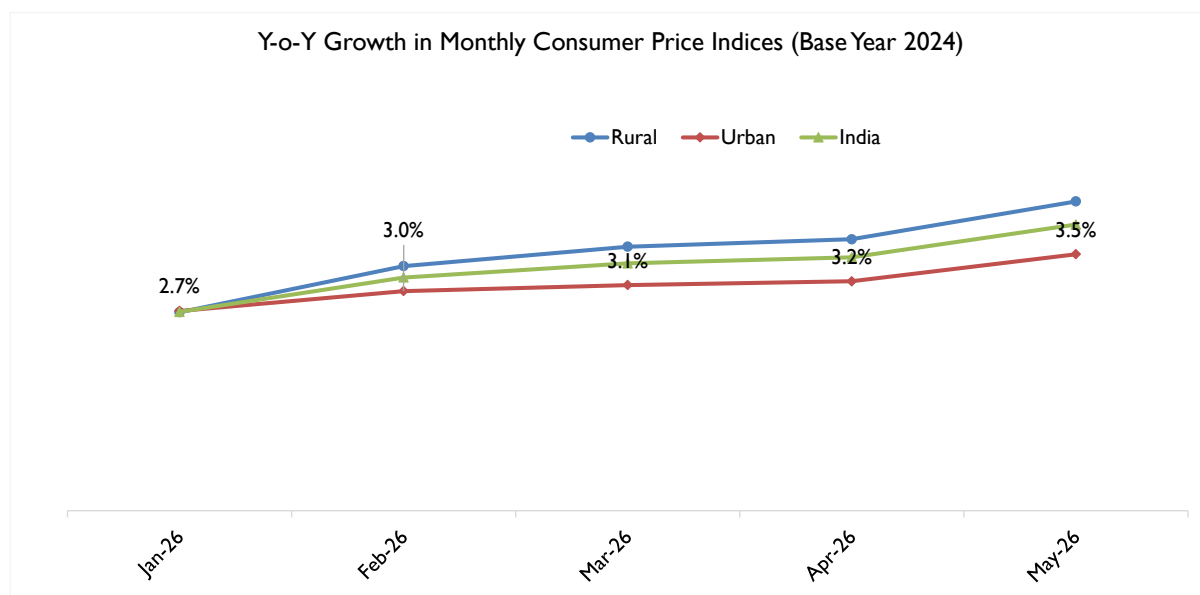
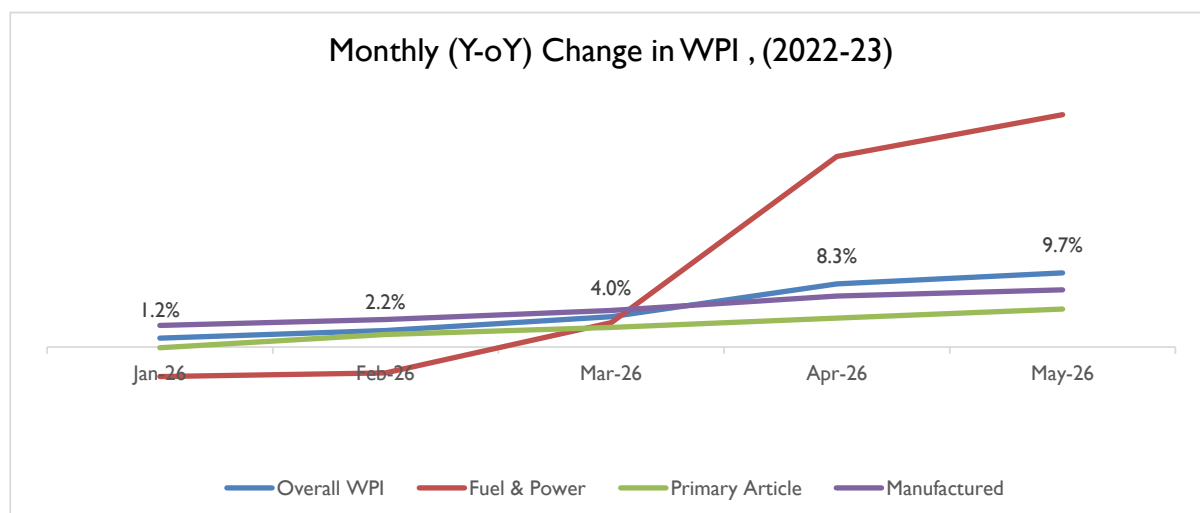
Inflation Scenario

The annual rate of inflation based on All India Wholesale Price Index (WPI) number is 3.88% (provisional) for the month of March 2026 (over March 2025). Positive rate of inflation in March 2026 is primarily due to increase in prices of crude petroleum & natural gas, other manufacturing, non-food articles, manufacture of basic metals and food articles etc.

All India Wholesale Price Index (WPI) inflation for May 2026 is 9.68 per cent on year-on-year (YoY) basis, compared to 8.26 per cent in April 2026. The index for All Commodities for May 2026 stands at 109.9, whereas it was 108.8 in April 2026. Across Groups, 'Mineral Oils (containing Petroleum Products)', 'Crude

Petroleum and Natural Gas', 'Manufacture of Chemicals and Chemical Products', and 'Manufacture of Basic Metals', have been major drivers of WPI inflation in April and May 2026.

Across Major Groups, YoY inflation for Primary Articles, Fuel and Power, and Manufactured Products is 4.99 per cent, 30.33 per cent, and 7.48 per cent, respectively in May 2026, whereas it was 3.78 per cent, 24.89 per cent, and 6.68 per cent, respectively, in April 2026. The indices for Primary Articles, Fuel and Power, and Manufactured Products are 113.7, 113, and 107.8, respectively, in May 2026, whereas they were 112.6, 110.9, and 107, respectively, in April 2026.

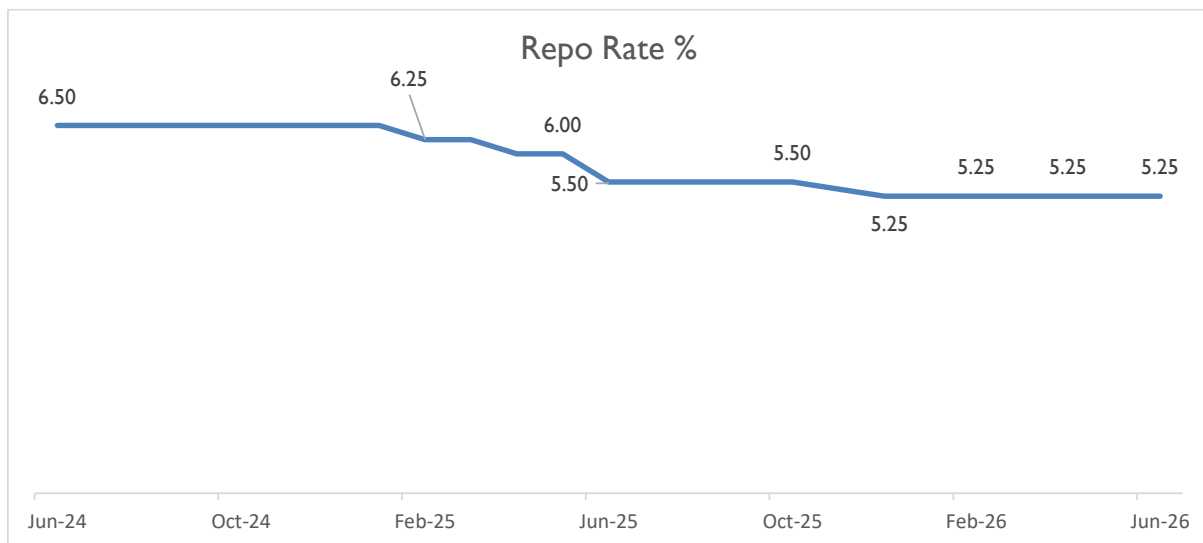


Source: MOSPI, Office of Economic Advisor

With effect from January 2026, the National Statistics Office (NSO) introduced a revised CPI series with base year 2024=100, drawing revised item weights from the Household Consumption Expenditure Survey (HCES) 2023-24. Year-on-year inflation rate based on All India Consumer Price Index (CPI) with base year 2024 for



the month of May, 2026 over May, 2025 is 3.93%(Provisional). Corresponding inflation rates for rural and urban are 4.25% and 3.53%, respectively. On the monetary policy front, the RBI had cumulatively raised the repo rate by 250 basis points between May 2022 and February 2023, bringing it to 6.50%, where it was held steady through January 2025 to anchor inflationary expectations. With inflation moderating below target and growth requiring support, the RBI's Monetary Policy Committee (MPC) commenced an easing cycle in February 2025, delivering a cumulative 125 basis points of rate cuts through four reductions — 25 bps each in February 2025, April 2025, and December 2025, and a larger 50 bps cut in June 2025 — interspersed with pauses in August and October 2025. The repo rate currently stands at 5.25%, in June 2026.



Sources: CMIE Economic Outlook

Growth Outlook

The Union Budget 2026–27 sets out a quantitatively strong push to build resilient supply chains and develop next-generation industrial capacity. The record ₹12.2 trillion capital expenditure outlay is aimed at easing logistics bottlenecks and enhancing India's cost competitiveness. Employment measures extend across both urban and rural India in one sweep. In cities and large towns, capex is channelled into “connectors” such as the seven proposed high-speed rail corridors and upgraded Tier-2 and Tier-3 infrastructure, thereby creating construction, logistics, and service jobs while cutting commute times. In smaller towns and villages, job creation is expected to be supported by mega textile parks, the Mahatma Gandhi Gram Swaraj Initiative's push for khadi and handloom, training for tourist guides, and new waterways and coastal shipping. Together, these steps broaden the wage base instead of providing a short-term bump.

This domestic push is complemented by targeted measures to strengthen strategic supply chains. Dedicated rare earth corridors in Odisha, Kerala, Andhra Pradesh, and Tamil Nadu; customs exemptions for capital goods used in critical mineral processing and battery cells; and the India Semiconductor Mission 2.0 aim to pull manufacturing deeper into components and materials. If executed well, these measures could reduce

import dependence in magnets, batteries, and chip inputs and lift the share of higher-productivity manufacturing jobs — thereby raising household incomes durably.

Alongside these domestic measures, India is also seeking to strengthen its external trade architecture through major trade agreements. The conclusion of the India–EU FTA negotiation marks a major strategic milestone, as it offers near-universal market access for 99.5% of India’s exports by value and integrates India more deeply into a USD 24 trillion economic bloc. By providing duty-free entry for key labour-intensive sectors, expanding services access, and establishing a mobility framework for Indian professionals, the deal is expected to improve market access, support export competitiveness and high-value job creation. It is likely to promote a predictable, rules-based environment for long-term trade and investment flows.

In a similar vein, India–Oman Comprehensive Economic Partnership Agreement (CEPA)⁴ has been framed as a comprehensive arrangement covering trade in goods and services, investment, professional mobility, and regulatory cooperation, with the objective of strengthening bilateral economic integration between India and Oman. Bilateral trade between the two countries stood at USD 10.61 billion in FY 2024–25, providing the economic basis for the agreement. Under the CEPA, India has secured 100% duty-free market access in Oman across 98.08% of tariff lines, covering 99.38% of India’s export value, thereby improving export competitiveness across sectors such as engineering goods, pharmaceuticals, agriculture and processed food, electronics, textiles, plastics, and gems and jewellery. At the same time, India has adopted a calibrated liberalisation approach by offering tariff concessions on 77.79% of its tariff lines, covering 94.81% of imports from Oman by value, while retaining safeguards for sensitive domestic sectors. The agreement also provides gains in services, with Oman undertaking commitments across 127 services sub-sectors, alongside improved provisions for professional mobility, including an increase in the Intra-Corporate Transferee ceiling from 20% to 50% and commitments for a defined category of Indian professionals. Overall, the CEPA is presented as a framework intended to support trade expansion, improve market access, and strengthen long-term economic cooperation between India and Oman.

However, these gains remain exposed to external geopolitical risks. The escalation of the Middle East crisis represents an external shock for India, transmitted primarily through energy markets, logistics, and trade-linked business exposure. The Gulf–Levant 11⁵ (GL 11) economies account for around 15% of India’s merchandise exports and 21% of its imports, with trade concentrated in high-value categories such as mineral fuels, precious metals, and electronics; disruptions in this region therefore have an outsized impact despite its modest share of global GDP.

⁴ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2213203®=3&lang=1>

The Comprehensive Economic Partnership Agreement (CEPA) between India and Oman marks a meaningful step forward in the economic relationship between the two countries. The agreement brings together trade in goods and services, investment, professional mobility, and regulatory cooperation under a single, coherent framework aimed at deepening bilateral economic integration.

⁵ For the purposes of this report, the analysis is confined to a defined group of countries referred to as the Gulf–Levant 11 (GL-11). This group comprises Bahrain, Iran, Iraq, Israel Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. These economies are treated collectively because they are either directly involved in, or immediately exposed to, the current crisis through geographic proximity, security linkages, energy production and transit, or their role as regional trade and financial hubs



Export exposure is unevenly distributed across India, with risks concentrated in specific districts that serve as production hubs. Discretionary exporters, such as gems and jewellery firms in the districts of Surat, Jaipur, and Mumbai; apparel manufacturers in Tiruppur; automotive producers in Ahmedabad; and electronics assemblers in Kanchipuram and Kolar, are vulnerable to demand slowdown and order deferrals in Gulf markets.

At the same time, Perishable agricultural exporters, including grapes from Nashik, bananas from Solapur, and bovine meat from Ghaziabad, face acute risks from shipping delays and logistics disruptions. Dun & Bradstreet data show that over 4,500 Indian exporters and around 1,800 importers relied on the Strait of Hormuz trade route in 2025, exposing them to working capital stress, payment delays, and production interruptions, while, for import-dependent industries, delays in critical inputs raise the risk of temporary shutdowns and sustained energy price volatility amplifies margin pressure across manufacturing and services.



Key Growth/Demographic Drivers for Economic Growth

Government focus on infrastructure development

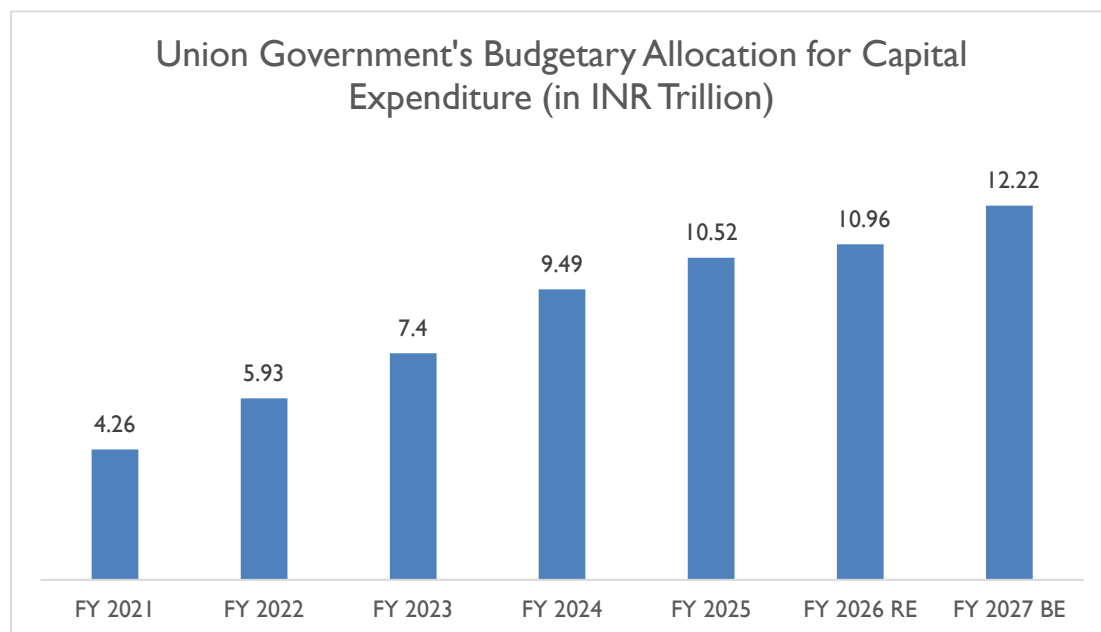
The infrastructure sector has received a strong boost in Budget FY'27, marked by a record INR 12.2 trn⁶ public capital expenditure allocation, reinforcing the government's focus on making assets more efficient and sustainable. The introduction of the landmark Infrastructure Risk Guarantee Fund aims to provide partial credit guarantees to lenders and revitalise private sector participation in large-scale projects. By lowering project risk premiums and easing borrowing costs, this mechanism is likely to help crowd in private capital and accelerate construction phase financing across the sector. The transport and logistics sector, in particular, will buoy infrastructure growth. Railways have received a substantial boost in allocation, which will help support the planned development of seven new high-speed rail corridors and a Dankuni-Surat DFC⁷, which aims to cut logistics costs and improve national connectivity. Moreover, the rollout of 20 new National Waterways, new ship repair hubs and a scheme to double the share of coastal and inland water transport from 6.0% to 12.0% by 2047⁸ will together build a greener, more efficient multimodal freight network. Urban transformation continues through targeted development of Tier-2 and Tier-3 cities – with populations over 0.5mn – alongside the creation of City Economic Regions, each supported by multi-year, challenge-based financing to establish new growth hubs and reduce pressure on metros. A broader ecosystem of reforms strengthens medium-term sector prospects. The government aims to scale domestic construction and infrastructure equipment manufacturing, reducing import dependence and improving execution capability in tunnelling, metro construction and road building machinery. The monetisation of CPSE assets will be accelerated through dedicated REIT⁹ structures, helping unlock liquidity for redevelopment and new project pipelines. Additional support flows through region-specific initiatives, such as industrial corridor expansion, and tourism development in cultural and Buddhist heritage zones will further reinforce construction demand. Together, these measures will strengthen India's infrastructure ecosystem through higher public investment, improved risk mitigation tools and wider multimodal connectivity – creating a constructive environment for sustained growth in construction, logistics and urban development.

⁶<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2222521®=3&lang=1#:~:text=Reinforcing%20the%20role%20of%20public,productive%20capacity%20across%20the%20economy.>

⁷ https://www.indiabudget.gov.in/doc/budget_speech.pdf

⁸ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2221817®=3&lang=1>

⁹ https://www.indiabudget.gov.in/doc/budget_speech.pdf



Union Budget, Government of India
 Note: BE (Budget Estimates) and RE (Revised Estimates)

Development of Domestic Manufacturing Capability

The Government launched the Production Linked Incentive (PLI) scheme in early 2020, initially aimed at improving domestic manufacturing capability in large-scale electronic manufacturing and gradually extended to other sectors. At present it covers 14 sectors, ranging from medical devices to solar PV modules. The PLI scheme provides incentives to companies on incremental sales of products manufactured in India. This incentive structure is aimed at attracting private investment into setting up manufacturing units and thereby strengthening domestic production capabilities. The overall incentive outlay earmarked for the PLI scheme is estimated to be INR 2 trillion. If fully realised, the PLI scheme could add nearly 4% to annual GDP growth, by way of incremental revenue generated from the newly formed manufacturing units.

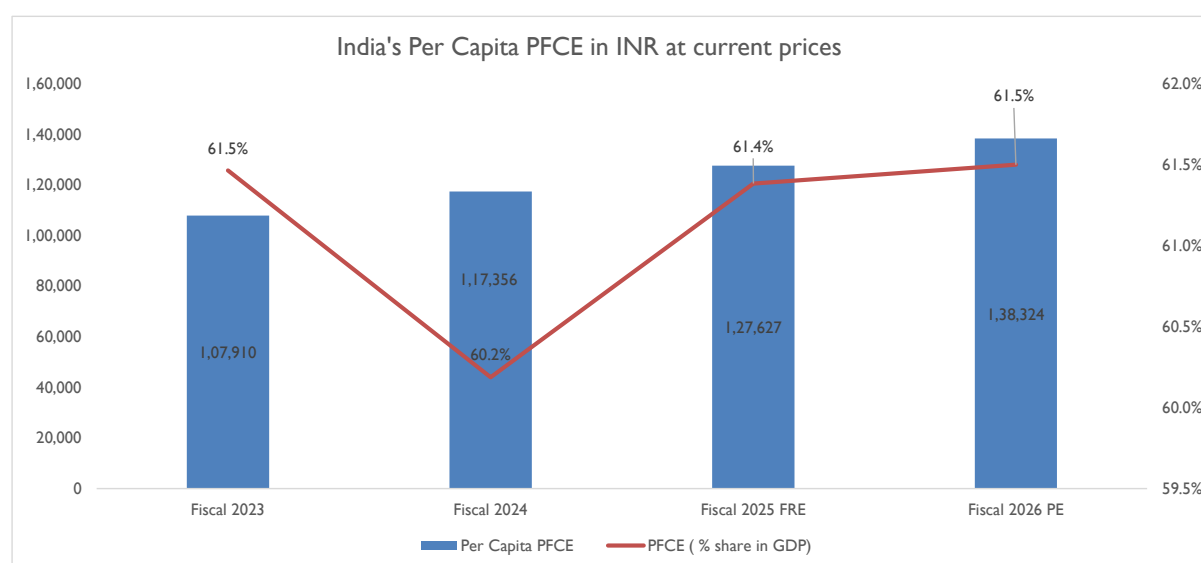
Strong Domestic Demand

Domestic demand has traditionally been one of the key drivers of the Indian economy. After a brief lull caused by the Covid-19, domestic demand is recovering. Consumer Confidence surveys by the Reserve Bank and other institutions point to an improvement in the Consumer Confidence Index, which is a precursor of improving demand. India has a strong middle-class segment, which has been the major driver of domestic demand. Factors like fast paced urbanization and improving income scenario in rural markets are expected to accelerate domestic demand further. This revival is reflecting in the private final consumption expenditure (PFCE) metric.

India's per capita Private Final Consumption Expenditure (PFCE) at current prices has shown a consistent upward trend, indicating steady improvement in household consumption levels over the years. Per capita PFCE increased from INR 1,07,910 in Fiscal 2023 to INR 1,17,356 in Fiscal 2024, and further rose to INR 1,27,627

in Fiscal 2025 FRE. It is estimated to increase further to INR 1,38,324 in Fiscal 2026 FE, reflecting continued growth in consumer spending and improving consumption capacity.

PFCE as a share of GDP also remained healthy during the period, broadly staying above 60%. The share stood at 61.5% in Fiscal 2023, moderated to 60.2% in Fiscal 2024, before recovering to 61.4% in Fiscal 2025 FRE and further improving to 61.5% in Fiscal 2026 FE. This indicates that private consumption continues to remain a key driver of India's economic growth. Overall, the steady increase in per capita PFCE, along with a stable PFCE share in GDP, reflects resilient household demand and sustained consumption momentum in the economy.



Source: Ministry of Statistics & Programme Implementation (MOSPI)

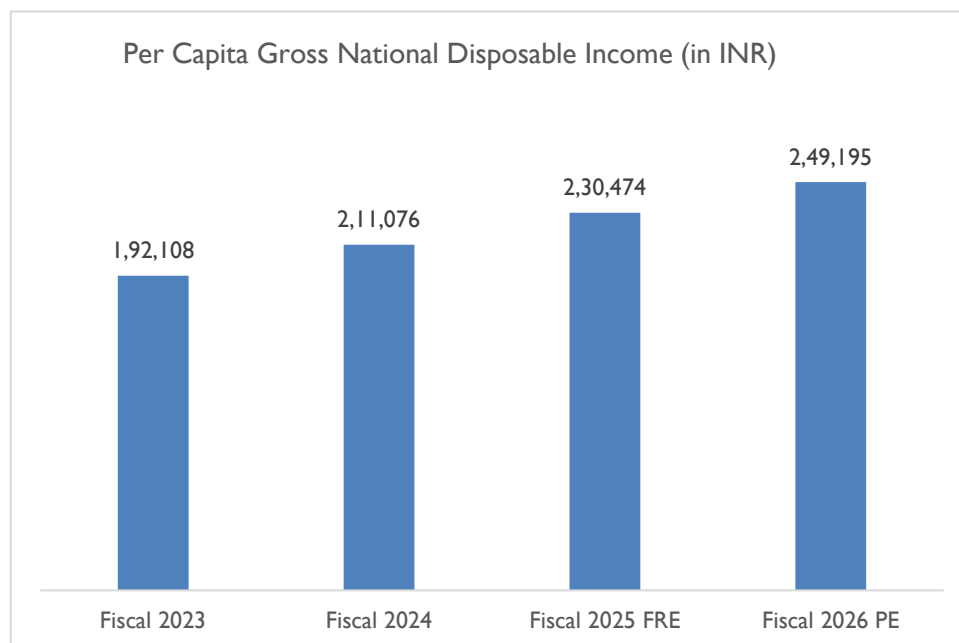
FRE is First Revised Estimate; PE is Provisional Estimates

There are two factors driving this domestic demand: first, the large pool of consumers; and second, the improvement in purchasing power.

- The share of middle class increased from nearly 14% in 2005 to nearly 30% in 2021 and is expected to cross 60% by 2047¹⁰. This expanding middle class household segment is fuelling India's growth story and would continue to play a key role in propelling India's economic growth.
- Consumer-driven domestic demand is majorly fuelled by this growth in per capita income. As per National Statistics Office (NSO), India's per capita Gross National Disposable Income (GNDI) has shown a steady upward trend, reflecting improvement in overall income levels and disposable income capacity. Per capita GNDI increased from INR 1,92,108 in Fiscal 2023 to INR 2,11,076 in Fiscal 2024 and further rose to INR 2,30,474 in Fiscal 2025 FRE. It is estimated to increase further to INR 2,49,195 in Fiscal 2026 PE, indicating continued growth in income levels across the economy. The consistent

¹⁰ As per the survey conducted by People Research on India's Consumer Economy. Households with annual income in the range of INR 5 – 30 lakh are considered as middle-class households.

rise in per capita GNDI highlights strengthening purchasing power and improving household income conditions, which can support consumption demand going forward. Overall, the trend reflects a positive income environment, with rising disposable income expected to contribute to sustained private consumption and broader economic growth.



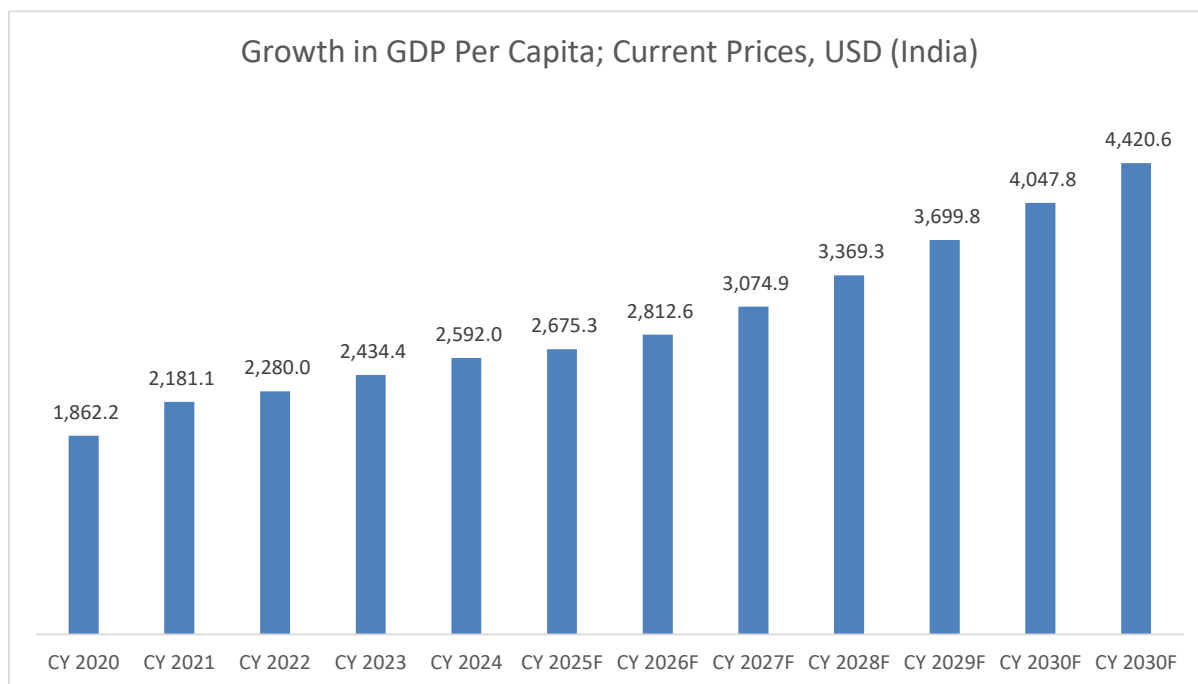
Source: Ministry of Statistics & Programme Implementation (MOSPI)

FRE is First Revised Estimate; PE is Provisional Estimates

India's Per Capita GDP Trends

India is poised to become the world's third-largest economy with a projected GDP of USD 5 trillion within the next three years, driven by ongoing reforms. As one of the fastest-growing major economies, India currently holds the position of the fifth-largest economy globally, following the US, China, Japan, and Germany. By 2027-28, it is anticipated that India will surpass both Germany and Japan, reaching the third-largest spot. This growth is bolstered by a surge in foreign investments and a wave of new trade agreements with India's burgeoning market of 1.4 billion people. The aviation industry is witnessing unprecedented orders, global electronics manufacturers are expanding their production capabilities, and suppliers traditionally concentrated in southern China's manufacturing hubs are now shifting towards India.

To achieve its vision of becoming the world's third-largest economy by 2027-28, India will need to implement transformative industrial and governmental policies. These policies will be crucial for sustaining the consistent growth of the nation's per capita GDP over the long term.

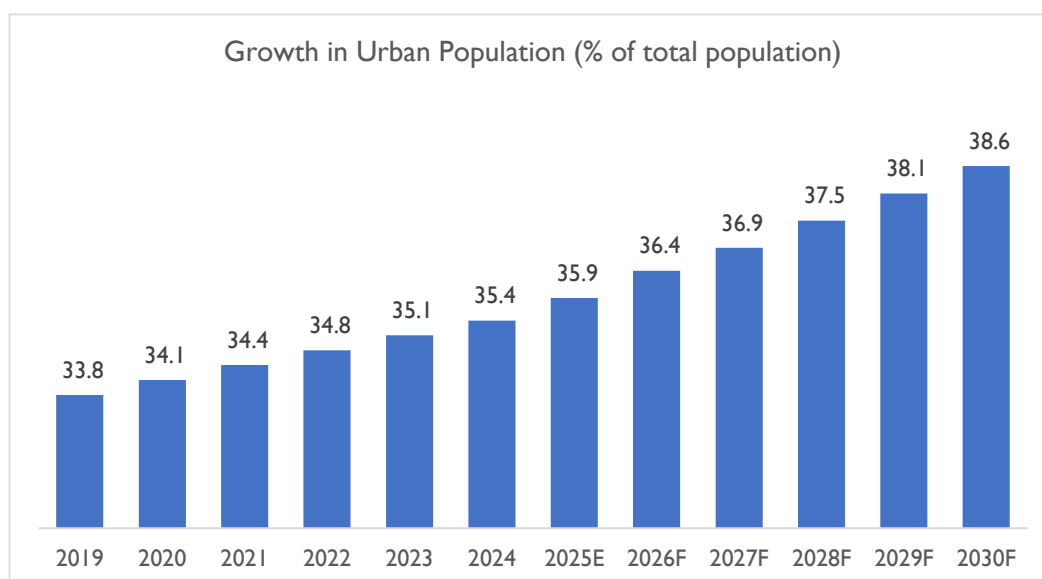


Source: IMF

From CY 2024 to CY 2031, India's per capita GDP is projected to grow at a compound annual growth rate of 7.9%. This growth will be driven by the service sector, which now accounts for over 50% of India's GDP, marking a significant shift from agriculture to services.

Increasing Urbanization

As per the Handbook of Urban Statistics 2022, India's urban population has been on a steady rise. Urban dwellers accounted for over 469 million in 2021 and are projected to rise to over 558 million by 2031 and further exceed 600 million by 2036.



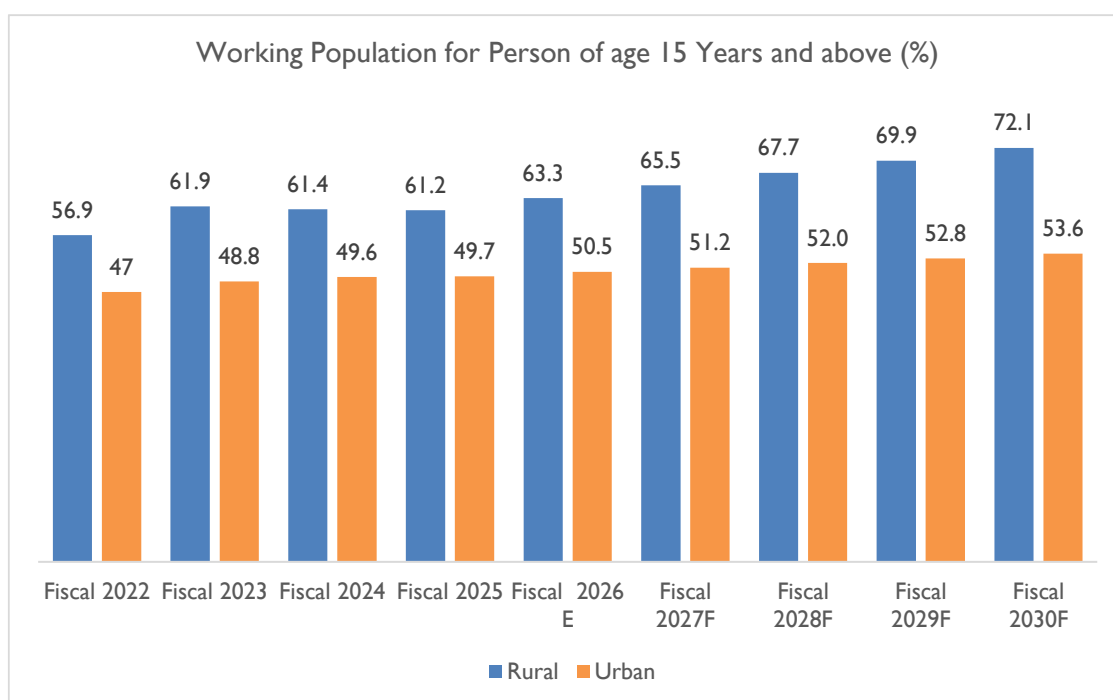
Source: World Bank,¹¹ Dun & Bradstreet Research and Estimates

¹¹<https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?end=2022&locations=IN&skipRedirection=true&start=1960&view=chart>

The share of urban population in total population has been rising steadily. In 2019, 33.81% of the total population was urban. By 2025, it had reached 35.9%, showing an increase over a span of five years of about 2.10%. The share of urban population is further forecasted to cross 38.6% by 2030. This increase in urban population is set to demand drastic changes in infrastructure development. Cities are a major driver for the construction industry. With cities expanding rapidly, there will be an increased need for improved housing, water supply, sewage systems, and electricity. Urban planning will need to account for higher population densities, necessitating the development of smart cities with integrated technology for efficient management of resources and services. The Smart Cities Mission targeted at 100 cities is aimed at improving the quality of life through modernised, technology-driven urban planning. This transformation will also require significant investment in public health, education, and recreational facilities to enhance the quality of urban living. The surge in urban population will also propel demand for improvement in multimodal transport infrastructure for freight and passenger travel requirements.

Rural vs. Urban Working Population by Age Group

As India continues to experience economic growth and development, the working population in both rural and urban areas is increasing. In the case of the urban population, this growth is reflected in the increase from a share of 47% in FY22 to 49.7% in FY25, whereas in rural areas, it grew from 56.9% in FY22 to 61.2% in FY25. This growth is driven by a combination of factors, including demographic changes, economic policies, and the expansion of various industries. The rise in employment opportunities across sectors such as agriculture, manufacturing, services, and information technology has contributed to the overall increase in the working population, thereby fostering economic stability and enhancing the standard of living for many Indians.



Source: Periodic Labour Force Survey (PLFS) Annual Report, Dun & Bradstreet Research and Estimates

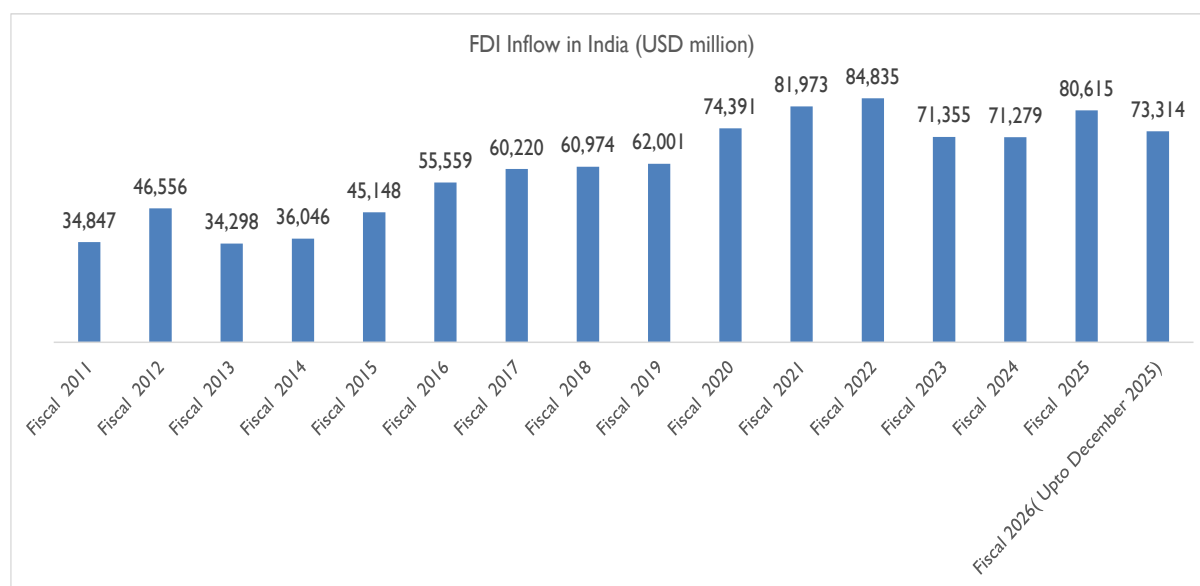
Note: 2025 refers to the period January 2025 – December 2025 and likewise for 2024, 2023 and 2022

In urban areas, the working population is growing rapidly due to the proliferation of jobs in sectors like IT, finance, retail, and healthcare. Additionally, the development of infrastructure, such as improved transportation networks and housing, has made urban centers more accessible and desirable for the working population. In rural areas, the working population remains substantial, primarily due to the dominance of the agricultural sector. Government initiatives aimed at rural development, such as improved access to education and skill development programs, have also played a crucial role in enhancing employment prospects in these regions.

The dominance of the rural working population over its urban counterpart can be attributed to the labour-intensive nature of the agricultural sector, which ensures a consistent demand for human labor despite advancements in mechanization, sustaining employment rates in rural areas.

Foreign Direct Investment Trend in India

FDI inflows in India observed a steady increase from FY 2013 to FY 2022 while it witnessed a decline of 15% in FY 2023 and a decline of 0.1% in FY 2024 due to several factors, including the ongoing conflict between Russia and Ukraine, changes in US monetary policy, and other global uncertainties. However, the country has received substantial FDI inflows from April 2000 to December 2025. This increasing FDI can be attributed to the new investment facilitation measures like the National Single-Window System (NSWS), which streamlines the approval and clearance process for investors, entrepreneurs, and businesses, along with sectoral measures and PLI schemes, supporting growth prospects in tier-2 and tier-3 cities. Further, tax compliance for startups and foreign investors has been simplified and the Income Tax Act, 1961, was amended in 2024 to abolish angel tax and to reduce income tax rate chargeable on income of a foreign company.

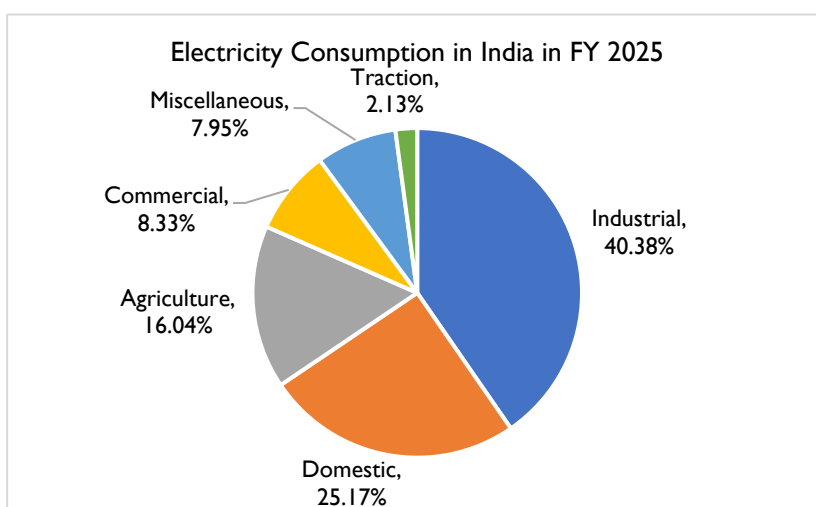


Sources: Department for Promotion of Industry and Internal Trade

Growth of Electricity Consumption in India (Consumer category-wise) (TWh), 2019-20 to 2024-25¹²

India's electricity consumption has shown a steady increase across all consumer categories between FY 2020-25. Domestic consumption rose from 308.75 BU in FY 2020 to 408.51 BU in FY 2025, indicating a growing demand for household electricity due to urbanization and rising appliance usage. The commercial sector exhibited fluctuations, dropping to 86.95 BU in FY 2021 due to the pandemic but rebounding to 135.16 BU in FY 2025.

Year	Domestic	Commercial	Industrial	Agriculture	Traction	Misc.	Total
FY 2020	308.75	106.05	532.82	211.30	19.15	70.03	1248.09
FY 2021	330.81	86.95	508.78	221.30	14.67	67.70	1230.21
FY 2022	339.78	97.12	556.48	228.45	21.94	73.00	1316.76
FY 2023	353.16	117.23	593.90	243.85	30.03	102.15	1440.31
FY 2024	369.05	128.62	640.62	275.48	33.91	92.87	1540.58
FY 2025	408.51	135.16	655.56	260.27	34.50	128.95	1622.96



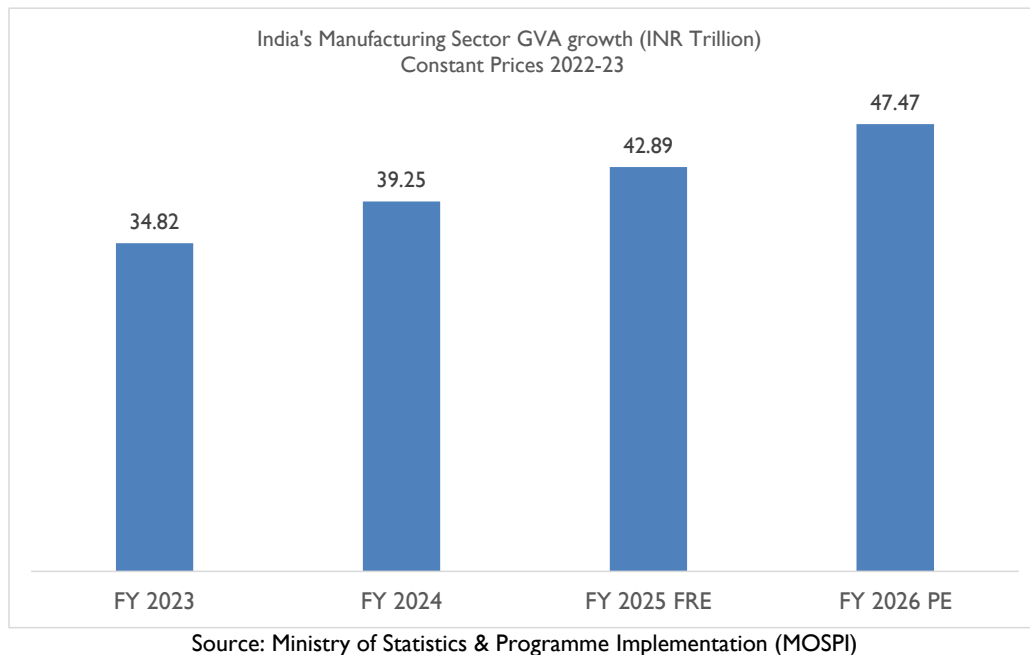
Source: Energy Statistic Report of India 2026, Central Electricity Authority

Industrial electricity consumption, a key driver of economic activity, saw a dip in FY 2021 but recovered significantly, reaching 655.56 BU in FY 2025. The agricultural sector also saw consistent growth, with consumption increasing from 211.30 BU to 260.27 BU, highlighting the expanding demand for irrigation and farming operations. Traction and miscellaneous categories followed a similar upward trend, reflecting increased electrification in railway operations and other sectors. Overall, total electricity consumption grew

¹² https://cea.nic.in/wp-content/uploads/general/2025/Updated_GR_2025_merged_new.pdf
https://cea.nic.in/wp-content/uploads/pdm/2025/11/Growth_Book_2025.pdf?

from 1248.09 BU in 2019-20 to 1622.96 BU in 2024-25, underscoring India's increasing energy needs driven by economic expansion and infrastructure development.

Contribution of manufacturing towards GVA

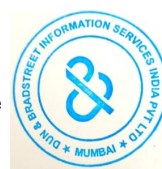


The manufacturing sector's contribution to India's Gross Value Added (GVA) at current prices reflects **steady and structurally improving growth over FY 2023–FY 2026 (PE)**. Manufacturing GVA increased from **INR 34.8 trillion in FY 2023 to INR 47.5 trillion in FY 2026**, indicating acceleration driven by recovery in industrial activity, capacity utilization, and policy support. The sector is estimated to have grown at CAGR of **10.8% during FY 2023–FY 2026**, underscoring manufacturing's growing role in economic expansion. This upward trajectory highlights the impact of government initiatives such as **Make in India, PLI schemes, and infrastructure-led demand**, alongside rising domestic consumption and export-oriented production. The overall trend reinforces manufacturing as a **key pillar of GVA growth**, contributing meaningfully to employment generation, capital formation, and industrial resilience in India's economy.

Supportive policies of Indian government to boost manufacturing sector in India

- **Make in India initiative** has promoted domestic manufacturing by encouraging localization, reducing import dependence, and attracting investments across electronics, automotive, pharmaceuticals, chemicals, and capital goods sectors.

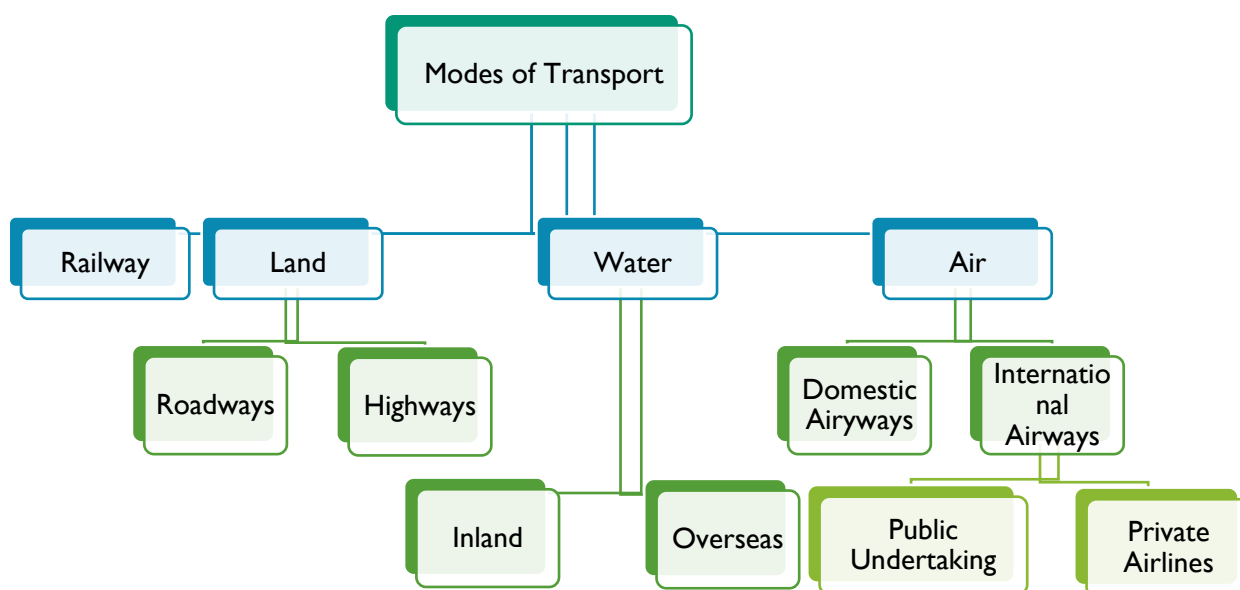
- **Production Linked Incentive (PLI) schemes** have driven capacity expansion and scale efficiencies by linking incentives to incremental production, supporting technology upgradation and enhancing global competitiveness of Indian manufacturers.
- **Infrastructure-led demand**, supported by sustained government spending on roads, railways, metros, ports, power, and urban infrastructure, has increased demand for manufactured inputs such as steel, cement, electrical equipment, and industrial machinery.
- **Rising domestic consumption**, driven by income growth, urbanisation, housing demand, and expansion of consumer durables, has strengthened the manufacturing demand base.
- **Export-oriented production** has gained momentum as Indian manufacturers benefit from global supply chain diversification, cost competitiveness, and improving trade access, reinforcing manufacturing's growing contribution to GVA.



Logistics Industry in India

An Industry Overview and Genesis of Logistics Market: Road Transport, Air Transport, Sea Transport and Rail Transport

The logistics market in India has evolved into one of the most critical enablers of the country's economic growth, acting as the backbone that connects producers, suppliers, and consumers across its vast geography. With the increasing pace of industrialization, urbanization, globalization, and the rapid growth of e-commerce, the demand for efficient movement of goods has surged, giving rise to a complex and dynamic logistics ecosystem. India's logistics cost is currently at **7.97%¹³ of GDP**, reflecting significant improvements in logistics efficiency driven by ongoing investments in transport infrastructure, multimodal connectivity, digitalization, and supply chain optimization. The freight modal split in India is dominated by **road transport, which accounts for 66% of freight movement**, followed by **railways at 22%**, **waterways at 8%**, **pipelines at 3.60%**, and **air transport at just 0.40%**, highlighting the country's evolving multimodal logistics ecosystem.¹⁴



Road transport dominates India's logistics landscape, accounting for approximately 66% of domestic freight movement due to its flexibility, accessibility, and door-to-door connectivity. As of **FY2026**, India's road network spans **63,73,581 km**, including **1,46,572 km of National Highways**, enabling efficient movement of goods across urban and rural regions while supporting e-commerce, manufacturing, small

¹³ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2195125®=48&lang=2>

¹⁴ <https://www.niti.gov.in/sites/default/files/2026-02/Scenarios-Towards-Viksit-Bharat-and-Net-Zero-Sectoral-Insights-Transport.pdf>

businesses, and last-mile logistics. The National Highway network has expanded by **61% between FY2014 and FY2026**, significantly strengthening freight connectivity across the country¹⁵. In FY24 alone, around **214 million tonnes of coal** were transported via roads, illustrating its crucial role for energy and industrial supply chains. Government initiatives like the Bharatmala Project aim to improve road quality, reduce congestion, and enhance freight efficiency, further strengthening road transport's role in India's logistics ecosystem.

Rail transport complements roadways by providing a cost-effective and energy-efficient mode for transporting bulk commodities over long distances. Investments in Dedicated Freight Corridors (DFCs) and modernized rail infrastructure have improved the movement of coal, iron ore, steel, cement, fertilizers, and agricultural produce. **In May 2026**, Indian Railways recorded **freight loading** of approximately **145 million tonnes**, representing a **1.3% year-on-year increase**¹⁶, driven by strong growth in iron ore, steel, and fertilizer traffic. For **FY2026-27**, **freight operations are expected** to remain the primary revenue source, with **62%** of Indian Railways' traffic revenue (approximately **INR 1.89 lakh crore**)¹⁷ projected to be generated from freight services, highlighting the sector's critical role in India's logistics ecosystem.

Air and maritime transport form the backbone of India's international logistics network. Air transport plays a critical role in moving high-value, time-sensitive, and perishable cargo such as electronics, pharmaceuticals, and express parcels, ensuring rapid connectivity with global markets. Maritime transport remains the primary mode for India's international trade and energy security. During April–December FY2025-26, the 12 Major Ports handled **672.98 million tonnes (MMT) of cargo**, registering an **8.22%** year-on-year increase from **621.87 MMT** during the corresponding period of the previous year.¹⁸ This growth highlights the expanding role of ports in supporting India's trade. Government initiatives such as the Sagarmala Programme continue to drive port modernization, improve coastal shipping, strengthen port connectivity, and promote multimodal integration, thereby reducing logistics costs and enhancing India's global trade competitiveness.

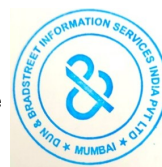
The logistics sector in India continues to evolve rapidly, driven by policy reforms, infrastructural investments, and technological innovations such as AI-enabled tracking, digital freight platforms, and integrated supply chain solutions. With industrialization, urbanization, and international trade expanding, new opportunities are emerging across road, rail, air, and maritime transport. The adoption of multimodal logistics, development of Dedicated Freight Corridors, port modernization under the Sagarmala Project, and growing investment in e-commerce and cold-chain infrastructure are reshaping the industry landscape. As the sector scales up, it is expected to adapt continuously to emerging technologies, changing trade patterns, and sustainability imperatives, reflecting India's dynamic economic growth trajectory.

¹⁵ <https://morth.gov.in/backend/documents/uploaded/RTH%20Annual%20Report%20English.pdf>

¹⁶ <https://newsonair.gov.in/railways-maintain-freight-growth-momentum-in-the-first-two-months-of-this-fiscal/>

¹⁷ https://prsindia.org/files/budget/budget_parliament/2026/DfG_Analysis_2026-27-Railways.pdf

¹⁸ <https://shipmin.gov.in/sites/default/files/Annual%20Report%202025-26%20english.pdf>



Genesis of Indian Logistics

The evolution of India's logistics industry can be traced back to the economic liberalization of the 1990s. This period marked a shift toward global supply chain integration, attracting foreign investments and modernizing logistics operations. Before liberalization, the sector was highly fragmented, labour-intensive, and reliant on outdated infrastructure and technology.

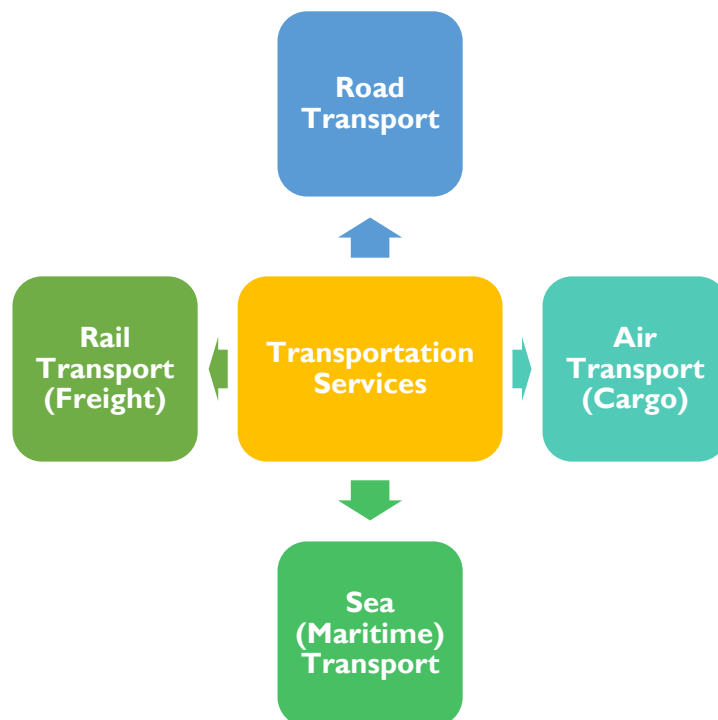
The rapid expansion of e-commerce, manufacturing, and retail sectors has further fuelled the need for streamlined supply chains. Foreign investments have introduced advanced technologies and best practices, significantly enhancing the capabilities of Indian logistics providers.

Recognizing the importance of infrastructure, the Indian government has heavily invested in roads, railways, ports, and airports. Key initiatives like the Goods and Services Tax (GST) and the Dedicated Freight Corridor (DFC) project have improved goods movement efficiency, reduced transit times, and strengthened India's logistics ecosystem.

- **Transportation Services:**

Transportation is the backbone of logistics, ensuring the movement of goods across the country. India's transportation network is shaped by historical developments, geography, and cultural influences. While transportation contributes significantly to economic growth, it also impacts the environment due to emissions and climate change. Advancements in technology have made transportation more cost-effective and efficient.

India's transportation system is classified into four primary modes:



I. Road Transport

Road transport forms the backbone of India's logistics sector, offering unmatched flexibility, last-mile reach, and accessibility to even the most remote regions. With an extensive road network of approximately **63,73,581 kilometres**¹⁹, one of the largest in the world, it plays a critical role in enabling domestic trade, efficient distribution, and smooth mobility across rural and urban markets.

Key Features of Road Transport:

- **Connectivity:** Links urban and rural areas, ensuring seamless movement of goods.
- **Flexibility:** Provides route flexibility and vehicle options to suit various logistics needs.

Types of Roads in India:

- **Golden Quadrilateral & Superhighways:** Connects major cities like Delhi, Kolkata, Chennai, and Mumbai, along with North-South and East-West corridors.
- **National Highways:** Maintained by the Central Public Works Department, connecting major cities and economic centres.
- **State Highways:** Links state capitals with district headquarters, managed by state authorities.
- **District Roads:** Connects district headquarters to smaller towns and villages.
- **Rural Roads:** Developed under schemes like the Pradhan Mantri Grameen Sadak Yojana.
- **Border Roads:** Constructed by the Border Roads Organisation to improve connectivity in strategic areas.

Key Government Initiatives

- **Bharatmala Pariyojana:** Focuses on developing economic corridors, border roads, expressways, and national highways.
- **PMGSY:** Strengthens rural connectivity by providing all-weather roads.
- **FASTag:** Introduces digital tolling for faster movement and reduced congestion.
- **Logistics Efficiency Enhancement Program (LEEP):** Aims to integrate transport modes and improve overall logistics performance.

2. Air Transport (Cargo)

Air transport is a rapidly expanding pillar of India's logistics ecosystem, enabling the fast movement of high-value, time-critical, and perishable goods. India has emerged as the world's third-largest

¹⁹ <https://morth.gov.in/backend/documents/uploaded/RTH%20Annual%20Report%20English.pdf>

domestic aviation market, supported by rising incomes, urbanisation, and demand for quicker delivery networks. During FY26 (April–July 2025), passenger traffic reached 96.54 million and air freight volumes touched 1.2 MMT, reflecting strong sectoral momentum. The country's airport network has grown from **74 airports in 2014 to 165 by 2026**²⁰, strengthening both domestic and global connectivity. Major hubs such as Delhi, Mumbai, Bengaluru, Chennai, and Hyderabad now anchor India's expanding air-cargo infrastructure, serving e-commerce, pharmaceuticals, electronics, perishables, and express logistics.

Development of Air Transport:

- Nationalized in 1953, leading to state-owned carriers like Indian Airlines and Air India.
- Private airlines and non-scheduled operators now enhance domestic air cargo connectivity.
- Helicopter services, such as Pawan Hans, facilitate transport to remote areas like the Northeast, Jammu & Kashmir, and Himachal Pradesh.

Government Initiatives Boosting Air Logistics

- **UDAN Scheme** to enhance regional connectivity and include cargo routes
- **Krishi UDAN** to support the transport of agricultural and perishable commodities
- **Air Cargo Logistics Promotion Board (ACLPB)** for process optimisation
- **Expansion of cargo terminals** with modern warehousing and handling facilities

Although air transport is more expensive than other modes, it offers unmatched speed and accessibility, making it crucial for industries requiring fast delivery.

3. Sea (Maritime) Transport

Maritime transport is one of the oldest and most cost-effective modes of transportation, ideal for moving bulk goods over long distances. India has an extensive coastline of **7,516.6 km**, with **12 major ports** and around **200 minor ports** that handle approximately **95% of India's international trade**.

Key Maritime Transport Features:

- **Inland Waterways:** India has 14,500 km of inland waterways, but only 5,685 km are navigable.
- **Major National Waterways:**
 - Ganga Waterway (Allahabad – Haldia, 1,620 km)
 - Brahmaputra Waterway (Sadiya – Dhubri, 891 km)
 - West Coast Canal (Kerala, 205 km)

²⁰ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2270740®=48&lang=2>

- Godavari-Krishna Waterway (1,078 km)
- Brahmani-Mahanadi Waterway (588 km)

Major Sea Ports in India:

- Kandla (Deendayal Port): First port built after independence, located in Gujarat.
- Mumbai Port: Largest and most important natural harbour.
- Marmagao (Goa): Handles around 50% of India's iron ore exports.
- Chennai Port: One of the oldest artificial ports, the second busiest after Mumbai.
- Visakhapatnam Port: A deep inland port with excellent connectivity.
- Kolkata Port: A tidal river port requiring regular dredging.

Government Initiatives Boosting Maritime Transport

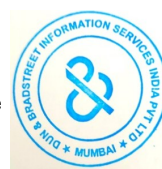
- **Sagarmala Programme:** Port modernization, coastal shipping, and port-led industrialization
- **National Waterways Development:** Promoting inland shipping and improving the navigability of rivers
- **Port Connectivity Improvement Project (PCIP):** Strengthening Road and rail links to major ports
- **Maritime Clusters & Industrial Corridors:** Establishing logistics parks and container terminals near ports
- **Digitization & Ease of Doing Business:** Single-window clearances and faster port operations.

4. Rail Transport (Freight)

Railways are the backbone of India's logistics sector, providing a **cost-effective, energy-efficient, and high-volume mode** for transporting goods over long distances. The network, divided into **16 zones**, plays a vital role in supporting industrial growth, agriculture, and trade. Rail freight is particularly suitable for bulk commodities such as coal, cement, steel, fertilizers, and agricultural produce, offering reliability even under adverse weather conditions.

Key Features of Rail Transport

- **High Capacity & Efficiency:** Ideal for long-distance, high-volume cargo.
- **Weather-Resistant:** Less affected by rain or extreme temperatures compared to road transport.



- **Cost-Effective:** Provides lower freight costs for bulk and heavy cargo.
- **Dedicated Freight Corridors (DFC):** Modernization initiatives to reduce congestion, increase speed, and improve logistics efficiency.

Factors Affecting Railway Development:

- **Flat Terrain (Northern Plains):** Ideal for railway expansion due to high population density and agricultural activity.
- **Difficult Terrain (Hills & Deserts):** Rail construction is challenging in hilly regions, deserts, and dense forests.
- **New Railway Projects:** The Konkan Railway has improved connectivity in western India but faces challenges like landslides.

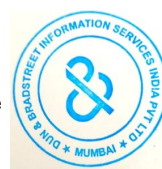
Government Initiatives Boosting Rail Logistics

- **Dedicated Freight Corridors (DFC):** Modernizing rail freight with high-capacity, high-speed cargo routes
- **National Rail Plan (NRP) 2030:** Optimizing rail infrastructure to handle 50% of freight movement by rail
- **Private Freight Terminals (PFTs):** Encouraging private participation for faster loading/unloading and warehousing
- **Railway Electrification & Green Initiatives:** Reducing carbon footprint and improving energy efficiency
- **Digital Freight Operations & Tracking:** Implementation of real-time tracking, EDI, and automated scheduling for efficiency

Rail transport is a weather-resistant mode of transportation compared to road and air, making it a reliable choice for freight movement. Indian Railways continues to modernize with Dedicated Freight Corridors (DFC) and high-speed rail projects to enhance efficiency.

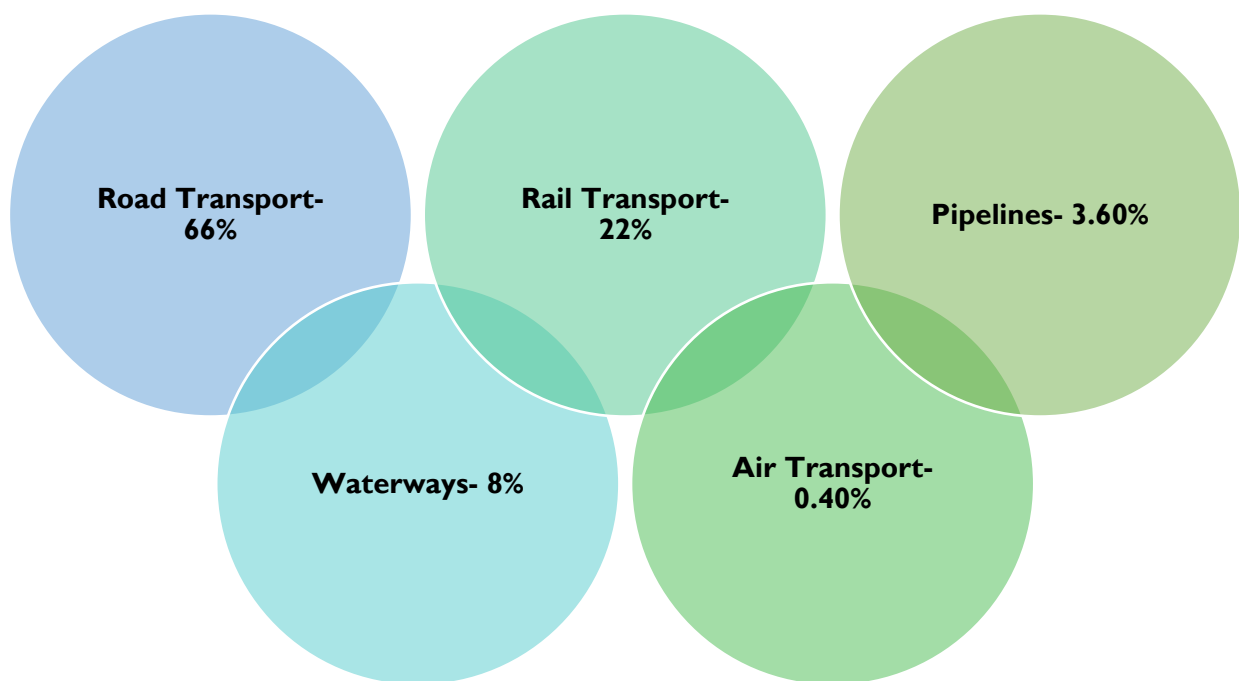
Freight Forwarding Services

Freight forwarding involves the coordination and management of shipments on behalf of shippers, serving as a critical link in India's logistics ecosystem. Freight forwarders help businesses navigate the complexities of transportation by selecting optimal routes, coordinating multiple modes of transport, road, rail, air, and sea, and ensuring timely delivery. They handle key responsibilities such as documentation, customs brokerage, warehouse planning, cargo consolidation, and insurance facilitation, enabling the smooth movement of goods both domestically and internationally.



For businesses looking to expand, international trade offers the opportunity to reach a broader customer base, but global logistics can be challenging due to varying regulations and complex supply chains. Freight forwarders simplify this process by ensuring shipments comply with all regulatory requirements, are transported efficiently, and reach their destination on schedule. Their expertise not only reduces operational risks but also supports industries such as e-commerce, manufacturing, pharmaceuticals, and agriculture in maintaining reliable, cost-effective, and seamless supply chains.

India's freight transportation industry plays a crucial role in the nation's economy, facilitating the movement of goods across vast distances. The industry is dominated by road transport, followed by railways, waterways, and other transport modes. Below is a detailed breakdown of the freight market, highlighting the share of each mode and its significance.



Source: NITI Aayog, **SECTORAL INSIGHTS: TRANSPORT 2026**

I. Road Transport

- **Market Share:** Approximately **66%** of India's total freight movement relies on road transport.
- **Key Factors for Dominance:**
 - **Versatility:** Road transport supports diverse cargo types, including perishable goods, consumer products, and industrial materials.
 - **Last-Mile Connectivity:** It provides seamless door-to-door delivery, making it the preferred choice for businesses.

- **Expanding Infrastructure:** Government initiatives such as the **Bharatmala Pariyojana** and expressway development are enhancing highway networks and improving logistics efficiency.

2. Rail Transport

- **Market Share: Around 22% of India's total freight traffic moves via railways.**
- **Advantages:**
 - **Cost Efficiency:** Rail transport is economical for long-distance bulk shipments such as coal, cement, steel, fertilizers, and food grains.
 - **Sustainability:** Lower carbon emissions and higher energy efficiency compared to road transport make rail an environmentally friendly alternative.
 - **Dedicated Freight Corridors:** Ongoing development of Dedicated Freight Corridors (DFCs) is improving freight capacity and transit time.

3. Water Transport (Inland Waterways & Coastal Shipping)

- **Market Share: Accounts for approximately 8% of India's total freight movement.**

Advantages:

- **Lower Costs:** Water transport offers a cost-effective alternative for transporting bulk cargo over long distances.
 - **Energy Efficient:** Fuel consumption and emissions are significantly lower than road and rail transport.
 - **Growing Infrastructure:** Government initiatives such as **Sagarmala** and the development of National Waterways are strengthening multimodal logistics.

4. Other Transport Modes (Pipelines & Air Transport)

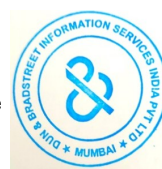
The remaining **4.00%** is distributed among other freight transport modes.

➤ Pipelines (3.60% of Total Freight Movement)

- **Usage: Best suited for transporting crude oil, petroleum products, natural gas, and other liquid commodities.**
- **Advantages:**
 - **Safe and Cost-Efficient:** Enables continuous transportation of large volumes over long distances.
 - **Reliable:** Minimal human intervention reduces delays, operational risks, and transportation losses.

➤ Air Transport (0.40% of Total Freight Movement)

- **Usage:** Primarily used for high-value, time-sensitive, and perishable goods such as pharmaceuticals, electronics, and express cargo.

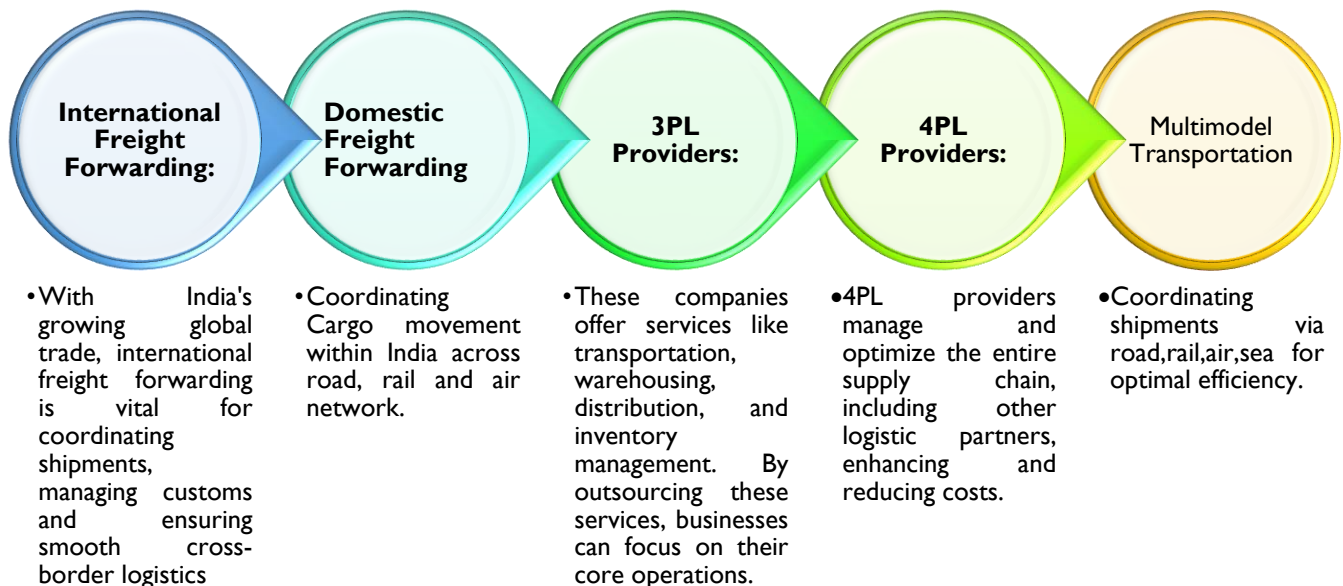


- **Advantages:**

- **Fastest Mode of Transport:** Significantly reduces lead times for urgent shipments.
- **High Security:** Ensures minimal transit time and reduced risk of cargo damage.

While **road and rail** continue to dominate India's freight market, **water transport, pipelines, and air transport** play important complementary roles. Increasing investments in multimodal logistics infrastructure, waterways, Dedicated Freight Corridors, and pipeline networks are expected to improve freight efficiency, reduce logistics costs, and create a more balanced and sustainable transport ecosystem.

Freight Forwarding and Logistics: Key Service Providers:



Belly cargo space

Belly cargo space, the underfloor cargo hold of an aircraft, plays a crucial role in air freight operations. While freighters are dedicated to carrying cargo, passenger aircraft also utilize their belly capacity to transport goods, providing an additional revenue stream for airlines. The efficiency of belly cargo utilization depends on factors such as aircraft type, baggage allowance, and overall cargo demand.

Utilization of Belly Cargo Space in Passenger Aircraft

- Passenger airlines maximize their revenue by optimizing available belly space for cargo transport. However, there are limitations to how much cargo can be carried, primarily due to the allocation of space for passenger baggage.
- Typically, airlines offer a baggage allowance of **15 kg per passenger** in the domestic sector. For an aircraft carrying **200 passengers**, this translates to **3,000 kg of baggage**, reducing the available belly capacity for additional cargo. Despite this limitation, airlines have been making concerted efforts to enhance belly cargo efficiency, ensuring optimal utilization of available space.

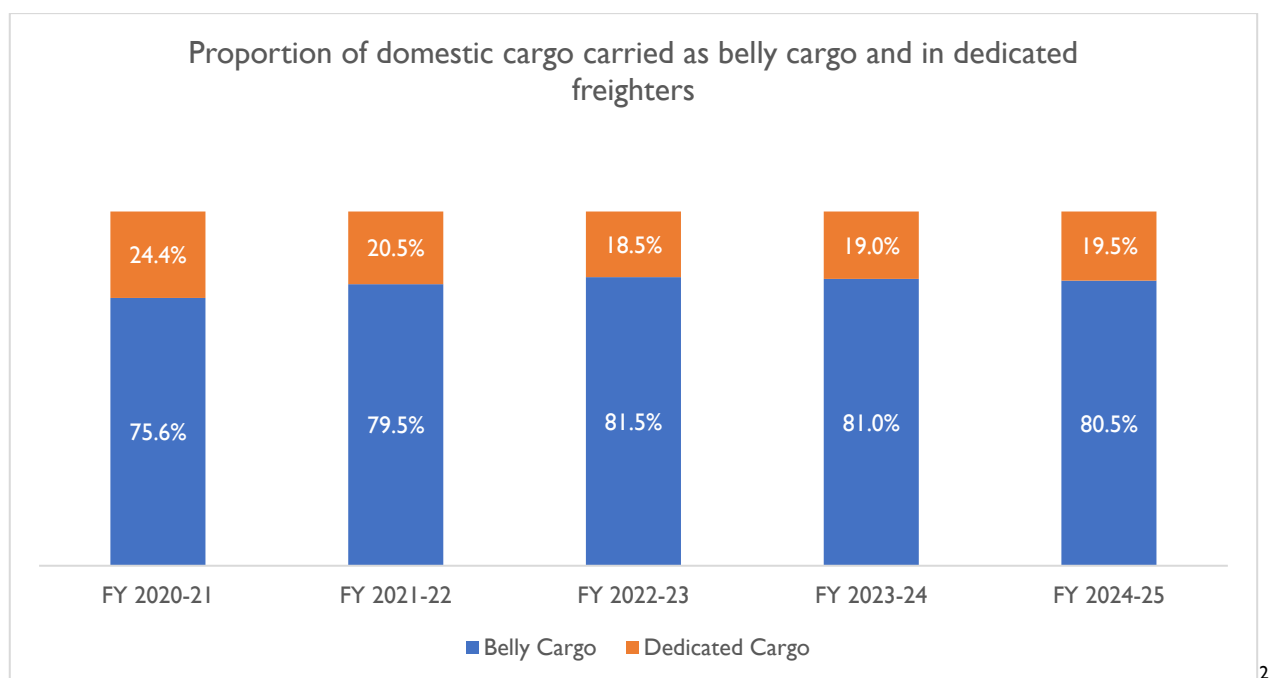
Belly Cargo Capacity in Different Aircraft Types

The belly cargo capacity varies based on the type of aircraft:

- **Narrow-body aircraft:** These aircraft, commonly used for domestic and short-haul international routes, can accommodate up to 6 tonnes of cargo in their belly compartments, depending on configuration and baggage load.
- **Wide-body aircraft:** Used for long-haul and international flights, wide-body aircraft have significantly larger belly capacities, often exceeding 20 tonnes.
- **Freight-dedicated aircraft** primarily focus on maximizing main deck capacity, with belly space serving as an additional cargo area.

Growth of Belly Cargo Utilization in India

In recent years, Indian airlines have significantly improved belly cargo utilization. There has been a steady increase in belly cargo utilization rates:



21

Note: as per the latest data of December 2025

Over the past five years, India's air cargo market has shown a clear dominance of **belly cargo**, which consistently accounts for the majority of shipments compared to **dedicated cargo**. In FY2020-21, belly cargo constituted **75.6%** of the market, rising to **81.5% by FY2022-23**, before slightly moderating to **80.5% in FY2024-25**. Conversely, dedicated cargo has maintained a smaller share, declining from **24.4% in FY2020-21** to a low of **18.5% in FY2022-23**, then edging up slightly to **19.5% in FY2024-25**. This trend reflects the continued reliance of air cargo operators on passenger flights for freight transport, while dedicated freighter services, though growing steadily, remain a smaller component of the overall air cargo ecosystem.

This growth highlights the importance of belly cargo in the Indian air freight sector. With increasing demand for e-commerce and time-sensitive shipments, airlines continue to optimize cargo operations to enhance revenue potential.

Challenges and Future Prospects

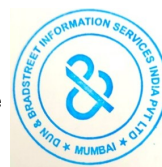
Despite its advantages, belly cargo space has some challenges:

- **Limited Capacity:** Passenger baggage reduces the space available for cargo, especially on high-density routes.
- **Load Balancing:** Cargo distribution must align with aircraft weight and balance requirements to maintain safety.

²¹ Civil Aviation Statistics

- **Regulatory Compliance:** Cargo transport regulations, including weight restrictions and security screening, impact operational efficiency.

Going forward, advancements in cargo handling technology, automated loading systems, and real-time tracking solutions will further enhance belly cargo efficiency. Additionally, airlines may introduce flexible baggage policies to optimize space utilization while maintaining passenger convenience. Belly cargo space remains a vital component of air cargo operations, providing a cost-effective way to transport goods alongside passengers. As airlines continue to refine cargo strategies, the utilization of belly capacity is expected to grow, contributing to overall industry efficiency and revenue generation.



India's Logistics Performance Index (LPI)

The country successfully ascended from the 44th to the 38th position in the World Bank's Logistics Performance Index (LPI) 2023, demonstrating notable progress. Logistic cost in India currently stands at 7.97% of GDP,²² intriguingly closer to a level seen in developed nations.

Parameter	Rank 2023 (Out Of 139 Countries)	Rank 2018 (Out Of 160 Countries)	Rank 2016 (Out Of 160 Countries)
Overall LPI Rank	38	44	35
Custom	38	40	38
Infrastructure	47	52	36
International Shipments	22	44	39
Logistics Quality & Competence	38	42	32
Tracking & tracing	41	38	33
Timeliness	35	52	42

Source: World Bank

This advancement is largely due to strategic government initiatives such as the PM Gati Shakti National Master Plan and the National Logistics Policy, which have enhanced logistics efficiency and infrastructure. Investments in trade-related infrastructure and the adoption of digital technologies such as the Unified Logistics Interface Platform (ULIP) and the Logistics Data Bank have also played a crucial role. Additionally, the establishment of an Inter-Ministerial team and the National Committee for Trade Facilitation (NCTF) has contributed to this progress in addressing key logistics parameters. Notable improvements include India's climb in international shipment rankings from **44th to 22nd** and an enhancement in infrastructure scores from **52nd to 47th**.

²² <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2195125®=48&lang=2>

Government Initiatives and Infrastructure Development

- **National Logistics Policy (2022)**

- Launched in September 2022, the National Logistics Policy aims to optimize India's logistics landscape by improving multimodal transportation.
- A key focus is to increase the railways' share in freight movement, currently at 18%, through investments in Dedicated Freight Corridors (DFCs) and expanded inland waterways.
- As of April 2024, 96% of DFCs are complete, expected to enhance rail freight capacity and efficiency, thereby improving the modal mix.
- The government's push for port privatization has led to improved infrastructure and efficiency at Indian ports, benefiting major logistics operators.
- Key achievements under the National Logistics Policy (2022–2025) include the successful implementation of the Unified Logistics Interface Platform (ULIP), which has enabled secure API integration across more than 30 digital systems and facilitated over 160 crore digital transactions as of August 2025, improving data sharing and operational efficiency across the logistics ecosystem.²³
- Additionally, the Logistics Data Bank (LDB) has tracked over 75 million EXIM containers across 101 Inland Container Depots (ICDs), providing real-time shipment visibility, improving supply chain transparency, and streamlining logistics operations.

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

- Launched in October 2021, PM Gati Shakti integrates 16 ministries to create a unified platform for planning and monitoring multimodal infrastructure.
- The initiative focuses on reducing logistics costs (currently 14–16% of GDP) through better connectivity, seamless coordination, and faster project execution.
- Over 1,600+ layers of data, covering roads, railways, ports, power, and land availability, are mapped to support efficient decision-making.
- Connectivity projects such as industrial corridors, economic zones, and port linkages are prioritized to enhance freight efficiency and reduce transit delays.
- During **FY2022-23 to FY2025-26, 300 railway infrastructure projects** (comprising **51 New Line, 17 Gauge Conversion, and 232 Doubling projects**) covering a total length of **13,808 km** were sanctioned under the PM Gati Shakti National Master Plan, strengthening rail connectivity and freight capacity across the country.²⁴
- Freight movement and logistics integration have been further strengthened through dedicated cargo infrastructure and multimodal logistics systems. Under the PM Gati Shakti framework, 139 cargo terminals have become operational, while 300 additional terminal locations have been

²³ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2167224®=3&lang=2>

²⁴ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2246241>

approved for development, enhancing cargo handling efficiency, reducing transit delays, and improving supply chain connectivity across regions.²⁵

- **Bharatmala Pariyojana**

- A flagship highway development program aimed at building **~34,800 km** of highways to strengthen freight corridors and improve last-mile logistics connectivity.
- Focuses heavily on the development of **economic corridors, feeder routes, border roads**, and expressways.
- Has significantly reduced travel time on major freight routes and improved connectivity between manufacturing hubs and ports.
- As of March 2026, projects covering **26,425 km had been awarded**, while **22,590 km had been constructed**, reflecting significant progress in expanding India's highway infrastructure.²⁶
- Bharatmala Pariyojana has significantly strengthened connectivity between manufacturing hubs, ports, logistics parks, and consumption centres, reduced travel time and logistics costs, and improved access to remote and strategically important regions, thereby supporting economic development, regional balance, and national integration.

- **Sagarmala Program**

- Targets modernization of port infrastructure and development of port-led industrial clusters to enhance coastal and EXIM logistics.
- Covers more than 800+ projects across port connectivity, port modernization, and coastal community development.
- Focuses on improving coastal shipping and reducing overall logistics costs by leveraging India's **7,500 km** coastline.
- Over the past eleven years, the programme has undertaken **845 projects** with a total estimated investment of **INR 6.06 lakh crore**, reflecting its scale and long-term commitment to maritime infrastructure development.
- As of **March 2026**, **315 projects worth INR 1.57 lakh crore** have been completed, **210 projects** are under implementation, and 320 projects are in the planning stage, significantly strengthening port infrastructure, improving cargo handling capacity, enhancing connectivity, and supporting economic activity across India's coastal regions.²⁷

- **Strengthening Multimodal and Integrated Logistics Ecosystem (SMILE) Program**

- A policy-based reform program jointly supported by the **Government of India** and the **Asian Development Bank (ADB)** to strengthen India's multimodal logistics ecosystem.

²⁵ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2270740®=3&lang=1>

²⁶ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2272639®=3&lang=1>

²⁷ <https://www.pib.gov.in/PressNoteDetails.aspx?NotelD=158151&ModuleId=3®=3&lang=1>

- Focuses on improving inter-ministerial coordination, promoting private sector participation in multimodal logistics projects, enhancing trade logistics efficiency, and encouraging the adoption of smart and automated logistics systems.
- Under the **second subprogram of the SMILE Program**, the **Government of India and ADB** signed a **US\$350 million policy-based loan** to support logistics sector reforms and infrastructure development.²⁸
- **Logistics Costs and Modal Mix**
 - Logistic cost in India currently stands at **7.97%²⁹ of GDP³⁰** intriguingly closer to a level seen in developed nations.
 - The inefficiency in the sector is largely due to the skewed modal mix, where road transport accounts for **71%** of freight movement, leaving railways and waterways with a smaller share.
 - To address these issues, the government has implemented Goods and Services Tax (GST) and invested heavily in road infrastructure, inland waterways, and DFCs.
- **Dedicated Freight Corridors (DFC)**
 - India is developing two major freight corridors, Eastern DFC (EDFC) and Western DFC (WDFC), to significantly increase freight speed and capacity.
 - As of 2024, **96% of the DFC network is completed**, with full operationalization expected to reduce transit time by up to 40%.
 - DFCs are expected to shift a substantial share of freight from road to rail, lowering logistics costs and improving reliability.
- **Airport Cargo & Connectivity Expansion**
 - The government is expanding air cargo capacity through upgrades under the UDAN and Bharatmala connectivity frameworks.
 - Dedicated cargo terminals and perishable cargo centers are being developed at major airports like Delhi, Mumbai, Hyderabad, and Bengaluru.
 - Airfreight capacity is rising to support e-commerce, high-value goods, and pharmaceutical exports.

²⁸ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2086638®=48&lang=2>

²⁹ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2195125®=48&lang=2>

³⁰ National Council of Applied Economic Research (NCAER) estimates in 2021-22

Key Market Segments and Growth Trends

The Indian logistics sector is highly diverse, covering road transport, rail transport, air cargo, multimodal logistics, and industrial warehousing.

1. Domestic Express Logistics

- The domestic express logistics segment is projected to grow at a CAGR of **14%** from **FY23 to FY28**, driven by the expansion of e-commerce.
- Organized players currently control **80%** of the market and are expected to strengthen their dominance by leveraging government policies such as GST and the e-way bill.

2. Less-Than-Truckload (LTL) Segment

- The LTL segment in road transportation is expected to grow at a **CAGR of 10%** due to increasing demand for smaller, more frequent shipments that bypass warehouse storage to reach retailers directly.

3. Third-Party Logistics (3PL)

- The 3PL segment continues to expand as companies outsource transportation, warehousing, order fulfilment, and supply chain operations for cost efficiency.
- Demand is rising, particularly from sectors like automotive, e-commerce, FMCG, electronics, and pharmaceuticals.
- Technology adoption, including WMS, TMS, RFID, and real-time visibility solutions, is a major differentiator for leading 3PL providers.

4. Warehousing & Storage

- Warehousing is expanding rapidly as companies shift from fragmented storage facilities to larger, Grade-A warehouses.
- Automation, racking systems, and multi-level storage are becoming standard features, especially near industrial corridors and consumption hubs.
- E-commerce and retail consolidation are driving demand for fulfilment centres and last-mile storage nodes.

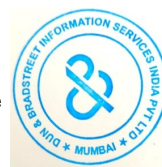
Growth Drivers of the Indian Logistics Market

• Expansion of E-Commerce and Digital Retail

- The boom in online shopping, hyperlocal delivery, and omni-channel retail has significantly increased demand for fast, reliable logistics services.
- E-commerce players are expanding fulfilment centers and last-mile networks even in Tier-2 and Tier-3 cities, driving logistics penetration deeper into the country.

• Infrastructure Modernization

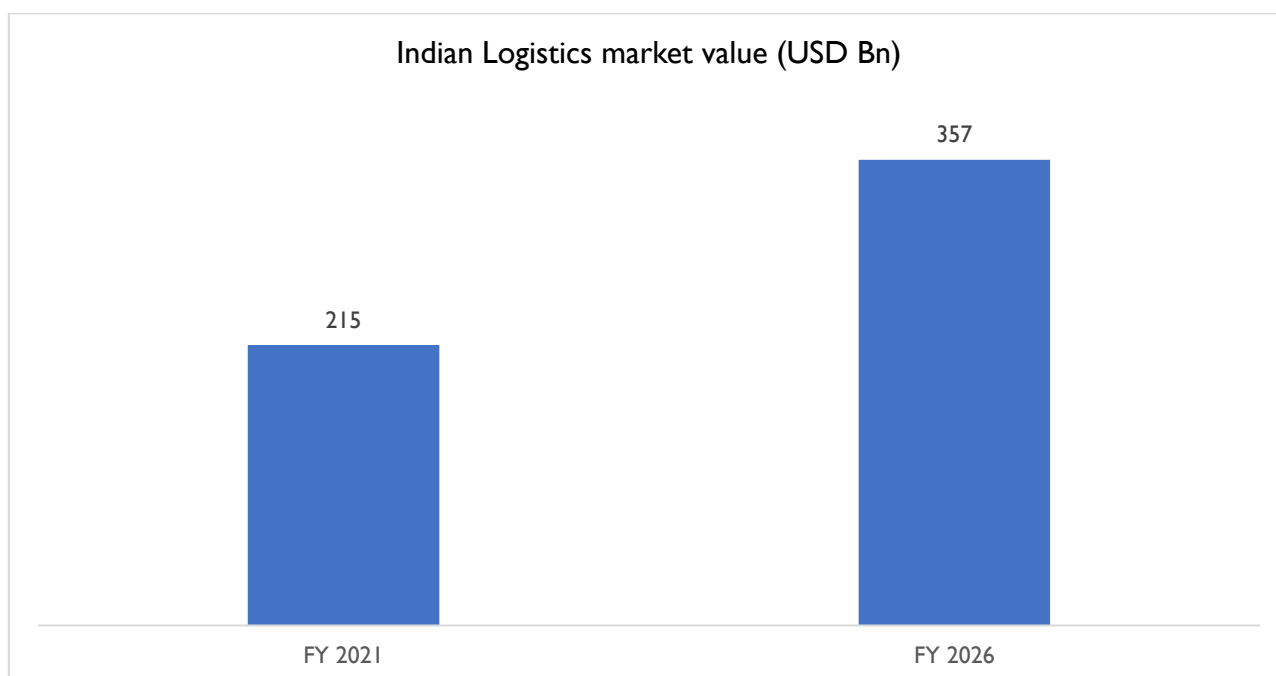
- Massive investments in highways, expressways, multimodal logistics parks, and airports are enabling faster cargo movement across regions.
- Development of Dedicated Freight Corridors (DFCs), inland waterways, and port upgrades is strengthening India's multimodal transport network.
- **Growth in Manufacturing and Industrial Activity**
 - Government programmes such as Make in India, PLI schemes, and industrial corridors are increasing production volumes, creating stronger demand for transportation, warehousing, and 3PL services.
 - Sectors like automotive, electronics, pharmaceuticals, textiles, and FMCG are expanding their supply chains, directly boosting logistics requirements.
- **Integration of Multimodal Logistics**
 - Increasing use of rail, road, air, and waterways in combination is reducing costs, improving transit times, and enhancing flexibility.
 - Companies are moving toward dynamic route planning that can shift between modes based on cost, speed, and congestion



Market Scenario: Estimated Market Size of Logistics Industry

The Indian logistics sector is among the largest in the world, offering significant opportunities for growth. This sector is an integral part of the national GDP value chain, as it connects various components of the economy and encompasses transportation, warehousing, and other supply chain solutions for both suppliers and end customers. An efficient logistics industry is a critical component as it secures better market access for goods and services and boosts consumption growth. Acknowledging the need to strengthen logistics infrastructure, the sector has attracted the attention of the government and even private participants.

India's logistics industry is thus poised to achieve significant milestones in 2024 due to a surge in e-commerce, government initiatives, and technological advancements. As the Indian economy expands, the logistics sector is expected to see unprecedented growth, driven by a range of factors including enhanced infrastructure and evolving market demands.



Source: Press Information Bureau, D&B Research³¹

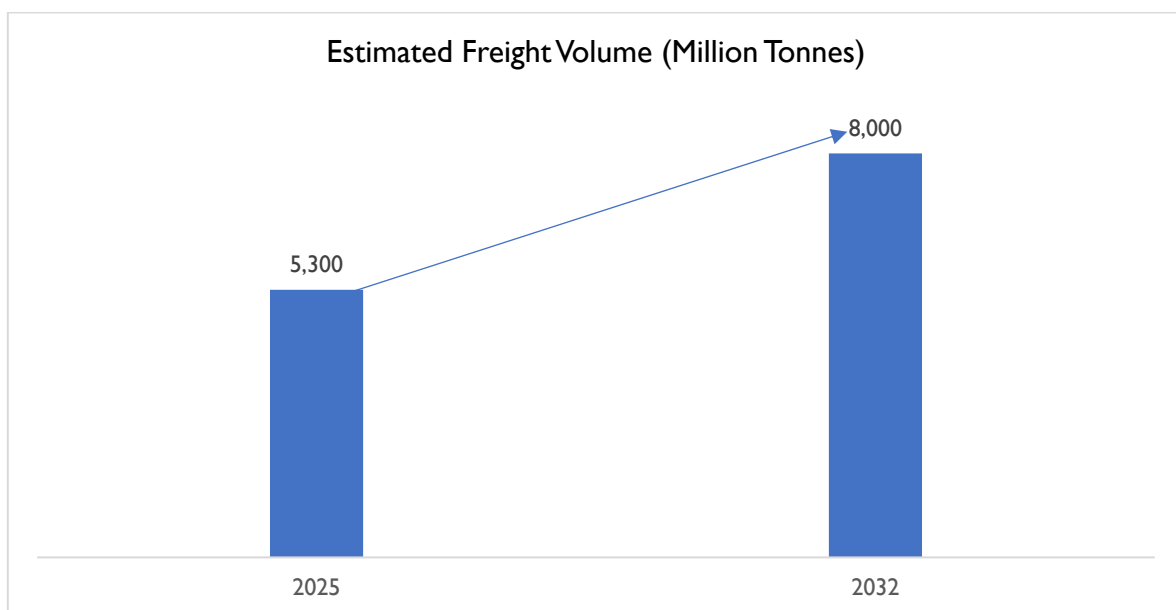
The Indian logistics sector has witnessed significant expansion over the past few years, supported by rapid industrialization, urbanization, rising domestic consumption, and the continued growth of e-commerce. The sector was valued at **USD 215 billion in 2021** and is expected to grow at a compound annual growth rate **(CAGR) of 10.7%**, reaching an **estimated USD 357 billion by FY2026**. This sustained growth reflects increasing demand for integrated supply chain solutions, multimodal transportation, warehousing, and value-added logistics services, reinforcing the sector's critical role in enhancing India's economic competitiveness and facilitating domestic as well as international trade.

³¹ <https://www.pib.gov.in/PressNoteDetails.aspx?NotelId=155038&ModuleId=3®=3&lang=2>

The sector's long-term growth outlook has been further strengthened by the Government of India's decision to grant logistics infrastructure status, enabling logistics companies to access lower-cost, long-term financing similar to road and rail infrastructure projects. This policy support, coupled with flagship infrastructure initiatives such as Bharatmala Pariyojana, PM Gati Shakti National Master Plan, and the National Logistics Policy (NLP), is improving multimodal connectivity, reducing logistics costs, and enhancing supply chain efficiency across the country. Simultaneously, the rapid expansion of e-commerce has accelerated demand for modern warehousing, last-mile delivery, cold-chain infrastructure, and technology-enabled logistics solutions. The adoption of advanced technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), blockchain, automation, drones, and data analytics is transforming logistics operations by improving visibility, operational efficiency, and cost optimization, positioning the sector for sustained long-term growth.

Estimated Volume of Freight Carried in India

The freight transportation industry in India has grown significantly due to increasing industrial activity, urbanization, and e-commerce expansion.



Current Scenario (2025):

- The total freight volume in India is estimated to be **5,300 million tonnes** as of 2025.
- This includes transportation through multiple modes such as road, rail, waterways, and air.
- The growth is driven by increasing demand in manufacturing, construction, and the retail sector.

Future Projection (2032):

- The total freight volume is expected to reach **8,000 million tonnes** by 2032.
- This indicates a substantial increase of **60% over eight years**.
- Government initiatives like the **PM Gati Shakti National Master Plan**, investment in dedicated freight corridors, and improved infrastructure are expected to support this growth.

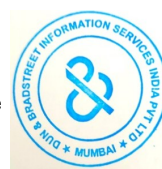
Key Factors Driving Freight Growth

- **Economic Expansion:** India's GDP growth directly contributes to higher freight demand.
- **Urbanization & Industrialization:** Increased production and consumption lead to greater freight movement.
- **E-commerce Boom:** The rise of online shopping has increased demand for fast and efficient logistics.
- **Government Policies:** Infrastructure investments, multimodal logistics parks, and policy reforms support logistics efficiency.

India's freight transportation sector is poised for significant growth, with an expected increase from **5,300 MT in 2025 to 8,000 MT by 2032**. This reflects a growing economy, improved logistics infrastructure, and a shift toward more efficient supply chain mechanisms. However, challenges such as congestion, environmental concerns, and the need for sustainable logistics solutions must be addressed. Investments in green logistics, technology-driven solutions, and infrastructure upgrades will be key in ensuring efficient and sustainable freight movement in the coming years.

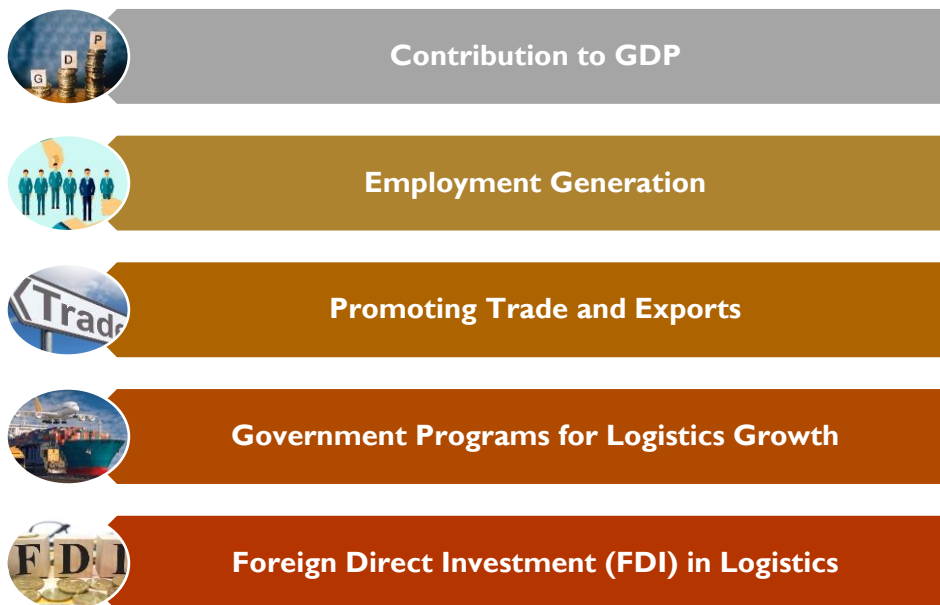
Factors Driving Freight Growth:

- **Rapid Industrialization and Manufacturing Expansion**
 - Expansion of manufacturing under initiatives like **Make in India**, PLI schemes, and industrial corridors is increasing the volume of goods transported.
 - Sectors like automotive, electronics, FMCG, chemicals, and pharmaceuticals are driving higher freight demand for both raw materials and finished products.
- **Growth of E-Commerce and Retail**
 - Rising online shopping, omni-channel retail, and hyperlocal deliveries are significantly increasing freight movement, especially in urban and semi-urban areas.
 - Demand for faster, frequent shipments is boosting LTL (Less-Than-Truckload) and last-mile freight services.
- **Infrastructure Development**



- Investments in **highways, expressways, Dedicated Freight Corridors (DFCs), ports, airports, and multimodal logistics parks** are reducing transit times and improving reliability.
- Better connectivity allows freight to move more efficiently across long distances, making rail, road, and waterways more viable for cargo.
- **Rising Organized Logistics and 3PL Adoption**
 - Businesses are increasingly outsourcing freight and supply chain operations to **organized 3PL and 4PL providers**, which improves efficiency and service levels.
 - Professional logistics players offer route optimization, multimodal transport, and cargo tracking, further stimulating freight volumes.
- **Global Trade Expansion**
 - Rising imports and exports are increasing demand for freight services linking ports, airports, and inland hubs.
 - Integration into global supply chains is boosting containerized freight and multimodal transport demand.

Logistics Industry Contribution to Economic Growth



- **Contribution to GDP**

The logistics industry is a core support area of the Indian economy, generating ~**14-15%** of the GDP in 2025 released by the Ministry of Finance. Until a few years back, owing to the inefficiencies in warehousing, transportation, and supply chain management, the logistics costs remained disproportionately elevated at **13-14%** of GDP, against the international benchmark of **8-10%**. However, proving to be aware of this challenge, the Government of India brought out the National Logistics Policy (NLP) in 2022, which is steadily helping to bring down the cost of logistics in India, which currently measures **7.97% of GDP**. This steady effort to

reduce the logistic cost is anticipated to increase the competitiveness of Indian industries and add a further 1.5-2% to GDP growth every year.

Supporting this endeavour is the PM Gati Shakti National Master Plan, a revolutionary effort that unites infrastructure development among **16 critical ministries**, such as roads, railways, ports, and aviation. By aligning these projects, the plan seeks to do away with delays and minimize expenses, thus enhancing the overall efficacy of the logistics network.

For example, the Bharatmala Pariyojana, a flagship ministry of Road Transport and Highways highway development project, has already slashed freight travel time by **20%**, and the Dedicated Freight Corridors (DFCs) being constructed by Indian Railways are expected to save INR **1.3 lakh crore** in logistics costs annually once they become operational in full.

- **Employment Generation**

The logistics industry is one of India's biggest job creators, and it employs over **22 million** people, as documented by the Ministry of Commerce and Industry in 2025. This staff is spread throughout several sub-industries, where road transportation covers **70%** of employees, warehousing and cold storage take **15%**, and last-mile delivery solutions cover 10%. The growth of online platforms such as Flipkart and Amazon at a faster pace has increased demand for well-skilled logistics professionals even more in urban and semi-urban cities.

In order to meet the skills gap, the National Skill Development Corporation (NSDC) undertakes the Skill India Mission that has trained 5 lakh workers for logistics-specific functions up to 2023. The emerging fields like drone-based delivery, which is being encouraged under the Drone Policy 2022, and AI-powered warehouse management systems, which form a part of the overall Digital India program, are the focus areas for training programs. Through the provision of contemporary skills to the workforce, the government hopes to boost productivity and make sure that the logistics industry remains a key driver of inclusive economic growth.

- **Promoting Trade and Exports**

Adequate logistics are vital to boost India's trade competitiveness, as highlighted by recent progress toward reducing national logistics costs. Through strategic policy interventions such as the National Logistics Policy (2022), the PM Gati Shakti National Master Plan, and dedicated multimodal infrastructure schemes under the National Infrastructure Pipeline, the Government of India has projected that India's logistics cost is expected to drop to around 9% by December 2025, down from the earlier 14–16%. This improvement, driven by integrated planning, digital enablement, and enhanced multimodal connectivity, is set to make Indian manufacturing stronger, improve export competitiveness, and attract greater global investment, marking a significant step in India's economic transformation and easing a long-standing burden on the trade ecosystem. The Dedicated Freight Corridors (DFCs), the bedrock of India's logistics modernization, have decreased



freight transit times considerably. For instance, the Delhi-Mumbai freight corridor has reduced the travel time from 14 to 8 hours and resulted in saving **INR 400 billion** annually, according to the Dedicated Freight Corridor Corporation of India (DFCCIL) in 2023. Further, the Sagarmala Programme, with its port-led development, has brought the cost of coastal shipping down by **40%**, improving the competitiveness of Indian exports in overseas markets. These gains are essential in helping the government realize its vision of USD 1 trillion in merchandise exports by 2030.

- **Government Programs for Logistics Growth**

The National Logistics Policy (NLP) 2022 is a comprehensive effort to make India's logistics sector more efficient. One of the main elements of this policy is the Unified Logistics Interface Platform (ULIP), which brings together 30+ digital platforms of railways, ports, and customs to track shipments in real-time. Another vital initiative is the creation of Multi-Modal Logistics Parks (MMLPs), which will cut freight costs by **10-12%**, as projected by NITI Aayog in its 2023 report.

The Sagarmala Programme, initiated by the Ministry of Ports, Shipping, and Waterways, is another revolutionary initiative to maximize port efficiency and lower logistics costs. With **600+** projects totalling INR 8.5 trillion, the program aims to increase port connectivity, upgrade infrastructure, and encourage coastal shipping. In the same vein, the Bharatmala Pariyojana, under the Ministry of Road Transport and Highways, is building 12,000 km of new highways to enhance freight mobility. These initiatives together seek to make India a global logistics hub.

- **Foreign Direct Investment (FDI) in Logistics**

Foreign Direct Investment (FDI) in the logistics sector has become a cornerstone for enhancing global trade efficiency, infrastructure development, and technological advancement. Between 2000 and 2024, total FDI inflows reached USD **991 billion**, with a significant **67% (USD 667 billion)** of this investment occurring in the last decade (2014–2024), highlighting a sharp upward trend. Particularly notable is the manufacturing sector, which is closely linked to logistics and saw FDI equity inflows grow by 69% from USD **98 billion** in 2004–2014 to USD 165 billion in 2014–2024. This surge reflects the increasing focus of global investors on integrated supply chains, driving demand for modern warehousing, cold storage, freight networks, and last-mile delivery services.

Emerging markets in Asia-Pacific, the Middle East, and Africa have attracted strong FDI due to rising consumption, infrastructure gaps, and government-led policy reforms. Countries like India, supported by initiatives such as “Make in India” and Gati Shakti, have become key destinations for foreign investment in logistics. At the same time, developed regions in North America and Europe are channelling FDI toward digital logistics infrastructure, sustainability, and automation. Despite challenges such as regulatory barriers



and capital-intensive entry, the logistics sector remains a magnet for foreign capital, driven by its critical role in global economic growth and the need for resilient, tech-enabled supply chain systems.

Positioning of the Indian Logistics Industry in the Global Economy

India's logistics sector plays a critical role in the country's economic growth, global trade facilitation, and industrial competitiveness. The World Bank's Logistics Performance Index (LPI) 2023 report highlights significant advancements in India's logistics efficiency, with the country ranking 22nd globally in the International Shipments category and 38th in overall LPI score. This notable improvement is a testament to the government's continued emphasis on enhancing logistics infrastructure, digitization, and policy reforms.

The Logistics Performance Index (LPI) serves as a benchmark for evaluating the logistics capabilities of countries worldwide based on factors such as customs efficiency, infrastructure, international shipments, logistics quality, tracking and tracing, and timeliness. India's recent jump in rankings underscores its growing significance in global trade and supply chain networks.

One of the most noteworthy achievements is the reduction in port turnaround time, a critical indicator of logistics efficiency. As per the World Bank's LPI 2023 report, Indian ports recorded an average turnaround time of 0.9 days, outperforming several developed economies, including:

Sr no.	Country	Turnaround Time (Days)
1	India	0.9
2	Singapore	1
3	Malaysia	1
4	UAE	1.1
5	Indonesia	1.1
6	Ireland	1.2
7	Belgium	1.3
8	Germany	1.3
9	USA	1.5
10	Australia	1.7
11	Russia	1.8
12	Canada	2
13	South Africa	2.8

- **Maritime Amrit Kaal Vision 2047 – A Blueprint for Future Growth**

To further strengthen its logistics and maritime capabilities, India has developed the Maritime Amrit Kaal Vision 2047, aligning with the principles of the blue economy. This strategic roadmap outlines the long-term transformation of India's maritime sector, focusing on:

- Expansion of port capacity: Development of greenfield and brownfield ports to cater to rising trade volumes.
- Operational efficiency: Integration of automation, digitization, and advanced logistics technologies to improve supply chain management.
- Sustainability initiatives: Promotion of green logistics, establishment of hydrogen hubs, and enhancement of eco-friendly shipping practices.
- Boosting coastal tourism: Infrastructure development for island-based tourism and cruise shipping, strengthening India's position as a global maritime hub.
- Maritime capacity building: Investment in workforce training and skill development to create a future-ready logistics workforce.
- Shipbuilding and repair: Strengthening the domestic shipbuilding industry to reduce reliance on foreign manufacturing and boost India's shipping tonnage.
- Global engagement: Increasing participation in international maritime forums, reinforcing India's global maritime presence.

By executing this vision, India aims to position itself as a global logistics leader, ensuring seamless movement of goods, reduced transit costs, and enhanced trade efficiency.

- **Investment Commitments and Policy Reforms**

The Global Maritime India Summit (GMIS) 2023 served as a major catalyst in attracting substantial investments in the logistics and maritime sectors. The summit resulted in **INR 10 trillion** worth of investment commitments, including:

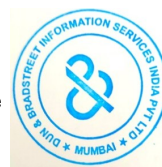
- 360 Memorandums of Understanding (MoUs) signed, accounting for an investment of **INR 8.35 trillion**, including international collaborations.
- Additional investible projects worth **INR 1.68 trillion** were announced, further driving growth in logistics infrastructure.

These investments reflect India's commitment to modernizing its logistics ecosystem, ensuring seamless trade facilitation, and enhancing global supply chain integration.

India's ascent in the Logistics Performance Index (LPI) 2023 demonstrates its growing competitiveness in global logistics. The country's strong performance in port efficiency, logistics infrastructure development, and



digital integration has positioned it as a critical player in international trade. With initiatives such as Maritime Amrit Kaal Vision 2047 and strategic investment inflows, India is well on track to become a global logistics powerhouse. Moving forward, continued policy reforms, technological advancements, and sustainability-driven strategies will be essential in sustaining this momentum and elevating India's position in the global logistics landscape.



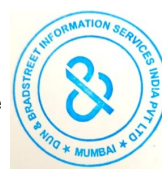
Air Transportation in Logistics

Overview of Air Transportation: Significance of air transportation in Logistics, Airport infrastructure Scenario in India

The Indian air transportation sector continues to be one of the fastest-growing segments of the country's mobility and logistics ecosystem. Passenger traffic has expanded steadily over the past decade, supported by rising disposable incomes, increasing domestic and international travel, and the continued expansion of low-cost carriers (LCCs), which have made air travel more affordable and accessible. According to the latest **ICRA Aviation Monthly Update** based on **DGCA** data, India's **domestic air passenger traffic reached 1,677.4 lakh (167.74 million) passengers in FY2025–26**, registering a **1.4% year-on-year growth** over **1,653.8 lakh passengers in FY2024–25**. Although growth moderated during the year, the Indian aviation market continued to witness resilient passenger demand, supported by improving regional connectivity under the Government's **UDAN (Ude Desh ka Aam Nagrik)** scheme and sustained expansion of airport infrastructure.

The air cargo and logistics segment continues to benefit from the rapid growth of e-commerce, express logistics, pharmaceuticals, and high-value cargo movement, reinforcing the strategic importance of air transportation within India's logistics ecosystem. According to the same ICRA report, **domestic air passenger traffic stood at 146.8 lakh in March 2026**, recording a **1.0% year-on-year increase** over **145.4 lakh passengers in March 2025** and a **4.4% sequential increase** compared to **140.6 lakh passengers in February 2026**. While domestic capacity deployment during March 2026 was **3.0% lower** than the corresponding month of the previous year, it increased by **10.6% over February 2026**, reflecting improved operational activity. However, the sector also faces challenges arising from rising aviation turbine fuel (ATF) prices, geopolitical disruptions affecting international airspace, and depreciation of the Indian Rupee, which are expected to exert pressure on airline profitability and moderate passenger traffic growth in the near term.

While the sector offers significant growth opportunities through airport modernization, greenfield projects, and digitalization of air traffic management and passenger services, it also faces challenges such as high fuel costs, regulatory compliance, competition from alternative transport modes, and environmental concerns. Despite these challenges, the Indian air transportation sector remains a crucial driver of economic growth, employment generation, and regional connectivity, while supporting trade, tourism, and emergency logistics. With sustained investment and policy support, the sector is projected to continue its robust growth trajectory in the coming years.



Air Cargo Segmentation by - Domestic / International

Domestic

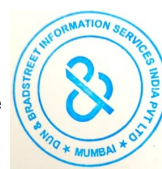
Domestic air cargo refers to the movement of goods within a single country's borders, serving industries such as e-commerce, retail, healthcare, and perishables. Historically, this segment has shown steady growth, propelled by rising consumer demand for faster deliveries, regional trade expansion, and infrastructure improvements. The growth of domestic air cargo has been closely linked to the rise of logistics providers, such as FedEx, UPS, and DHL, which have optimized air freight operations through hub-and-spoke models. Additionally, the increasing adoption of express parcel services and the integration of digital tracking technologies have enhanced efficiency, making air transport a preferred mode for time-sensitive shipments. The demand for domestic air freight surged with the boom in online retail and urbanization, compelling cargo airlines and logistics firms to expand their networks and invest in automation.

Domestic air cargo in India has shown **steady and resilient growth**, with a **CAGR of approximately 10%**, driven primarily by the rise of **e-commerce, increasing urbanization, and improvements in logistics efficiency**. The sector faces challenges such as **high operational costs** and **regulatory constraints**, but recent developments like **drone deliveries** and enhancements in **last-mile logistics** are helping to strengthen the domestic air freight ecosystem.

International

International air cargo involves the transportation of goods across countries and continents, serving global industries such as electronics, pharmaceuticals, automotive, and cross-border e-commerce. Historically, this segment has exhibited fluctuating growth, influenced by global trade agreements, economic downturns, and geopolitical developments. The emergence of free trade zones, advancements in freight aircraft capacity, and the liberalization of air cargo markets have significantly bolstered international air freight movement. Major global hubs such as Hong Kong, Frankfurt, and Dubai have played a pivotal role in facilitating international cargo transit. However, international air cargo is highly sensitive to external factors, including fuel price volatility, trade disputes, and regulatory restrictions. Despite these challenges, the segment has remained resilient, adapting to new consumer trends such as the rise of cross-border online shopping and the demand for just-in-time inventory replenishment.

International air cargo growth is more **fluctuating**, with a **CAGR of around 6%**, influenced by global **economic cycles and trade dynamics**. Key drivers include **global trade agreements, evolving supply chains, and international economic policies**. Challenges such as **geopolitical instability** and **fuel price volatility** can affect performance, while recent initiatives focusing on **e-commerce-driven international shipping** and **sustainability measures** are shaping the future of India's global air freight operations.



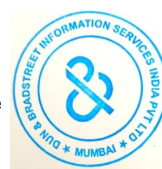
Significance of Air Transportation in Logistics

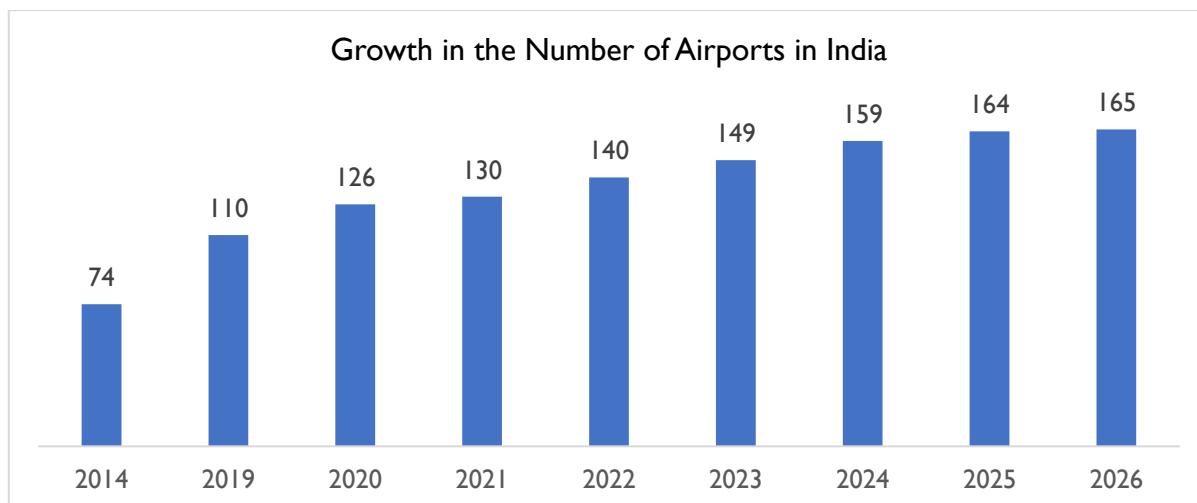
- **Speed and Efficiency:** Air transport is the fastest mode of freight movement, often delivering international shipments within 24-48 hours. This rapid transit is crucial for time-sensitive goods such as perishables, pharmaceuticals, and high-value items, ensuring they reach markets promptly and in optimal condition.
- **Global Reach:** Air freight enables businesses to access international markets swiftly, facilitating global trade and commerce. The ability to transport goods quickly across continents allows companies to respond effectively to market demands and maintain competitive advantages.
- **Supply Chain Optimization:** Utilizing air transport allows businesses to adopt just-in-time delivery models, reducing the need for extensive warehousing and minimizing inventory costs. This efficiency enhances overall supply chain management, allowing for better responsiveness to consumer needs and market fluctuations.
- **Strategic and Emergency Use:** Air transport is crucial for **emergency relief, disaster management, and defence logistics**. It allows rapid deployment of personnel, equipment, and aid during natural disasters or crises.
- **Integration with Multimodal Networks:** Modern airports are increasingly linked with logistics parks, rail, and road networks, enabling smooth multimodal cargo movement. This reduces transit times and increases overall supply chain efficiency.
- **Boosts International Trade:** Air cargo supports India's trade by connecting the country to **global markets**. Sectors like pharmaceuticals, electronics, and perishables rely heavily on-air transport for timely exports and imports.

Airports Infrastructure Scenario in India: Current Landscape

As of 2026, India boasts 165³² operational airports, a significant increase from 74 in 2014. This expansion reflects the country's commitment to enhancing its aviation infrastructure to support growing passenger and cargo demands.

³² <https://www.civilaviation.gov.in/?q=en%2Fpublication%2Fannual-reports&utm>





Source: Airports Authority of India (AAI), Ministry of Civil Aviation, as on 07.07.2026

India's aviation industry has experienced significant growth in the past 10 years. The number of operational airports in the country has doubled from **74 in 2014 to 165 in 2026**, and the aim is to increase this number to **350-400 by 2047**. The domestic air passengers have more than doubled in the past decade, while Indian airlines have significantly expanded their fleets. **India handled a record 3.96 million metric tonnes (MMT) of air cargo in FY 2025–26, and annual air cargo volumes are targeted to reach 10 million metric tonnes by 2030.** The Indian international air cargo market has outperformed both the global and Asia-Pacific averages, driven by robust growth in cross-border e-commerce, pharmaceuticals, electronics, and other high-value exports.

The outlook for India's air cargo sector remains strong, supported by rising trade, expanding manufacturing activity, and continued investments in airport infrastructure and logistics. With annual air cargo volumes **targeted to reach 10 million metric tonnes by 2030**,³³ the sector is expected to play an increasingly important role in supporting export-oriented industries and strengthening India's position in global supply chains.

Total Cargo carried by Air in terms of volume

Air cargo serves as a critical pillar of global trade, ensuring the efficient and timely movement of goods across international markets. Over the years, the total volume of cargo transported by air has demonstrated a steady upward trajectory, driven by various factors such as economic expansion, technological advancements, and shifting trade patterns.

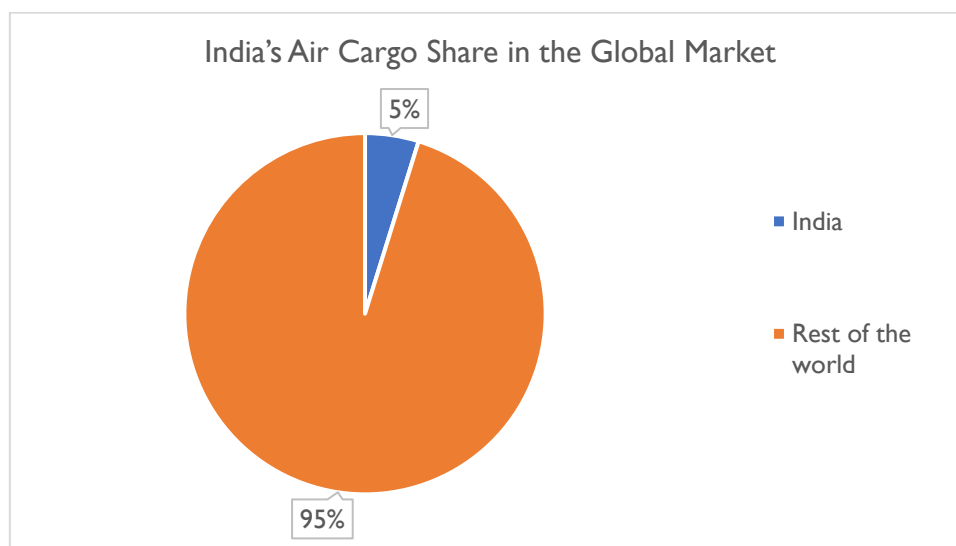
Global air cargo volumes are forecast to reach 71.7 million tonnes in 2026³⁴, representing a modest 0.2% increase over 2025 levels. Although growth has moderated compared with previous years, demand is expected to remain resilient, supported by the continued expansion of cross-border e-commerce, increasing

³³ https://www.pib.gov.in/PressReleasePage.aspx?PRID=2133351&utm_source=chatgpt.com®=48&lang=2

³⁴ <https://www.iata.org/en/pressroom/2026-releases/06-07-middle-east-disruptions-high-fuel-prices-halve-airline-industry-profitability/>

shipments of high-value and time-sensitive goods, and ongoing diversification of global supply chains. At the same time, the air cargo industry faces headwinds from geopolitical disruptions, particularly in the Middle East, and elevated jet fuel prices, which have increased operating costs across the aviation sector. Despite these challenges, air freight continues to play a critical role in enabling reliable, time-sensitive global trade.

India's aviation sector is emerging as a significant player in global air cargo logistics. In FY 2025–26, Indian airports handled a record 3.96 million tonnes (MMT) of air cargo, comprising 2.45 MMT of international cargo and 1.51 MMT of domestic cargo, compared with 3.73 MMT in FY 2024–25 (2.33 MMT international and 1.41 MMT domestic). In FY 2026–27 (April–May 2026), Indian airports handled 0.68 MMT of air cargo, including 0.42 MMT of international cargo and 0.26 MMT of domestic cargo. India currently accounts for around 5% of the global air cargo market, reflecting its growing role in international trade and logistics, supported by expanding airport infrastructure and increasing import-export activity.



The sector's recovery post-pandemic is evident in both passenger and freight traffic. Improved airport infrastructure, the rise of regional connectivity, and the expansion of air cargo facilities have strengthened India's capacity to handle increasing volumes. As a result, air transport is becoming a key component of the country's logistics and trade ecosystem, providing faster, more efficient solutions for both domestic and international shipments.

Key Drivers of Air Cargo Growth

- **E-commerce Expansion:** With the rapid rise of online shopping, the demand for express delivery services has significantly increased, contributing to higher air cargo volumes.
- **Supply Chain Disruptions:** Challenges such as the Red Sea crisis have led businesses to pivot towards air freight for urgent and time-sensitive shipments.
- **Post-Pandemic Recovery:** The strong rebound in passenger air traffic has also positively impacted cargo movement, as more flights translate into enhanced freight capacity.

- **Infrastructure Development:** Improvements in cargo-handling facilities and airport expansions have further facilitated efficient air freight movement.
- **Rising Global Trade:** India's growing integration with **international markets** increases import and export volumes, particularly for pharmaceuticals, electronics, and perishables, which often rely on air cargo for speed and safety.
- **Cold Chain and Specialized Cargo:** Rising demand for **temperature-sensitive goods** such as pharmaceuticals, frozen food, and perishable products is driving the development of specialized air cargo solutions with cold-chain facilities.

As global trade continues to evolve, the air cargo industry is expected to witness sustained growth. The projected 5.8% annual increase in cargo volumes indicates a promising future, with air freight becoming an increasingly vital component of global logistics. In India, the government's ongoing investments in aviation infrastructure and logistics hubs will further strengthen the country's role in the international air cargo ecosystem. Given the current trajectory, air transport will remain a crucial enabler of economic growth, ensuring seamless global trade and connectivity.

Services Offered by Air Cargo in India

India's air cargo industry offers a range of services tailored to meet varying delivery timeframes and budget considerations.

- **Priority Services:** Priority cargo services provide **fast-track processing**, from acceptance to loading, ensuring minimal dwell time. This is crucial for temperature-sensitive goods, machinery parts, and high-value shipments that require immediate uplift.
- **Same-Day and Next-Day Delivery:** Major airports and cargo operators offer **same-day and next-day delivery** for intercity shipments, enabling faster turnaround for businesses. This service is widely used for medical supplies, perishables, and urgent business shipments that require guaranteed delivery windows. For instance, Delhivery launched a 'guaranteed' same-day delivery service across 15 key cities in India, enabling Direct-to-Consumer (D2C) brands to fulfil orders on the day they are received.



- **Express Services:** Air cargo in India provides **express delivery solutions** designed for time-critical shipments, ensuring rapid transport of parcels, documents, and small consignments. These services cater heavily to e-commerce platforms, pharmaceuticals, and high-value goods that demand speed and reliability.
- **Temperature-Controlled and Perishable Delivery:** Specialized cold-chain air cargo services support the delivery of **perishables, pharmaceuticals, vaccines, and food products**. With temperature-controlled storage and transport, the system ensures product integrity from origin to destination.
- **Freighter-Based Bulk Delivery:** Dedicated freighter aircraft support **bulk cargo delivery**, transporting heavy machinery, automotive components, electronics, and industrial consignments across domestic and international routes. These services enable faster replenishment cycles for industries.

Facilities/Advantages of Air Transport

Air transport plays a crucial role in modern logistics and global trade. Its unique characteristics make it an indispensable mode of transportation, offering unparalleled efficiency and reliability. Below are the key advantages and facilities that define the significance of air transport.

Advantages of Air Transport

Fastest Mode of Transportation

- One of the most significant benefits of air transport is its exceptional speed, making it the fastest mode of transportation.
- Delivers goods within hours, ideal for urgent and time-sensitive cargo.
- Frequent flight schedules further enhance delivery efficiency, ensuring the timely shipment of goods.
- Greatly reduces transit time for critical shipments like medical supplies and electronics.

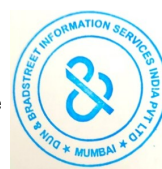
Reliable and High Service Quality

- Strict schedules with predictable arrival and departure times.
- Advanced tracking systems ensure minimal delays and high reliability.
- Helps reduce inventory holding and buffer stock needs.

Global Reach and Extensive Connectivity

- Connects India quickly to major global trade hubs.
- Enables seamless international export–import operations.
- Supports rapid movement across continents.

Suitable for High-Value & Sensitive Cargo



- Enhanced security protocols ensure the safety of fragile and expensive goods.
- Ideal for electronics, diamonds, pharmaceuticals, and luxury items.
- Controlled handling reduces damage risks.

Minimal Physical Constraints

- Unlike road or rail transport, air transport is not restricted by geographical barriers or infrastructure limitations.
- This enables uninterrupted services, making it a highly reliable option for businesses that require seamless logistics.

High Reliability

- Air transport is known for its punctuality and adherence to strict schedules, reducing the risk of delays.
- The chances of cargo misplacement or loss are minimal due to stringent security and tracking measures.

Long-Distance Connectivity

- No other mode of transport covers vast distances as efficiently as air transport.
- It is the most viable solution for international trade, bridging continents and enabling the swift movement of goods and passengers.

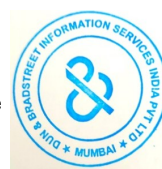
Access to Remote & Difficult Terrains

- Provides essential connectivity to hilly, island, and landlocked regions.
- Crucial for supply chains in Northeast India, Ladakh, disaster-hit areas, and remote towns.
- Ensures movement where road/rail access is limited or slow.

Facilities of Air Transport

Cargo Handling & Storage Facilities

- **Dedicated Air Cargo Terminals** – Major international airports are equipped with specialized cargo terminals for streamlined processing and efficient handling.
- **Temperature-Controlled Warehousing** – Storage facilities for perishable goods such as fresh produce, pharmaceuticals, and vaccines ensure product integrity.
- **Advanced Security Measures** – X-ray scanners, screening procedures, and tracking systems enhance cargo safety and prevent unauthorized access.



Passenger & Aircraft Maintenance Facilities

- **Modern Airport Infrastructure** – Airports feature advanced runways, air traffic control (ATC) systems, and well-equipped maintenance hangars.
- **Passenger Amenities** – Comfortable waiting lounges, baggage handling services, and duty-free shopping enhance the travel experience.
- **Aircraft Servicing & Refuelling** – Airports provide on-site maintenance, fuelling stations, and technical support to ensure uninterrupted operations.

Multimodal Transport Connectivity

- **Integrated Transport Networks** – Efficient coordination between air, rail, and road networks allows seamless cargo and passenger movement.
- **Logistics & Express Cargo Hubs** – Leading logistics providers such as SpiceXpress, Blue Dart, and FedEx operate specialized hubs to enhance air cargo efficiency.

Digital & Technological Facilities

- **Real-Time Cargo Tracking Systems** – Advanced digital platforms enable end-to-end visibility of shipments, improving transparency and coordination.
- **E-Air Waybill (e-AWB) Adoption** – Digital documentation reduces processing time, enhances accuracy, and supports faster cargo clearance.
- **Automated Handling Equipment** – Use of conveyor belts, cargo loaders, and robotic systems ensures quick and safe cargo movement.

Operational & Support Facilities

- **24/7 Operational Capability** – Airports function round-the-clock, enabling continuous cargo and passenger movement.
- **Efficient Customs & Clearance Support** – Dedicated customs desks and fast-track clearance reduce processing delays for imports and exports.
- **Freighter Parking Bays** – Designated areas for cargo aircraft to allow quick turnaround and loading operations.

Business & Commercial Facilities

- **Cargo Village & Warehousing Zones** – Integrated logistics clusters offering warehousing, distribution, and value-added services.
- **Free Trade Warehousing Zones (FTWZs)** – Allow duty-free storage, repackaging, and consolidation for exporters and importers.



- **Airport Hotels & Business Lounges** – Support business travellers and freight professionals with meeting areas and stay options.

Air transport remains a cornerstone of global logistics, offering unmatched speed, reliability, and connectivity. Its well-established infrastructure and integrated services continue to drive economic growth and facilitate international trade.

Regulatory Landscape specific to Aviation

India's aviation industry is governed by a comprehensive regulatory system aimed at providing safety, security, and efficiency in diverse areas such as commercial air transport, cargo aviation, and general aviation.

Bodies that regulate this sector

- **Ministry of Civil Aviation (MoCA)**

The Ministry of Civil Aviation (MoCA) is the main government agency that makes policies and regulates civil aviation in India. It manages the growth of aviation infrastructure, bilateral air service agreements, and airline operations. One of its major initiatives is the National Civil Aviation Policy (NCAP) 2016, which looks to promote regional connectivity under the UDAN (Ude Desh Ka Aam Nagrik) scheme by offering low fares for flying in smaller cities.

The policy also allows **100%** Foreign Direct Investment (FDI) in scheduled airlines with up to **49%** possible under the automatic route and over that through government approval. Apart from this, MoCA has also launched the DigiYatra program, which is a digital travel system based on biometrics aimed at streamlining the passenger processing in airports by eliminating the need for manual checks and bolstering security. The ministry also controls fares on some routes under the Route Dispersal Guidelines (RDG) for connecting remote and unserved areas.

- **Directorate General of Civil Aviation (DGCA)**

The Directorate General of Civil Aviation (DGCA) is India's central aviation safety regulatory, licensing, and airworthiness authority. It functions under the Aircraft Act, 1934, and the Aircraft Rules, 1937, enforcing Civil Aviation Requirements (CARs) that cover every aspect of civil aviation. The DGCA issues pilot licenses, such as Commercial Pilot Licenses (CPL) and Airline Transport Pilot Licenses (ATPL), and oversees medical standards compliance. It also issues Air Operator Certificates (AOC) to airlines, insisting on strict compliance with safety regulations, maintenance practices, and operating procedures.

The DGCA manages Flight Duty Time Limitations (FDTL) to avoid pilot fatigue and improve flight safety. It also monitors consumer protection practices, insisting that airlines pay compensation to passengers in case of flight cancellations, delays, or denied boarding according to specified guidelines. The DGCA also certifies aircraft types and ensures that the aircraft flying within India are internationally compliant with standards of safety approved by bodies such as the FAA and EASA.



- **Bureau of Civil Aviation Security (BCAS)**

The central organization for ensuring aviation security in India is the Bureau of Civil Aviation Security (BCAS). It functions under the Aviation Security Programme (ASP) and implements regulations according to ICAO Annex 17 (Security Standards). The BCAS develops the National Civil Aviation Security Programme (NCASP), which provides security procedures for airports, airlines, and passengers. Major duties are the conduct of Pre-Employment Background Checks (PEBC) for airport employees to secure sensitive areas against unauthorized entry. The BCAS requires rigorous passenger and baggage checks at airports to identify banned items and possible dangers. It also carries out anti-hijacking procedures under the Anti-Hijacking Act, 2016, such as sending armed sky marshals on specific flights. The BCAS also carries out routine security audits and surprise checks in airports to monitor compliance with security standards and thwart possible violations.

- **Airports Authority of India (AAI)**

The Airports Authority of India (AAI) is charged with the management and development of civil aviation infrastructure in the country, such as air traffic control (ATC), navigation facilities, and airport management. Set up under the Airports Authority of India Act, 1994, the AAI is in charge of over 125 airports, ranging from international, domestic, to regional airports. Its key activities involve the provision of air traffic management (ATM) services, the safe movement of aircraft during take-off, landing, and in-route flight, respectively. The AAI also executes airport modernization schemes, terminal expansion, runway extension, and cargo terminals to meet increased passenger and freight traffic. In accordance with the Regional Connectivity Scheme (RCS-UDAN), the AAI develops and upgrades smaller airports to improve connectivity in remote locations. In addition, the AAI controls landing and parking fees at non-major airports, whereas the Airports Economic Regulatory Authority (AERA) controls tariffs at major airports such as Delhi and Mumbai.

- **Airports Economic Regulatory Authority (AERA)**

Airports Economic Regulatory Authority (AERA) is a statutory body set up under the AERA Act, 2008, to regulate major airport tariffs and charges in India. Its main function is to maintain fair prices for aeronautical services such as landing fees, parking charges, and passenger service charges to keep airport operators from monopolizing activities. AERA fixes tariffs for airports with more than 1.5 million annual passenger traffic, including Delhi, Mumbai, Bangalore, and Hyderabad. The authority reviews airport revenue and expenditure from time to time to fix reasonable charges that reconcile the interests of airlines, passengers, and airport operators. Regulating economic aspects of airport operations, AERA encourages competition, efficiency, and investment in India's aviation infrastructure.



Government policies for this sector

- **Cargo Aviation Regulations**

Open Sky Policy for Air Cargo: This policy, initiated in 1990, allows Indian as well as foreign airlines satisfying prescribed operation and safety norms to operate scheduled and non-scheduled cargo services to/from any airport having customs/immigration facilities. The policy was revised in September 2020 to limit foreign ad hoc and non-scheduled freighter charter services to six main airports: Bengaluru, Chennai, Delhi, Kolkata, Hyderabad, and Mumbai. The policy modification is to increase the demand for domestic freight charter services.

- **National Civil Aviation Policy (NCAP 2016)**

The NCAP 2016 provides a foundational framework for the growth of air cargo in India, both on domestic and international routes. It emphasizes the promotion of cargo facilities by co-locating them at airports, giving them infrastructure status, and streamlining customs procedures. The policy mandates digital processing of cargo through systems like the Advance Cargo Information (ACI) and envisions a **single-window clearance system** at cargo terminals that integrates multiple regulatory bodies (Customs, FSSAI, Drug Controller, etc.). Additionally, NCAP seeks to develop cargo villages near airports and supports Free-Trade Warehousing Zones (FTWZ) to facilitate air transshipment.

- **Air Cargo Logistics Promotion Board (ACLPB)**

Under NCAP, the Air Cargo Logistics Promotion Board (ACLPB) is tasked with developing a detailed action plan to enhance cargo throughput and reduce dwell time. Swaniti Initiative+ I The board funds initiatives to promote transshipment at Indian airports and supports the adoption of industry best practices like FTWZs. BYJU'S It also works to streamline governance, recommending ideas like freighter-priority space norms and favourable user charges at airports.

- **Drone Regulation for Cargo Delivery (Drone Rules 2021)**

The **Drone Rules, 2021**, notified by the Ministry of Civil Aviation, create a regulatory framework that encourages the use of drones for cargo delivery. The rules expand the permissible weight for drones to **500 kg**, enabling the use of cargo drones and even “drone taxis.” Approvals have been simplified: several permissions have been removed, and the **Digital Sky Platform** offers a self-generated permission system with minimal human intervention. The policy also proposes the development of **dedicated “drone corridors” for cargo deliveries** and sets up a Drone Promotion Council to foster a business-friendly drone ecosystem.



- **New Aircraft Act: Bharatiya Vayuyan Adhiniyam, 2024**

Coming into force on **1 January 2025**, the Bharatiya Vayuyan Adhiniyam, 2024, replaces the decades-old Aircraft Act of 1934. This new law modernizes India's aviation regulatory framework by explicitly regulating aircraft design, manufacturing, and maintenance, areas not clearly covered earlier. It also retains key regulatory bodies (DGCA, BCAS, and AAIB) while strengthening their powers, streamlining licensing, and creating a more robust appeals mechanism.

- **Customs Reforms for Air Cargo and Transshipment**

In April 2025, the Central Board of Indirect Taxes & Customs (CBIC) simplified import procedures for **Unit Load Devices (ULDs)**, allowing temporary import via a continuity bond. In the same move, India **waived transshipment permit fees**, reducing compliance costs for airlines and cargo agents. Unique ID tracking for ULDs and tighter BCAS (security) compliance were also introduced to improve cargo visibility and security.

- **National Civil Aviation Policy (NCAP) 2016**

The **NCAP 2016** was introduced to promote the aviation sector, including air cargo. It includes several measures to improve cargo operations:

- **Air Cargo Logistics Promotion Board (ACLPB):** Established to facilitate faster movement of cargo by reducing clearance times and enhancing coordination between various regulatory bodies.
- **Air Cargo Community System (ACCS):** A digital platform to streamline documentation and reduce paperwork delays, ensuring quicker cargo processing.
- **Service Delivery Modules (SDMs):** Implemented to monitor cargo handling performance and minimize inefficiencies.

These reforms have contributed to **reducing air cargo dwell times and increasing efficiency at airports**, making air freight a more attractive option for businesses.

- **Make in India Initiative**

The Make in India program was launched to boost domestic manufacturing, which has directly impacted air cargo demand.

- **Encouragement of exports:** By expanding industrial production, the program has led to increased shipments of electronics, pharmaceuticals, and textiles, sectors that heavily rely on air freight.



- Development of the Maintenance, Repair, and Overhaul (MRO) sector: This has reduced India's reliance on foreign MRO facilities for aircraft maintenance, increasing domestic cargo movement.
- Promotion of indigenous manufacturing in high-tech industries, which has driven air freight shipments of precision components and machinery to global markets.
- **Infrastructure Development for Air Cargo**

The Indian government is investing **approximately USD 1.83 billion in airport modernization and cargo infrastructure expansion** by 2026. Some key developments include:

- Upgrading **150** airports to improve cargo handling efficiency, including the establishment of cold storage facilities for perishable goods.
- Expansion of dedicated air freight corridors, ensuring faster movement of high-value goods.
- Development of satellite freight cities near major airports to improve connectivity and reduce congestion.

- **National Logistics Policy (NLP)**

The **National Logistics Policy**, launched to enhance supply chain efficiency, has played a crucial role in strengthening India's air cargo sector:

- Reducing logistics costs by integrating different modes of transport (air, rail, road, and waterways).
- Development of multimodal logistics parks to facilitate seamless cargo movement.
- Simplification of regulatory procedures and digitalization of logistics operations to boost efficiency.

- **Open Sky Policy**

The **Open Sky Policy** has **liberalized cargo movement**, allowing **foreign airlines to operate unrestricted freighter services**.

- This has increased competition, leading to better pricing and improved services in the air cargo sector.
- The policy has also helped Indian exporters access more international markets through expanded air connectivity.

- **Regional Connectivity Scheme (RCS) – UDAN Cargo**

The **UDAN (Ude Desh Ka Aam Nagrik) Cargo Scheme** aims to **enhance air connectivity for smaller cities and improve last-mile logistics**.

- Establishment of air cargo terminals at smaller airports, reducing dependence on metropolitan hubs.
- Encouraging e-commerce logistics through air transport, benefiting businesses in remote locations.
- Boosting agricultural exports by providing better access to international markets for perishable goods.

- **Stakeholder Collaboration and Industry Consultations**

The government is actively **engaging with logistics companies, airlines, and exporters** to simplify air cargo operations.

- The goal is to handle **10 million** tonnes of air cargo annually by 2030.
- Policies are being refined based on feedback from industry leaders, ensuring practical implementation of reforms.

- **Moratorium on Repayments** – Regulated entities (REs) may offer a moratorium on term-loan instalments and defer interest on working-capital (WC) facilities falling due between 1 September and 31 December 2025. Interest will accrue on a simple-interest basis, without compounding, and may be converted into a Funded Interest Term Loan (FITL) repayable between 31 March and 30 September 2026.
- **Extension of Export Credit Tenure** – The permissible credit period for pre-shipment and post-shipment export credit has been extended to 450 days for credit disbursed up to March 31, 2026. For packing credit facilities already availed by exporters before August 31, 2025, where dispatch could not take place, REs may allow liquidation from any legitimate alternate source, including domestic sale proceeds or substitution of export contracts.
- **Flexibility in Working-Capital Management** – To maintain liquidity during the effective period, REs may recalculate drawing power by reducing margins or reassessing working-capital limits.
- **Regulatory Forbearance on Asset Classification** – The moratorium/deferment period will be excluded from days-past-due (DPD) calculations under IRACP norms; granting relief will not be treated as restructuring; credit bureaus (CICs) are directed to ensure borrowers' credit histories are unaffected.
- **FEMA Relaxations for Export Realisation** – Under the Foreign Exchange Management (Export of Goods and Services) (Second Amendment) Regulations, 2025, the period for realisation and repatriation



of export proceeds has been extended from nine months to 15 months, and the shipment period against advance payments has been increased from one year to three years.

- **Niryat Protsahan (Financial Enablers):** As part of the Government of India's ongoing efforts to boost export competitiveness and facilitate trade, the Niryat Protsahan (Financial Enablers) scheme has been implemented to provide targeted financial support to exporters. The scheme offers interest subvention on pre- and post-shipment export credit, along with enhanced access to working capital, particularly benefiting MSMEs and small-scale exporters. Through this initiative, exporters can avail of concessional credit facilities, reduced cost of funds, and easier compliance mechanisms, enabling them to improve liquidity, expand market reach, and compete more effectively in the global market. The scheme aligns with India's broader export promotion strategy and supports the achievement of long-term trade growth objectives.
- **Niryat Disha (Non-Financial Enablers):** As part of the Government of India's broader strategy to enhance export readiness and deepen global market integration, the Niryat Disha (Non-Financial Enablers) scheme has been instituted to provide holistic non-financial assistance to exporters. The initiative focuses on strengthening quality compliance, market access, logistics, and capacity-building support—especially for MSMEs and exporters in remote regions. Under this scheme, exporters receive facilitation for testing and certification, international branding and packaging guidance, subsidized participation in trade fairs and buyer-seller meets, reimbursements for inland transport from distant districts, and enhanced warehousing and logistics solutions. Additionally, the program drives skill development through training at the cluster and district levels, and strengthens export facilitation cells to build a resilient and competitive export ecosystem. By addressing critical infrastructural and procedural barriers, Niryat Disha aligns with India's Foreign Trade Policy 2023 and supports sustainable, inclusive export growth and greater participation in global value chains.



Government Initiatives and Investments

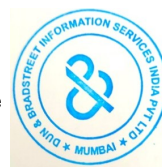
- India's aviation infrastructure is undergoing rapid expansion, with the number of operational airports increasing from **74 in 2014 to 165 in 2026**. Building on this progress, the Government of India plans to expand the airport network to **350–400 operational airports by 2047**, aiming to enhance regional connectivity, support rising passenger traffic, and strengthen the country's aviation ecosystem.³⁵
- The **Ude Desh ka Aam Nagrik (UDAN) Scheme**, launched in October 2016, has significantly enhanced regional air connectivity across India. As of March 2026, the scheme has operationalised **669 routes, connecting 95 airports**, heliports, and water aerodromes, and has facilitated air travel for over **1.66 crore passengers**. To build on these achievements, the Union Cabinet approved the Modified UDAN Scheme on **25 March 2026, with an estimated outlay of INR 29,000 crore** over the next ten years. The revamped scheme aims to expand regional aviation infrastructure, improve connectivity to underserved and remote areas, promote balanced regional development, boost tourism and economic activity, and support the Government of India's long-term vision of **Viksit Bharat 2047**.³⁶
- The Government of India plans to invest approximately **INR 12,159 crore** (inflation-adjusted) over the next ten years to develop **100 airports** under its **Viksit Bharat 2047** vision. Additionally, around **INR 3,661 crore** has been proposed to establish **200 modern helipads** across the **Northeastern Region (HINER) States and Aspirational Districts**, aimed at improving regional connectivity and enhancing access to remote areas.³⁷
- In 2025, India's aviation sector reached a new milestone with the operationalisation of secondary airports such as Navi Mumbai International Airport and Noida International Airport. These airports have strengthened the country's aviation infrastructure by reducing congestion at primary hubs, expanding capacity, improving connectivity, and supporting the growing demand for air travel.
- In 2025, Union Civil Aviation Minister **Kinjarapu Ram Mohan Naidu** highlighted plans to develop the **Northeast region** as a strategic logistics and aviation hub. With **16 operational airports** and growing international traffic from Guwahati, this initiative aims to **connect India more effectively with Southeast Asia**.
- In September 2025, **Air India SATS Airport Services (AISATS)** became the first Indian ground handling company to secure the **DGCA Safety Clearance under CAR**. This aligns operations with **ICAO standards**, making India the **second country globally** to formally regulate ground handling services.

³⁵ <https://www.pib.gov.in/PressReleaseFramePage.aspx?PRID=2181865®=48&lang=2>

³⁶ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2281051®=48&lang=1>

³⁷ <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2285420®=1&lang=1>

- **Adani Airports** plans to invest **USD 7 billion** to expand its operations in India, focusing on enhancing its **existing airport portfolio** and **landside infrastructure**. This investment comes as India faces a significant **aviation infrastructure gap**, with only **149 commercial airports** serving a population of **1.4 billion**.
- In July 2025, the Digi Yatra app hit a milestone of **15 million** downloads, facilitating over 61 million contactless passenger journeys across **24 airports** since its December 2022 launch, **with plans to expand to four more airports, support international travel pilots** and multiple Indian languages, and reach 80 percent of domestic flyers by 2028.
- On February 4, 2025, the Central Government granted in principle approval for aviation expansion in Bihar, sanctioning greenfield airports at Rajgir, Bhagalpur and Sonapur, redevelopment of the brownfield airport at Raxaul, and new civil enclaves at Bihta and Purnia, all poised to enhance regional air connectivity under the UDAN framework.
- UDAN scheme fosters regional connectivity with **519** operational routes, encompassing **53** tourism and **48** helicopter routes, benefiting **133.86** lakh passengers. Over **2.56 lakh** flights have operated, involving **13** airlines, including startups, shaping a transformative impact on regional growth and air connectivity.
- In February 2025, the Central Government granted in principle approval for aviation expansion in Bihar, sanctioning greenfield airports at Rajgir, Bhagalpur and Sonapur, redevelopment of the brownfield airport at Raxaul, and new civil enclaves at Bihta and Purnia, all poised to enhance regional air connectivity under the UDAN framework.



Drivers of Air Cargo Traffic in India



- **Rapid Expansion of E-commerce and Online Retail in India:** The rapid rise of India's e-commerce sector already valued at nearly **USD 125 billion in 2024** and projected to reach **USD 345 billion by 2030** and further to around **USD 550 billion by 2035** is fundamentally reshaping the logistics landscape and emerging as one of the strongest demand drivers for air cargo. With online retail penetrating deeper into Tier-II and Tier-III cities, order volumes are not only increasing but also becoming more geographically dispersed. This creates a pressing need for faster, more reliable, and more time-definite transportation channels. Air freight therefore becomes essential for bridging long intercity distances, ensuring quick replenishment for sellers, and managing high consumer expectations around same-day and next-day delivery. Categories such as electronics, fashion, personal care, and premium consumer goods where speed and handling quality matter further amplify reliance on air cargo networks.

In addition, India's e-commerce ecosystem is witnessing unprecedented investment in fulfilment networks, automated warehouses, and integrated logistics systems by major players like Amazon, Flipkart, Meesho, Nykaa, and logistics specialists such as Delhivery and Blue Dart. These companies increasingly use air cargo to maintain lean inventories, shorten delivery cycles, and serve high-order-density regions efficiently. Cross-border e-commerce imported electronics, accessories, high-end fashion, and niche consumer items is also rising sharply, pushing international air freight volumes upward. Festivals, flash sales, and seasonal demand spikes further intensify air cargo utilisation across the year. Together, these developments reinforce air freight as a strategic pillar of India's digital commerce economy, making the rapid expansion of e-commerce one of the most transformative and sustained growth drivers of the country's air cargo traffic industry.

- **Rising Pharmaceutical Export–Import Volumes Boosting Air Freight Demand:** India's pharmaceutical sector, one of the strongest globally, plays a pivotal role in driving air cargo traffic due to the sensitive, high-value, and time-critical nature of pharma shipments. India currently ranks among the top three pharmaceutical producers in the world by volume and is recognized as the largest global supplier of generic medicines. Pharmaceutical exports increased from approximately **USD 24.58 billion in FY 2025 to USD 25.07 billion in FY 2026**³⁸ reflecting a year-on-year growth of around 2.0%. A substantial share of these exports, such as vaccines, biologics, and active pharmaceutical ingredients (APIs), must move through highly controlled environments, requiring strict temperature integrity and minimal transit time. Air cargo is therefore indispensable, as it provides the speed, precision, and regulatory compliance necessary for maintaining product efficacy and meeting international health and safety standards.

Simultaneously, India's imports of specialized APIs, high-value biologics, medical devices, and clinical trial materials are increasing rapidly, further boosting inbound air cargo volumes. The rise of contract manufacturing, global supply chain integration, and India's growing role as a hub for vaccine and biosimilar production has intensified demand for certified cool-chain air freight corridors. Airports such as Mumbai, Hyderabad, Bengaluru, and Delhi have invested heavily in GDP-compliant cargo terminals, thermal insulation, automation, and temperature-controlled ULDs to serve pharma exporters and multinational drug companies. This expanding infrastructure, combined with the scale and sophistication of India's pharmaceutical industry, makes pharma trade one of the most consistent and strategic demand drivers for India's air cargo industry ensuring high load factors, premium yields, and year-round cargo movement.

Expanding Cargo Volumes Driving Infrastructure and Network Growth: India's air cargo industry is witnessing a clear and sustained rise in freight movement, signalling strong structural momentum rather than short-term volatility. Recent data shows that international cargo volumes continue to climb steadily, with **January 2026** handling **201.13 thousand tonnes**, an **8.4%** increase over the previous year. Domestic air cargo volumes are rising in parallel, with **123.56 thousand tonnes** handled in **January 2026**³⁹, reflecting a healthy **8.7%** year-on-year growth. Consequently, **total air cargo handled at Indian airports reached 324.69 thousand tonnes in January 2026**, registering an **8.5%** increase over **299.17 thousand tonnes** in January 2025. This broad-based increase across both domestic and international segments highlights a rising baseline demand fuelled by export–import trade, e-commerce, pharmaceuticals, perishables, and other time-sensitive cargo categories. The sustained growth in cargo traffic is expected to drive continued investments in airport cargo terminals, cold-chain infrastructure, automation, and multimodal logistics connectivity to support the expanding freight ecosystem.

³⁸ HS Code: 30 PHARMACEUTICAL PRODUCTS, Tradestat

³⁹ https://www.aai.aero/sites/default/files/traffic-news/TRJan2k26_0.pdf



This consistent volume growth acts as a major driver for the sector by creating a powerful reinforcement cycle of investment, efficiency, and expanding capacity. Higher cargo movement encourages airports, ground handlers, and logistics operators to upgrade their physical and technological infrastructure building new cargo terminals, expanding cold-chain capabilities, deploying automated handling systems, and improving customs processes. These enhancements make air freight more efficient and reliable, attracting even more shippers dealing in high-value or time-critical goods. The steady rise in volumes also enables airlines and freight forwarders to stabilise yields, optimise networks, and increase cargo capacity on key routes. Collectively, these developments strengthen India's position as a growing hub for domestic and international air logistics, making rising cargo volumes one of the most important drivers of long-term growth in the country's air cargo traffic industry.

- **Increasing Demand for Perishable and Temperature-Sensitive Goods:** The demand for perishable and temperature-sensitive goods is emerging as a major driver for India's air cargo industry. With the growing export of fruits, vegetables, seafood, dairy products, and frozen foods, there is an increasing need for transport solutions that ensure freshness, quality, and safety. Air cargo offers the speed and reliability required to move such products across long domestic and international distances, minimizing spoilage and maintaining strict temperature requirements. The expansion of India's cold-chain infrastructure, including temperature-controlled storage facilities and refrigerated handling at airports, has further strengthened the industry's capacity to handle perishable shipments efficiently.

Domestic trends are also fuelling this growth, with the rise of fresh e-grocery deliveries and online food marketplaces requiring fast and dependable logistics. Consumers increasingly demand high-quality fresh produce delivered directly to their homes, often within 24 hours, which creates additional reliance on air freight. At the same time, international demand for Indian agricultural exports such as mangoes, pomegranates, seafood, and dairy products has been steadily rising, requiring rapid and secure transport solutions to reach global markets in optimal condition. Together, these factors make perishable and temperature-sensitive goods one of the fastest-growing segments for air cargo, driving continuous investment in specialized aircraft, cold-chain technology, and logistics processes.

- **Trade Route Disruptions and Digital Innovation:** The Indian air cargo market is undergoing a period of significant transformation, driven by both global disruptions and evolving trade dynamics. The ongoing Red Sea crisis has disrupted traditional maritime shipping routes, prompting international traders and freight forwarders to divert substantial volumes of cargo from sea to air to ensure continuity in critical supply chains. This shift has created new business opportunities for the Indian air cargo sector, particularly in express and time-sensitive shipments that cannot tolerate delays. At the same time, regional trade agreements such as the Regional Comprehensive Economic



Partnership (RCEP), India-ASEAN Free Trade Agreement, and bilateral pacts with countries like Australia and the UAE are reshaping cargo flows, establishing preferential trade corridors that favor air transport of high-value, low-weight goods. These developments are positioning India as a strategic transshipment hub for intra-Asian and global trade networks, further strengthening the role of air cargo in the country's logistics ecosystem.

Technological advancements and sustainability initiatives are also driving growth and efficiency in India's air cargo industry. IoT-enabled cold chain tracking systems are being widely implemented, allowing real-time monitoring of temperature, humidity, location, and handling conditions across the logistics chain. Such solutions are critical for sensitive shipments, including pharmaceuticals, biotechnology products, and perishable foods, ensuring precise environmental control and regulatory compliance. Meanwhile, airlines and cargo operators are increasingly adopting sustainable aviation fuel (SAF) to reduce carbon footprints, meet global environmental standards, and maintain operational efficiency. Investments in SAF infrastructure, along with partnerships with biofuel producers, are helping the industry align with sustainability mandates while supporting cost-competitive, reliable cargo operations. Together, these trends in trade dynamics, technology adoption, and sustainability are reshaping the outlook for India's air cargo market, making it more resilient, efficient, and strategically positioned for future growth.

- **Infrastructure Development and Policy Support Boosting Market Growth:** Infrastructure development and government policy support are playing a crucial role in driving growth in India's air cargo market. The National Air Cargo Policy seeks to enhance cargo handling capacity and establish India as a global transshipment hub. Significant investments in dedicated cargo terminals, free trade zones, and multimodal logistics parks are strengthening the overall supply chain network, positively impacting air cargo operations. Industry projections indicate that the sector is expected to attract **USD 4.99 billion in investments** over the next four years, while government plans **earmark USD 1.83 billion by 2026** for airport infrastructure upgrades and enhancement of aviation navigation services.

Digitalization and modernization initiatives are further boosting operational efficiency and capacity in the sector. Programs such as DigiYatra and advanced digital cargo tracking systems are reducing turnaround times and improving cargo visibility. Airport privatization and modernization efforts, particularly at major hubs like Delhi, Mumbai, and Bengaluru, are increasing cargo handling capabilities and overall market share. Additionally, government measures to promote indigenous aircraft manufacturing and leasing incentives under the Atmanirbhar Bharat initiative are contributing to long-term market stability. Regional connectivity schemes like UDAN are expanding air freight services to Tier-2 and Tier-3 cities, enhancing logistics efficiency and supporting rising demand for both domestic and international air cargo transport.



- **Rise of the Defence and Aerospace Sector:** India's increasing focus on strengthening domestic defence and aerospace manufacturing is significantly boosting air cargo movement. With the government promoting indigenous production through initiatives like Make in India and the Defence Production & Export Promotion Policy (DPEPP), the flow of military components, aircraft parts, and unmanned systems (drones) has grown considerably. As defence exports rise and global collaborations expand, the need for fast, secure, and specialized air freight logistics has intensified. Air cargo enables the timely transport of high-value, sensitive defence equipment, supporting both domestic deployment and global distribution.
- **Growth in Space Technology and Satellite Exports:** India's rapidly expanding space ecosystem powered by ISRO, NewSpace India Limited (NSIL), and private startups is contributing to increased air freight of satellite parts, propulsion systems, and scientific payloads. With India emerging as a global hub for cost-effective launch services, the export of satellite hardware has increased markedly. Many of these components require precision handling, environmental control, and rapid transportation, making air cargo the preferred mode. The commercial expansion of satellite launches, space-tech research collaborations, and international payloads further fuel the demand for specialized aerospace logistics solutions.
- **Surge in Luxury Goods and Consumer Electronics:** The rise of premium consumer markets in India has driven a surge in imports of luxury goods, high-end fashion, smartphones, wearables, and premium automobiles. Global brands rely heavily on-air freight to maintain lean inventory cycles and ensure rapid restocking across major Indian cities. Air cargo supports the fast-moving nature of electronics and luxury sectors, where product life cycles are short and market competition is intense. Quick replenishment through air freight helps companies address demand spikes, seasonal launches, and festival-driven sales cycles.
- **Regional Airports Enhancing Air Cargo Connectivity:** Government initiatives such as UDAN and the expansion of regional airport infrastructure are transforming tier-2 and tier-3 cities into emerging cargo hubs. These airports are now equipped to handle increasing freight volumes, improving access for industries located outside major metros. By enabling direct cargo flights and better multimodal connectivity, regional airports reduce transportation time, lower overall logistics cost, and decongest major airports like Delhi, Mumbai, and Bengaluru. This decentralization strengthens India's nationwide air cargo network and supports balanced economic development.
- **Expansion of Dedicated Freighter Services:** Airlines are increasingly investing in dedicated freighters, cargo aircraft conversions, and specialized cargo terminals to meet rising market demand. India has also seen the development of exclusive cargo airports and express logistics hubs, which specifically support high-volume and time-critical shipments. Dedicated freighter operations improve reliability, offer flexible scheduling, and enhance capacity for e-commerce, pharmaceuticals,



perishables, and industrial goods. This infrastructure modernization is enabling smoother cargo flow and improving India's competitiveness in global air logistics.

- **Consumer Shift Towards Faster Deliveries:** The rise of e-commerce, quick-commerce, and omni-channel retailing has led to an unprecedented consumer demand for same-day and next-day deliveries. Platforms like Amazon, Flipkart, and Meesho are increasingly relying on air freight to ensure faster movement of parcels between metropolitan and regional hubs. Air cargo reduces delivery timelines from days to hours, making it essential for companies that compete on speed and reliability. This shift in consumer expectations continues to push logistics providers to expand their air-based express delivery networks.
- **AI and Automation in Air Cargo Operations:** The adoption of artificial intelligence, predictive analytics, robotics, and automated warehousing is transforming India's air cargo operations. AI-driven systems optimize cargo loading, track shipments in real time, and improve demand forecasting for air freight companies. Automated sorting systems and digital documentation reduce delays, enhance cargo visibility, and minimize human error. These technologies also help streamline customs processes and enable efficient end-to-end logistics management, contributing to faster turnaround times and improved cost efficiency for the sector.
- **Growth of Semiconductor and EV Battery Manufacturing:** With the government's strong push to build domestic semiconductor fabs and EV battery manufacturing facilities under PLI schemes, the movement of high-value chipmaking equipment, wafers, and battery components has increased substantially. These items are extremely sensitive, often requiring controlled environments and rapid transportation, making air cargo the ideal mode. As India integrates deeper into global electronics and EV supply chains, the demand for specialized air freight services capable of handling precision, fragile, and high-technology goods will continue to rise.

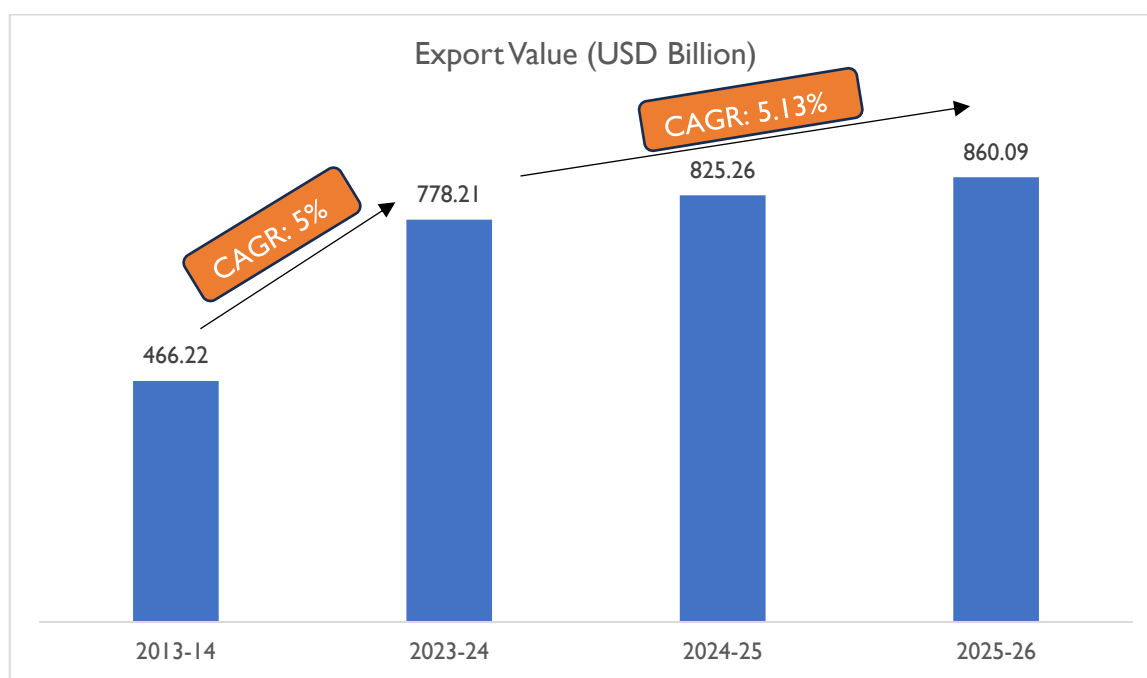


India's Foreign Trade Growth

Over the past decade, India's foreign trade has witnessed remarkable growth, driven by strong performance across both merchandise and services exports. In **FY 2013–14**, India's total exports were valued at approximately **USD 466.22 billion**, rising steadily to **USD 778.21 billion** in **FY 2023–24**, registering a **5% CAGR** over the ten-year period. This growth trajectory continued into **FY 2024–25**, with exports reaching **USD 825.26 billion**, reflecting a **6.0% year-on-year growth**. The momentum was sustained in **FY 2025–26**, when India's total exports further increased to a **record USD 860.09 billion**, recording a **4.2% year-on-year growth** despite continued global uncertainties arising from geopolitical tensions, supply chain disruptions, and slower demand in major economies. This steady expansion reflects a diversified export basket comprising **engineering goods, electronics, pharmaceuticals, textiles, agricultural products, and technology-enabled services**, highlighting India's increasing integration into global value chains and its gradual shift toward higher value-added exports. Alongside exports, imports have also expanded, driven by rising domestic demand for **energy, raw materials, capital goods, and advanced technologies**. This balanced growth underscores India's expanding role in international commerce and its increasing competitiveness across multiple sectors.

The expansion of foreign trade has significant implications for India's logistics and air cargo sectors. Rising exports and imports are increasing demand for efficient, time-sensitive, and high-value transport solutions, including air freight for perishables, pharmaceuticals, and high-tech products. Airports and cargo operators are investing in advanced infrastructure, cold-chain capabilities, and digital tracking systems to handle growing volumes with speed and reliability. The continued growth in both domestic and international trade underscores the need for enhanced cargo handling capacity, modernized logistics networks, and multimodal connectivity, positioning India as a strategic hub in global supply chains. This trend is expected to sustain long-term investment in the air cargo sector and strengthen India's competitiveness in global trade.

India's Export Growth



Source: Ministry of Commerce & Industry – PIC Delhi

India's export ecosystem has demonstrated consistent and broad-based expansion over the past decade, with total exports increasing from **USD 466.22 billion** in **FY 2014** to **USD 778.21 billion** in **FY 2024**, registering a **5% CAGR**. The growth continued in **FY 2025** with exports reaching **USD 825.26 billion**, supported by resilient performance in both merchandise and services exports. In **FY 2026**, total exports further rose to a **record USD 860.09 billion**,⁴⁰ reflecting a **4.2% year-on-year increase** despite persistent global economic headwinds. The sustained expansion has been driven by **stronger manufacturing capabilities, deeper integration into global value chains, policy initiatives to enhance export competitiveness, and increasing diversification across products and destination markets**. Robust growth in **engineering goods, electronics, pharmaceuticals, agricultural products, and technology-driven services** has reinforced India's position as a reliable global trading partner and strengthened the resilience of its export ecosystem.

In **FY 2026**, **merchandise exports** stood at **USD 441.78 billion**, while **services exports** reached **USD 418.31 billion**, taking total exports to a record **USD 860.09 billion**. Strong export performance was supported by engineering goods, electronics, pharmaceuticals, marine products, coffee, tobacco, rice, and other value-added manufactured products, while services exports continued to benefit from sustained growth in IT, business, financial, and professional services. Strengthened by strategic policy measures, improved competitiveness, expanding market access, and continued infrastructure development, India's export ecosystem has become more diversified, resilient, and deeply integrated into the global economy.

⁴⁰ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2252272&lang=I®=3&utm>

The momentum culminated in **FY 20226** with record exports of **USD 860.09 billion**, driven by continued expansion in both merchandise and services exports despite heightened global trade uncertainties. Continued policy support, export diversification, logistics infrastructure development, and stronger participation in global value chains have enhanced India's export competitiveness and reinforced its position as one of the world's fastest-growing major trading economies.

India's merchandise exports continued to demonstrate resilience during FY 2025–26, supported by strong performance across a diverse range of sectors despite global trade uncertainties. Key export categories such as electronic goods, engineering goods, marine products, and drugs & pharmaceuticals recorded positive year-on-year growth, reflecting strengthening domestic manufacturing capabilities and sustained global demand. Electronic goods emerged as the fastest-growing major export category, while engineering goods remained the largest contributor to India's merchandise exports. However, exports of petroleum products and rice witnessed a decline during the year. Overall, non-petroleum exports registered healthy growth, underscoring the increasing diversification and competitiveness of India's export basket. The following table highlights the export values for FY 2025 and FY 2026 along with the corresponding year-on-year growth rates.

Product / Category	FY 2025 (USD Billion)	FY 2026 (USD Billion)	YoY Growth (%)
Non-Petroleum Exports	374.32	387.88	3.62
Electronic Goods	38.56	47.96	24.40
Petroleum Products	63.38	53.91	-14.95
Engineering Goods	116.75	122.43	4.86
Rice	12.47	11.54	-7.50
Marine Products	7.41	8.43	13.86
Drugs & Pharmaceuticals	30.47	31.12	2.13

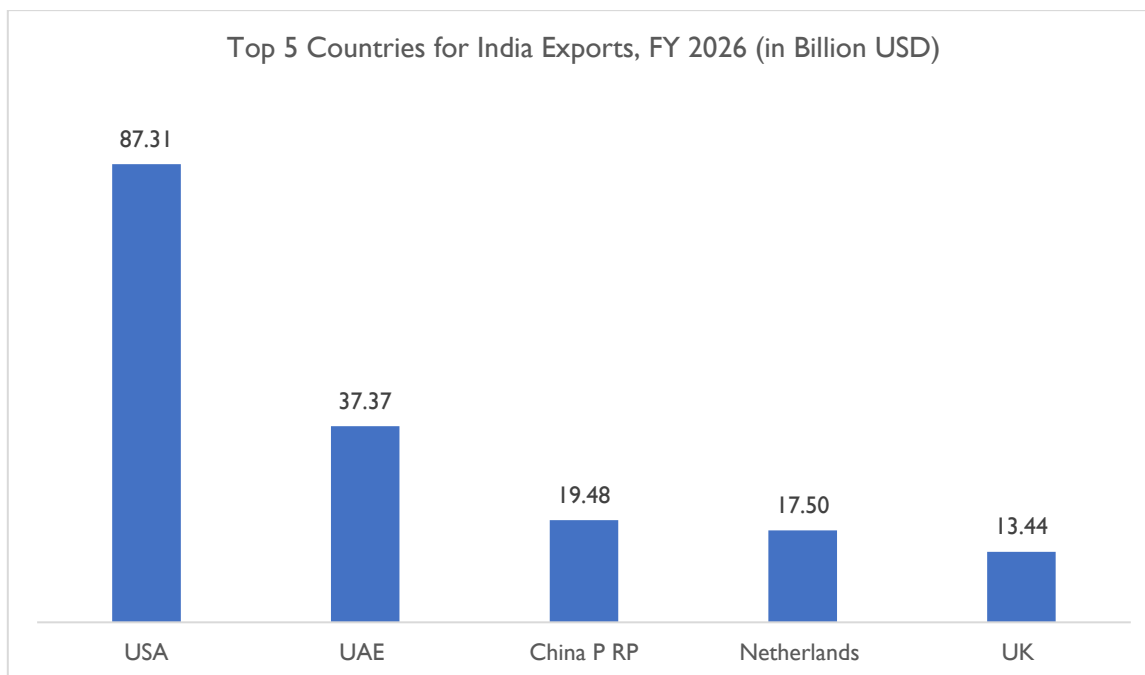
Source: Press Information Bureau, Ministry of Commerce & Industry⁴¹

Leading Export Destinations (Top Countries)

In FY 2026, India's export basket remained geographically diversified, with the **United States** retaining its position as the largest export destination, followed by the **United Arab Emirates (UAE)**, **China**, the **Netherlands**, the **United Kingdom**, **Singapore**, and **Germany**. The continued dominance of these markets highlights India's strong global trade presence across sectors such as engineering goods, pharmaceuticals, petroleum products, electronics, textiles, chemicals, and gems & jewellery. Collectively, these countries accounted for a significant share of India's merchandise exports, while exports to other countries also remained substantial, reflecting India's broad-based global trade network.

⁴¹ <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2026/apr/doc2026415848001.pdf>





Source: Press Information Bureau ⁴²

- **United States (USA)** remained India's largest export destination, with exports valued at **USD 87.31 billion** in FY 2026. Strong demand for engineering goods, pharmaceuticals, electronics, gems & jewellery, textiles, and IT-enabled products continued to drive exports, reinforcing the strategic importance of the India–US trade relationship.
- **United Arab Emirates (UAE)** ranked as the second-largest export market, recording exports of **USD 37.37 billion** in FY 2026. The UAE continued to serve as a major trading hub for petroleum products, gems & jewellery, engineering goods, food products, and chemicals, supported by the India–UAE Comprehensive Economic Partnership Agreement (CEPA).
- **China** accounted for exports worth **USD 19.48 billion** in FY 2026. Indian exports to China were primarily driven by iron ore, organic chemicals, marine products, cotton yarn, and petroleum products. Despite trade imbalances, China remained an important destination for several raw materials and intermediate goods.
- **The Netherlands** emerged as one of India's key European export destinations, with exports reaching **USD 17.50 billion** in FY 2026. The country acts as a major gateway to the European market, supporting exports of petroleum products, chemicals, pharmaceuticals, machinery, and engineering goods.

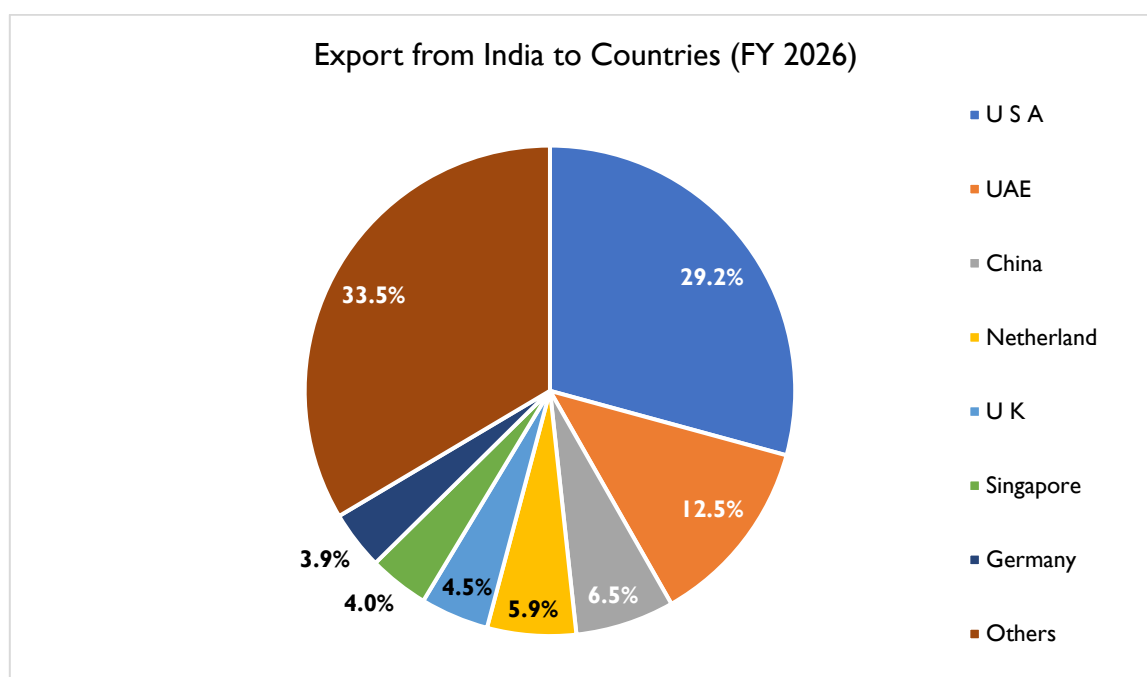
⁴² <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2026/apr/doc2026415848001.pdf>



- **United Kingdom (UK)** recorded imports from India worth **USD 13.44 billion** in FY 2026. India's exports to the UK were led by engineering goods, pharmaceuticals, textiles, apparel, gems & jewellery, and automotive components, reflecting long-standing bilateral trade ties.
- **Singapore** received **USD 11.87 billion** worth of exports from India in FY 2026. As a leading financial and logistics hub in Southeast Asia, Singapore remained an important market for petroleum products, electronics, machinery, chemicals, and precious stones.
- **Germany** imported goods worth **USD 11.53 billion** from India in FY 2026. Engineering goods, automobiles and auto components, chemicals, pharmaceuticals, textiles, and machinery continued to be the major export categories supporting India's trade with Germany.

Other Countries collectively accounted for **USD 100.13 billion** in exports during FY 2026, highlighting India's diversified export footprint across Asia, Africa, Latin America, Oceania, and other European markets. This broad geographical presence reduces dependence on a few markets and strengthens India's resilience against global trade disruptions.

Key Export Destinations in fiscal year 2026



Source: Press Information Bureau⁴³

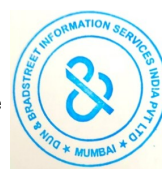
In FY 2026, India's export profile continued to demonstrate a well-diversified global market presence, with the United States remaining the largest export destination, accounting for 29.24% of total exports. This reflects robust demand for Indian products across key sectors such as engineering goods, pharmaceuticals, petroleum products, electronics, textiles, chemicals, and gems & jewellery. The United Arab Emirates (UAE)

⁴³ <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2026/apr/doc2026415848001.pdf>

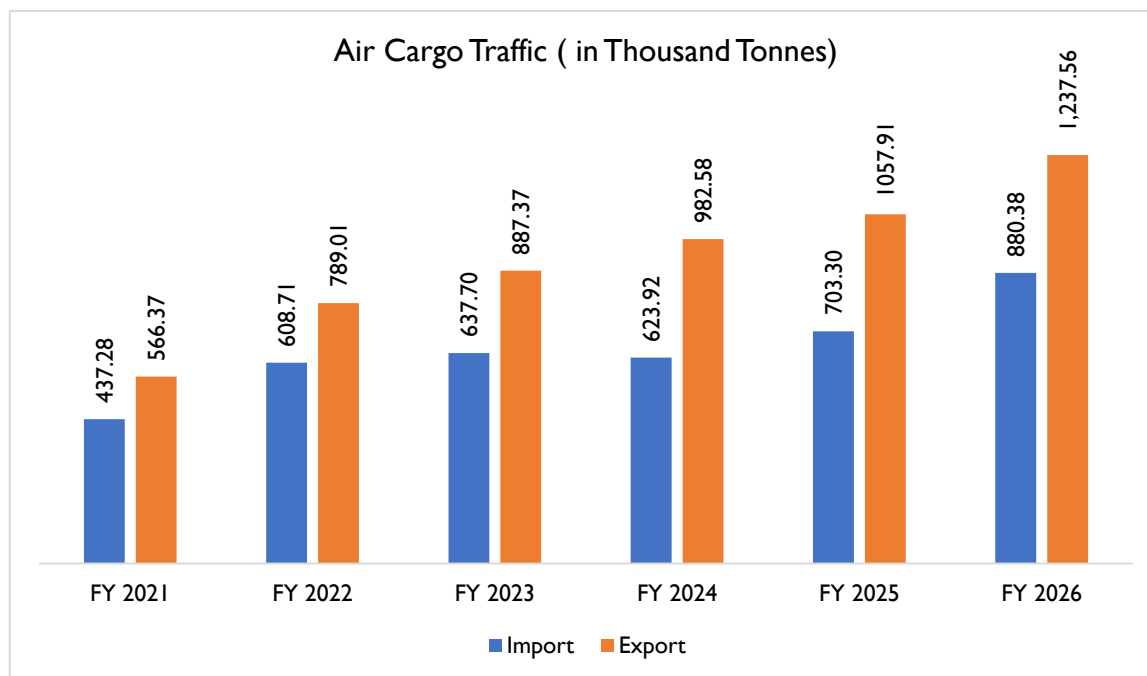
ranked as the second-largest export destination, contributing 12.51% of total exports, supported by its strategic position as a major regional trade and re-export hub under the India–UAE Comprehensive Economic Partnership Agreement (CEPA).

Among other major markets, China accounted for 6.52% of India's exports, driven primarily by shipments of iron ore, organic chemicals, marine products, and petroleum products. The Netherlands, with a 5.86% share, continued to serve as a key gateway to the European Union, facilitating exports of petroleum products, engineering goods, chemicals, and pharmaceuticals. The United Kingdom represented 4.50% of exports, reflecting strong demand for engineering products, textiles, automotive components, pharmaceuticals, and gems & jewellery.

Within Asia, Singapore accounted for 3.97% of India's exports, reinforcing its role as an important financial, logistics, and trading hub for petroleum products, electronics, machinery, and chemicals. Germany contributed 3.86% of total exports, supported by steady demand for engineering goods, machinery, automotive components, chemicals, and pharmaceuticals. Meanwhile, other countries collectively accounted for 33.53% of India's exports, highlighting the country's broad geographical diversification across Asia, Europe, Africa, the Americas, and Oceania. This diversified export base strengthens India's resilience against market-specific risks and supports sustainable export-led economic growth



Trends in India's Foreign Trade By Air Ways⁴⁴



Source: Directorate General of Civil Aviation (DGCA)

Freight to India (Imports):

Air freight imports to India increased from **437.28 thousand tonnes** in FY 2021 to **880.38 thousand tonnes** in FY 2026, nearly doubling over the period, experiencing a CAGR of 15%. After a strong recovery in FY 2021 following the pandemic, import volumes continued to grow in FY 2022 and FY 2023, experienced a marginal decline in FY 2024, and rebounded in FY 2025 and FY 2026 and observed 12.7% and 25.2% y-o-y growth respectively. The growth was driven by rising imports of high-value and time-sensitive goods, including electronics, machinery, industrial components, and pharmaceuticals.

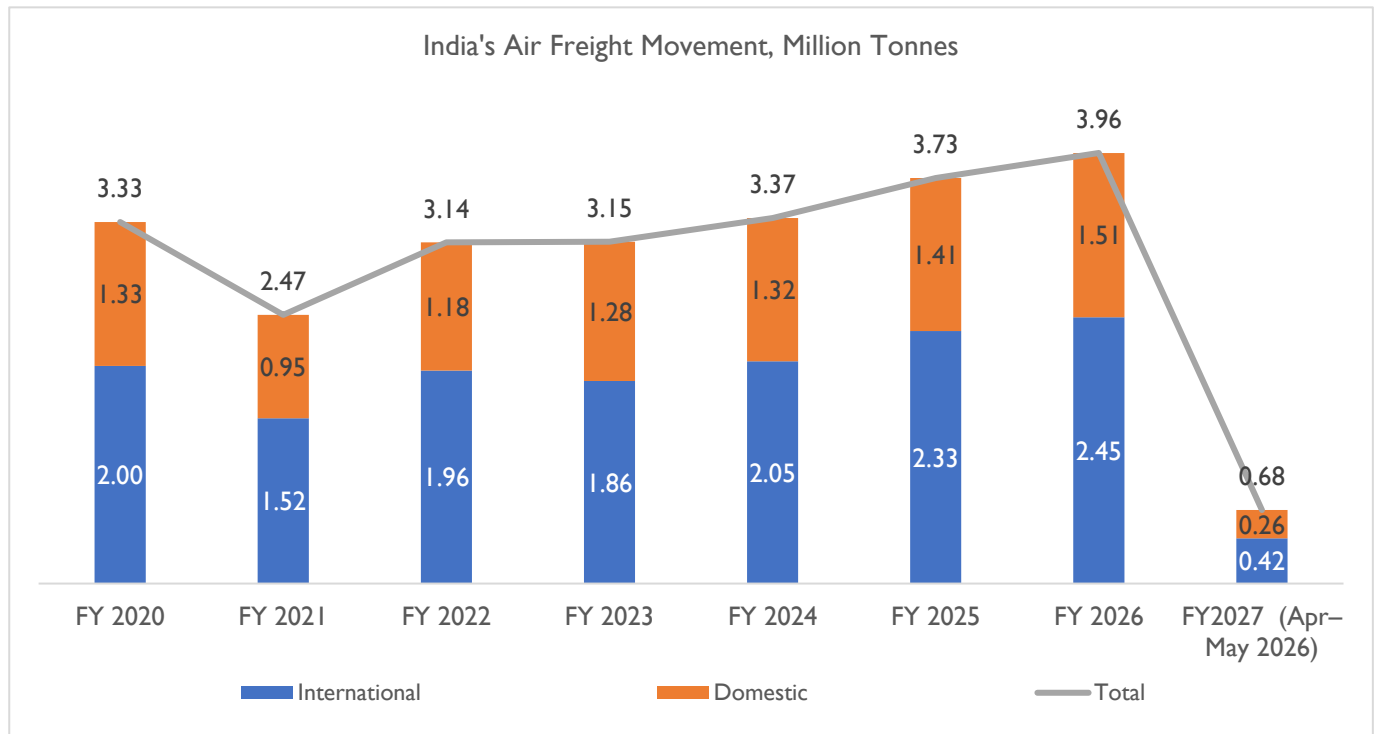
Freight from India (Exports):

Air freight exports from India demonstrated consistent growth, increasing from **566.37 thousand tonnes** in FY 2020 to **1,237.56 thousand tonnes** in FY 2026, representing an overall increase of over 115% and a CAGR of 14.3% during the above period. Export volumes grew steadily each year on the back increasing global demand for Indian exports, particularly pharmaceuticals, electronics, engineering goods, perishables, and other high-value products.

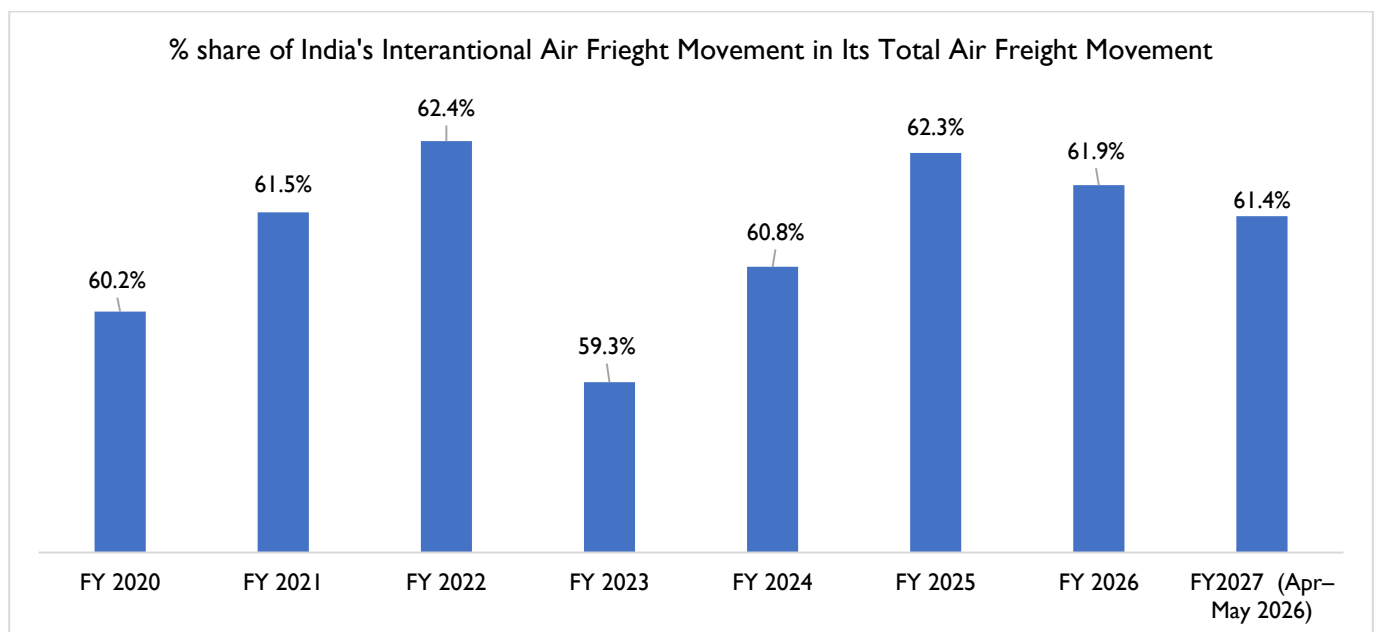
⁴⁴ https://www.dgca.gov.in/digigov-portal/?baseLocale=en_US?page=4268/4207/servicename

Historical Growth Trend in India's Cargo Movement by Air and Ocean

○ Air Freight⁴⁵:



Source: Airport Authority of India



⁴⁵ <https://www.aai.aero/sites/default/files/traffic-news/May2k26Annex4.pdf>
<https://www.aai.aero/sites/default/files/traffic-news/Mar2k26Annex4.pdf>

Sources: Airport Authority of India

India's air freight movement has demonstrated steady long-term growth, increasing from **3.33 million tonnes in FY2020 to 3.96 million tonnes in FY2026**, registering a CAGR of approximately 2.9% during the period. After experiencing a decline in FY2021 due to pandemic-related disruptions, air cargo volumes recovered strongly, supported by the revival in international trade, rapid expansion of e-commerce, growth in high-value manufacturing, and increasing demand for time-sensitive transportation. In FY2026, total air freight reached **3.96 million tonnes, reflecting a 6.2% year-on-year increase over FY2025**. Looking ahead, freight movement during **FY2027 (April–May 2026) stood at 0.68 million tonnes**, indicating continued momentum in India's air cargo sector at the beginning of the new financial year.

International freight continued to dominate India's air cargo landscape throughout the period, consistently accounting for around 60%–62% of total air freight movement. Its share increased from **60.2% in FY2020 to 61.9% in FY2026**, highlighting India's growing integration with global trade networks and cross-border supply chains. International cargo volumes increased from **2.00 million tonnes in FY2020 to 2.45 million tonnes in FY2026**, driven by robust exports of pharmaceuticals, electronics, engineering goods, perishables, and e-commerce shipments. Domestic freight also witnessed steady expansion, rising from **1.33 million tonnes in FY2020 to 1.51 million tonnes in FY2026**, supported by increasing domestic consumption, express logistics, and the expansion of regional air connectivity. During FY2027 (April–May 2026), international freight accounted for **61.4% of total air cargo movement**, indicating that international shipments continue to contribute nearly two-thirds of India's overall air freight volumes.

Economic Activity:

The steady rise in overall freight volumes reflects a broad-based expansion in India's economic activity. Growth in air cargo typically signals increased manufacturing output, stronger consumption patterns, and higher demand for fast and reliable logistics. When industries operate at higher capacity whether in pharmaceuticals, electronics, or perishables, the need for timely movement of goods intensifies, leading to increased freight traffic. This correlation between freight growth and economic momentum indicates that businesses are scaling production and distribution, contributing to healthier supply chain cycles across the country.

Global Trade Dynamics:

The strong performance of international air freight points toward favourable global trade conditions and India's strengthening position in cross-border commerce. Higher international cargo volumes may stem from rising exports, increased import of high-value goods, entry into new global markets, and the signing of new bilateral or multilateral trade agreements. Additionally, global companies are increasingly diversifying supply chains, and India is emerging as a key alternative hub amid shifting geopolitical conditions. These factors collectively enhance international trade flows, helping air freight gain momentum.



Domestic Market Growth:

The relatively moderate yet steady growth in domestic air freight highlights a stable internal market that is gradually expanding. Domestic cargo volumes are closely linked to factors such as consumer demand, expansion of e-commerce penetration in Tier-II and Tier-III cities, development of regional logistics infrastructure, and efficiency of multimodal transport systems. While domestic demand may not be growing as sharply as international segments, its consistency suggests resilience in internal trade and a slow but sustained improvement in manufacturing and distribution networks within the country.

Sectoral Performance:

A deeper examination of sector-specific contributions is crucial to fully understand the drivers behind freight growth. Different industries influence freight trends in varied ways. For instance, the rise of electronics manufacturing boosts demand for high-value, time-sensitive air cargo, while agricultural and perishable segments rely on air freight for export quality maintenance. Similarly, the surge in pharmaceuticals and medical supplies post-pandemic has significantly increased cold-chain dependent air shipments. Meanwhile, e-commerce and express logistics continue to reshape domestic cargo patterns. Identifying which sectors are contributing most helps assess both current performance and future growth potential of the air freight market.

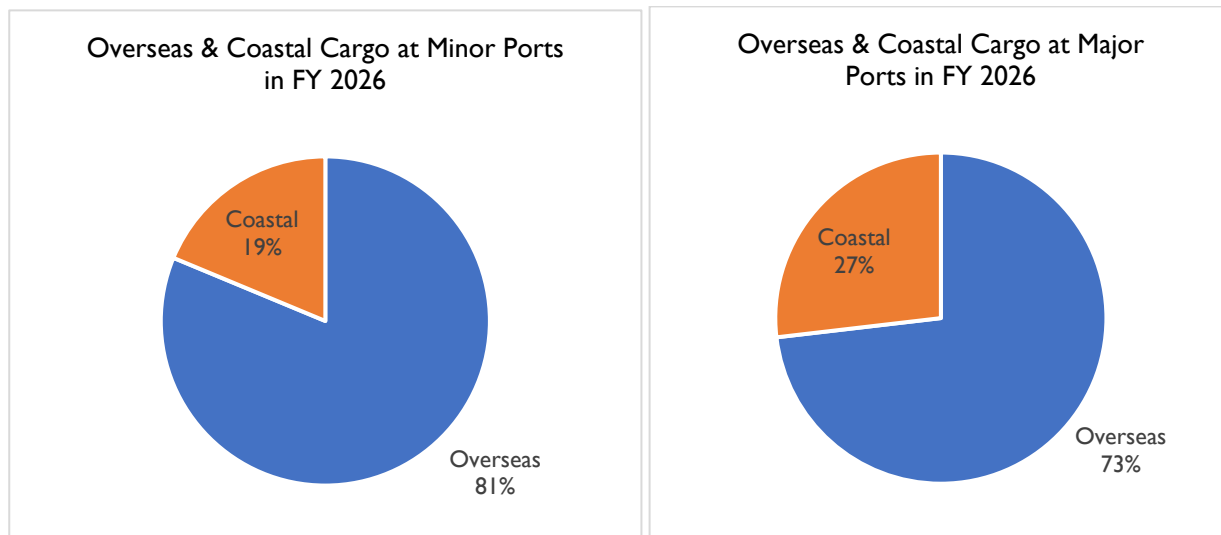
Impact on Air Cargo Traffic:

Increased Demand for Express Deliveries: The surge in e-commerce has escalated the need for expedited shipping solutions. Consumers now anticipate shorter delivery windows, prompting e-commerce platforms and logistics providers to utilize air cargo for its speed and efficiency. This shift is evident as express shipments are projected to constitute a significant portion of air cargo business in the coming decades.

Cross-Border E-Commerce Growth: The expansion of cross-border online sales has further amplified the demand for air cargo services. Air freight is often the preferred mode for international shipments due to its ability to reduce transit times, thereby meeting customer expectations for prompt deliveries.

Infrastructure and Fleet Expansion: To accommodate the burgeoning e-commerce sector, logistics companies and airlines are investing in expanding their air cargo capacities. This includes acquiring additional aircraft, enhancing cargo handling facilities, and optimizing logistics networks to ensure efficient operations

Cargo Movement at Indian Ports:



Source: Ministry of Ports, Shipping and Waterways

Maritime transport in India is fundamentally driven by the expansion of global trade and economic activity. With an extensive coastline stretching approximately **7,517 km** (including island territories), maritime transport remains the backbone of the country's trade logistics. Around **95% of India's merchandise trade by volume** and nearly **70% by value** is carried through sea routes, making ports critical to the nation's import-export ecosystem. These maritime routes not only facilitate international trade but also provide vital connectivity between the Indian mainland and island territories.

India's maritime ecosystem comprises **major ports, non-major (minor) ports, shipping services, shipbuilding and repair facilities, and inland waterways**, supporting a wide range of overseas and coastal cargo operations. In **FY2026**, cargo movement continued to be dominated by **overseas (international) trade**, although the share varied between major and non-major ports. At **major ports**, overseas cargo accounted for approximately **73%** of total cargo handled, while **coastal cargo contributed 27%**. In contrast, **non-major ports** handled a significantly higher proportion of international cargo, with **overseas cargo accounting for 81%** of throughput and **coastal cargo contributing 19%**. This distribution highlights the pivotal role of Indian ports in supporting international trade while also facilitating domestic coastal shipping.

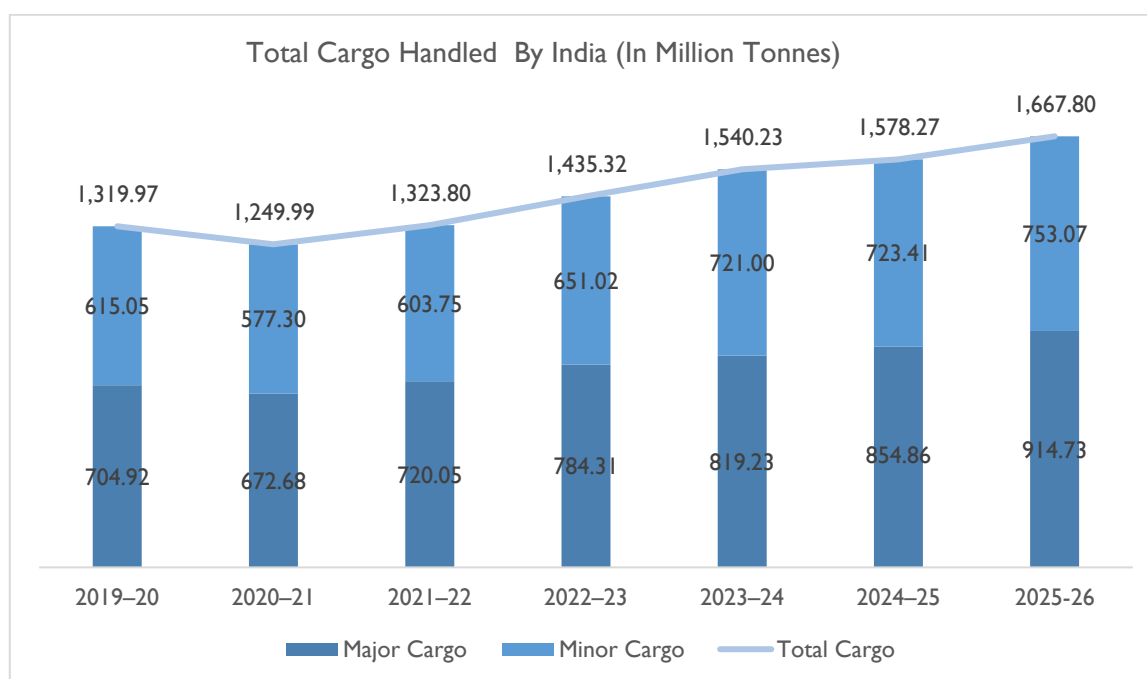
Despite being one of the most cost-effective and environmentally sustainable modes of transportation, **coastal shipping** in India remains relatively underdeveloped compared to overseas trade. To strengthen coastal logistics, the Government continues to invest in port infrastructure, cargo-handling facilities, and multimodal connectivity. For instance, the **Kerala Maritime Board** has undertaken infrastructure upgrades

at ports such as **Kollam, Beypore, Azhikkal, and Vizhinjam**, including the installation of new berths and cargo-handling equipment to enhance coastal cargo capacity.

India's shipping services broadly operate under two models: **tramp services** and **liner services**. Tramp services function on demand without fixed schedules or routes, transporting bulk cargo wherever required, whereas liner services operate on predetermined routes and fixed schedules, providing regular connectivity between ports for containerized and general cargo.

In addition to cargo transportation, a range of **marine support services**—including tugboat operations, pilotage, mooring, stevedoring, lighterage, barge operations, and dredging—play a crucial role in ensuring efficient port operations. These ancillary services are particularly important in India, where ongoing investments in port modernization and capacity enhancement continue under initiatives such as the **Sagarmala Programme** and the **Maritime India Vision 2030**, aimed at improving logistics efficiency, reducing turnaround time, and strengthening India's position as a global maritime hub.

Historical Cargo Handling



Source: - Port Data Management Portal, Ministry of Ports, Shipping and Waterways⁴⁶

Between FY2020 and FY2026, cargo volumes handled by Indian ports (Major and Non-Major) exhibited a sustained upward trend, increasing from 1,319.97 million tonnes in FY2020 to 1,667.80 million tonnes in FY2026, representing a CAGR of approximately 4.0%. In FY2021, total cargo throughput declined by 5.3% year-on-year to 1,249.99 million tonnes, primarily due to the COVID-19 pandemic, which disrupted global trade, industrial production, and port operations. Thereafter, cargo traffic recovered steadily as economic activity normalized, infrastructure investments accelerated, and international trade rebounded.

⁴⁶ <https://shipmin.gov.in/sites/default/files/Cargo%20handled%20at%20Major%20Ports%20March%202026.pdf>
<https://shipmin.gov.in/sites/default/files/Cargo%20handled%20at%20Non-Major%20Ports%20March%202026.pdf>



The recovery gained momentum from FY2022 onwards, with cargo volumes reaching 1,323.80 million tonnes in FY2022 and further increasing to 1,435.32 million tonnes in FY2023, supported by higher movement of coal, crude oil, fertilizers, containers, iron ore, and other bulk commodities. Growth remained robust in FY2024, when total cargo handled increased to 1,540.23 million tonnes, reflecting continued expansion in industrial production, manufacturing activity, and external trade. However, the pace of growth moderated to 2.5% year-on-year in FY2025, with cargo throughput reaching 1,578.27 million tonnes, indicating a normalization following the strong post-pandemic recovery. In FY2026, total cargo volumes further increased to 1,667.80 million tonnes, registering a healthy 5.7% year-on-year growth, driven by higher containerized cargo, petroleum products, coal imports, and ongoing capacity additions under major port modernization and logistics connectivity initiatives.

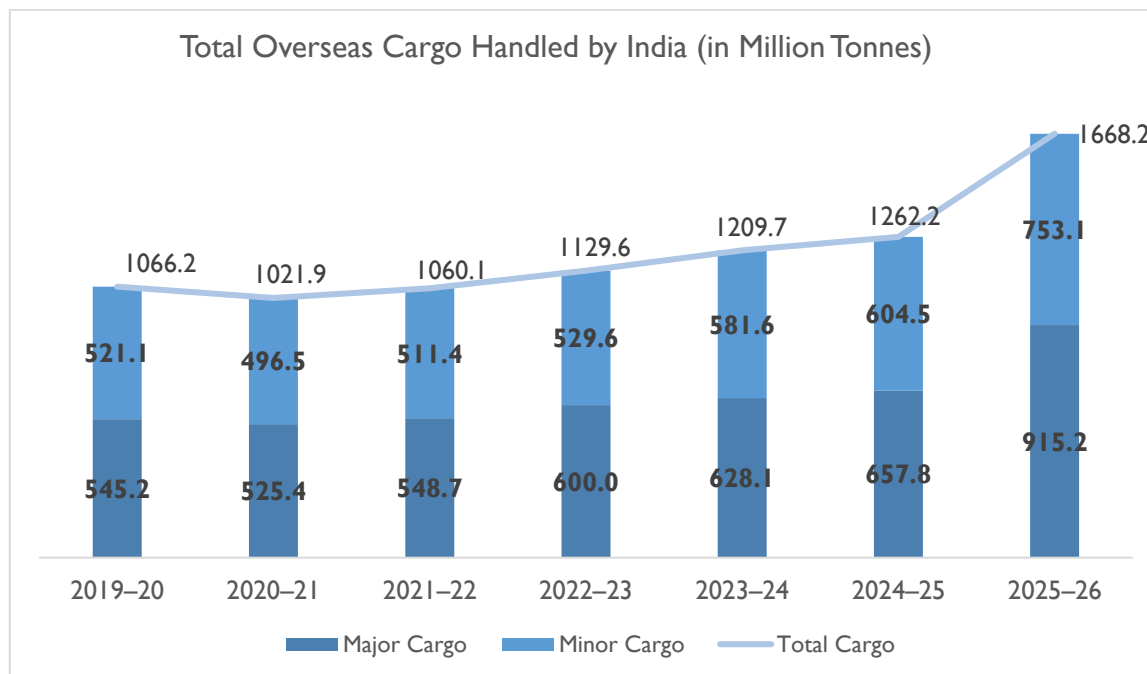
Major Ports continued to account for the largest share of India's maritime cargo traffic, handling 914.73 million tonnes in FY2026⁴⁷, representing nearly 55% of total cargo throughput. Non-Major Ports also recorded steady growth, with cargo volumes increasing to 753.07 million tonnes⁴⁸, supported by expanding private port infrastructure, improved operational efficiencies, and rising coastal and international trade. The consistent growth across both categories highlights the strengthening of India's maritime logistics ecosystem and reflects sustained investments under initiatives such as the Sagarmala Programme, port modernization projects, and multimodal connectivity development, which continue to enhance the country's trade competitiveness and cargo-handling capacity.

⁴⁷ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2249113&lang=1®=3&utm>

⁴⁸ https://www.mopsw.nic.in/sagarvidyakosh/index.php?title=Transport_Research_Wing&utm



India's International Ocean (Overseas) Cargo Volume:



Between **FY 2020** and **FY 2026**, India's overseas cargo volumes handled across both major and non-major ports demonstrated a steady upward trajectory, particularly strengthening from FY 2022 onward. During this period, the country's port ecosystem exhibited resilience, operational efficiency gains, and deeper integration with global maritime trade networks. While the growth trend was temporarily disrupted by the COVID-19 pandemic, the sustained recovery thereafter underscores India's expanding role in international logistics and global commodity movement.

The only major setback occurred in **FY 2020-21**, when overseas cargo volumes declined by **4.2%** to **1,021.9 million tonnes** from **1,066.2 million tonnes** in the previous year. The decline was primarily driven by the COVID-19 pandemic, which disrupted global shipping operations through vessel delays, container shortages, cargo handling constraints, reduced industrial production, and supply chain bottlenecks. Port congestion, labour shortages, and temporary shutdowns across export-oriented industries further affected cargo movement, making FY2020-21 the only year of negative growth during the period.

A strong and broad-based recovery began in **FY 2021-22**, with overseas cargo volumes increasing to **1,060.1 million tonnes**, followed by consistent year-on-year growth to **1,129.6 million tonnes** in FY2022-23, **1,209.7 million tonnes** in FY2023-24, and **1,262.2 million tonnes** in FY2024-25. This recovery was supported by the revival in domestic manufacturing, normalization of global trade routes, rising

demand for bulk commodities such as coal, crude oil, fertilizers and iron ore, along with higher containerized cargo movement. Simultaneously, continued investments under the **Sagarmala Programme**, modernization of port infrastructure, digitalization of port operations, mechanization, and improved hinterland connectivity significantly enhanced cargo handling efficiency and reduced logistics bottlenecks.

By **FY 2025–26**, overseas cargo handled across major and non-major ports surged to **1,668.2 million tonnes**, representing a robust **32.2% year-on-year growth** over FY2024–25. The sharp increase was driven by strong growth in international trade, higher energy imports, rising exports of engineering goods and petroleum products, expanding container traffic, and significant improvements in port capacity and multimodal logistics infrastructure. India's ports have substantially surpassed pre-pandemic cargo levels, reflecting enhanced operational efficiency, greater maritime competitiveness, and stronger integration with global supply chains. The sustained growth reinforces India's emergence as a strategic maritime and logistics hub in international trade.

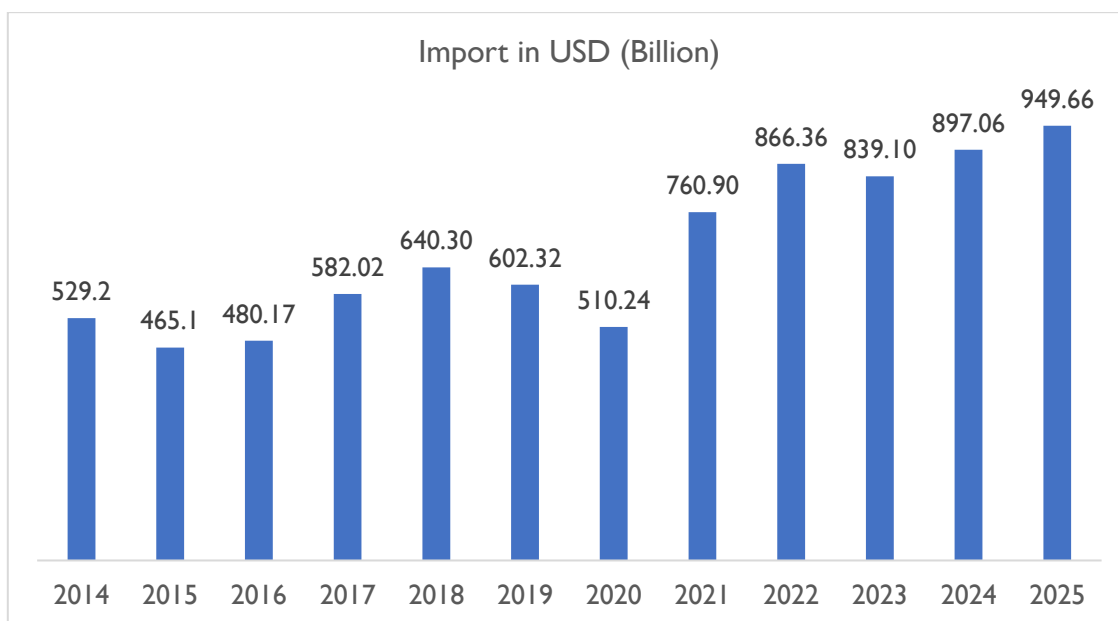
India's Import Growth and its share in global exports.

India's import landscape has evolved significantly over the past decade, reflecting the country's expanding industrial base, rising domestic consumption, and deeper integration with global supply chains. **Total merchandise imports increased from USD 529.20 billion in 2014 to USD 949.66 billion in 2025**, representing a substantial rise over the period. While imports witnessed temporary declines in **2015, 2019, 2020, and 2023**, primarily due to weaker global trade, commodity price fluctuations, and the impact of the COVID-19 pandemic, the overall trajectory remained strongly upward. Following the pandemic-induced slowdown, imports rebounded sharply to **USD 760.90 billion in 2021**, increased further to **USD 866.36 billion in 2022**, and, after a slight moderation to **USD 839.10 billion in 2023**, rose to **USD 897.06 billion in 2024** before reaching a record **USD 949.66 billion in 2025**.

The sustained increase in imports reflects robust demand for crude oil, electronic goods, machinery, chemicals, metals, and other intermediate and capital goods required to support India's manufacturing, infrastructure, and industrial development. Rising investments in sectors such as renewable energy, automobiles, electronics, construction, and engineering have further strengthened import demand for raw materials and advanced technologies. Although annual import values continue to be influenced by global commodity prices, exchange rate movements, and international trade dynamics, the long-term trend highlights India's growing role in global trade and its increasing dependence on imported inputs to sustain economic growth and industrial expansion.



Detail Import data from 2014 to 2025⁴⁹



Source-World Bank as per latest data

The table and graph show India's annual import values from **2014 to 2025**, highlighting how total imports have evolved over the period in response to changing global economic conditions, commodity price movements, and domestic demand.

- **2014–2016:** India's import trajectory between 2014 and 2016 reflected the impact of global commodity cycles. Imports fell sharply from **USD 529.2 billion** in 2014 to **USD 465.1 billion** in 2015, primarily due to the steep decline in global crude oil prices and subdued industrial demand. A mild recovery followed in 2016, with imports rising to **USD 480.17 billion**, indicating gradual stabilization in energy prices and a modest revival in domestic consumption.
- **2017–2019:** Between 2017 and 2019, India experienced a period of strong economic expansion, leading to a steady increase in import demand. Imports rose significantly, reaching **USD 640.30 billion** in 2018, supported by higher crude oil prices, increased manufacturing activity, and a growing consumer base. However, in 2019, imports declined to **USD 602.32 billion**, reflecting the impact of moderating global growth, US–China trade tensions, and softer domestic investment.
- **2020:** The year 2020 marked an unprecedented disruption in India's import landscape, with total imports declining sharply to **USD 510.24 billion**. The COVID-19 pandemic and the nationwide lockdown severely affected industrial production, consumer spending, and international trade. Supply chain disruptions, mobility restrictions, and lower global commodity prices significantly reduced imports of crude oil, machinery, electronics, and other industrial inputs.

⁴⁹ <https://data.worldbank.org/indicator/NE.IMP.GNFS.CD?end=2025&locations=IN&start=2006>



- **2021–2022:** The downturn of 2020 was followed by a strong recovery in 2021 and 2022 as economic activity normalized and global trade rebounded. Imports surged to **USD 760.90 billion** in 2021, driven by the reopening of industries, restoration of supply chains, and rising domestic demand for raw materials, capital goods, and electronics. This momentum continued in 2022, with imports increasing further to **USD 866.36 billion**, supported by elevated global prices of crude oil, coal, metals, fertilizers, and other essential commodities, alongside sustained industrial and infrastructure activity.
- **2023:** In 2023, imports moderated slightly to **USD 839.10 billion**, reflecting easing commodity prices, weaker global demand, tighter monetary policies across major economies, and a decline in imports of certain commodities. Nevertheless, import levels remained well above pre-pandemic levels, indicating continued domestic economic resilience.
- **2024:** India's imports rebounded to **USD 897.06 billion**, supported by strong domestic consumption, higher imports of capital goods, electronics, machinery, and intermediate products, along with improving investment activity. The increase also reflected India's expanding manufacturing base and deeper integration into global value chains despite continued geopolitical and economic uncertainties.
- **2025:** India's imports increased further to a record **USD 949.66 billion**, highlighting sustained growth in domestic demand and industrial activity. The rise was driven by higher imports of energy products, electronic goods, machinery, transport equipment, chemicals, and other intermediate goods required to support manufacturing and infrastructure development. Continued investments in production capacity, rapid technological adoption, and expanding consumer demand further strengthened India's import requirements, reinforcing its position as one of the world's fastest-growing major economies and an integral part of global supply chains.

Overall, India's import trajectory over the past decade reflects the combined influence of global commodity cycles, domestic economic conditions, and geopolitical developments. Imports declined between 2014 and 2016 largely due to falling crude oil prices, while strong economic expansion supported sustained growth during 2017–2019. The sharp contraction in 2020 was caused by the COVID-19 pandemic and widespread disruptions to global trade, followed by a robust recovery in 2021 and continued expansion in 2022 as economic activity normalized. Although imports moderated slightly in 2023 due to easing commodity prices and slower global growth, they rebounded strongly in 2024 and reached a **record USD 949.66 billion in 2025**, reflecting resilient domestic demand, rising industrial production, expanding manufacturing capacity, and increasing integration with global supply chains. Looking ahead, India's import performance is expected to remain closely linked to global commodity prices, trade policies, domestic manufacturing growth, infrastructure investment, and exchange rate movements.



Globalization of Supply Chains

The globalization of supply chains has dramatically elevated the role of air cargo as companies pursue faster, more resilient, and geographically diversified logistics networks. With production shifting across continents, from East Asian manufacturing clusters to consumer hubs in North America, Europe, and increasingly the Global South, air freight has become indispensable for moving time-critical, high-value, and perishable goods. Sectors such as electronics, pharmaceuticals, fast fashion, and e-commerce now depend on air cargo to maintain lean inventories, achieve rapid replenishment, and ensure service-level consistency across dispersed global markets. The rise of integrated express operators and digital freight platforms has further optimized cross-border flows, enabling end-to-end visibility and multimodal connectivity.

Amid this global transformation, **India is emerging as a pivotal node** in the international air logistics ecosystem. The country's growing footprint in global supply chains, driven by the "China+1" strategy, make in India, and rapidly expanding export sectors, has increased demand for high-capacity, tech-enabled air cargo infrastructure. Major airports such as Delhi, Mumbai, Bengaluru, and Hyderabad are being upgraded into multimodal cargo hubs, supported by initiatives like the **National Air Cargo Policy Outline (NACPO)**, the **Unified Logistics Interface Platform (ULIP)**, and **PM Gati Shakti**. India's pharmaceutical and biotech exports, fresh horticulture shipments, and electronics manufacturing (especially smartphones and semiconductors) increasingly rely on air freight to serve distant markets efficiently.

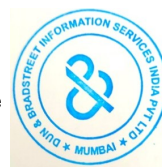
Simultaneously, India's booming e-commerce market and rising cross-border online retail have triggered a surge in express and parcel volumes, placing the country alongside global consumption markets. With dedicated freighter operations expanding, growing participation of global integrators, and policy emphasis on improving transshipment and cold-chain capacity, India is steadily positioning itself not just as a consumption market but as a **strategic air cargo gateway** for Asia and beyond. As global supply chains become more volatile, due to geopolitical tensions, natural disruptions, and shifting trade patterns, India's strengthening air cargo ecosystem is set to play a larger role in enhancing resilience and supporting global economic integration.

- **Integration into Global Manufacturing Networks:** India's deeper integration into global manufacturing circuits, across electronics, pharmaceuticals, automotive components, and textiles, has elevated the requirement for high-speed logistics. As production becomes globally distributed, the timely movement of raw materials and finished goods is critical to maintaining competitiveness. Air freight has become the preferred mode for high-value, time-sensitive shipments due to its reliability and speed. **With annual air cargo volumes targeted to reach 10 million metric tonnes by 2030⁵⁰**, the sector is poised for significant expansion. This growth reflects India's increasing reliance on rapid cross-border logistics to support export-oriented and technology-driven industries, backed by investments in airport infrastructure, enhanced connectivity, and logistics modernization.

⁵⁰ https://www.pib.gov.in/PressReleasePage.aspx?PRID=2133351&utm_source=chatgpt.com®=48&lang=2



- **Support for Just-in-Time (JIT) Production Models:** The adoption of JIT manufacturing in sectors like electronics, automotive, and precision engineering has directly increased reliance on efficient air logistics. These industries require components to arrive exactly when needed to prevent assembly-line delays or inventory bottlenecks. Air cargo enables ultra-short lead times, flexible scheduling, and reduced warehouse holdings, which are essential for maintaining lean supply chains. By minimizing production downtime and optimizing inventory turnover, air freight has become an integral pillar of India's modern manufacturing ecosystem as it integrates more tightly with global value chains.
- **Diversification of Global Sourcing Strategies:** As multinational corporations diversify supply bases to mitigate risks from geopolitical tensions, trade fragmentation, and pandemic-driven shocks, India is gaining traction under the global "China+1" strategy. This shift strengthens India's role as both a sourcing destination and a manufacturing hub for high-value goods. Air cargo is vital for supporting this transition, ensuring fast and secure movement of sensitive shipments such as semiconductor components, life-saving pharmaceuticals, aerospace parts, and specialized machinery. The dependability of air logistics helps global companies maintain supply continuity while deepening India's position in diversified global supply chains.
- **Government-Driven Logistics Modernization:** India's logistics transformation is being accelerated by policy initiatives designed to enhance multimodal connectivity and reduce systemic inefficiencies. The National Logistics Policy (NLP) and PM Gati Shakti framework are central to this effort, promoting integrated planning across air, road, rail, and port infrastructure. These initiatives focus on digitization of logistics processes, infrastructure harmonization, streamlined clearances, and improved cargo handling capacity at airports. Such reforms strengthen India's global logistics competitiveness by enabling faster cargo turnaround, higher visibility in supply chain workflows, and better alignment of air cargo operations with global standards.



Growth in Pharmaceutical, Manufacturing and Agricultural

The growth of India's air cargo traffic is significantly driven by key industries such as **pharmaceuticals, manufacturing, and agriculture**. These sectors rely heavily on-air freight due to the need for speed, efficiency, and global market integration. Air cargo plays a crucial role in ensuring timely delivery, maintaining product quality, and expanding India's trade presence worldwide.

I. Pharmaceuticals Sector and Air Cargo Demand

- **Why Air Cargo is Important for Pharmaceuticals?**

- Pharmaceutical products such as vaccines, biologics, insulin, and speciality drugs are highly sensitive to temperature variations. Even a minor deviation from required conditions can render them ineffective or unsafe. Air cargo offers advanced cold-chain solutions, ranging from refrigerated containers to ultra-low-temperature storage, which are crucial for maintaining product integrity during long-distance transit. Medicines and medical supplies often need to reach hospitals, pharmacies, and distribution centers rapidly. Air freight significantly reduces delivery time compared to sea or road transport. This speed is essential not only for commercial fulfilment but also during emergencies, humanitarian missions, and global health crises.
- After COVID-19, the world's dependency on fast, secure delivery of vaccines and pharmaceutical raw materials surged. India became a global supplier of vaccines, boosting the need for efficient air cargo. The pandemic reshaped logistics networks, making air freight an integral part of pharma supply chains for both routine and emergency shipments.

- **Key Growth Indicators:**

- **Surging Exports:** India's pharmaceutical exports have emerged as a significant global force, reaching **USD 30.47 billion in FY2024–25⁵¹**, with a **year-on-year CAGR of 9.21%** while in FY 2026 the sector is expected to surpass USD 31 Billion reflecting the sector's robust growth trajectory and increasing prominence in international markets. This strong growth reinforces global confidence in India's capabilities in producing high-quality, affordable medicines. As export volumes increase, so does the demand for reliable and fast cargo services, most of which move by air due to the nature of the products.
- **Major Global Supplier:** India played a pivotal role in this global landscape. As the third-largest producer of drugs by volume, India contributed 20% to the global export of generic drugs. The Indian pharmaceutical industry is projected to grow at a CAGR of over 10%, with its market size expected to reach \$130 billion by 2034. India's strength lies in cost-efficient production, a skilled workforce,

⁵¹ Pharmexcil

and a robust regulatory framework. This vast international outreach requires an extensive, well-coordinated air freight system to connect Indian manufacturers with markets in the US, Europe, Africa, and Asia.

- **Increase in Specialized Air Cargo:** In 2023, pharmaceutical shipments via air cargo grew by **22%**, driven by rising exports of high-value, temperature-controlled products. Airlines and logistics companies are increasingly investing in dedicated pharma corridors, equipped with real-time temperature monitoring, thermal blankets, insulated containers, and secured storage, to cater to this growing demand.

2. Manufacturing Sector and Air Freight Growth

The manufacturing sector plays a crucial role in strengthening India's air freight ecosystem. As global supply chains evolve and production cycles become more time-sensitive, manufacturers increasingly rely on air cargo to maintain efficiency, reduce downtime, and meet international delivery commitments.

- **Why Air Cargo is Essential for Manufacturing?**

- Modern manufacturing, especially in sectors like automotive, electronics, aerospace, and precision engineering, operates on just-in-time and lean inventory models. In these systems, even small delays in component delivery can halt entire production lines. Air cargo provides the speed and dependability required to ensure uninterrupted operations by delivering critical components exactly when needed.
- Many manufactured goods fall into the high-value or sensitive category such as semiconductor chips, telecom equipment, medical devices, EV components, and industrial machinery parts. These products require rapid and secure movement to prevent damage, avoid production delays, and meet contract deadlines. Air freight offers lower risk, better tracking, and faster transit, making it the preferred mode for such shipments.
- Indian factories are increasingly integrated into global production networks. Whether supplying parts for electronics in East Asia, automotive systems in Europe, or textiles for global retail brands, the need for fast international connectivity is essential. Air freight ensures Indian manufacturers can meet global timelines and maintain competitiveness.

- **Key Growth Indicators:**

- **Growth in Export-Oriented Manufacturing:** Growth in Export-Oriented Manufacturing: India's export-oriented manufacturing sector continued to strengthen in **FY2025–26**, supported by robust global demand, expanding production capacity, and government initiatives such as **Make in India** and the **Production Linked Incentive (PLI)** schemes. During the year, **non-petroleum merchandise exports increased to USD 387.88 billion**, reflecting sustained growth in value-

added manufacturing, while **services exports reached USD 396.99 billion**, taking India's total exports to a record **USD 838.53 billion**. Key sectors including electronics, engineering goods, automotive components, pharmaceuticals, chemicals, and textiles remained major contributors to export growth. The continued diversification of export destinations, improved trade facilitation, and favourable trade agreements have further strengthened India's global competitiveness. To meet stringent delivery schedules and rising customer expectations, exporters are increasingly relying on **air freight** for transporting high-value, perishable, and time-sensitive products, thereby driving demand for air cargo and reinforcing India's position in global supply chains.

- **Air Freight Usage by Global Brands:** Global companies are increasingly turning to Indian suppliers and manufacturers, and many are boosting their air cargo shipments from India to avoid delays in sea transport. A notable example is Inditex, the parent company of Zara, which increased its air freight shipments from India by **37%**. This shift helps them match rapid fashion cycles, respond to dynamic consumer demand, and reduce supply chain bottlenecks caused by ocean freight disruptions.
- **Make in India & PLI Schemes Boosting Air Cargo:** Government initiatives such as Make in India, Atmanirbhar Bharat, and the Production Linked Incentive (PLI) schemes have significantly strengthened domestic manufacturing across sectors like electronics, pharmaceuticals, textiles, semiconductors, and renewable energy. As output increases, industries require faster international logistics support, both for exporting finished goods and importing specialized components. This has led to a substantial rise in air freight demand from industrial clusters, SEZs, and export hubs.

3. Agriculture Sector and Air Freight Expansion

The agricultural sector has emerged as one of the fastest-growing contributors to India's air cargo demand. As global consumers increasingly prefer fresh, high-quality, and exotic food products, the need for rapid and reliable transport has grown significantly. Air freight plays a crucial role in ensuring that India's perishable agricultural goods reach international markets on time, with minimal spoilage and maximum value realization.

- **Why Air Cargo is Vital for Agriculture?**

- Agricultural commodities such as fruits (grapes, mangoes, pomegranates), vegetables, seafood, dairy items, meat products, and floriculture goods have limited shelf life and require fast, temperature-controlled logistics. Air cargo ensures they reach global markets, such as the Middle East, Europe, and Southeast Asia, within hours rather than weeks, preserving freshness and nutritional value.
- Fast delivery through air freight allows Indian exporters to supply products at peak freshness, helping them tap into premium international markets. This not only increases competitiveness but also enables farmers and exporters to secure higher prices for their goods. Air cargo also facilitates the export of seasonal and specialty items that need to arrive within strict market windows.



- With India diversifying its agricultural basket from traditional staples to exotic produce, organic foods, and ready-to-eat items air freight is becoming essential. It reduces transit time drastically and helps exporters meet stringent quality standards set by importing countries. This is especially vital for products that must remain in controlled temperatures throughout their journey.

- **Key Growth Indicators:**

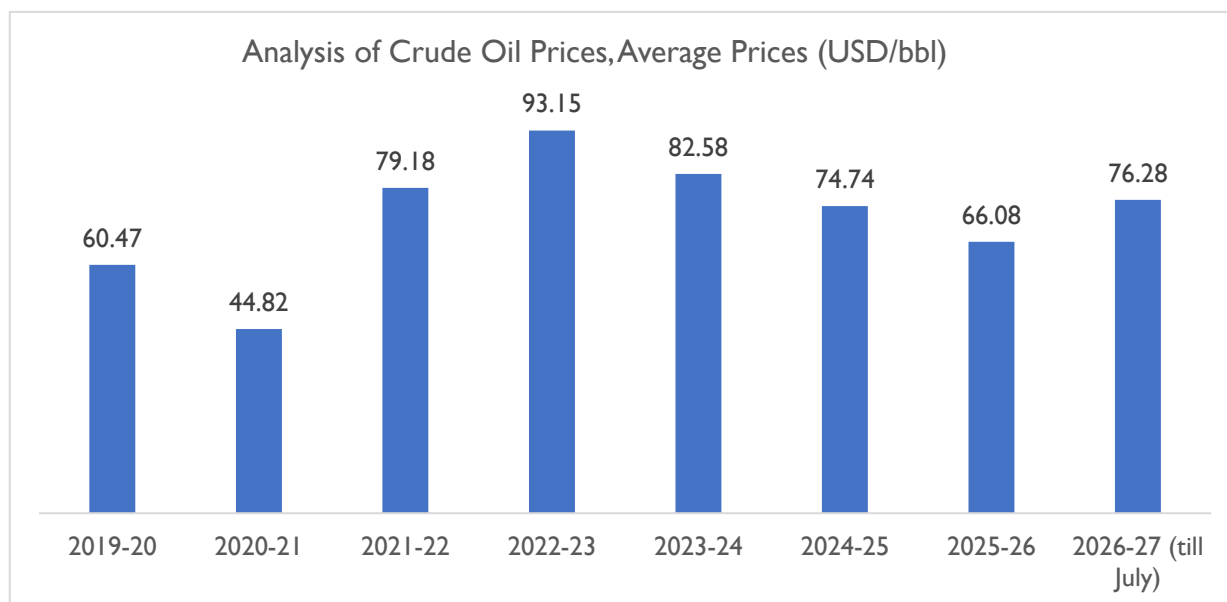
- **Rising Agricultural Exports:** India's agricultural export performance continued to demonstrate steady growth, with exports increasing by **2.8%**, rising from **USD 51.12 billion in FY2024–25** to a record **USD 52.55 billion in FY2025–26⁵²**. This sustained growth underscores the sector's significant contribution to the country's trade and its expanding presence in global markets. The increase reflects India's deeper integration into international food supply chains, supported by robust demand for rice, marine products, spices, coffee, fresh fruits and vegetables, and processed food products. Enhanced logistics infrastructure improved cold chain facilities, and the growing use of air cargo have enabled exporters to minimize post-harvest losses, preserve product quality, and efficiently access high-value international markets. These developments have strengthened India's position as a reliable global supplier of agricultural products while further boosting demand for time-sensitive air freight services.
- **Government's Agriculture Export Policy:** The Government of India's Agriculture Export Policy is focused on doubling agricultural exports by 2030 through improved logistics, better quality control, and expanded market access. The policy emphasizes minimizing wastage, strengthening cold-chain infrastructure, and promoting export clusters all of which directly boost demand for air freight. By aligning farmers, FPOs, exporters, and logistics providers, the policy aims to position India as a leading global food supplier.
- **Development of Agri-Air Corridors:** To support perishable exports, the government is developing dedicated agri-air corridors connecting major production hubs to international gateways. These corridors help streamline customs processes, reduce transit delays, and enhance cold-chain efficiency. Examples include improved connectivity for products like mangoes from Maharashtra, grapes from Nashik, flowers from Bengaluru, and seafood from coastal clusters. Dedicated corridors significantly reduce spoilage, increase export frequency, and boost the confidence of global buyers in Indian produce.

⁵² <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2271100&lang=15®=24&utm>



Impact of Crude Oil Volatility on Logistics Cost Structures

An analysis of Crude Oil Prices' impact on the Overall logistics industry and the post-COVID impact of Crude oil Prices on the logistics sector.

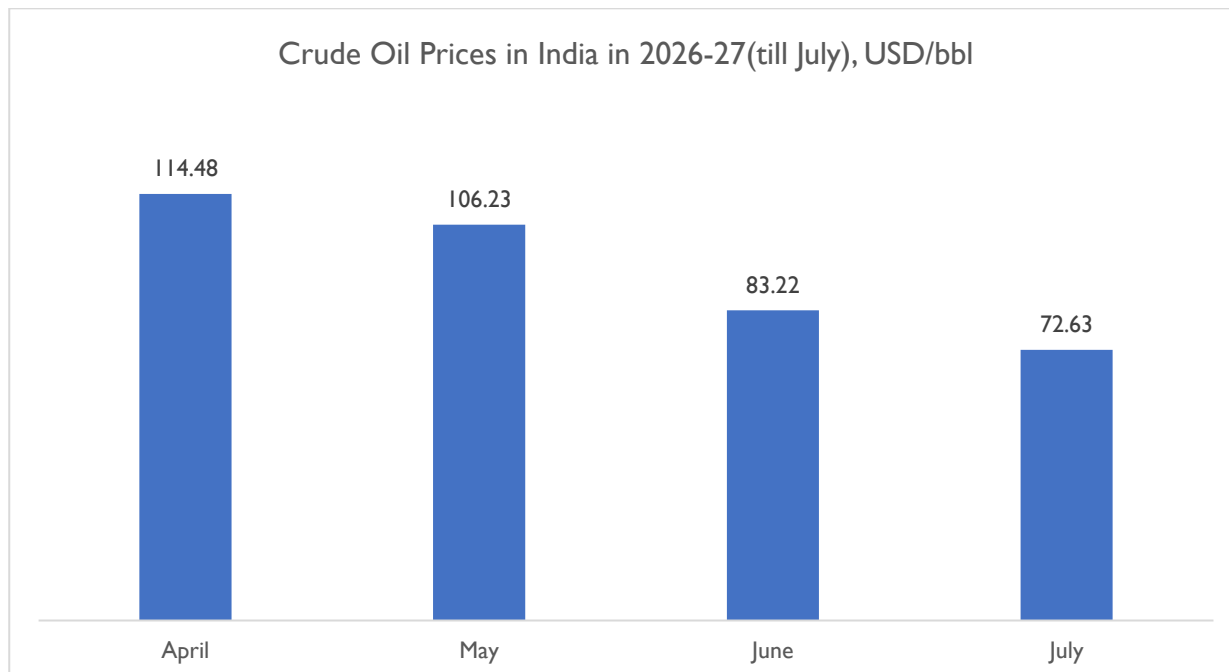


Source: Petroleum Planning & Analysis Cell, Ministry of Petroleum & Natural Gas

Crude oil prices play a pivotal role in shaping the logistics industry, as fuel costs directly influence transportation expenses across road, rail, air, and maritime freight. Fluctuations in oil prices have a direct impact on freight rates, supply chain costs, inventory management, and overall business profitability. The crude oil price trend from FY2020 to FY2027 (till July) highlights the industry's exposure to global energy market volatility. Following the sharp decline during the COVID-19 pandemic, oil prices rebounded significantly due to the recovery in global demand and geopolitical disruptions before gradually moderating in recent years. These fluctuations have accelerated investments in fuel-efficient fleets, route optimization, digital fleet management, and the adoption of alternative fuels and electric mobility solutions to reduce operating costs and improve supply chain resilience.

Crude oil prices have witnessed considerable volatility over the past several years, driven by changing global supply-demand conditions, geopolitical tensions, OPEC production decisions, and macroeconomic developments. The average crude oil price declined from USD 60.47 per barrel in FY2019-20 to USD 44.82 per barrel in FY2020-21 due to the pandemic-induced collapse in global demand. As economic activity recovered, prices surged to USD 79.18 per barrel in FY2021-22 and further to USD 93.15 per barrel in FY2022-23, primarily driven by strong demand recovery and supply-side constraints. Subsequently, prices moderated to USD 82.58 per barrel in FY2023-24, USD 74.74 per barrel in FY2024-25, and USD 66.08 per barrel in FY2025-26, reflecting improved supply conditions, easing inflationary pressures, and slower global economic growth. However, FY2026-27 (till July) has recorded an average crude oil price of USD 76.28 per

barrel, indicating renewed upward pressure amid evolving geopolitical developments and changing global energy market dynamics. Overall, the recent trend underscores the continued sensitivity of the logistics sector to fluctuations in crude oil prices and reinforces the importance of fuel diversification, operational efficiency, and sustainable transportation solutions.



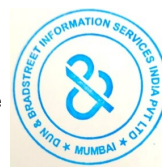
Source: Petroleum Planning & Analysis Cell, Ministry of Petroleum & Natural Gas⁵³

Crude oil prices have exhibited significant volatility during the early months of FY2026–27, largely influenced by geopolitical tensions, OPEC+ production decisions, and evolving global demand-supply dynamics. The average international crude oil price stood at USD 114.48 per barrel in April 2026, before declining to USD 106.23 per barrel in May, USD 83.22 per barrel in June, and further to USD 72.63 per barrel in July 2026 (up to 13 July). This sharp downward correction indicates that the temporary supply-side disruptions witnessed earlier in the year have eased, while improving market fundamentals and expectations of balanced global oil supply have contributed to moderating prices. Despite the decline, crude oil prices remain above the FY2025–26 annual average, highlighting the continued uncertainty in global energy markets.

The logistics industry remains highly sensitive to fluctuations in crude oil prices, as fuel constitutes one of the largest components of transportation costs across road, rail, air, and maritime freight. Elevated crude oil prices during the initial months of FY2026–27 increased freight operating costs, prompting logistics companies to optimize transportation routes, improve fleet utilization, adopt fuel-efficient technologies, and strengthen digital fleet management systems. As prices moderated from June onwards, cost pressures began to ease; however, continued geopolitical uncertainties and supply-side risks emphasize the need for resilient supply chain strategies and effective fuel cost management.

⁵³ <https://ppac.gov.in/prices/international-prices-of-crude-oil>

Looking ahead, crude oil prices are expected to remain a key determinant of logistics costs and inflationary trends. Although the recent decline suggests improving market stability, future price movements will continue to depend on geopolitical developments, global economic growth, OPEC+ production policies, and energy demand. Consequently, logistics companies are accelerating investments in electric vehicles (EVs), alternative fuels, multimodal transportation, and AI-driven route optimization to reduce dependence on conventional fuels. These initiatives are expected to enhance operational efficiency, improve cost competitiveness, and strengthen the long-term sustainability of India's logistics sector.



Challenges for Air Cargo Traffic in India

India's air cargo sector has witnessed significant growth in recent years, driven by rising e-commerce, manufacturing exports, and the pharmaceutical and perishable goods markets. Despite this expansion, the sector faces multiple structural and operational challenges that constrain its efficiency and competitiveness. While demand for fast, reliable, and temperature-sensitive cargo transport continues to rise, gaps in infrastructure, high operational costs, regulatory hurdles, and workforce limitations pose serious obstacles. Understanding these challenges is critical for developing strategies to enhance the capacity, resilience, and overall performance of India's air cargo industry.

➤ **Inadequate Infrastructure & Capacity Gaps at Airports**

Many airports in India, especially those outside major metropolitan areas, lack dedicated cargo terminals, modern warehousing, cold-storage facilities for perishables and pharmaceuticals, and automated handling systems. This results in inefficient cargo movement, long dwell times, and limited throughput. Even major hubs face constraints such as insufficient apron space, warehouse capacity, night-handling facilities, and cargo-specific infrastructure, which struggle to keep up with rising demand.

➤ **High Operational Costs & Cost-Competitiveness Issues**

Air cargo in India is relatively expensive due to high ground handling charges, airport tariffs, fuel costs, and security or handling surcharges. These high operational costs reduce the competitiveness of air cargo, particularly for medium-to-low value goods. The reliance on “belly-hold” space in passenger aircraft rather than dedicated freighters adds volatility, as cargo capacity may shrink during travel downturns or off-peak seasons, complicating scheduling and further increasing costs.

➤ **Over-concentration on Few Major Airports (“Hub Bottlenecks”)**

Approximately **90%** of India's air cargo is handled by a small number of major airports, creating congestion and limiting scalability. This over-concentration restricts the ability to expand cargo operations nationwide and makes the system vulnerable to disruptions at these hubs. Such bottlenecks impact the resilience of the supply chain and reduce efficiency across the sector.

➤ **Regulatory Complexity and Customs / Documentation Delays**

Air cargo operators frequently face overlapping regulatory requirements across customs, aviation, safety, and other authorities. These complexities lead to delays, unpredictable clearance times, and compliance challenges. Inconsistent procedures, manual paperwork, and limited automation exacerbate the problem, particularly affecting time-sensitive or perishable shipments.

➤ **Lack of Skilled Workforce & Low Technology/Automation Adoption**

The air cargo sector suffers from a shortage of trained personnel, especially for specialized consignments like cold-chain pharmaceuticals, perishables, and high-value electronics. Additionally, the adoption of advanced



technologies, such as real-time tracking, automated warehouse systems, cargo management software, and cold-chain logistics, remains limited. This reduces operational efficiency and restricts the ability to scale services effectively.

➤ **Fragmented Logistics Ecosystem & Weak Multimodal/Hinterland Connectivity**

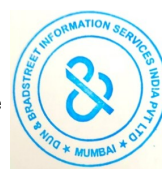
India's logistics sector is highly fragmented, with many small and unorganized players, making coordination, standardization, and integration difficult. Poor connectivity between air cargo hubs and road or rail freight networks, particularly in remote or Tier-2/Tier-3 regions, limits effective first-mile and last-mile movement. This reduces the reach, reliability, and overall efficiency of air cargo services for exporters and importers across the country.

Disruptions in Ocean Shipping

The global shipping industry has faced multiple disruptions in recent years, leading to significant shifts in freight transport trends. These disruptions have had a direct impact on India's air cargo industry, as businesses seek faster and more reliable alternatives to ocean shipping. Factors such as **port** congestion, geopolitical conflicts, capacity shortages, and supply chain delays have driven an increasing number of exporters and importers to choose air freight over traditional sea routes.

Factors responsible for disruption in Ocean Shipping

- **Port Congestion and Capacity Constraints**
 - Major seaports worldwide, including those in Asia, have experienced severe congestion, resulting in long delays for cargo shipments.
 - Container shortages and lack of available shipping slots have further increased wait times, affecting supply chains that depend on predictable schedules.
 - To mitigate these delays, businesses have turned to air freight, which, despite being more expensive, offers a faster and more reliable delivery alternative.
 - Reports indicate that ocean freight disruptions have had a direct impact on air cargo demand, with companies increasing their reliance on air shipments to avoid supply chain bottlenecks.
- **Geopolitical Conflicts and Trade Route Disruptions**
 - Geopolitical tensions and conflicts, such as those affecting the Red Sea and Suez Canal, have caused shipping diversions, longer transit times, and increased costs.
 - The recent crisis in the Red Sea region has significantly impacted sea trade routes, forcing businesses to seek alternative transport methods.



- Global brands, including Inditex (Zara's parent company), have increased air freight shipments from India by 37% to avoid the risks associated with sea freight disruptions.
- **Rising Air Cargo Demand Due to Ocean Shipping Delays**
 - International air cargo volumes from India have surged as exporters shift from sea to air transport.
 - In Ahmedabad, international air cargo volumes rose by **33%** from April to October 2024 compared to the same period the previous year, showing a significant shift in logistics trends.
 - Sectors such as electronics, pharmaceuticals, and fast fashion are particularly affected, as they require time-sensitive shipments that cannot afford prolonged ocean transit times.
- **Shift in Logistics Strategy: From Ocean to Air Freight**
 - Due to continued uncertainties in ocean freight, businesses are modifying their logistics strategies and incorporating air freight into their supply chain planning.
 - Companies that previously relied heavily on sea transport are now diversifying their shipping methods, ensuring they have air freight options available in case of further maritime disruptions.
 - Analysts predict that the increased reliance on air cargo due to ocean shipping issues will continue, potentially reshaping long-term logistics trends.

Warehousing Infrastructure

India's air cargo traffic plays a crucial role in facilitating trade and economic growth, yet it faces significant challenges due to inadequate warehousing infrastructure. Many airports lack dedicated cargo handling facilities, leading to congestion, inefficiencies, and delays in shipment processing. The absence of modern storage solutions, including temperature-controlled warehouses for perishable goods, further hampers the efficiency of air cargo logistics. Additionally, limited multimodal connectivity between airports and other logistics hubs restricts the seamless movement of goods, increasing transportation costs and turnaround times. India's logistics cost is estimated at **around 7.97% of GDP⁵⁴**, with **transportation and warehousing accounting for over 63%** of this cost. Despite government initiatives to improve infrastructure, the existing warehousing facilities remain insufficient to meet the growing demands of e-commerce, pharmaceuticals, and international trade. According to the **CREDAI-CRE Matrix Grade A India Warehousing Report (July 2026)**, **Grade A/A+ warehousing leasing (which reflect demand growth reached) 16.9 million square feet in Q1 CY2026**, exceeding **13.8 million square feet of new supply** and resulting in an **absorption-to-supply ratio of 1.2x**, indicating that occupier demand continues to outpace fresh capacity addition.

⁵⁴ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2195125®=48&lang=2>

Major Gaps in the Indian Warehousing Sector

Besides the growing demand, the warehousing sector in India also faces many structural gaps such as outdated warehouse management systems, manual cargo handling processes, and cumbersome customs clearance procedures. Regulatory hurdles and complex documentation requirements further slowdown air cargo movement, increasing operational costs for businesses. Additionally, the sector faces a shortage of skilled professionals trained in cargo handling and digital logistics, limiting the potential for automation and technology adoption. These structural gaps are discussed below in detail

1. Technology Deficiency and Automation Gap

A significant shortcoming in Indian warehousing is the limited adoption of advanced technology and automation. In global markets, warehouses increasingly leverage robotic automation, AI-driven inventory management, predictive analytics, and IoT-enabled real-time tracking to optimize operations and improve efficiency. In contrast, many Indian warehouses continue to rely heavily on manual processes and outdated software systems. This technological lag results in several operational inefficiencies:

- **Longer Order Processing Times:** Manual handling and labour-intensive operations slow down the movement of goods, delaying order fulfilment and increasing turnaround times.
- **Higher Error Rates:** Reliance on manual inventory tracking and documentation increases the likelihood of discrepancies, stockouts, and overstocking, which can disrupt supply chains.
- **Limited Real-time Visibility:** The absence of IoT-enabled sensors and cloud-based warehouse management systems limits real-time monitoring of inventory levels, shipment status, and equipment utilization, reducing responsiveness to sudden demand fluctuations.

The lack of technological adoption not only hampers operational efficiency but also affects competitiveness, particularly in sectors requiring high-speed fulfillment, such as e-commerce and pharmaceuticals.

2. Poor Infrastructure and Inadequate Storage Facilities

Infrastructure challenges remain a major bottleneck in the Indian warehousing sector. Many warehouses operate in outdated facilities that are ill-equipped to handle modern logistics requirements. Specific gaps include:

- **Outdated Storage Systems:** A significant number of warehouses lack high-rise racking systems, automated storage and retrieval systems (ASRS), temperature-controlled storage, and specialized handling facilities for perishable or high-value goods. This limits storage density and handling efficiency.
- **Unorganized and Scattered Warehouses:** The sector is highly fragmented, with a large proportion of small-scale, unorganized warehouses operating in limited spaces and with inadequate



standardization. This fragmentation reduces operational efficiency and makes consolidation of shipments difficult.

- **Inadequate Transportation Connectivity:** Poor road networks, limited proximity to industrial hubs, and weak last-mile connectivity delay the movement of goods to and from warehouses, increasing lead times and logistics costs.

These infrastructural challenges make it difficult for Indian warehouses to meet the speed, reliability, and scale of operations demanded by modern supply chains.

3. Regulatory and Policy Challenges

Despite reforms like the Goods and Services Tax (GST) and the National Logistics Policy, regulatory and policy hurdles continue to affect warehouse expansion and operational efficiency. Key challenges include:

- **Complex Land Acquisition Procedures:** Procuring land for modern warehouses involves navigating lengthy legal and bureaucratic procedures, including multiple approvals from local authorities.
- **High Compliance Costs:** Various licensing, safety, and environmental regulations increase operational costs, particularly for small and medium-sized warehouse operators.

These regulatory complexities discourage investment in state-of-the-art facilities and slow down the modernization of the sector.

4. Skilled Workforce Shortage

Efficient warehouse operations require specialized skills in areas such as inventory management, material handling, equipment operation, data analytics, and warehouse automation. However, India faces a persistent shortage of trained warehouse professionals due to:

- **Limited Training and Skill Development Programs:** Most workers receive minimal technical training, affecting accuracy in order fulfillment and the efficient handling of modern equipment.
- **High Dependence on Manual Labor:** The absence of skilled automation specialists prevents the adoption of advanced warehouse management systems, robotic handling, and AI-driven process optimization.

The workforce gap reduces operational efficiency and hinders the adoption of modern technologies, keeping Indian warehouses behind global benchmarks.

5. Inefficient Supply Chain Integration

A modern warehouse functions optimally only when integrated seamlessly with transport networks, suppliers, and retailers. Indian warehouses often face challenges in achieving this integration:

- **Poor Data Synchronization:** Lack of real-time data exchange across warehouses, transporters, and retail systems leads to stock mismatches, delayed shipments, and inefficiencies in order fulfillment.
- **Fragmented Logistics Ecosystem:** Small and medium-sized enterprises (SMEs) often struggle to access efficient warehousing solutions due to high costs, limited capacity, and lack of standardized services.

The fragmented and poorly integrated supply chain ecosystem limits visibility, responsiveness, and coordination, which are essential for just-in-time inventory management and efficient distribution.

6. Limited Adoption of Sustainable Practices

Environmental sustainability is gaining importance globally, but Indian warehouses lag in implementing green practices. This gap has both ecological and economic implications:

- **Low Usage of Renewable Energy:** Few warehouses utilize solar energy, energy-efficient lighting, or other renewable energy solutions, resulting in higher operational costs and environmental impact.
- **High Carbon Footprint:** Inefficient logistics, outdated equipment, and poor energy management contribute to excessive greenhouse gas emissions.

Waste Management Issues: Limited recycling practices and poor disposal mechanisms increase environmental degradation and reduce compliance with emerging sustainability standards.

These limitations lead to elevated operating costs, longer cargo processing cycles, frequent inventory mismatches, and reduced agility in responding to evolving market requirements. As a result, India's air cargo sector remains less competitive than its global counterparts. To bridge this gap, the industry is witnessing sustained investment in advanced warehousing infrastructure aimed at optimizing storage capacity, improving cargo throughput, and enhancing supply chain efficiency. At the same time, the adoption of digital technologies and automation, including artificial intelligence, automated cargo-handling systems, and real-time tracking solutions, is helping improve operational performance and visibility across the logistics chain. Strengthening multimodal connectivity and streamlining customs clearance procedures can further reduce transit delays and lower logistics costs. Additionally, increased private sector participation and foreign direct investment in airport warehousing infrastructure can accelerate capacity expansion and modernization. By addressing these structural challenges, India can significantly enhance its air cargo capabilities and strengthen its position as a global trade and logistics hub.

Regulatory Hurdles

1. Land Acquisition and Zoning Issues

Land acquisition remains one of the most critical bottlenecks for warehouse infrastructure development in India. The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR Act) significantly slows down project timelines due to extensive procedural requirements. Under Section 4, a compulsory Social Impact Assessment (SIA) must be conducted for acquisitions exceeding **50 acres** in urban areas or **100 acres** in rural areas, a process that typically takes 6–9 months and involves public hearings, multiple field surveys, and impact evaluation reports. Additionally, Section 10 mandates that 80% landowner consent for private projects and **70%** consent for PPP projects must be obtained before acquisition can proceed. In practice, achieving this level of consensus is extremely difficult, resulting in prolonged negotiations, higher land prices, and frequent project delays.

State-level differences add to these hindrances:

- **Maharashtra Land Revenue Code (1966):** Under Section 42, converting agricultural land into industrial or warehousing use requires paying **50–75%** of the ready reckoner rate as a conversion fee. This significantly raises the upfront cost for developers and often makes large-scale warehousing projects financially unviable, especially near Mumbai, Pune, and Nagpur.
- **Haryana Development and Regulation of Urban Areas Act (1975):** As per Section 3, developers must secure NOCs from five or more state departments, including town planning, environment, fire services, and irrigation authorities. The lack of a unified approval mechanism results in repetitive inspections, document submissions, and cross-department delays, extending approval timelines by several months.
- **Karnataka Town and Country Planning Act (1961):** Section 14A requires additional zoning clearances before land can be used for warehousing or logistics purposes. This process involves detailed scrutiny of land utility, environmental suitability, and traffic impact studies. As a result, approvals often take **120–180 days**, pushing back construction schedules and creating uncertainty for logistics investors.

Overall, these multi-layered legal and procedural requirements increase project timelines, escalate land acquisition costs, and reduce investor confidence. The lack of uniformity across states also forces companies to navigate different regulatory environments for each warehousing project, hindering the creation of an integrated national warehousing network.

2. Multi-Layered Approval Framework

Warehouse development in India is burdened by an extensive and fragmented approval ecosystem. As per the Ease of Doing Business Report 2023, a typical warehouse project must comply with 47 separate approvals from municipal bodies, environmental authorities, fire departments, and state-level planning agencies. The absence of a unified single-window clearance mechanism significantly slows project execution, increases administrative costs, and creates uncertainty for developers. These delays are further amplified by differing state-level procedures and the lack of digital integration among approving agencies.



Fire Safety Compliance: National Building Code 2016 (Part IV): Mandates

Under the National Building Code (NBC) 2016, warehouses must meet stringent fire safety norms to obtain a Fire NOC, which is a mandatory prerequisite for project commencement and occupancy.

- **Minimum 6m wide motorable access (Clause 3.4.2):** Warehouses must provide a 6-metre-wide all-weather motorable road around the building to ensure access for fire tenders. This often requires redesigning site layouts, acquiring additional land, or altering boundary limits, adding both time and cost to the development process.
- **Automatic sprinklers for storage >500m³ (Clause 5.2):** Storage volumes exceeding 500 cubic metres must be equipped with automated sprinkler systems, which require sophisticated hydraulic calculations, certified equipment, and periodic inspections. Installing these systems can delay construction by several weeks and substantially raise the project's capital expenditure
- **Fire NOC process takes 90-120 days (Source: BIS Notification No. CD-1/2023):** As per BIS Notification No. CD-1/2023, Fire NOCs typically require 90–120 days due to multiple site inspections, document submissions, and compliance checks. Any deviation from the NBC even minor design changes necessitates re-inspection, further delaying approvals.

Environmental Clearances: Environment Impact Assessment Notification (2006)

- **Category B2 projects need EC for >20,000m² built-up:** Warehouses with built-up areas exceeding 20,000 square metres fall under Category B2 and must obtain an Environmental Clearance (EC). This requires conducting baseline environmental studies, traffic impact assessments, and risk analyses, all of which extend project timelines.
- **Form I and IA applications require 6 months of processing:** Developers must submit Form I/IA with detailed project and environmental data. The approval cycle review, site inspection, public consultation (if applicable), and Expert Appraisal Committee evaluation generally takes 6 months, delaying construction commencement and affecting financing schedules.

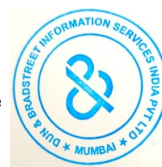
Municipal Approvals: Model Building Bye-Laws 2016:

Municipal corporations impose an additional layer of procedural approvals that vary across states and cities, further complicating the development process.

- **Extra 2% of project cost as scrutiny fee:** Under the Model Building Bye-Laws 2016, developers must pay a scrutiny fee amounting to 2% of the project cost for building plan approvals. For large warehouses spanning 5–10 lakh square feet, this fee becomes a significant financial burden.
- **45-day compulsory waiting period for objections:** Municipal bodies impose a mandatory 45-day public notice period, allowing local residents and stakeholders to raise objections regarding land use, traffic impact, or environmental concerns. Even a single objection can trigger



re-evaluation, hearings, and additional documentation, pushing approval timelines well beyond the standard 45-day period.



Capex trend and other initiative to strengthen the Warehousing Infrastructure in India

India's warehousing infrastructure is undergoing rapid transformation, driven by increasing capital expenditure (Capex), government policies, and technological advancements. The sector is a critical component of India's logistics ecosystem, influencing supply chain efficiency, trade competitiveness, and economic growth. To enhance warehousing capacity and optimize storage and distribution networks, India is implementing large-scale infrastructure projects, production-linked incentives (PLI) schemes, and policy-driven investments. These initiatives aim to position India as a global manufacturing and logistics hub by fostering innovation, improving multimodal connectivity, and promoting sustainable storage solutions.

The Indian government and private sector players have significantly increased investments in warehousing infrastructure to meet the growing demands of e-commerce, manufacturing, and cold chain logistics. Some key trends in Capex allocation include:

1. Large-Scale Investments in Multi-Modal Logistics Parks (MMLPs)

The Government of India's PM Gati Shakti National Master Plan, launched in 2021, has provided a significant impetus to the country's warehousing and logistics sector by promoting large-scale investments in Multi-Modal Logistics Parks (MMLPs). These parks are designed to integrate various modes of transportation, road, rail, and coastal shipping with modern warehousing facilities, aiming to enhance supply chain efficiency, reduce logistics costs, and improve last-mile connectivity across the country. By bringing together 16 ministries under a unified framework, the initiative ensures coordinated planning and development, minimizing redundancies and optimizing resource utilization across infrastructure projects.

- **Chennai MMLP:** A total of **35 MMLPs** have been proposed under this plan, with investments aimed at creating state-of-the-art warehousing, automated material handling systems, and dedicated freight corridors linking major industrial hubs and ports. For instance, the Chennai MMLP, with an **investment of INR 7,200 crore**, will feature **5 million** square feet of automated warehousing. This facility will be strategically linked to Chennai Port via dedicated rail corridors, enabling seamless movement of goods and reducing transit times significantly. Such large-scale, integrated logistics hubs are expected to serve as key nodes in the national supply chain network, supporting both domestic distribution and international exports.
- **GIS-Based Planning:** The planning and development of these MMLPs are increasingly being guided by GIS-based site selection and AI-powered analytics, which optimize warehouse locations, minimize duplication, and ensure efficient land use. This data-driven approach enhances operational efficiency, enabling logistics operators to plan routes, allocate storage, and manage inventory more effectively.
- **Investment Inflow:** In terms of investment scale, the PM Gati Shakti initiative has already mobilized over **INR 1.2 lakh crore** in infrastructure and logistics projects. According to the PM Gati Shakti Progress Report (Q1 2024), these developments have already led to a **40%** reduction in warehouse-



to-port transit times, demonstrating tangible improvements in supply chain speed and reliability. Beyond efficiency gains, these MMLPs are expected to generate employment, support industrial clusters, and attract private-sector participation, further boosting the growth and modernization of India's logistics and warehousing sector).

2. Production-Linked Incentive (PLI) Scheme Driving Investment

The PLI scheme is a transformative initiative to boost domestic manufacturing and strengthen warehousing infrastructure. With **INR 1.61 lakh** crore in approved investments and **INR 14 lakh** crore in projected production output, the scheme is driving significant upgrades in warehousing and supply chain capabilities:

- **Capacity Expansion:** The scheme has accelerated investment in automated storage and retrieval systems (ASRS), high-density racking, and temperature-controlled cold storage. These upgrades enable warehouses to handle high-value and perishable goods efficiently, reduce human errors, optimize space utilization, and improve turnaround times. This is particularly beneficial for sectors like electronics, pharmaceuticals, automobiles, and FMCG.
- **Export-Oriented Growth:** Warehouses developed under the PLI framework adhere to international quality, safety, and regulatory standards, enabling smoother export operations. Modernized facilities support seamless trade flows, faster customs clearance, and compliance with global certifications, making India a more attractive destination for international trade and supply chain investments.
- **Job Creation:** Over **11.5 lakh** new jobs have been generated through PLI-linked investments, expanding the logistics workforce. The scheme also promotes skill development in warehouse management, material handling, automation systems, and data-driven inventory management, enhancing employability and creating a technically skilled workforce to operate modern warehouses.
- **Operational Efficiency:** Modernization through the PLI scheme reduces order processing times, minimizes inventory discrepancies, and improves overall supply chain responsiveness. Enhanced warehouse systems enable predictive inventory planning, efficient first-mile and last-mile operations, and better integration with manufacturing and distribution networks.

3. Rise of Private Sector Investments in Grade-A Warehousing

Private sector participation in India's warehousing industry has grown significantly, particularly in Grade-A warehouses large, modern, technology-enabled facilities designed to meet global standards. These



investments are concentrated in high-demand regions such as Delhi-NCR, Mumbai, Bengaluru, and Chennai, driven by industrial growth, e-commerce expansion, and investor interest. Key highlights include:

- **Institutional Funding & REITs:** Warehousing-focused Real Estate Investment Trusts (REITs), global private equity firms, and infrastructure funds have invested billions of dollars into developing modern logistics parks and Grade-A warehouses. This infusion of institutional capital is not only expanding warehouse capacity but also improving professional management, standardization, and long-term sustainability of assets. REIT-backed projects ensure high-quality design, regulatory compliance, and modern safety features, attracting large corporate clients and multinational companies.
- **E-Commerce Boom:** Rapid growth in e-commerce and omnichannel retail has created an unprecedented demand for fulfillment centers, last-mile distribution hubs, and just-in-time inventory management solutions. This demand has driven **10–12%** annual growth in warehouse leasing, particularly in urban and suburban industrial corridors. Technology-enabled warehouses with real-time tracking, automated material handling, and integrated inventory management are becoming critical to supporting fast deliveries and high-volume order processing.
- **Sustainability Focus:** Private sector investors are increasingly incorporating green and sustainable practices into Grade-A warehouses. Initiatives include solar-powered storage, thermal energy storage (TES) backup systems, energy-efficient lighting, rainwater harvesting, and smart waste management. Such practices not only reduce operational costs but also align with global environmental standards, attract multinational clients with ESG (Environmental, Social, Governance) mandates, and support India's overall sustainability goals.

Key Initiatives to Strengthen Warehousing Infrastructure

I. Solar-Powered Cold Storage Systems with TES Backup

To address energy inefficiencies in cold chain logistics, the government has introduced new guidelines regulating solar-powered cold storage systems. These systems incorporate thermal energy storage (TES) backup, reducing reliance on conventional power grids and enhancing operational efficiency.

- **Impact:** The adoption of solar-powered cold storage systems with TES backup significantly lowers energy costs, which form a major portion of operational expenses in cold chain logistics. The TES backup ensures continuous temperature control even during periods of low solar generation or power outages, minimizing spoilage of temperature-sensitive products. These systems also enhance the effective storage capacity for perishable goods, benefiting sectors such as pharmaceuticals, vaccines, dairy, fruits, and vegetables, while ensuring compliance with regulatory and quality standards.



- **Scalability:** These energy-efficient systems encourage private sector investments in renewable energy-powered warehousing infrastructure and can be replicated across industrial corridors, logistics parks, and standalone facilities. Integration with smart energy management and IoT-enabled monitoring allows predictive maintenance, optimizes performance, and further reduces operational costs. Overall, this approach supports sustainability goals, strengthens the cold chain ecosystem, and enhances India's competitiveness in domestic and export markets.

2. Logistics Vision 2030 – Attracting USD 50 Billion in FDI

The NITI Aayog's Logistics Vision 2030 outlines a comprehensive roadmap to transform India into a highly efficient, technology-driven, and globally competitive logistics hub. A central goal is to attract **USD 50 billion** in foreign direct investment (FDI) into warehousing, cold chain, and multimodal logistics. The initiative strengthens India's long-term infrastructure pipeline, improves ease of doing business, and aligns with global supply chain standards.

- **Policy Reforms:** Logistics Vision 2030 emphasizes simplifying land acquisition processes, reducing bureaucratic delays, and creating a friendlier regulatory environment for global investors. Policy changes include single-window clearances, rationalized logistics-related taxes, and incentives for setting up large, modern warehouses. These reforms aim to significantly cut compliance burdens and improve investor confidence, enabling faster project execution and larger inflows of foreign capital.
- **Technological Integration:** A key component of the vision is the adoption of advanced technologies such as AI-driven Warehouse Management Systems (WMS), IoT-enabled tracking, automated sorting, and digital twins for warehouse planning. These technologies enhance efficiency by improving real-time visibility, reducing operational errors, and optimizing inventory management. By encouraging tech-intensive warehousing, the policy positions India to meet the evolving expectations of global supply chains and high-value industries.
- **Global Competitiveness:** Through modern infrastructure, digital transformation, and supportive policies, Logistics Vision 2030 aims to position India as a leading destination for third-party logistics (3PL), fourth-party logistics (4PL), and contract warehousing services. Improved service quality, faster turnaround times, and compliance with international standards allow India to compete more effectively with global logistics hubs. This strengthens India's attractiveness for MNCs, export-oriented companies, and integrated logistics providers seeking efficient and scalable warehouse operations.

3. Digital & Smart Warehousing Development

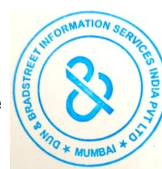
The government is actively promoting the modernization of warehousing through the adoption of digital and smart technologies that significantly enhance operational accuracy, speed, and scalability. By encouraging



automation, data-driven decision-making, and interconnected warehouse ecosystems, India aims to build a future-ready logistics backbone capable of supporting high-volume, time-sensitive, and global supply chain operations.

- **Automated Guided Vehicles (AGVs) and Robotics:** AGVs, robotic arms, and automated picking systems are being introduced to streamline warehouse activities such as sorting, picking, packaging, and pallet movement. These technologies drastically reduce manual errors, increase throughput, and enable warehouses to operate at higher efficiency levels. Robotics also supports 24/7 operations, ensuring faster order fulfilment and minimizing dependence on manual labour during peak seasons.
- **Blockchain for Supply Chain Transparency:** Blockchain solutions are being integrated to enhance visibility, authenticity, and traceability across the supply chain. By creating secure, tamper-proof records of every transaction and movement of goods, blockchain helps reduce fraud, prevent counterfeiting, and improve regulatory compliance. This is especially valuable for industries such as pharmaceuticals, electronics, and food processing, where traceability is essential. The use of blockchain also strengthens trust among stakeholders, including exporters, importers, and logistics service providers.
- **5G & IoT Connectivity:** With the rollout of 5G and advanced IoT sensors, warehouses are transitioning into fully connected environments where every asset, package, and piece of equipment can be monitored in real time. High-speed connectivity supports continuous inventory tracking, automated replenishment systems, and predictive analytics that help identify and resolve disruptions before they occur. These technologies ensure better space utilization, reduced downtime, and improved decision-making, ultimately strengthening the resilience and responsiveness of the overall logistics network.

India's warehousing infrastructure is undergoing a structural transformation with high Capex allocations, government-driven policies, and technological innovations. The convergence of initiatives such as PM Gati Shakti, PLI schemes, solar-powered cold storage, and smart warehousing solutions is set to elevate India's logistics ecosystem to global standards. With sustained investment momentum, India is well-positioned to enhance supply chain resilience, boost exports, and emerge as a logistics powerhouse by 2030.



Performance Standards

1. Structural & Safety Standards

- Structural building standards assure that warehouses can withstand mechanized handling and heavy loads. The National Building Code 2016 requires a minimum ceiling height of **9** meters to support modern stacking equipment such as high-reach forklifts and automated storage systems (BIS SP 7:2016, Part IV). For heavy-duty flooring, floors need to be able to support a **5-7.5** metric tons per square meter load capacity according to WDRA specifications, essential for the storage of industrial products or bulk commodities. Earthquake resistance standards conform to IS 1893:2016, necessitating certain structural reinforcements dependent upon seismic zones, with the most protection being required for Zone V.
- Fire safety measures are also stringent. Automatic smoke detection systems need to cover all spaces according to NBC Part IV requirements, with heat/smoke detectors at **9m** intervals. Hydrant systems, as per IS 3844:2019 standards, need to be installed every **30** meters with sufficient water pressure. These are supplemented by mandatory Fire NOCs from local authorities, which include inspections of emergency exits (at least two per warehouse), fire extinguisher locations (one per 500 sqm), and electrical safety compliance.

2. Cold Chain Standards

- Temperature regulation is critical for perishable items. FSSAI Regulation 4.1.5 allows only $\pm 2^{\circ}\text{C}$ deviation from specified temperatures, with the need for precision cooling systems and digital monitoring. Frozen foods require -18°C to -25°C conditions according to NCCD TS-102, with ongoing temperature recording. Pharmaceutical warehouses require even more stringent controls - the CDSCO requires $\pm 1^{\circ}\text{C}$ for vaccines with backup power for cooling equipment.
- Cold storage design specifications ensure proper air circulation. The mandated 0.5-1.0 m/s airflow velocity (IS 14812) prevents hot spots while minimizing product dehydration. Pharma facilities require dual redundant cooling systems - if the primary fails, the backup must activate within 90 seconds. All units need temperature mapping reports showing uniform distribution across storage zones.

3. Technology Compliance

- Automation grading divides facilities into capabilities. Grade-A warehouses employ Automated Storage/Retrieval Systems (ASRS) with less than 5% manual handling - including robotic pallet movers, conveyor systems, and automated guided vehicles. Grade-B facilities combine Warehouse Management Systems (WMS) with barcode scanners and semi-automated picking.
- Data reporting requirements harmonize synchronizations with taxation systems. Real-time GSTN portal updates monitor inventory movements, while E-way bill integration provides automatic documentation for dispatches. Cybersecurity standards (ISO 27001) require encrypted databases,



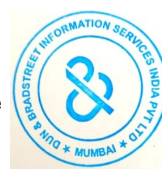
biometric access controls, and penetration testing once a year - particularly essential for e-commerce warehouses dealing with customer data.

4. Environmental & Sustainability Standards

- Energy efficiency standards conform to climate objectives. The 1-star BEE rating (ECBC 2017) mandates LED lighting, insulated panels, and energy-efficient HVAC systems. Big warehouses (50,000+ sqft) have to get **15%** of the power from on-site solar as per SECI guidelines, usually through rooftop installations.
- Water management adheres to CPWD standards with no liquid discharge - treating and reusing all wastewaters. Rainwater collection systems require at least **50,000 litres of** capacity for every acre of roofing area. Handling of materials moves to electric fleets - the NITI Aayog 2025 target eliminates diesel-operated forklifts with a carbon-reduction of 8-10 tons per warehouse per year.

5. Labour & Safety Standards

- Work conditions laws strike a balance between production and well-being. The 48-hour work week maximum (OSH Code 2020) supports 8-hour shifts with 30-minute mandatory meal breaks. For material handlers, 15-minute breaks every 2 hours avoid musculoskeletal damage - a requirement from the Ergonomics Code (DGMS Circular 5/2021).
- Safety gear regulations prescribe ANSI-quality hard hats, high-stacking full-body harnesses, and NFPA-approved PPE kits. Biennial medical screening tests for hearing loss (due to conveyor noise) and respiratory problems. The 100-hour biennial training (NSDC Standards) involves equipment operation, first aid, and computer systems for inventory.



Threats and Challenges

India's logistics sector is undergoing a transformation driven by rising demand from manufacturing, e-commerce, and international trade. The government's infrastructure push, digitalization efforts, and policy interventions like the National Logistics Policy (NLP) and Gati Shakti are steps toward streamlining operations and reducing logistics costs. Despite these positive developments, the sector remains complex, with operational inefficiencies, cost pressures, and infrastructural constraints impacting its full potential. Air cargo logistics, in particular, has emerged as a crucial mode for time-sensitive and high-value shipments, yet it faces specific hurdles that distinguish it from surface logistics.

Key Threats and Challenges

- **Fuel Price Volatility**

Crude oil price movements have a direct and substantial impact on air logistics. Jet fuel accounts for a large portion of air cargo operating expenses, and fluctuations can sharply erode margins. For instance, the dramatic rise in fuel prices in 2022 following the Russia-Ukraine conflict significantly increased freight costs for air cargo operators, prompting them to introduce fuel surcharges or renegotiate rates. While some large players could partially absorb or pass on the cost, mid-sized firms like Skyways had to optimize routes and reduce non-essential legs to stay competitive.

- **Geopolitical and Global Trade Risks**

Disruptions like the COVID-19 pandemic, U.S.-China trade tensions, and the Suez Canal blockage in 2021 have highlighted how fragile global supply chains can be. These events had cascading effects on international cargo schedules, customs clearance times, and freight pricing, particularly for air shipments requiring just-in-time delivery.

- **Climate Change and Environmental Concerns**

The global shift toward sustainable logistics is placing pressure on air cargo operators to lower emissions and carbon footprints. European regulations, for example, are increasingly favouring low-emission freight alternatives, which could marginalize non-compliant air carriers. Companies like Lufthansa Cargo and FedEx have started integrating Sustainable Aviation Fuel (SAF), while Indian players are still in early stages, indicating a widening technology gap.

- **Cybersecurity Threats**

The logistics sector is increasingly reliant on digital tools for inventory management, cargo tracking, and customs documentation. However, this reliance exposes firms to data breaches and cyber-attacks. In 2021, global shipping giant CMA CGM suffered a ransomware attack that disrupted its booking systems. For Indian firms transitioning to digital platforms, a lack of robust cybersecurity measures makes them vulnerable to similar threats.



- **Fragmented Industry Structure**

India's logistics space remains dominated by small, unorganized players lacking integrated systems. This fragmentation leads to inefficiencies in cargo handling, poor intermodal coordination, and limited scalability. For air cargo, which demands time-bound and precision-driven execution, working with multiple disconnected vendors increases risks of delay and service inconsistency.

- **Infrastructural Gaps**

While metro cities like Delhi and Mumbai have reasonably advanced cargo facilities, many secondary airports lack dedicated air freight terminals, cold-chain support, and night-handling capabilities. For example, a pharma shipment requiring temperature control may get delayed or damaged in Tier-2 airports due to lack of cold storage or skilled handling staff.

- **Regulatory Complexity**

Logistics players often deal with overlapping regulations from customs, aviation, and GST departments. Delays in customs clearances, frequent changes in documentation requirements, and inconsistent enforcement across states result in operational bottlenecks. For instance, exporters frequently report delays in DGFT approvals or scanning clearances, even when shipments are time-sensitive.

- **Limited Skilled Workforce**

Specialized logistics especially air freight involving hazardous or perishable goods requires trained manpower in cargo handling, packaging, documentation, and compliance. The industry currently suffers from a shortage of such skilled professionals, increasing reliance on on-the-job training and risking errors or shipment rejections.

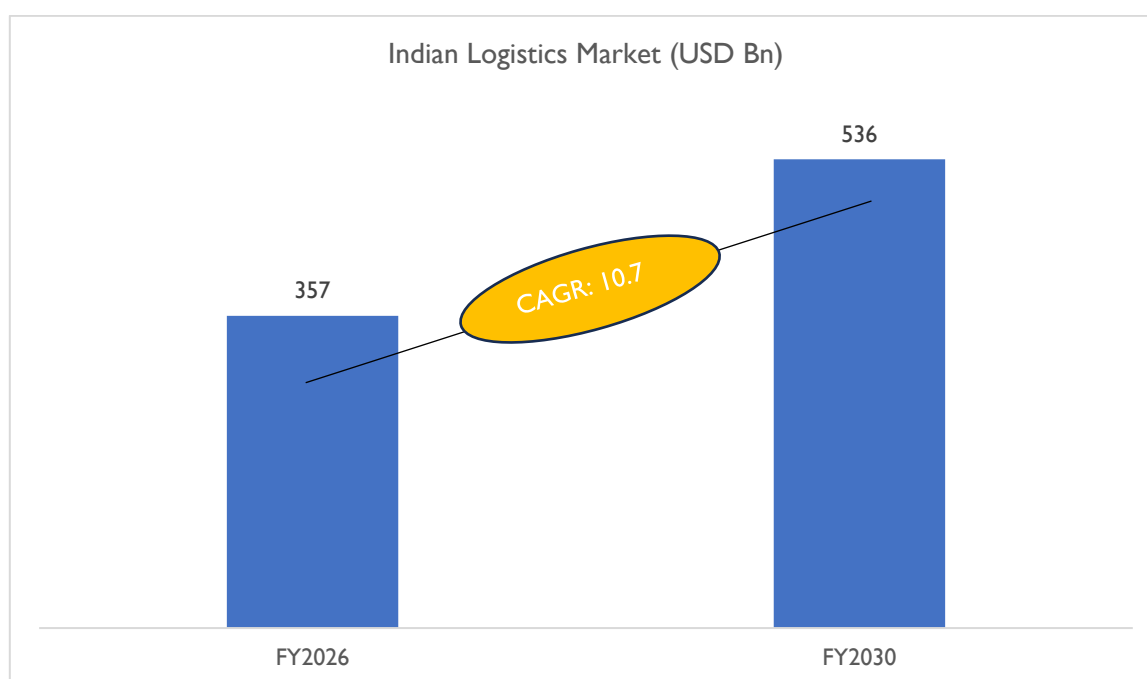
- **Technology Adoption Gap**

Although many large logistics firms are adopting AI, IoT, and blockchain solutions to enhance efficiency, smaller and mid-tier companies often struggle with the cost and complexity of implementing these systems. As a result, companies like Skyways may find it difficult to offer end-to-end visibility or real-time tracking at the level of global competitors.

Growth scenario

The Indian logistics sector is expected to maintain a strong growth trajectory over the coming years, supported by sustained economic expansion, rising manufacturing activity, increasing domestic consumption, and the continued growth of e-commerce and international trade. As freight demand is closely linked to GDP growth, India's position as one of the world's fastest-growing major economies is expected to drive higher demand for integrated logistics, warehousing, multimodal transportation, and value-added supply chain services.

The sector's long-term outlook remains favourable, supported by continued government investment in logistics infrastructure and policy reforms. Key initiatives such as the PM Gati Shakti National Master Plan, National Logistics Policy (NLP), Bharatmala Pariyojana, Sagarmala Programme, Dedicated Freight Corridors (DFC), and the Unified Logistics Interface Platform (ULIP) are expected to improve multimodal connectivity, reduce logistics costs, and enhance supply chain efficiency. In addition, the growing adoption of Artificial Intelligence (AI), the Internet of Things (IoT), automation, blockchain, and digital freight management platforms is transforming logistics operations by improving visibility, asset utilization, and operational efficiency.



Sources: Dun & Bradstreet Desk Research

Supported by these structural growth drivers, the Indian logistics market, estimated at approximately USD 357 billion in FY2026, is projected to reach around USD 536 billion by FY2030, registering an estimated CAGR of 10.7% during FY2026–FY2030. Rising freight volumes, increasing exports, expansion of manufacturing under the Make in India initiative, rapid growth in e-commerce, and continued investments in

transport and warehousing infrastructure are expected to strengthen the competitiveness, resilience, and long-term sustainability of India's logistics ecosystem.

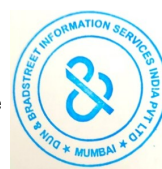
Several factors are fuelling this market expansion:

1. Infrastructure Development

- **Bharatmala Project – Strengthening Road Connectivity:** The Bharatmala Pariyojana is significantly improving national highway networks by linking economic corridors, border roads, and rural-urban clusters. Projects like the Delhi–Mumbai Industrial Corridor (DMIC) have enhanced freight mobility between major industrial hubs, reducing travel time and improving long-haul trucking efficiency. This expanded connectivity helps manufacturers, exporters, and logistics companies move goods faster with fewer bottlenecks.
- **Sagarmala Project – Port-Led Development:** Sagarmala aims to modernize India's ports and integrate them with Special Economic Zones (SEZs), coastal industrial zones, and inland waterways. This boosts cargo handling capacity and reduces turnaround time at ports. The improved coastal shipping routes and multimodal linkages created under Sagarmala are making maritime logistics more cost-effective and reliable for both domestic and international trade.
- **Dedicated Freight Corridors (DFCs) – Rail Logistics Transformation:** The Delhi–Mumbai and Amritsar–Kolkata Dedicated Freight Corridors are expanding India's rail freight network, allowing high-speed, high-capacity movement of goods across long distances. These corridors reduce logistics costs by improving fuel efficiency, shortening transit times, and freeing up passenger rail lines. The DFCs are expected to handle nearly **70%** of freight traffic on these routes, supporting faster and safer movement of industrial cargo.

2. E-Commerce Expansion

- **Quick Commerce Growth:** India's rapid-commerce sector has experienced exponential growth, with platforms delivering groceries and essentials within minutes. This trend has increased demand for dense micro-warehousing networks and optimized last-mile delivery systems. Quick commerce now accounts for over two-thirds of e-grocery orders, reflecting shifting consumer behavior toward instant delivery services across major cities.
- **International Company Example – Amazon's Network Expansion:** Global e-commerce giants like Amazon have invested heavily in India's logistics infrastructure by expanding fulfillment centers, same-day delivery hubs, and advanced sorting facilities. Amazon's focus on automation, robotics, and predictive analytics in its warehouses has pushed industry standards higher and accelerated sector-wide digital adoption, strengthening the overall e-commerce logistics ecosystem.



3. Implementation of the Goods and Services Tax (GST)

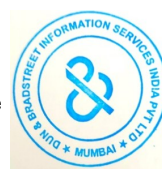
- **Streamlined Tax Structure & Faster Freight Movement:** GST replaced the earlier fragmented tax system, eliminating interstate checkpoints and reducing compliance burdens. This has cut transit delays significantly and improved truck turnaround time. As a result, the average distance travelled per truck per day increased from **225 km to nearly 300–325 km**. This improvement has lowered overall logistics costs, strengthened supply chain reliability, and made nationwide distribution far more efficient.

4. Technological Advancements

- **IoT-enabled Fleet Monitoring (Rivigo Example):** Rivigo has integrated IoT-based sensors across its fleet, enabling real-time monitoring of critical data such as fuel consumption, engine performance, location tracking, and temperature. This visibility helps reduce breakdowns, prevent delays, enhance driver productivity, and optimize route planning, ultimately improving overall fleet efficiency.
- **Blockchain Adoption for Supply Chain Transparency:** Companies are increasingly experimenting with blockchain technology to ensure safer, tamper-proof, and fully traceable documentation of goods across the supply chain. Blockchain enhances trust by securing records like invoices, shipment data, and quality certificates. This reduces fraud, eliminates documentation errors, and accelerates customs and compliance processes.

5. Growing Demand for Cold Chain Logistics

- **Expansion of Cold Storage Capacity:** India's cold storage infrastructure has grown to **39.37 million metric tons**, driven by rising demand from agriculture, food processing, pharmaceuticals, and dairy sectors. States like Uttar Pradesh and West Bengal lead this expansion due to their strong output of perishable products. This increased capacity supports better preservation, reduces food wastage, and strengthens agro-supply chains.
- **Vaccine Distribution Requirements & ULT Freezers:** The nationwide COVID-19 vaccination drive highlighted the importance of advanced cold chain systems, requiring over **2,000** ultra-low temperature (ULT) freezers for safe distribution. This created a shift toward more robust, temperature-controlled logistics networks capable of handling sensitive pharmaceuticals, biologics, and high-value medical supplies.



Future Trends and Opportunities in the Indian Logistics Market

The Indian logistics industry presents immense opportunities for growth and innovation in the coming years. Several key trends will shape the future of the sector:

1. Adoption of 3PL and 4PL Services

- Companies are increasingly outsourcing their logistics operations to third-party (3PL) and fourth-party (4PL) logistics providers to enhance efficiency and reduce costs.
- This shift allows businesses to focus on core competencies while leveraging professional logistics expertise.

2. Sustainable and Green Logistics

- With growing concerns about carbon emissions, companies are shifting toward electric vehicles (EVs), eco-friendly packaging, and energy-efficient warehouses.
- The Indian government is promoting green supply chain initiatives to achieve sustainability goals.

3. Expansion of Cold Chain Logistics

- Rising demand for perishable food, dairy products, and pharmaceuticals will drive investments in temperature-controlled warehouses and refrigerated transport.
- The Indian government is offering incentives and subsidies to support the expansion of cold storage facilities.

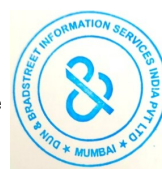
4. Smart Warehousing and Automation

- Adoption of AI-driven inventory management, automated storage systems, and robotics is enhancing warehouse productivity.
- Smart warehouses equipped with IoT sensors and predictive analytics improve real-time stock monitoring and reduce wastage.

5. Investment in Multi-Modal Transportation

- Integration of road, rail, air, and water transport will optimize freight movement and reduce transit times.
- The expansion of logistics parks and inland container depots (ICDs) will further facilitate seamless goods transportation.

The Indian logistics industry is undergoing rapid transformation, fuelled by technological advancements, policy reforms, and infrastructure investments. While the market is set to grow at a CAGR of **10.7%**, addressing high logistics costs, regulatory challenges, and infrastructure gaps remains crucial for sustainable development. With continued investments in digitalization, automation, green logistics, and multi-modal transport, India is



well-positioned to emerge as a global logistics hub in the near future. Strengthening supply chains, streamlining operations, and fostering collaborations between government and private players will be key to unlocking the full potential of India's logistics sector.

Airport Network Expansion

India's aviation industry has undergone a remarkable transformation in the past decade, emerging as one of the fastest-growing air transport markets globally. The sector has seen a surge in domestic air travel, infrastructure expansion, and fleet growth. The rapid expansion of operational airports and an increase in air passengers underscore the industry's bright future.

India's aviation industry has witnessed rapid growth, with the number of operational airports more than doubling from **74 in 2014 to 165 in 2026**⁵⁵. The government's expansion plan aims to reach **350-400** airports by 2047, significantly improving regional connectivity.

By 2030, the number of airports is expected to cross **200**, driven by increasing air travel demand. By 2040, around **300** airports are projected, aligning with India's infrastructure growth. The long-term goal of **350-400** airports by 2047 highlights a strong government commitment to making India a global aviation hub. This expansion will enhance connectivity, boost economic development, and support India's growing air passenger market, which is set to become the third-largest globally by 2030.



Source: Government of India – PIB, Ministry of Civil Aviation
Note: Number of Operational Airports in India for Till 07 July 2026

⁵⁵ <https://www.civilaviation.gov.in/node/7357>

Key factors affecting the Air Transport Industry:

➤ Growth in Air Passenger Traffic

Over the past decade, domestic air passenger traffic in India has more than doubled, reflecting the increasing affordability and accessibility of air travel. According to the International Air Transport Association (IATA), India is poised to become the third-largest air passenger market by 2030, surpassing China and the United States. This growth is fuelled by rising middle-class incomes, improved regional connectivity, and government initiatives such as the UDAN (Ude Desh Ka Aam Nagrik) scheme, which promotes affordable regional air travel.

➤ Fleet Expansion

To meet growing passenger demand, Indian airlines have significantly expanded their fleets. Major airlines like IndiGo, Air India, and Akasa Air have placed large aircraft orders, ensuring fleet modernization and increased capacity. The increase in fleet size will enhance connectivity, reduce congestion, and improve service efficiency across domestic and international routes.

➤ Future Growth Prospects

India's commitment to increasing its number of operational airports to **350-400 by 2047** suggests a strong focus on infrastructure development. The expansion of airports in tier-2 and tier-3 cities will play a crucial role in enhancing regional air connectivity, reducing dependency on metro hubs, and promoting economic growth in smaller cities.

Rising Passenger Demand

- India's domestic air passenger traffic is projected to grow at a CAGR of **8-10%** over the next decade.
- By 2030, India will become the third-largest air passenger market, overtaking the U.S. and China.
- Increased disposable incomes, business travel, and tourism will continue to fuel this demand.

➤ Increase in Aircraft Fleet

With rising passenger demand, Indian airlines are expected to double their fleet size by 2035. Fleet expansion will enable greater connectivity between domestic and international destinations, reinforcing India's position as a key global aviation hub. India's aviation industry is on a robust growth trajectory, driven by increasing airport infrastructure, rising passenger traffic, and fleet expansion. Government policies, economic growth, and technological advancements will further enhance connectivity and efficiency in the sector. With the projected increase in operational airports and air passenger traffic, India is set to become one of the world's leading aviation markets in the coming decades.



Factors and Trends Impacting the Growth of Air Transportation in India

1. Infrastructure Development

- The Bharatmala Project is enhancing road connectivity, with initiatives like the Delhi-Mumbai Industrial Corridor facilitating faster freight movement between industrial hubs.
- The Sagarmala Project focuses on port-led development, modernizing ports and integrating them with special economic zones to improve maritime logistics.
- The Dedicated Freight Corridors, such as the Delhi-Mumbai and Amritsar-Kolkata corridors, are expanding rail freight infrastructure, reducing transportation costs, and boosting trade efficiency.

2. E-Commerce Expansion

- Companies like Amazon and Flipkart increasingly use air cargo networks (e.g., Amazon Air in India) to ensure same-day or next-day delivery, directly increasing demand for aviation logistics.
- E-commerce shipments require speed and reliability, making air transport the preferred mode for intercity and international deliveries.

3. Implementation of the Goods and Services Tax (GST)

- The GST reform has streamlined tax structures, reduced logistics costs and increasing the average daily distance travelled by trucks from **225** kilometres to **300-325** kilometres, significantly enhancing efficiency in goods transportation.

4. Technological Advancements

- Rivigo, a logistics startup, has integrated IoT technology to enable real-time tracking of truck metrics like fuel levels and engine temperature, improving operational efficiency.
- Companies are increasingly exploring blockchain technology to enhance transparency and secure documentation in supply chains, ensuring trust and efficiency.

5. Growing Demand for Cold Chain Logistics

- India's cold storage capacity has expanded to **39.37 million** metric tons, with Uttar Pradesh and West Bengal leading due to their strong agricultural production.
- The COVID-19 vaccination drive required over **2,000** ultra-low temperature freezers, emphasizing the critical role of cold chain logistics in distributing temperature-sensitive vaccines.



Industry SWOT Analysis

The Indian logistics industry is a cornerstone of the nation's economy, ensuring the seamless movement of goods across its vast and diverse landscape. A detailed SWOT analysis examining Strengths, Weaknesses, Opportunities, and Threats offer a comprehensive understanding of the industry's current state, with a particular emphasis on airways logistics.

Strengths:

- **Strategic Geographic Position:** India's central location in South Asia positions it as a crucial hub for international trade routes connecting the East and West. This strategic advantage facilitates efficient distribution channels for both domestic and international markets.
- **Robust Economic Growth:** India's consistent economic expansion drives demand for sophisticated logistics services. As industries grow and consumer markets expand, the need for timely and reliable transportation, especially via air freight, becomes increasingly critical.
- **Expanding Air Cargo Market:** The Indian air cargo market has demonstrated significant growth, reaching approximately **USD 13.44 billion** in **2024**. Projections indicate a compound annual growth rate (CAGR) of 5.80% between 2025 and 2034, potentially attaining a market value of **USD 23.62 billion** by **2034**. This growth is fuelled by factors such as increased export activities and advancements in airport infrastructure.
- **Technological Integration:** The adoption of advanced technologies, including automation, real-time tracking, and data analytics, has enhanced operational efficiency within the air cargo sector. These innovations lead to improved cargo handling, reduced turnaround times, and increased customer satisfaction.

Weaknesses:

- **Infrastructure Limitations:** Despite growth, many Indian airports face challenges like inadequate cargo handling facilities, limited warehousing space, and outdated equipment. These limitations can cause delays and increase operational costs.
- **Regulatory Challenges:** Complex customs procedures and bureaucratic hurdles often impede the swift movement of goods. Lengthy clearance processes can diminish the advantages of air freight's speed, affecting overall supply chain efficiency.
- **High Operational Costs:** Air freight is inherently more expensive than other transportation modes. Factors such as volatile fuel prices, high airport charges, and maintenance expenses contribute to elevated operational costs, which can deter price-sensitive customers.
- **Limited Domestic Connectivity:** While major metropolitan areas are well-served, regional connectivity remains underdeveloped. This gap restricts the reach of air cargo services, particularly affecting businesses in remote or underserved regions.



Opportunities:

- **E-commerce Expansion:** The rapid rise of e-commerce in India has escalated demand for quick and reliable delivery services. Air cargo is uniquely positioned to meet these needs, offering expedited shipping that aligns with consumer expectations for speed.
- **Government Initiatives:** The Indian government has launched several initiatives aimed at bolstering the logistics sector. Policies focused on modernizing infrastructure, streamlining regulations, and promoting public-private partnerships are set to enhance the efficiency and capacity of air cargo operations.
- **Investment in Infrastructure:** Ongoing and planned investments in airport infrastructure, including the development of dedicated cargo terminals and integrated logistics parks, present opportunities to alleviate current bottlenecks and improve service delivery.
- **Regional Trade Agreements:** India's participation in regional trade agreements can open new markets and increase cargo volumes. Strengthening ties with neighbouring countries and trading blocs can lead to enhanced cross-border air cargo movement.

Threats:

- **Intense Competition:** The air cargo sector faces stiff competition from other modes of transport, such as road, rail, and sea, which may offer more cost-effective solutions for certain types of cargo. Additionally, international carriers operating in India add to the competitive pressure.
- **Environmental Concerns:** The environmental impact of air freight, particularly its carbon footprint, is under increasing scrutiny. Regulatory measures aimed at reducing emissions and promoting sustainability could impose additional costs and operational constraints on air cargo operators.
- **Global Economic Fluctuations:** The air cargo industry is vulnerable to global economic downturns, trade restrictions, and geopolitical tensions. Such factors can disrupt supply chains, reduce trade volumes, and impact profitability.
- **Pandemic and Health Crises:** Health crises, like the COVID-19 pandemic, have demonstrated the potential for severe disruptions in air cargo operations. Travel restrictions, reduced flight frequencies, and lab or supply shortages can significantly impact the industry's ability to function effectively during such events.



Competitive landscape

India's air cargo logistics sector forms a vital link in the broader supply chain, facilitating the rapid movement of time-sensitive and high-value goods across domestic and international markets. As the economy grows and global trade volumes increase, the demand for efficient air freight services continues to rise. Sectors such as pharmaceuticals, electronics, automotive components, and e-commerce are increasingly reliant on the speed and reach that air cargo offers.

The segment is also witnessing structural improvements driven by government support, including logistics infrastructure development, cargo-specific airport terminals, and digital initiatives aimed at enhancing transparency and turnaround time. While air cargo represents a smaller share compared to surface freight, its significance lies in handling urgent consignments and servicing regions with limited access.

Operational complexity, infrastructure limitations at key airports, and the need for specialized handling remain challenges in this space. However, advancements in cargo tracking technologies, growing adoption of multimodal logistics models, and the expansion of express logistics services are steadily reshaping the sector. Service providers are focusing on improving agility, optimizing capacity, and ensuring reliability to meet evolving client expectations.

Key players in the Indian air cargo logistics segment include a mix of specialized freight forwarders and diversified logistics providers. Companies like **Skyways Air Services Limited** focus primarily on-air freight and international cargo movement, offering tailored solutions for time-sensitive shipments. On the other hand, larger integrated logistics firms such as **Delhivery Ltd**, **Mahindra Logistics Ltd**, and **TVS Supply Chain Solutions Ltd** incorporate air cargo as part of a broader multimodal logistics portfolio, combining it with surface transport, warehousing, and last-mile delivery. These companies leverage scale, technology, and a pan-India presence to serve varied industry verticals. Together, they shape a competitive market where niche specialization and end-to-end service capabilities both find relevance depending on client needs.

Analysis of key factors shaping competition in the air transportation sector

The Indian air transportation sector is a dynamic and evolving industry, influenced by various competitive factors and dominated by key players who shape its trajectory.

I. Market Structure and Dominant Players:

- **IndiGo Airlines:** Holding over **60%** of India's domestic market share, IndiGo has established itself as the largest carrier in the country. The airline is transitioning from its budget airline image by expanding internationally and introducing business-class seating, aiming to compete with global long-haul carriers.



- **Air India:** Under the ownership of the Tata Group, Air India is undergoing modernization efforts. The airline is in discussions with Boeing and Airbus for a substantial order of 30 to 40 widebody jets, aiming to elevate its modernization efforts and recapture market share lost to global rivals.

2. Fleet Expansion and Modernization:

Airlines are investing aggressively in expanding and modernizing their fleets to cater to rising passenger volumes, improve operational efficiency, and strengthen global competitiveness. Air India, for example, has initiated one of the largest fleet renewal programs in aviation history, with significant widebody jet orders proposed from Airbus and Boeing. This strategy is aimed at upgrading its long-haul capabilities, entering new international routes, and restoring its position in the global aviation market. In addition, IndiGo Airlines is pursuing an ambitious expansion roadmap starting August 2025, reflecting its long-term strategic focus on operational resilience and cost optimization. The airline is developing a state-of-the-art maintenance facility in Bengaluru, designed to support advanced fleet servicing, reduce turnaround times, and minimize dependence on external MRO partners. Alongside this, IndiGo plans to increase its owned aircraft share to **30–40% by 2030**, a major shift from its predominantly leased fleet model. This move is intended to strengthen balance-sheet stability, reduce lease liabilities, mitigate supply chain risks, and enhance overall operational discipline.

3. Infrastructure Development:

The Indian government has been investing heavily in airport infrastructure to support the rapidly growing aviation sector. This includes the construction of new airports under the UDAN regional connectivity scheme, along with major capacity expansion and modernization of existing airports to handle rising passenger and cargo volumes. To address the surge in air traffic, airport operators are set to invest a cumulative **INR 60,000 crore** in capital expenditure between FY 2025 and FY 2027, marking a **12%** increase compared to the **INR 53,000 crore** invested during FY 2022–24. This investment push is critical as the aviation industry is projected to add **65 million** passengers per year, requiring significant upgrades in terminal capacity, runway expansion, cargo handling zones, and airside infrastructure.

4. Regulatory Environment:

India's regulatory environment has been steadily evolving to support the expansion of the aviation sector. The government has introduced policies aimed at improving safety standards, enhancing passenger convenience, and promoting investment across airports and airlines. Reforms such as the DigiYatra initiative, single-window clearances for airport development projects, and the modernization of DGCA processes have reduced compliance complexities and encouraged industry growth. Additionally, reforms in slot allocation, bilateral agreements, ground handling, and air cargo policy frameworks are helping create a more competitive and efficient aviation market.



5. Pilot Shortage:

India's aviation industry is currently grappling with a severe pilot shortage, with an estimated **12–15%** deficit in trained, experienced pilots required to meet projected growth. Ironically, despite this shortage, **4,000–5,000** newly licensed pilots remain unemployed because airlines prefer candidates with substantial flying hours and real-world experience. The high cost of Type Rating training, limited simulator availability, and the long training cycles make it challenging for new pilots to enter commercial operations quickly. This mismatch between supply and demand places additional pressure on airlines, forcing them to depend on expatriate pilots for widebody operations or delay route expansion plans due to insufficient crew availability. The pilot shortage remains one of the biggest operational bottlenecks for India's fast-growing aviation sector.

6. Technological Advancements:

Airlines are increasingly leveraging advanced technologies to deliver a more seamless passenger experience and improve operational efficiency. Innovations such as mobile check-in, biometric boarding, AI-driven flight scheduling, and smart baggage tracking systems are becoming standard across major carriers. The adoption of in-flight Wi-Fi, digital payment systems, predictive maintenance tools, and real-time performance monitoring is helping airlines reduce delays and enhance customer satisfaction. Additionally, backend operations such as crew management, route optimization, and fuel efficiency monitoring are increasingly being automated using AI and big-data analytics. This growing digital transformation not only improves convenience for passengers but also boosts cost efficiency and operational reliability for airlines.

7. Sustainability Initiatives:

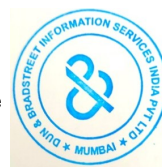
Growing concerns over climate change and global carbon emissions have compelled Indian airlines to adopt more sustainable practices. Carriers such as Air India, IndiGo, and Vistara are replacing older aircraft with newer, fuel-efficient models like the A320neo and Boeing 787 Dreamliner to reduce fuel consumption and emissions. Airlines are also exploring sustainable aviation fuels (SAF), participating in global carbon-offset programs, and implementing waste reduction measures onboard. Airports, too, are transitioning to renewable energy sources, green building standards, and electric ground support equipment. These sustainability initiatives are becoming essential as aviation's environmental footprint faces increasing scrutiny from regulators, international bodies, and environmentally conscious passengers.

8. Market Dominance by Foreign Carriers

Foreign carriers exert overwhelming dominance in India's international air cargo market, controlling nearly 94–95% of total freight volumes. Their strong position is backed by extensive global networks, operational efficiencies, and access to a large fleet of dedicated freighter aircraft advantages that Indian



carriers currently lack. Airlines like Emirates SkyCargo, Qatar Airways Cargo, Lufthansa Cargo, FedEx, and UPS provide high-frequency services, faster connections, and superior global coverage, making them the preferred choice for exporters and freight forwarders. Meanwhile, Indian carriers rely mostly on belly cargo capacity, limiting their flexibility and scale. This imbalance influences market pricing, cargo routes, and service levels, making it difficult for local airlines to compete effectively. Until domestic carriers expand their widebody and freighter operations, foreign airlines will continue to dominate India's international cargo ecosystem.



Peer Profiling

Delhivery Limited

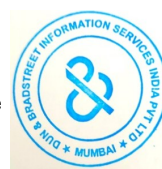
Established in 2011 and headquartered in Gurugram, Haryana, Delhivery is India's largest fully integrated logistics provider, with a mission to build the operating system for commerce through world-class logistics infrastructure, engineering, and technology capabilities. Since its inception, the company has successfully fulfilled over 4.5 billion parcels across India and has built a nationwide logistics network with a presence in every state. Its network services 18,850+ pin codes through 50 automated sort centres, 123 gateways, and over 4,500 direct delivery centres, supported by a workforce of 74,000+ people. Delhivery serves 52,000+ businesses across e-commerce marketplaces, direct-to-consumer (D2C) brands, enterprises, and SMEs operating in sectors such as FMCG, consumer durables, consumer electronics, lifestyle, retail, automotive, and manufacturing.

Delhivery's logistics capabilities are built on high-quality logistics infrastructure, network engineering, automation, and proprietary technology. Its self-developed logistics operating system enables flexible, reliable, and resilient supply chains by integrating transportation, warehousing, and network operations while enhancing operational efficiency and customer visibility. The company offers integrated logistics solutions across Express Parcel, Warehousing, Part Truckload (PTL), Full Truckload (FTL), International Shipping, Software Platform (TransportOne), and Data Intelligence services. Delhivery's logistics infrastructure covers 23 million square feet, while its freight network has transported over 9 million tonnes since inception. Through strategic partnerships with FedEx and Aramex, the company provides international express parcel and freight services to 220+ countries and territories.

Product & Service Offerings:

Delhivery provides a wide range of logistics and supply chain services designed to meet the diverse needs of its customers across various sectors:

- **Express Parcel:** Time-bound delivery services for high-volume e-commerce and direct-to-consumer shipments, covering first mile, line haul, and last-mile logistics.
- **Part Truckload (PTL):** Freight solutions that allow multiple clients to share space on a single vehicle, offering cost efficiency and regular dispatches across key routes.
- **Full Truckload (FTL):** Dedicated truck services for businesses with bulk transportation needs, providing direct connectivity between manufacturing units, warehouses, and retail points.
- **Warehousing & Fulfilment:** A network of warehousing facilities offering inventory management, order processing, packaging, and fulfilment services. These are supported by technology platforms for inventory visibility and control.



- **Cross-border Services:** International shipping solutions including import/export clearance, freight forwarding, and last-mile delivery in select markets through global partnerships.
- **Retail Chains:** Enables intra-city and inter-city movement of inventory for organized retail outlets through structured warehousing and FTL services.
- **Supply Chain Software:** A proprietary logistics operating system enabling shipment tracking, network optimization, demand forecasting, and operational analytics.
- **Data Intelligence Solutions:** Technology-driven insights for customers to optimize their logistics planning, demand prediction, and cost structures.
- **Solutions for D2C and SMEs:** Customizable logistics services to support direct-to-consumer brands, small sellers, and businesses with flexible scale requirements.

Key Customer Segments Served:

Delhivery caters to a broad and diversified customer base across industries, offering tailored logistics solutions to meet varying supply chain needs:

- **E-commerce Marketplaces:** Serves some of India's largest online platforms by providing high-frequency express parcel and reverse logistics services across the country.
- **Direct-to-Consumer (D2C) Brands:** Supports digitally native and emerging consumer brands with scalable fulfilment and delivery services, enabling faster market reach and customer responsiveness.
- **Small and Medium Enterprises (SMEs):** Offers flexible warehousing, PTL, and last-mile solutions to SMEs across sectors, helping streamline logistics and improve delivery timelines.
- **Large Enterprises:** Works with established firms in automotive, retail, FMCG, and manufacturing sectors, providing end-to-end transportation and supply chain management solutions tailored to complex business needs.
- **Consumer Durables & Electronics:** Facilitates safe and timely movement of high-value and bulky goods, leveraging tracking systems and secure delivery protocols.
- **Retail Chains:** Enables intra-city and inter-city movement of inventory for organized retail outlets through structured warehousing and FTL services.

Key Strengths

- **Integrated Multi-Modal Logistics Network:** Delhivery operates one of India's largest integrated logistics networks, providing Express Parcel, Part Truckload (PTL), Full Truckload (FTL), Warehousing & Fulfilment, International Shipping, TransportOne, and Data Intelligence services. The company serves 18,850+ pin codes through 50 automated sort centres, 123 gateways, and over 4,500 direct delivery centres, supported by 23 million square feet of logistics infrastructure.



- **Proven Profitability & Scale:** Delhivery reported Revenue from Operations of ₹10,50,830.70 lakh in FY2026, representing a 17.65% YoY growth over FY2025 (₹8,93,190.10 lakh). The company achieved Gross Profit of ₹3,04,242.90 lakh, EBITDA of ₹62,131.80 lakh, and Profit After Tax (PAT) of ₹15,254.00 lakh in FY2026, reflecting continued growth in operations and improving profitability.
- **Technology-Driven Logistics Platform:** Delhivery's proprietary logistics operating system integrates transportation, warehousing, shipment tracking, fulfilment, and network operations to enhance visibility, operational efficiency, and supply chain reliability. The company also offers TransportOne and Data Intelligence solutions to support logistics management and decision-making.
- **Large and Diversified Customer Base:** Delhivery serves 52,000+ businesses across e-commerce marketplaces, direct-to-consumer (D2C) brands, SMEs, and enterprises operating in industries including FMCG, retail, automotive, manufacturing, consumer electronics, consumer durables, and lifestyle, providing a diversified revenue base.
- **Robust Operational Infrastructure:** Since inception, Delhivery has shipped over 4.5 billion parcels and transported over 9 million tonnes of freight. Its extensive infrastructure, automation capabilities, and nationwide presence enable efficient and scalable logistics operations across India.
- **Global Connectivity through Strategic Partnerships:** Delhivery offers international express parcel and freight services across 220+ countries and territories through strategic partnerships with global logistics providers including FedEx and Aramex, strengthening its cross-border logistics capabilities.

Mahindra Logistics Ltd

Established in 2007 and part of the Mahindra Group, Mahindra Logistics Limited (MLL) is one of India's leading integrated logistics and mobility solutions providers. The company delivers technology-enabled, customer-centric, and scalable logistics solutions that help businesses optimize their supply chains while enhancing operational efficiency. Mahindra Logistics serves a diversified customer base across industries including Automobile & Auto Components, Engineering, Consumer Goods, Pharmaceuticals, E-commerce & D2C, Telecom, Chemicals, and Industrial sectors. With a customer-first approach built on trust, transparency, safety, customization, and optimization, the company provides integrated logistics solutions designed to address complex supply chain requirements.

As of 2026, Mahindra Logistics has established a strong operational footprint with 22+ million sq. ft. of warehousing space under management across 1,100+ locations in India, supported by a workforce of 30,000+ employees. The company executes 50,000+ full truck trips per month, manages 10,000+ TEUs of ocean freight annually, and delivers approximately 12 crore packages annually through its integrated logistics network. Its operations span 19,000+ pin codes, supported by 1,500+ business associates, 1,500+ electric vehicles (cargo and passenger), 50+ global trade lanes, and 4.1 million+ sq. ft. of warehouse space powered by renewable energy. This extensive infrastructure, combined with technology-enabled logistics solutions and



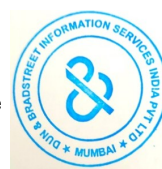
an integrated supply chain platform, enables Mahindra Logistics to efficiently manage complex, multi-modal supply chains while delivering reliable and scalable logistics solutions to customers across diverse industries.

On 21 April 2025, the Board of Mahindra Logistics Ltd. appointed Hemant Sikka as Additional Director and Managing Director & CEO Designate, effective 22 April 2025. He formally assumed the role of Managing Director & CEO on 5 May 2025, succeeding Ram Praveen Swaminathan, whose tenure concluded on 20 July 2025. As of 2026, Hemant Sikka continues to lead Mahindra Logistics, bringing over three decades of global business leadership experience and driving the company's next phase of growth, operational excellence, technology-led transformation, and sustainable logistics initiatives.

Product Profile & Operational Infrastructure

Mahindra Logistics operates through the following integrated business solutions:

- **Contract Logistics:**
 - Inbound logistics
 - Outbound logistics
 - Warehousing & inventory management
 - Order fulfilment
 - Transportation solutions
 - End-to-end supply chain management
- **Freight Forwarding:**
 - Air freight
 - Ocean freight
 - Customs clearance support
 - Import & export logistics
 - Cross-border logistics
- **B2B Express:**
 - Time-sensitive business logistics
 - Express transportation solutions
 - Technology-enabled logistics services
- **Last Mile Delivery:**
 - Nationwide last-mile delivery

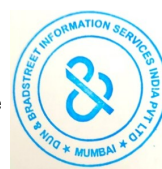


- Delivery across urban and remote locations
- Customer-centric delivery solutions
- **Mobility Solutions:**
 - Enterprise mobility
 - Employee transportation
 - Technology-enabled fleet and mobility management
 - Sustainable mobility solutions including electric vehicles
- **eDeL-EAR:**
 - Carbon footprint visualization platform
 - Sustainability and green logistics monitoring

Key Customer Segments Serviced

Mahindra Logistics serves a wide range of customer segments across various industries, providing integrated logistics and mobility solutions tailored to specific business requirements. Key customer segments include:

- **Automobile & Auto Components:** Providing integrated transportation, warehousing, inventory management, and end-to-end supply chain solutions for automobile manufacturers and component suppliers.
- **E-commerce & D2C:** Offering contract logistics, warehousing, fulfilment, B2B express, freight forwarding, and last-mile delivery solutions for e-commerce businesses and direct-to-consumer brands.
- **Consumer Goods:** Delivering warehousing, transportation, distribution, and supply chain management solutions for consumer goods companies.
- **Pharmaceuticals:** Providing technology-enabled logistics, warehousing, transportation, and supply chain solutions for pharmaceutical companies.
- **Engineering:** Offering integrated logistics, transportation, warehousing, and supply chain solutions for engineering companies.
- **Telecom:** Delivering customized logistics and supply chain solutions for the telecommunications sector.
- **Chemicals:** Providing logistics and transportation solutions designed to support the chemicals industry.
- **Industrial:** Offering integrated warehousing, transportation, freight forwarding, and supply chain solutions for industrial businesses.



Key Strengths

- **Integrated End-to-End Logistics Platform:** Mahindra Logistics offers a comprehensive portfolio comprising Contract Logistics, Freight Forwarding, B2B Express, Last Mile Delivery, and Mobility Solutions, enabling customers to manage diverse logistics and mobility requirements through a single integrated platform.
- **Technology-Enabled Operations:** The company leverages technology-driven solutions to enhance supply chain visibility, improve operational efficiency, optimize logistics processes, and deliver seamless customer experiences across its integrated service offerings.
- **Extensive Operational Network:** Mahindra Logistics has established a strong nationwide presence with 22+ million sq. ft. of warehousing space, 1,100+ operating locations, connectivity across 19,000+ pin codes, and a network of 1,500+ business associates, enabling efficient logistics solutions across India.
- **Diversified Industry Presence:** The company serves customers across Automobile & Auto Components, Engineering, Consumer Goods, Pharmaceuticals, E-commerce & D2C, Telecom, Chemicals, and Industrial sectors, reducing dependence on any single industry while supporting varied supply chain requirements.
- **Global Freight Forwarding Capabilities:** Through its international air and ocean freight services and global trade network spanning 50+ trade lanes, Mahindra Logistics enables efficient cross-border logistics supported by customs expertise and international logistics partnerships.
- **Sustainability-Focused Solutions:** The company promotes sustainable logistics through electric mobility solutions, 4.1+ million sq. ft. of warehouse space powered by renewable energy, and eDeL-EAR, a digital platform that enables customers to monitor carbon emissions and support greener supply chain operations.
- **Customer-Centric Service Model:** Guided by its 'Igniting Success' philosophy, Mahindra Logistics focuses on trust, transparency, safety, customization, and optimization to deliver scalable logistics solutions tailored to customers' evolving business requirements.
- **Strong Brand Heritage:** As part of the Mahindra Group, the company benefits from a well-established brand, extensive industry expertise, and a strong reputation, reinforcing its position as a trusted integrated logistics and mobility solutions provider.

TVS Supply Chain Solutions Ltd

TVS Supply Chain Solutions Ltd (TVS SCS), **established in 2004** and headquartered in Chennai as part of the TVS Mobility Group, is a global leader in integrated supply-chain and logistics solutions. Operating across **26 countries**, the company delivers end-to-end services including inbound and outbound logistics, in-plant operations, warehousing, international freight forwarding, final-mile deliveries, and value-added supply-chain



solutions. By combining technology-enabled platforms with a network-focused approach, TVS SCS helps businesses streamline operations, improve visibility, and manage complex global supply chains with agility and precision.

As of 2025, TVS SCS operates a vast global network, managing 19.9 million sq. ft. of warehouse and managed space across 26 countries, supported by a dedicated workforce of around 17,000 professionals. Every day, the company delivers seamless logistics and supply-chain services to over 6,200 customers worldwide, including 91 Fortune Global 500 clients, across industries like automotive, industrial, consumer goods, retail, healthcare, aerospace, defence, and technology. This scale, combined with integrated end-to-end solutions and technology-driven processes, allows TVS SCS to handle complex, multi-modal supply chains efficiently while offering highly customized services that meet the unique needs of each client.

Product & Service Offerings

TVS SCS delivers supply chain solutions through integrated logistics and forwarding services:

Integrated Supply Chain Solutions (ISCS)

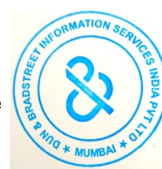
- Inbound logistics
- Outbound distribution
- Warehousing and fulfilment
- Inventory management
- In-plant logistics operations
- Transportation management
- Value-added supply chain services

Global Forwarding & Network Solutions

- Air freight forwarding
- Ocean freight forwarding
- Road transportation
- Customs and cross-border logistics support
- Integrated final-mile delivery solutions
- Aftermarket and spare-parts logistics support

Key Customer Segments Serviced

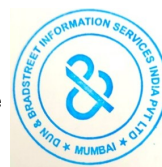
TVS SCS serves a wide spectrum of industries through customized supply chain and logistics solutions:



- **Automotive & Auto Components:** Integrated inbound, outbound, warehousing, and distribution solutions for vehicle manufacturers and component suppliers.
- **Engineering:** End-to-end logistics, transportation, and warehousing solutions for engineering businesses.
- **FMCG & Consumer Goods:** Supply chain, fulfilment, and distribution services for fast-moving consumer goods companies.
- **E-commerce:** Technology-enabled warehousing, transportation, and final-mile delivery solutions for online businesses.
- **Healthcare:** Logistics and supply chain support for healthcare and pharmaceutical customers.
- **Rail:** Specialized logistics and supply chain solutions for rail-related operations.
- **Defence:** Integrated logistics solutions supporting defence-sector requirements.
- **Utilities:** Supply chain and transportation solutions for infrastructure and utility businesses.

Key Strengths

- **Integrated End-to-End Supply Chain Platform:** TVS SCS combines warehousing, transportation, global forwarding, and final-mile delivery into a single integrated operating model, improving visibility and coordination across customer supply chains.
- **Technology-Driven Operations:** The company leverages digital platforms and technology-enabled processes to enhance supply chain visibility, optimize logistics performance, and support data-driven decision-making.
- **Large Warehousing Network:** TVS SCS operates a warehousing network of 21.85 million sq. ft. in India, strengthened by the addition of a 650,000 sq. ft. facility in Hosur in 2024.
- **Global Supply Chain Expertise:** The company manages large and complex supply chains across India and international markets through customized, technology-enabled solutions developed over more than two decades.
- **Diversified Industry Presence:** TVS SCS serves customers across automotive, defence, engineering, FMCG, rail, utilities, e-commerce, and healthcare sectors, providing resilience through a broad customer portfolio.
- **Experienced Global Workforce:** The company is supported by a workforce of approximately 17,000 people, enabling the delivery of integrated logistics services across multiple geographies and sectors.



Customized Supply Chain Solutions: TVS SCS designs sector-specific warehousing, fulfilment, transportation, and forwarding solutions tailored to customer requirements, helping improve efficiency and operational performance.

Shadowfax Technologies Limited

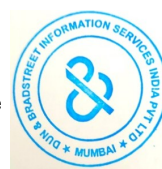
Established in 2015 and headquartered in Bengaluru, Karnataka, Shadowfax is India's leading logistics service provider for e-commerce, express parcel, and value-added logistics services. Over the past decade, the company has built a technology-driven logistics platform that enables seamless commerce through speed, agility, innovation, and operational excellence. Shadowfax offers integrated logistics solutions spanning express parcel, reverse logistics, same-day and next-day delivery, hyperlocal delivery, quick commerce, fulfilment, and SME courier services. Leveraging AI-powered technologies and a large crowdsourced logistics network, the company helps businesses optimize last-mile delivery while delivering superior customer experiences.

As of 2026, Shadowfax operates one of India's largest logistics networks, covering 2,500+ cities and 15,656+ PIN codes. The company has delivered over 1.5 billion parcels, operates 3,500+ trucks, manages 4.7 million+ sq. ft. of operational space, and supports its operations through 2.6 lakh+ quarterly delivery partners. Delivering approximately 2.5 million packages daily, Shadowfax serves leading e-commerce, D2C, hyperlocal, and quick commerce brands across India through a technology-enabled logistics ecosystem focused on speed, flexibility, and reliability.

Product & Service Offerings

Shadowfax provides a comprehensive portfolio of logistics and delivery solutions designed to meet diverse business requirements:

- **Express Parcel:**
 - Nationwide parcel delivery services
 - Standard, same-day, and next-day delivery
 - Parcel quality checks
- **Reverse Parcel:**
 - Reverse logistics and return management
 - Doorstep quality checks
 - Instant refunds and seamless exchanges
- **Prime:**
 - Same-day and next-day delivery solutions
 - Fast local delivery network
- **Prime Large:**
 - Delivery solutions for shipments above 15 kg



- Heavy goods logistics
- Technology-enabled large parcel delivery
- **Critical Logistics:**
 - Transportation of high-value and critical goods
 - Manufacturing plant-to-warehouse logistics
 - Secure and compliant movement of sensitive products
- **Hyperlocal & Quick Commerce:**
 - On-demand delivery within 10 minutes to 2 hours
 - Grocery, pharmacy, meal, and retail deliveries
 - Dark store and live store fulfilment
- **SME & Personal Courier:**
 - On-demand pickup and drop services
 - Courier solutions for individuals and SMEs
 - City-wide delivery services
- **Electric Vehicle Fleet:**
 - Sustainable last-mile delivery solutions
 - Electric vehicle-enabled logistics operations

Key Customer Segments Served

Shadowfax serves a diversified customer base across multiple industries by providing technology-enabled logistics solutions tailored to varying business requirements.

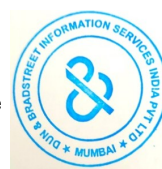
- **E-commerce & D2C Brands:** End-to-end logistics solutions including express parcel, reverse logistics, fulfilment, same-day and next-day delivery.
- **Hyperlocal & Quick Commerce:** Fast delivery solutions for grocery, food, pharmacy, and retail businesses requiring rapid fulfilment.
- **Small & Medium Enterprises (SMEs):** Affordable courier, parcel, and logistics solutions for growing businesses.
- **Personal Courier Customers:** On-demand intra-city pickup and delivery services for individual customers.
- **Retail & Consumer Brands:** Integrated parcel, reverse logistics, and last-mile delivery solutions supporting omnichannel retail operations.

Key Strengths

- **Extensive Last-Mile Logistics Network:** Shadowfax has established one of India's largest delivery networks with coverage across 2,500+ cities and 15,656+ PIN codes, supported by 2.6 lakh+ quarterly delivery partners, 3,500+ trucks, and 4.7 million+ sq. ft. of operational space.



- **Technology-Driven Operations:** The company leverages proprietary AI-powered platforms including Shadowfax Maps for intelligent address mapping and route optimization, and Shadowfax Shield for AI-enabled fraud detection, enhancing delivery accuracy, operational efficiency, and customer experience.
- **Comprehensive Delivery Portfolio:** Shadowfax offers integrated logistics solutions including Express Parcel, Reverse Logistics, Hyperlocal Delivery, Quick Commerce, Critical Logistics, SME Courier Services, and Electric Vehicle-based delivery solutions through a single technology platform.
- **Strong Operational Scale:** Since inception, the company has delivered over 1.5 billion parcels and currently handles approximately 2.5 million packages daily, demonstrating significant operational scale and execution capabilities.
- **Customer-Centric Innovation:** Shadowfax focuses on delivering fast, flexible, and reliable logistics solutions supported by intelligent automation, real-time tracking, and customized delivery options for businesses across multiple sectors.
- **Commitment to Sustainable Logistics:** The company promotes environmentally responsible logistics through its Electric Vehicle Fleet, supporting sustainable and cost-effective last-mile delivery operations.



Financial KPI Benchmarking

	Skyways Air Services Limited			Delhivery Limited			Mahindra Logistics Limited			TVS Supply Chain Solutions Limited			Shadowfax Technologies Limited		
Particulars	For the Year ended on March 31			For the Year ended on March 31			For the Year ended on March 31			For the Year ended on March 31			For the Year ended on March 31		
	2026	2025	2024	2026	2025	2024	2026	2025	2024	2026	2025	2024	2026	2025	2024
Revenue from Operations (₹ in Lakhs)	2,81,289.89	2,24,782.49	1,28,911.01	10,50,830.70	8,93,190.10	8,14,153.80	6,99,930.00	6,10,483.00	5,50,597.00	11,00,297.00	9,99,572.00	9,19,998.00	4,20,244.00	2,48,513.10	1,88,482.20
Growth in Revenue from Operations (%)	25.14%	74.37%	-13.14%	17.65%	9.71%	12.68%	14.65%	10.88%	7.36%	10.08%	8.65%	-10.12%	69.10%	31.85%	33.19%
EBITDA (₹ in Lakhs)	12,564.86	8,648.86	4,834.42	62,131.80	37,771.90	11,292.60	36,892.00	28,404.00	23,184.00	85,900.00	69,648.00	63,574.00	21,184.00	5,618.60	1,137.20
EBITDA Margin (%)	4.47%	3.85%	3.75%	5.91%	4.23%	1.39%	5.27%	4.65%	4.21%	7.81%	6.97%	6.91%	5.04%	2.26%	0.60%
Profit After Tax (₹ in Lakhs)	6,352.38	4,813.97	3,449.35	15,254.00	16,211.00	-24,918.60	1,057.00	-3,000.00	-5,309.00	11,702.00	-964.00	-9,049.00	11,171.00	642.60	-1,188.20
PAT Margin (%)	2.26%	2.14%	2.68%	1.45%	1.81%	-3.06%	0.15%	-0.49%	-0.96%	1.06%	-0.10%	-0.98%	2.66%	0.26%	-0.63%
RoE (%)	14.15%	19.52%	22.37%	1.60%	1.75%	-2.72%	0.28%	-7.71%	-10.39%	5.96%	-0.75%	-7.97%	9.29%	1.19%	-3.97%
RoCE (%)	18.11%	14.61%	15.57%	-0.77%	-1.67%	-6.63%	7.38%	6.68%	3.14%	13.24%	8.32%	4.28%	5.41%	-1.37%	-3.83%
Net Fixed Asset Turnover (In Times)	14.14	13.98	12.21	3.60	3.55	4.18	7.66	8.62	9.69	5.41	7.03	6.03	8.60	10.45	19.21
Net Working Capital Days	23	23	16	106.09	185.69	206.39	11	2	-7	2.91	8.98	9.81	64.97	58.51	53.29
Operating Cash Flows (₹ in Lakhs)	11,361.60	201.05	-904.17	91,145.70	56,736.30	47,240.20	25,361.00	34,317.00	22,686.00	74,634.00	67,197.00	12,758.00	35,009.00	4,986.70	13,155.20
Earnings per Share (Basic & Diluted)															
Basic	3.56	3.71	2.99	2.04	2.19	-3.40	0.25	-4.97	-7.60	2.59	-0.31	-2.40	2.22	0.13	-0.28
Diluted	3.56	3.71	2.99	2.00	2.14	-3.40	0.25	-4.97	-7.60	2.59	-0.31	-2.40	2.18	0.13	-0.28
Operating Profit before Working Capital Changes (₹ in Lakhs)	13,233.11	9,202.47	5,261.44	90,009.90	61,746.80	49,458.70	40,994.00	30,856.00	27,104.00	80,630.00	69,836.00	69,275.00	23,768.00	9,154.70	2,761.20
Current Ratio	1.20	1.17	1.11	2.59	4.23	4.42	1.16	1.02	0.93	1.02	1.08	1.09	1.84	1.81	1.80
Net Worth (₹ in Lakhs)	33,264.21	24,714.05	15,425.78	9,68,695.50	9,43,215.10	9,14,464.60	1,17,478.00	43,788.00	49,247.00	2,03,350.00	1,80,177.00	1,81,503.00	1,74,484.00	66,042.70	42,177.60
Return on Net Worth (%)	12.33%	15.85%	20.26%	1.58%	1.72%	-2.72%	0.19%	-8.19%	-11.12%	5.62%	-0.75%	-5.58%	6.40%	0.97%	-2.82%

Note: For all companies consolidated balance sheet is considered.



Company Profiling: Skyways Air Services Limited

Skyways Air Services Limited is a professional air logistics company specializing in air cargo transportation, freight forwarding, and related services. Established in 1984, the company has built a strong foundation in the aviation sector, offering reliable and efficient solutions for cargo movement across domestic and international routes. Headquartered in New Delhi, Skyways Air Services Limited operates with a focus on streamlined logistics, ensuring timely and secure deliveries for a diverse range of industries.

With a well-established regional presence, the company serves key markets presence across India with 28 locations, including major cities such as Ahmedabad, Bangalore, Chennai, Cochin, Delhi, Hyderabad, Jaipur, Kolkata, Mumbai, Panipat, and Surat., enabling seamless connectivity between major trade hubs. Internationally, Skyways has expanded its operations to Germany, Vietnam, Bangladesh, Dubai (UAE) , Hong Kong, Cambodia, Saudi Arabia and Thailand.. Skyways Air Services Limited collaborates with a network of carriers, ground handling agents, and logistics partners to provide customized transport solutions that cater to the specific needs of businesses. By leveraging industry expertise and technology-driven processes, the company continues to enhance its service offerings and expand its operational footprint in the aviation and logistics industry.

Product profile & operational infrastructure

Skyways Air Services Limited provides a range of logistics and freight solutions tailored to diverse industry needs directly or through its subsidiaries. The company's key services include:

1. Air Freight Services

- Direct and consolidated air cargo solutions
- Time-sensitive and high-value cargo handling
- Partnerships with major airlines for efficient routing
- Specialized handling of perishable, dangerous, and oversized goods

2. Ocean Freight Services

- Full Container Load (FCL) and Less than Container Load (LCL) shipping
- Multi-modal transport solutions (sea-air, sea-road)
- Global partnerships with shipping lines for optimized costs

3. Road Transportation Services

- Domestic and cross-border road freight solutions
- Full truckload (FTL) and less than truckload (LTL) options



- Real-time tracking and end-to-end logistics support

4. Express & Courier Services

- Fast-track delivery for documents and parcels
- Domestic and international courier services
- Last-mile delivery solutions

5. Warehousing & Distribution

- Temperature-controlled and general warehousing
- Inventory management and order fulfilment
- Distribution network across key locations

6. Customs Clearance & Regulatory Compliance

- Import and export documentation support
- Customs brokerage and duty management
- Trade compliance advisory

7. Specialized Logistics Solutions

- Handling of hazardous materials and live animals
- Cold chain logistics for pharmaceuticals and perishables
- E-commerce and retail supply chain solutions

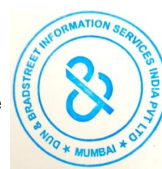
Operational Infrastructure:

1. Network & Regional Presence

- Headquartered in New Delhi, India
- Operational presence in 31 locations across India, including major cities such as Mumbai, Bangalore, Chennai, Hyderabad, Kolkata, and Ahmedabad
- International offices in Germany, Vietnam, Bangladesh, Dubai, Hong Kong, and Thailand

2. Logistics Hubs & Facilities

- Strategically located warehouses near major transport hubs
- Cold storage facilities for temperature-sensitive shipments



- Automated handling systems for faster processing

3. Technology Integration

- Digital tracking and real-time shipment visibility
- AI-driven logistics optimization
- Integrated supply chain management systems

4. Certifications & Compliance

- IATA-accredited air freight services
- AEO (Authorized Economic Operator) certified
- ISO 9001:2015 for quality management in logistics

Key customer segments serviced:

Skyways Air Services provides logistics solutions to businesses across multiple industries, ensuring seamless supply chain management tailored to each sector's specific requirements. The key customer segments include:

1. Fast-Moving Consumer Goods (FMCG)

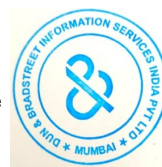
- Supports large FMCG brands such as Parle and Britannia in the efficient distribution of food products and packaged goods.
- Ensures timely deliveries to maintain stock availability in retail chains and supermarkets.
- Offers warehousing and last-mile delivery solutions to optimize supply chain efficiency.

2. Pharmaceuticals & Healthcare

- Provides cold chain logistics for temperature-sensitive medications and vaccines for companies like Morepen and IPCA.
- Ensures regulatory-compliant transportation of medical devices and pharmaceutical products.
- Offers express delivery services for urgent medical supplies, reducing lead times for critical healthcare shipments.

3. Automotive Industry

- Partners with leading automotive brands such as Tata Motors and Eicher to manage the transport of vehicle parts and assemblies.
- Supports just-in-time (JIT) supply chains, ensuring uninterrupted production lines.



- Provides multimodal transport options, including air, sea, and road freight, for the global automotive supply network.

4. Textiles & Apparel

- Works with major textile manufacturers such as Vardhman and Arvind to streamline fabric and garment transportation.
- Ensures smooth international trade logistics for raw materials and finished clothing.
- Offers warehousing and distribution services to manage seasonal inventory fluctuations.

5. Engineering Goods & Industrial Equipment

- Supports companies like Honeywell and JCB Power Systems in transporting heavy machinery, industrial tools, and engineering components.
- Provides secure logistics solutions for high-value industrial goods, ensuring safety during transit.
- Manages global freight forwarding for manufacturing units, ensuring smooth operations across supply chains.

Skyways Air Services continues to cater to a broad spectrum of industries by offering specialized logistics solutions, advanced tracking systems, and a robust global network to support businesses in managing their supply chain operations efficiently.

Financial Performance Snapshot on Consolidated Basis

Skyways Air Services Limited			
Particulars	For the Year ended on March 31		
	FY 2026	FY 2025	FY 2024
Revenue from Operations (₹ in Lakhs)	2,81,289.89	2,24,782.49	1,28,911.01
Growth in Revenue from Operations (%)	25.14%	74.37%	-13.14%
EBITDA (₹ in Lakhs)	12,564.86	8,648.86	4,834.42
EBITDA Margin (%)	4.47%	3.85%	3.75%
Profit After Tax (₹ in Lakhs)	6,352.38	4,813.97	3,449.35
PAT Margin (%)	2.26%	2.14%	2.68%
RoE (%)	14.15%	19.52%	22.37%
RoCE (%)	18.11%	14.61%	15.57%
Net Fixed Asset Turnover (In Times)	14.14	13.98	12.21
Net Working Capital Days	23	23	16
Operating Cash Flows (₹ in Lakhs)	11,361.60	201.05	-904.17
Earnings per Share (Basic & Diluted)			
Basic	3.56	3.71	2.99
Diluted	3.56	3.71	2.99
Operating Profit before Working Capital Changes (₹ in Lakhs)	13,233.11	9,202.47	5,261.44
Current Ratio	1.20	1.17	1.11



Net Worth (₹ in Lakhs)	33,264.21	24,714.05	15,425.78
Return on Net Worth (%)	12.33%	15.85%	20.26%

Formula Table

Particular	Formula
Revenue from Operations	Revenue from Operations
Growth in Revenue from Operations (%)	$((\text{Current Year Revenue from Operations} - \text{Previous Year Revenue from Operations}) \div \text{Previous Year Revenue from Operations}) \times 100$
EBITDA (Earnings Before Interest, Taxes, Depreciation & Amortization)	Profit after Tax + Taxes + Finance Cost (Interest Expense only) + Depreciation & Amortization – Other Income
EBITDA Margin (%)	$(\text{EBITDA} \div \text{Revenue from Operations}) \times 100$
EBIT (Earnings Before Interest & Taxes)	Profit after Tax + Taxes + Finance Cost (Interest Expense only) – Other Income
Profit After Tax (PAT)	Profit After Tax
PAT Margin (%)	$(\text{PAT} \div \text{Revenue from Operations}) \times 100$
Total Net Worth / Total Equity	Equity Share Capital + Preference Share Capital + Other Equity (Reserves & Surplus)
Return on Equity (RoE) (%)	$(\text{PAT Attributable to Parent} \div \text{Average Equity over the Year}) \times 100$
Total Capital Employed	Equity Share Capital + Other Equity (Reserves & Surplus) + Long-term Borrowings + Non-Controlling Interest (NCI)
Return on Capital Employed (RoCE) (%)	$(\text{EBIT} \div \text{Total Capital Employed}) \times 100$
Net Fixed Assets	Property, Plant & Equipment + Capital Work-in-Progress + Right-of-Use Assets
Net Fixed Asset Turnover (Times)	$\text{Revenue from Operations} \div \text{Net Fixed Assets}$
Working Capital	Current Assets – Current Liabilities
Net Working Capital Days	$(\text{Working Capital} \div \text{Revenue from Operations}) \times 365$
Current Ratio	$\text{Current Assets} \div \text{Current Liabilities}$
Return on Net Worth (%)	$(\text{PAT Attributable to Parent} \div \text{Average Equity over the Year}) \times 100$

