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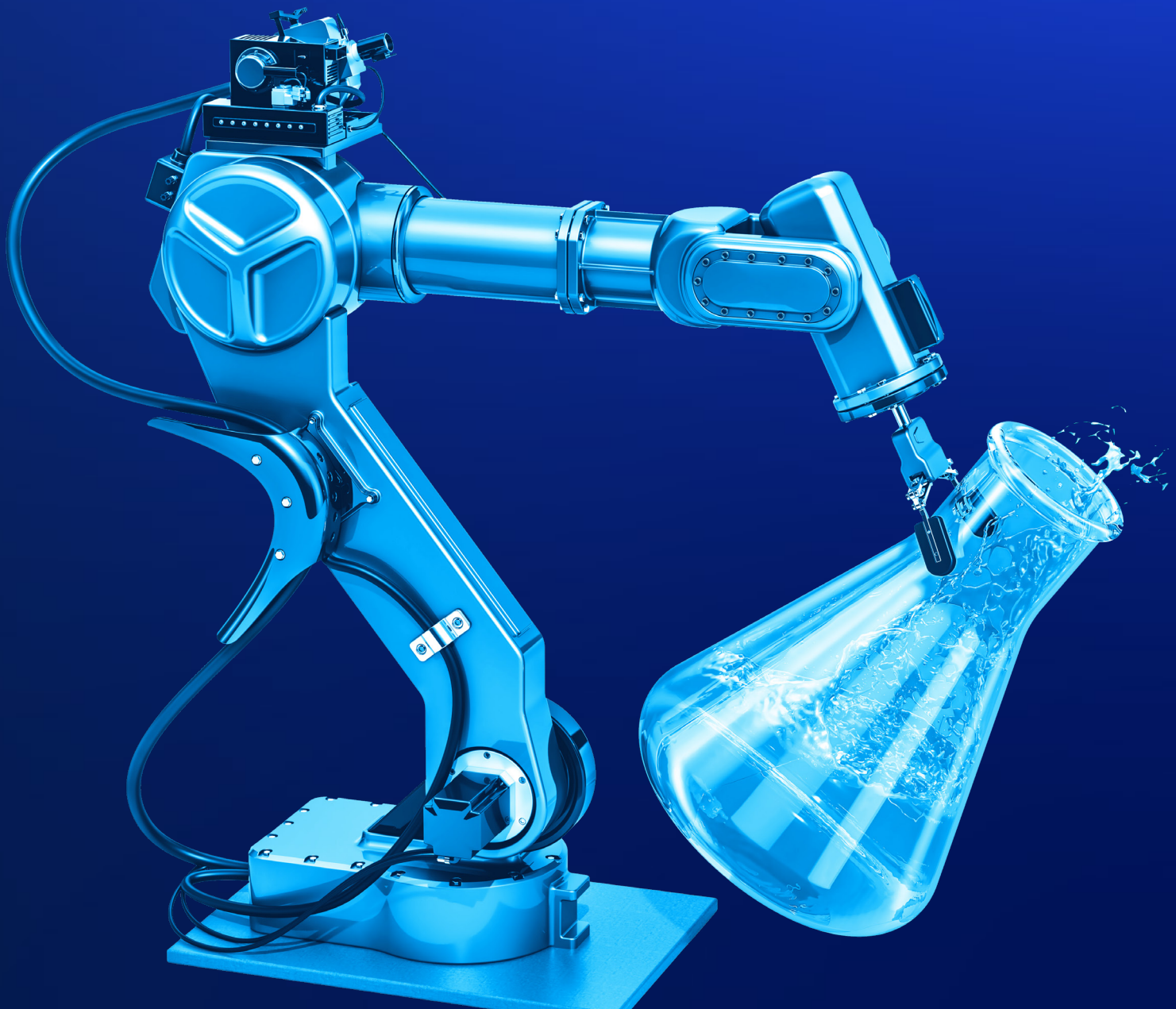
From challenges to possibilities: Leading India's chemical industry through global headwinds

March 2026



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Executive summary

After two decades of outperformance, the global chemical industry has entered a structurally different operating environment. Since late 2022, global chemicals have trailed the broader market, with total shareholder return (TSR) turning negative. This shift is driven by inventory destocking and China's structural overcapacity putting pressure on prices. Global petrochemical operating rates have fallen to approximately 70 percent, considerably below pre-COVID averages of approximately 80 percent,[1] and rising US tariffs (now averaging 18 percent)[2] are reshaping competitive dynamics and accelerating supply regionalization.

While these headwinds compress near-term margins, they also present opportunities for leaders to reposition for long-term advantage. India's strong domestic demand, competitive cost base, and expanding role in global value chains offer structural resilience relative to many other markets. Indian companies that act boldly—focusing on high-growth sectors, building differentiated capabilities, and streamlining capital deployment—could be well positioned to drive the next phase of the industry's evolution.

The global chemical industry: A new paradigm

The industry has shifted from a phase of broad-based value creation to one of structural capacity imbalance. Following strong TSR during China-led expansion and the COVID-19 upcycle, the global chemical industry now faces declining returns—TSR of 1.2 percent over the past two years [3] as capacity additions, particularly in China, have exceeded demand and depressed global utilization rates. Over long-time horizons, commodity and specialty chemicals have delivered similar average returns, while diversified chemical companies have consistently lagged by an average TSR of 0.5 to 2 percent.[4] Although specialty chemicals continue to outperform on a relative basis in the current cycle, returns have moderated given customer destocking, China's overcapacity, and weakening pricing power. Petrochemicals are the most affected, as sustained oversupply has pushed utilization to multi-year lows and delayed margin recovery.

Headwinds confronting India's chemical industry

Over the past decade, Indian chemical companies have delivered a TSR CAGR of approximately 17 percent,[5] two to three times the return of most global peers and outpacing the Sensex. A changing world order has, however, softened value creation, with base chemicals experiencing sharper declines than specialty chemicals over the past one to two years.

1 Chemical Market Analytics by OPIS.
2 Agreed and effective as of February 7, 2026. The formal signing was pending at the time of writing this.
3 McKinsey Value Intelligence: Capital markets perspective.
4 McKinsey Value Intelligence: Capital markets perspective.
5 McKinsey Value Intelligence: Capital markets perspective.

Industry revenue growth over fiscal year 2019 to fiscal year 2025 has tracked nominal GDP growth of 6 to 7 percent, yet EBITDA margins have compressed across multiple segments.[6] Value creation has become noticeably bifurcated: A limited set of winners combine double-digit growth with margin expansion, while the broader cohort remains mired in modest growth with flat margins. These pressures have slowed capex momentum, with utilization rates across specialty chemicals averaging 60 to 75 percent and new lines operating at just 20 to 30 percent.[7]

Raising global ambitions for the Indian chemical industry

India's chemical market is projected to expand at 8 to 9 percent CAGR over the next five to six years, reaching $230 billion to $255 billion from the current $155 billion to $165 billion and potentially outpacing the GDP growth rate.[8] Trends indicate a significant growth opportunity for companies willing to look beyond domestic demand and scale capabilities to compete as global suppliers.

At a macro level, McKinsey research has identified 18 distinctive arenas of growth that could generate $1.7 trillion to $2 trillion in revenue for India by 2030, led by technological advancements and sustained investment.[9] Of these, eight select arenas, including construction, semiconductors, renewables, and automotive, have significant usage of chemical inputs, and could add $30 billion to $35 billion to chemical revenues by 2030, as downstream capacity expands through government funding, policy incentives, and supply chain localization.[10] In parallel, India's approximately $31 billion chemical trade deficit in 2025 highlights a substantial import substitution opportunity, particularly in inorganics and polymers.[11]

How Indian chemical companies could create value

Amidst global volatility, overcapacity, margin pressure, and trade fragmentation, profitable growth is likely to depend on sharper choices around portfolios, capabilities, capital allocation, and execution. Focused moves across seven levers could help build resilience and global competitiveness for Indian chemical companies:

1. *Build domestic platforms with global reach.* Eight select arenas can now support global-scale chemical operations in India. Even individual segments offer significant near-term opportunities, highlighting the importance of timely investments and strategic partnerships.
2. *Create global operating capabilities in priority markets.* With only an approximately 3 percent share of global trade,[12] Indian companies could build global operating capabilities to enhance growth and pricing power.
3. *Institutionalize programmatic partnerships.* As global deal activity accelerates and asset valuations reset, Indian companies could drive partnerships to access technology and markets that may otherwise require prolonged organic development.

6 McKinsey Value Intelligence: Revenue and EBITDA of the top 195 listed chemical companies in India; World Bank.
7 McKinsey Value Intelligence: CAPEX of top 195 listed chemical companies in India.
8 S&P Global Comparative Industry, October 6, 2025; McKinsey analysis.
9 Bhavesh Mittal, Kevin Russell, Rajat Dhawan, and Mamta Deswal, "India's future arenas: Engines of growth and dynamism," McKinsey, June 19, 2025.
10 S&P Global Comparative Industry, October 6, 2025; "India's future arenas: Engines of growth and dynamism," McKinsey, June 19, 2025; McKinsey analysis.
11 UN Comtrade, International Trade Map; McKinsey analysis.
12 UN Comtrade, International Trade Map.

4. *Turn innovation into a growth engine.* There is scope to transform R&D from a process-focused technical function into a strategic growth engine through technology development, application-led innovation, customer-embedded creation, and accelerated commercialization—independently or in partnership.
5. *Integrate AI into the operating model.* We estimate that AI and advanced analytics could deliver 8 to 12 percentage point EBITDA improvements across procurement, manufacturing, and supply chain, without heavy capital spend.[13] Agentic AI has the potential to enable comprehensively reimagining most workflows and functional operations.
6. *Build resilient supply chains.* Recent disruptions, including pandemic-related shutdowns and logistics bottlenecks, underscore the need for more resilient supply chains such as distributed warehousing, regional inventory positioning, and vertical and horizontal integration or partnership arrangements.
7. *Strengthen the balance sheet and P&L.* Amid geopolitical turmoil, maintaining balance sheet headroom and active management of working capital, foreign exchange, and energy exposure are important, not only as defensive necessities but as strategic enablers.

While challenges may persist, these seven levers could help Indian chemical companies to reignite growth while maintaining profitability amid heightened global volatility. Firms that prioritize structurally attractive markets, develop specialized capabilities, and deploy capital with discipline can lead India's chemical industry into its next phase of global prominence, with early movers not only achieving superior scale but also shaping competitive dynamics for the decade ahead.

[13] McKinsey analysis.

1 The global chemical industry: A new paradigm

After outperforming on total shareholder return for two decades, and rebounding post COVID, the global chemical industry is in transition. The period of broad-based value creation has given way to an era that is structurally more demanding, forcing companies to respond with more focused growth plans.

The shifting global reality

Returns now trail broader markets as overcapacity, softer demand, and trade fragmentation squeeze margins and utilization. Performance is diverging across segments and regions: China and parts of Asia are reshaping trade flows while Europe contends with high costs and legacy assets. The dominant headwind is overcapacity, and tariff uncertainty and geopolitical friction are an additional strain.

In response, leading companies are initiating a structural reset, repositioning portfolios, tightening cost and capital discipline, and scaling technology-enabled productivity to drive the next wave of value creation.

TSR outperformance has come to an end

Over the past two decades, the global chemical industry consistently outperformed broader capital markets.[14] From 2002 to 2019, the TSR for chemicals compounded at rates above the MSCI World Index across multiple cycles. Between 2002 and 2008, chemicals generated an average TSR CAGR of approximately 8 percent versus around 5 percent for the broader market. Momentum strengthened in the following decade as TSR CAGR accelerated to approximately 13 percent, slightly higher than the MSCI World Index (around 12 percent), driven by China-led demand growth, advantaged North American feedstocks, and scale-driven operating leverage.

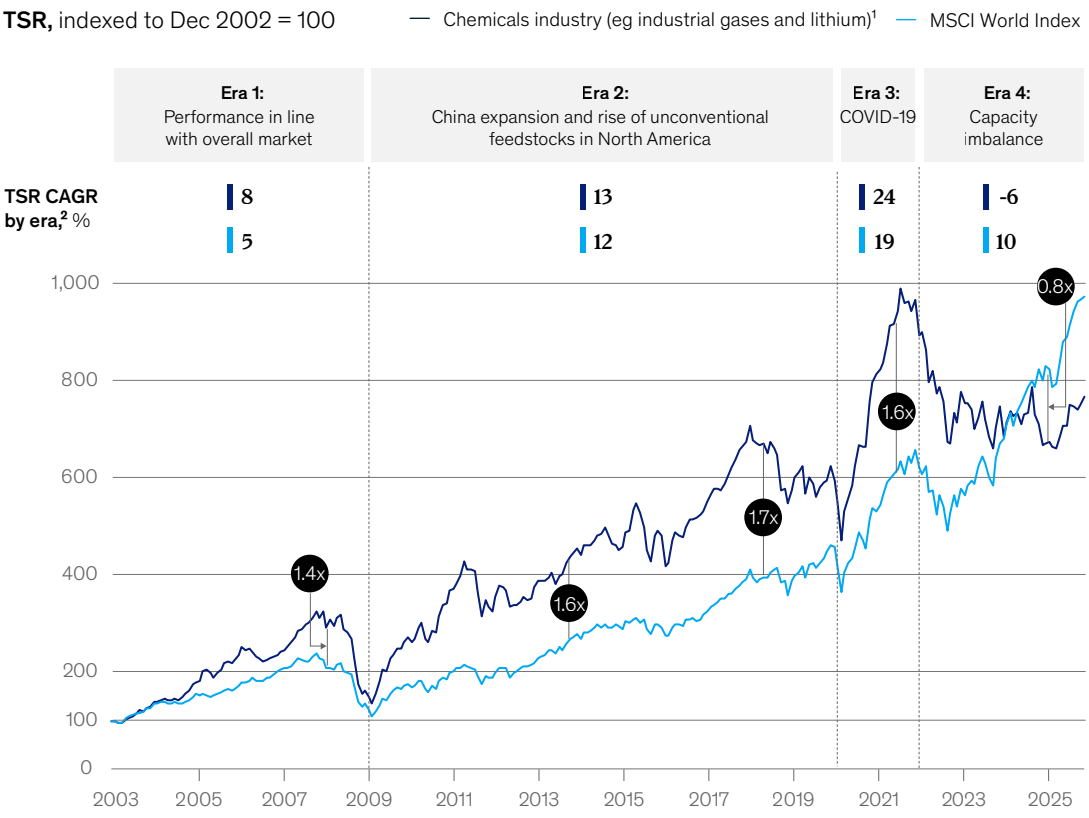
The industry's long run of outperformance peaked during the COVID-19 recovery cycle. From 2019 to 2021, chemical companies delivered exceptional shareholder returns, with TSR CAGR reaching approximately 24 percent, well above the MSCI World Index at around 19 percent. Tight supply–demand balances, inventory restocking, and temporary margin expansion fueled a sharp rebound in earnings and cash flow, pushing chemicals equity valuations to cyclical highs.

Since late 2021, however, that trend has reversed, with the chemical industry now underperforming broader equity markets. Chemicals' TSR is declining at an estimated –6 percent CAGR, compared with about 10 percent for the MSCI World Index (Exhibit 1). This divergence marks a clear structural break rather than a typical cyclical correction. Persistent capacity imbalances from the previous investment surge, prolonged destocking, and structurally weaker demand growth across key end markets have compressed margins, reduced operating leverage, and eroded the industry's long-standing TSR premium.

[14] Data on chemical industry performance in this section is sourced from S&P Global Market Intelligence and McKinsey analysis.

Exhibit 1

The chemical market outperformance is waning, especially post COVID highs, heavily impacted by capacity imbalance.



[1]Weighted mean of TSR, year-on-year, indexed to 100% in $. Chemicals sample size 699 companies (excludes industrial gases and Lithium).
[2]**Era 1:** Dec 2002 to Dec 2008, **Era 2:** Dec 2008 to Dec 2019, **Era 3:** Dec 2019 to Dec 2021, **Era 4:** Dec 2021 to Dec 2025.
Source: S&P Global Market Intelligence, McKinsey Value Intelligence Platform, McKinsey analysis

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Performance is diverging across segments and regions. Over the long term, commodity and specialty chemicals have generated comparable average TSR, while diversified chemical companies have consistently lagged.[15] The current cycle has widened this divergence. At the same time, value creation across regions has grown increasingly uneven, with a few trends standing out:

Specialty chemicals returns moderate. Specialty chemicals continue to outperform diversified chemicals, supported by differentiated products, closer customer integration, and application-specific offerings (Exhibit 2). However, even these segments are now seeing returns soften as customers reduce inventories and pricing power weakens.

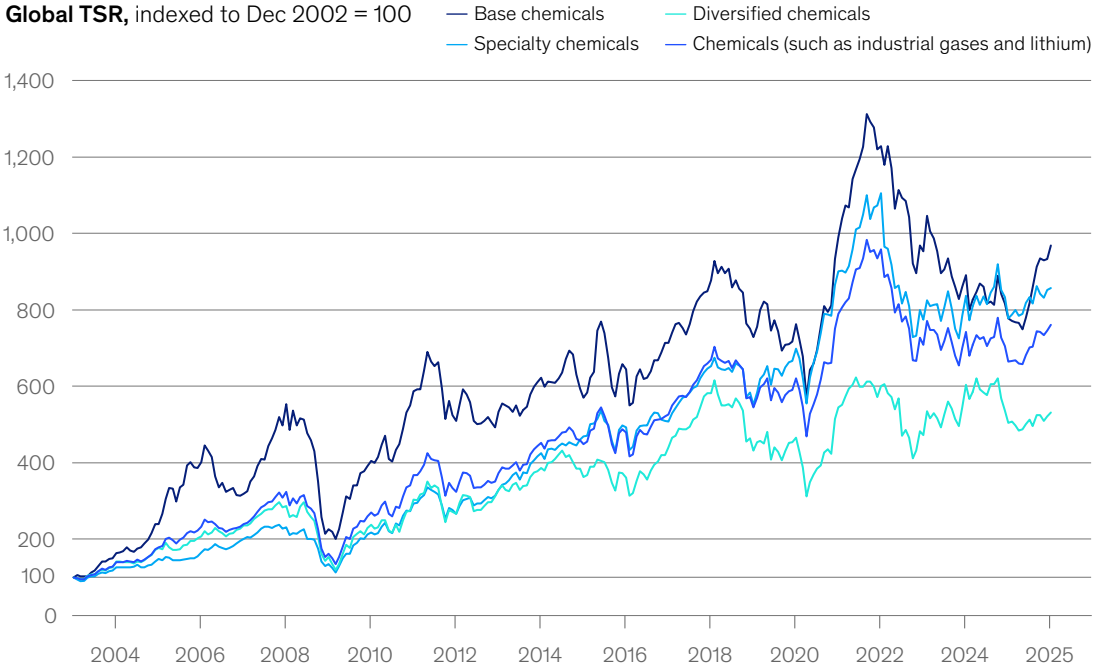
Petrochemicals under pressure. Persistent oversupply has stalled margin recovery of petrochemicals and other scale-driven segments. Meanwhile, losses in utilization at structurally disadvantaged assets, particularly in Europe, have further impacted profitability.

[15] S&P Global Market Intelligence; McKinsey Value Intelligence; McKinsey analysis.

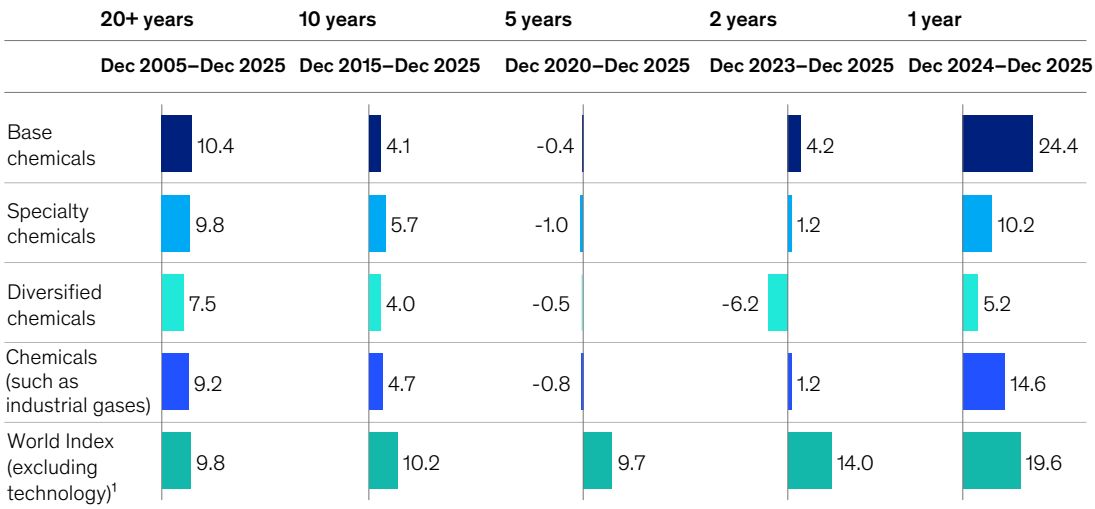
Exhibit 2

Over long periods of time, commodity and specialty chemicals deliver similar returns while diversified chemicals consistently lags behind.

Global TSR, indexed to Dec 2002 = 100



Global TSR, CAGR, %



Note: Weighted mean of TSR, year-on-year, indexed to 100% in $. Chemicals sample size 699 companies (excludes industrial gases and Lithium).
[1]Refers to Global 5000 companies excluding High Tech.
Source: S&P Global Market Intelligence, McKinsey Value Intelligence, McKinsey analysis

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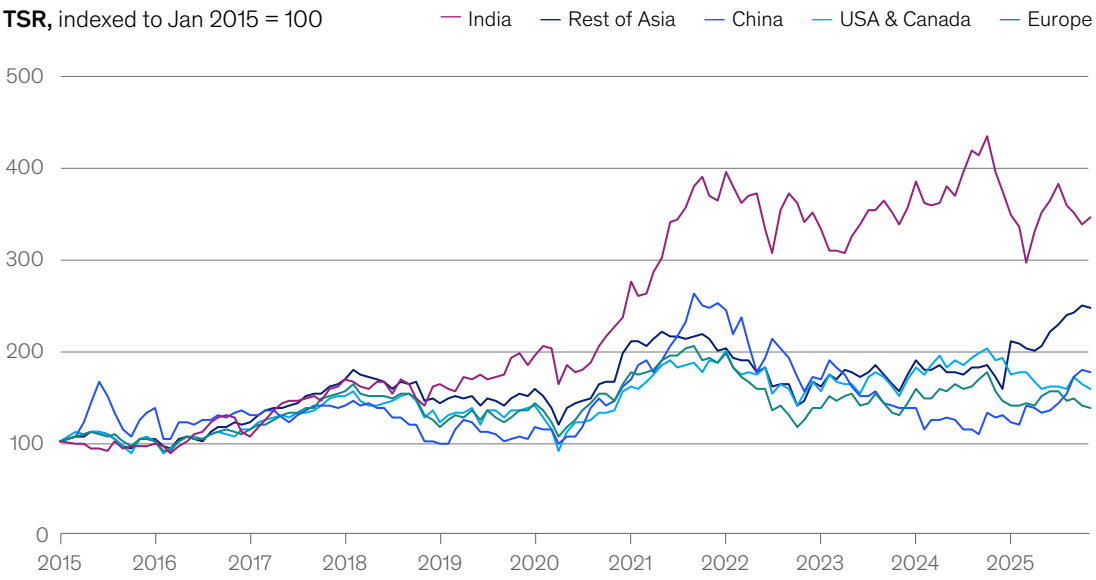
China's chemicals surge. Over the past decade, China and the rest of Asia have accounted for a disproportionate share of global value creation (Exhibit 3). In China, this is due to short-term TSR swings driven by equity market dynamics, policy measures, recent global entrants, and a structurally low-cost production position. The country's transition from a net importer to a major exporter across both petrochemicals and specialty chemicals has reconfigured global trade flows, impacting export prices and margins.[16]

[16] S&P Global Market Intelligence.

Exhibit 3

Globally, India and the rest of Asia have shown disproportionate value creation.



Note: Region classification is based upon the headquarters for each of the companies.
China (n=349), Europe (n=69), India (n=41), US and Canada (n=83), Rest of Asia (n=48), Rest of the world (n=53).
Source: S&P Global Market Intelligence, McKinsey Value Intelligence, McKinsey analysis

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Europe loses cost edge. Without any factor cost advantage and burdened with legacy assets and overheads, European companies have struggled to regain cost competitiveness in the current cycle. Utilization has fallen well below global averages, prompting accelerated asset closures, portfolio rationalization, and divestments.

Overcapacity is the defining challenge

Overcapacity has emerged as the central force reshaping the global chemical industry and eroding returns. Capacity accelerated during and immediately after the COVID-19 upcycle, particularly in China, as producers invested aggressively to increase scale, improve self-sufficiency, and lock in expected long-term demand growth. In many value chains, capacity has grown faster than consumption, creating a sustained demand–supply imbalance.

The impact of this imbalance is most evident in operating rates. Global petrochemicals utilization has declined from pre-COVID averages of approximately 80 percent to around 70 percent in recent years, with Western Europe operating closer to 60 percent to 65 percent (Exhibit 4).[17] These levels have weakened operating leverage, compressed margins, and prolonged destocking cycles, delaying recovery across value chains. Excess capacity has reduced pricing discipline across regions, limiting the industry's cost pass-through and lowering investor confidence in a near-term profit recovery.

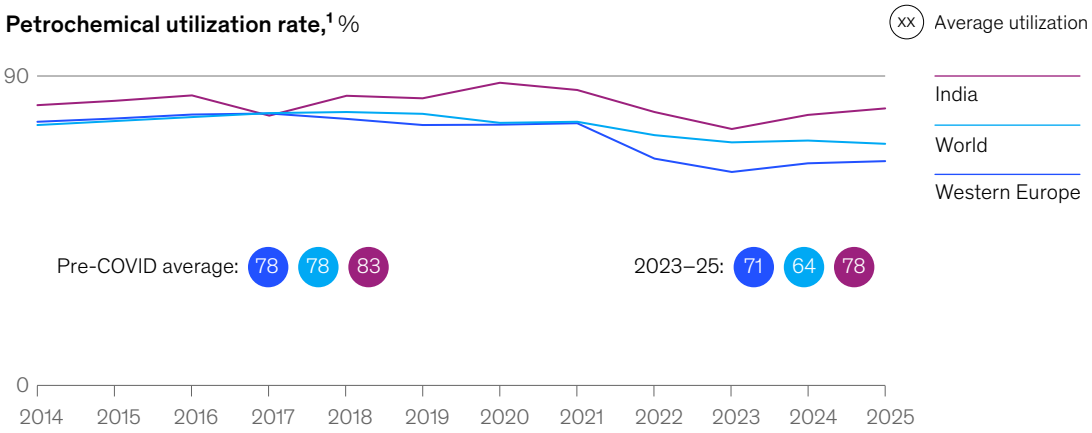
Trade fragmentation and tariffs reinforce margin pressure

For an industry built on scale and cross-border flows, tariff uncertainty and trade fragmentation have increased volatility and discouraged export-led growth models. When combined with an already elevated global capacity, these trade frictions further suppress utilization, alter relative competitiveness across geographies, and amplify margin pressure across value chains.

[17] Chemical Market Analytics by OPIS.

Exhibit 4

Slowing global demand growth and overcapacity have impacted utilization rates.



[1]2EH, acetic acid, acetone, acrylic acid glacial, ACN, ABS, adipic acid, ADN, aniline, BZ, BPA, BDE, CPL, CHX, cumene, EB, ethylene, EDC, EO, HMDA, isophthalic acid, methanol, MMA, MDI, MEG, NBR, PA6/66, phenol, PBR, PBT, PC, polyether polyol, PE, PP, PET, PS, PVC, PO, propylene, SBR, SM, SAP, PTA, toluene, TDI, VAM, VCM, MX.
Source: Chemical Market Analytics by OPIS

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The response of global leaders

Leading global chemical companies are pivoting from managing cycles to reshaping their businesses for a tougher, new normal. This means implementing decisive portfolio and operational changes.

Accelerated portfolio moves. Companies are exiting non-core businesses, shuttering structurally uncompetitive assets, and pursuing selective consolidation to tackle overcapacity. Occidental's $9.7 billion sale of OxyChem to Berkshire Hathaway[18] and BASF's closure of its adipic acid production plant at Ludwigshafen, Germany—both aimed at restoring profitability—exemplify this trend.[19]

Cost and capital discipline. Management teams are tightening fixed-cost structures, simplifying operating models, and reallocating capital toward higher-return opportunities rather than pursuing volume-led growth. Dow recently announced its "Transform to Outperform" plan to generate $2 billion in operating EBITDA improvement through a cost structure reset, including approximately 4,500 role redundancies.[20] Investment is tilting to premium, differentiated segments and faster-growing end markets, such as construction solutions, advanced materials, and sustainability-linked applications.

AI and gen AI scale-up. In parallel, leaders are scaling AI and gen AI across manufacturing, supply chain, commercial, and R&D functions in an attempt to protect margins, accelerate innovation cycles, improve responsiveness, and reduce full-time equivalents, eventually bringing down costs in an increasingly volatile environment.

Implications for the next phase of value creation

These shifts collectively mark a fundamental break with the era of broad-based TSR outperformance. Value creation has become far more selective, depending on portfolio focus, structural cost advantages, disciplined capital allocation, and technology-enabled productivity. While near-term headwinds due to overcapacity, lower utilization, and trade fragmentation could persist, they also create opportunities for decisive leaders to reposition for long-term advantage. As chemicals companie seek to reignite growth, the relative resilience and growth potential of select regions, including India, assume greater strategic importance.

[18] "Occidental Completes Sale of OxyChem," Oxy press release, January 2, 2026.
[19] "BASF drives forward structural adjustments at the Ludwigshafen site and closes production plants for adipic acid, CDon and CPon," BASF press release, August 29, 2024.
[20] "Dow launches Transform to Outperform to raise the competitive industry benchmark for productivity and growth to enable improved returns," Dow press release, January 29, 2026.

2 Headwinds confronting India's chemical industry

Over the past decade, India's chemical industry structurally outperformed both global rivals and regional peers. While it navigates a shifting world order that complicates value creation and capital expenditure, its fundamental advantages and growth potential remain compelling. Performance is diverging across industry segments, with specialty and niche chemicals showing greater resilience than commoditized products. This inflection point presents an opportunity for companies to decisively reassess capital allocation and long-term positioning.

Global pressures soften value creation

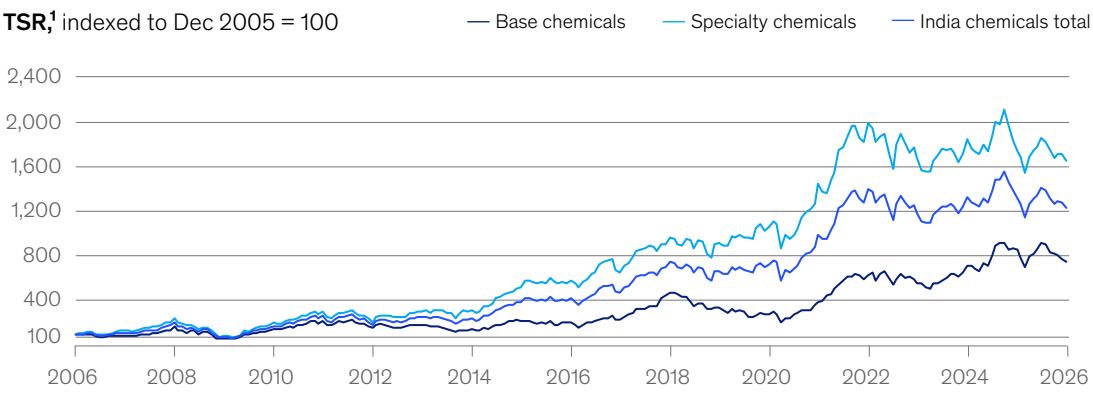
Indian chemicals have historically been more resilient to the slowdown, even outperforming the Sensex over the past year.[21] The industry's TSR growth, however, has moderated in recent years, mirroring the global trend. Overall industry TSR growth is in line with the Indian market's performance. This has declined compared to the previous era, when the chemical industry's TSR growth was double that of the broader market,[22] driven by rising multiples alongside substantial growth and margin expansion.

The industry has experienced broad-based erosion in value creation, though the intensity varies significantly across segments. Amid near-term pressures, specialty chemicals continue to outperform base chemicals on a relative basis, with a TSR of approximately 7.1 percent and 3.5 percent respectively, due to higher differentiation and pricing resilience (Exhibit 5).[23] Base chemicals lagged because of margin compression, lower utilization rates, and heightened price competition from imports, particularly from China.

[21] S&P Global Market Intelligence; McKinsey analysis.
[22] McKinsey Value Intelligence: Capital markets perspective.
[23] S&P Global Market Intelligence; McKinsey analysis.

Exhibit 5

Indian chemicals TSR softened in 2025 due to global pressures, with a sharper decline in base chemicals.



TSR CAGR, %

	20 years Dec 2005–Oct 2025	10 years Dec 2015–Oct 2025	5 years Dec 2020–Oct 2025	2 years Dec 2023–Oct 2025	1 year Dec 2024–Oct 2025
Base chemicals[2]	13.8	19.5	11.8	3.5	0.9
Specialty chemicals	19.8	16.0	9.0	7.1	9.3
India chemicals total	18.1	17.3	9.6	6.9	7.8
BSE Sensex	8.5	10.3	11.4	7.8	4.3

[1]Refers to 200+ Indian chemical companies (excluding industrial gases); 2. Weighted mean of TSR, year-on-year, indexed to 100% in $.
[2]Excluding fertilizer and sugar players.
Source: S&P Global Market Intelligence, McKinsey Value Intelligence, McKinsey analysis

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This recent moderation does not negate the industry's structural strengths, but it highlights increased sensitivity to global cycles.

Specialty chemicals show resilience

Overall specialty companies have performed better than average, though divergence persists across sub-segments. Companies focused on inorganics have emerged as the most resilient value creators across cycles, materially outperforming peers by delivering around 23 percent TSR CAGR over 20 years and approximately 31 percent over both 10- and five-year periods.[24] Even in the last year, returns remained positive at around 9 percent, underscoring earnings stability.[25] This performance is driven by structurally stronger pricing power, long-term customer contracts, and effective cost pass-through mechanisms, particularly in segments such as fluorochemicals and industrial gases.

In contrast, companies focused on dyes and pigments, specialty intermediates, and agrochemicals show strong medium-term returns (10 to 20 percent TSR over 10 years) but higher short-term volatility.[26] Recent performance reflects global tailwinds from a China+1 approach, US tariffs, and custom manufacturing demand, offset by inventory corrections and regulatory pressures. Food and nutrition and

[24] S&P Global Market Intelligence; McKinsey analysis.
[25] S&P Global Market Intelligence; McKinsey analysis.
[26] S&P Global Market Intelligence; McKinsey analysis.

paint-focused companies deliver more stable, mid-teens returns, supported by defensive end markets and brand-led pricing, while surfactant and adhesive-focused companies face near-term pressure due to weaker FMCG and construction demand.

Comparing the pre- and post-COVID periods highlights a clear deceleration in both growth and profitability across most chemical sub-segments. Average industry revenue CAGR declined by 10 percentage points between fiscal year 2023 and fiscal year 2025 compared to the three fiscal years prior, while EBITDA margins compressed by 1 to 2 percentage points on average (Exhibit 6).[27] Differentiated, value-added niches such as paints and coatings and adhesives and sealants have remained relatively resilient on margins, supported by downstream demand from infrastructure build-out, housing, packaging, and consumer staples, as well as greater pricing power and customer stickiness.

In contrast, more scale-driven and globally exposed segments have seen revenue decline or sustained margin pressure, reflecting a combination of global overcapacity, inventory destocking, and weaker export demand. Agrochemicals have been impacted by softer global crop prices, reduced farm incomes, and channel destocking in key export markets. These trends reinforce a widening performance gap between differentiated, application-led chemistries and volume-driven, globally commoditized segments.

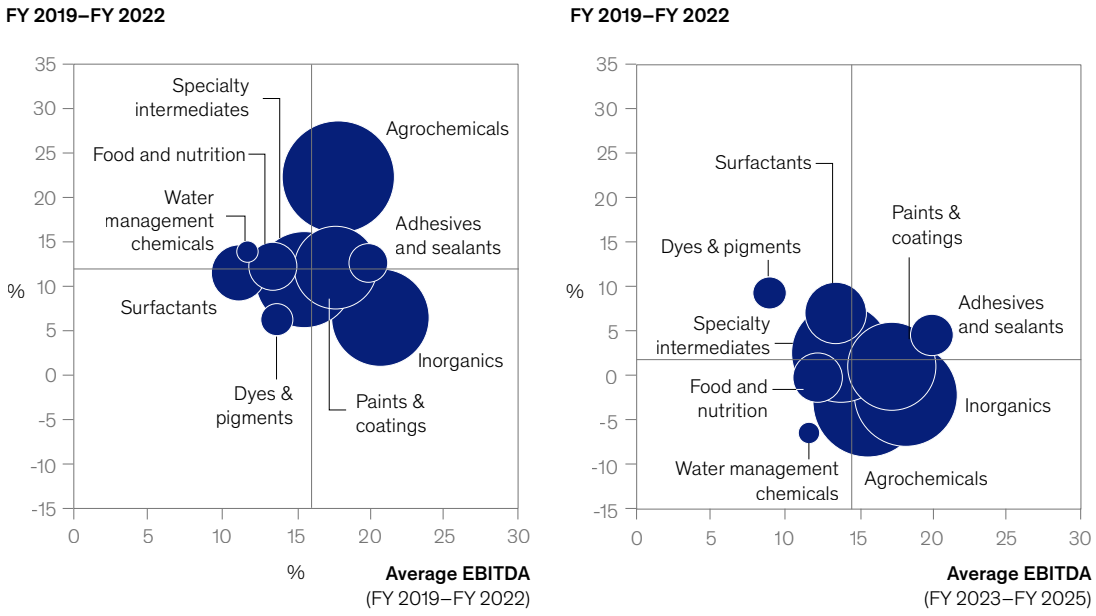
[27] S&P Global Market Intelligence; McKinsey Value Intelligence; McKinsey analysis.

Exhibit 6

Both revenues and margins declined across most segments in the last 2 to 3 years.

CAGR revenue and changing EBITDA[1]

◯ Size of sub-segment[2]



[1]Includes analysis of 190+ Indian chemical companies except basic petrochemicals. Ignored segments where the number of companies was three or below.
[2]Size of each segment corresponds to the total revenue in FY 2022(L) and FY 2025(R) of all the companies in that segment.
Source: S&P Global Market Intelligence, McKinsey Value Intelligence, McKinsey analysis

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China-led supply pressure continues to weigh on margins

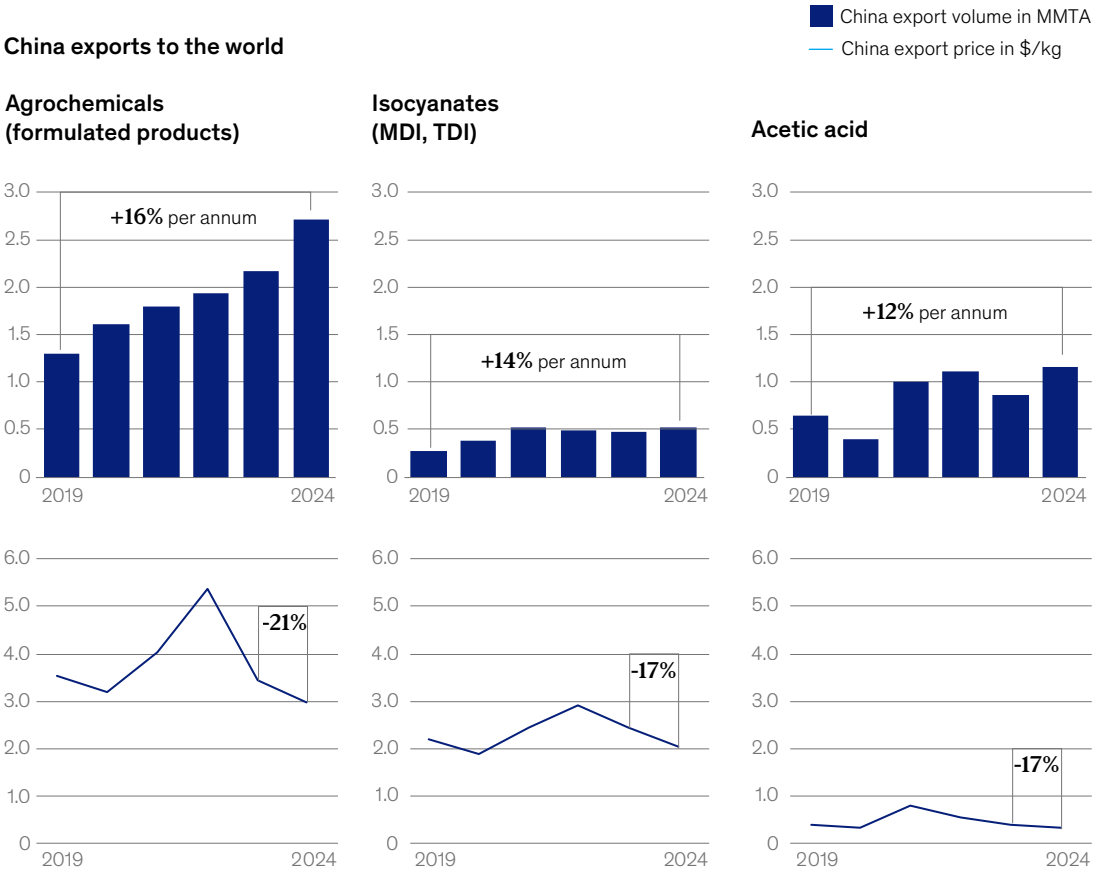
China's expanding export footprint continues to have a significant impact on the Indian chemical industry's near-term dynamics. Chinese companies have added capacity even as China's domestic demand has softened (China saw 4 to 5 percent GDP growth from 2023 to 2025 versus around 7 percent before 2019).[28] Across several products, such as agrochemicals formulations, isocyanates (MDI/TDI), and acetic acid, China's export volumes have grown at a CAGR of 12 to 16 percent between 2019 and 2020–24, while export prices have declined by 11 to 21 percent from recent peaks (Exhibit 7).[29] This combination of rising volumes and falling prices has intensified competition in both domestic and export markets, leading to sustained margin erosion for Indian producers, particularly in segments with limited differentiation or high exposure to Chinese imports.

At the same time, China's scale, manufacturing cost position, and improving quality standards are narrowing traditional differentiation gaps, increasing competitive pressure even in segments previously considered defensible. For example, isocyanates, historically defended by capital intensity, process complexity, and tight supplier concentration, have experienced significant erosion as large-scale Chinese capacity additions have increased export volumes and pushed down global prices.

[28] World Bank Group data, accessed on February 19, 2026.
[29] China Customs Statistics Data Query Platform.

Exhibit 7

China's capacity buildup amid slowing domestic demand is lifting exports and pressuring prices worldwide.



Source: International Trade Map, UN Comtrade, China Customs; analysis conducted using Other insecticides in retail packagings (HS code: 38089119), Insecticides, not in retail packagings (HS code: 38089190), Fungicides in retail packagings (HS code: 38089210), Fungicides, not in retail packagings (HS code: 38089290), Herbicides, in retail packagings (HS code: 38089311), Herbicides, not in retail packagings (HS code: 38089319), Anti-sproutng prod/plant growth regulators, in retail packaging (HS code: 38089391), Anti-sproutng prod/plant growth regulators, not in retail packagings (HS code: 38089399)

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As growth and returns soften, capex has plateaued

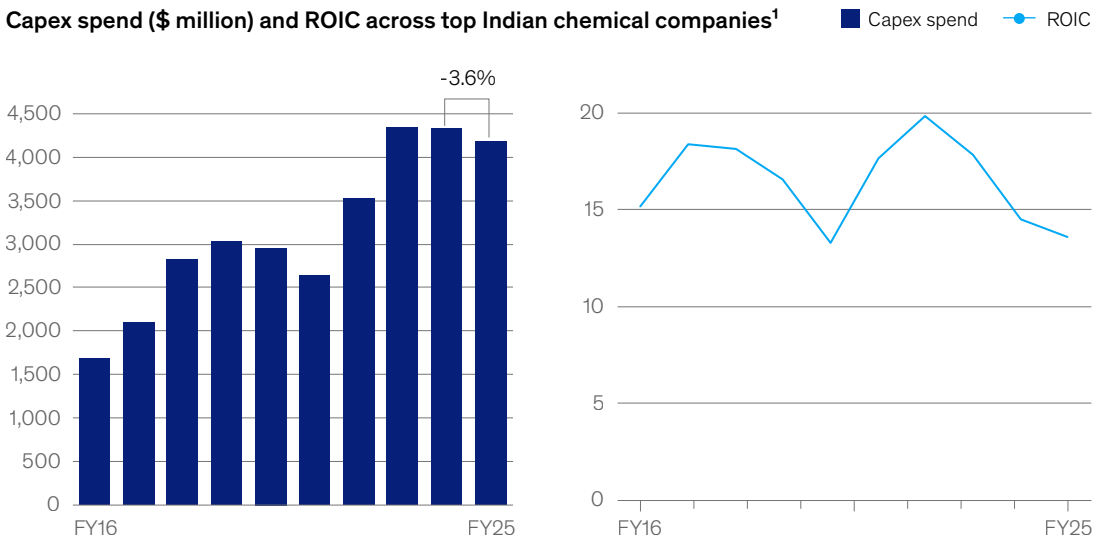
Capital expenditure across the Indian chemical industry has flattened. While aggregate capital expenditure rose steadily from around $1.7 billion in fiscal year 2016 to a peak of approximately $4.3 billion in fiscal year 2023, ROIC declined from 18 to 20 percent between fiscal year 2017 and fiscal year 2022 to around 13.6 percent by fiscal year 2025—an approximately 360 basis points drop (Exhibit 8).[30] This decline is not just driven by lower margins. It also reflects asset capacity added over the past five years and slower demand absorption, leading to lower operating rates.

In response, capital expenditure (extrapolated from fiscal year 2024 to fiscal year 2025 as a proportion of revenues) has decelerated by around 7.5 percent, signaling a shift toward tighter capital discipline.[31] Companies are instead prioritizing full-scale commercialization of existing assets over large-scale capacity additions. Recent capital expenditure is increasingly concentrated in select high-growth or strategic areas, while expansion in more commoditized segments is being deferred or reassessed.

Exhibit 8

Underutilization of new capex in India over the past five years has led to a decline in ROIC.

Capex spend ($ million) and ROIC across top Indian chemical companies[1]



[1]Considered top 195 chemical companies in India.
Source: S&P Global Market Intelligence, McKinsey Value Intelligence

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Implications for Indian chemical companies

These trends point to an industry that remains fundamentally attractive but increasingly discerning in its value creation. India's chemical industry continues to benefit from strong long-term demand fundamentals and structural competitiveness. However, near-term performance will depend on companies' ability to navigate margin pressure, sharpen capital discipline, and refocus strategies toward differentiated growth.

The next phase of value creation could hinge on a key choice that companies make: shifting from volume-led expansion alone to differentiation and operational excellence, which could protect and expand margins. They could also create value by prioritizing investments into structurally advantaged segments with selective backward or forward integration.

[30] McKinsey Value Intelligence; S&P Global Market Intelligence.
[31] McKinsey Value Intelligence; S&P Global Market Intelligence.

3 Raising global ambitions for the Indian chemical industry

India's chemical market is currently estimated at $155 billion to $165 billion and could continue to outpace GDP growth by 1.1 or 1.2 times, reaching $230 billion to $255 billion by 2030. This would mean an industry CAGR of 8 to 9 percent, not accounting for major potential disruptions (Exhibit 9).[32]

Growth is likely to stem from expansion in traditional GDP-linked end markets like consumer goods, packaging, textiles, and so on, and the emergence of new arenas such as EVs, renewables, and semiconductors.[33] In addition, India-based chemical companies could further accelerate growth by addressing India's $20 billion to $30 billion supply–demand gap[34] and by increasing exports. This could require them to align their capital and resources with the drivers of demand.

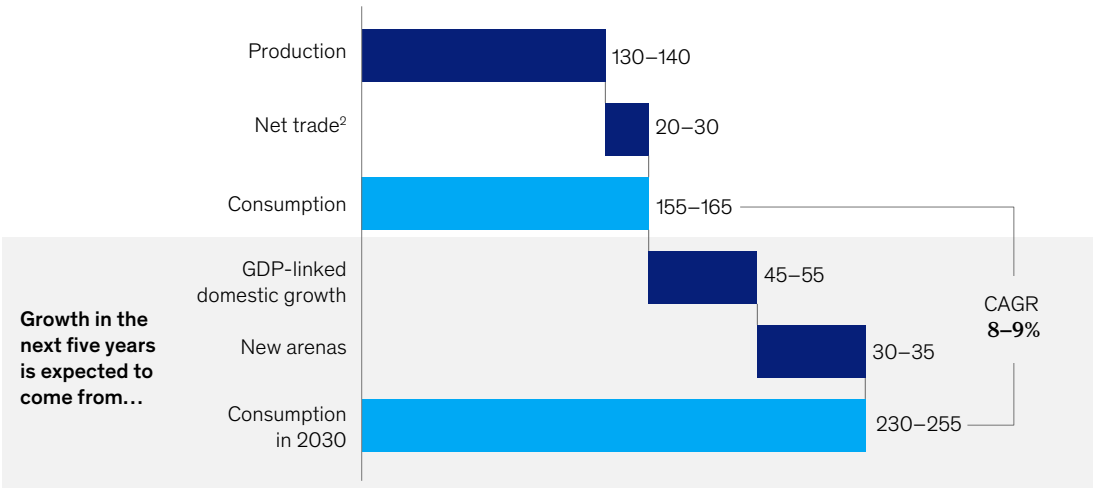
Together, these trends indicate a market that is not only growing but also becoming more competitive and globally integrated. To capture this opportunity, Indian companies could look beyond serving domestic demand, instead positioning themselves as suppliers to the world. Doing so would mean raising their global ambitions and execution on scale, capabilities, and capital deployment.

[32] S&P Global Comparative Industry , October 6, 2025; International Trade Map; UN Comtrade.
[33] Bhavesh Mittal, Kevin Russell, Rajat Dhawan and Mamta Deswal, "India's future arenas: Engines of growth and dynamism," McKinsey, June 19, 2025.
[34] UN Comtrade, International Trade Map.

Exhibit 9

Despite current challenges, the Indian chemical industry is positioned to sustain growth momentum over the next five years.

Indian chemical market 2024,[1] $ billion



[1]Includes petrochemicals, specialty, inorganic, fertilizers.
[2]Includes HS codes in chapters 28,29,32,38,39,40.
Source: S&P Global Comparative Industry, October 6, 2025; UN Comtrade International Trade Map; McKinsey analysis

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Beyond core demand, McKinsey research has identified 18 sectors as emerging growth arenas and dynamic industries worldwide that could capture a disproportionate share of economic value and reshape the global landscape. These arenas concentrate both innovation and scale advantages, investing at roughly twice the R&D intensity of other sectors and hosting about half of global market capitalization in companies worth more than $200 billion. At the same time, they remain open to disruption, with about one-third of market capitalization held by new entrants.[35]

The arenas identified for India could together generate $1.7 trillion to $2 trillion in revenue by 2030, up from approximately $690 billion in 2023 (Exhibit 10).

[35] "The next big arenas of competition", McKinsey Global Institute, October 23, 2024.

Exhibit 10

18 arenas of growth could yield $1.7 trillion to $2 trillion in revenues for India by 2030.

Arenas disruptive in chemical industry

Revenue estimate, $ billion

Global arenas	2023	2030
E-commerce	60–70	240–300
Semiconductors	40–45	100–120
Cloud services	15–20	70–80
Cybersecurity	30–35	65–80
Electric vehicles and batteries	5–10	40–60
AI software and services	5–10	40–50
Space	5–10	20–30
Nuclear fission	2–4	10–15
Robotics	1–2	~3

National arenas	2023	2030
Urban construction	170–190	400–490
Travel and tourism	160–170	360–420
Auto components	70–75	160–190
Renewables with storage system	20–25	50–70
Aerospace and defense	20–25	40–50
Bio-to-X	10–15	30–40
Medical devices	10–15	25–35
Biopharma	5–10	20–25
Industrial electronics	10–15	20–25

Total revenue estimate, global and national arenas

2023: ~$690 billion

2030 estimate: ~$1.7 trillion to $2 trillion

Source: IHS, Oxford Economics; McKinsey analysis

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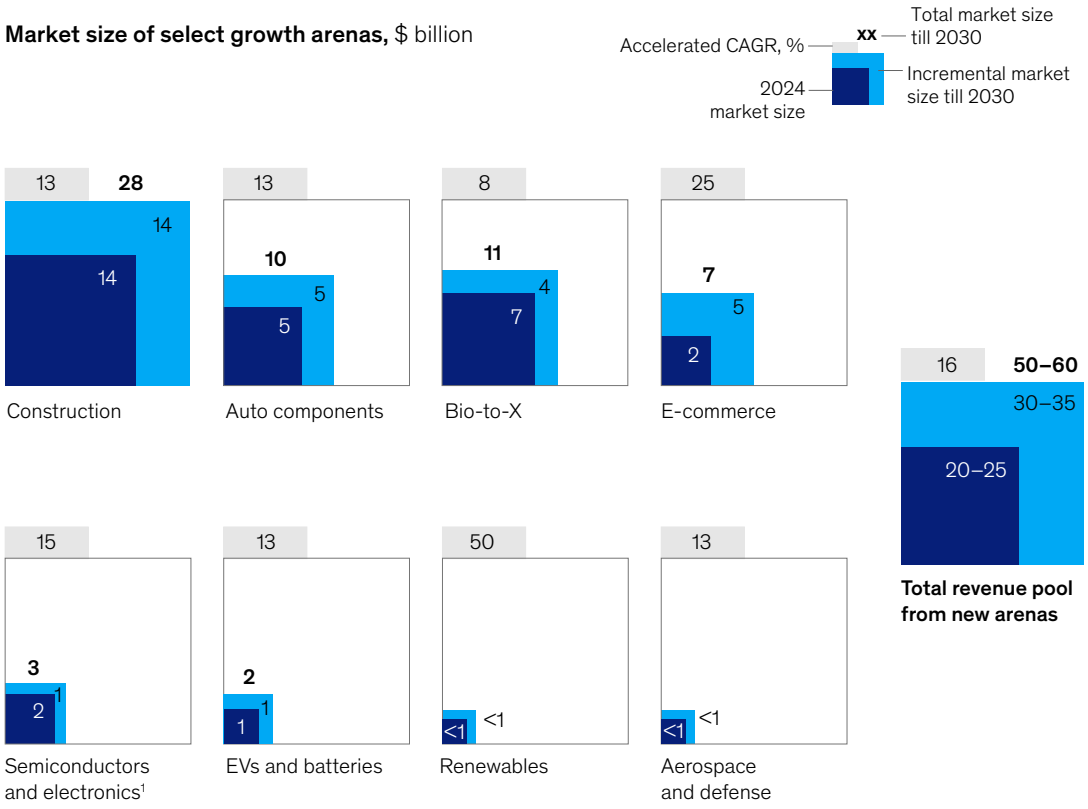
New arenas that could unlock the next frontier of growth

Eight of these 18 new arenas could be particularly disruptive for chemicals, with demand expected to grow at an accelerated rate of around 16 percent a year,[36] effectively doubling the growth potential of India's chemical industry. These arenas could unlock $30 billion to $35 billion in incremental demand by 2030 (Exhibit 11).[37]

[36] S&P Global Comparative Industry, October 6, 2025; McKinsey analysis.
[37] S&P Global Comparative Industry, October 6, 2025; McKinsey's Chemical Insights demand model.

Exhibit 11

For the Indian chemical industry, eight growth arenas could unlock incremental demand of $30 billion to $35 billion.



[1]Only industrial electronics are considered in the segment for 2024, as semiconductor manufacturing in India did not commence until 2025.
Source: S&P Global Comparative Industry, October 6, 2025; McKinsey Chemical Insights demand model

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These opportunities are driven by downstream capacity buildouts supported by government spending, policy support, and localization initiatives, as outlined in the table.

Eight arenas could prompt high demand growth for Indian chemicals across end-use segments.

#	Demand signals	Illustrative products
1	**Construction chemicals**	
	— Government capital expenditure has scaled to around ₹12 lakh crore annually ($140 billion to $150 billion), with flagship programs such as Bharatmala and Sagarmala boosting demand for durability and corrosion-protected chemicals.[1] — Under UDAN, India has over 160 operational airports, with a target of 300–350 by 2040.[2] — Residential momentum is growing in Tier 2 and Tier 3 cities through urbanization and housing schemes, such as the PMAY sanction of 120+ lakh houses).[3]	— Paints and coatings — Concrete admixtures — Waterproofing systems — Sealants and adhesives — Plastics (for example, PVC)
2	**Auto components**	
	— India produces approximately 25 million to 30 million vehicles annually, driving scaled demand for automotive plastics, coatings, and elastomers.[4] — Passenger vehicles and two-wheeler premiumization are increasing demand for adhesives, sealants, lubricants, and interior polymers. — Auto exports exceed $20 billion, pushing demand for high-specification coatings and performance chemicals.[5] — EVs have about 1.3–1.5 times the chemical content (battery, thermal, insulation), boosting value per vehicle.	— Polymers used in interiors — Coatings, lubricants, adhesives, etc.
3	**Bio-to-X**	
	— India's Ethanol Blended with Petrol (EBP) Programme targets 20 percent blending (approximately over 1,000 crore liters), while surplus ethanol creates feedstock optionality for bio-based chemicals.[6] — Sustainable aviation fuel (SAF) (less than 1 percent of global jet fuel today) is central to aviation decarbonization, given the net-zero targets driven by the International Air Transport Association.[7]	— Biofuels (for example, ethanol and SAF) — Bio-based surfactants and solvents — Bioplastics
4	**E-commerce**	
	— Post-COVID growth in quick commerce is increasing per-order packaging intensity and last-mile material usage. — E-commerce–led logistics is expanding over 533 million sq. ft. of warehousing in 2024, boosting demand for corrugated boxes, stretch films, and tapes.[8] — Private-label growth and greater reach in Tier 2 and Tier 3 cities via various e-commerce platforms are lifting demand for low-cost packaging, inks and coatings.	— Packaging adhesives — Printing inks and coatings
5	**Semiconductors and electronic chemicals**	
	— India's semiconductor demand is set to double from approximately $52 billion to more than $100 billion by 2030 (about 13 percent CAGR), driven by electronics and auto demand.[9] — India Semiconductor Mission (Phase II) has raised incentives to approximately ₹40,000 crore ($4.0 billion to $4.5 billion), supporting domestic chip and component manufacturing.[10] — India imports more than 90 percent of semiconductors, creating a strong import-substitution opportunity as global OEMs pursue China+1, with companies expanding India sourcing. India Semiconductor Mission 1.0 and 2.0 (approximately $20 billion) provides up to 50 percent Production Linked Incentives (PLI) support for fabs, Assembly, Testing, Marking, and Packaging (ATMP)/Outsourced Semiconductor Assembly and Test (OSAT), compound semiconductors.[11]	— Wet chemicals (ultra high purity acids and solvents) — Photoresist — Electronic gases

Continued

#	Demand signals	Illustrative products
6	**EVs and batteries**	
	— EV sales, currently at approximately 2.2 million units annually, are growing 16 percent year-on-year.[12] — Schemes such as FAME and PLI provide subsidies, tax rebates, and incentives, reducing upfront EV ownership costs. — Declining battery costs and advances in higher-density cells and alternative chemistries are improving EV range and performance, accelerating adoption. — India's public EV charging stations have grown five-fold from fiscal year 2022 to early fiscal year 2025, increasing from 5,151 (2022) to 11,903 (2023) and 26,367 (early 2025), easing range anxiety.[13]	— Electrolyte salts and chemicals — Lightweight polyolefins in EV body — Adhesives, sealants and encapsulants — Cathodes and anodes — Battery recycling chemicals, such as leaching agents, and waste treatment chemicals.
7	**Renewables**	
	— India targets approximately 500 GW renewables by 2030 and net zero emissions by 2070, driving large-scale clean energy investments.[14] — Supportive policies like PLI, RPOs and interstate transmission charge waivers are improving renewable project economics. — By 2030, an investment of more than $360 billion is planned across renewables, including $190 billion to $215 billion for capacity and $150 billion to $170 billion for grid and storage.[15]	— Solvents — EVA films and polyolefins used in solar module encapsulation — Composites and carbon fibers
8	**Aerospace and defense**	
	— India's commercial aviation fleet is expected to triple from about 850 aircraft to 2,250 by 2035, driven by strong passenger growth and airline expansion.[16] — The Union Budget fiscal year 2026–27 allocated ₹7.85 lakh crore (approximately $85 billion to $90 billion) to defense, including ₹2.19 lakh crore (approximately $20 billion to $25 billion) for modernization and capital procurement (aircraft, aero-engines, systems).[17] — Government push for self-reliance has lifted defense exports from approximately ₹685 crore (approximately $0.1 billion) in fiscal year 2014 to about ₹23,600 crore (approximately $2 billion to $2.6 billion) in fiscal year 2025, with defense corridors in Uttar Pradesh and Tamil Nadu attracting significant manufacturing investments.[18]	— Aerospace-grade structural adhesives and sealants; composite resin — Specialty thermoset and thermoplastic materials for high-temperature applications — Specialty coatings and surface chemicals

[1] Union Budget Documents 2026–27, Ministry of Finance, Government of India, February 2026.
[2] Regional air connectivity scheme UDAN (Ude Desh Ka Aam Nagrik), Ministry of Civil Aviation, Government of India, 2017.
[3] Pradhan Mantri Awas Yojana (PMAY), Ministry of Housing and Urban Affairs, Government of India, 2015.
[4] Industry Trends hosted by Society of Indian Automobile Manufacturers (SIAM) as on February 19, 2026.
[5] *Automotive Industry: Powering India's participation in Global Value Chains*, NITI Aayog, April 2025.
[6] "Cabinet approves National Policy on Biofuels – 2018," Ministry of Petroleum & Natural Gas press release, Press Information Bureau, May 16, 2018.
[7] "Net-Zero Carbon Emissions by 2050," International Air Transport Association press release, October 4, 2021.
[8] JLL (India warehousing market updates 2025).
[9] *India Semiconductor Market Report 2030*, India Electronics and Semiconductor Market Association; "India's semiconductor market to grow at 13%, reach Rs. 8,95,134 crore by 2030", India Brand Equity Foundation, January 30, 2025.
[10] "Budget 2026–27 sets the stage for India as a global hub for cloud and AI infrastructure", Press Information Bureau, February 14, 2026.
[11] "India's semiconductor revolution: Powering the future of electronics," Press Information Bureau, August 3, 2025.
[12] EV adoptions gathers pace in 2025: Sales hit 2.3 million units; UP, Maharashtra lead sales, Times of India
[13] *Electric Vehicle Industry in India: Growth, Policy & Market Trends*, India Brand Equity Foundation, November 2025.
[14] "India's Renewable Energy Capacity Hits New Milestone," Ministry of New and Renewable Energy, PIB, November 13, 2024.
[15] "Energy storage enables major savings in power costs," Times of India, August 26, 2025.
[16] "Indian aircraft fleet to reach 2,250 by 2035, MRO market to hit US$9.5 billion," Airbus press release, January 29, 2026.
[17] "Defence in Union Budget 2026–27," Press Information Bureau, February 3, 2026.
[18] "Make in India Powers Defence Growth," Ministry of Defence, Press Information Bureau, March 29, 2025.

Illustrative deep dive: Construction chemicals

Construction-linked chemical demand is one of the largest growing categories with an expected doubling of market size, from $14 billion to $28 billion by 2030 at a CAGR of 12 to 13 percent.[38]

India's construction sector is entering a phase of sustained growth, supported by $2.2 trillion of planned infrastructure investment under the National Infrastructure Pipeline with an expansion of approximately 13 percent expected in construction activity.[39] Investment is concentrated across five key sectors: transport, urban and industrial development, environment, renewables, and electricity.

Transport and urban–industrial development account for the largest share of spending of approximately 80 percent, driven by mega projects such as expressways (for example, Pune–Bengaluru), over seven high-speed railway lines, over 20 metro rail projects across cities, multiple new tunnel projects in mountainous regions, plans to build operational airports from about 160 to 300–350 by 2047, and so on.[40] Highways, railways, metros, airports, industrial corridors, smart cities, and data centers are expected to drive demand for cement additives, admixtures, waterproofing systems, coatings, corrosion inhibitors, flooring resins, sealants, and specialty polymers used in large civil, commercial, and industrial projects.

[38] "Atmanirbhar India will only be possible if our cities become productive: Shri Hardeep Puri," Ministry of Housing & Urban Affairs, Government of India, PIB, September 13, 2021; *Affordable housing in India*, Knight Frank-CII, December 2024; "Indian real estate expected to reach US $1.5 tn by 2034; driving 10.5% of economic output: Knight Frank India—CII Report," CII press release, April 12, 2024; McKinsey analysis.

[39] Data hosted on India Investment Grid website as on February 19, 2026; McKinsey analysis.

[40] *National Infrastructure Pipeline,* report of the task force, Department of Economic Affairs, Ministry of Finance, Government of India, updated February 4, 2026.

Environmental, renewable, and power infrastructure further broaden chemical demand. Water supply, irrigation, sanitation, and waste management projects increase consumption of water-treatment chemicals, membranes, pipes, and protective linings, while solar, wind, and power transmission investments support demand for epoxy resins, composites, specialty plastics, cable compounds, insulation materials, and transformer oils. These sectors make construction a resilient growth engine, shifting chemical demand toward application-led, value-added segments with long-term visibility.

Demand for construction chemicals is expected to be concentrated in the engineering, procurement, and construction (EPC) segments that combine scale, complexity, and faster growth (Exhibit 12).

Infrastructure projects such as highways, bridges, metros, tunnels, and airports are key drivers, given their high concrete volumes and durability requirements. Similarly, the commercial and industrial sectors (data centers, healthcare facilities, factories, warehouses, and large commercial buildings) show high adoption of advanced admixtures, waterproofing, and coatings. By contrast, renewables, energy storage, telecom, and utilities have lower chemical intensity despite ongoing capex.

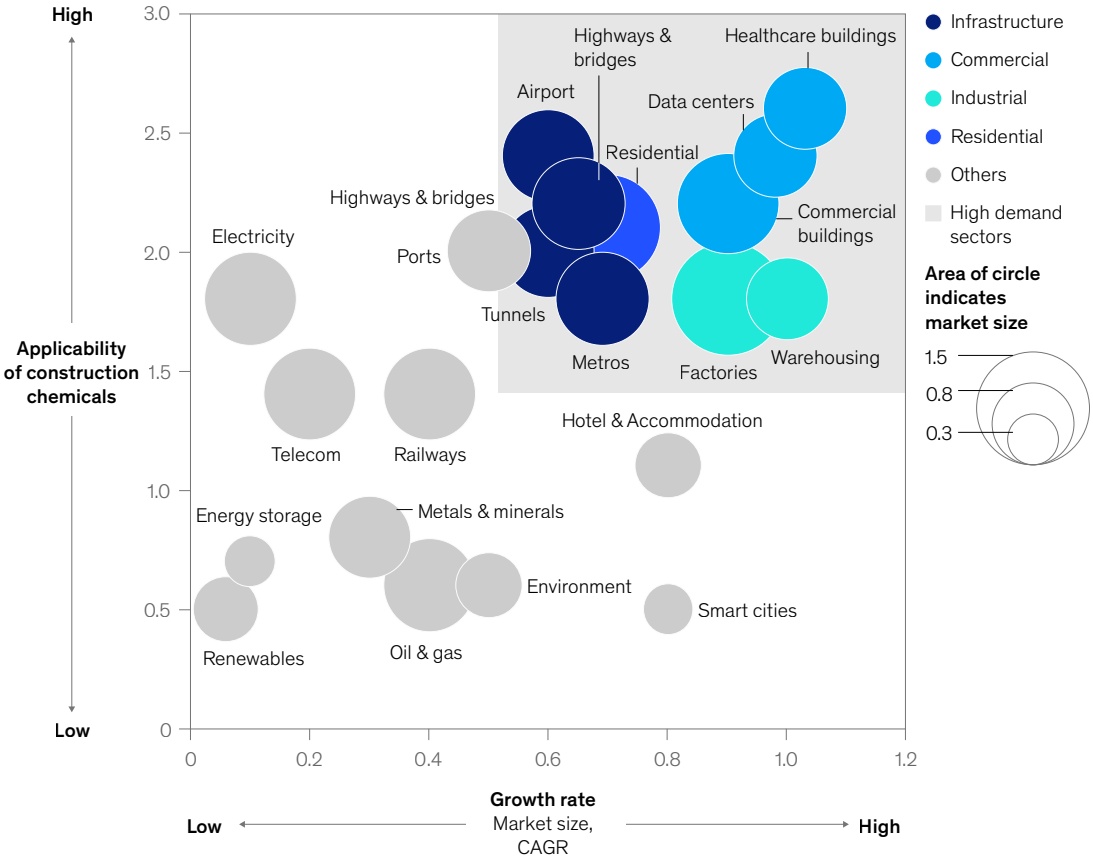
Early investments in these spaces could allow Indian companies to secure partnerships, build capabilities, and establish leadership positions ahead of demand inflection points.

Exhibit 12

Multiple engineering, procurement, and construction (EPC) sectors would see high demand for construction chemicals.

INDICATIVE & NOT EXHAUSTIVE

Opportunity by category



Source: Expert interviews; McKinsey analysis

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Import substitution as a growth accelerator

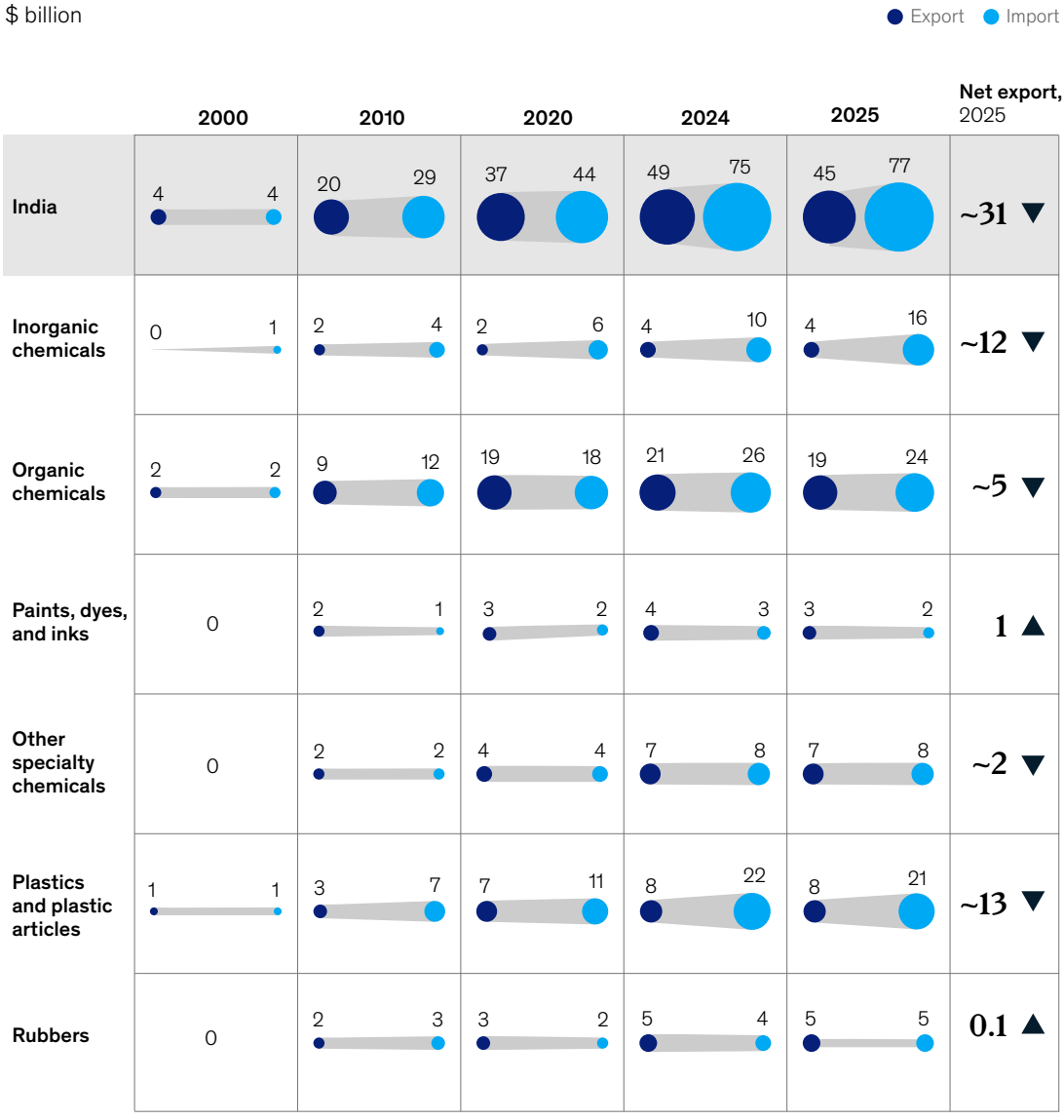
India's sizable chemical trade deficit highlights a significant import-substitution opportunity alongside demand growth. As of 2025, the chemical trade deficit stands at approximately $31 billion (Exhibit 13), concentrated in inorganics (about $12 billion) and polymers (about $13 billion).[41] Enhancing domestic production in these segments could materially improve the trade balance while creating globally competitive manufacturing platforms.

[41] UN Comtrade, International Trade Map; McKinsey analysis.

Exhibit 13

The chemical trade deficit of approximately $31 billion in 2025 could narrow by 2030 through growth in new arenas.

Includes HS chapters 28 (Inorganic chemicals), 29 (Organic chemicals), 32 & 38 (Specialty chemicals), 39 & 40 (Plastics and Rubber)



Source: UN Comtrade, International Trade Map; McKinsey analysis

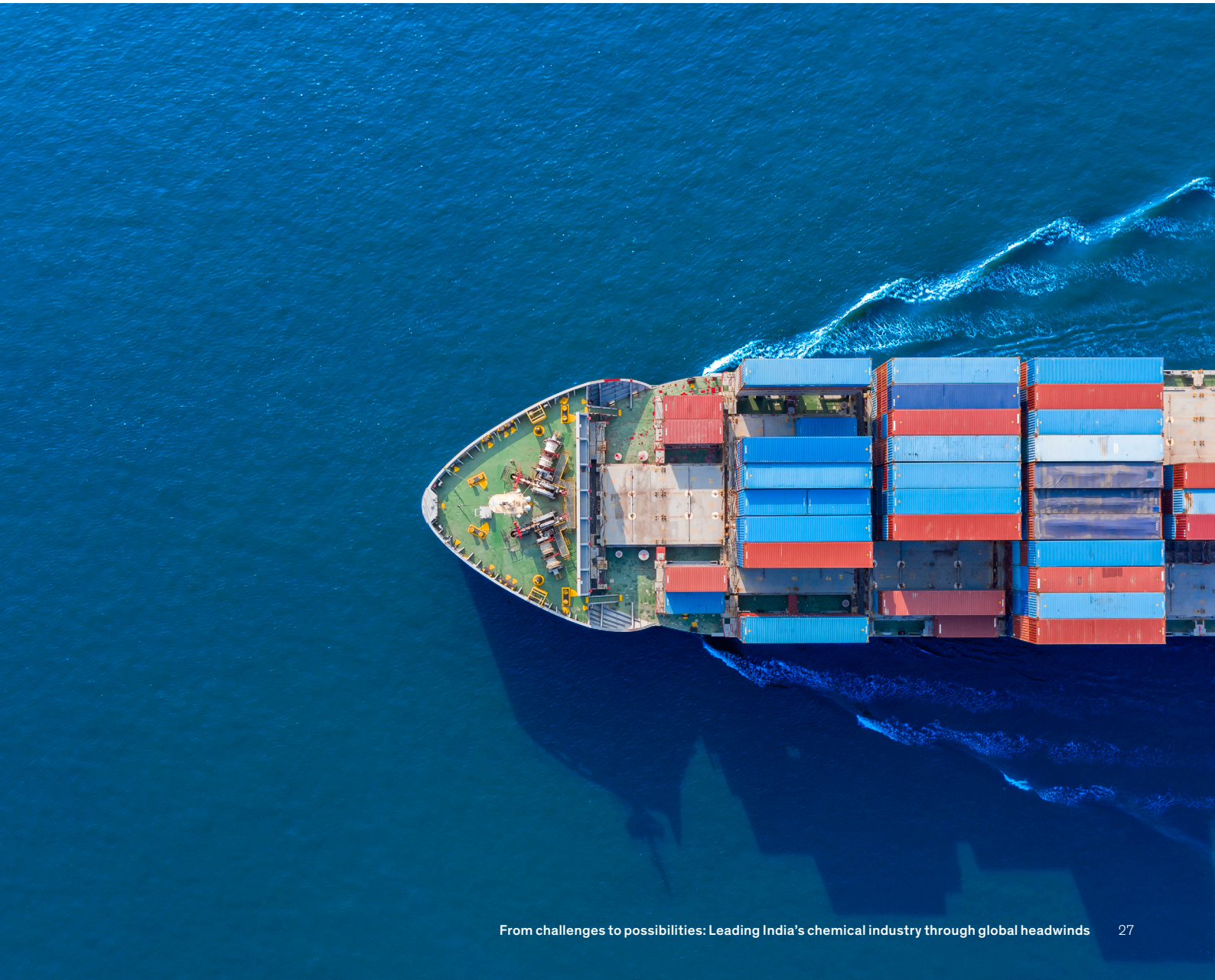
McKinsey & Company

Import substitution is most compelling where domestic demand is already large, logistics favor local production, or supply-chain resilience is a strategic priority. Developing world-scale capacities across chemicals such as styrene, acetic acid, polyols and the aniline value chain could unlock financial feasibility for chemical manufacturers and replace approximately 10 percent of India's chemical imports by value.[42] India now has the scale to support at least one global-scale manufacturing asset, provided investments are executed with discipline and cost competitiveness.

Capturing growth will require selectivity. Not all segments offer equal returns, and premature investment risks may replicate global overcapacity. Companies could prioritize structurally advantaged arenas, align investments to clear demand signals, and build differentiated capabilities, particularly in application development, quality, and customer integration.

Taken together, these growth hotspots define where the next wave of expansion for India's chemical industry may emerge. The challenge now shifts from identifying opportunities to executing effectively, requiring sharper go-to-market strategies, capability building, and disciplined capital allocation.

[42] UN Comtrade, International Trade Map.



4 How Indian chemical companies could create value

India's chemical industry is now at an inflection point. Capital availability is strong, domestic demand is deepening, and geopolitical realignment is creating once-in-a-generation opportunities. However, strategies that powered growth over the last decade, such as incremental capacity additions within narrow value chains, may prove insufficient going forward.

The challenge ahead is not momentum, but intentional design. The next phase of value creation will be determined not by scale alone, but by deliberate, selective moves around where to play and how to win. Indian chemical companies could adopt a capability-led approach that balances growth ambitions with margin resilience and structural competitiveness.

Based on an analysis of industry performance and peer responses, seven levers could help Indian chemical companies to progress beyond cyclical performance toward resilient, globally competitive business-building over the next decade (Exhibit 14).

Exhibit 14

Seven levers could help Indian chemical companies to progress beyond cyclical performance.

Detailed in this chapter

1

Build domestic platforms with global reach

Anchor global-scale platforms on India's maturing domestic demand, making disciplined, long-horizon bets on integrated value chains, application-led portfolios, and end-to-end offerings that could scale beyond India.

2

Create global operating capabilities in priority markets

Move from opportunistic exports to structurally embedded platforms in priority markets to deepen customer stickiness, improve resilience, and compound returns over time.

3

Institutionalize programmatic partnerships

Look at M&As, joint ventures, and long-term partnerships as a repeatable capability to accelerate scale, enter high-value adjacencies, and extend geographic and customer reach.

4

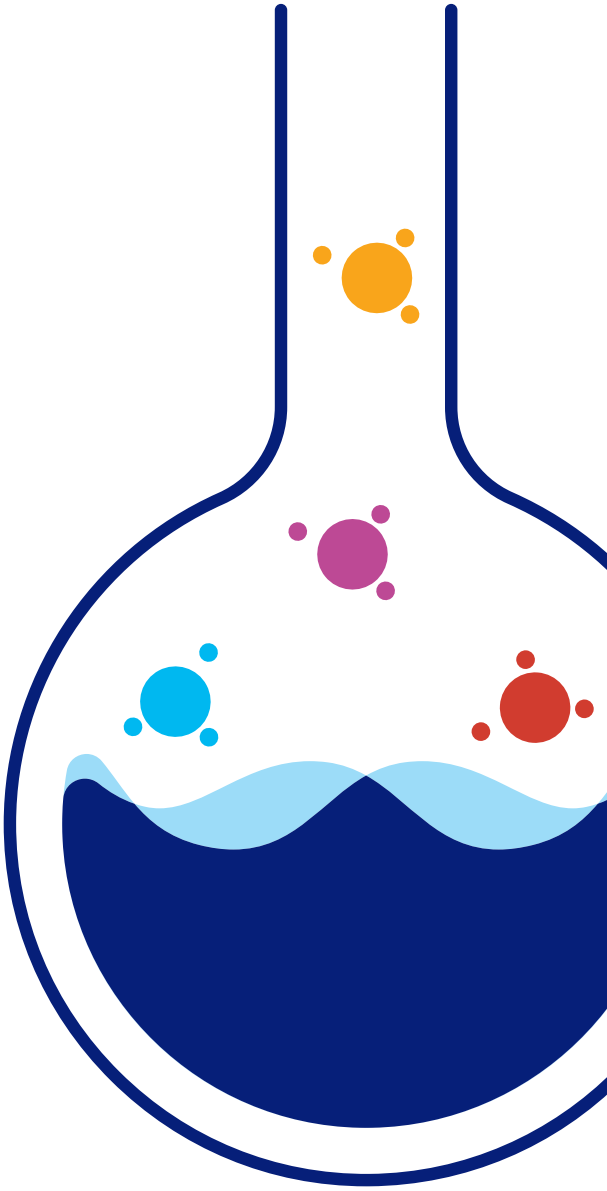
Turn innovation into a growth engine

Recast R&D from a technical, process-focused function into a growth engine that can deliver new technologies, application-led solutions, customer-embedded development, and faster commercialization, including through partnerships.

5

Integrate AI into the operating model

Embed AI and advanced analytics across operations, supply chains, commercial, and R&D to drive sustained productivity gains, margin expansion, and faster, better-informed decisions.



6

Build resilient supply chains

Design structurally more resilient operating models with distributed warehousing, regional stocking closer to customers, multi-node production, and better inventory planning to withstand shocks.

7

Strengthen the balance sheet and P&L

Treat balance sheet headroom as a strategic asset, actively managing working capital, foreign exchange, and energy exposure in a structurally more volatile geopolitical environment.

1. Build domestic platforms with global reach

India's domestic market has reached a scale and sophistication that allows chemical companies to build global-sized platforms anchored in local demand. End-use industries such as construction, consumer goods, pharmaceuticals, healthcare, electronics, energy, and mobility are seeing increased size, complexity, quality requirements, and customization needs. This shift could favor companies that offer integrated product portfolios, reliable supply, and application-level solutions.

Building domestic platforms in a global market already facing overcapacity across multiple segments calls for strategic bets on selectively integrated value chains where India can be cost-competitive. Successful platforms will require global scale, disciplined capital expenditure deployment, and technology partnerships (where licensing is challenging).

A notable example of such platform building is India's semiconductor and electronic chemicals arena (as mentioned in Chapter 3), one of the high-growth demand arenas within Indian chemicals. As this ecosystem gains momentum, a significant demand inflection is expected between 2028 and 2030, offering a narrow but powerful window for chemical companies to build capabilities today.[43] Even within select categories, the opportunity is material. For example, demand for high-purity wet chemicals used in semiconductor manufacturing is expected to reach $400 million to $450 million in India by 2030.[44]

Any company aspiring to build a credible semiconductor wet chemicals platform in India could start with three strategic priorities.

Technology partnerships to accelerate business build. Ultra-high-purity production is defined by purification, not synthesis. Building and validating purification stacks, including sub-boiling distillation, advanced distillation, ion exchange, and membrane separation, can take years of iteration and entail steep learning curves. Strategic technology licensing or joint ventures with established global companies can accelerate this journey, de-risk scale-up, and fast-track qualification readiness.

Secure bulk feedstock supply. Wet chemicals (for example, phosphoric acid, nitric acid, hydrogen peroxide, and ammonium hydroxide) and bulk and specialty gases (for example, nitrogen, hydrogen, and argon) are derived from industrial-grade feedstocks. Having captive production capabilities or locked-in bulk supply is a prerequisite to achieving consistent sub-10 parts per billion (ppb) electronic-grade purity at scale.

Anchor the business with a binding customer offtake. In semiconductor chemicals, demand is not won on spot markets. Products are qualified fab-by-fab against stringent metal, particle, total organic carbon (TOC), and packaging specifications, often over 12 to 24 months. Once qualified, demand becomes sticky, but getting there requires mutual conviction. Binding offtake agreements are often critical to justify capital investment, secure financing, and sustain utilization through the long qualification cycle.

[43] "The semiconductor opportunity in India: Semicon India Mission, new fabs & global partnerships," Invest India, February 13, 2026.
[44] *India Semiconductor Market Report 2030*, India Electronics and Semiconductor Market Association; McKinsey analysis.

2. Create global operating capabilities in priority markets

Despite strong export growth over the past decade, India's share of global trade in chemicals remains limited at approximately 3 percent.[45] China continues to take a disproportionate share of over 20 percent in exports, followed by more than 15 percent for the European Union, and over 10 percent for the United States (Exhibit 15). To close this gap, Indian chemical companies can move beyond an exporter mindset and build truly global operating models. The recently signed India–European Union Free Trade Agreement cuts duties on 97.5 percent of India's chemical export basket (worth approximately $12 billion) to zero, from levels as high as 12.8 percent.[46]

This creates a meaningful opportunity to improve cost competitiveness for Indian exporters that can meet regulations such as the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Classification, Labelling and Packaging (CLP), and Carbon Border Adjustment Mechanism (CBAM).

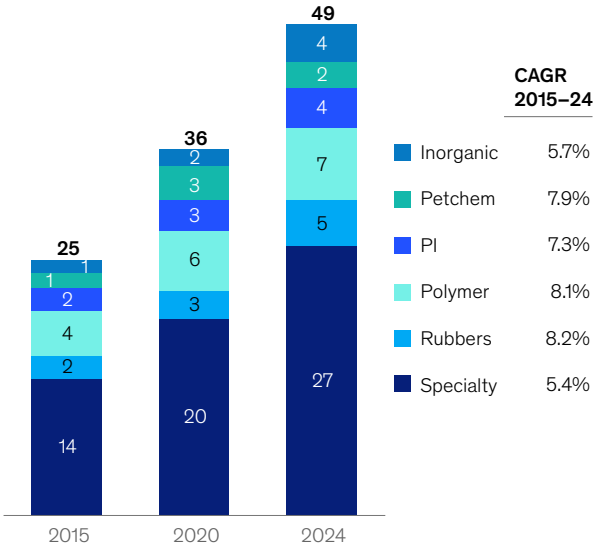
Evidence from industry data shows that companies with a stronger international footprint consistently outperform peers on both revenue growth and EBITDA margins. Companies operating in major chemical markets saw an approximately 2 percentage points higher revenue growth (fiscal years 2019–2025 CAGR) and approximately 1.5 percentage points higher EBITDA margin compared to those with no international presence.[47]

[45] UN Comtrade, International Trade Map.
[46] "Factsheet, India and European Union Trade Agreement," Department of Commerce, Ministry of Commerce and Industry, Government of India, January 27, 2026.
[47] McKinsey Value Intelligence; McKinsey analysis.

Exhibit 15

China's chemical exports continue to take a disproportionate share of global trade.

Indian chemical exports by sub-domain,[1] 2015–2024
$ billion



Top countries' share of chemical exports to global trade, 2015–2024

	Exports 2024 $ billion	% share of total[3]	CAGR, 2015–2024
China	326.2	21.0	8.1
Europe[2]	254.2	16.3	3.0
US	206.2	13.3	~60 3.0
South Korea	85.5	5.5	3.6
Japan	74.2	4.8	1.1
India	**48.8**	**3.1**	**7.5**

[1] Includes HS codes in chapters 28,29,32,38,39,40.
[2] Data aggregated at the EU-27 level.
[3] Calculated excluding internal trade of EU-27 states.
Source: UN Comtrade, International Trade Map; McKinsey analysis

McKinsey & Company

Reflecting on the experience of peers, two key success factors emerge:

Design manufacturing and supply chains for flexibility and efficiency. Indian chemical companies could set up manufacturing, processing, and supply chains that are adaptable across geographies, grades, and formulations. Export-led growth demands modular capacity, regional mixing, effective use of toll manufacturers, and customer-specific customization, instead of rigid, single-market plants. Companies can also invest in advanced demand planning and forecasting to build resilience across geographies that support growth without sacrificing service or working capital discipline. Consider keeping some inventory close to customers to help build customer confidence, while carefully balancing cost implications.

Build the capability of application-based selling for specialties. Specialty portfolios require solution-led selling where sales teams engage on both chemistry and economics, understand customer P&L impact, and engage cross functional teams across R&D, procurement, and plant heads to deliver value. This would require investing in application labs, hiring industry veterans, strengthening technical service teams, building focused domain clusters, and aligning sales incentives toward margin expansion. For example, some chemical companies trade products from China while creating a network of application labs in the US and Europe to be closer to customers.

3. Institutionalize programmatic partnerships

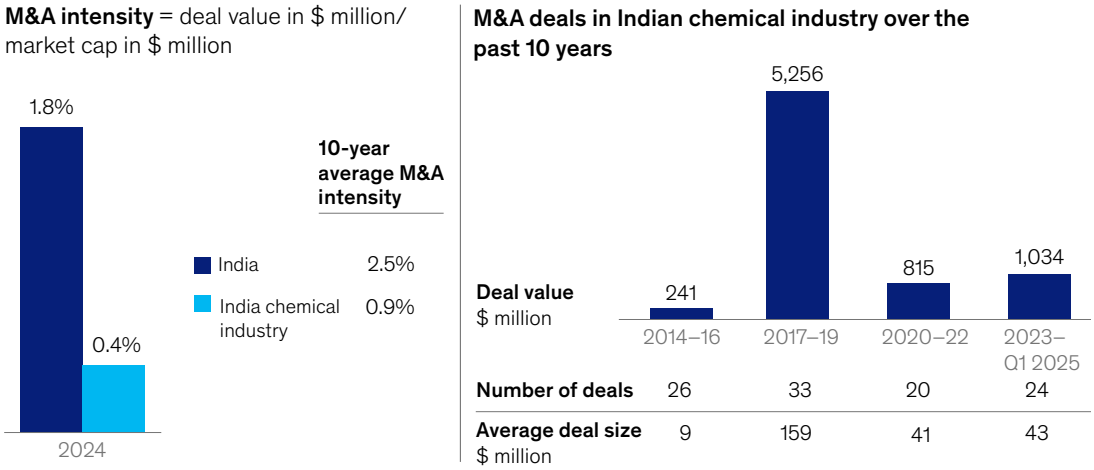
Compared with other industries, the chemical industry performs better on large deals. Large chemical companies often use these deals to sharpen their focus, either deepening their presence in certain geographies or products as specialized companies or moving into higher-margin sectors.[48]

Despite this, M&A is among the most underutilized levers in India's chemical industry. The industry's average M&A intensity of 0.9 percent over the past decade trails the national average of 2.5 percent, leaving significant room for inorganic growth (Exhibit 16).[49] At the same time, global margin pressure and portfolio rationalization, particularly in Europe, have created a buyer-friendly environment.

[48] Obi Ezekoye, Christine Johnson, Andrew Rose and Ulrich Weihe, "Chemicals: Success through timely, tailored action," McKinsey, February 29, 2024.
[49] S&P Global Market Intelligence; McKinsey Value Intelligence.

Exhibit 16

Indian chemicals' lower share of overall M&A activity signals untapped potential for inorganic value creation.



Source: S&P Global Market Intelligence; McKinsey Value Intelligence

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Programmatic M&A, including the acquisition of distressed or non-core assets (for example, in European chemical companies) could help Indian companies build capabilities faster, deepen customer relationships, and enter higher-value specialty segments.

Partnerships strategies, both globally and in India, focus on five distinct themes:

Technical capability acceleration. Acquire differentiated process technologies, catalysts, formulations, and R&D platforms at attractive valuations to accelerate capability building beyond organic routes. For example, Arclin's definitive agreement to acquire DuPont's Aramid's business for approximately $1.8 billion expands its portfolio to include innovative protective technologies of brands like Kevlar and Nomex across new domains like aerospace, electric vehicles and personal protection.[50]

Geographic scale-up. Pursue overseas acquisitions to establish a direct presence in priority markets, anchor global customers, and build local commercial and distribution networks. This helps companies shift from an export-led model to a truly global operating model. For example, Orica's $640 million acquisition of Cyanco doubled its sodium cyanide production and strengthened access to North American and African mining markets.[51] Similarly, Sudarshan's acquisition of Heubach, for approximately €127.5 million, enhanced product lines and expanded the former's presence in Europe and the Americas.[52]

Value-chain integration. Secure critical upstream feedstocks or integrate across intermediates and derivatives to improve cost competitiveness, supply security, and margin resilience across cycles. Petronas Chemicals Group's 100% acquisition of Perstorp (valued at €2.3 billion enterprise value) enabled Petronas to strengthen supply-chain control across end markets such as coatings, engineered fluids and nutrition solutions while expanding into higher value derivatives.[53]

Portfolio expansion. Enter higher-margin and more specialized product categories through targeted acquisitions that complement core strengths and accelerate movement up the chemical value curve. Local consolidation can also unlock a broader portfolio and market share. For example, Shanghai Titan Scientific's £6 billion acquisition of Apollo Scientific (UK) expanded its specialty reagents portfolio and strengthened its international footprint.[54]

Consolidation. Capture scale, reduce redundant capacity, and unlock cost effectiveness and geographic synergies through strategic mergers amid maturing markets and global oversupply. For example, AkzoNobel and Axalta agreed to an all-stock merger to create a premier global coatings company with complementary portfolios, $17 billion joint revenues and an expected $600 million in cost synergies, enhancing global reach and innovation leverage in a fragmented coatings market.[55] Japan's biggest petrochemicals companies Mitsui Chemicals, Idemitsu Kosan, and Sumitomo Chemical are consolidating their polyolefin and ethylene operations to reduce overcapacity and improve cost efficiency in the face of low utilization and Chinese competitive pressure.[56]

As Indian companies explore M&A options, it is important to remember that successful M&A is rarely about the deal itself. It is about whether integration choices boost or quietly erode the value that justified the acquisition in the first place.

[50] "Arclin Enters into Definitive Agreement to Acquire Aramids Business, including Kevlar® and Nomex® Brands, from DuPont™," Arclin press release, August 29, 2025.
[51] "Orica to expand mining chemicals business with Cyanco acquisition, partly funded by equity raising," Orica press release, February 21, 2024.
[52] "Sudarshan Chemical Enters into Definitive Agreement to Acquire Heubach Group," Sudarshan press release, October 11, 2024.
[53] "PCG Makes Landmark Acquisition of Perstorp, a Global Leader in Sustainable Specialty Chemicals, for RM10.5 Billion," Petronas Chemicals Group press release, May 17, 2022.
[54] "Titan Technology: Plans to acquire 100% equity of Apollo Scientific Ltd.," official regulatory disclosure of stock exchange announcement filed by Shanghai Titan Technology hosted on the SINA website (Translated from Chinese (Simplified)).
[55] "AkzoNobel and Axalta to Combine in All-Stock Merger of Equals, Creating a Premier Global Coatings Company," Axalta Coating Systems press release, November 18, 2025.
[56] "Mitsui Chemicals, Idemitsu Kosan, and Sumitomo Chemical Concluded a Definitive Agreement for the Business Integration of Sumitomo Chemical's PP and LLDPE Businesses into Prime Polymer, Aiming to Strengthen the Competitiveness of the Polyolefin Business in Japan," Mitsui Chemicals press release, December 24, 2025.

Four principles consistently distinguish the best from the rest. The first is leading with a value thesis, not only a cost thesis. This includes acquiring assets to accelerate growth, gain IP access, build innovation capability or gain market adjacency, rather than pursuing default cost synergies. Second, protect the target's "special sauce", be it culture, proprietary capabilities, customer intimacy or R&D labs. Third, de-risk day-1 beyond the balance sheet by keeping focus on regulatory, quality, supply chain, and EHS risks beyond HR and finance. Fourth, ring-fence the people who create value, whether it is R&D leaders, process experts or technical operators.

4. Turn innovation into a growth engine

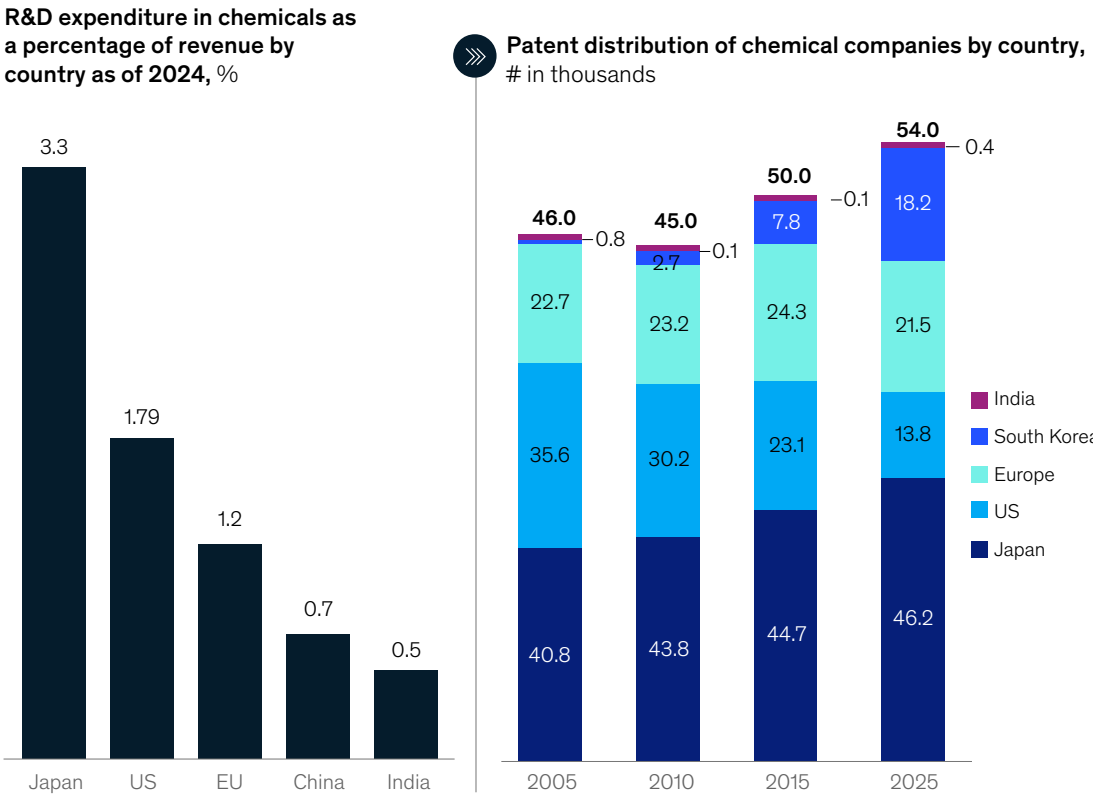
India's chemical industry currently invests only approximately 0.5 percent of its revenue into R&D, significantly less than global peers such as Japan, the US, and the EU (Exhibit 17).[57] Closing this gap could be critical for long-term competitiveness.

Innovation need not focus solely on breakthrough molecules. Global leaders show that value can come from multiple innovation pathways: process innovation that improves yield and energy efficiency; customer-embedded R&D that accelerates qualification and adoption; application-specific formulations that increase switching costs; and digital-enabled R&D platforms that shorten development cycles.

[57] McKinsey Value Intelligence; S&P Global Market Intelligence; Company annual reports and filings; ITIF; Invest India; FAST India; Statista.

Exhibit 17

India's R&D expenditure is the lowest compared to other countries.



Source: McKinsey Value Intelligence; S&P Global Market Intelligence; Company annual reports and filings; ITIF; Invest India; FAST India; Statista

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Indian chemical companies might take a leaf out of China's playbook by positioning targeted R&D as a core driver of global competitiveness rather than a support function (Exhibit 18). Chinese companies have leveraged various methods, from collaborating with academia to partnerships for smart pilots, to build their R&D muscle.

AI could become a critical tool in building innovation, as it has already democratized the ability to drive sustained R&D efforts and accelerate investment realizations from R&D for companies with the appropriate infrastructure and capabilities. This presents a unique opportunity for Indian companies, with the global chemical industry moving from traditional, hypothesis-driven search methods to AI-powered and molecular-embedding search algorithms (Exhibit 19).

Exhibit 18

Indian chemical companies can take a leaf out of China's competitiveness.

Strategic industry–academia collaboration	Local tech partnerships	Customer-embedded application development	Digitalization & smart R&D platforms
Joint research programs between chemical companies and research institutes to co-develop high-specialty chemicals and advanced manufacturing processes	Iterative model with producers teaming up with domestic process licensors and engineering integrators for technology across acetic acid, citric acid, polycarbonates, etc	R&D tightly integrated with key customers' application, qualification, and scale-up processes, enabling rapid customization and faster commercial adoption	Use of digital and AI-powered tools in R&D and process optimization to cut development time and enhance predictability of performance is critical to compete globally
China has 500+ academies publishing academic research papers on chemicals. Wanhua Chemical and Beijing University of Chemical Technology collaborated on enabling faster compliance with global regulatory standards	***SWCHEM (a Sinochem subsidiary) won a 1 MTPA project for licensing its proprietary technology for low-pressure AA synthesis by carbonylation of methanol for Sichuan Ruibai New Energy Materials***	***Hengli Petrochemical established application labs near textile and packaging customers to co-develop polyester and polymer grades tailored to processing conditions***	***Across China's chemical sector, digital twins have reduced equipment failures by ~40%, while AI-assisted algorithms have shortened materials R&D cycles***

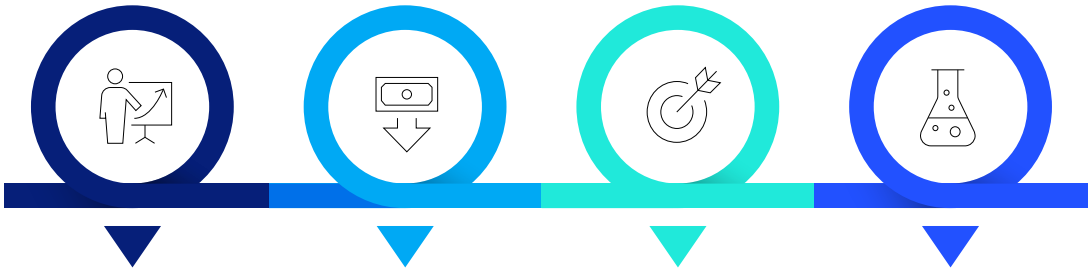
Source: Press search including but not limited to corporate releases; McKinsey analysis

McKinsey & Company

Exhibit 19

Scientific AI has the potential to double R&D throughput.

Imagine an AI-enabled R&D paradigm that…



… increases research throughput 2x through increased PoS and faster DMTA[1] cycles in tests and experiments

… prioritizes from 4x as many targets and leads through more powerful discovery, increasing 'shots on goal' and the PoS of each taken

… reduces R&D costs per launch by 50% through more efficient experiments, enabling 2x more products

… increases PoS 2x, through translation of higher-confidence, more-deeply understood candidates

[1]Design, Make, Test, Analyze.

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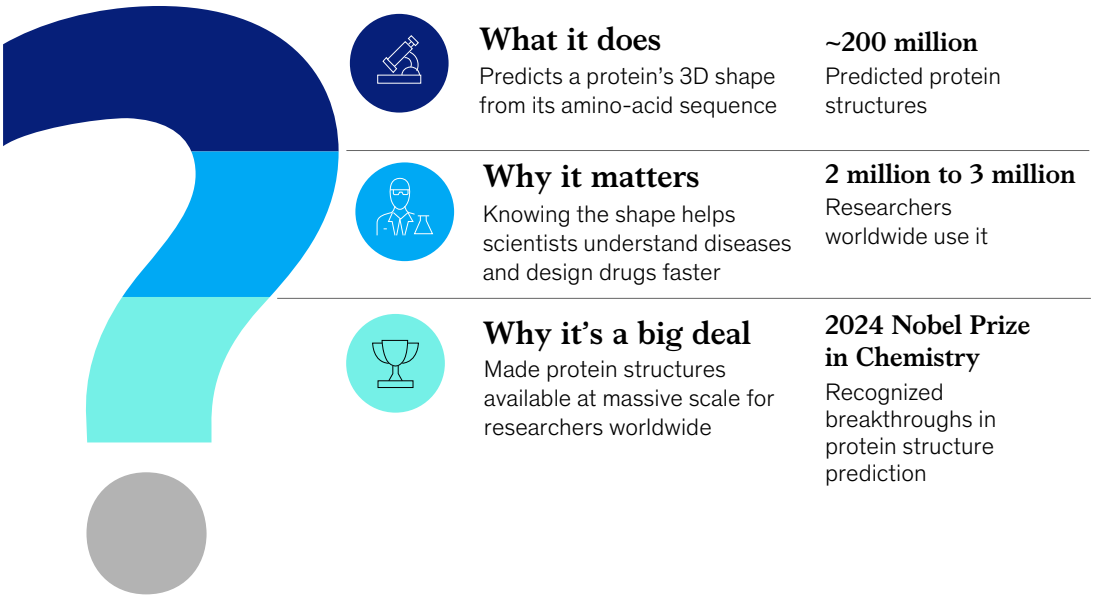
Global success stories have already emerged with recognized breakthroughs in protein structure prediction (Exhibit 20). [58]

[58] "AlphaFold has revealed millions of intricate 3D protein structures, and is helping scientists understand how life's molecules interact.", Google DeepMind Webpage, February 25, 2025.

Exhibit 20

Google AlphaFold cracked a 50-year biology challenge by accurately predicting 3D protein structures at scale.



Note: Google AlphaFold is an AI system that predicts the 3D structure of proteins to help understand diseases and discover drugs to treat them.
Source: "AlphaFold has revealed millions of intricate 3D protein structures, and is helping scientists understand how life's molecules interact.", Google DeepMind Webpage, February 25, 2025.

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Multiple problem statements in chemicals—for example, the potential for strict EU regulations against per- and polyfluoroalkyl substances (PFAS) has accelerated the search for alternatives to fluorine-based chemistries—offer an opportunity for Indian companies to leverage AI and accelerate innovation with limited R&D investments.

5. Integrate AI into the operating model

Advanced analytics, ML, AI, and gen AI have emerged as powerful enablers of both growth and margin expansion across the chemical value chain. We estimate that use cases across procurement, manufacturing, supply chain, commercial, and R&D functions could unlock 8 to 12 percentage points of incremental EBITDA through higher asset utilization, lower energy and raw material costs, improved pricing discipline, and faster time to market (Exhibit 21).[59]

Leading companies are moving beyond isolated pilots toward end-to-end, agentic AI workflows that link insights across functions. These transformations are business-led rather than IT-led, with clear value targets and operating-model redesigns embedded from the outset. For Indian chemical companies, AI adoption represents a rare opportunity to leapfrog global peers by improving productivity and resilience without large capital outlays.

Organizations looking to realize AI's full potential could need to address four key elements when moving from early exploration to enterprise-scale AI and agentic AI adoption:

Prioritize high-value use cases and workflows. Focus on agentic applications that unlock the most value, such as manual, repetitive, and coordination-intensive workflows with clear business impact.

Set a clear agentic ambition. Define the target state and investment appetite, whether that is a single productivity agent or an enterprise-wide agentic operating model.

Operationalize and scale with discipline. Translate ambition into execution by aligning objectives, building capabilities through staged pilots, and using performance metrics to inform go/no-go scaling decisions. This can be supported by strong governance and change management.

Bring the workforce along. Build the capabilities, mindsets, and behaviors required for employees to adopt, trust, and collaborate effectively with AI agents.

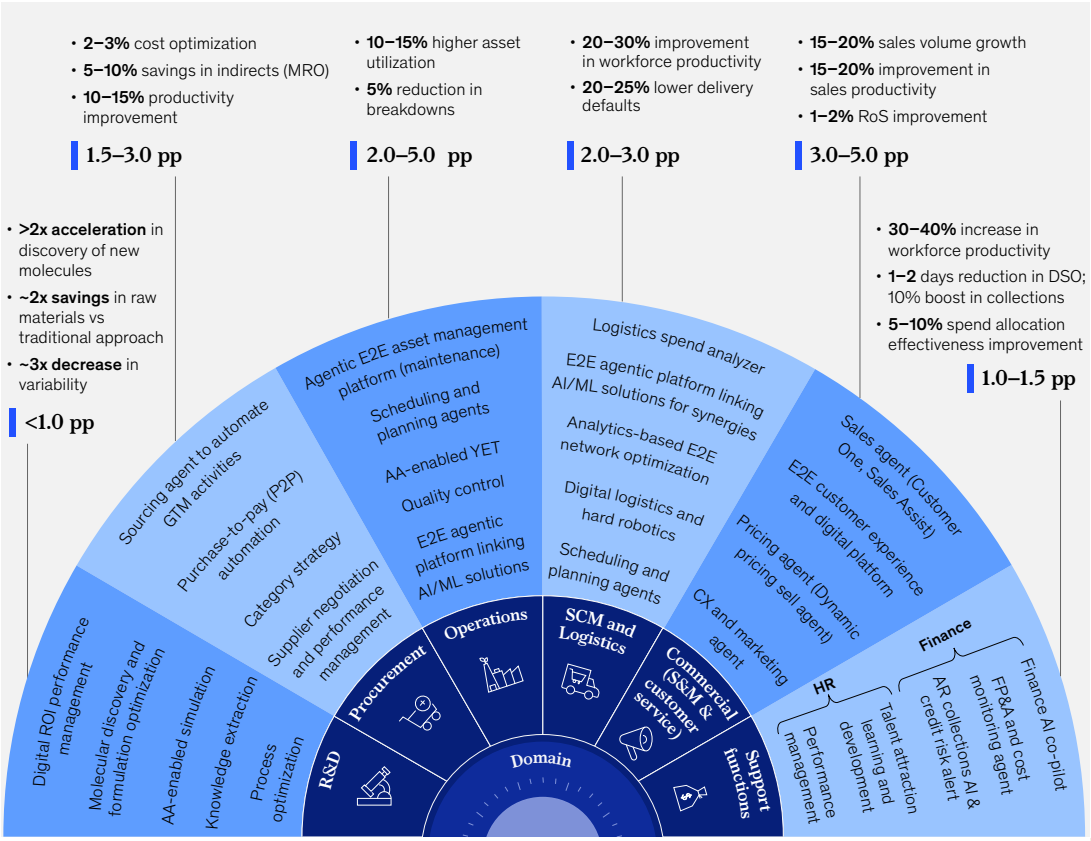
[59] McKinsey analysis.

Exhibit 21

AI and machine learning–led applications across priority domains have the potential to unlock 8–12 pp additional EBITDA.

NOT EXHAUSTIVE

Additional EBITDA uplift in pp



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Building resilience while shaping the next phase of growth

The chemical industry is entering a prolonged phase of disruption, not a passing downturn. In this new reality, a focused set of bold moves across the seven levers could separate leaders from the rest. These could serve as a roadmap for Indian chemical companies to reignite growth while protecting margins in a volatile global environment. Companies that focus on structurally advantaged markets, build differentiated capabilities, and deploy capital and technology with discipline, are likely to be best positioned to shape the next phase of global leadership. Early movers may not just scale faster but could also define the rules of competition for the next decade.

Notes

From challenges to possibilities: Leading India's chemical industry through global headwinds

By McKinsey

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