



सत्यमेव जयते

NITI Aayog

TRADE WATCH

QUARTERLY

THEMATIC ANALYSIS: **METALS & ORES TRADE**



April-June (Q1) FY27

TRADE WATCH QUARTERLY, Quarterly Report for the FY'2026-27

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Published: September, 2026

NITI Aayog

Government of India

Sansad Marg, New Delhi-110001, India

TRADE WATCH

QUARTERLY

April-June [Q1] FY27

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FOREWORD

India's integration with the global economy is entering a phase in which the quality, resilience, and depth of its trade relationships are becoming increasingly important to sustaining growth. As global production networks evolve and new sources of demand emerge, strengthening domestic capabilities and moving towards higher-value segments will be central to India's trade ambitions.

Against this backdrop, India's trade performance in Q1 FY27 remained robust, supported by continued growth in both merchandise and services trade and greater diversification across markets. The quarter also reflects India's deepening engagement with regional and global value chains, even as the external environment becomes more complex.

This edition of *Trade Watch Quarterly* focuses on the metals and ores sector, which has an important bearing on India's manufacturing ambitions, infrastructure development and energy transition. India has developed significant strengths across several metal segments, but changing global demand increasingly places a premium on value addition, processing capabilities, critical mineral security, and lower-carbon production.

The analysis presented in this edition highlights the importance of strengthening domestic capabilities across the value chain, while improving competitiveness and resilience in a rapidly changing global trade landscape. I commend the team for its continued efforts to produce timely, policy-relevant analysis, and I trust this edition will contribute meaningfully to ongoing deliberations on India's trade and industrial strategy.

I laud the team for bringing together a comprehensive assessment of India's trade performance and a detailed examination of the structural opportunities and constraints facing the metals and ores sector. I am confident that the analysis and insights presented in this edition will contribute to informed policy deliberations and support efforts to strengthen India's export competitiveness, deepen value addition and build greater resilience in the evolving global trading landscape.

Date : 11 September 2026

Place : New Delhi


(Ashok Lahiri)



अनुराग जैन
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FOREWORD

The global trade landscape is being reshaped by geopolitical realignments, evolving supply chains, climate imperatives, and changing industrial policies, influencing patterns of production, investment, and trade. In this evolving environment, India's external sector has remained broadly resilient and stable.

2. This edition of Trade Watch Quarterly provides a useful evidence base for understanding these shifts. Alongside its assessment of FY27's first quarter trade trends, it highlights India's growing strength in digitally delivered services. It also examines the Metals and critical minerals sector, including import dependence, changing global demand and the implications of new carbon-related trade measures.

3. The publication highlights a key strategic imperative: India's objective must extend beyond resource availability and primary production to greater value addition, advanced processing, and integrated industrial ecosystems. India's metals and ores exports remain relatively small share of global demand, despite the global market's scale and growing importance. At the same time, India's imports of metals and ores nearly doubled over the past decade, underscoring both the dynamism of domestic demand and the need to strengthen capabilities in specialised and strategic segments.

4. The value of such analysis lies in translating trade data into clear policy priorities. India's export performance would be strengthened through closer alignment of trade policy with industrial capabilities, technology adoption, and access to strategic inputs. The edition's emphasis on mineral security, regulatory efficiency, logistics, green-transition preparedness and advanced manufacturing provides a useful framework for this discussion.

5. I congratulate the Economics & Finance - I team for their efforts in publishing Trade Watch Quarterly. I hope it continues to serve as a useful reference for policymakers, industry and researchers as India builds a more competitive and forward-looking trade strategy.

Dated: 15th September, 2026


(Anurag Jain)



डॉ. प्रभाकर साहू

कार्यक्रम निदेशक

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ACKNOWLEDGEMENT

The global trading environment continues to evolve amid geopolitical uncertainty, shifting supply chains and changing trade policies. In this environment, India has continued to demonstrate resilience, with merchandise and services trade recording strong growth in Q1 FY27, reflecting sustained engagement with global markets and greater trade diversification.

In this edition of the Trade Watch Quarterly, the focus is on India's metals and ores trade, a sector closely linked to manufacturing, infrastructure and the energy transition. The global metals and ores market has expanded significantly, while India has built strong positions in segments such as iron and steel and aluminium. The publication examines these strengths alongside opportunities to expand India's presence in higher-value and critical mineral segments.

India's metals trade is also evolving alongside rising domestic demand and changing global supply chains. The increasing reliance on imports highlights both the scale of industrial demand and the importance of strengthening domestic value addition, processing capabilities and resource security. At the same time, India's growing strength in digitally delivered services underscores the breadth of opportunities available across both goods and services trade.

The analysis presented in this edition provides valuable insights into the opportunities and structural challenges shaping India's trade competitiveness. I would like to express my sincere gratitude to the Hon'ble Vice Chairman, Dr Ashok Lahiri, NITI Aayog, for his valuable guidance and encouragement. I am thankful to Mr. Anurag Jain, CEO, NITI Aayog, for his guidance and support. I am deeply grateful to Shri BVR Subrahmanyam, former CEO of NITI Aayog, for his vision in initiating the *Trade Watch Quarterly* and for his continued guidance with each edition. I also thank the members of the Advisory Board for their insightful comments. Lastly, I commend the Economic & Finance-1 Team at NITI Aayog for its continued efforts to produce timely, evidence-based analysis through the *Trade Watch Quarterly*. I hope this edition contributes meaningfully to policy discussions on strengthening India's competitiveness, deepening value addition, and building greater resilience in global value chains.

8th September 2026

New Delhi

Pravakar Sahoo
(Pravakar Sahoo)

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EXECUTIVE SUMMARY

International trade remained resilient in the first half of calendar year 2026 despite heightened geopolitical and trade-policy uncertainty. Global goods trade reached \$13.7 trillion, growing by 12.5% y-o-y, while services trade expanded by 10.5%¹. Against this backdrop, India's merchandise and services trade expanded by 15.5% y-o-y in Q1 FY27 to \$506.9 billion, indicating stronger overall growth than global trade. India's merchandise exports increased by 16%, while merchandise imports grew by 19.8%. Meanwhile, services exports rose by 9.6% to \$106.75 billion, while services imports increased by 10.2% to \$54.53 billion, reflecting continued expansion in India's services trade.

India's merchandise exports continued to grow strongly in Q1 FY27, led by mineral fuels, electrical machinery, nuclear reactors, iron and steel, and vehicles, with rise in shipments of petroleum products, finished steel, engineering goods, and automobiles supporting the expansion. The import basket remained concentrated in key industrial and energy products, with strong growth in capital goods, electronic components and copper reflecting robust domestic investment and continued reliance on imported industrial inputs. Geographically, exports showed gradual diversification in Q1 FY27, with Tanzania and South Africa emerging among the top ten destinations alongside strong growth in shipments to Singapore, while imports from Latin America and West Africa increased sharply, partly reflecting diversification of crude oil sourcing amid geopolitical disruptions. However, Northeast Asia, West Asia-GCC and ASEAN continued to account for around half of India's imports, highlighting persistent dependence on these regions for energy, electronics and industrial inputs. Trade with FTA partners strengthened considerably, with exports rising by 36.3% and imports by 10%, reflecting deeper regional trade and supply-chain integration.

India's position in global digitally delivered services (DDS) has strengthened further. India's DDS exports rose from around \$277 billion in 2024 to \$317 billion in 2025, registering 15% y-o-y growth, the highest among leading exporters. India consequently moved from the fifth-largest DDS exporter in 2024 to the fourth-largest in 2025, behind the United States, United Kingdom and Ireland, highlighting its growing global competitiveness in digitally delivered services.

The thematic focus of this edition is India's Metals and Ores Trade, given its strategic importance for manufacturing, infrastructure, energy transition and advanced industries. India's metals exports stood at \$34.8 billion in 2025, with iron and steel, articles of iron and steel and aluminium accounting for ~78% of total metal exports. India remains highly competitive in these segments but its presence is limited in high-value non-ferrous metals and critical minerals. The analysis points to a persistent and widening import dependence in India's metals and ores trade. Metals and ores import nearly doubled from \$32.2 billion in 2015 to \$60.5 billion in 2025, indicating that domestic demand has outpaced domestic capacity in several segments, particularly high-value non-ferrous and critical minerals such as copper, lithium, cobalt and nickel. While India remains competitive in ferrous metals and aluminium, limited domestic capabilities in exploration, processing and specialised metal production continue to constrain value addition and increase reliance on imports. The upstream mining

¹ <https://unctad.org/publication/global-trade-update-julyaugust-2026-global-trade-continues-expand-amid-rising-price>

sector's limited attractiveness to foreign investors reinforces this challenge. The cumulative FDI equity inflow to India's mining sector stood at \$3.5 billion for the 25-year period spanning from 2000 to 2025². The sector accounts for less than 0.5% of India's overall long-term cumulative foreign equity inflows. This suggests that India's geological potential has not yet been fully translated into sustained international investment, highlighting opportunities to further strengthen the regulatory framework, infrastructure and availability of geoscientific information to support investor confidence. Recent reforms under the Mines and Minerals (Development and Regulation) (MMDR) Act, 1957 provide an opportunity to address some of these structural constraints. The MMDR Amendment Act, 2026 seeks to establish a more uniform and predictable fiscal framework by restricting State-level taxes and levies on mineral rights and mineral-bearing lands, thereby reducing the cumulative burden on mining and improving the viability of mineral projects³. The reform is also intended to strengthen investor confidence by providing greater certainty and stability in the fiscal regime, which could encourage investment in exploration, mine development and critical minerals.

India's metals exports also face growing risks from EU CBAM, particularly for steel and aluminium, given their carbon intensity and the EU's significant share of India's exports. India has developed significant domestic capabilities across steel, stainless steel, alloy steel and specialised metallurgical products; however, export competitiveness remains constrained by high raw-material and financing costs, regulatory and mining bottlenecks, high logistics costs, limited domestic value addition and growing trade barriers in major markets. The transition to low-carbon production is further challenged by the high cost and limited availability of renewable energy and emerging CBAM compliance requirements. Strengthening the sector's global competitiveness will therefore require a coordinated value-chain approach focused on improving mineral exploration and raw-material security, rationalising mining and auction mechanisms, streamlining regulatory clearances, reducing logistics and export-finance costs, strengthening import monitoring and trade safeguards, improving renewable-energy access and CBAM preparedness, and promoting domestic capabilities in advanced materials and critical-mineral recycling.

2 <https://www.dpiit.gov.in/static/uploads/2025/12/008805ddffdb8bb7a9a0a20aa54b0f1.pdf>

3 <https://www.pib.gov.in/FactsheetDetails.aspx?id=150952&NotelId=150952&ModuleId=16®=48&lang=2>

HIGHLIGHTS

1. India's merchandise exports increased by 16% y-o-y to \$129.5 bn in Q1 FY27, while merchandise imports grew by 19.8% to \$216.1 billion, resulting in a merchandise trade deficit of \$86.6 billion.
2. Services exports remained resilient, rising by 9.6% y-o-y to \$106.7 billion in Q1 FY27, while services imports increased by 10.2% to \$54.3 billion, resulting in a net services trade surplus of \$52.22 billion.
3. Export composition remained unchanged from the previous quarter. Imports remained concentrated in key industrial and energy products, with the composition remained broadly stable, although copper replaced aircraft among the leading import commodities.
4. Export markets showed greater diversification, with ASEAN and East Africa recording the strongest growth at 61.3% and 89.0%, respectively, driven by higher shipments of petroleum products, electrical machinery, engineering goods and agricultural products.
5. Imports from Latin America and West Africa surged by 137.4% and 91.3%, respectively, largely reflecting higher imports of crude oil, minerals and other primary commodities, indicating greater diversification of India's import sourcing.
6. India's digitally delivered services exports reached \$317 billion in 2025, growing 15% y-o-y lifting India from the world's fifth largest exporter to fourth-largest exporter in 2025, overtaking Germany. Business services and computer services remained the dominant components of India's DDS exports.
7. The global metals and ores sector represents a \$2 trillion import market. India catered \$36.8 billion of the global demand accounting for only 1.8% of global metals and ores import demand in 2025, including a 2.1% share in metals and 0.5% in ores. Iron and steel and articles of iron and steel alone constitute 50.9% of global metals demand, but India captures only 2.5% of this market.
8. India's metals export competitiveness remains concentrated in traditional segments, while global demand has increasingly shifted towards copper, aluminium and nickel. India's share in global lead exports has risen to 12.1%, whereas export shares in major products such as iron and steel have remained largely stagnant.
9. India has strong domestic production capabilities in several minerals, including iron ore, zinc, chromite and bauxite, but remains relatively dependent on imports for manganese, copper and magnesite. Mineral production is also geographically concentrated, with Odisha, Rajasthan and Chhattisgarh accounting for over three-fourths of total production.
10. India remains a net importer of both iron and steel and aluminium, with imports exceeding exports in 2025. Iron and steel exports stood at \$9.9 billion against imports of \$16.5 billion, while aluminium exports were \$6.8 billion compared with imports of \$9.9 billion.

11. Critical mineral import dependence is deepening amid rising domestic demand. Copper imports more than tripled to \$11.8 billion in 2025, while India remains 100% import-dependent on nickel and cobalt.
12. India's metals trade is highly concentrated across key trading partners. The US accounts for 10–30% of India's exports across major metal categories, while China supplies over 25–35% of import demand in leading categories.
13. China is also a major import source across India's key metal categories, with its share ranging from around 25% to 43%.
14. Critical mineral security is becoming central to India's industrial and energy-transition strategy, with the National Critical Mineral Mission adopting a full value-chain approach covering exploration, mining, processing, recycling and overseas acquisition of mineral assets.
15. The metals sector continues to face structural competitiveness constraints, with the availability and competitiveness of domestic raw materials being affected by mineral costs and delays in mine operationalisation. Downstream steel production is further affected by royalty and levy burdens, auction premiums and delays in the operationalisation of lapsed iron-ore blocks.
16. Export competitiveness in the sector is being eroded by high energy, finance and compliance costs, particularly for steel exporters facing elevated renewable-power costs, limited renewable banking, CBAM verification constraints and PCFC financing costs of around 5–7%.
17. Import competition and market-access barriers are limiting expansion of specialised metals exports, with zero-duty imports of certain high-value alloys, rising steel imports under FTAs and significant tariff/quota barriers in the EU, US, Mexico and MERCOSUR constraining domestic capacity utilisation and export growth.
18. Strengthening India's metals and ores trade performance requires rationalisation of mineral auctions and acceleration in mine development by reviewing royalty and auction-premium structures; introducing a single-stage sealed-bid mechanism with a realistic reserve price; and setting fixed timelines for re-auction and operationalisation of lapsed iron-ore and other mineral blocks.
19. Address import and market-access pressures through targeted trade measures by strengthening FTA melt-and-pour/rules-of-origin checks, reviewing zero-duty treatment and quality-control requirements for strategic alloys such as nickel-based superalloys, using product-specific tariff-rate quotas where import surges threaten domestic capacity, and introducing phased domestic-content requirements and targeted incentives for aerospace-grade steel, superalloys, aluminium, titanium and critical-mineral recycling.
20. The evolving metals trade landscape increasingly favours countries with strong downstream capabilities, technology and integrated industrial ecosystems, rather than resource availability alone. India's future competitiveness will therefore depend on moving beyond primary metals towards higher-value processing and advanced materials.

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LIST OF ABBREVIATIONS

AI	Artificial Intelligence
ASEAN	Association of Southeast Asian Nations
CAGR	Compound Annual Growth Rate
CBAM	Carbon Border Adjustment Mechanism
CCTS	Carbon Credit Trading Scheme
CECM	Centre of Excellence on Critical Minerals
CIS	Commonwealth of Independent States
DDS	Digitally Delivered Services
DMF	District Mineral Foundation
EFTA	European Free Trade Association
EODC	Export Obligation Discharge Certificate
EPCG	Export Promotion Capital Goods
ESR	Electro Slag Remelting
EU	European Union
EU ETS	European Union Emissions Trading System
EURIBOR	Euro Interbank Offered Rate
EVs	Electric Vehicles
FTA	Free Trade Agreement
GCC	Gulf Cooperation Council
GOI	Government of India
GSI	Geological Survey of India
GVA	Gross Value Added
HR	Hot-Rolled
HS	Harmonized System
IMF	International Monetary Fund
IT	Information Technology
MERCOSUR	Southern Common Market
MMDR	Mines and Minerals (Development and Regulation)

MRO	Maintenance, Repair and Overhaul
MRV	Monitoring, Reporting and Verification
NCMM	National Critical Mineral Mission
NMET	National Mineral Exploration Trust
PCFC	Pre-Shipment Credit in Foreign Currency
PSUs	Public Sector Undertakings
PV	Photovoltaic
RCA	Revealed Comparative Advantage
REEs	Rare Earth Elements
SIMS	Steel Import Monitoring System
SOFR	Secured Overnight Financing Rate
UAE	United Arab Emirates
UK	United Kingdom
US / USA	United States / United States of America
USTR	United States Trade Representative
VAR	Vacuum Arc Remelting
VIM	Vacuum Induction Melting
WTO–IMF	World Trade Organization–International Monetary Fund

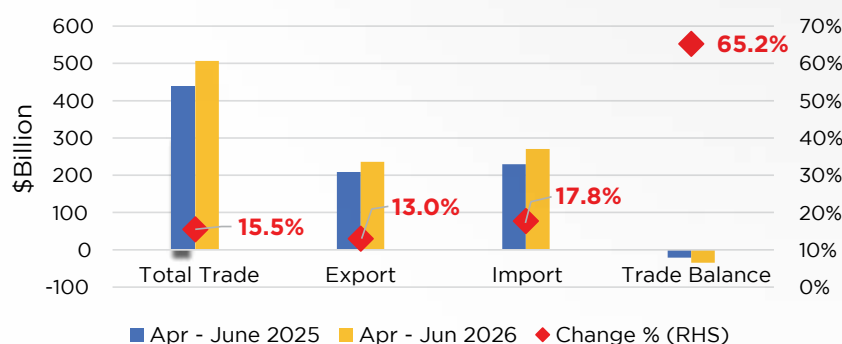
A.
**INDIA'S TRADE
ANALYSIS**

A. India's Trade Analysis

Global trade remained resilient in the first half of calendar year 2026, with goods trade reaching approximately \$13.7 trillion, up 12.5% y-o-y, while services trade grew by 10.5%⁴. Geopolitical uncertainty continued to drive the reconfiguration of global supply chains and trading relationships, resulting in shifts in bilateral trade patterns and greater diversification of trading partners.

India's merchandise and services trade performance recorded a 15.5% y-o-y increase during April–June 2026, supported by growth in both exports and imports. During this period, total trade reached \$506.9 bn, up from \$438.9 bn in the same period last year. In the current period, exports grew 13.0% to \$236.2 bn, while imports grew 17.8% to \$270.6 bn between April–June 2026 (Fig 1).

Fig 1: Total Trade performance between Apr-June'26



Source: Department of Commerce, MoC&I, GOI

1. Merchandise and Services Analysis

In June 2026, merchandise exports rose by 15.4% y-o-y to \$40.38 billion, while imports increased by 30.9% to \$70.80 billion, widening the trade deficit by 59.3% to \$30.42 billion (Fig. 2). On a quarterly basis, exports grew by 16.0% to \$129.50 billion, while imports rose by 19.8% to \$216.12 billion, resulting in a trade deficit of \$86.62 billion, 26.0% higher y-o-y (Fig. 3).

Fig 2: Merchandise Trade (Monthly)

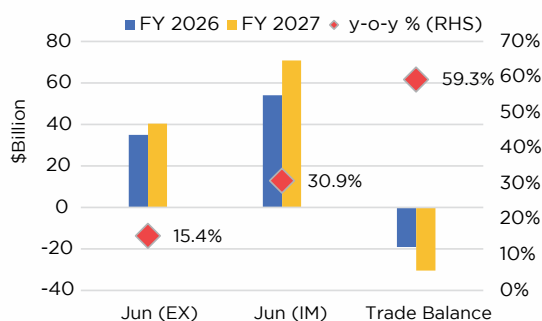
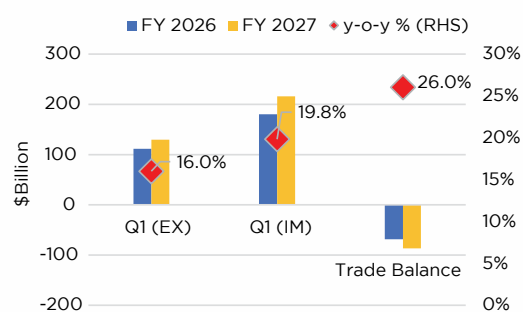


Fig 3: Merchandise Trade (Quarterly)



Source: Department of Commerce, MoC&I, GOI

4 https://unctad.org/system/files/official-document/ditcinf2026d7_en_0.pdf

India's services exports stood at \$37.02 billion in June 2026, registering a 12.7% y-o-y growth, while services imports rose by 8.9% to \$18.42 billion, resulting in a services trade surplus of \$18.60 billion (Fig. 4). During Q1 FY27, services exports increased by 9.6% to \$106.75 billion, while imports grew by 10.2% to \$54.53 billion, resulting in a net services trade surplus of \$52.22 billion (Fig. 5).

Fig 4: Services Trade (Monthly)

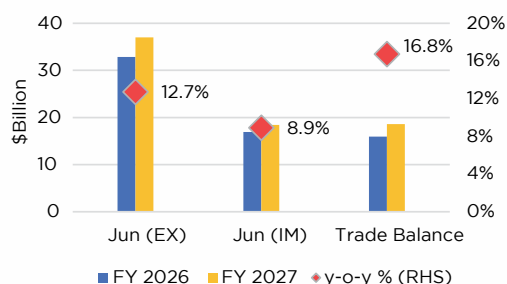
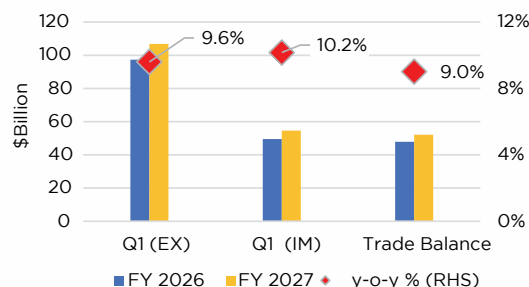


Fig 5: Services Trade (Quarterly)



Source: Department of Commerce, MoC&I, GOI

2. Compositional Analysis

2.1 Merchandise Exports

In Q1 FY27, exports of leading⁵ commodities amounted to \$85.7 bn marking a y-o-y increase of 19.3%. The leading commodities continued to be mineral and related fuels (28.6%), electrical machinery and parts (19.8% share), and nuclear reactors (11.9%). The list of leading commodities remained the same as the previous quarter (Fig 6).

Among the major export segments, all recorded positive y-o-y growth in Q1 FY27 with mineral fuels recording the highest growth of 37.4%, supported by higher petroleum-product exports amid favourable global price and refining-margin conditions. Petroleum Products exports increased from \$7.12 billion in April 2025 to \$9.59 billion in April 2026⁶. Electrical machinery and iron & steel also recorded strong growth of 20.0% and 22.9%, respectively, reflecting rising global demand for electronics, engineering goods and metal products. Finished steel exports grew by 31.4%, driven by higher exports of HR coils/strips, pipes and plates, particularly to the UAE and Vietnam⁷. Vehicle exports grew by 13.1%, supported by continued overseas demand for Indian automobiles supported by strong demand from Latin America, Europe and Japan⁸ while organic chemicals and nuclear reactors exports increased by 16.7% and 12.8%, respectively.

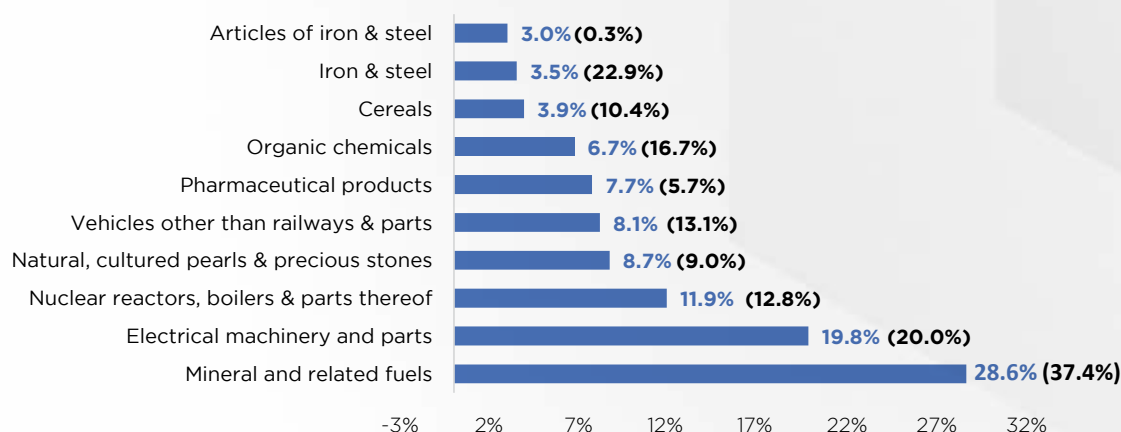
⁵ Leading commodities are the top ten commodities with the highest value share in exports in the current quarter.

⁶ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2261383®=3&lang=1>

⁷ <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2303018®=4&lang=1>

⁸ <https://www.siam.in/press-release.aspx>

Fig 6: Composition and Growth of Exports



Note: Y-o-y growth of the commodity in India's export for this quarter is mentioned in parenthesis

Source: Department of Commerce, MoC&I, GOI

2.2 Merchandise Imports

In Q1 FY27, the leading imports⁹ amounted to \$216.1 billion, registering a y-o-y increase of 19.8%. The share of leading imports is topped by mineral fuels led imports (32.2%), followed by electrical machinery (15.1%), nuclear reactors, boilers and parts (10.6%), and natural and cultured pearls (7.7%). Compared with the previous quarter, the composition remained broadly similar, with copper and articles thereof replacing aircraft, spacecraft and parts thereof among the leading commodities. In terms of growth, nine of the ten leading import commodities recorded positive y-o-y growth, with nuclear reactors, boilers and parts witnessing the highest growth of 35.7%, followed by electrical machinery at 33.2% and animal or vegetable fats at 23% (Fig. 7). Iron and steel was the only leading commodity to register a decline, falling by 7.2% y-o-y.

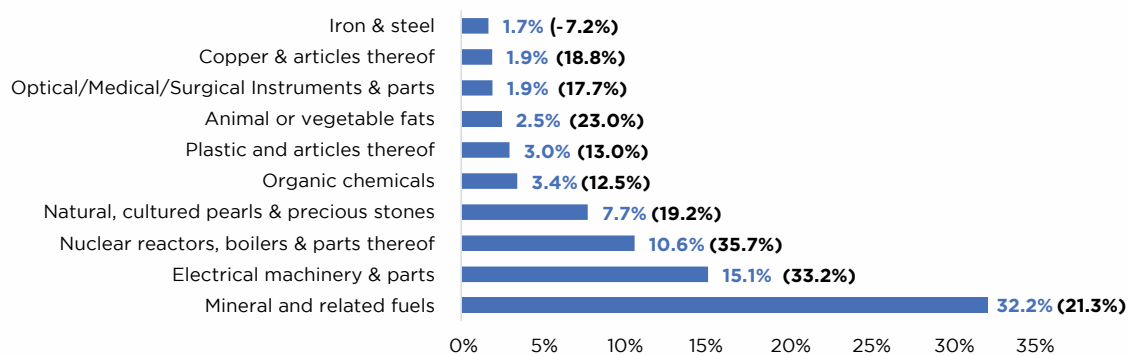
Imports under HS 84 (nuclear reactors, boilers, machinery and mechanical appliances) recorded the highest y-o-y growth of 35.7% in Q1 FY27, supported by strong domestic investment and infrastructure activity and rising demand for imported machinery and capital equipment. This was consistent with the growth in capital goods production during the quarter¹⁰. Imports of electrical machinery and equipment increased by 33.2% y-o-y, reflecting rising domestic demand for electrical and electronic equipment and components, alongside continued reliance on imported inputs for India's expanding electronics manufacturing ecosystem. Mineral fuel imports increased by 21.3% y-o-y in Q1 FY27, despite lower crude oil import volumes, primarily reflecting higher international crude oil prices amid geopolitical disruptions¹¹.

⁹ Leading commodities are the top ten commodities with the highest value share in imports in the current quarter.

¹⁰ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2290419&lang=1®=3>

¹¹ <https://ppac.gov.in/import-export>

Fig 7: Composition and Growth of Imports



Note: y-o-y growth of the commodity in India's imports for this quarter is mentioned in parentheses
Source: Department of Commerce, MoC&I, GOI

3. Trade Direction

3.1 Merchandise Exports

India's exports to its top ten markets amounted to around \$65.9 billion in Q1 FY27, accounting for approximately 50.9% of total exports. Tanzania and South Africa entered the top ten export destinations, replacing Hong Kong and Saudi Arabia from the previous quarter. Among the top ten destinations, seven recorded positive y-o-y growth, with the strongest growth observed in Tanzania (146.7%), followed by Singapore (100.5%) and South Africa (76.5%). In June 2026, the year-on-year growth in India's exports to Tanzania was driven mainly by exports of Petroleum Products (118%), Machinery for Dairy etc (156%), and Drug Formulations, Biologicals (48.4%)¹². The sharp increase in exports to Singapore 101.2% y-o-y in Q1 FY27, from \$3.24 billion to \$6.50 billion, was primarily driven by higher petroleum-product shipments¹³. Singapore emerged as an important destination for Indian refined petroleum products amid disruptions in global fuel supply and West Asia-related shipping disruptions. India's petroleum product exports to Singapore rose sharply, reaching \$2.54 billion in April 2026 alone, up from \$1.44 billion in March.

Fig 8: Exports to Major Destinations & YoY Growth

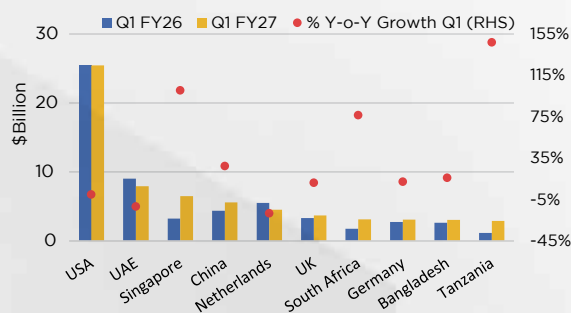


Fig 9: Top Destinations Share (%)



Source: Department of Commerce, MoC&I, GOI

¹² <https://oec.world/en/profile/bilateral-country/ind/partner/tza>

¹³ <https://www.spglobal.com/energy/en/news-research/latest-news/chemicals/021626-singapore-strengthens-its-lead-as-asias-multifuel-marine-and-aviation-hub>

3.2 Merchandise Imports

India's imports from its top ten markets accounted for around 61.4% of total imports in Q1 FY27, amounting to \$132.7 billion. China and Russia remained the major sources of imports, accounting for 17.6% and 11.8% of total imports, respectively. Japan and Germany entered the top ten import markets, replacing Switzerland and Thailand from the previous quarter. Among the top ten markets, eight recorded positive y-o-y growth, with the sharpest increase observed in Russia (52.6%), followed by South Korea (28.0%) and China (27.9%). In contrast, imports from the UAE and Hong Kong recorded relatively modest declines/growth, with the UAE registering the sharpest contraction of 10.5%. The increase in imports from Russia was primarily driven by higher crude oil imports. During Q1 FY27, disruptions to Middle Eastern supplies through the Strait of Hormuz led Indian refiners to increase purchases from Russia. Russia's share of India's crude imports rose to over 40% during the quarter¹⁴. Imports from China and South Korea increased due to higher imports of electrical machinery, electronic components, machinery and industrial inputs¹⁵.

Fig 10: Imports from Major Destinations & YoY Growth

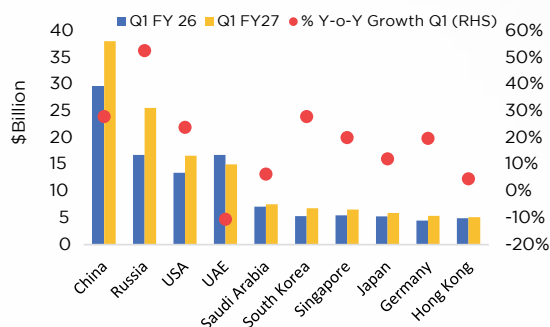
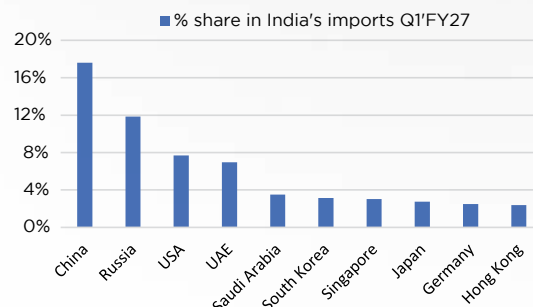


Fig 11: Top Destinations Share (%)



Source: Department of Commerce, MoC&I, GOI

4. Regional Analysis

4.1 Merchandise Exports

India's exports to its top 10 export regions accounted for 87.8% of total exports in Q1 FY27. Among the major regions, eight recorded positive y-o-y growth, with East Africa emerging as the fastest-growing region, registering an 89.0% increase, driven by sharp growth in exports to Tanzania and South Africa particularly in mineral fuels. ASEAN also recorded robust growth of 61.3%, supported particularly by a doubling of exports to Singapore¹⁶, while South Asia (36.7%) and Northeast Asia (29.5%) benefited from stronger exports to markets such as Sri Lanka and China, respectively. The broad-based growth across these regions was supported by strong performance in engineering goods, electronic goods, chemicals, gems and jewellery, and rice, which were among the key drivers of India's export growth during the quarter.

Other European Countries¹⁷ also recorded strong growth of 21.9%, while exports to Latin America and West Africa increased by around 9.2% each, reflecting continued

¹⁴ <https://www.reuters.com/business/energy/indian-refiners-turn-russia-latam-oil-june-quarter-data-shows-2026-07-21/>

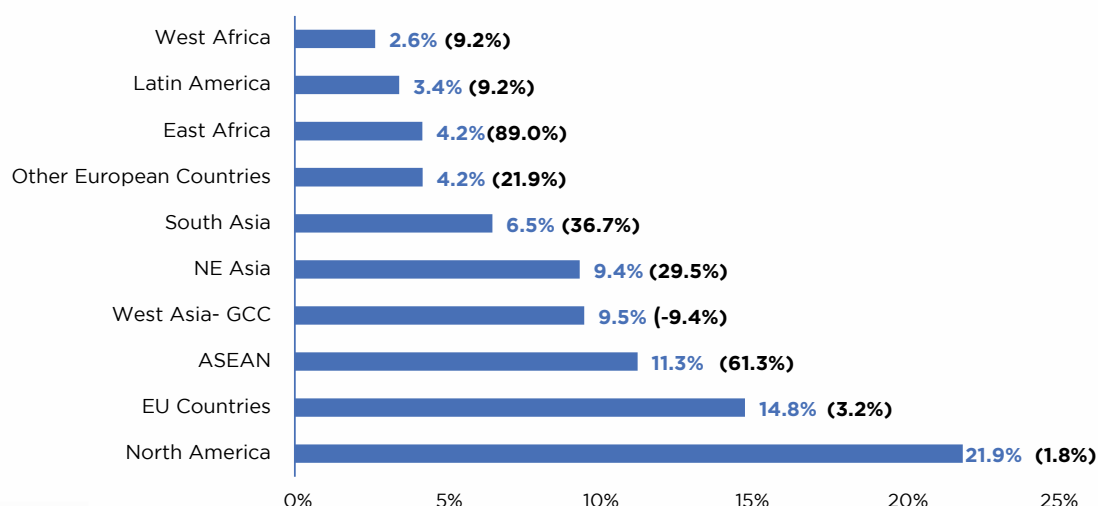
¹⁵ <https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2277931&lang=2®=48>

¹⁶ <https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2284139&lang=2®=48>

¹⁷ Other European Countries constitute Albania, Bosnia-Herzegovina, Macedonia, Montenegro, Serbia, Turkey, UK, Union of Serbia & Montenegro

diversification towards non-traditional markets. In contrast, West Asia-GCC was the only major region to record a contraction, declining by 9.4%, likely reflecting trade and shipping disruptions arising from the conflict in West Asia¹⁸ during the quarter. North America and EU countries, meanwhile, recorded only modest growth of 1.8% and 3.2%, respectively, indicating relatively subdued demand compared with the stronger momentum in Asian and African markets.

Fig 12: Region-Wise Export Composition and Growth



Note: y-o-y growth of the region in India's exports for this quarter is mentioned in parentheses

Source: Department of Commerce, MoC&I, GOI

4.2 Merchandise Imports

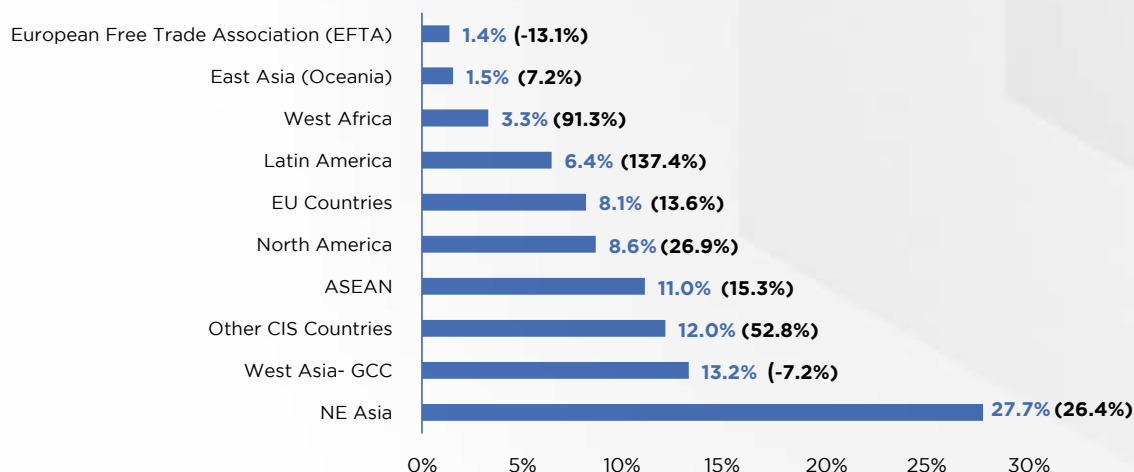
India's imports from its top 10 regions accounted for around 93.3% of total imports in Q1 FY27. Among these, eight regions recorded positive y-o-y growth. Northeast (NE) Asia remained India's largest import source, accounting for 27.7% of total imports, with imports rising by 26.4%, reflecting continued dependence on the region for electronics, machinery and intermediate goods. ASEAN also recorded growth of 15.3%, supported by higher imports of electronic components, machinery and industrial inputs.

Latin America saw the strongest growth, with imports surging 137.4%, driven largely by increased crude oil purchases¹⁹ as India diversified sourcing amid disruptions to Middle Eastern supplies. West Africa also recorded a sharp increase of 91.3%, supported by higher imports from Ghana and Burkina Faso, particularly of natural and cultured pearls, fertilisers and cotton. Other CIS Countries recorded growth of 52.8%, while imports from North America and NE Asia increased by 26.9% and 26.4%, respectively. In contrast, imports from EFTA and West Asia-GCC declined by 13.1% and 7.2%, respectively. Despite some diversification towards Latin America and West Africa, India's import basket remained heavily concentrated in NE Asia, West Asia-GCC and ASEAN, which together accounted for around 52% of total imports, underscoring continued dependence on these regions for energy, electronics and industrial inputs.

¹⁸ <https://www.reuters.com/world/india/indias-june-merchandise-trade-deficit-3043-bln-reuters-calculation-shows-2026-07-13/>

¹⁹ <https://www.reuters.com/business/energy/indian-refiners-turn-russia-latam-oil-june-quarter-data-shows-2026-07-21/>

Fig 13: Region-Wise Import Composition and Growth



Note: y-o-y growth of the region in India's imports for this quarter is mentioned in parentheses

Source: Department of Commerce, MoC&I, GOI

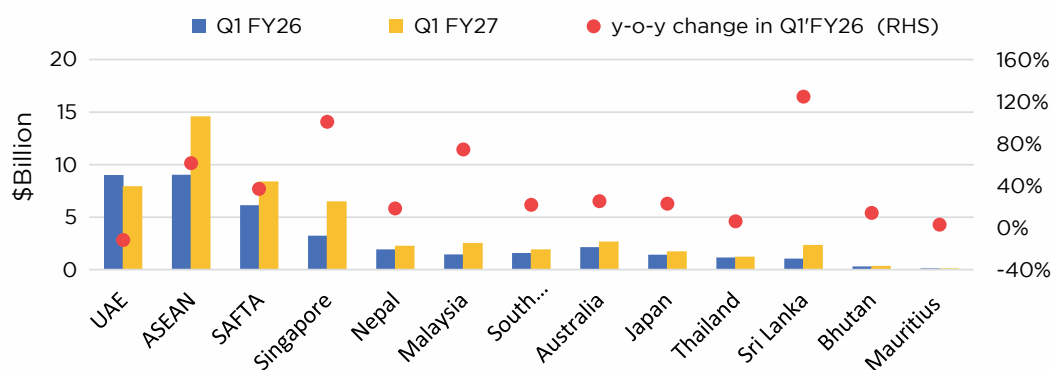
5. FTA Partners

5.1 Merchandise Trade with FTA Partners

India's trade with its FTA partner countries remained robust in Q1 FY27, with exports rising from \$38.63 billion to \$52.66 billion, registering a 36.3% y-o-y growth. Imports from FTA partners also increased by 10.0%, from \$65.32 billion to \$71.99 billion, resulting in a continued trade deficit with FTA economies. ASEAN and the UAE remained the largest FTA partners, accounting for a substantial share of both exports and imports.

On the export side, Sri Lanka (124.6%), Singapore (100.5%), and Malaysia (74.3%) recorded strong growth, while exports to ASEAN as a bloc increased by 61.3%. Higher shipments of petroleum products, electronics, engineering goods and agricultural products supported the increase, with the sharp rise in Singapore exports also reflecting higher petroleum-product shipments. Exports to South Korea, Australia and Japan increased by 21.6%, 25.1% and 22.7%, respectively. In contrast, exports to the UAE declined by 11.8%, amid weaker shipments of petroleum products and other key export items.

Fig 14: Exports- FTA Partners

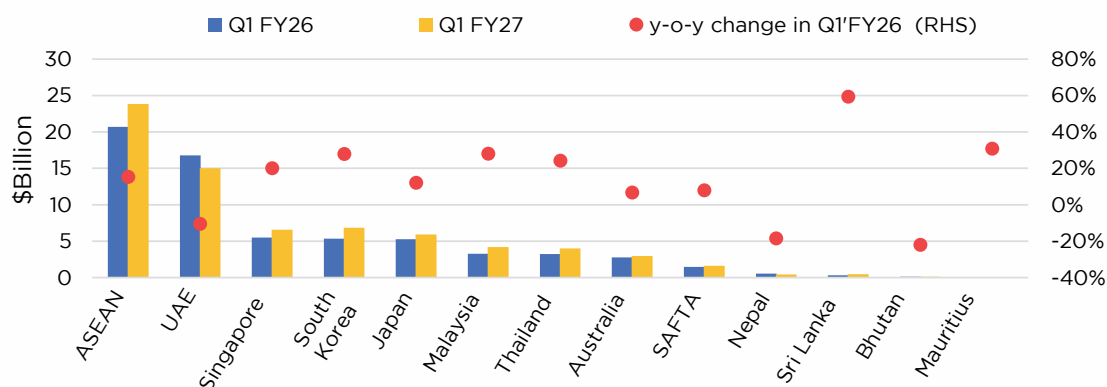


Source: Department of Commerce, MoC&I, GOI

On the import side, imports from Sri Lanka (59.4%) and Malaysia (28.0%) recorded the strongest growth among major FTA partners, followed by South Korea (28.0%), Thailand (24.3%) and Singapore (20.0%). The increase was driven by greater inflows of

electrical and electronic goods, machinery, industrial inputs and other intermediate goods, reflecting continued regional supply-chain integration. In contrast, imports from the UAE declined by 10.5%, partly reflecting lower imports of crude oil and petroleum products, while imports from Nepal declined by 18.5%.

Fig 15: Imports- FTA Partners



Source: Department of Commerce, MoC&I, GOI

6. India's Merchandise Exports Presence Globally

India's export basket continues to show an apparent mismatch with global demand. Nearly 68% of global imports are concentrated in products where India's average export share is below 1% (Category 1). However, these products account for only 9% of India's exports, valued at \$40.2 billion in 2025, highlighting India's limited presence in large global demand pools. At the other end, products where India commands an export share of more than 10% account for just 3% of global imports (Category 4), but contribute 28% of India's exports, valued at \$125.4 billion, with India holding an average 18.7% share of world imports. This contrast indicates that India has a stronger presence in relatively smaller global markets, while its presence remains limited across products with a larger share of global demand.

Mid-range products (Categories 2 and 3, where India's export share ranges between 1% and 10%) together contributed ~63% of India's export basket, in 2025. These categories account for 29% of the global import basket, indicating meaningful presence across a sizeable range of global markets. However, India's presence remains relatively limited in products with very large global demand, as reflected in Category 1, where its average share stands at just 0.2% despite these products accounting for 68% of world imports.

The distribution points to significant scope for expanding India's presence in high-demand global product segments. Strengthening competitiveness and market presence in such products could help align India's export basket more closely with global demand and support sustained growth in merchandise exports.

Table 1: India's Export Presence In Global Demand

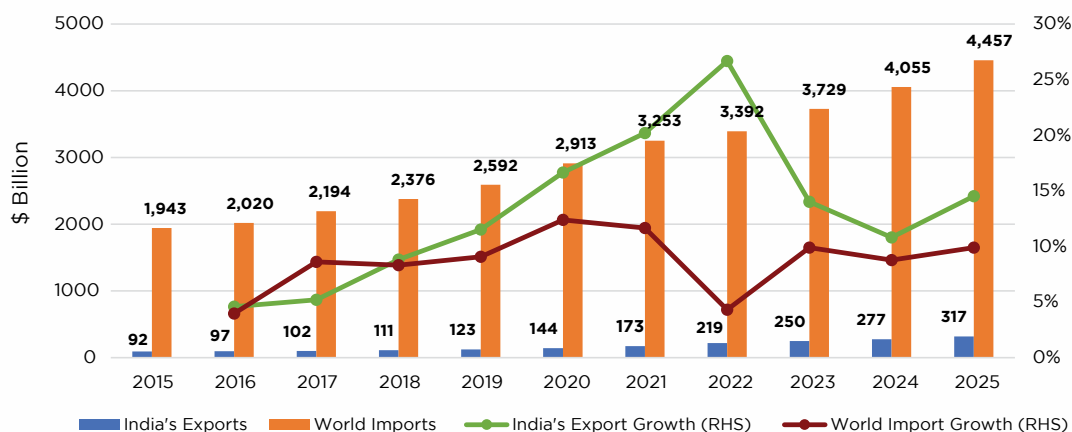
	Average Share % (2021-2025)		2025 (US\$ billion)		Share % in 2025		India's Export Share % in World's Import (2025)
Category	India's export share in World's import	Number of 6HS items	India's Exports	World's Imports	India's Export Basket	World's Import Basket	
Category 1	Less than 1%	4361	40.2	17485.0	9.0%	67.8%	0.2%
Category 2	Between 1% - 5%	1410	141.8	5774.0	31.8%	22.4%	2.5%
Category 3	Between 5% - 10%	385	139.1	1857.9	31.2%	7.2%	7.5%
Category 4	More than 10%	486	125.4	671.7	28.1%	2.6%	18.7%
	Total of the above	6642	446.6	25788.6			

Source: ITC Trade Map

7. India's Export of Digitally Delivered Services (DDS)

India's position in global digitally delivered services (DDS) has strengthened further, with the latest WTO estimates pointing to a shift from rapid expansion to greater global market prominence. The WTO defines DDS as services traded through computer networks, including those delivered through the internet, applications, email, voice and video calls, and digital intermediation platforms. Digitally delivered services trade expanded strongly during 2015–2025. India's DDS exports increased steadily from around \$92 billion in 2015 to \$317 billion in 2025, while global imports rose from about \$1.9 trillion to \$4.5 trillion over the same period. The data show that India's DDS exports increased from \$277 bn in 2024 to \$317 bn in 2025, registering a ~ 15% y-o-y increase; the corresponding growth was 11% for the UK, 10% for China & the USA, and 9% for Germany. This lifted India from the fifth-largest global exporter in 2024 to fourth-largest in 2025, overtaking Germany. India's share of global DDS exports consequently increased from 5.8% to 6%.

Fig 16: Digitally Delivered Services Exports Trade Value (2015-2025)



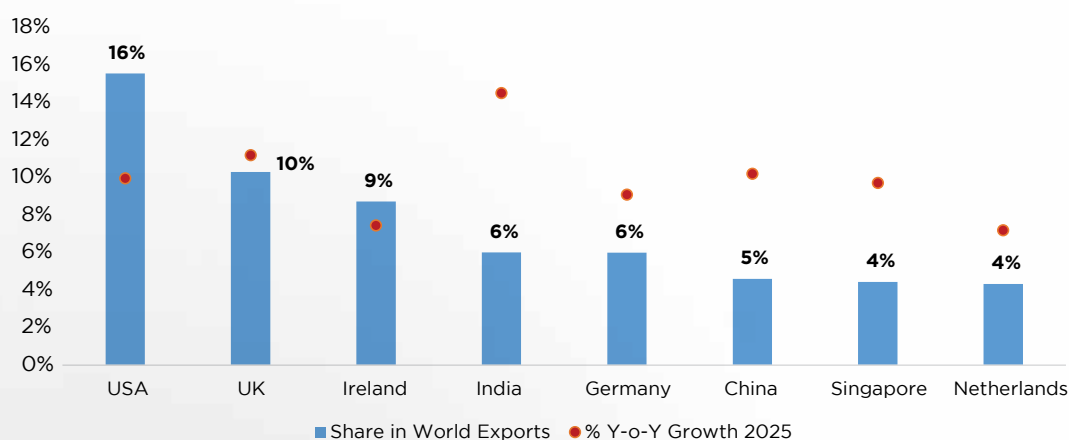
Source: Authors Calculation and WTO

The improvement is particularly significant when viewed against India's earlier trajectory. Between 2019 and 2025, India's DDS exports increased from \$123 billion to \$317 billion, more than doubling in six years. The expansion has also been much stronger than growth in India's conventional merchandise exports, reinforcing the structural shift toward remotely delivered, skill-intensive services.

The global DDS export landscape remains concentrated among a few major economies. The United States leads with a 16% share of world DDS exports, followed by the UK (10%) and Ireland (9%). India accounts for 6% of global DDS exports, alongside Germany, but recorded 15% y-o-y growth in 2025, the highest among the leading exporters. China, Singapore and the Netherlands each recorded around 7–10% growth, while the UK grew by 11%. India's combination of a sizeable global share and relatively faster export growth highlights its growing competitiveness in digitally delivered services.

India's DDS exports continue to show a strong concentration in business- and technology-oriented services and computer services. The 2025 data indicate that these two categories continue to dominate, accounting for approximately 54.5% and 39.2%, respectively. Thus, while computer services remain central to India's digital export strength, the relative contribution of other business services has increased significantly, with their share rising from 42.5% in 2015 to 54.5% in 2025, an increase of ~12%. This points to India's expanding role beyond conventional IT/software delivery into consulting, engineering, R&D, professional and technical business services.

Fig 17: Top DDS Exporters and Their Share in Global Exports, 2025



Source: WTO

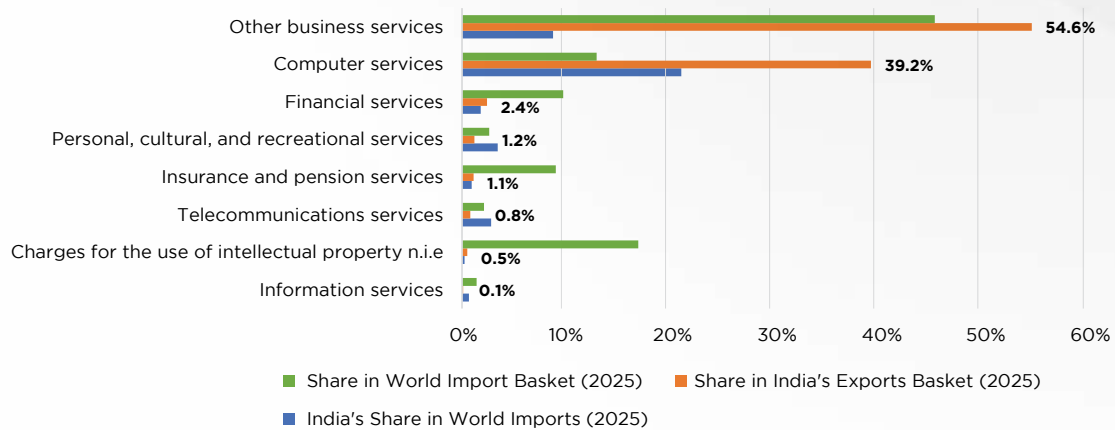
This compositional shift matters because it suggests India's competitive advantage is increasingly built around higher-value knowledge and business functions rather than only software and IT-enabled services. The growing presence of global capability centres, alongside Indian firms' expanding provision of engineering, analytics, consulting, cloud and technology-enabled professional services, is creating a broader base for digitally delivered exports.

However, the next phase of growth will depend increasingly on market access and the regulatory architecture governing digital trade. The rapid increase in export value has occurred alongside a global shift towards digitally delivered trade. Yet global digital services markets remain highly concentrated, with the US, UK and Ireland together accounting for a substantial share of exports. India's rise to fourth place therefore

represents significant progress, but also indicates the scale of the opportunity to move further up the global value chain.

The policy challenge has consequently shifted from building basic export capability to deepening competitiveness and securing predictable market access. Future policy should focus on expanding India's presence in high-value digital segments such as AI-enabled services, cloud computing, cybersecurity, engineering and R&D, while improving access for smaller firms and emerging service providers. Greater regulatory clarity on cross-border data flows, digital taxation, electronic transactions and emerging AI-related trade rules will become increasingly important as digital trade expands.

Fig 18: Composition of Digitally Delivered Services (2025)



Source: WTO

Overall, India's DDS story has shifted from rapid growth to global competitive consolidation. India has increased its exports by nearly \$40 billion in one year, raising its global share to 6%. The next policy priority should therefore be to convert this scale advantage into greater value addition, diversify into high-end digital services, and deepen integration with emerging global digital value chains.

B.
THEMATIC ANALYSIS:
METALS AND ORES
TRADE

B. Thematic Analysis: Metals and Ores Trade

1. Overview: Metals and Ores Trade

The metals and ores sector forms the backbone of India's industrial economy, supplying the essential raw materials that support manufacturing, infrastructure development, energy security and export competitiveness. Unlike other manufacturing industries that produce final goods, the sector sits upstream in the production ecosystem, generating extensive forward and backward linkages across the economy. Steel, aluminium, copper, zinc and other industrial metals are indispensable inputs for automobiles, engineering goods, capital goods, construction, railways, defence, electronics, renewable energy, shipbuilding and urban infrastructure. Consequently, the sector's performance has important implications not only for merchandise exports but also for manufacturing productivity, industrialisation and long-term economic growth.

India possesses one of the world's largest mineral resource bases and has emerged as a leading producer of several strategically important ores. The country is the world's second-largest producer of crude steel, second-largest producer of aluminium, fourth-largest producer of iron ore, and one of the leading producers of chromite and bauxite²⁰. The sector also supports industrial development across several mineral-rich states, including Odisha, Chhattisgarh, Jharkhand, Karnataka, and Rajasthan, where mining activities generate employment, infrastructure development, logistics networks, and significant public revenues.

Steel continues to anchor India's metals ecosystem and remains one of the country's most important manufacturing industries. India has retained its position as the world's second-largest crude steel producer since 2018, supported by sustained expansion in domestic demand, rising production capacity and investments across the value chain. Steel consumption has more than doubled over the past decade, reflecting robust demand from infrastructure, housing, engineering goods, automobiles and capital equipment²¹.

The mining and quarrying sector, occupies an equally important position in India's external trade and industrial value chains. Mining and quarrying contribute ~2% to India's Gross Value Added (GVA) for 2025-26²². Metals and ores are critical intermediate inputs for several export-oriented industries, including engineering goods, automobiles, electrical machinery and transport equipment, and thus influence the competitiveness of downstream manufacturing. The global imports of metals and ores increased from \$1.2 tn in 2015 to \$2 tn in 2025, accounting for nearly 7.5% of world merchandise imports. During the same period, India's metals exports increased from \$21.8 bn to \$36.8 bn, while India's share of global metals and ores demand rose marginally from 1.7% in 2015 to 1.8% in 2025.

India's metals export basket is led by iron and steel, articles of iron and steel, and aluminium, but remains largely dominated by iron and steel reflecting the country's strong manufacturing base in ferrous metals. Iron and steel exports reached \$9.9

20 <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2019556®=48&lang=2>

21 <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2258028®=3&lang=1>

22 The share has been computed at constant price for the base year 2022-23. <https://esankhyiki.mospi.gov.in/macroindicators?product=na>

bn in 2025, while exports of articles of iron and steel increased to \$10.6 bn, together accounting for nearly three-fifths of India's metals exports. Aluminium has emerged as one of the fastest-growing export segments, with exports rising to \$6.8 billion and India's export share of global aluminium demand increasing from 1.7% in 2015 to 2.6% in 2025. At the same time, India's exports value remains relatively small in several high-value non-ferrous metals, including nickel, tin and copper products, highlighting opportunities for greater value addition and diversification into emerging metal value chains.

Beyond conventional industrial metals, the global metal sector is undergoing a structural transformation driven by the clean energy transition, digitalisation and evolving manufacturing technologies. Rapid growth in electric vehicles, renewable energy systems, battery storage, semiconductors and advanced electronics has significantly increased demand for critical ores such as lithium, cobalt, nickel, graphite and rare earth elements. These ores have become central to emerging industrial value chains, making resource security and resilient supply chains an increasingly important component of national industrial and trade strategies.

Recognising these structural shifts, India has increasingly expanded its policy focus from conventional mining towards securing critical mineral supply chains. Recent initiatives, including the National Critical Mineral Mission, seek to strengthen domestic exploration, promote mineral processing and recycling, facilitate overseas acquisition of strategic mineral assets and reduce import dependence for critical raw materials. These initiatives are expected to support India's transition towards advanced manufacturing while strengthening integration with global value chains for clean energy technologies.

At the same time, the sector is navigating a changing global trade environment. Growing emphasis on supply chain diversification, resource nationalisation, export restrictions on critical ores, carbon border adjustment mechanisms and sustainability standards is reshaping international trade in metals and ores. The transition to green steel, recycled aluminium, and low-carbon production technologies is expected to redefine competitiveness, while rising geopolitical uncertainty continues to shape access to strategic raw materials and international markets. These developments present both opportunities and challenges for India as it seeks to strengthen domestic manufacturing capabilities while expanding its presence in global metals trade.

Against this backdrop, the following sections examine the global trade landscape of the metals and ores sector in greater detail. The analysis maps the size and composition of international trade across major product categories, identifies leading exporters and emerging growth segments, and assesses India's position in global markets. It also evaluates India's competitiveness across key metals and mineral products and highlights emerging opportunities and policy priorities to strengthen value addition and enhance India's integration into global value chains.

2. Global Trade Landscape of Metals and Ores

This analysis examines the metals and ores trade at the HS-2 level under Chapters 72–83 (metals and articles thereof) and 26 (ores, slag and ash). The sector comprises ferrous and non-ferrous metals, articles of metals, ores and concentrates, and other intermediate metal products that constitute the foundation of manufacturing and industrial production.

The global metals and ores market collectively represented a demand of approximately \$2 tn, with metals and its articles comprising \$1.625 tn and ores of \$371.5 bn. India's collective exports for the segment was \$36.8 bn with metals and its articles accounting for \$34.8 bn and ores of \$2.0 bn in 2025. This translates to a 1.8% share of global import demand for metals and ores in 2025, marginally up from 1.7% a decade ago.

The global demand for metals and ores is concentrated, with iron and steel (HS 72), articles of iron and steel (HS 73), aluminium (HS 76) and copper (HS 74) collectively accounting for nearly two-thirds of global metals and ores demand, amounting to over \$1.38 trillion in 2025. India's exports in these four product groups stood at \$30.1 billion, representing approximately four-fifths of the country's total metals and ores exports. While India's export basket broadly aligns with the largest traded product categories globally, competitiveness varies significantly across individual metal segments, with exports acutely concentrated in iron, steel, and aluminium.

India exhibits its strongest export competitiveness in ferrous metals and aluminium, where it has developed substantial manufacturing capacity and established downstream industries. Iron and steel exports reached \$9.9 billion in 2025, accounting for 2.2% of global demand, while exports of articles of iron and steel increased to \$10.6 billion, translating into a global market share of 2.8%. Aluminium has emerged as one of India's fastest-growing metal exports, increasing to \$6.8 billion in 2025 from \$2.7 bn in 2015, with a CAGR of 9.7%, significantly exceeding the corresponding growth in global demand.

India also demonstrates strong competitiveness in selected niche metal products. Lead (HS 78) represents the country's most competitive segment, with an RCA of 7.0 and exports accounting for 12.1% of global demand; however, its market size is relatively small. Zinc (HS 79) also records an RCA greater than unity, reflecting India's competitive position in refined metal production.

In contrast, India's presence remains limited in several high-value non-ferrous metals. Copper exports amounted to \$2.9 billion in 2025, accounting for only 1.1% of global demand despite rapid global demand growth from renewable energy, electrical equipment, and electric vehicles. Similarly, exports of nickel (HS 75), tin (HS 80) and other strategic industrial metals remain negligible, with RCA values well below unity. These segments continue to exhibit significant import dependence, reflecting limited domestic reserves, processing capacity and downstream manufacturing relative to global leaders.

India's import basket further highlights these structural characteristics. Total imports of metals and ores increased from \$32.2 bn in 2015 to \$60.5 bn in 2025, almost doubling as domestic demand from infrastructure, engineering, and manufacturing industries rose. Iron and steel accounted for the largest share of India's metal imports (32.1%), followed by copper (23.1%), aluminium (19.2%), and articles of iron and steel (11.0%). The simultaneous rise in imports and exports indicates increasing integration of India's manufacturing sector with global value chains, although dependence on imported raw materials and intermediate inputs remains significant for several product categories. (Table 2).

Table 2: Overview of India's Trade Profile for Metals, 2025

Code	Product label	World Import (in \$bn)	Product Share in World Demand	India's Export (in \$bn)	India's export share in World demand	India's Import (in \$bn)	Top Exporter and Value (in \$bn)
'72	Iron and steel	450.3	27.7%	9.9	2.2%	16.5	China (\$72.1)
'73	Articles of iron or steel	376.5	23.2%	10.6	2.8%	5.7	China (\$107.8)
'74	Copper and articles thereof	268.6	16.5%	2.9	1.1%	11.8	Congo (\$30.1)
'75	Nickel and articles thereof	43.9	2.7%	0.2	0.4%	1.2	Indonesia (\$9.7)
'76	Aluminium and articles thereof	259.8	16.0%	6.8	2.6%	9.9	China (\$40.1)
78	Lead and articles thereof	10.2	0.6%	1.2	12.1%	1.2	India (\$1.2)
'79	Zinc and articles thereof	19.1	1.2%	0.8	4.1%	1.0	Belgium (\$1.5)
'80	Tin and articles thereof	8.9	0.5%	0.0	0.4%	0.5	Indonesia (\$1.8)
'81	Other base metals; cermets; articles thereof	27.2	1.7%	0.2	0.9%	0.7	China (\$4.8)
'82	Tools, implements, cutlery, spoons and forks, of base metal and parts	73.9	4.5%	1.2	1.6%	1.6	China (\$24.5)
'83	Miscellaneous articles of base metal	86.9	5.3%	1.0	1.2%	1.3	China (\$26.2)
	Total Metals	1625.3		34.8	2.1%	51.4	

Note: Values in \$bn and excludes precious metals

Source: ITC Trade Map

Trade in ores and concentrates presents a contrasting picture. Global imports under HS 26 increased from \$174.1 billion in 2015 to \$371.5 billion in 2025, driven largely by growing demand for iron ore and ores used in clean energy technologies. India's exports of ores increased from \$0.6 billion to \$2.0 billion during the same period; however, the country's share in global demand remained limited at around 0.5%. Iron ore constitutes nearly 90% of India's ore exports, while exports of copper, nickel, cobalt and other critical mineral ores remain relatively small. This reflects India's greater strength in metal processing rather than exports of unprocessed mineral resources. While domestic demand from infrastructure, construction, automobiles, and engineering industries absorbs a significant share of raw ores, India has developed a robust manufacturing base for value-added products such as iron and steel, aluminium, copper, and fabricated metal products (Table 3).

Table 3: Overview of India's Trade Profile for Ores, 2025

Code	Product label	World Import (in \$bn)	Product Share in World Demand	India's Export (in \$bn)	India's export share in World demand	India's Import (in \$bn)	Top Exporter and Value (in \$bn)
'2601	Iron ores and concentrates, incl. roasted iron pyrites	166.3	44.7%	1.84	0.2%	1.2	Australia (\$78.4)
'2602	Manganese ores and concentrates	6.7	1.8%	0.01	0.0%	1.1	South Africa (\$3.2)
'2603	Copper ores and concentrates	122.5	33.0%	0.04	0.0%	5.3	Chile (\$34.7)
'2604	Nickel ores and concentrates	5.1	1.4%	0.00	0.0%	0.0	Philippines (\$1.4)
'2605	Cobalt ores and concentrates	0.0	0.0%	0.00	0.0%	0.0	Italy (\$0.005)
'2606	Aluminium ores and concentrates	17.8	4.8%	0.01	5.1%	0.5	Guinea (\$12.9)
'2607	Lead ores and concentrates	8.8	2.4%	0.05	0.0%	0.0	Peru (\$1.7)
'2608	Zinc ores and concentrates	17.6	4.7%	0.00	0.0%	0.0	Peru (\$2.2)
'2609	Tin ores and concentrates	2.4	0.7%	0.00	0.0%	0.0	Congo (\$0.4)
'2610	Chromium ores and concentrates	7.5	2.0%	0.00	0.9%	0.1	South Africa (\$5.2)
	Total Ores	371.5		2.03	0.5%	9.1	

Note: Values in \$bn and excludes precious metal ores

Source: ITC Trade Map

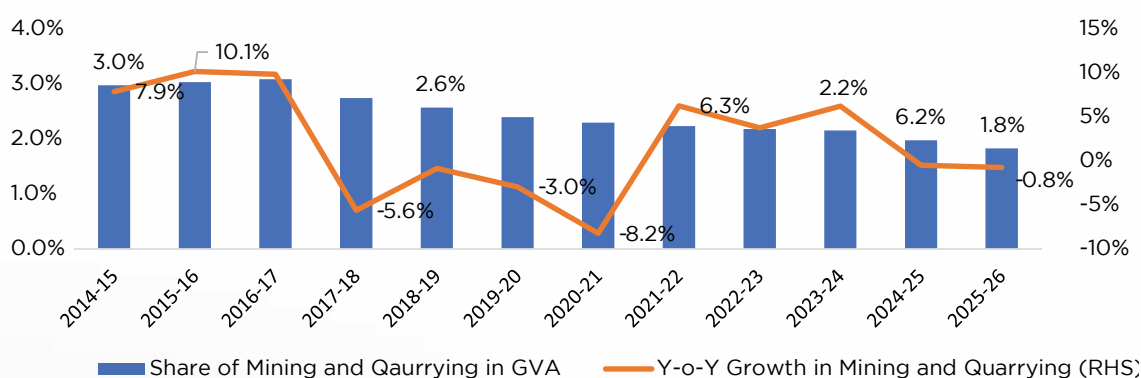
Overall, India's competitiveness in metals remains concentrated in a limited number of product groups. The country has an RCA above 1 in iron and steel, articles of iron and steel, aluminium, and lead and zinc, while competitiveness remains relatively weak in several technologically important non-ferrous and critical metals. At the same time, global demand is increasingly shifting toward aluminium, copper, nickel, cobalt, and other ores essential for electric mobility, renewable energy systems, and advanced manufacturing. As countries diversify supply chains and invest in low-carbon industrial technologies, expanding domestic capabilities in these emerging segments offers India a significant opportunity to deepen value addition, reduce import dependence, and strengthen its integration into global metals value chains.

The following sections assess India's metals and ores sector across domestic production, global trade trends, India's competitive position and emerging opportunities across key metals and ores. This analysis provides insights into product-specific strengths and identifies areas where India can enhance export competitiveness through greater value addition and deeper participation in global value chains.

3. Domestic Scenario for Metals and Ores in India

Domestically, India has a diverse mineral resource base and a well-established mining sector that supports key industrial activities. India's mining sector produces 95 minerals, comprising 4 fuel minerals, 10 metallic minerals, 27 non-metallic minerals, 3 atomic minerals and 51 minor minerals²³, providing essential raw materials for industries such as steel, aluminium, cement, ceramics and glass. The country is largely self-sufficient in several bulk minerals, supporting its manufacturing and infrastructure sectors. Beyond its traditional role in supplying coal and iron ore, the sector is gaining strategic importance as the global energy transition drives demand for critical minerals used in clean energy technologies. However, despite its vast resource base, India's mining sector remains underdeveloped across the value chain, particularly in mineral processing, refining and downstream value addition.

Fig 19: Contribution and Growth of Mining and Quarrying²⁴ to Gross Value Added (GVA)



Source: MoSPI

Note: Figures for 2025–26 are provisional estimates. All values are presented in ₹ crore at constant (2011–12 base year) prices

Between 2014-15 and 2025-26, the mining and quarrying sector grew by an average of 2.1%, with Gross Value Added (GVA) increasing from ₹2.89 lakh crore to ₹3.37 lakh crore. However, its contribution to the overall economy steadily declined from 3.0% of total GVA in 2014-15 to 1.8% in 2025-26. In contrast, mining contributes 2.4% in China, 2.9% in Russia and Brazil, and 11.8% in Indonesia.²⁵ This highlights the relative underperformance of India's mining industries.

The sharp slowdown after 2016-17 can be attributed to a combination of cyclical and structural factors like delays in obtaining environmental and forest clearances, land acquisition challenges, and slow operationalisation of newly auctioned mines constrained production in several mineral segments. The weaker industrial demand, further weighed on mining output. Growth deteriorated further during 2019-20 due to the broader economic slowdown and contracted sharply by 8.2% in 2020-21 as the pandemic disrupted mining operations, labour availability, logistics and mineral demand from user industries such as steel, cement and construction.^{26,27}

²³ <https://mines.gov.in/admin/download/69945dabea1821771330987.pdf>

²⁴ Mining and Quarrying includes coal, crude petroleum and natural gas, and other major minerals (metallic and non-metallic) except salt and sand

²⁵ https://www.icmm.com/website/publications/pdfs/social-performance/2025/research_mci-7-ed.pdf?cb=119321

²⁶ https://www.assochem.org/uploads/files/Knowledge_Report_3rd_edition_of_Minerals_Mining_Conclave_2025.pdf

²⁷ https://www.assochem.org/uploads/files/Study_Indian%20Mineral%202022.pdf

3.1 Examining Production and Domestic Self-sufficiency for Ores and Metals

India possesses a strong mineral resource base and is among the world's leading producers of several key minerals. It ranks 2nd globally in primary aluminium and crude steel production, 3rd in iron ore, chromite and zinc, and contributes over 11% of global iron ore production. It is also largely self-sufficient in bulk minerals such as iron ore (100%), chromite (92%), bauxite (90%) and zinc (94%), providing a strong foundation for its steel, aluminium and infrastructure industries. This resource endowment has enabled India to emerge as a globally competitive producer of several mineral-based products while supporting domestic industrialisation.

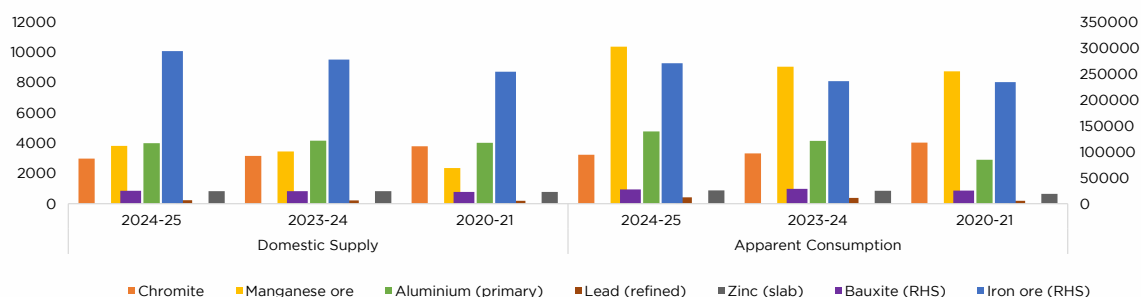
Table 4: India's Position in World in terms of production and domestic self-sufficiency

Mineral	Domestic supply (‘000 tonnes) ^b	Apparent Consumption (‘000 tonnes) [*]	Contribution of India in World Production ^a	India's rank in world for production ^c	Order of Self-sufficiency (%) ^c
Bauxite	24742	27405	5.7%	6th	90%
Chromite	2971	3228	8.4%	3rd	92%
Iron ore	293773	270163	11.1%	3rd	100%
Manganese ore	3805	10365	6.5%	5th	37%
Magnesite	115	659	0.5%	15th	17%
Aluminium (primary)	3990	4769	6.0%	2nd	84%
Copper (refined)	536	1542	1.8%	10th	35%
Steel (crude/liquid)	-	-	7.5%	2nd	-
Lead (refined)	225	409	1.4%	10th	55%
Zinc (slab)	827	876	5.8%	3rd	94%

Source: Ministry of Mines Annual Report 2024-25

Note: a refers to 2023, b refers to 2024-25, c refers to the period 2019-23, and '-' refers to data not available. *Apparent Consumption = (production+ import-export)

Fig 20: Domestic supply and Apparent consumption Patterns (in 000' tonnes)



Source: Ministry of Mines Annual Reports

However, India's mineral ores profile also reveals significant vulnerabilities. India remains dependent on imports to meet domestic demand for many categories, with self-sufficiency levels of around 37% for manganese, 35% for refined copper, 17% for magnesite, and 55% for refined lead. The mismatch reflects limited domestic reserves

for some minerals, declining ore grades, inadequate exploration, and insufficient downstream refining capacity, resulting in continued import dependence for several strategically important minerals.

Table 5: Contribution of Leading States in Selected Ores Production in India, 2024-25

State	Percentage share of total production in India	Share of State in Country's Production for selective ores
Odisha	38.4%	Chromite (100%), Bauxite (72.5%), Iron Ore (55.6%), Graphite (39.6%), Manganese Ore (16.05%)
Rajasthan	23.2%	Lead and Zinc Ore (100%), Selenite (100%), Garnet (100%), Siliceous Earth (100%)
Chhattisgarh	13.5%	Tin (100%), Iron Ore (15.1%), Bauxite (4.3%)
Karnataka	10.1%	Manganese Ore (16.1%), Iron Ore (15.6%), Bauxite (4.3%)
Maharashtra	5.4%	Kyanite (100%), Sillimanite (100%), Fluorite (32.9%), Manganese Ore (30.3%), Bauxite (4.6%)
Jharkhand	3.6%	Bauxite (7.5%), Iron Ore (6.6%), Copper Ore (3.2%), Graphite (0.4%)
Madhya Pradesh	2.4%	Copper Ore (76.6%), Manganese Ore (26.1%), Phosphorite (20.2%), Iron Ore (2.3%)
Andhra Pradesh	1.0%	Manganese Ore (11.3%), Iron Ore (0.01%)
Others	2.4%	

Source: Ministry of Mines Annual Report 2024-25

Note: Only selective metallic minerals have been mentioned here for the leading states

A closer look at the sub-national level reveals the production patterns across states in India. India's mineral production is highly concentrated, with five states accounting for over 90% of the country's total mineral output. Odisha alone contributes two-fifths of national mineral production, driven by its dominance in key bulk minerals, producing 100% of India's chromite, 72.5% of bauxite, and 55.6% of iron ore. Together with Rajasthan (23.2%), Chhattisgarh (13.5%), Karnataka (10.1%), and Maharashtra (5.4%), these states form the backbone of India's mining sector, supplying critical raw materials for the steel, aluminium, power, cement and manufacturing industries.

Table 6: State-wise Mineral/Ore Resources, 2025: Total resources, as on 1 April 2025 | Million tonnes

State	Iron ore	Manganese	Bauxite	Copper ore	Lead-zinc ore	Chromite	Graphite	Tin	Cobalt	Garnet	Limestone	Nickel
Odisha	15649	206	2559	58	2	501	33	0.02	31	17	2388	177
Rajasthan	1411	14	1	926	739	—	2	0.15	0.71	4	32825	—
Chhattisgarh	5390	—	1542	5	0.02	—	26	30	—	0.03	22497	—
Karnataka	11162	129	47	44	—	2	1	—	—	—	64703	10
Maharashtra	843	65	249	18	9	1	4	—	—	—	4102	—

State	Iron ore	Manganese	Bauxite	Copper ore	Lead-zinc ore	Chromite	Graphite	Tin	Cobalt	Garnet	Limestone	Nickel
Jharkhand	4883	23	331	446	0.003	0.001	45	—	9	0.11	555	9
Madhya Pradesh	403	68	336	322	22	—	29	—	—	—	14784	—
Andhra Pradesh	1867	50	797	9	24	—	2	—	0.03	17	34835	—
Others	2579	44	813	77	34	0.01	191	54	5	29	90837	6
All India	44187	599	6675	1900	831	515	333	84	46	67	267526	202

Source: National Mineral Inventory 2025 – IBM; 17848872786a6337eee5e4aChapter __4_State_wise.pdf

Note: Only selective metallic minerals have been mentioned here for the leading states

3.2 Ownership and Structure of Mining Metals and Ores in India

In 2024-25, the private sector accounted for 59.3% (₹90,431 crore) of the total value of mineral production, compared with 40.7% (₹61,999 crore) for the public sector. Private-sector participation was particularly dominant in limestone (95.9%), magnesite (58.5%), iron ore (51.3%), chromite (49.2%), bauxite (48.5%) and manganese ore (43.4%), while it exclusively mined/recovered minerals such as zinc and lead concentrates, garnet and wollastonite. The public sector, meanwhile, retained a concentrated presence in select minerals, accounting for 99.4% of phosphorite, 98.7% of gold ore and 87.6% of tin concentrate, and was the sole producer of copper ore and concentrate and diamond.

Table 7: Mineral-wise ownership structure

Mineral	Private-sector share	Public-sector share / position	Ownership structure
Limestone	95.92%	4.08%	Strongly private
Magnesite	58.52%	41.48%	Private-led
Iron ore	51.32%	48.68%	Broadly balanced
Chromite	49.17%	50.83%	Broadly balanced
Bauxite	48.54%	51.46%	Broadly balanced
Manganese ore	43.35%	56.65%	Public-led
Phosphorite	0.61%	99.39%	Public-dominated
Tin concentrate	12.38%	87.62%	Public-dominated
Copper ore & concentrate	0%	100%	Exclusively public
Zinc concentrate	100%	0%	Exclusively private
Lead concentrate	100%	0%	Exclusively private
Garnet	100%	0%	Exclusively private
Wollastonite	100%	0%	Exclusively private

Source: Ministry of Mines Annual Report 2025-26

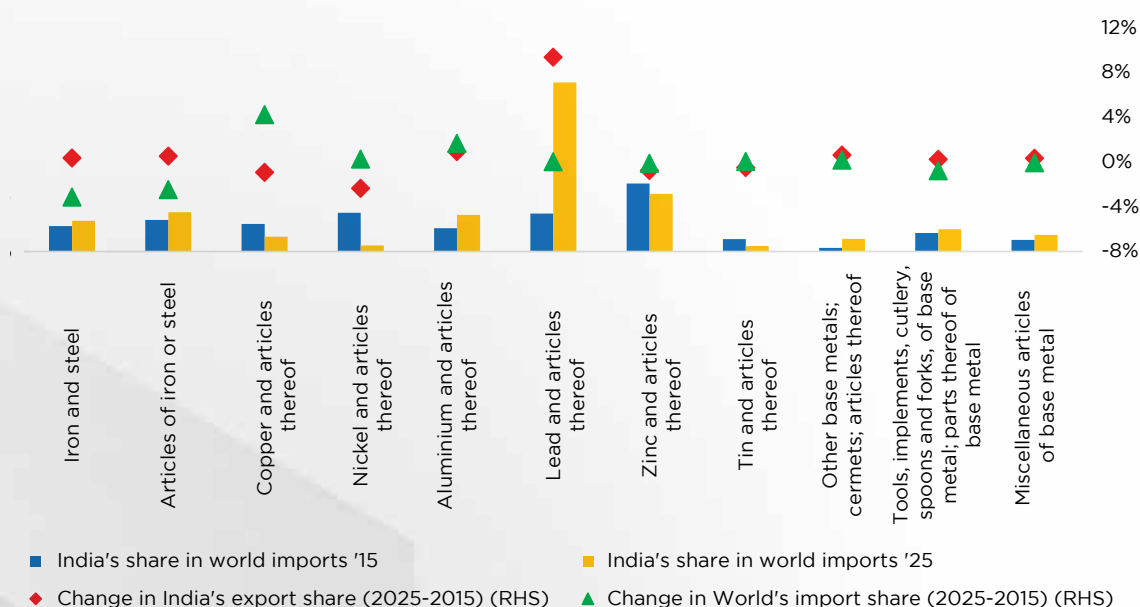
The sector has also witnessed a decline in the overall number of operating mines, from 2,117²⁸ in 2014-15 to an estimated 1,852 currently, even as the composition has shifted towards non-metallic minerals. Metallic mineral mines increased marginally from 693 to 707, while non-metallic mines rose from 866 to 1,145. However, the mining sector remains structurally fragmented, with more than 60% of mining leases covering areas below 20 hectares²⁹, suggesting that the reduction in mine numbers has not necessarily been accompanied by greater consolidation of mining operations.

This domestic production structure should be viewed against the changing composition of global metals demand and trade, particularly the growing importance of non-ferrous metals in clean energy, electric mobility, and advanced manufacturing.

4. Changing Composition of Global Metals Trade

The composition of global metals trade has gradually shifted towards non-ferrous metals over the past decade, reflecting rising demand from clean energy technologies, electric mobility and advanced manufacturing. Between 2015 and 2025, the composition of global metals trades gradually shifted toward non-ferrous metals, reflecting growing demand from clean energy technologies, electric mobility, and advanced manufacturing. During this period, the share of copper and articles thereof in global metals imports increased from 12.4% to 16.5%, representing the largest gain (+4.2%) among all major metal categories. Aluminium and articles thereof also saw global demand rise, with its share increasing from 14.3% to 16.0% (+1.7%), while nickel recorded a modest increase from 2.4% to 2.7%. These trends reflect the growing importance of metals used in renewable energy systems, power transmission, batteries and electric vehicles.

Fig 21: India's changing share in global import demand, 2015-25



Source: ITC Trade Map

28 <https://mines.gov.in/admin/download/6433eda82708c1681124776.pdf>

29 <https://mines.gov.in/admin/download/69945dabea1821771330987.pdf>

In contrast, the relative importance of traditional ferrous metals has moderated over the decade. The share of iron and steel in global metals imports declined from 30.8% in 2015 to 27.7% in 2025, while articles of iron and steel declined from 25.6% to 23.2%, together accounting for a reduction of over 5% in global demand. Similar declines were observed in zinc, tin, and miscellaneous base metal products, indicating a gradual diversification of global metals demand away from conventional ferrous products toward higher-value, non-ferrous, and technology-intensive metals (Figure 21).

India's export performance has broadly mirrored these evolving demand patterns in certain product segments, although significant gaps remain. The country strengthened its presence in aluminium, with its export share in global demand increasing by 0.9%, closely tracking the expansion in global demand. India's export share also improved marginally in iron and steel (+0.4%) and articles of iron and steel (+0.5%), despite their declining relative importance in world trade, reflecting sustained competitiveness in these established product categories.

However, India's export basket has not fully aligned with the fastest-growing segments of global demand. Despite copper witnessing the largest increase in global import share, India's export share in copper products declined by 0.9% over the same period. Similarly, India's export share in nickel, another strategically important metal for battery manufacturing and clean energy technologies, declined by 2.3%, even as global demand rose modestly. These trends indicate that India's export growth has remained concentrated in traditional metal products, while its participation in several emerging high-growth metal segments remains limited.

An important exception is lead and articles thereof, where India's export share increased sharply by 9.4%, substantially outpacing the relatively unchanged global demand. India's strong export performance in lead products is consistent with its well-established refined and secondary lead industry, supported by an extensive battery recycling ecosystem that has strengthened domestic production capabilities³⁰. Moderate gains were also observed in other base metals, tools and cutlery, and miscellaneous base metal articles, although these product groups account for a relatively small share of global metals trade.

Overall, while India has consolidated its position in traditional ferrous metals and selected non-ferrous products such as aluminium and lead, its export basket has yet to fully capture the structural shift in global demand toward copper, nickel, and other metals increasingly critical for the energy transition and advanced manufacturing. Strengthening domestic processing capabilities, promoting downstream value addition and expanding production of strategically important non-ferrous metals will be critical for improving India's competitiveness in the evolving global metals trade landscape.

5. Mapping Global Demand and India's Position among Leading Exporters

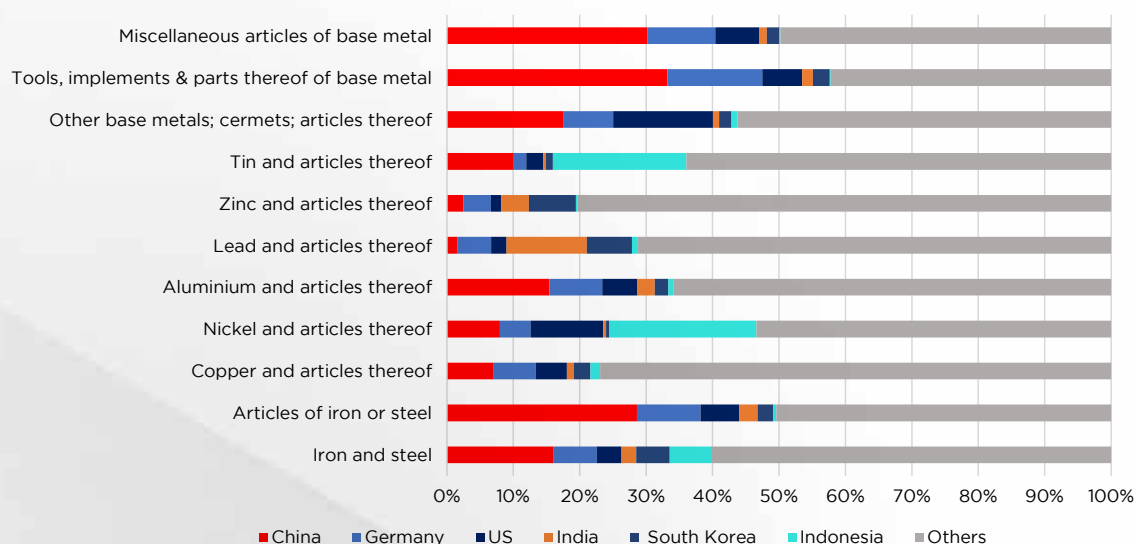
Global trade in base metals and their products is highly concentrated among a few industrial economies that combine abundant raw material availability with large-scale processing capacity, integrated manufacturing ecosystems, and strong export competitiveness. Across HS Chapters 72–83, China emerges as the dominant exporter in most product categories, while Germany and the United States maintain strong

30 <https://www.gravitaindia.com/blogs/lead-recycling-plant-india-capacity-technology-compliance>

positions in high-value and technologically sophisticated metal products among the five countries examined, along with India. South Korea and Indonesia have developed niche comparative advantages in steel and critical ores respectively, whereas India's export presence remains significant only in a few non-ferrous metals such as lead and zinc.

China's dominance stems from a mix of policies aimed at strengthening domestic mining, refining, manufacturing and foreign investments across Africa.³¹ It also commands a substantial share of global refining capacity for several critical ores. Germany consistently ranks as the second-largest exporter across most product groups, particularly in fabricated and precision-engineered metal products, with 14.3% of global exports in tools (HS 82), 10.3% in miscellaneous metal articles (HS 83), 9.6% in articles of iron and steel (HS 73), and around 6–8% across most other base metals. Germany's strength comes from its advanced manufacturing sector, specialised engineering capabilities, high-quality metallurgy, and deep integration within European automotive and machinery value chains.³² Rather than competing on volume, German firms compete through technology-intensive and high-value-added metal products. Among Asian competitors, South Korea has established itself as a major exporter of steel and zinc products through globally competitive steel producers, advanced shipbuilding, automobile manufacturing and electronics industries. Indonesia stands out with an exceptional 22.2% share in nickel exports and 20.1% in tin, reflecting its abundant mineral reserves and its strategic policy of banning exports of unprocessed ores to encourage domestic smelting and downstream processing. Massive investments in nickel refining and battery-material value chains have transformed Indonesia into a key global supplier of processed nickel products.

Fig 22: Competitor Export Presence- Share in World's Export, 2025



Source: ITC Trade Map

India's export presence remains relatively modest across most base metal categories, generally accounting for 1-4% of global exports, except in lead (12.1%) and zinc (4.1%), where it is more competitive due to an integrated domestic mining and smelting

31 https://www.inss.org.il/strategic_assessment/metal/

32 <https://www.britannica.com/place/Germany/Manufacturing>

industry. India's comparatively lower shares in steel, fabricated metal articles and engineering-intensive products indicate that its participation remains concentrated in intermediate products rather than higher-value manufacturing. This highlights the need to strengthen value addition, adopt technology, and integrate into global metal value chains to compete more effectively with leading exporters (Figure 22). This suggests that export leadership in metals is increasingly determined not only by mineral availability but also by processing capacity, technological sophistication, integrated industrial ecosystems, scale economies, and supportive industrial policies. Countries that have invested in downstream manufacturing, refining capabilities, and specialised engineering have secured significantly larger shares of global metal exports than those relying primarily on raw material production.

Further, the direction of trade suggests that India's exports of iron and steel (HS 72) are primarily destined for Italy (12.2%), the United States (7.6%) and Nepal (7.3%), reflecting India's growing role as a supplier of primary and semi-finished steel products to both advanced manufacturing economies and regional markets. Global exports remain dominated by China (16.7%), followed by Germany and Indonesia, highlighting their greater scale and stronger integration into global steel value chains.

Table 8: Mapping Global Demand and India's Export Footprint in Metal Exports

HS Code	Product	World Imports (\$bn)	India's Top Export Destinations (% share)	Major Global Exporters (Share in World Exports %)	Top Importers (%)
'72	Iron and steel	450.3	Italy (12.2%), USA (7.6%), Nepal (7.3%)	China (16.7%), Germany (6.9%), Indonesia (6.5%)	China (6.9%), Germany (6.1%), USA (6%)
'73	Articles of iron or steel	376.5	USA (29.9%), UAE (8.8%), Germany (4.8%)	China (27.8%), Germany (9.3%), Italy (5.6%)	USA (11.7%), Germany (7.8%), France (3.7%)
'74	Copper and articles thereof	268.6	Saudi Arabia (28.8%), China (19.6%), USA (12.3%)	Congo (11.5%), Chile (7.3%), China (7.2%)	China (27.8%), USA (9.3%), Germany (5.5%)
'75	Nickel and articles thereof	43.9	USA (14.7%), UK (13%), UAE (7.1%)	Indonesia (22.4%), USA (11%), China (8.1%)	China (32.4%), USA (7.7%), Japan (7.2%)
'76	Aluminium and articles thereof	259.8	USA (15.3%), South Korea (7.4%), Vietnam (7.1%)	China (15.1%), Germany (7.8%), USA (5.1%)	USA (10.2%), Germany (8.8%), China (6.5%)
'78	Lead and articles thereof	10.2	South Korea (27.5%), Singapore (25.8%), Vietnam (9.2%)	India (12.4%), Australia (8%), South Korea (7%)	USA (12.5%), India (12.1%), Vietnam (6.3%)
'79	Zinc and articles thereof	19.1	Thailand (15.9%), Singapore (14.7%), Saudi Arabia (12.9%)	Belgium (8.2%), Netherlands (7.7%), South Korea (7.3%)	USA (13%), Germany (7.7%), China (5.8%)
'80	Tin and articles thereof	8.9	UAE (20.9%), South Korea (15.7%), Malaysia (13%)	Indonesia (18.6%), Peru (11.7%), Israel (10%)	USA (12.7%), China (9.6%), Japan (8.4%)

HS Code	Product	World Imports (\$bn)	India's Top Export Destinations (% share)	Major Global Exporters (Share in World Exports %)	Top Importers (%)
'81	Other base metals; cermets; articles thereof	27.2	USA (30.2%), Singapore (12.7%), Germany (12.5%)	China (19%), USA (16.4%), Germany (8.2%)	USA (14.4%), China (13.3%), Germany (9.3%)
'82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal	73.9	USA (26.4%), Netherlands (8.5%), Germany (5.8%)	China (32.1%), Germany (13.8%), USA (5.8%)	USA (15.2%), Germany (9.6%), France (3.8%)
'83	Miscellaneous articles of base metal	86.9	USA (26%), UK (11.7%), UAE (5.7%)	China (30.1%), Germany (10.3%), USA (6.6%)	USA (17.4%), Germany (7.3%), France (4.4%)

Source: ITC Trade Map

A similar pattern is evident in articles of iron or steel (HS 73), aluminium (HS 76), and higher-value fabricated products such as tools and implements (HS 82) and miscellaneous articles of base metal (HS 83), where the United States is India's single largest export destination. The prominence of the US market reflects strong demand for Indian engineering products and metal manufactures, with the United States remaining India's largest destination for engineering exports³³. US accounted for ~16% of total engineering exports, with exports increasing by 2.3% during FY 2025–26. China's leadership across iron and steel, aluminium, tools and miscellaneous base metal products is underpinned by its extensive manufacturing ecosystem and economies of scale³⁴, while Germany's strong presence reflects its specialisation in high-value engineering and industrial equipment integrated into European value chains.

India's exports of copper (HS 74), nickel (HS 75), lead (HS 78), zinc (HS 79) and tin (HS 80) are comparatively diversified across markets in West Asia, East Asia and Europe, with destinations including Saudi Arabia, the UAE, South Korea, Singapore and the United Kingdom. These products largely serve as intermediate inputs for downstream industries such as automobiles, electronics, construction and industrial machinery. However, unlike China, Germany or resource-rich economies such as Indonesia in nickel, India has a relatively limited presence in global exports of processed non-ferrous metals, reflecting its smaller domestic resource base and refining capacity.

Overall, India's metal exports remain concentrated in a few product categories and are largely positioned in intermediate segments, with relatively limited presence in higher-value processed metals and engineering products. The following section examines India's import profile and dependence across key metal and mineral products, highlighting areas where domestic supply and processing capabilities remain limited.

³³ <https://www.eepcindia.org/export-statistics>

³⁴ <https://www.steel.org/2026/07/aisi-says-china-report-on-so-called-excess-capacity-fundamentally-flawed/>

INDIA LEADING THE RECYCLED MARKET IN LEAD

Lead is one of the most recycled base metals and the largest source of lead worldwide comes from recycling. It can be melted and reprocessed several times, and the final product (termed secondary lead) remains indistinguishable from primary lead, which is extracted from ore and consumes more energy, adding to costs. Secondary lead producers cater to about 55% of Indian lead demand.³⁵ India's emergence as the world's leading lead exporter is primarily due to its dominance in recycled lead production. Lead is one of the most circular industrial metals, enabling countries with limited ore reserves to become globally competitive through recycling rather than mining as over 95% of it can be recycled.³⁶ Scrap includes lead-acid batteries, cable coverings, pipes, sheets, and lead-coated metals. Over 80% of global demand stems from batteries alone,³⁷ despite the growth of lithium-ion batteries. Major demand for lead comes from batteries, construction materials, radiation shielding, and industrial applications. Global import demand in 2025 stands at \$10.2 billion, of which \$8.2 billion, or ~85%, is unwrought lead, followed by scrap at \$0.7 billion and articles of lead at the remaining \$1.1 billion. The United States of America, India, Vietnam and Singapore are the leading importers, together comprising over 40% of global import demand for 2025.

Unlike countries such as Australia, Peru or China, which have the highest reserves³⁸, India's comparative advantage lies in an extensive lead recycling ecosystem centred on used lead-acid batteries (ULABs). India has leveraged this circular value chain by developing one of the world's largest lead recycling industries. The predictable replacement cycle of batteries, combined with an established nationwide scrap collection network and comparatively lower processing costs, has ensured a steady supply of recyclable feedstock for Indian smelters.

The industry's competitiveness has also been supported by substantial private investment in integrated recycling and refining capacity. Government policy has further reinforced India's position by strengthening the circular economy for batteries. The Battery Waste Management Rules, 2022 introduced Extended Producer Responsibility (EPR), requiring battery producers to ensure environmentally sound collection and recycling of end-of-life batteries. These regulations aim to formalise battery collection, improve recovery rates and increase the availability of recyclable material for domestic refiners. As India's vehicle fleet and industrial battery usage continue to expand, the domestic supply of recyclable lead is expected to rise further, supporting long-term export competitiveness.

³⁵ <https://www.careratings.com/uploads/newsfiles/Lead%20Industry.pdf>

³⁶ <https://ila-lead.org/sustainability/>

³⁷ <https://www.unep.org/topics/chemicals-and-pollution-action/chemicals-management/pollution-and-health/heavy-metals/lead>

³⁸ India possesses relatively modest lead reserves of around 1.9 million metric tonnes, compared with Australia's 35 million metric tonnes, China's 22 million metric tonnes, and Peru's 5 million metric tonnes.

6. Analysing India's Import Dependence in Leading Metals

The composition of India's metal import basket reveals a notable shift in demand over the past decade. Iron and steel, copper and articles thereof, and aluminium and articles thereof accounted for 74.3% of India's total metal imports in 2025, up from 69.9% in 2015, indicating a growing concentration of import demand in a few key industrial metals. This reflects the growing material requirements of India's infrastructure expansion, manufacturing sector and energy transition, all of which rely heavily on these metals as critical intermediate inputs.

Despite remaining the largest import category, the share of iron and steel declined significantly from 43.9% in 2015 to 32.0% in 2025. This moderation is consistent with the substantial expansion of India's domestic steelmaking capacity under the National Steel Policy 2017 and Domestically Manufactured Iron and Steel Products (DMI&SP) Policy, which has increased production by integrated steel producers and greater self-reliance in conventional steel products. Consequently, while dependence has reduced in relative terms, imports remain important for downstream manufacturing sectors such as automobiles, engineering goods and capital equipment.

In contrast, copper and articles thereof recorded the sharpest increase in import share, rising from 12.4% to 23.1%, making it the second-largest component of India's metal imports. This trend reflects both robust domestic demand and structural supply constraints. Copper consumption remains critical with the rapid expansion of renewable energy, electric vehicles, transmission networks, electronics and construction, all of which are significantly more copper-intensive than conventional technologies. The global copper trade also remains highly concentrated, with China owning over 44% of global processing capacity. At the same time, domestic refined copper production remains constrained due to India's limited copper ore reserves, and there remains only one domestic copper miner, Hindustan Copper Limited (HCL) (after the closure of Sterlite's Tuticorin), which continues to face operational inefficiencies, leading to stagnant ore and concentrate production.³⁹ This necessitates substantial imports of concentrates and refined copper to bridge the supply gap.

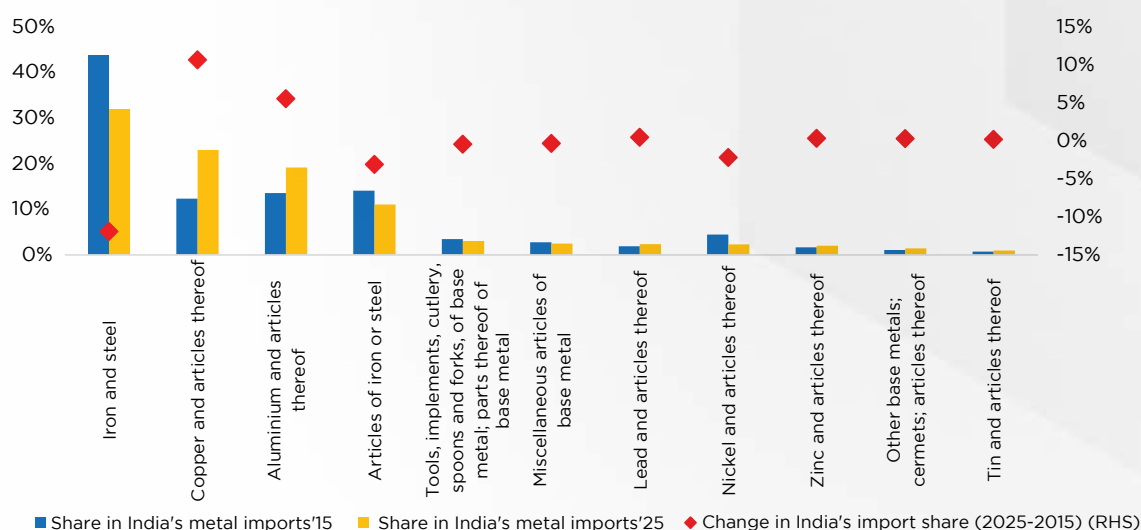
Similarly, the share of aluminium and articles thereof increased from 13.6% to 19.2% over the decade. Aluminium remains an essential input across industries such as power, transport, construction, packaging, and consumer goods.⁴⁰ Although India is among the world's largest producers of bauxite and primary aluminium⁴¹, rising imports largely reflect growing demand for value-added aluminium products, specialised alloys, rolled and extruded products, and high-performance materials used in transportation, renewable energy, electrical equipment and packaging. The increasing sophistication of domestic manufacturing has therefore shifted import demand towards downstream aluminium products rather than primary metal alone.

39 <https://csep.org/reports/the-copper-report-navigating-through-the-demand-and-supply-gap/>

40 https://cuts-citee.org/pdf/Briefing_Paper_Reforming_Indias_Aluminium_Ecosystem_Tariff_Rationalisation_and_Competitive_Pricing_for_MSME_Growth.pdf

41 https://www.niti.gov.in/sites/default/files/2026-01/Roadmap_for_Aluminium_Sector_Decarbonisation.pdf

Fig 23: Change in share of metal imports in India's Metal Import basket, 2015-25



Source: ITC Trade Map

The remaining categories account for a relatively small share of India's metal imports, although some important structural shifts are evident. Articles of iron or steel declined from 14.1% to 11.0%, suggesting greater domestic value addition in fabricated metal products. Conversely, lead, zinc, tin, and other base metals registered marginal increases in share, reflecting growing industrial demand from sectors such as batteries, galvanising, chemicals, and electronics. While nickel and articles thereof experienced a decline in import share from 4.4% to 2.3%, this largely reflects the faster growth of imports in other metal categories rather than a decline in absolute imports, as India's demand for nickel continues to rise with the expansion of stainless-steel production and battery manufacturing (Figure 23).

India has achieved self-sufficiency in several major ores, including iron ore, bauxite, chromite, and limestone. However, it remains import-dependent for several essential ores, relying entirely on imports for critical ores such as lithium, cobalt, and nickel, and heavily on graphite, potash, phosphorus, magnesite, manganese, and rock phosphate.⁴² As domestic demand rises, reducing import dependence has become a strategic priority.⁴³

A closer look at India's imports of the top five metal products, which rose from \$19.0 billion in 2015 to \$23.6 billion in 2025, shows the increase was driven mainly by rising demand from infrastructure, automobiles, renewable energy, and manufacturing. While imports of iron and steel (3.5% CAGR), articles of iron and steel (4.2%), copper (13.9%) and aluminium (10.6%) expanded steadily over the decade, imports of nickel declined at a CAGR of 0.1%. This indicates a gradual shift towards greater domestic value addition, although dependence on imported primary and intermediate metals remains significant. India depends heavily on imports of copper ores and concentrates to meet 96% of demand, while domestic availability satisfies only about 4%.⁴⁴

42 India is 100% dependent on imports for lithium, cobalt, and nickel; 25% for graphite and remains heavily reliant on foreign supplies for potash and phosphorus. (https://dspstg.sansad.in/getFile/app/Isscommittee/Coal,%20Mines%20and%20Steel/pr_files/Eng%20press%20release%20self%20reliance.pdf?source=app)

43 <https://mines.gov.in/webportal/nationaloresscenario>

44 <https://www.apex-avalon.sg/wp-content/uploads/insights/Indian-Non-Ferrous-Metals-Industry-Way-Forward.pdf>

Table 9: Import demand Analysis for Leading Metals

Product code	Product label	India's Imports (2015, \$bn)	India's Imports (2025 \$bn)	HHI (2015)	HHI (2025)	CAGR Imports (2015-25)	Top Import Sources
'72	Iron and steel	11.6	16.4	0.1	0.07	3.5%	South Korea (16.4%), Indonesia (11.2%), Japan (10.6%)
'73	Articles of iron or steel	3.7	5.6	0.14	0.21	4.2%	China (43.4%), Japan (7.3%), USA (6.1%)
'74	Copper and articles thereof	3.2	11.8	0.07	0.09	13.9%	Japan (18.2%), Tanzania (15.4%), UAE (15.4%)
'75	Nickel and articles thereof	1.2	1.2	0.13	0.11	-0.1%	China (26.2%), Japan (13.5%), USA (9%)
'76	Aluminium and articles thereof	3.6	9.9	0.08	0.1	10.6%	China (25.5%), USA (9.5%), UAE (8.1%)

Source: ITC Trade Map

The composition of import sources reveals an uneven pattern of supply diversification, although overall importing source countries remain broadly diversified, with HHI values remaining below 0.5 across the leading metal imports. Supplier concentration declined for iron and steel (HHI: 0.10 to 0.07) and nickel (0.13 to 0.11), reflecting broader sourcing and improved resilience. In contrast, concentration increased for articles of iron and steel (0.14 to 0.21) and aluminium (0.08 to 0.10), indicating growing dependence on a smaller set of suppliers. China remains a dominant source across several categories, underscoring persistent vulnerabilities in strategically important supply chains. At the same time, the prominence of countries such as South Korea, Japan, Indonesia, and the UAE reflects India's continued integration with East Asian and regional manufacturing networks. (Table 9).

Overall, the changing composition of India's metal imports points towards a structural transformation in the economy. As India pursues its manufacturing and energy transition ambitions, strengthening domestic capabilities in processing, refining and downstream metal fabrication will be critical to reducing import dependence in strategically important metals while enhancing supply-chain resilience.

7. India's Participation in Value Chains for Metal Exports

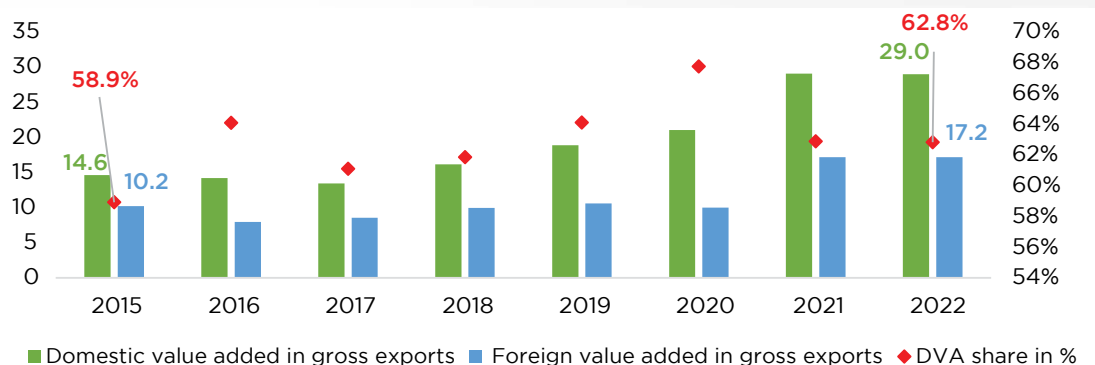
India's basic metals and fabricated metal products sector has seen a significant increase in its integration with global value chains over 2015–2022. Domestic value added⁴⁵ (DVA) embodied in gross exports nearly doubled from \$14.6 billion in 2015 to \$29.0 billion in 2022, indicating that a much larger share of the sector's export earnings is generated through domestic production. This reflects the expansion of India's steel

⁴⁵ Domestic Value Added = Domestic Value-Added Share*Gross Exports, where Domestic Value-Added Share is the proportion of exports that is actually generated within the domestic economy, including value added by different domestic industries.

and metal manufacturing capacity, rising export competitiveness, and stronger domestic supplier linkages in downstream fabricated metal products. The sharp increase between 2020 and 2021 coincides with the post-pandemic recovery in global steel demand and elevated international metal prices, which boosted India's exports of iron, steel and related products.

At the same time, foreign value added⁴⁶ (FVA) embodied in exports increased from \$10.2 billion in 2015 to \$17.2 billion in 2022. The rise in FVA suggests the sector continues to rely on imported intermediate inputs, such as alloying elements (e.g., nickel, chromium and molybdenum), specialised steel products, machinery, and industrial inputs processed domestically before export. Despite greater use of imported intermediates, domestic producers consistently generated around two-thirds of the total value embodied in exports, with the DVA share remaining between 59% and 68% throughout the period and standing at 62.8% in 2022.

Fig 24: India's GVC Integration in the Manufacture of basic metals and fabricated metal products



Source: OECD TiVA

Note: Values are in USD billion

China, Germany, the United States and Italy generate substantially higher domestic value added in both gross exports and foreign final demand in the basic metals and fabricated metal products sector, reflecting their strong industrial base and extensive integration across global manufacturing networks. These economies not only produce primary metals but also participate in higher value-added downstream activities such as machinery, automobiles and engineering products, enabling domestic value to flow through multiple stages of global value chains before reaching final consumers.

8. CBAM's Impact on India's Metal Sector

India's metals and mining sector forms the backbone of the country's industrial base, supplying critical inputs to construction, infrastructure, transportation, energy and manufacturing. However, its production processes, particularly coal-based steelmaking and electricity-intensive aluminium smelting, are highly carbon-intensive, resulting in significant embedded emissions. As climate-related trade measures become increasingly prominent, these characteristics make India's metallurgical industries particularly vulnerable to carbon-based border measures.

Under the European Union's Carbon Border Adjustment Mechanism (CBAM), iron and steel and aluminium are among the first sectors subject to mandatory emissions

⁴⁶ Foreign Value Added = Foreign Input Share*Gross Exports, where Foreign Input Share is the share of exported products/services that comes from imported inputs

reporting and carbon pricing. Their inclusion reflects both their high emissions intensity and their substantial trade with the EU. India's iron and steel sector, one of the largest contributors to industrial greenhouse gas emissions, has an average carbon emission intensity of approximately 2.5–2.6 tonnes of CO₂ per tonne of crude steel, considerably higher than Turkey (1.04), South Korea (1.5), the UK (1.65), Vietnam (1.84) and the EU average (around 1.0–1.2 tonnes of CO₂ per tonne of steel)⁴⁷. This is primarily due to the dominance of coal-based blast furnace–basic oxygen furnace (BF-BOF) and coal-based direct reduced iron (DRI) production routes. Similarly, although India's aluminium exports have a relatively lower emissions intensity per unit of export value (approximately 0.33 kg CO₂ per US dollar of exports)⁴⁸, the sector remains highly exposed to CBAM because aluminium smelting is heavily dependent on captive coal-fired power generation and still lacks fully developed monitoring, reporting and verification (MRV) systems.

India's merchandise exports to the European Union (EU) amounted to USD 84.7 billion in 2025, with iron and steel (\$3.9 billion) and aluminium (\$1.06 billion) constituting the largest CBAM-covered export categories. Together, these sectors represent the bulk of India's direct exposure to the EU's Carbon Border Adjustment Mechanism (CBAM), making them particularly vulnerable to additional carbon-related compliance costs.

Indian exporters of iron and steel and aluminium are required to purchase CBAM certificates corresponding to the embedded carbon emissions of their products, with certificate prices linked to the prevailing EU Emissions Trading System (EU ETS) carbon price. Given the relatively high carbon intensity of India's coal-based steel production and electricity-intensive aluminium smelting, CBAM is expected to increase export costs, compress profit margins, and reduce the price competitiveness of Indian products in the European market. The EU accounts for approximately 22% of India's combined steel and aluminium exports, making these sectors particularly sensitive to the new carbon pricing regime⁴⁹.

The trade exposure analysis reveals significant differences in the dependence of major steel and aluminium exporting countries on the European Union (EU) market, which directly influences their vulnerability to the Carbon Border Adjustment Mechanism (CBAM).

Fig 25: India's Iron & Steel Trade Exposure vs Top Competitors (in %) 2025

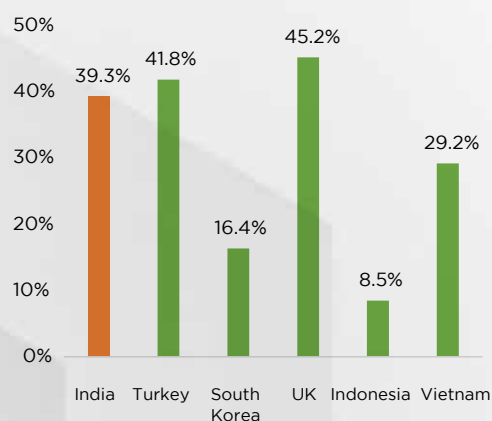
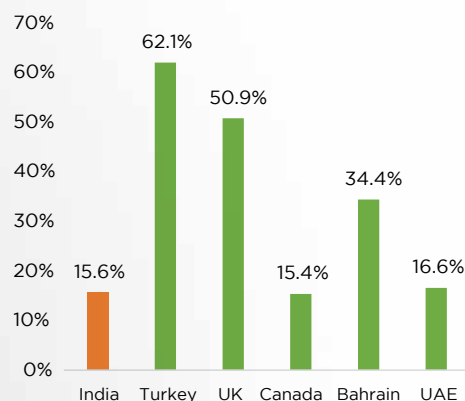


Fig 26: India's Aluminium Trade Exposure vs Top Competitors (in %) 2025



Source: ITC Trade Map

47 <https://publications.jrc.ec.europa.eu/repository/handle/JRC129297>

48 https://icrier.org/pdf/pb64_Transitioning-from-PAT-to-a-Carbon-Trading-System.pdf

49 <https://eu-india.org/2026/01/03/between-india-and-the-eu-a-carbon-gap-and-an-fta-bridge/>

In the iron and steel sector, India's trade exposure stands at 39.3%, indicating that nearly two-fifths of its steel exports are destined for the EU. This places India among the more exposed exporters, although it is not the most dependent. The United Kingdom (45.2%) and Türkiye (41.8%) exhibit even greater reliance on the EU market, reflecting their deep integration with European manufacturing value chains and geographical proximity. In contrast, Vietnam (29.2%), South Korea (16.4%), and Indonesia (8.5%) have substantially lower exposure, suggesting that their steel exports are more diversified across global markets. India's relatively high dependence on the EU implies that CBAM is likely to affect its steel exports more than those of countries with broader export destinations, potentially reducing price competitiveness unless producers adopt lower-carbon production technologies. A more striking pattern emerges in the aluminium sector, where India's trade exposure is only 15.6%, significantly lower than that of most competing exporters. Türkiye records the highest exposure (62.1%), followed by the United Kingdom (50.9%) and Bahrain (34.4%), indicating a strong dependence on EU demand. Canada (15.4%) and the United Arab Emirates (16.6%) exhibit exposure levels comparable to India. The relatively low exposure of Indian aluminium exports suggests that the direct impact of CBAM on the sector may be more limited than for countries that rely heavily on the EU market. However, this should not be interpreted as low overall risk, as India's aluminium production remains relatively carbon-intensive due to its dependence on coal-based electricity, increasing the potential carbon cost per unit exported.

CBAM represents more than a trade compliance measure; it marks a structural shift in the relationship between climate policy and international trade. For India, competitiveness in iron and steel and aluminium exports will increasingly depend on production carbon efficiency alongside traditional cost advantages. While export diversification towards non-CBAM markets may provide temporary relief, sustaining long-term competitiveness will require structural decarbonisation through cleaner production technologies, greater use of renewable energy and green hydrogen, and stronger monitoring, reporting and verification (MRV) systems. Implementing India's Carbon Credit Trading Scheme (CCTS) is expected to support this transition by creating a domestic carbon price signal, incentivising emissions reductions, and potentially allowing exporters to offset domestic carbon costs against future CBAM liabilities. Consequently, the transition towards low-carbon manufacturing is no longer solely an environmental imperative but a strategic economic necessity for sustaining export growth and integration into global value chains.

9. Critical Minerals

Critical minerals have emerged as strategic inputs for economic development, national security and the global clean energy transition. Minerals such as lithium, cobalt, nickel, graphite, copper and rare earth elements (REEs) are essential for batteries, electric vehicles (EVs), solar photovoltaic (PV) systems, wind turbines, power grids and other advanced technologies. Their strategic importance arises not only from their economic value but also from the concentration of reserves, mining and processing capacity in a limited number of countries. Any disruption in their supply can therefore create significant vulnerabilities for downstream industries and delay the deployment of clean energy technologies.

For India, securing access to critical minerals is particularly important given its ambitious climate and energy targets. India aims to achieve 500 GW of non-fossil

electricity capacity by 2030⁵⁰, meet 50% of its electricity requirements from renewable sources, reduce the emissions intensity of GDP by 45% from 2005 levels, and achieve net-zero emissions by 2070. Meeting these targets will require rapid expansion of solar and wind power, battery storage and EVs, all of which are mineral-intensive. For instance, silicon, tellurium, indium and gallium are used in solar PV technologies; neodymium and dysprosium are critical for permanent magnets used in wind turbines; while lithium, nickel, cobalt and graphite are important inputs into batteries. Copper is also indispensable for electricity networks, renewable energy infrastructure and EVs.

India remains significantly dependent on imports for several critical minerals. In particular, lithium, cobalt and nickel are currently almost entirely import dependent, while domestic availability and processing capabilities for several other minerals remain inadequate relative to projected demand. Given the long gestation period of domestic mining projects, which can often exceed a decade, and the time required to establish beneficiation, processing and refining capacities, imports will remain an important source of supply in the near to medium term. This makes diversifying and strengthening the resilience of India's international supply chains an important component of its critical mineral strategy.

Recognising these challenges, the Government of India launched the National Critical Mineral Mission (NCMM) in 2025 to establish a comprehensive framework for securing the country's critical mineral supply chain. A committee constituted by the Ministry of Mines in November 2022 identified 30 critical minerals, of which 24 have been included in Part D of Schedule I of the MMDR Act, 1957, giving the Central Government exclusive authority to auction mining leases and composite licences for these minerals. The committee also recommended establishing a Centre of Excellence on Critical Minerals (CECM) to periodically review the list of critical minerals and guide India's strategic approach⁵¹.

The NCMM adopts a full value-chain approach, covering exploration, mining, beneficiation, processing, recycling and overseas acquisition of mineral assets. The mission targets 1,200 domestic critical mineral exploration projects between 2024-25 and 2030-31, alongside overseas asset acquisition, recycling, processing infrastructure, skill development and technological innovation. It also envisages 26 overseas critical mineral assets through PSUs and 24 through private entities, four mineral processing parks, three Centres of Excellence, 1,000 patents and training of 10,000 personnel. Recycling is another important pillar, with a target of recovering 400 kt of critical minerals from secondary sources.

The Geological Survey of India (GSI) is accelerating domestic exploration. During the 2024-25 field season, GSI undertook 195 critical mineral exploration projects, including projects in Rajasthan. Exploration is also being extended to offshore regions containing polymetallic nodules with potential resources of cobalt, nickel, manganese and REEs. In parallel, the introduction of an Exploration Licence, streamlined regulatory approvals, and incentives for recovering minerals from sources such as fly ash, tailings, and red mud are intended to increase private-sector participation and improve resource recovery.

50 https://ieefa.org/sites/default/files/2026-04/India's%20critical%20mineral%20imports%20in%202025%20and%20a%20shift%20towards%20supply%20diversification_0.pdf

51 <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2120525®=3&lang=2>

Of the 30 minerals identified as critical by the Government of India for their economic significance, the import data of five minerals have been analysed, given their central role in renewable energy technologies and applications. These include cobalt, copper, graphite, lithium, and nickel.

Table 10: India's Import Dependence and Demand Outlook for Select Critical Minerals

HS Code	Critical mineral	India's Import 2015 (in USD mn)	India's Imports 2025 (in USD mn)	CAGR in % (2015-2025)	Import Dependence* (%)	Demand in kt* (2025-2030)	Share of top exporters in India's imports (%), 2025
74	Copper	3,288.2	11,846.6	13.7%	57	66,069	Japan (18.2%), Tanzania (15.4%), UAE (11.4%), USA (6.6%), China (6.2%)
75	Nickel	1,184.4	1,174.6	-0.1%	100	11,543	China (26.2%), Japan (13.5%), USA (9.0%), Norway (6.6%), UK (5.8%)
2404, 3801	Graphite	67.7	179.0	10.2%	28	46,489	Natural Graphite: Madagascar (36.1%), Tanzania (30.5%), Mozambique (9.6%), China (9.0%), Germany (4.0%) Synthetic Graphite: China (52.3%), Germany (8.3%), USA (7.1%), Japan (5.7%), Norway (4.6%)
2822	Cobalt	2.7	13.0	16.9%	100	1,454	Belgium (58.3%), South Africa (27.4%), China (6.5%), Germany (5.4%), Netherlands (1.0%)
282520, 283691	Lithium	19.888	32.791	5.1%	100	5,468	Lithium oxide and hydroxide: Argentina (32.5%), Belgium (25.6%), China (22.6%), South Korea (6.0%), Australia (3.7%) Lithium carbonates: China (34.3%), USA (21.0%), Chile (13.6%), Belgium (10.5%), Argentina (10.5%)

Source: ITC Trade Map, *Critical Mineral Assessment Report (NITI Aayog)

- a. Copper:** India's imports show moderate diversification, with Japan (18.2%), Tanzania (15.4%) and the UAE (11.4%) together accounting for 45% of total imports in 2025. The presence of the USA (6.6%) and China (6.2%) indicates a relatively broad supplier base, while Others account for 42.2%, reducing dependence on any single country. However, the concentration among the top three

suppliers suggests scope for further diversification to strengthen supply-chain resilience. Rising domestic demand and limited reserves could increase import dependence and the import bill. India's copper demand is projected to reach 8.8–9.8 million tonnes by 2047, compared with copper imports of \$14.45 billion in FY2025⁵². As global demand rises, India should balance domestic production with imports by expanding mining and refining capacity, maintaining strategic reserves, and securing overseas copper assets. Indian companies expanding into international exploration, such as the Adani–Codelco partnership in Chile, can support long-term supply security and diversification.

- b. Nickel:** India's nickel imports are relatively diversified, with China (26.2%), Japan (13.5%) and the USA (9.0%) together accounting for 48.7% of imports in 2025. However, India remains 100% import-dependent for nickel, making diversification important for supply security. Globally, supply is highly concentrated. Indonesia accounted for around 66.7% of global mined nickel production in 2025, followed by the Philippines at 6.9%⁵³. This makes India vulnerable to disruptions in a small number of major producing countries. India should therefore focus on diversifying suppliers, securing overseas nickel assets and developing domestic recovery and recycling capabilities. The Ministry of Mines is already supporting projects for nickel recovery from laterites, mine tailings and spent batteries⁵⁴, which could provide a secondary domestic source and reduce import dependence over the longer term.
- c. Graphite:** India's natural graphite imports are relatively diversified, with Madagascar (36.1%) and Tanzania (30.5%) together accounting for 66.6% of imports in 2025. In contrast, synthetic graphite imports are more concentrated, with China alone accounting for 52.3%, increasing India's exposure to a single supplier. This matters because China produces around 70% of global natural graphite, controls 80% of synthetic graphite supply, and holds about 90% of global anode manufacturing capacity. China's export controls since 2023 further highlight this vulnerability. Given graphite's importance for lithium-ion battery anodes and clean-energy technologies, India should diversify natural graphite sources, reduce dependence on China for synthetic graphite, and develop domestic graphite processing, anode manufacturing, and recycling capabilities.
- d. Cobalt:** Cobalt remains a significant supply-chain vulnerability due to high upstream and processing concentration. Belgium and South Africa together accounted for 85.7% of India's cobalt imports in 2025, although these may also function as processing or trading hubs rather than reflecting mining locations. Globally, the Democratic Republic of the Congo's (DRC) accounted for 73% of mined cobalt production in 2025, followed by Indonesia at 14%, while China remains the leading refiner. The DRC move from an export ban to quota-based exports for 2026–27 adds further uncertainty to global availability and prices⁵⁵. For India, this makes supplier diversification and overseas resource access important, alongside developing domestic recycling and recovery of cobalt from spent batteries. Because cobalt is primarily used in battery applications,

52 https://mines.gov.in/admin/storage/ckeditor/Final_Copper_Vision_Document_20_1751560229.pdf

53 <https://pubs.usgs.gov/periodicals/mcs2026/mcs2026.pdf>

54 <https://research.mines.gov.in/OngoingProjectsDetails.aspx>

55 <https://pubs.usgs.gov/periodicals/mcs2026/mcs2026.pdf>

strengthening secondary supply could reduce exposure to both DRC mining disruptions and China's downstream processing dominance.

- e. **Lithium:** India's lithium imports show some diversification but remain concentrated. Argentina, Belgium and China account for 80.7% of lithium oxide and hydroxide imports, while China alone supplies 34.3% of lithium carbonate. Chile and Argentina offer scope for diversification, although imports through Belgium and other trading hubs may mask underlying upstream concentration. With China producing around 70% of global lithium chemicals, India remains exposed to supply-chain risks. Falling prices reflect rapid supply expansion and inventory accumulation, while long-term demand is expected to remain strong given the energy sector's dominant share of lithium-ion battery demand. India should therefore prioritise direct sourcing, long-term offtake agreements and partnerships with resource-rich countries.

10. Industry Insights on Strengthening India's Metals and Ores Trade Performance⁵⁶

India has developed significant domestic capabilities across steel, stainless steel, alloy steel and specialised metallurgical products. However, industry stakeholders highlighted that export competitiveness remains constrained by high input and financing costs, limited access to key markets, import competition in specialised products, and gaps in domestic value addition. These constraints are particularly relevant as India seeks to expand exports of higher-value steel and advanced materials. The key issues emerging from industry discussions are summarised below.

- **Limited Mineral Exploration and High Cost of Raw Materials:** India's mineral exploration ecosystem remains constrained by fragmented geological data, limited availability of risk capital and inadequate participation of junior exploration companies. At the same time, high royalty rates, additional levies and aggressive auction premiums increase the cost of mineral extraction and are passed through to downstream industries. These factors constrain domestic raw material availability, increase input costs and affect the competitiveness of metals and mineral-based exports.
- **Unsustainable Auction Premiums and Delayed Mines Operationalisation:** In some cases, aggressive bidding under the existing auction mechanism has resulted in high premiums that, combined with royalty and other levies, affect the economic viability of mining operations. Delays in auctioning and operationalising lapsed blocks further constrain the availability of key raw materials such as iron ore. This creates uncertainty for steel producers in securing long-term supplies and planning capacity expansion.
- **Regulatory Bottlenecks in Mining and Industrial Expansion:** The delays arise from the limited validity of Certified Compliance Reports, multiple stages of scrutiny under Project Screening Committees, and prolonged Stage-I and Stage-II forest clearance procedures. Delays in identifying compensatory afforestation land and uncertainty regarding green cover requirements for brownfield projects further extend project timelines. These bottlenecks increase project costs, delay capacity creation and reduce investment certainty.

⁵⁶ A stakeholder knowledge-sharing session was held to gather industry insights on challenges and strategies for boosting India's global competitiveness in the metals and ores exports

- **High Cost of Renewable Energy and CBAM Compliance Challenges:** The transition towards lower-carbon steel production is constrained by high wheeling charges, renewable energy banking of only around 30% against an industry requirement of 100% banking for night-time consumption, restrictions on off-site group captive sourcing and high landed costs of renewable power. Limited access to accredited verification capacity can further increase compliance costs. These constraints could weaken CBAM preparedness and reduce the competitiveness of Indian steel exports in the EU market.
- **Import Competition in High-Value Materials:** Nickel-based super alloy bars and rods are imported at zero duty despite domestic production capabilities using advanced processes such as Vacuum Induction Melting (VIM), Electro Slag Remelting (ESR) and Vacuum Arc Remelting (VAR). This has contributed to continued import dependence and under-utilisation of domestic investments. The resulting competitive disadvantage limits the development of India's strategic advanced metallurgy ecosystem.
- **Import Surges and Gaps in Trade Monitoring:** Industry stakeholders highlighted the need to strengthen the Steel Import Monitoring System and revive structured consultation mechanisms to identify abnormal import trends. Concerns were also raised regarding import pressures through existing FTAs and the possibility of third-country steel entering India after minimal processing. Such trends can adversely affect domestic capacity utilisation and discourage investment in specialised steel segments.
- **High Logistics Costs and Infrastructure Barriers:** Delays in the development of slurry pipelines and the denial of Input Tax Credit on pipelines located outside factory premises increase the cost of establishing efficient raw-material logistics infrastructure. These barriers discourage investment in lower-cost and environmentally sustainable transport systems, adding to the overall cost disadvantage faced by the mining and steel sectors.
- **Delays in Export-Linked Benefits and Working Capital Blockage:** Delays in EPCG redemptions, issuance of Export Obligation Discharge Certificates and processing of duty drawback claims can result in blocked working capital and continued compliance liabilities. For a capital-intensive sector such as steel, these delays can adversely affect liquidity, technology upgradation and capacity expansion.
- **High Export Finance Costs:** Pre-Shipment Credit in Foreign Currency (PCFC) financing is currently available at spreads of around 2–4% over Secured Overnight Financing Rate (SOFR)/ Euro Interbank Offered Rate (EURIBOR), translating into financing costs of approximately 7% for USD exports and 5% for euro exports⁵⁷. Higher financing costs increase the working-capital burden on exporters and create a cost disadvantage relative to competing economies, particularly in capital-intensive steel manufacturing.
- **Restricted Market Access in Major Export Destinations:** Indian steel exports face a quota of approximately 30,000 tonnes per quarter in the EU, beyond

⁵⁷ <https://www.skydo.com/blog/export-packing-credit>

which a 25% tariff applies, with a proposed increase to 50% from 1 July 2026⁵⁸. Indian steel products also face a 25% tariff in Mexico and a 50% tariff under US Section 232⁵⁹. In MERCOSUR, Indian steel exports face tariffs ranging from 16–27%⁶⁰, while imports from MERCOSUR reportedly attract only 7.5% duty in India. These tariff and quota barriers significantly increase the landed cost of Indian products and constrain export expansion and market diversification.

- **Limited Domestic Value Addition in Aerospace and Advanced Materials:** India's expanding civil aviation market provides an opportunity to develop domestic capabilities in aerospace-grade alloy steels, stainless steels, super alloys, aluminium and titanium alloys. However, limited integration of domestic suppliers into aircraft procurement means that growing aviation demand does not adequately translate into domestic manufacturing and value addition. This constrains the development of an integrated aerospace materials ecosystem and limits opportunities for higher-value exports and technology development.
- **Constraints in Critical Mineral Recycling and Secondary Resource Recovery:** India's critical mineral recycling ecosystem faces challenges related to fragmented collection systems, limited availability of end-of-life batteries and e-waste, and inadequate support for scaling advanced recovery technologies. The export of battery black mass before domestic recovery of contained minerals further reduces feedstock availability for domestic recyclers. These constraints limit the development of domestic secondary critical-mineral supply chains and reinforce import dependence.

11. Way Forward

The strengthening of India's metals, steel and advanced materials trade performance will require interventions across the entire value chain, from mineral exploration and raw material availability to manufacturing, logistics, export competitiveness and integration into global markets. While India possesses significant mineral resources and expanding industrial capabilities, high input costs, regulatory delays, fragmented supply chains and growing external trade barriers continue to constrain competitiveness. Sustained improvement will therefore require a coordinated strategy aligning mineral policy, industrial development, trade facilitation, green transition and strategic capability building. The following priority actions are recommended:

- **Mineral Exploration and Raw Material Security**
 - **Strengthen mineral exploration:** Develop a supportive ecosystem for junior exploration companies through improved access to geological data, risk capital and appropriate fiscal support to expand the domestic resource base.
 - **Improve iron ore availability:** Accelerate the auctioning and operationalisation of lapsed blocks and introduce predictable auction pipelines to provide greater certainty for long-term raw material planning.

58 <https://www.mondaq.com/india/export-controls-trade-investment-sanctions/1816682/eus-2026-steel-trq-regulation-from-temporary-safeguards-to-permanent-industrial-policy>

59 <https://kpmg.com/us/en/taxnewsflash/news/2026/04/united-states-new-rules-calculating-section-232-tariffs-steel-aluminum-copper.html>

60 <https://customsai.in/fta/mercosur>

- **Regulatory Reforms and Infrastructure Development**

- **Streamline project clearances:** Extend the validity of Certified Compliance Reports, reduce repetitive scrutiny under multiple approval stages and simplify forest clearance procedures to accelerate mine operationalisation and industrial expansion.
- **Simplify compensatory afforestation procedures:** Develop more efficient mechanisms for identifying and transferring compensatory afforestation land to reduce delays in obtaining Stage-I forest clearances.
- **Clarify norms for brownfield expansion:** Establish clear and consistent criteria for green cover and other environmental requirements applicable to existing industrial facilities undertaking capacity expansion.
- **Strengthen mineral logistics infrastructure:** Fast-track slurry pipeline projects and review the GST treatment of pipelines located outside factory premises to reduce logistics costs and encourage investment in efficient raw-material transportation.

- **Green Transition and CBAM Preparedness**

- **Improve renewable energy access:** Establish more uniform renewable energy open-access norms, increase renewable energy banking, and rationalise wheeling and cross-subsidy charges for group captive projects.
- **Strengthen CBAM compliance infrastructure:** Expand access to accredited verification facilities within India and address concerns regarding default emission values to reduce compliance costs and improve predictability for exporters.

- **Strengthening Domestic Manufacturing and Trade Safeguards**

- **Address import dependence in strategic materials:** Review the tariff and quality-control framework for specialised products, including nickel-based super alloys, where domestic manufacturing capabilities exist.
- **Review FTA-related import pressures:** Strengthen rules of origin, including appropriate “melt and pour” requirements, and review tariff concessions where sustained import growth is affecting domestic capacity utilisation and investment.
- **Consider targeted import management:** Explore transparent product-specific measures, including tariff-rate quotas where appropriate, to address sustained import surges while ensuring access to essential inputs.

- **Export Competitiveness and Market Access**

- **Reduce export finance costs:** Examine measures to narrow the current PCFC spread of around 2–4% over SOFR/EURIBOR, with the objective of improving access to more competitive export finance.
- **Ensure timely delivery of export-linked benefits:** Strengthen digital processing and adherence to prescribed timelines for EPCG, EODCs and duty drawback claims to reduce working-capital blockage.

- **Advanced Materials, Aerospace and Critical Mineral Circularity**

- **Develop an indigenous aerospace ecosystem:** Consider a phased and incentive-based indigenous content framework for civil aviation, beginning at around 20% domestic content and progressively increasing towards 40%, covering components, aerospace materials, engineering and related services.
- **Strengthen aerospace materials manufacturing:** Support domestic capabilities in aerospace-grade alloy steels, super alloys, aluminium, titanium, composites, forgings and other specialised materials to increase domestic value addition and supply-chain resilience.
- **Build Maintenance, Repair and Overhaul (MRO) ecosystem:** Greater localisation of aerospace components and materials can improve parts availability, reduce maintenance costs and turnaround times, and support India's objective of emerging as a globally competitive MRO hub.
- **Strengthen critical mineral recycling:** Develop organised collection and traceability systems for batteries and e-waste, promote domestic processing of battery black mass, and link incentives more closely with actual recovery of critical minerals.
- **Support recycling technology scale-up:** Provide targeted support for pilot, demonstration and first-commercial-scale recovery projects to enable domestic recycling technologies to move from laboratory-level development towards commercial deployment.

C.
POLICY HIGHLIGHTS

C. Policy Highlights

1. Global Trade–Related Policy Updates

- United States Introduces New Section 301 Tariffs Covering 60 Trading Partners:** On 24 July, 2026, the United States imposed new tariffs of 10% and 12.5% on imports from 60 trading partners following the conclusion of investigations under Section 301. The action replaced the earlier temporary universal tariff framework and applied different duty rates across categories of economies, with certain products receiving exemptions. The development marked a further expansion in the use of Section 301 beyond its conventional application to country specific trade practices⁶¹. For India United States Trade Representative (USTR) has imposed an additional 10% ad valorem duty on imports. The evolving US tariff framework remains significant given the importance of the US market for Indian merchandise exports, while also presenting opportunities to enhance the competitiveness and market positioning of Indian products vis-à-vis other suppliers⁶².
- Global Trade Policy Activity Reaches a New High:** The WTO–IMF Trade Policy Activity Index, updated in July 2026, showed that global trade policy activity reached a new high during early 2026. Averaged over January–May 2026, activity was nearly twice its 2024 level and around 25% above the 2025 average, with restrictive measures accounting for a significant part of the increase. The development reflects the increasing use of tariffs, import restrictions and subsidies by economies in pursuit of industrial, strategic and security objectives. For India, the increasingly active use of trade policy instruments could create opportunities to enhance market access, strengthen export competitiveness, and leverage emerging prospects for supply chain diversification⁶³.
- Trade Defence and Safeguard Actions Continue to Intensify:** Discussions at the WTO Committee on Safeguards in April 2026 reflected ongoing engagement among members on recent tariff actions, including those affecting steel products. India, along with other WTO members, continues to engage constructively to support a predictable and rules based multilateral trading system and stable global supply chains. The evolving trade policy landscape also presents opportunities for India to further strengthen the resilience and competitiveness of its exports, particularly in metals and manufactured goods⁶⁴.

2. India's Trade Policy Developments

- Government Undertakes Measures to Address Disruptions in Maritime Trade and Supply Chains:** During 2026, the Government strengthened its review and coordination mechanism to monitor disruptions affecting international shipping routes, export import cargo movement, port operations, freight and insurance costs and the continuity of supply chains. Coordinated

61 <https://www.reuters.com/world/us/trump-imposes-forced-labor-duties-60-trading-partners-as-10-us-tariffs-expire-2026-07-24>

62 <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2289348®=3&lang=1>

63 https://www.wto.org/english/news_e/news26_e/rese_23jul26_463_e.htm

64 https://www.wto.org/english/news_e/news26_e/safe_27apr26_380_e.htm

measures included operational support at major ports, waiver of ground rent and demurrage charges, evacuation of containers through rail connectivity and other trade facilitation measures. These interventions helped ensure seamless cargo movement and minimise disruptions to maritime trade routes. The measures also supported exporters by easing logistics related pressures and strengthening the resilience of India's trade infrastructure⁶⁵.

- **DGFT Extends Export Obligation Periods and Undertakes Special Drive to Unlock Bank Guarantees:** As part of measures to support exporters amid evolving global shipping and supply-chain conditions, the DGFT extended the export obligation period for eligible Advance Authorisation and EPCG authorisations until 31 August, 2026. The measure covered 1,017 EPCG and around 7,400 Advance Authorisations. In addition, a special drive facilitated discharge of export obligations under 21,370 EPCG and Advance Authorisations, enabling the release of funds locked in pending bank guarantees. These measures provided greater operational flexibility and strengthened liquidity support for exporters navigating external disruptions⁶⁶.
- **Temporarily Exempts Customs Duty on Cotton Imports:** The Government temporarily exempted customs duties on cotton imports from 01st June to 31st October 2026, particularly during the cotton off season, to ensure adequate availability of cotton for the textile industry. The measure is aimed at supporting MSMEs, moderating input costs and strengthening the competitiveness of Indian textiles, while balancing the interests of cotton farmers and maintaining market stability⁶⁷.

3. Commodity Price Trends

Global commodity prices remained elevated during the first quarter of FY'2026–27, while the sharp rise observed towards the end of the previous fiscal year moderated during the quarter. The overall commodity price index (2016=100), after reaching 218.8 in March 2026, remained broadly stable in April and May before moderating to 194.6 in June. The subsequent easing, led mainly by energy and metal prices, is expected to support greater price stability and provide a more favourable environment for trade and economic activity.

Crude oil prices remained volatile during the quarter. The APSP crude oil index declined from 241.9 in April to 239.3 in May and further to 195.4 in June, following the sharp spike recorded in March. Despite the moderation, oil prices remained well above levels seen during most of FY'2025–26, reflecting continued geopolitical uncertainties and concerns about energy supply and trade routes. The energy index followed a similar pattern, declining from 229.4 in April to 198.8 in June.

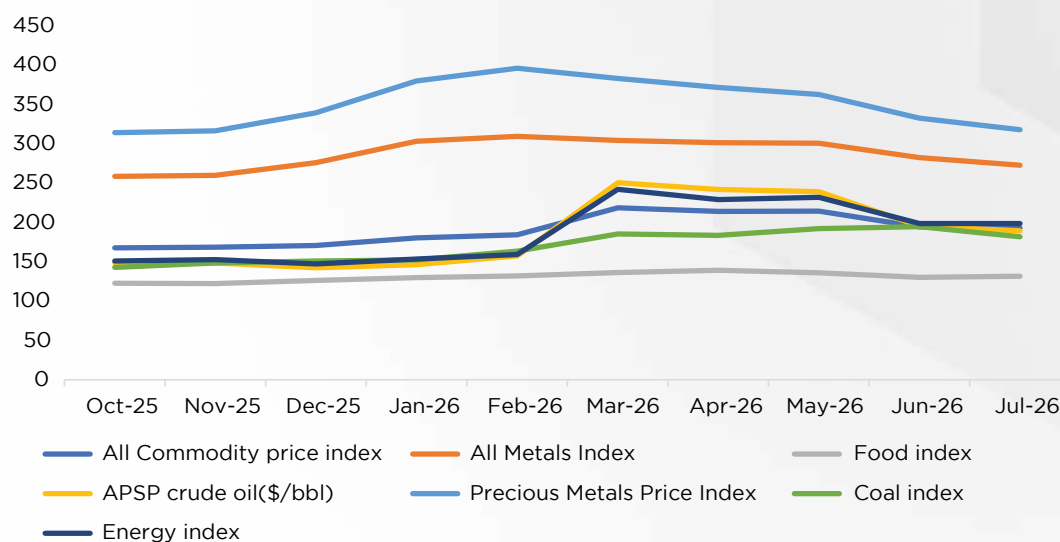
Metal prices also moderated gradually during the quarter, with the all-metals index declining from 301.7 in April to 300.8 in May and further to 282.5 in June. The decline suggests easing supply side pressures and commodity market conditions after the elevated price levels seen earlier in the year. Precious metal prices also softened, with the index declining from 371.8 in April to 332.8 in June, although prices remained elevated compared to the beginning of FY'2025–26.

65 <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2292404&lang=1®=48>

66 <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2236414&lang=1®=3>

67 <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2267011®=48&lang=2>

Fig 27: Price indices across key commodity indices



Source: IMF data

Coal prices, however, remained relatively firm during the quarter. The coal index increased from 183.6 in April to 192.5 in May and further to 194.8 in June, indicating continued strength in energy demand and possible supply constraints. Food prices showed comparatively limited volatility, declining from 139.3 in April to 130.3 in June, suggesting relatively stable global agricultural market conditions despite continued weather related and geopolitical risks.

Overall, commodity markets during Q1 FY'2026–27 witnessed a moderation from the sharp price increases recorded in March 2026, particularly in crude oil, metals and precious metals. While energy and commodity prices remained at relatively elevated levels, the correction contributed to improved price stability. Geopolitical developments and potential supply disruptions remain key factors shaping the global commodity outlook. (Figure 27).

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