

# Specialty chemicals industry in India





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## **Executive summary**

The Indian chemical industry plays a pivotal role in contributing to the economy of the country, accounting for approximately 7 per cent of GDP and is expected to reach USD304 billion by 20251, up from USD178 billion in 2021. The industry continues to remain an attractive hub for opportunities for both domestic and multinational manufacturers. Specialty chemicals segment comprises a significant portion of India's chemical industry. With rising demand for value-added products by both domestic consumption and exports, the industry has experienced a significant increase from end-user segments such as the food industry, automobile industry, real estate, clothes and cosmetics, among other industries. Additionally, the Indian specialty chemicals industry is also expected to outpace China, Japan and the rest of the world.

From a trading perspective, specialty chemicals account for a significant share of more than 50 per cent of chemical exports<sup>2</sup>. Active pharmaceutical ingredients (APIs) and dyes and pigments continue to dominate the sub-segments in terms of influencing export potential. The competitive intensity, margin profiles, safety from price fluctuations in raw materials and growth potential vary between the segments within specialised chemicals.

Operations in several key industries globally were disrupted during the COVID-19-induced lockdown period, as revenues were strained due to the hindrance in transportation facilities, causing stockpiles and unavailability of labour. However, prevailing factors also spurred demand for a few specialty chemical sub-segments because these

were identified, as necessary. Consumer demand, for instance, increased for products related to hygiene. The lockdown period also led to supply chain disruptions, which forced manufacturers to de-risk their supply chains and shift their reliance away from crucial manufacturers located in China and toward alternative countries like India.

Moreover, stringent pollution control regulations and high labour costs, along with 'China plus one' strategy are expected to encourage manufacturers from China and other developed nations to move their manufacturing capabilities to India.

Additionally, India's strong process engineering capabilities, low-cost manufacturing capabilities and abundant manpower are leading to an array of opportunities for imports and exports of specialty chemicals. Likewise, government initiatives, such as the Petroleum, chemicals and petrochemicals investment region (PCPIR) policy and production-linked incentive (PLI) schemes, are providing reassurance to further develop the potential for domestic manufacturing and specialty chemicals, which are anticipated to benefit from this momentum.

While India aims to emerge as a manufacturing hub for the world, there are likely to be a few challenges in the near term. Therefore, the country should also focus on aspects such as research and development, capital investment, acquisitions, economies of scale, and most importantly, expanding domestic demand to sustain the rising growth of the industry.

- Analysis: Chemical sector in India grows by leaps and bounds, Livemint, June 2022
- India Country Commercial Guide, International Trade Administration, September 2022



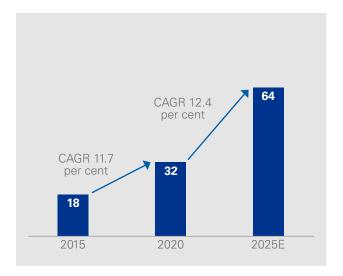


The Indian specialty chemicals industry has expanded exponentially in recent years. It represents 22 per cent of India's overall chemicals and petrochemicals market and is valued at USD32 billion. The industry is anticipated to reach USD64 billion by 2025 at a CAGR of 12.4 per cent<sup>1</sup>.

The specialty chemicals segment has been one of the fastest growing segments in the Indian manufacturing sector. This expansion can be attributed to increased demand from many end-user sectors, favourable government policies, a growing domestic customer base, changes in consumer lifestyle among other factors.

From a trading perspective, specialty chemicals account for a significant share of more than 50 per cent of chemical exports. Among the sub-segments, dyes and pigments, and pharma Active pharmaceutical ingredient (APIs) remain dominant in driving the potential for exports.

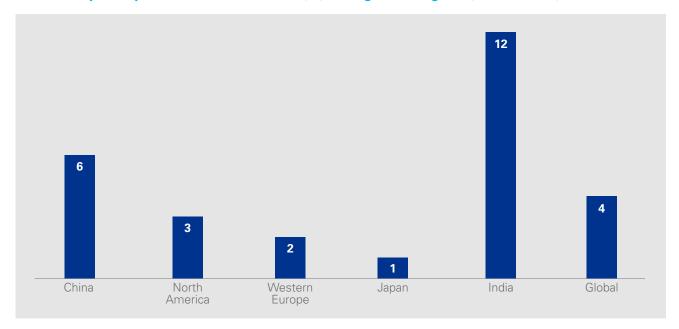
Exhibit 1: Indian specialty chemicals industry size (USD billion)<sup>1</sup>





In terms of global market share, India's specialty chemicals comprise approximately 4 per cent, while China accounts for 26 per cent<sup>2</sup>. However, as shown in Exhibit 2, India's specialty chemicals industry is predicted to grow rapidly, outpacing China, Japan and the rest of the world in percentage terms. Given its smaller global market share, India's absolute growth will be slower. However, its market share is predicted to increase from 4 per cent to 6 per cent by 2026, on the back of strong revenue growth of 15-20 per cent during FY2023<sup>3</sup>.

Exhibit 2: Specialty chemicals market CAGR (%) among select regions (FY2020-2025)1



<sup>1.</sup> Indian Specialty Chemicals, Yes Securities, January 2022

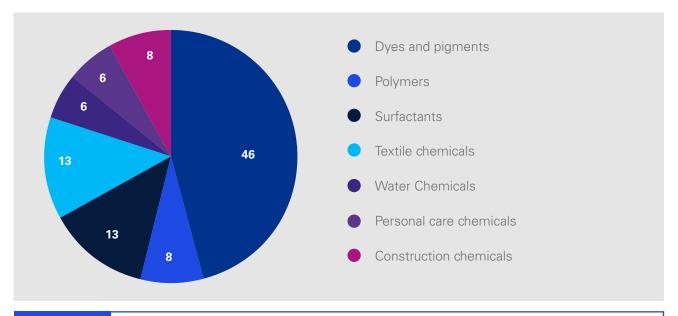
<sup>2.</sup> Specialty Chemicals, Motilal Oswal, June 2021

<sup>3.</sup> India to double specialty chemicals market share in 5 years, Crisil, March 2022

#### 1.1 Specialty chemicals market segmentation

The specialty chemicals industry comprises a wide range of sub-segments. The rising demand for these is a key reason for growth in the industry, as a whole. These are classified based on end-user markets. Some specialty chemical segments are also important for multiple industries.

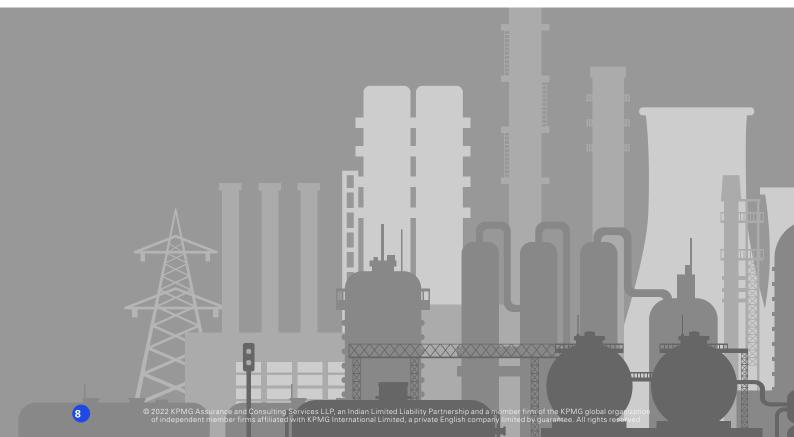
Exhibit 3: Breakup of select Indian specialty chemicals (per cent)<sup>1</sup>





The majority of the Indian specialty market is dominated by dyes and pigments. Furthermore, the segment is likely to rise as a result of the government's objective of establishing more than 100 smart cities, which is expected to drive demand for paints and coatings<sup>2</sup>.

- 1. Specialty Chemicals, Motilal Oswal, June 2021
- 2. Smart Cities Mission, IBEF, accessed in November 2022



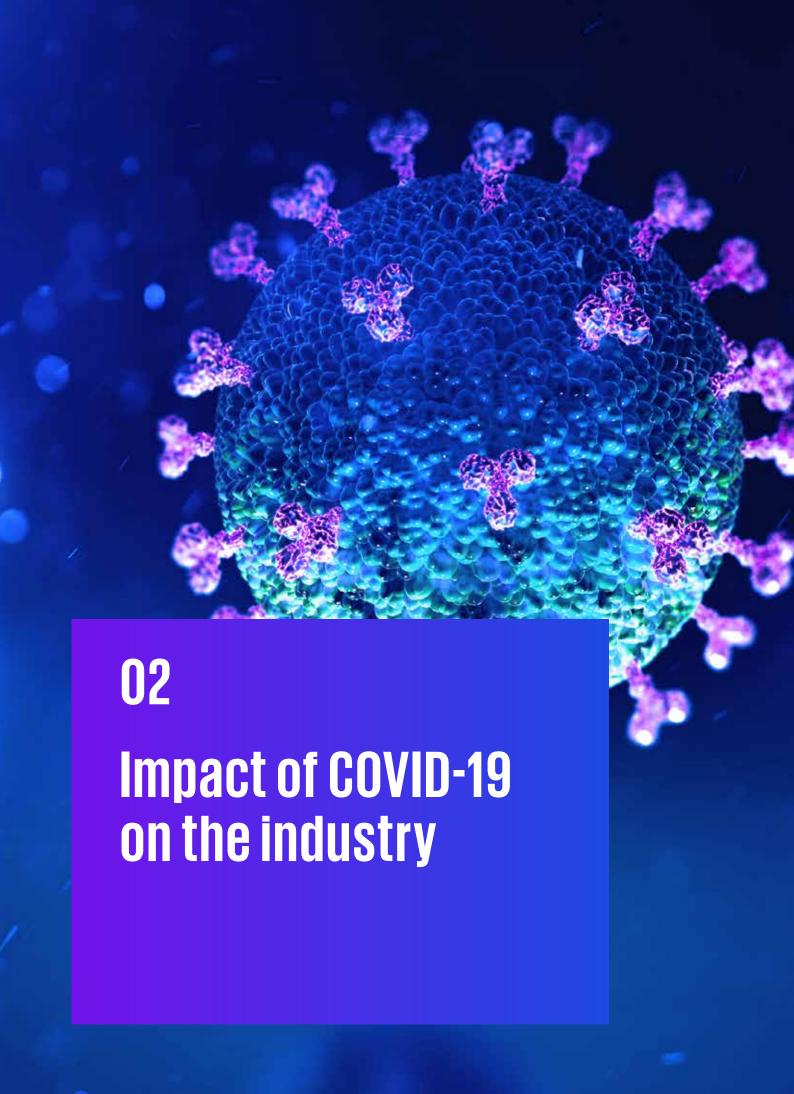
#### **COVID-19** impact on specialty chemicals segment

Segments	Market size in 2020 (USD billion) <sup>1</sup>	CAGR % (2020-2026) <sup>1</sup>	End-user industries	Entry barriers	Market growth
Dyes and pigments	7.0	10.0	Textile; Paints and coatings		
Personal care chemicals	1.0	15.0	Cosmetics; Hair care		
Surfactants	2.0	11.0	Home care, personal care		
Textile chemicals	1.8	11.5	Apparel		
Polymers	1.3	10.0	Automotive; Pipes		
Construction chemicals	1.4	15.0	Real estate; Infrastructure		
Flavours and Fragrances	2.4	17.1	Food processing; Personal care		
Water chemicals	0.8	15.0	Water treatment		



<sup>1.</sup> Specialty Chemicals, Motilal Oswal, June 2021





The COVID-19 pandemic disrupted manufacturing in major industries globally, primarily due to the lockdowns that impacted the manufacturing segments significantly. Correspondingly, the specialty chemicals industry in India also encountered challenges such as limited transportation facilities, stockpiling at ports and unavailability of labour at plants, which hindered product processing and loading.

The industry observed a fall in demand in some of the major end-user markets which specialty chemicals cater to. This comprised industries such as automotive, construction, and textiles, which witnessed a significant drop in demand due to the global recession and volatility in economic activities.

Conversely, increased demand for end-user market products in hygiene and personal care, boosted the

growth potential of the specialty chemicals market, primarily on account of change in consumer preference due to conscious measures undertaken towards better health and hygiene choices. Firms within specialty chemicals segment that cater to the pharmaceutical industries also observed vast growth. A specialised chemicals and organic intermediates manufacturer reported a 30 per cent rise in sales of the chemical isobutyl benzene (IBB), which is used to make Ibuprofen (a pain-relieving medicine).

The pandemic also prompted various multinational chemical companies to seek suppliers beyond the dominant Chinese market. India's favourable macroeconomic factors attracted such companies to the country, leading to an influx of orders for Indian manufacturers.

#### 2.1 Assessing the impact of COVID-19 across segments<sup>1</sup>

	Segments	COVID impact	Highlights
	Dyes and pigments	Neutral	Domestic manufacturers profited as import from China was disrupted
	Personal care chemicals	Positive	Increase in demand due to consumer preference for hygiene products
	Surfactants	Positive	High demand for disinfectants, cleaning agents and detergents
	Textile chemicals	Negative	Major demand disorder due to headwinds in enduser market
*	Polymers	Neutral	Strong demand in the packaging segment, partially offset by lower demand in automotive and industrial applications
	Construction chemicals	Negative	Negative impact due to the decline in construction activity
•	Flavours and Fragrances	Positive	High demand for packaged foods and fragrances have positively impacted the sector
, i	Water Chemicals	Neutral	The adverse impact of declining industrial activity was partially offset by increased demand for water disinfectants



The pandemic had a mixed impact on the specialty chemical industry; industries experiencing a global recession and volatility in economic activities saw a drop in demand, whereas increasing health consciousness and hygiene, as well as the need for pain relievers, drove the demand for specialty chemicals used in their production.

<sup>1.</sup> Specialty Chemicals Market in India 2022, Netscribes, April 2022



Companies within Asia play a pivotal role in the global specialty chemical spectrum. On the back of rapid industrialisation, Asian countries expanded their share in the manufacturing of specialty chemicals, resulting in a structural shift in manufacturing from the EU and North America to Asia.

Among the Asian countries, China emerged as a global major in the specialty chemical manufacturing industry, dominating production levels as well as exports to the rest of the world. However, due to the country's economic reforms transformation, such as environmental restrictions and labour costs, China's chemical industry went through a transition period. Also, the relocation of hazardous manufacturing plants to designated industrial parks resulted in significant supply-chain disruptions in the country's chemical industry.

These factors led several specialty chemical firms to re-evaluate their company strategies in terms of the location of their business activities and manufacturing sites. Some of these companies with operations in China looked into alternate locations to diversify or completely relocate their operations.

#### 3.1 India emerging as a viable alternative

India has the opportunity and potential to emerge as a viable alternative hub for specialty chemical manufacturing. The operational cost disparity between China and India has reduced due to China's enhanced pollution control regulations. Additionally, as a result of the 'China plus one' offshore strategy, numerous global manufacturers are relocating capacities to low-cost regions with high technological capabilities, such as India.

India provides low-cost operations; feedstock availability; skilled labor; benefit of a long coastline and navigable waterways for ease of trade; favourable government policies; significant import substitution opportunity; strong intellectual property protection, among other advantages. Macroeconomic factors leading to a positive ecosystem and improving the ease of doing business has been critical to attract foreign specialty chemicals manufacturers in the country.

The country is well positioned to expand its global market share as it continues to invest in core R&D competence, scale and the capacity to deliver products at lower costs (through efficiency measures) in order to build a competitive edge.





The 'China plus one' strategy is expected to attract chemical manufactures to setup and expand their production capabilities in India. This ultimately will support the growth of specialty chemicals market within the country.

#### 3.2 Capturing the export opportunity within segments

China contributes to 18 per cent of specialty chemical exports globally, which is nearly quadruple the value of Indian exports<sup>1</sup>. However, as India presents itself as a viable alternative market for specialty chemical companies, there is a potential to reduce the disparity in China's and India's export capacities.

As indicated in the illustration below, India's export numbers in some sub-segments are significantly low, compared to China. However, scaling up production in these sub-segments with a focus on expanding the export capacity may help India bridge the gap. Global chemical leaders re-evaluating their procurement from China to India, can also help accelerate plans for expansion. Moreover, improving the productivity of chemicals catering to electronics, food additives, rubber and flavours and fragrances can aid in exploring the potential of the export share in these segments.

Global exports (USD billion)
India's export share (in per cent)

China's export share (in per cent)

27%

22%

19%

Polymer additives

Electronic chemicals

Food additives

Rubber chemicals

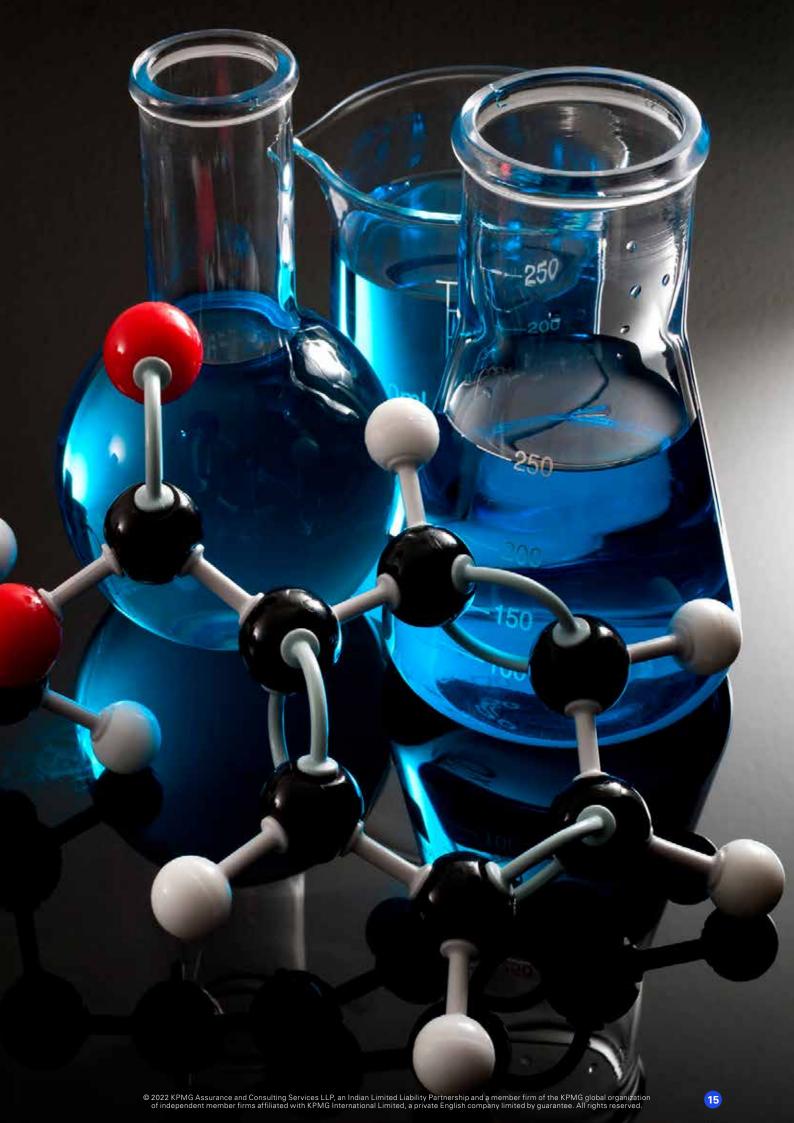
Flavours and

fragrances

Exhibit 4: Specialty chemicals export dynamics<sup>1</sup>

1. Specialty Chemicals, Motilal Oswal, June 2021







#### 4.1 India's trade flow presents a multifold opportunity for the sector

India is fast becoming a preferred manufacturing destination for companies across the globe, for its low cost manufacturing capabilities, strong process engineering skills and abundant availability of manpower. This is leading to creation of multifold opportunities in both exports and imports of specialty chemicals.

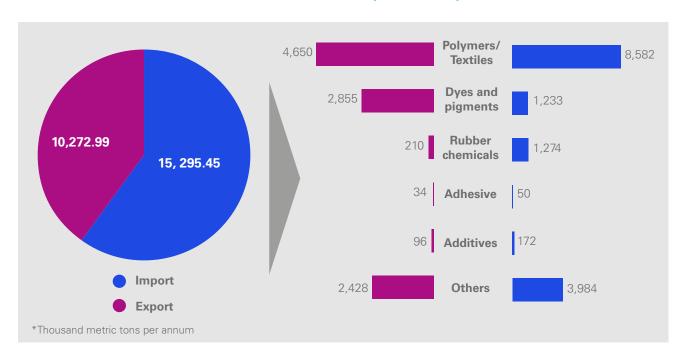
India's chemical export registered a record USD29.2 billion¹ in 2021-22 with specialty chemicals accounting for more than 50 per cent in the same. India has emerged as a significant contributor in global dyes production with a market share of approximately 16-18 per cent of the world's dyestuff exports. Indian dye is exported to over 90 countries¹. The exports of India's top 10 specialty chemical manufacturers have grown at a CAGR of 20.8 per cent between FY15-FY20 as compared with revenue growth of 17.1 per cent during the same period¹.



As outlined in Exhibit 5, India is a net importer of specialty chemicals. However, reforms and policies undertaken by the Indian government, along with other strategic advantages, presents India as a viable destination for both domestic and multinational companies to align their priorities and capitalise on the import substitution opportunity, by scaling up production and resultantly reducing India's dependence on imports.

Exhibit 5: India's three-year average total trade in TMTA\* (2019-21)<sup>2</sup>

Exhibit 6: India's three-year average total exports and imports in TMTA\* (2019-21)



#### 4.2 Rise in demand in different end-user industries

Resurgence in demand has influenced Indian companies to revisit their capacity expansion plans. Companies have been focusing on capacity expansion due to demand fueled by growth in the end-user industries such as pharmaceuticals, food, construction, electronics, dyes and pigments, among others. Demand for a wide range of cosmetic chemicals, health care goods, and hygiene products that contain specialty chemicals has also picked up.

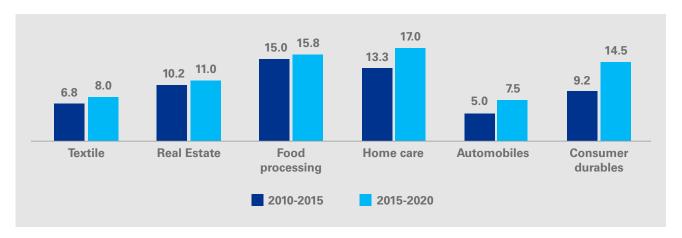
As a result, capital spending by companies within the sector is expected to increase by 50 per cent y-o-y to INR6,000-6,200 crore through 2023³, well exceeding the INR5,000 crore spent before the pandemic in fiscal 2020.

Exports of Indian chemicals register growth of 106% in 2021-22 over 2013-14, Ministry of Commerce & Industry, April 2022

<sup>2.</sup> DCPC Imports-Exports list, Chemicals.nic.in, accessed in August 2022

Specialty chemicals' capex to spurt 50%, riding on strong demand owing to China+1 strategy, Crisil, September 2021

Exhibit 7: Growth rate of end-user industries (per cent)<sup>1</sup>



#### 4.3 Favourable government initiatives

#### PCPIR policy<sup>2</sup>

The Petroleum, chemicals and petrochemicals investment region (PCPIR) was redrafted, with an aim to attract a combined investment of USD142 billion by 2025, USD213 billion by 2030 and USD284 billion by 2035.

## Production-linked incentive (PLI) scheme

PLI scheme for chemicals is in development stages, aiming for 10-20 per cent output incentives, to boost domestic production and exports<sup>3</sup>.

#### Chemicals Promotion and Development Scheme (CPDS)

CPDS was implemented to facilitate growth and development of the chemical industry, and specialty chemicals such as dye and dye intermediates<sup>4</sup>.

#### **Import-Export governance**

It is mandatory to mention 8-digit HSN or tariff code for 49 chemical-based products, while issuing GST. This is to curtail tax evasion and enable a better trade intelligence<sup>5</sup>.

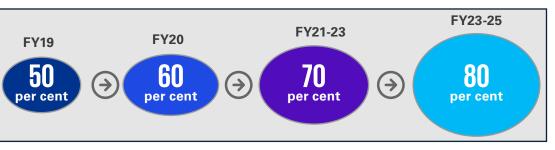
#### **Public procurement policy**

As part of the Make in India scheme, procuring entities should follow the local content criteria for a set of chemicals. The minimum local content would progressively increase till FY25°.

### 2034 Vision for Chemicals sector<sup>7</sup>

Government announced the setting-up of a vision 2034 blueprint to explore opportunities to improve domestic production, reduce imports and attract investments in the sector.





- 1. Specialty Chemicals Market in India 2022, Netscribes, April 2022
- 2. India specialty chemicals, Yes Securities, January 2022
- India: Global Manufacturing Hub for Chemicals and Petrochemicals, Department of Chemicals & petro-chemicals, March 2021
- 4. National portal of India, India.gov.in, accessed in August 2022
- Government makes it mandatory to mention 8-digit HSN Code in tax invoice for 49 chemical-based products, Economic Times, December 2020
- 6. Public Procurement (Preference to Make in India), Ministry of Power, November 2021
- Government to bring PLI scheme to promote domestic agro-chemicals manufacturing, Economic Times, November 2020





While there are opportunities favouring growth in the specialty chemicals sector, there is a need to stimulate key enablers to ensure continued growth. Strategies for ushering in these enablers need to be initiated by the key stakeholders of the industry. The government's role is also pivotal to these enablers. It is essential that there is focus on aspects such as R&D investments and acquisitions, economies of scale, government initiatives to boost manufacturing, duty restructuring, some of which are highlighted below.



Companies should increasingly focus on their innovation cycle and invest in research and development. Some of the larger specialty chemical companies in India spend less than 3 per cent of their revenue towards R&D activities¹. The government is aiming to increase India's public investment in R&D to ~2 per cent of GDP by FY25E². The specialty chemicals industry is also likely to raise its spending to 5-6 per cent during this period.



Indian companies in the specialty chemicals industry face low risk from new competitors due to high entry barriers. However, there is a need to address import dependence. With an aim to expand geographical and segment footprint, companies need to focus on growth to exploit economies of scale.



With an emphasis on technology, targeting small to mid-sized firms in Europe, Japan, and the U.S., can be beneficial for the Indian companies with resources to expand. They can explore acquiring or partnering with companies in these geographies with expertise in specific innovative chemistries, Industry 4.0 and efficient technologies. This will help in implementing advanced technologies in their domestic manufacturing capabilities.



To drive further growth in the overall specialty chemicals market, introduction of collaborative platforms/schemes by the government can drive innovation.

Government schemes for specialty chemicals that cater to sunrise industries can also help propel their production capabilities to compete against large international companies.



With an uptick in consumer sentiments towards sustainability, specialty chemical companies also need to focus on structuring their climate goals, particularly in manufacturing. Sustainability should be considered imperative for long term value creation rather than a compliance parameter.

Government initiatives can also influence adoption of sustainability reporting, setting methodology-based targets and developing roadmaps for decarbonisation.

- 1. Indian Specialty Chemical Industry, Avendus, September 2020
- 2. Specialty Chemicals, Motilal Oswal, June 2021



As we analyse the growth drivers and inhibitors for the specialty chemicals sector, we must also look at the fundamental constituents of the sector. In this section, we will delve into the strategies that companies have adopted to grow, diversify, innovate, reinvest and continue in a virtuous growth cycle.

#### 6.1 Case study - 1

A diversified chemicals conglomerate engaged in the manufacture of industrial intermediates maintains a portfolio of chemicals which are used in varied application, such as tyres to air conditioners, mines to cricket grounds, automotive to household appliances, food packaging to raw materials for pharmaceuticals. Its business segments include technical textile business (TTB), chemical business (CB), packaging film business (PFB) and others. It exports to more than 75 countries.

The company entered specialty chemicals business in early 2000s, as a supplier of fine chemicals to the agrochemicals and pharmaceuticals industry. It has been expanding its investment in specialty chemicals, which contributes ~60 per cent of its chemical segmental revenue. As a result, the chemical business, which formed ~30 per cent of the company's 2015 revenue, generated ~40 per cent of its 2021 revenue. Further scale up in revenue is expected in the coming years, on back of monetisation of growth opportunities in specialty chemicals and agrochemicals.

#### 6.1.1 Strategies that have worked for the company

## Extended focus on specialty chemicals



Over the years, the company has turned its focus towards specialty chemicals segment. It intends to continue with the strategy, through re-investment of the cash flow from other business segments into the chemicals business. It has also deployed dedicated facilities catering to specialty chemicals.

## Investing in research and development (R&D)



The company places strong emphasis on innovation, having established several R&D centres. ~2 per cent of its revenue is dedicated to product and process innovation. It has commercialised more than 100 molecules, has over 100 global patents granted and more than 300 patents applied for. It also employs over 400 people engaged in the area of R&D, engineering and scale-ups.

## Long-term partnerships and client relationships



The company's primary clients are global market leaders in the chemical industry, and this contributes to over 50 per cent of its specialty chemical revenues. Strong network with market leaders has led to collaboration in terms of innovation and research, thereby benefitting the overall business of the company.

#### **6.2 Case study - 2**

The company is one of India's leading manufacturers of specialty chemicals and pharmaceuticals APIs with a global footprint. It expanded its portfolio to 200 products and caters to various end-user industries such as pharmaceuticals, polymer additives, pigment and dyes, rubber chemicals, among others.

#### 6.2.1 Strategies that have worked for the company

## De-risking through diversification

The company has diversified its product portfolio, and its clientele to more than 700 domestic and 400 export customers. Moreover, its top 10 customers contribute to more than 20 per cent of its revenue. It also has low dependence on imports from countries like China, as its key raw material has abundant domestic availability.

## 02 Investment in capacity

The company has various plans of capacity expansion FY22-24, with INR15 billion likely to be invested in existing product lines and over INR30 billion in new products. These projects are expected to double the company's revenue growth by FY27 (versus FY21).

## Efficient business model

The company operates on a cost-plus business model, wherein margins are safeguarded as volatility in rawmaterial cost is passed on to customers. The company has invested in scaling up its capabilities to operate complex processes, which has improved both product portfolio and margins, leading to a competitive edge.

#### **6.3 Case study – 3**

India's emergence as one of the fastest growing specialty chemicals markets has attracted various multinational companies to invest in the country. One of the global leaders in the industry has established a joint venture in India for clean specialty derivatives. The joint venture was established with a prominent Indian company in the market.

The joint venture will be utilising the production facilities of the domestic company, while also using the facilities across geographies such as Sri Lanka, Bangladesh and Nepal. The key aim of the joint venture is to drive innovation to add value through sustainability and be a leading supplier of renewable materials to the rapidly growing consumer care

market in India and neighbouring countries.

India's geographical position has been strategically beneficial for catering products to its neighbouring countries. Multinational companies targeting multiple markets in Asia have availed joint venture opportunities with Indian companies. They collaborate on their capabilities and drive growth by penetrating into other markets. Due to high entry barriers of specialty chemicals in India, joint ventures prove to be a critical passage into the market. The low cost of labour, and other favourable macro factors attract multinational companies to the country.

#### 6.4 Key learnings



The leading companies within the Indian ecosystem maintain a diversified portfolio with the aim of de-risking during unfavourable conditions or unforeseen events, such as COVID-19. Companies are dependent on end-user markets; hence, keeping a diverse portfolio safeguards them from uncertainties and possible demand dips in any specific end-user market.



Many companies in the industry are focused on investing in scaling up their capabilities, as India's macro-economic factors have presented it as a viable business opportunity for international investors. Entry barriers in the industry are relatively high, so opportunities lie in creating a position in the market and strengthening it further.



To stay ahead of the competition, innovation is key - several major Indian specialty chemical companies made significant investments towards their R&D initiatives and also towards setting up global innovation centres. Value for eco-friendly manufacturing has also been garnering attention which is leading to companies re-assessing strategies to develop products through a sustainable process.





The specialty chemicals industry is going through a growth phase, and conducive factors can drive the industry to emerge as one of the world's major markets. Domestic companies taking advantage of factors such as 'China plus one' strategy along with Indian Government pushing for self sufficiency by promoting domestic manufacturing can benefit in the long term as global manufacturing giants are evaluating viable alternative manufacturing locations.

However, it has to be understood that China became a global hub of chemical manufacturing through years of focus and investment in developing infrastructure, capabilities and efficiencies translating to cost leadership. Hence, specialty chemical industries in India would need to step up their game to be seen as globally competitive in terms of quality, cost, and agility.

## Considerations for specialty chemical industry stakeholders to make India a global manufacturing hub

## Target growth in domestic demand segments

Consumption of specialty chemicals in the country is low per capita, compared to global average. Given the potential, Indian companies have the opportunity to expand their market, target key segments & states for demand-creation and build a dominant position for themselves in the market.



## **02**Enhance scale of operations

Majority of the specialty chemical manufacturers in India operate at a significantly lower scale, severely impacting their ability to be cost competitive with their Chinese counterparts – there is need to focus on capacity expansions to right-size and for right products and get economies of scale.



#### U3 Identification of right product mix

Specialty chemicals is a diverse space and margins vary across sub-segments- there is need to focus on growth segments like electronics, food additives, fragrance and flavours, among others, and hence it is important to invest in the right portfolio.



## U4 Build efficiencies in supply chain

India needs to re-look at traditional logistics across inbound and outbound movement – for both domestic and global market, as well as strengthening the secondary channel network and create efficiencies to have cost leadership.



#### 05 Leverage technology

India is well positioned with existing digital and startup ecosystem favourable for innovation across new technologies and business models. These factors can provide significant opportunities to the sector in order to access the growth potential and deliver to the markets.



The future looks bright for the specialty chemicals sector in India, with many companies well-placed as long as they address key growth considerations over the coming years, and focus on customer, enhance their global tie-ups, along with capacity and supply chain ramp-ups.

## **Acknowledgements:**

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## Research

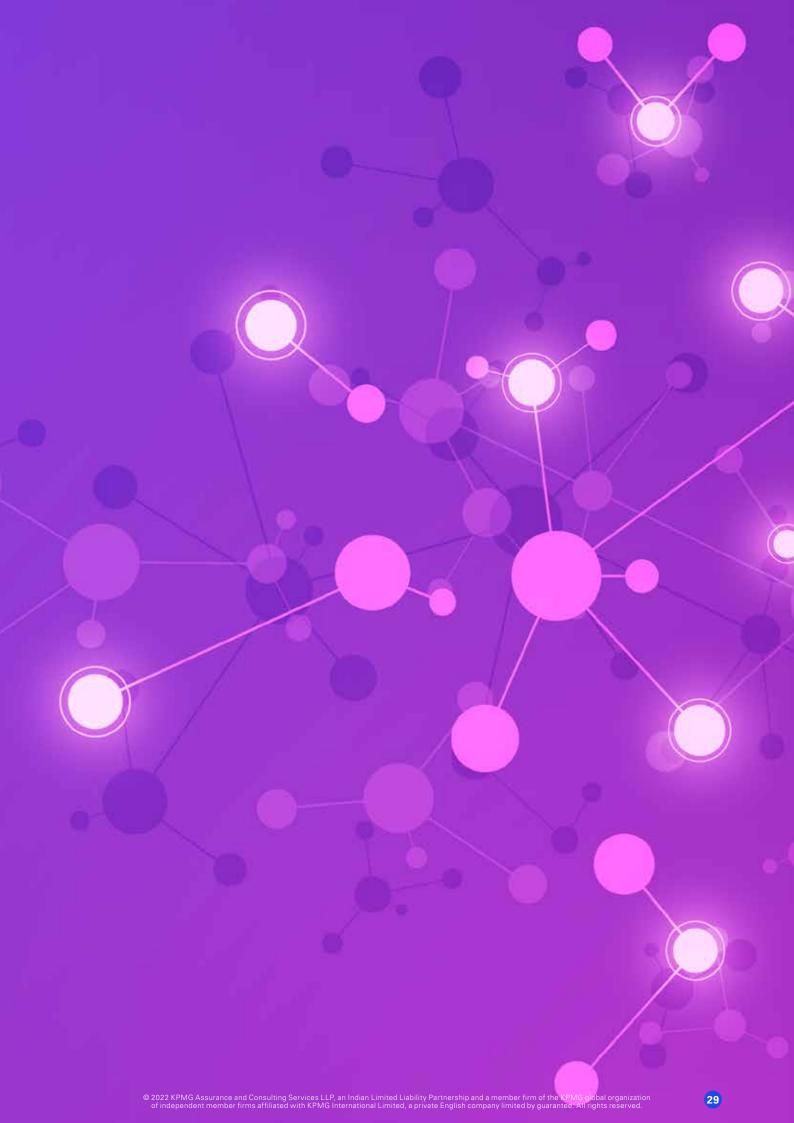
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