

Indian Chemical industry

Growth of Chemical Industry

The chemical sector has witnessed growth of **13-14% in the last 5 years** while petrochemicals have registered a growth of **8-9% over the same period**. The major growth drivers, behind India's chemical industry could be listed as follows:

- **Structural advantage:** With a growing market and purchasing power, the domestic industry is likely to grow at over 10-13% in the coming years. Growing disposable incomes and increasing urbanization are fuelling the end consumption demand for paints, textiles, adhesives and construction, which, in turn, leads to substantial growth opportunity for chemicals companies.
- **High domestic consumption:** The chemicals industry in India is the largest consumer of its own products, consuming 33% of its output. With promising growth trends in the chemicals industry, this internal consumption is also set to rise.
- **Diversified industry:** The Indian chemicals industry has a diversified manufacturing base that produces world-class products. There is a substantial presence of downstream industries in all segments. Further, this large and expanding domestic chemicals market also boasts of a large pool of highly-trained scientific manpower.
- **Promising export potential:** Chemicals constitute ~5.4% of India's total exports. India already has a strong presence in the export market in the sub-segments of dyes, pharmaceuticals and agro chemicals. India exports dyes to Germany, the UK, the US, Switzerland, Spain, Turkey, Singapore and Japan.

Government Policies and FDI Investments

Government recognizes Chemical industry as a key growth element of Indian economy. In Chemical Sector, 100% FDI is permissible. Manufacture of most of chemical products is delicensed. The entrepreneurs need to submit only IEM with the DIPP provided no locational angle is involved. Only the following items are covered in the compulsory licensing list because of their hazardous nature.

- Hydrocyanic acid & its derivatives

- Phosgene & its derivatives
- Isocyanates & di-isocyanates of hydrocarbons

A number of initiatives have been proposed in the 12th 5-year plan (2012-2017) to boost the growth of Indian Chemical industry. Few highlights are:

- **Investment policies:**

- Target to increase the share of manufacturing in GDP to at least 25% by 2025 (from current 16%). Investments in manufacturing in the chemical sector are absolutely essential to ensure growth of the Indian chemical industry
- Government's proposal to set up of a technology up-gradation fund of ~USD 80 Mn in the 12th plan for chemicals.
- Proposal to establish an autonomous USD 100 Mn chemical innovation fund by securing 10% of the total inclusive national innovation fund set up by the National Innovation Council to encourage commercialization efforts for innovations generating inclusive growth

- **Other initiatives:**

- Government readiness to provide incentives for bio-based raw materials to reduce dependence on crude oil, encourage companies to seek "Responsible Care Certification" and facilitate priority loans to those who meet environment norms
- Government's plan to expedite the consolidation of multiple legislations governing the chemical industry into one Integrated Chemical Legislation. This legislation should cover the entire life cycle of chemicals. This will act as REACH like legislation for safe use of chemicals for protection of human health & environment
- Chemical industry could be granted tax and duty reductions for specific identified products such as import duty reduction on inputs like coal, furnace oil, naphtha, etc., inclusion of a wider range of inputs under CENVAT credit and encouraging companies to set up captive power plants
- Policies have been initiated to set up integrated petroleum, chemicals and petrochemicals investment regions (PCPIRs). PCPIR will be an investment region spread across 250 square kilometres for manufacturing of domestic and export-related products.

- Simplified procedures for FDIs as most of the chemical sector products fall under the automatic approval route for FDI/NRI investment upto 100%

Chemical industry had to face the brunt of global slowdown in past 2-3 years. Global economic uncertainty along with recent regulatory issues has resulted in low FDI inflows to the country. FDI in Chemical industry dropped from USD 749 Mn in FY09 to USD 362 Mn in FY10. However, FDI inflow picked up in FY11 reaching USD 2,345 Mn and USD 4,041 Mn in FY12. Indian Chemical industry also managed to lead industrial IIP in FY13. As per CSO sources, Chemicals IIP for FY13 stood at 3.1% while the overall IIP was 0.8%.

Sector Dynamics

The Indian Chemical Industry comprises both small and large-scale units, and presently, there are about 70,000 chemical manufacturing units located in the country (Deptt. Of Chemicals and Petrochemicals-Draft National Chemical Policy-December 2013) a major component (in numbers) are covered in the small scale sector. Top ten chemical companies listed in the Indian markets, based on their 2012 revenues are:

Company Name
Tata Chemicals
United Phosphorous Limited
BASF
India Glycols
Pidilite Industries
Vikas WSP
Phillips Carbon Black Limited
Gujarat Heavy Chemicals
Aarti Industries
Gujarat Alkalies & Chemicals Limited

In the petrochemicals space, polymers constitute 70% of end products petrochemicals market in India. Indian polymers industry is oligopolistic in nature with only 4 large producers:

- Reliance Industries Ltd. (RIL)
- Indian Oil Corporation Limited (IOCL)
- Haldia Petrochem Ltd (HPL)
- Gas Authority of India Ltd (GAIL)
- Many more players are entering viz: OPAL, HMEL, BPCL, Brahmputra Crackers etc.

Key Trends & Developments

Indian Chemical players have been focussing on sustainable development. Water, environmental impact, raw materials, safety over lifecycle and energy use is some of the issues grappling the industry. Indian chemical companies are largely investing in innovative solutions to find appropriate answers to these challenges. Some of the successful examples from the industry are as follows:

- Kanoria Chemicals & Industries Limited (KCI) launched a “waste to wealth” program at its Ankleshwar plant with the objective of recovery of recyclable water from distillery effluents. KCI went for reverse osmosis technology to achieve maximum recycle and minimum possible disposal.
- The Arulpuram common effluent treatment plant in Tirupur adopted a technology to recycle more than 98% of water and reuse of more than 90% of the salt by implementing an effluent treatment plant consisting of a pre-treatment system followed by water recovery system using reverse osmosis.
- Bristol-Myers Squibb went for integrating the pervaporation technology with constant volume distillation operation. With the integrated approach Bristol Myers achieved 56% reduction in THF (100% reduction in entrainer) and 93% reduction in wastes generated

Apart from investing in innovative solutions, companies have also made major investments in the upcoming PCPIRs. OPaL has committed an investment of USD 3.2 Bn for 1.1 MMTPA multi feed petrochemical cracker and USD 560 Mn for C2 / C3 extraction unit at Dahej PCPIR. Other chemical units who have invested in PCPIR are Reliance Petrochemicals Complex, Gujarat Alkalies and Chemicals Limited (GACL), BASF, Birla Copper, Gujarat Chemical Port Terminal Company Limited (GCPTCL), Petronet LNG and Welspun. As of Jan 2013, a total of USD 21 Bn has been committed for investment.

Chemical industry is also offering new products according to the changing requirements of the market. The industry has developed microbial de-colorization and degradation procedures for textiles and begun exploring bio-diversity for natural dyes and developing eco-friendly methodology for synthetic dyes. Hindustan Petroleum Corporation Ltd (HPCL), a public sector refiner, has stated its intent to bring to market green lubricants developed from renewable feedstock. DuPont, as part of its R&D strategy, has set up a knowledge centre in India focusing on areas like green technologies for refinery processes. Tata Chemicals has established an Innovation centre to focus on green technologies in emerging areas such as nano-technology, fermentation and bio-fuels.

As per reports, the chemical industry will foresee the following trends:

- Western companies would look to **expand presence in ASIA** as Asian markets emerge as a major consumption hub
- Commodity chemical companies will look **for entry into Specialty Chemicals** for Growth and profitability. **M&A** would be the preferred route for Cash Rich global companies to expand in Specialty Chemicals in Asia
- After EU, **REACH** like regulations is expected to come up in other nations e.g. China, US. This will increase cost of production and may make certain companies uncompetitive
- With Availability of Shale Gas as cheaper feedstock, **US could become major processing hub**. ASIAN producers will have to look at innovative ways e.g. alternate sources of feedstock, right product mix to remain competitive
- Petrochemicals industry would face **reduced margins** due to oversupply in the global petrochemicals market. Between 2012 and 2016 ethylene capacity additions is expected to grow by 25 million tonnes. Major capacity build up is happening in USA, Middle East and China. Global capacity utilization levels are observed to be at all-time lows of 80% in 2011. This may continue till the global demand picks up.
- With increasing availability of natural gas and new gas finds, the dependency on naphtha as major feedstock for petrochemicals complexes would go down. In Middle East, substantial capacity additions will be based on ethane as a feedstock.

Future Prospects & Investment Opportunities

Indian chemical industry is expected to register a growth of 8-9% in the next decade and is expected to double its share in global chemical industry to **5-6% by 2021**. Indian Chemical industry has the potential to grow significantly provided some of the key growth imperatives are taken care of. Securing Feedstock, Right Product Mix, M&A opportunities are currently the key imperatives for chemical industry in India. Few investment opportunities can be highlighted as:

- Chemical companies in India can either explore alternate feedstock or invest in setting up plants in resource rich nations to secure feedstock

- Companies need to invest in exploring the right product mix to be competitive and profitable using the available feedstock in India i.e. Naphtha and its derivatives
- Indian companies can explore possible Merger, JV opportunities for technology, capital or access to international market by taking advantage of increasing expansion of western companies in India
- Chemical companies can invest in exploring strategic energy management and strategic water management to cut down their energy costs and contain water availability concerns
- Companies can invest in upcoming PCPIRs in India and overcome challenges related to infrastructure, power and water availability.
- There are good opportunities in segments such as Speciality Chemicals, Speciality Polymers, for catering to huge emerging domestic demand as also as a manufacturing hub.

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