

# Significance of the Indian Chemical Industry

The Chemical industry is a vital indispensable sector to any economy or nation. In this context I would like to make clear that I am not only talking about Oil & gas sector but also the entire downstream sector that is dependent on petroleum as a feedstock for materials that will be manufactured. Every advanced developed nation has a strong presence of chemical industry and it has significantly contribute to their growth - US, Germany, Japan, South Korea, China, France, Netherlands, Brazil, Switzerland, Singapore and even India ( Sorry for the countries that I may have missed out). On a side note, Nordic countries while having oil reserves especially Norway, they have concentrated more on paper industry.

**Keyword:** Chemicals, Gases, Downstream, Reserves, Agrochemicals, Pesticides.

## Introduction

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The Indian chemical industry includes oil & gas, bulk chemicals, agrochemicals & pesticides, dyes & pigments, speciality chemicals and advanced materials, This doesn't include Pharmaceuticals which is ~\$36 billion industry on its own. It must be noted however that a significant share of raw materials for drugs are sourced from chemical companies.

Specialty chemicals on its own (which are basically high performance niche chemicals manufactured by limited suppliers thereby having higher prices) form \$60 billion of sales in India (this number may vary from report to report based on survey and the "definition" of specialty chemicals. The chemical industry forms about 15% of Manufacturing GDP of India. Since manufacturing is about 15% of total GDP, Chemical industry is about 2.2% of total GDP of India. It also represents 1.2% of GVA (Gross value addition) of India.

Ankleshwar in Gujarat was one of the first exclusive industrial areas in 1975 dedicated to chemicals sector ( as a predecessor to SEZ concept). Similarly, Vapi and Valsad are amongst the earliest chemical manufacturing zones of India. Atul Limited, which is located to Valsad, is so famous that the township where it is located in just called Atul. Most people will know Reliance, Essar, Tata Chemicals, Aditya Birla Chem and Adani in the private sector and IOCL, HPCL, BPCL, ONGC, GAIL, GSPC, in public sector.

Gujarat Fluorochem, Navin Fluorine and SRF concentrate on FLuroine chemistry which is one of the toughest in the world and make fluorinated products. Guj Alkali and Guj Heavy Chem are major producers of bulk chemicals.

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The estimated value of the Indian chemical industry is around \$100 billion dollars. The chemical industry of India generates employment for five million people. It produces more than 50,000 different chemical products. The alkali chemical industry produces 60% of all chemicals produced in India. India's chemical industry accounts about 14% of production in Indian industries.

Until 2014, TRS growth was primarily underpinned by an increase in top line. Between 2006 and 2017, the compound annual growth rate (CAGR) in TRS for India's chemical companies was 15 percent—a figure much higher than the global chemical-industry return, with a CAGR of 8 percent, and the overall global equity market, with a CAGR of 6 percent. Even between 2016 and 2017, when India's economy faced headwinds, the chemical industry maintained a CAGR of 15 percent.

## Major Trends of the Chemical Industry in India

Six trends are shaping the global chemical industry. Several global oil and gas majors are turning their sights on downstream chemical opportunities.

1. The structure of China's chemical industry is changing due to stricter environmental norms, tighter financing, and consolidation. That could create opportunities for India's chemical companies in certain value chains and segments, especially in the short term.
2. Trade conflicts have erupted around the world, especially among China, the United States, and Western Europe. These have led to shifts in global supply chains, affecting bilateral trade between China and the United States,<sup>9</sup> with possible repercussions for other economies.
3. Industry-wide, there seems to be a move toward prioritization of core businesses and consolidation on a greater scale, often through big-ticket mergers and acquisitions. For players in India, scale will matter even more, as it could help to fortify their competitive advantage.
4. Digital technology has established itself as a lever to enhance efficiency and productivity.

5. Sustainability is becoming an imperative, not a buzzword, with various stakeholders placing a premium on it.

#### **Investment Opportunities in Chemical Industry in India**

We analyzed India's trade flow in the chemical sector to identify and better understand themes for investment. Chemicals are a significant part of India's overall trade flow, consistently ranking third in imports and fourth in exports for the past five years.

Today, India has a chemical trade deficit of \$ 15 billion. Analysis of India's chemical exports and imports, coupled with a review of opportunities emerging from global trends, suggests two themes for investment:

1. Building self-sufficiency in petrochemicals to plug the shortfall of domestic supply of 52 percent (by volume) in petrochemical intermediates: six value chains make up about 77 percent of this shortfall, creating an opportunity worth approximately \$ 11 billion.
2. Ramping up exports in select areas, such as specialty chemicals, to obtain a larger share of global value.

#### **A charter for industry players**

1. Accelerate to build an at-scale business and take advantage of economies of scale.
2. Use digital and analytics to improve margins. Chemical companies could see an increase of three to five percentage points in earnings before interest, taxes, depreciation, and amortization from Industry 4.0 technologies.
3. Protect value in the long term through a pursuit of sustainability-beyond-compliance requirements.

In addition, industry players and associations could actively work with the government to address sector-level challenges.

#### **Objectives of the Study**

1. To explore the significance of the chemical industry in India
2. To correlate the chemical industry and the industrial growth
3. To enumerate the major trends of the chemical industry in India
4. To predict the future of the chemical industry in India

#### **Hypothesis**

1. Chemical industry is one of the major industries in the world
2. Its contribution in India is so immense
3. It contributes to the industrial growth in India
4. Its future is bright in terms of the industrial growth in India

#### **Method**

Based on the secondary data available in the various forms of literature, lab-observation of the various chemicals, and discussions casually made on the growing significance of the chemical industry in India, the present study is an interpretative work. For the purpose, all the steps prescribed for the research were adopted which eventually helped in arriving at the conclusion.

#### **Findings**

1. The chemical industry in India is growing and expanding rapidly, contributing around 3% of GDP. It is one of the third largest industries in Asia and twelfth in the world.
2. The chemical industry consists of large and small production units and has grown rapidly in both the organic and inorganic sectors.
3. Inorganic chemicals, including sulfuric acid, nitric acid, alkalis, etc., are used to make fertilizers, adhesives, plastics, detergents, soaps, lye, etc. This industry is widespread throughout the subcontinent.
4. Organic chemicals include petrochemicals, which are used to make synthetic fibers, synthetic rubber, plastics, dyes, pharmaceuticals, and pharmaceuticals.
5. The chemical industry in India is the largest consumer. With the current size of around 108 billion dollars, the Indian chemical Industry accounts for approximately 7 percent of Indian GDP.
6. The chemicals sector accounts for about 14 % in overall index of Industrial production.
7. The share of the Industry in the national exports is around 11 percent.
8. In terms of volume, India is the third largest producer of chemicals in Asia after China and Japan.
9. The government aims to create 100 million additional jobs in the manufacturing sector by 2025. Hence, investments in manufacturing in the chemical sector are absolutely essential to ensure growth of the Indian Chemical Industry.
10. The Indian Chemical industry accounts for approximately 3% in the global share and hence a lot need to be done in this regard. with respect to policy changes and greater tax relaxations. The Industry has a huge potential to drive the Indian economy at a fast pace and create huge employment to harness India's demographic dividend.

#### **Conclusion**

India is a global manufacturing hub for chemicals and petrochemicals. The chemical industry includes companies that produce industrial chemicals. Indispensable for the modern world

economy, raw materials (oil, natural gas, air, water, metals and minerals) are converted into more than 70,000 different products. The plastics industry has some overlap as several chemical companies produce plastics and chemicals.

Its contribution to economic growth cannot be denied. The future of the chemical industry is bright as it is the backbone of the industrial growth without which the industrial sector in India cannot be developed. India is embarking on a high growth path, and the country is establishing itself as an attractive destination for investment in chemical industry. Organic chemicals are witnessing high growth due to growing demand from consumer goods & pharmaceutical industry.

The Chemical industry dominates the Indian economy accounting for 6% of the total industrial output in 2009. India's chemical industry is currently regulating towards modernization of the chemical plants and adopting western technologies while simultaneously increasing their productivity. The main factors for its growth could be listed as follows:

#### **Fundamental Edge**

The Indian paint industry is the fourth largest in terms of volume and the third largest in terms of value marketed at Rs. 16,500 Crore in FY 2013-14. The paint industry has exhibited a positive growth on account of the growing construction activity, rising disposable income levels, rural demand and adoption of modern building material like polymer modified cement sheet, plastics and ceramic tiles. With a growing market and purchasing power and with India's growing population, the domestic industry is likely to grow at over 10-13 percent 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.

#### **Government Policies**

India's chemical industry has always been protected by high tariffs, strict foreign direct investment (FDI) policies and other regulatory controls. The government of India has maintained a mixed, uncertain and cautious view on FDI in the chemical industry. Increasing growth in end-user demand is expected to boost the domestic market for chemical products in India in the coming years.

Indian chemical industry often complains about what is termed as lack of level playing ground, which is not borne by the facts. While the investment constraints are pointed out as a stumbling block for setting up large capacity plants of global size, the fact is that there are many specialty chemicals which are now imported in increasing quantity in India, for which large investments are not required.

The issue is that often for setting up several chemical projects even of small size, Indian chemical industry is looking for technology from abroad. In several cases, it is seen that the investment in the chemical industry is limited by the extent to which international organizations are willing to provide technology and global market support. Another matter of concern is that corporate planning strategies are not given due importance that they deserve in Indian chemical industry. Corporate planning strategies imply the continuous tracking of developments about demand-supply trends and technologies on a global scale and efforts to identify appropriate opportunities based on the strength of the individual units. This does not seem to be happening in adequate measures. There appears to be lack of knowledge accumulation efforts.

#### **References**

1. Balasubramanian A. -Chemical Industries in India (Book), 2017
2. Majumdar, Subrata-Productivity Performance of Indian Chemical Sector: Post Reform Perspective, The Journal of Industrial Statistics, 1 (2), 2007
3. Narayanappa Thimmarayappa Vijalapura, Swamy Devappa Renuka, Manish Ramesh-Status of Safety Climate in Chemical Industry-Karnataka, Journal of Safety Engineering, 2018; 7(1): 32-36
4. Tanuja KA- A Study on the Comparative Financial Performance of Indian Chemical Companies, GJra- Global Journal for Research Analysis, Volume e : 3, Issue : 11, N -4, April - 2017
5. Viswanathan Swaminathan-Occupational health and safety in chemical industries in transitional economies, Sep-Dec; 2011 15(3): 85-86.
6. <https://chemicals.nic.in/sites/default/files/PCPIRPolicy.pdf>
7. <http://southasiajournal.net/what-ails-indian-chemical-industry/>
8. <https://www.mckinsey.com/industries/chemicals/our-insights/india-the-next-chemicals-manufacturing-hub>
9. <https://www.linkedin.com/pulse/future-growth-chemical-industry-ajjay-kumar-gupta?trk=pulse-article>

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