

POLICY BRIEF

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Beyond the Smelter: Where Aluminium Policy Meets India's Growth Story



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Table of Contents

List of Abbreviations	1
Executive Summary	2
<i>Structural Challenges</i>	2
<i>Recommendations</i>	3
1. Introduction	4
2. The Aluminium Value Chain	4
3. Snapshot of the Aluminium Production in India	6
4. The Three Problems Faced by Secondary Manufacturers of Aluminium	8
4.1 <i>Pricing Mechanisms: International and Domestic</i>	9
4.2 <i>The Inverted Duty Structure</i>	9
4.3 <i>Unfavourable Free Trade Agreements (FTAs)</i>	10
5. Structural Challenges and Broader Economic Implications for MSMEs	11
6. Possible Solutions	12
7. Scope of the Discussion	13
8. Summary of the Stakeholder Discussion	14
9. Policy Recommendations and Rationale	16
Bibliography	20

List of Figures

Figure 1: Production of Bauxite and Aluminium in India (2015-16 to 2023-24)	6
Figure 2: Domestic Aluminium Production vis-à-vis Domestic Aluminium Consumption	7

List of Abbreviations

AAI	Aluminium Association of India
AIFTA	ASEAN-India FTA
AINFMA	All India Non Ferrous Metal Association
ASEAN	Association of Southeast Asian Nations
ASMA	Aluminium Secondary Manufacturers Association
CACMAI	Cable and Conductor Manufacturers Association of India
CAGR	Compounded Annual Growth Rate
CAROTAR	Customs (Administration of Rules of Origin under Trade Agreements) Rules
CBAM	Carbon Border Adjustment Mechanism
CSEP	Centre for Social and Economic Progress
EPR	Extended Producer Responsibility
FACE	Federation of Aluminium Consumers in Europe
FTAs	Free Trade Agreements
FY	Financial Year
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GoI	Government of India
GST	Goods and Services Tax
GTRI	Global Trade Research Initiative
IEEMA	Indian Electrical and Electronics Manufacturers Association
IIFT	Indian Institute of Foreign Trade
IMARC	International Market Analysis Research and Consulting
INR	Indian Rupee
IPP	Independent Power Producer
LME	London Metal Exchange
MRAI	Material Recycling Association of India
MSME	Micro, Small, and Medium Enterprise
MT	Million Tonnes
MTPA	Million Tonnes Per Annum
NALCO	National Aluminium Company Limited
PIB	Press Information Bureau
TERI	The Energy and Resources Institute
UNIDO	United Nations Industrial Development Organization
USD	United States Dollar
ZED	Zero Defect Zero Effect

Executive Summary

India occupies a prominent position in the global industrial landscape, ranking second worldwide in primary aluminium production. Supported by abundant bauxite reserves primarily located in Odisha, Chhattisgarh, and Jharkhand, the country features an established integrated value chain spanning bauxite mining, alumina refining, primary smelting, recycling, and downstream manufacturing. The domestic sector plays a foundational role in powering crucial national infrastructure expansion, renewable energy installations, electric mobility, railway modernisation, defence manufacturing, and engineering industries.

Despite these foundational strengths and substantial production capacities reaching approximately 4.16 million tonnes annually, the domestic ecosystem experiences a profound structural mismatch. While primary production is dominated by large-scale private and public smelters, the downstream and secondary segments consist of approximately 3,500 active players, predominantly comprising micro, small, and medium enterprises. These micro, small, and medium enterprises account for roughly 90 per cent of total employment within the aluminium value chain, sustaining hundreds of thousands of jobs directly and indirectly, particularly across semi-urban and rural areas.

Structural Challenges

The viability of secondary manufacturers and micro, small, and medium enterprises is severely constrained by three primary structural bottlenecks:

- **Import Parity Pricing Mechanics:** Domestic primary producers price their metal referencing London Metal Exchange benchmarks while incorporating local premiums, freight costs, and customs duties. Consequently, downstream enterprises pay import-equivalent prices even for domestically sourced metal, imposing a multi-million-dollar financial penalty that severely compresses operating margins.
- **Inverted Duty Structures:** The basic customs duty on raw primary aluminium sits at 7.5 per cent, supplemented by a 0.75 per cent social welfare surcharge, whereas many finished downstream products attract significantly lower tariff rates. This inversion penalises domestic value addition and creates a strong disincentive against local manufacturing.
- **Unfavourable Free Trade Agreements:** Free trade agreements with regions such as the Association of Southeast Asian Nations, Japan, and South Korea establish reduced or zero duties on finished aluminium imports. This influx of foreign finished articles outcompetes domestic enterprises, which lack equivalent economies of scale or protection against subsidised inflows.

Compounding these trade distortions are high operational costs. Secondary manufacturers rely heavily on grid power subject to elevated industrial tariffs, while national logistics expenses remain higher than those of competing developing economies. Furthermore, while India's secondary recycling sector has grown at a compound annual growth rate exceeding 10 per cent, it remains critically constrained by an underdeveloped domestic scrap collection infrastructure. Consequently, the industry relies on imports for roughly 85 per cent of its scrap requirements, navigating a 2.5 per cent import duty and an 18 per cent Goods and Services Tax.

Recommendations

To protect domestic manufacturing, prevent industrial decline, and align with national growth visions, policymakers should execute a comprehensive reform agenda comprising the following measures:

- **Rationalise Primary Tariffs:** Implement a staggered, time-bound glide path to reduce the basic customs duty on primary aluminium down to zero, accompanied by energy-cost compensation packages for primary smelters to secure political and economic feasibility.
- **Abolish Scrap Import Duties:** Eliminate the 2.5 per cent import duty on aluminium scrap to support the viability of secondary recycling networks and lower national carbon footprints.
- **Rationalise Scrap Taxation:** Lower the Goods and Services Tax on aluminium scrap from 18 per cent to 5 per cent while keeping finished product taxes intact, pairing this adjustment with minimum purity standards of 91 to 95 per cent to pull informal aggregators into the formal tax net.
- **Correct Free Trade Inversions:** Deploy administrative tools including tariff-rate quotas, stricter smelting-and-casting-based rules of origin, enhanced verification capacity under trade agreements, and targeted anti-dumping measures to counter unfair finished-goods imports.
- **Build Long-Term Frameworks:** Formally designate aluminium as a critical mineral for strategic stockpiling, establish a dedicated national scrap collection policy, create a green aluminium certification framework ahead of carbon border adjustments, and calibrate extended producer responsibility compliance pathways to protect smaller enterprises

1. Introduction

India's aluminium sector occupies an important position in the country's industrial and infrastructure landscape. Globally, India ranks second in production of aluminium (PIB Release, August 2024) and with its objectives of accelerating infrastructure development, expanding manufacturing capacity, enhancing export competitiveness, and advancing the clean energy transition, demands for aluminium and aluminium-based products are expected to remain robust. Beyond primary metal production, aluminium serves as a foundational material for several sectors that are central to India's economic development. Power transmission and distribution infrastructure, renewable energy installations, electric mobility, railway modernisation, housing, urban infrastructure, defence manufacturing, and engineering industries all depend significantly on aluminium and aluminium based products. In fact, the power sector alone accounts for 48 per cent of aluminium consumption in India, followed by automobile and transport, and construction, both at 13 per cent (Srivastava & Dutta, 2025). The sector therefore occupies an important place in India's infrastructure development, manufacturing ambitions, and energy transition objectives.

2. The Aluminium Value Chain

India's aluminium industry is large but remains fragmented. This structure limits its economic potential. India's aluminium value chain begins with bauxite mining, as bauxite is the principal ore used to produce aluminium. This activity mainly occurs in three mineral rich states, Odisha, Chhattisgarh, and Jharkhand, which have large smelters and refineries. The three major players that dominate the primary aluminium market are privately owned Vedanta, Hindalco, and public sector undertaking National Aluminium Company Limited (NALCO). These companies turn mined bauxite into alumina, and then into primary aluminium metal, which is essential for the entire value chain.

After producing primary aluminium, it is cast into standard ingot forms, such as slabs, billets, foundry alloy ingots, and re-melt ingots. Downstream manufacturers then acquire these forms and turn them into semi-finished products through processes like rolling, extruding, casting, and drawing. These semi-finished products, often referred to as "wrought aluminium," "semis," or "mill products," are utilised by many industries in the form of extrusions, flat rolled sheets, castings, foil, wire, slugs, powder, and lacquers, among others. Unwrought aluminium (HS Code: 7601), also known as "primary aluminium" remains the main raw material for all stages of

processing through the whole chain. Its value in the final products is 60 per cent or more (Arora & Gupta, 2023).

Semi-finished aluminium products support key sectors of the modern economy, such as packaging, construction, engineering, automotive, aerospace, and electrical transmission. India's downstream aluminium sector, which transforms semi-finished products into end use goods, is large but uneven. It includes around 3,500 players with a total processing capacity of almost 2 million tonnes (MT) as of FY24 with the potential to reach 3.5MT by FY30 (Ministry of Mines, 2025). Many large and mid-sized firms operate here, but most are small, self-organised units that lack formal regulation and institutional support. Downstream industry groups have emphasised the need for clear policy driven support that covers the entire value chain and creates fair conditions for businesses of all sizes (ASMA, 2026).

In addition to primary production, India has a rapidly growing secondary aluminium sector that recycles aluminium scrap into usable alloys and ingots. This recycled metal has become essential for mid and downstream manufacturers. India's aluminium recycling industry has grown at a compound annual rate of 9 to 11 per cent from FY15 to FY23, significantly outperforming the 1 to 2 per cent growth in primary aluminium demand during the same period (MRAI, 2023). However, this sector is critically constrained by a deficient domestic scrap collection infrastructure. Domestic scrap availability is constrained due to underdeveloped collection systems and informal processing networks (IMARC Group, 2025). This network, whilst economically active, lacks the scale, quality sorting capabilities, and regulatory oversight necessary to meet the feedstock demands of secondary manufacturers. Hence it becomes important to ensure that the secondary manufacturers have access to primary aluminium at affordable rates as their raw material.

The micro, small and medium enterprises (MSMEs) dominate India's secondary aluminium manufacturing industry. The MSME segment is the principal organisational form within India's secondary aluminium manufacturing landscape. India's secondary aluminium alloy sector is highly fragmented, with approximately 60 per cent of capacity in the self-organised MSME segment (Ministry of Mines, 2025). In terms of employment generation, every million tonnes of aluminium produced creates 20,500 direct and indirect employment (Ministry of Mines, 2025). Based on these figures, the MSME sector, conservatively, generates around 41,000 direct and indirect jobs, based on a production capacity of 2 metric tonne (MT). As production increases, so does the potential for job creation. For the downstream aluminium, they employ nearly 10 lakh workers and make up about 90 per cent of jobs in the aluminium value chain (Arora & Gupta, 2023). These are the labour intensive, locally

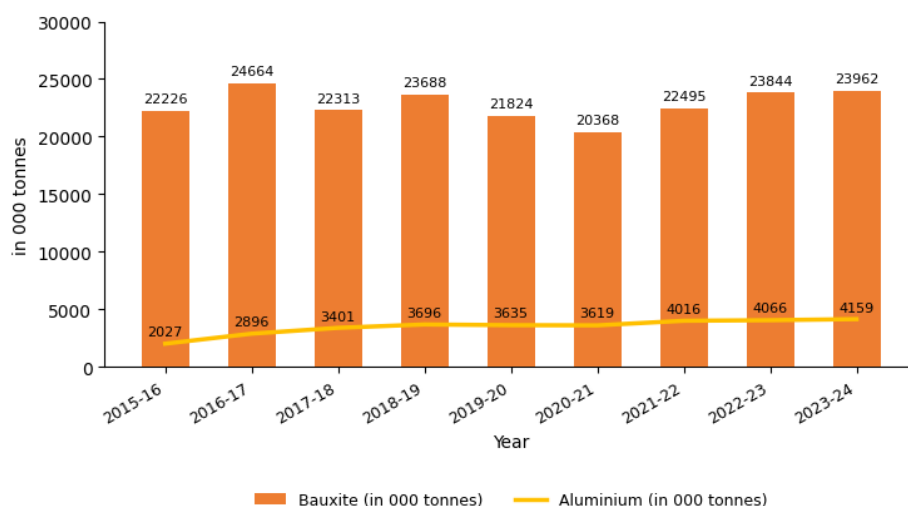
rooted firms that represent the essence of homegrown manufacturing. This concentration of employment in the downstream segment is not incidental; it rather reflects the labour-intensive nature of value addition. The MSME downstream is therefore not merely a buyer of primary metal. It is the segment where India's manufacturing potential is realised.

The cost vulnerability of the downstream and secondary MSME aluminium manufacturing segment is acute. For downstream manufacturers, primary aluminium can account for nearly 60 per cent of production costs. This is largely inflated due to the current import duty of 7.5 per cent plus an additional 0.75 per cent social welfare surcharge, a total of 8.25 per cent. This has resulted in the downstream manufacturing sector paying around USD 420 million in 2022 to primary producers simply because of the former's import parity pricing strategy (Ministry of Mines, 2025).

3. Snapshot of the Aluminium Production in India

Backed by one of the largest bauxite reserves in the world, the Indian aluminium sector has established a strong integrated value chain including mining, alumina refining, smelting, recycling, and downstream manufacturing. Recent production trends reflect the continued expansion of the sector. Figure I provides a snapshot of the productions of bauxite and aluminium between FY 2015-16 and 2023-24.

Figure 1: Production of Bauxite and Aluminium in India (2015-16 to 2023-24)

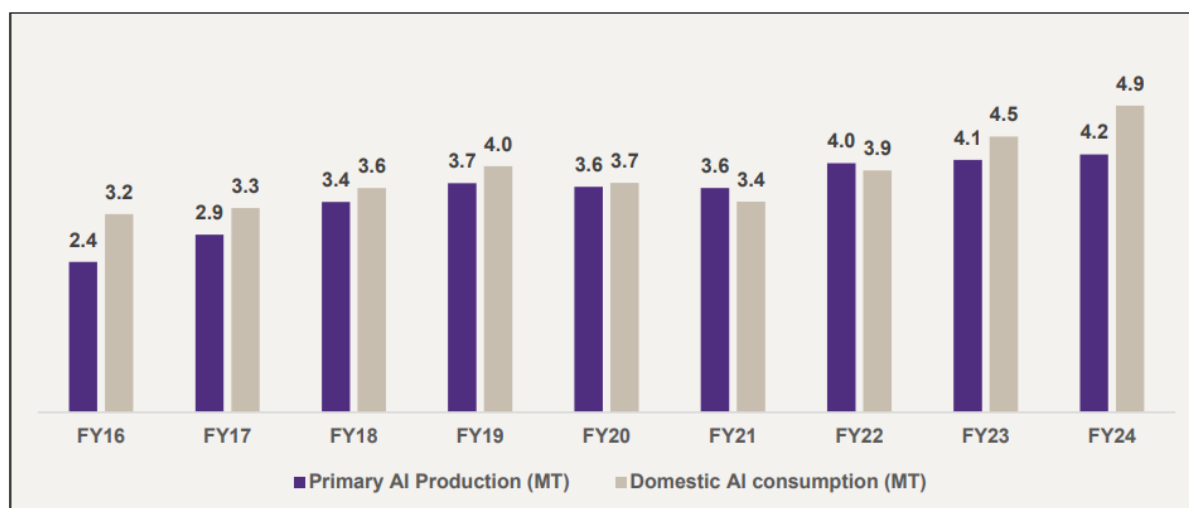


Source: Collated from Annual Reports of the Ministry of Mines, Government of India

Alumina, the intermediate product refined from bauxite before it is smelted into aluminium, has also grown over this period. India's alumina production rose from about 4.17 million tonnes in FY15-16 to a peak of 5.21 million tonnes in FY21-22, before

easing to 4.93 million tonnes in FY22-23 as expanded refining capacity outpaced captive smelter offtake (Indian Bureau of Mines, 2022-23). On average, about 2 tonnes of alumina (and 3 to 3.5 tonnes of bauxite) are required to produce 1 tonne of aluminium, which is why alumina production broadly tracks, but is not identical to, the bauxite and aluminium trends shown above.

Figure 2: Domestic Aluminium Production vis-à-vis Domestic Aluminium Consumption



Source: Ministry of Mines (2025), Vision Document on Aluminium Sector,

The demand for secondary aluminium has substantially outpaced that of primary aluminium, achieving a compounded annual growth rate (CAGR) of approximately 10.7 per cent from FY16 to FY23 (rising from 0.85 MT in FY16 to 1.73 MT in FY23). This rapid expansion has enabled the secondary sector to capture nearly 40 per cent, around 2.2 million tonnes annually, of the total domestic aluminium market, representing a 12 per cent increase over FY16 baseline levels (Figure II). Driven by strong automotive casting and non-ferrous manufacturing demand, secondary aluminium production capacity in India is projected to grow from approximately 2.0 MT in FY24 to 3.5 MT by FY30 (Ministry of Mines, 2025). Primary aluminium production has grown alongside this from 3.40MT in FY17-18 to approximately 4.16MT in FY23-24 (Figure I), and India remains the world's second largest primary aluminium producer.

Despite such substantial production and distribution capacity of the Indian aluminium sector, the per capita consumption remains relatively low compared to the global average. Furthermore, India remains a net importer of aluminium. Almost 85 per cent of the aluminium scrap which is required for secondary production is met through imports (ET Manufacturing, April 21, 2026). It is projected that by FY 30, India

would need almost 4.12 MT of aluminium scrap (Ministry of Mines, 2025). This import dependency exists alongside significant domestic smelting capacity.

There is no inherent, large-scale difference in the quality of primary aluminium produced domestically and that imported; major Indian producers adhere to global standards (International Aluminium Institute, 2022). The need for imports arises from a structural mismatch within the value chain. The aluminium production in India is dominated by primary aluminium (ingots), but its consumption is increasingly skewed towards specialised downstream products such as, extrusions, rolled products, and high purity alloys. The domestic capacity and variety are insufficient to meet burgeoning demand from sectors like automotive, electronics, and defence. Furthermore, imports of aluminium scrap, a critical raw material for secondary producers, are substantial due to inadequate domestic scrap collection and recycling infrastructure.

Under the overarching vision of “Viksit Bharat 2047”, secondary aluminium production derived specifically from domestic scrap is projected to reach an incremental 6.0 Million Tonne per Annum (MTPA). However, to meet the massive national aggregate demand target of 37 MTPA by FY47, the country will face a raw material shortfall of at least 7 MTPA, which must be bridged via international scrap sourcing, expanded domestic tracking systems, or foreign bauxite concessions (Ministry of Mines, 2025).

4. The Three Problems Faced by Secondary Manufacturers of Aluminium

India’s aluminium sector faces a duty structure question that primary and secondary manufacturers each experience differently, but that ultimately calls for a shared solution rather than a zero-sum contest. Primary producers operate under one of the highest cost structures among major aluminium producing nations, with taxes, cesses, and an inverted duty regime on critical raw materials adding meaningfully to production costs, even as the current 2.5 per cent duty on scrap sits well below the 7.5 per cent duty on primary metal. Secondary manufacturers, most of them MSMEs, depend on that low-cost scrap access for their basic viability. However, domestic scrap collection hasn’t kept pace with what the recycling economy needs, partly because the country’s scrap-recovery infrastructure remains underdeveloped relative to the volume of aluminium accumulated in the economy over decades. Hence, India needs to import scrap aluminium as raw material for secondary aluminium manufacturers.

There are three structural issues that impede the growth of the secondary manufacturers in India.

4.1 Pricing Mechanisms: International and Domestic

Internationally, aluminium prices are primarily determined on commodity exchanges, most notably the London Metal Exchange (LME). The LME price serves as the global benchmark, influenced by macroeconomic factors, global supply-demand balances, inventory levels, input costs (especially energy), and geopolitical developments (London Metal Exchange, 2023). Domestically, Indian primary producers price their metal largely with reference to the LME price. The domestic price is typically calculated as the LME price, adjusted for import duties, freight, insurance, port charges, and a local premium or discount based on domestic market conditions.

Therefore, India does not independently “set” the price; it is derived from the LME benchmark (Aluminium Association of India, 2022). Even though India produces primary aluminium, the manufacturers practice imports parity pricing. By definition, import parity pricing builds in the prevailing customs duty as one of its cost components alongside freight, insurance, and port charges. The calculation of overpayment is based on a) price on unwrought aluminium at London Metal Exchange (LME) as the international benchmark; b) local Indian premium; c) import tariff; d) exchange rate of INR/USD; e) cost & freight charges and f) amount of aluminium sold in India/year (Arora & Gupta, 2023). With the recent increase in the cost of non-ferrous metals owing to geopolitical pressures, this cost has further increased for secondary manufacturers. Unlike the primary manufacturers, MSMEs cannot absorb this cost. This means that MSMEs in India are paying import equivalent prices for domestically sourced aluminium. This additional cost burden has been the biggest constraint for growth for the MSMEs in downstream aluminium manufacturing.

4.2 The Inverted Duty Structure

An inverted duty structure occurs when the import duty on raw materials, such as primary aluminium, is higher than the duty on finished aluminium products. According to an analysis by the Aluminium Association of India (AAI), the basic customs duty on primary aluminium is 7.5 per cent, while the duty on many finished aluminium goods can be as low as 5 per cent or even less under various FTAs (Aluminium Association of India, 2022). This discrepancy creates a perverse incentive for downstream users to import finished goods rather than source primary metal domestically and manufacture locally.

For MSMEs, which operate on thin margins and lack the economies of scale of larger integrated producers, this duty asymmetry directly erodes their cost competitiveness. It places them at an immediate disadvantage before production even begins, as they pay more for their key input than what their final product must compete against in the market.

4.3 Unfavourable Free Trade Agreements (FTAs)

Free Trade Agreements (FTAs) with ASEAN, Japan, South Korea, and others often stipulate reduced or zero duties on a range of finished aluminium goods. For example, under the ASEAN-India FTA (AIFTA), many downstream aluminium products attract nil duty, facilitating a surge in imports from these regions. This has had a detrimental impact on MSMEs, which lack the economies of scale to compete with duty free finished imports. The FTA benefits have accrued more to trading partners and importers of finished goods than to the domestic manufacturing value chain, undermining the government's "Make in India" initiative in this sector (Pradhan & Abraham, 2022). These issues collectively undermine the competitiveness and viability of MSMEs, with significant repercussions for economic growth, employment, and the strategic "Make in India" initiative.

Under agreements like the AIFTA, many finished aluminium products attract reduced or nil duties, making them cheaper than Indian made equivalents. Data from the Ministry of Commerce and Industry shows that India's imports of aluminium articles (HS Chapter 76) from ASEAN countries have seen a consistent rise, growing from approximately USD 1.2 billion in the financial year 2019-20 to over USD 1.8 billion in 2022-23 (Ministry of Commerce and Industry, 2023). Overall downstream aluminium product imports have risen from 343,000 tonnes in 2014 to 562,000 tonnes in 2023, a 64 per cent rise, of which 70 per cent are attributed to imports from China. There is also the risk of trade diversion and circumvention where goods from non-ASEAN countries are potentially being routed through ASEAN nations to India (Ministry of Mines, 2025). This surge in imports directly displaces domestic production, especially from MSMEs that cannot match the scale and price of these inflows. The competition is not always on a level playing field, as many exporting nations may benefit from state subsidies, lower environmental compliance costs, or more efficient infrastructure, further widening the cost gap.

5. Structural Challenges and Broader Economic Implications for MSMEs

India's secondary aluminium manufacturing sector, predominantly comprising of MSMEs, serves as a critical downstream link in the nation's industrial value chain. These enterprises transform primary aluminium into a diverse array of semi-finished and finished products, such as extrusions, rolled products, and castings, which are essential for industries ranging from automotive and construction to packaging and electrical goods. However, this sector is currently grappling with a confluence of structural challenges, including an inverted duty structure, elevated input costs, and intense competition from cheaper imported finished goods, often facilitated by certain FTAs.

Compounding the existing duty issue are persistently high input costs that go beyond the prevalent import parity pricing strategy adopted by the primary manufacturers. The domestic price of primary aluminium in India is influenced by factors such as power tariffs, logistics costs, and the imposition of Goods and Services Tax (GST). Power is a particularly significant cost component, accounting for nearly 40 per cent of the production cost in secondary aluminium operations (Ministry of Mines, Government of India, 2023). While large primary producers often have captive power plants, MSMEs typically rely on grid power, which is subject to high industrial tariffs that vary significantly across states. Furthermore, the cost of logistics within India remains elevated. A World Bank report from 2023 noted that India's logistics costs are estimated to be 13 to 14 per cent of GDP, which is higher than many other developing economies, thereby increasing the final cost of domestically manufactured goods (World Bank, 2023). These elevated costs of power and logistics stifle the ability of MSMEs to price their products competitively.

The impact of these intertwined problems on MSMEs is severe and multifaceted. Financially, it leads to underutilised capacity, reduced profitability, and stunted growth. Many units are forced to operate at 50 to 60 per cent of their installed capacity due to weak domestic demand suppressed by imports (Aluminium Association of India, 2022). This financial stress inhibits their ability to invest in new technology, upgrade equipment, or enhance skills, trapping them in a cycle of low productivity. The most significant consequence, however, is on employment. The secondary aluminium sector is highly labour-intensive, providing direct and indirect employment to an estimated 500,000 to 700,000 people across India, many in semi-urban and rural areas (MSME Ministry, Annual Report 2022-23). As units struggle or shut down, these jobs are imperilled, leading to localised economic distress and reversing gains in formalising industrial employment.

The ramifications extend beyond the sector itself, negatively affecting broader economic growth and the “Make in India” vision. A vibrant MSME sector is a well-documented engine for economic diversification, innovation, and inclusive growth. By stifling this sector, the nation loses out on the potential multiplier effects that aluminium MSMEs could generate across linked industries. More critically, the challenges directly contravene the objectives of “Make in India”, which aims to transform India into a global manufacturing hub by promoting domestic value addition. The current scenario, where importing finished goods is often cheaper than manufacturing them domestically due to policy distortions, actively discourages value addition within India. It perpetuates a model where India remains a large consumer and importer of finished goods, rather than a manufacturer and exporter. This places MSMEs, intended to be the bedrock of this manufacturing revolution, at a considerable strategic disadvantage, undermining the very premise of self-reliance and domestic capacity building.

6. Possible Solutions

To solve the structural conundrum impacting India’s aluminium value chain, policy think tanks and industry experts have proposed a comprehensive, multi-pronged structural overhaul. The consensus is that India needs to transition from treating aluminium as a heavily protected raw material to treating it as a strategic industrial driver, much like China has done. The proposed roadmap to balance the market and protect secondary and downstream manufacturers centres on four specific interventions:

- **Rationalise the Import Duty on Primary Aluminium:** The most direct way to dismantle the damage of import parity pricing is to rationalise import duties. If the import tariff is rationalised, secondary manufacturers will have access to reasonably priced primary aluminium in both domestic and from foreign markets. This removes the artificial 7.5 per cent tariff premium that is currently passed down to over 3,500 local MSMEs.
- **Impose High Export Duties on Primary Metal:** To prevent local smelters from simply abandoning the domestic market and executing a mass “export exodus” to seek higher international margins, a defensive trade barrier could be imposed on exports. This strategy involves imposing an export duty. For instance, China currently imposes a 15 per cent export duty on primary aluminium ingots and unwrought metal, which has proven to be a successful strategy for them. By heavily taxing raw metal exports, primary producers are financially disincentivised from shipping basic ingots out of the country. It

forces them to redirect their vast production capacities inward, ensuring abundant domestic raw material availability.

- **Re-negotiate or Correct FTA Inversions:** To stop cheap foreign finished products from suffocating Indian manufacturers, FTAs must be rationalized. The government should review and adjust the tariff schedules within existing FTAs (especially with ASEAN countries, Japan, and South Korea) to ensure that duties on imported finished aluminium goods are never lower than the duties on input materials. Correcting this restores a logical trade hierarchy. If foreign finished goods are subjected to normal, protective tariffs, domestic secondary manufacturers can compete fairly based on their actual operational efficiency.
- **Implement Local “Dual-Pricing” Mechanisms:** Another corporate-level solution involves the state facilitating long-term supply agreements between primary smelters and domestic secondary/downstream manufacturers. The government could mandate a percentage of domestic smelting output to be allocated to local MSMEs at a “Domestic Formula Price” (linked to actual local production cost plus a fixed margin cap), while allowing primary producers to sell their remaining surplus on the open market at LME/IPP rates. This mechanism is a complement to, rather than a substitute for, a reduction in the basic customs duty on primary aluminium: even with a Domestic Formula Price in place, MSMEs that need to supplement local supply with imports would still benefit from a lower landed cost.

7. Scope of the Discussion

The problems faced by India’s secondary aluminium manufacturers, be it the inverted duty structure, high input costs, or the FTA driven import competition, they are all contributing towards an unfavourable environment, particularly for MSMEs. This not only threatens the survival of numerous enterprises but also weakens a critical segment of the manufacturing ecosystem. For the “Make in India” initiative to succeed in metals and manufacturing, it is imperative to address these structural issues through coherent policy reform. This may include rationalising the duty structure to correct the inversion, providing targeted relief on critical input costs like power for MSMEs, examining the feasibility of a dual price structure, considering a feasibility of export tariffs, and reviewing FTA terms to ensure they foster fair competition and support domestic value addition. Without such interventions, the potential of this vital sector will remain unrealised, to the detriment of India’s industrial and economic ambitions.

Against this backdrop, a stakeholder consultation was convened by the Policy Consensus Centre on 2 July 2026. The consultation brought together representatives of the Ministry of Micro, Small and Medium Enterprises, Invest India, the Federation of Aluminium Consumers in Europe (FACE), the Centre for Trade and Investment Law, the Indian Institute of Foreign Trade, the Material Recycling Association of India (MRAI), The Energy and Resources Institute (TERI), the Institute for Studies in Industrial Development, the Centre for Social and Economic Progress (CSEP), the Indian Electrical and Electronics Manufacturers Association (IEEMA), Cable and Conductor Manufacturers Association of India (CACMAI) and ASMA member companies among others to deliberate how tariff policy, resource availability, recycling, export competitiveness, and MSMEs growth can be aligned to support a stronger and more competitive aluminium ecosystem. Sections 8 and 9 below summarise that discussion and set out the policy recommendations, and the rationale for each, that emerged from it.

8. Summary of the Stakeholder Discussion

The discussion opened with the scale of the burden that import parity pricing places on India's aluminium downstream, which can absorb as much as 80 per cent of production costs in the most metal-intensive segments, against a sector-wide average of 60 per cent, and was estimated to cost the downstream around USD 600 million annually, above the USD 420 million figure shown by estimates in 2022. With MSME margins already below 8 to 10 per cent and capacity utilisation at just 50 to 55 per cent, participants agreed that the duty structure needs rationalising, differing mainly on pace and sequencing. The European Union's experience was invoked as a warning. Its own import parity mechanism costs downstream firms close to EUR 2 billion a year, and over EUR 22 billion cumulatively across three decades, driving bankruptcies and a fall in the EU's share of global aluminium products from 28 to 14 per cent. Two partial tariff cuts failed to ease this pressure, because domestic pricing remained benchmarked to the residual duty. This experience led to a strong recommendation that only a reduction to zero, not a partial one, breaks the mechanism structurally.

Additional tools discussed included tariff-rate quotas and stricter, smelting-based rules of origin to counter FTA-driven duty inversion and suspected transshipment, alongside investment-protection and local-content provisions, though India's limited capacity to verify origin under Customs Administration of Rules of Origin under Trade Agreements (CAROTAR) was flagged as a persistent constraint. It was noted that the Government remains open to evidence-based advocacy on the issue, though industry would need to demonstrate, empirically, that current pricing practice disproportionately harms the downstream relative to the benefits retained upstream.

Any change, it was stressed, would need to be revenue-neutral and weighed against wider trade, employment and investment considerations. Underused MSME support schemes, including credit guarantee, equity support and ZED certification instruments, were also highlighted during this part of the discussion.

Discussion then turned to structural concentration in bauxite mining and smelting, seen as a constraint that duty reform alone cannot fix, alongside proposals to sequence any reduction gradually (for instance from 7.5 towards 2.5 per cent before a longer glide to zero) paired with energy-cost relief for primary producers, and to explore designating aluminium a critical mineral for stockpiling purposes. On recycling, with 85 per cent of India's scrap needs met through imports, there was strong support for scrapping the 2.5 per cent import duty on scrap and cutting GST on scrap from 18 to 5 per cent, judged close to revenue-neutral and likely to formalise informal scrap aggregation, provided quality standards (91 to 95 per cent purity) guard against substandard imports; risks from the EU's proposed Waste Shipment Regulation and from Extended Producer Responsibility compliance costs falling harder on smaller units were also raised. On decarbonisation, participants noted the absence of an aluminium equivalent to the Green Steel Action Plan despite the sector's inclusion among hard-to-abate industries, suggesting green aluminium may be easier to decarbonise than steel and that early certification could turn CBAM exposure into an export advantage. A dual-pricing proposal drew downstream support but also caution, on the grounds that similar mechanisms elsewhere have proved litigious and administratively difficult to police. In closing, duty rationalisation drew the broadest backing, though with disagreement over whether to move directly to zero or cap near-term cuts at 2.5 per cent; export duties were largely seen as a counterproductive long-term tool; correcting FTA-driven inversion was endorsed in principle but seen as slow to achieve through renegotiation, favouring administrative fixes in the interim; and a fifth idea emerged during discussion, a targeted, revenue-neutral incentive scheme calibrated to the effective rate of protection facing the downstream, proposed as a complement to duty rationalisation rather than a substitute. It was broadly accepted that of the four possible solutions, rationalisation of import duty on primary aluminium and policy reforms to counter the inverted duty structure are low hanging fruits and could provide much relief to the constraints faced by the secondary aluminium manufacturers.

9. Policy Recommendations and Rationale

Drawing on the concept-note and the stakeholder consultation summarised above, the following recommendations are put forward for consideration by policymakers, in particular the Ministry of Micro, Small and Medium Enterprises and the Department of Commerce. Each recommendation is accompanied by the rationale that emerged from the discussion.

- **Rationalise the import duty on primary aluminium along a staggered, time-bound glide path.** Rather than a single adjustment, the basic customs duty on primary aluminium (currently 7.5 per cent, 8.25 per cent inclusive of the social welfare surcharge) should be reduced in pre-announced steps – for instance, toward 2.5 per cent in the near term, with a firm, published date for reaching zero – rather than being left open-ended.

Rationale: this responds to both sides of the evidence presented at the consultation. Downstream industry’s empirical case (an estimated USD 420–600 million annual cost of import parity pricing) supports early relief; FACE’s 27-year EU experience shows that partial cuts alone (from 6 per cent to 3–4 per cent) failed to break the import parity pricing mechanism because domestic prices continued to benchmark off the residual tariff. A staggered but time-bound path to zero reconciles the government’s stated preference for gradualism and evidence-based sequencing with the structural case for eventual elimination.

- **Pair duty rationalisation with a compensating support package for primary producers, particularly on energy costs.**

Rationale: participants cautioned that primary producers, for whom energy is the principal cost disadvantage, are likely to resist duty rationalisation more strongly if it is not accompanied by relief elsewhere in their cost structure. Structuring reform as a package, rather than a one-sided change, reduces the risk of the reform being contested as a zero-sum transfer between primary and secondary producers and improves its political feasibility.

- **Reduce the customs duty on aluminium scrap from 2.5 per cent to zero.**

Rationale: Budget 2024-25 already reduced scrap import duties to zero for most other base metals, leaving aluminium as an outlier; with 85 per cent of India’s scrap requirement import-dependent, this duty adds cost to an input that also carries a materially lower carbon footprint than primary metal, and its removal

would support both the recycling sector's viability and India's decarbonisation objectives.

- **Rationalise GST on aluminium scrap from 18 per cent to around 5 per cent, while retaining GST on downstream products.**

Rationale: participants argued this change is close to revenue-neutral, since GST paid on scrap as an input is creditable rather than a net revenue item for government, while GST on the finished product continues to be collected in full. A lower GST rate is expected to draw India's fragmented, largely informal scrap-aggregation network into the formal tax net, supported by preliminary survey evidence of a meaningful formalisation response. Any such change should be accompanied by minimum purity standards (in the range of 91–95 per cent aluminium content) for imported and domestically traded scrap, to protect the secondary industry from substandard material.

- **Correct FTA-driven duty inversion using instruments appropriate to new and existing agreements.** For future or renegotiated FTAs: introduce tariff-rate quotas on finished aluminium products, adopt smelting-and-casting-based rules of origin in place of simple value-addition thresholds, include explicit denial-of-benefits clauses to guard against transshipment, and seek Special and Differentiated Treatment provisions consistent with India's developing-country status. For FTAs already in force: expand the targeted use of anti-dumping duties where dumping is evidenced (building on the existing measure on aluminium foil) and strengthen CAROTAR-based verification capacity so that rules-of-origin claims can be checked at the product level.

Rationale: this reflects the trade law expertise brought to the consultation, and the recognition that renegotiating existing FTAs outright is slow and diplomatically costly, whereas administrative and future-facing tools can deliver protection more quickly.

- **Treat export duties on primary aluminium, and wholesale renegotiation of existing FTAs, as secondary, contingent instruments rather than first-line measures.**

Rationale: the weight of expert opinion at the consultation, including FACE's long-run international experience, was that export duties tend to be counterproductive over time and that renegotiating existing FTAs is slow and carries diplomatic costs; both retain some value as negotiating leverage but should not substitute for duty rationalisation and the FTA-inversion measures above.

- **Commission further legal and design feasibility work before advancing a domestic dual-pricing (“Domestic Formula Price”) mechanism.**

Rationale: while dual pricing retains support among downstream participants, it carries a documented trade-dispute and litigation risk (illustrated by the EU-GCC gas dual-pricing dispute) and is vulnerable to definitional manipulation once a formula is codified. It should be pursued, if at all, only following a rigorous feasibility and legal-risk assessment, and positioned as complementary to, not a substitute for, customs duty rationalisation.

- **Build and route the empirical case the Government has asked for.** This should include the effective rate of protection facing the downstream segment (preliminary calculations presented at the consultation suggest this has turned negative), the ad valorem equivalent of all duties, cesses and non-tariff costs across the value chain, and an explicit accounting of the trade-off between the (limited) revenue and protection benefit retained by primary producers and the exports, employment and GDP contribution forgone by a constrained downstream.

Rationale: the Ministry of MSME indicated it is willing to advocate for duty rationalisation with the Department of Commerce, which alone can amend the relevant customs notification, but only on the basis of robust evidence that current pricing practice disproportionately harms the larger part of the industry and that reform would serve the broader economic and revenue interest, not the aluminium value chain alone.

- **Explore formal designation of aluminium as a critical mineral, alongside a dedicated national scrap and recycling policy.**

Rationale: critical mineral status, already adopted for aluminium in the European Union, the United States and the United Kingdom, would support strategic stockpiling against the geopolitical price volatility highlighted at the consultation and would reflect aluminium’s growing strategic role in electric mobility, defence, renewable energy and construction. This should be paired with a national policy for scrap collection, sorting and recycling, addressing the absence of such a framework noted both in this note and at the consultation, so that duty and GST reforms are matched by an organised domestic recycling ecosystem able to absorb them.

- **Develop a green aluminium and CBAM-readiness framework ahead of the compliance burden.**

Rationale: unlike steel, aluminium currently has no green certification scheme, action plan, or production-linked incentive in India, despite being named among the initial hard-to-abate sectors in the Ministry of Finance's green taxonomy. Since aluminium decarbonisation is comparatively more tractable than steel's, an early and credible framework – potentially modelled on the steel sector's certification approach – could convert CBAM compliance into a competitive and export advantage for Indian producers, rather than allowing it to compound the cost burden created by import parity pricing.

- **Calibrate any Extended Producer Responsibility (EPR) obligations for non-ferrous metals with MSME-specific simplification.**

Rationale: EPR compliance and certification costs are more easily absorbed by large, integrated players than by MSMEs; without simplified compliance pathways for smaller aggregators and downstream units, EPR risks becoming, as one participant put it, “good policy, weak execution,” undermining rather than advancing the formalisation of the recycling sector that the policy intends.

- **Consider a targeted, revenue-neutral incentive calibrated to the sector's effective rate of protection.**

Rationale: with preliminary estimates suggesting the downstream segment's effective rate of protection has turned negative, a targeted incentive (for instance, a production-linked or interest-subsidy scheme, distinct from the generic MSME credit and equity instruments already available but evidently underutilised by this sector, including the ZED certification scheme) could offset this while remaining broadly consistent with the Government's revenue posture, since improved downstream profitability would, over time, generate compensating direct-tax and investment gains.

Bibliography

- AL Circle. (2025). "Secondary aluminium: Powering India's green growth, circular economy, and global competitiveness". <https://www.alcircle.com/press-release/secondary-aluminium-powering-indias-green-growth-circular-economy-and-global-competitiveness-116096>
- AL Circle. (2026). "From iPhones to trucks, aluminium's downstream and end-user demand story is gathering pace". <https://www.alcircle.com/news/from-iphones-to-trucks-aluminium-s-downstream-and-end-user-demand-story-is-gathering-pace-119994>
- AL Circle. (2026). "GTRI seeks a trade policy shift to keep more aluminium within India". <https://www.alcircle.com/news/gtri-seeks-a-trade-policy-shift-to-keep-more-aluminium-within-india-120001>
- AL Circle. (2026). "Indian aluminium recyclers seek import duty relief amid tightening global scrap supply". <https://www.alcircle.com/news/indian-aluminium-recyclers-seek-import-duty-relief-amid-tightening-global-scrap-supply-118162>
- All India Non Ferrous Metal Association (AINFMA). (2018). "Aluminium scrap recycling MSMEs oppose import duty hike". KNN India. <https://knnindia.co.in/news/newsdetails/msme/aluminium-scrap-recycling-msmes-oppose-import-duty-hike-on-aluminium-scrap-from-25-to-75>
- Aluminium Association of India. (2022). "Pre-Budget Memorandum 2022-23: Recommendations for the Aluminium Industry". Retrieved from <https://aluminium-india.org/pre-budget-memorandum-2022-23/>
- Aluminium Secondary Manufacturers Association (India). (2022). Policy. ASMA India. <https://asmaindia.co.in/policy/>
- Arora, A., & Gupta, S. K. (2023, June). Assessing the impact of CBAM and tariffs in the Indian aluminium industry. Indian Institute of Foreign Trade (IIFT); Aluminium Secondary Manufacturers Association (ASMA). https://asmaindia.co.in/wp-content/uploads/2023/07/ASSESSING-THE-IMPACT-OF-CBAM-AND-TARIFFS_June-2023_FINAL.pdf
- Asian Development Bank. (2023). "Trade Agreements and Manufacturing Competitiveness in Developing Asia". <https://www.adb.org/publications/trade-agreements-manufacturing-competitiveness-developing-asia>
- Bizongo. (2024). "The Indian aluminium market: Industry dynamics, trends, and future potential". <https://www.bizongo.com/blog/the-indian-aluminium-market-industry-dynamics-trends-and-future-potential>
- Business Standard. (2024). "Budget 2024: MRAI urges govt to remove import duty on aluminium scrap". <https://www.business->

- standard.com/budget/news/budget-2024-mrai-urges-govt-to-remove-import-duty-on-aluminium-scrap-124071800228_1.html
- Business Standard. (2026). "India should curb primary aluminium exports to boost manufacturing: GTRI". https://www.business-standard.com/industry/news/india-should-curb-primary-aluminium-exports-to-boost-manufacturing-gtri-126061800737_1.html
- Economic Times. (April 21, 2026), "Indian recyclers seek removal of import tax on aluminium scrap, letter shows". <https://manufacturing.economictimes.indiatimes.com/news/industry/indian-recyclers-seek-removal-of-import-tax-on-aluminium-scrap-letter-shows/130410525>
- Global Trade Research Initiative (GTRI). (2026). Cited in AL Circle: "GTRI seeks a trade policy shift to keep more aluminium within India". <https://www.alcircle.com/news/gtri-seeks-a-trade-policy-shift-to-keep-more-aluminium-within-india-120001>
- IMARC Group. (2025). "Aluminium scrap prices, trend, index, chart and forecast". <https://www.imarcgroup.com/aluminium-scrap-pricing-report>
- Indian Bureau of Mines, Ministry of Mines, Government of India. (2025). "Indian Mineral Industry at a Glance 2022-23". Nagpur: Controller General, Indian Bureau of Mines. Retrieved from https://ibm.gov.in/writereaddata/files/17501634866851601e3668eIMIG_2223_Annex_IIMYB.pdf
- International Aluminium Institute. (2023). "Global Aluminium Value Chain Analysis". Retrieved from <https://www.world-aluminium.org/publications/>
- London Metal Exchange. (2023). "LME Aluminium Contract Specifications".
- Material Recycling Association of India (MRAI). (2023). "India's growing low carbon aluminium recycling industry demands zero per cent import duty on scrap metal". Cited in AL Circle. <https://www.alcircle.com/press-release/indias-growing-low-carbon-aluminium-recycling-industry-demands-zero-import-duty-on-scrap-metal-material-recycling-association-of-india-mrai-101946>
- Ministry of Micro, Small & Medium Enterprises, Government of India. (2023). Annual Report 2022-23. Retrieved from <https://msme.gov.in/sites/default/files/MSME-AR-2022-23-Eng.pdf>
- Ministry of Mines, Government of India. (2023). Annual Report 2022-23. Retrieved from https://mines.gov.in/writereaddata/UploadFile/Annual_Report_English_2022_23.pdf
- Ministry of Mines, Government of India. (2024). "International mineral scenario". <https://mines.gov.in/webportal/internationalmineralsscenario>

- Ministry of Mines. (2025), "Vision Document on Aluminium Sector". New Delhi. Retrieved from https://mines.gov.in/admin/storage/ckeditor/n-25_1751560198.pdf
- NITI Aayog. (2022). "Strategy for New India @ 75: Manufacturing and MSMEs". https://www.niti.gov.in/sites/default/files/2019-01/Strategy_for_New_India_2.pdf
- PIB Release. (August 2024), "India is the 2nd Largest Aluminium Producer in the World". PIB Release 10612. Retrieved from <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2039988®=48&lang=2>
- Policy Consensus Centre (2026). "Beyond the Smelter: Where Aluminium Policy Meets India's Growth Story" [Stakeholder consultation transcript]. New Delhi, 2 July 2026.
- Pradhan, J., & Abraham, V. (2022). "Trade Agreements and Manufacturing Performance: The Case of Indian Aluminium". *Journal of World Trade*.
- Press Information Bureau, Government of India. (2023). "Make in India: Progress and Prospects". <https://pib.gov.in/PressReleasePage.aspx?PRID=1904323>
- Srivastava, R. & Dutta, R. (November 2025), "Policy Brief: Reforming India's Aluminium Ecosystem – Tariff Rationalisation and Competitive Pricing for MSME Growth". Published by CUTS Centre for International Trade, Economics and Environment, Jaipur. Retrieved from https://cuts-citee.org/pdf/Briefing_Paper_Reforming_Indias_Aluminium_Ecosystem_Tariff_Rationalisation_and_Competitive_Pricing_for_MSME_Growth.pdf
- Swarajya Magazine. (2025). "Why India's electronics makers pay more for aluminium despite having the cheapest production". <https://swarajyamag.com/economy/why-india39s-electronics-makers-pay-more-for-aluminum-despite-having-the-cheapestproduction>
- TechSci Research / AL Circle. (2024). "India aluminium market report: Forecast till 2030". <https://www.alcircle.com/specialreport/2389/india-aluminium-market-report-forecast-till-2030>
- The Energy and Resources Institute (TERI). (2022). "Energy Efficiency in Indian MSMEs: A Sectoral Analysis". New Delhi: TERI Press.
- UJA Market Reports. (2025). "Aluminium industry in India". <https://uja.in/blog/market-reports/aluminium-industry-in-india/>
- United Nations Industrial Development Organization (UNIDO). (2023). "Industrial Development Report 2023: The Future of Industrialization in a Post-Pandemic World". Retrieved from <https://www.unido.org/idr2023>
- World Bank. (2023). India Logistics Costs: A Comparative Analysis. Retrieved from <https://www.worldbank.org/en/country/india/publication/india-logistics-costs-analysis>

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