

Overview of Chemical and Pharmaceutical Industry

WIRC - ICAI

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Rajendra Gogri

Chairman & MD, Aarti Industries Limited

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01 Global Chemical Industry & its Easternization

02 Indian Pharmaceutical Industry & Contrast with Chemicals

03 About Aarti Industries..

Agenda

01 Global Chemical Industry & its Easternization

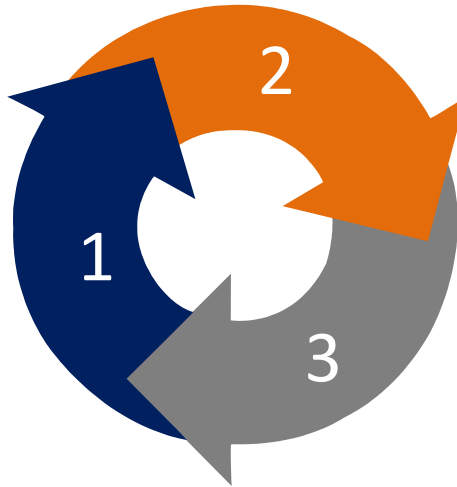
02 Indian Pharmaceutical Industry & Contrast with Chemicals

03 About Aarti Industries..

Chemical industry, the industry of industries, differs from others along 3 main dimensions..

Only Specifications matter

- Unlike other manufacturing industries like automotive, textiles, construction etc., the products of the chemical industry are sold purely on **specifications**
- Brand value is not important and hence, **cost leadership** becomes very important
- Qualification cycle is long and supply reliability of in-spec, quality approved material is important



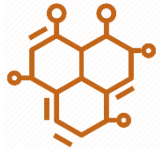
Chemistry more important than machines

- Chemistry/ **Route of synthesis** is more important than machines
- Each chemistry requires a different combination of machines, reduces flexibility vs. other industries

Inherent focus on Sustainability

- Safety, Health & Environment (**SH&E**) very important
- Inherently **hazardous** nature of most raw materials, products
- Intensive **process conditions** – pressure, temperature, energy exchange etc.

The chemical industry underpins virtually every sector of the economy



80,000

Products are commercially manufactured across the chemical industry



\$5 tn

Of Chemical Sales were recorded globally in 2018



4.1%

Is spent on R&D globally by the chemical industry¹



\$92 bn

Total Trade in chemicals by India in 2018 (\$37 bn exports and \$55 bn imports)



\$450 bn

Will be invested in capacity addition and upgradation in the chemical industry

Agrochemicals

Polymers

Colors & Cosmetics

Construction

Surfactants

Personal Care

Synthetic Materials

Water Treatment

and many more...

1. Does not include healthcare

Chemicals are everywhere.. Simple chemistries of Aarti's products have a host of end uses..



In lightweight polymers of the aircraft bodies



In the medicines that keep you healthy



In the Agrochemicals which help improve productivity of farms



In perfumes and flavours that tickle your senses



In paints that brings colour to your life



In printing inks that help express stories



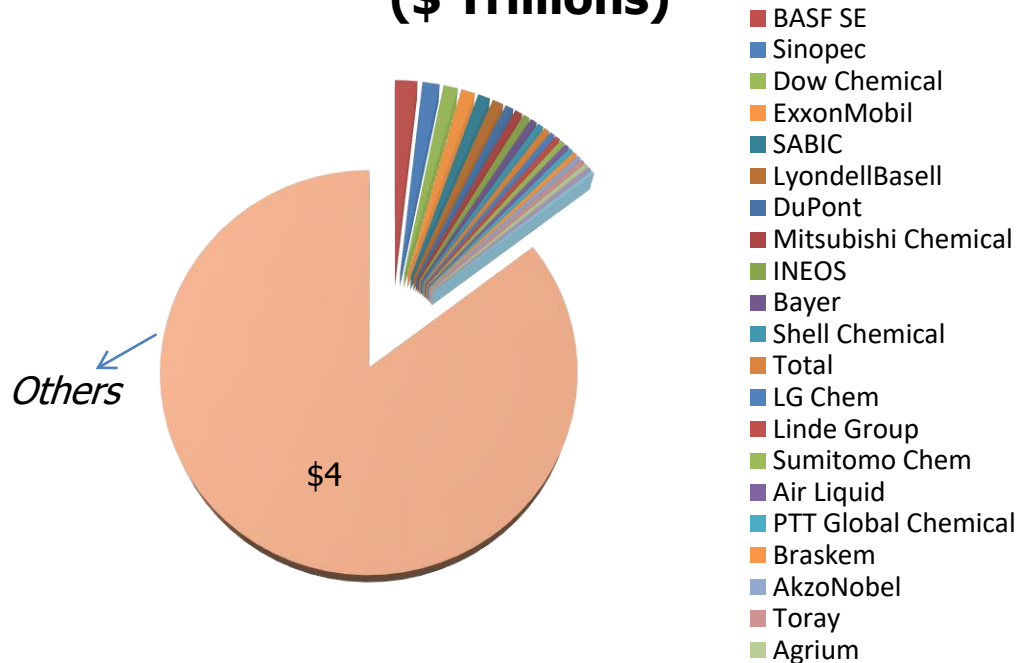
In gasoline to improve engine performance



In soaps and shampoos that keep you clean

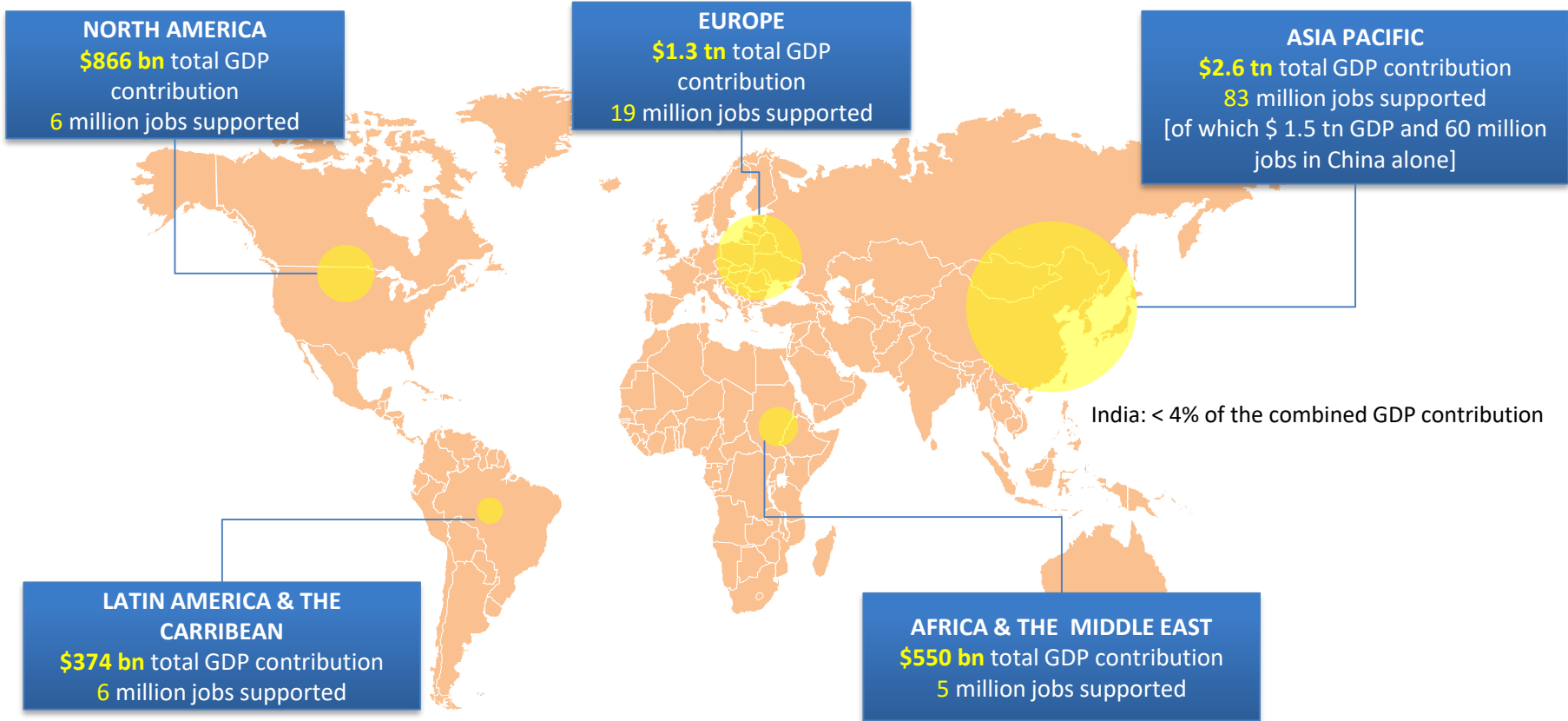
The industry is huge and fragmented..

Market Share of Key Players (\$ Trillions)

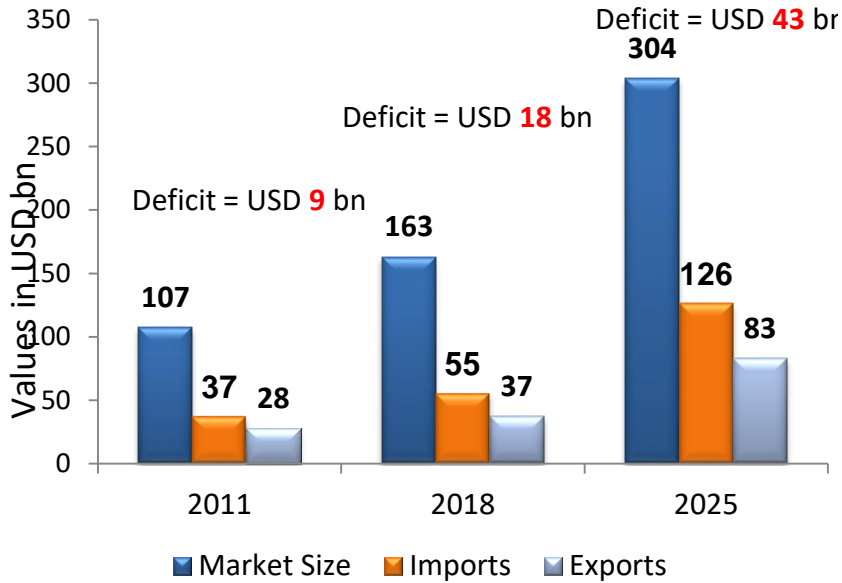


- ▶ The global chemicals market is highly fragmented
- ▶ Top 23 companies account for just 20% of global market share (\$5 Trillion)
- ▶ Asia to play a dominant role in future growth – its share of market set to rise to 62 percent by 2035

The global chemical industry has shifted to the east, with China gaining a major share in the past 3 decades



Indian Chemical industry has a deficit whereas the pharma industry has a net surplus..



- The trade deficit may grow from USD 18 bn to USD 43 bn by 2025
- There is an **opportunity** to produce USD 126 bn worth of chemical by 2025

Source: DCGC, BCG statistics

Note: Chemicals, Pharmaceuticals and Fertilizers market is considered

Building Block / Bulk Chemicals			\$Bn, 2019
Import	Export	Deficit	
\$ 11.4	\$ 5.7	\$ 5.6	

Intermediate Chemical			\$Bn, 2019
Import	Export	Deficit	
\$ 24.1	\$ 17.8	\$ 6.4	

Downstream Chemicals			\$Bn, 2019
Import	Export	Deficit	
\$ 5.9	\$ 0.5	\$ 5.4	

Pharma			\$Bn, 2019
Import	Export	Deficit	
\$ 2.7	\$ 14.2	-\$ 11.5	

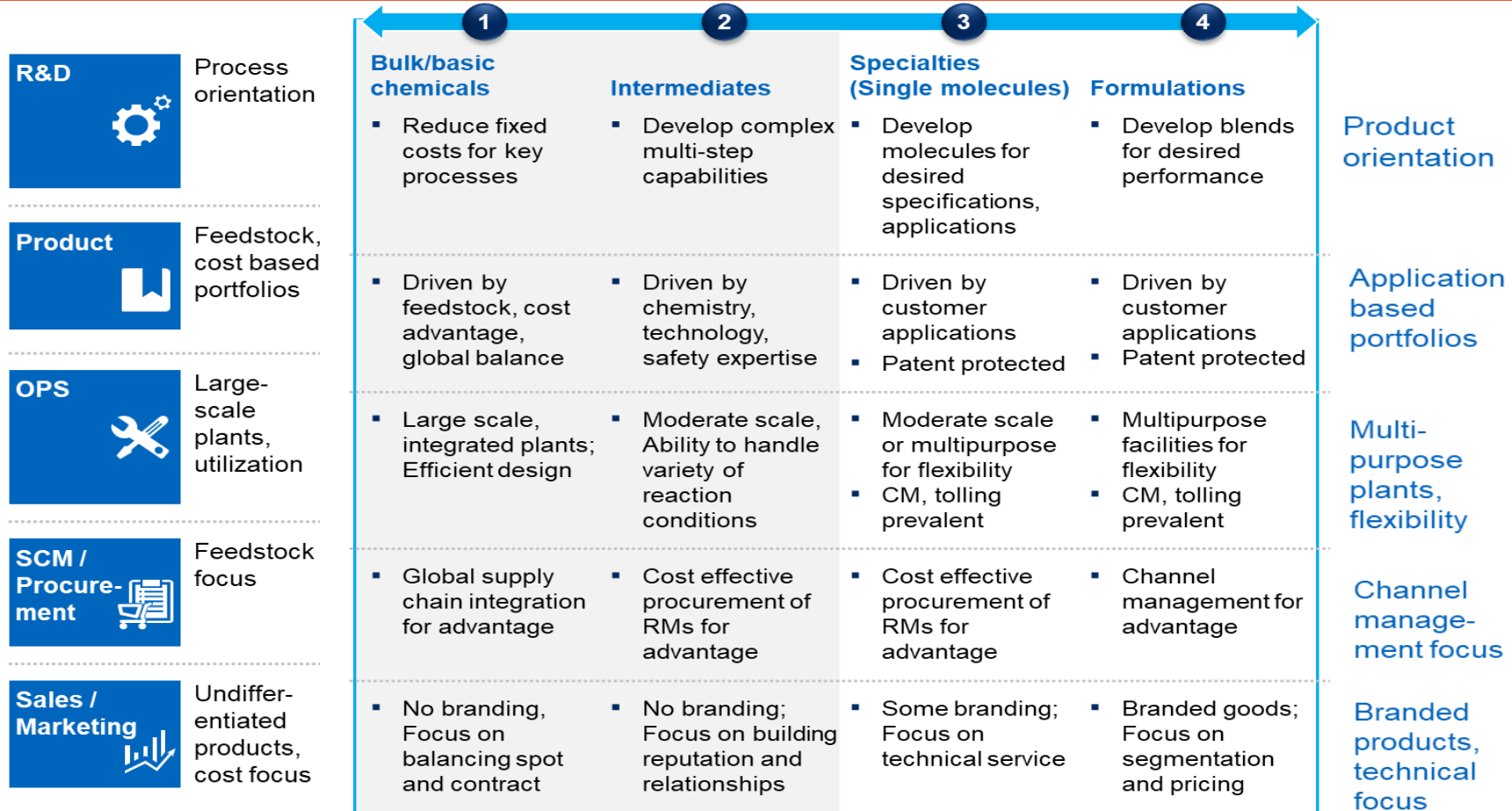
Fertilizer			\$Bn, 2019
Import	Export	Deficit	
\$ 5.9	\$ 0.2	\$ 5.7	

Insect / Pesticides			\$Bn, 2019
Import	Export	Deficit	
\$ 1.3	\$ 2.9	-\$ 1.6	

Tanning / Dying			\$Bn, 2019
Import	Export	Deficit	
\$ 2.4	\$ 3.3	-\$ 0.9	

Others			\$Bn, 2019
Import	Export	Deficit	
\$ 4.9	\$ 3.5	\$ 1.4	

The Chemicals Spectrum – From Bulk to Formulations



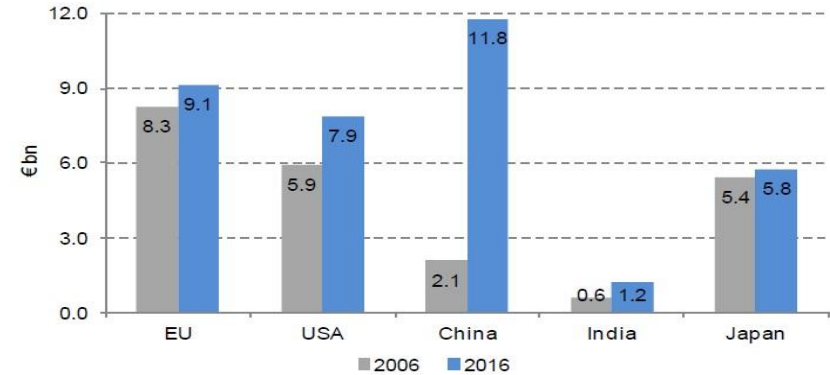
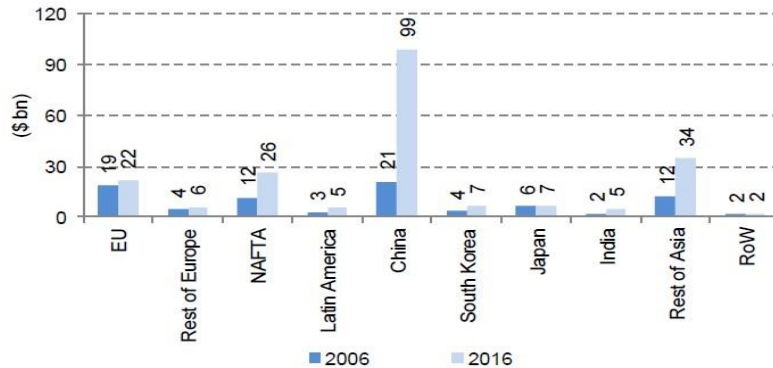
Easternization of the chemical industry led to a massive gain for China over the past few decades



- **Easternization** of manufacturing has happened over the past five decades, with manufacturing GDP of **Asia** growing sharply
- Unlike other manufacturing industries, the growth of **chemicals** manufacturing sector was largely dominated by **India** and **China**
- As with other industries, **China** grew massively, to now have **>40% share** in global chemicals manufacturing while India lagged behind
- Now, with the **increase in labor costs** in China [almost double] and environmental compliance coming at par with India and the emergence of **trade war** between US and China, India finds itself in a sweet spot
- We need to ensure that this **opportunity** is not wasted, like some other sectors where manufacturing moved from China to other Asian geographies [textiles, electronics etc.]

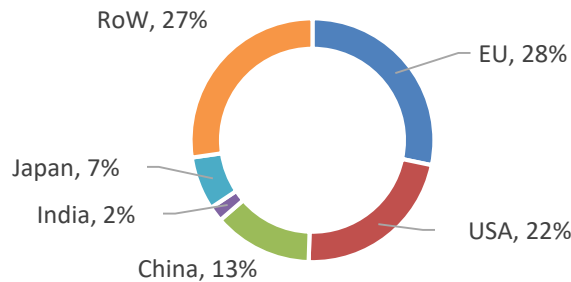
China had dramatically outpaced India in terms of chemical manufacturing over the last decade...

China's investment and R&D spend in chemicals over the last 10 years has far outpaced India and other countries

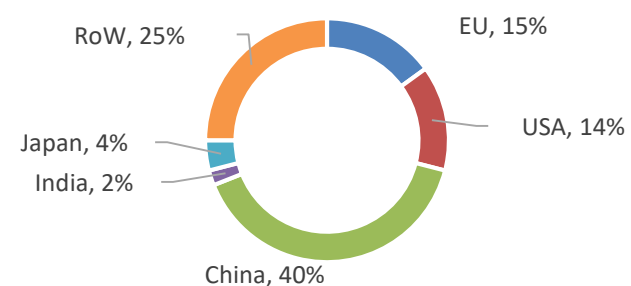


From a distant third player, China has become a global leader in the chemical industry

Chemical Market Share in 2006

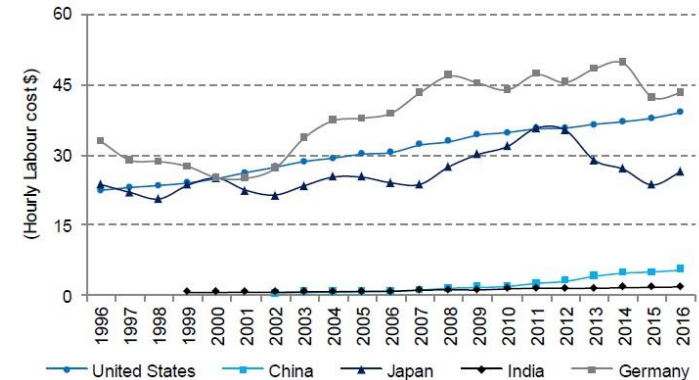


Chemical Market Share in 2016



India did not match China's rapid growth in the chemical sector until 2015..

Though China and India both shared the labour cost advantage around the turn of the century, China was able to far outpace India because of policy decisions and infrastructure



Lack of R&D Collaboration

- R&D spending in China increased to EUR 12 billion in 2016 from EUR 2 billion in 2006
- China created an R&D ecosystem where technical universities worked in coordination with the industry to reverse-engineer products and reduce production costs

Inadequate Enabling Infrastructure

- China made massive investments to expand the road and rail infrastructure across the country – road connectivity increased 8x between 2000 and 2005
- Chinese State-owned enterprises dominated capacity addition in basic chemicals – availability of RM feedstock drove investment in value-added products

SEZ and FDI Policy

- Chinese SEZ policy worked to attract FDI based on labor reforms and tax incentives
- Export-oriented manufacturing enabled China to benefit from the easternization trend

However, now, Indian Chemical Industry enjoys many sweet spots not just vs. China, but also vs. the West

- 1 Over the years, India has grown a critical mass in its intermediate and specialty chemicals sectors
- 2 Global multinationals need alternate sourcing destinations – other emerging countries who may have a labour cost advantage do not have an existing ecosystem in chemicals
- 3 Skilled **talent pool** availability in India cannot be easily matched by other sourcing destinations
- 4 Inherent **CAPEX** advantage: due to high proportion of structure, piping and fabrication of equipment, labor cost arbitrage is available as compared to the West, leading to CAPEX in India being 40% - 60% of the west

Competitiveness comparison

Labour cost

West, Japan



China



India



Environmental Compliance



Plant Capital Expenditure

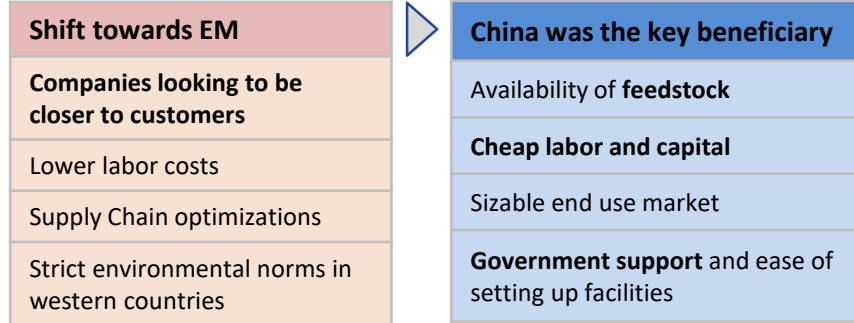


- 5 Additionally, demand of consumer goods in India is growing, for which chemicals industry acts as a crucial input

Above factors lead to India now being in a sweet spot of a **twin pull** – from China as well as from the West

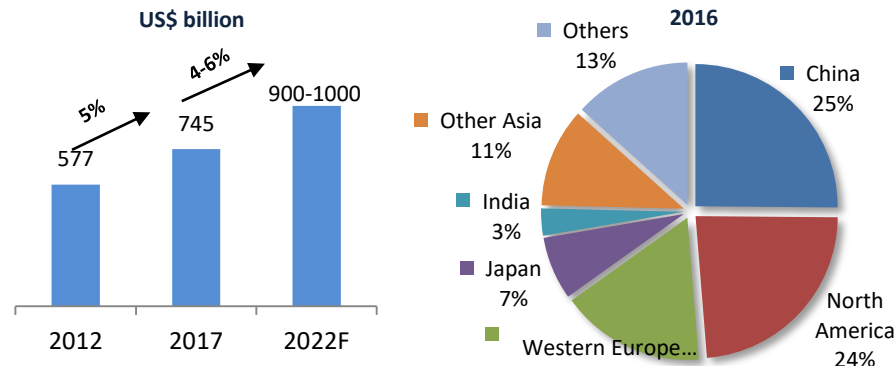
Chemicals manufacturing is well placed to benefit from sector tailwinds – Global

Speciality chemicals market has been shifting eastwards with China benefitting significantly over the last 2 decades



China market CAGR	2003-08	25%
	2008-16	13%

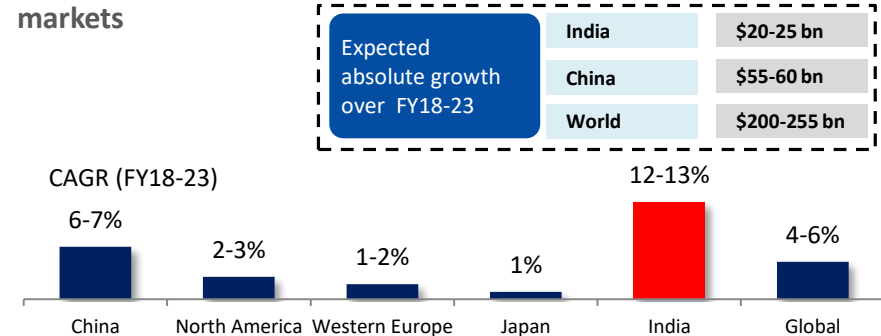
Global Speciality chemicals market size and region-wise share



...India to benefit from China's downturn

- Gradual erosion in China's cost advantage, due to:
 - Appreciation of Chinese currency
 - Increase in capital costs** driven by adherence to stricter effluent treatment norms and environmental regulations
 - Increasing **labour cost**
 - Reduction of government subsidies**
- Global companies trying to diversify supply risk from China which is leading to more orders for Indian chemical companies
- India is expected to benefit from this shift as there are **few other countries** with requisite scale, technology, raw materials, supportive government policies to capture this opportunity
- Depreciation of rupee in recent times is expected to aid the domestic industry's export competitiveness
- Labour Costs significantly lower in India** as compared to China and West.

Significant opportunity of growth for Indian speciality chemicals markets



India - Offerings & Requirements

What India offers

- ▶ Capex & Opex Cost Savings
- ▶ Availability of Feed Stock
- ▶ Skilled Manpower
- ▶ Access to Ports
- ▶ Geographic De-Risking
- ▶ Better Legal & Regulatory Framework
- ▶ Stronger IP Protection



What Indian Companies need to do

- ▶ Strong Safety, Health & Environment
- ▶ Better Project Management
- ▶ Strong R&D
- ▶ Customer Relations Management
- ▶ Operating Efficiencies
- ▶ Availability of Finance and Willingness to Invest.
- ▶ Legal & Regulatory Compliance
- ▶ Competent Manpower



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The Pharmaceuticals industry in India

20%

share in global supply by volume

3rd

Pharmaceuticals market by 2020 in terms of incremental growth

60,000

brands across 60 therapeutic categories and manufactures more than 500 different Active Pharmaceutical Ingredients (APIs)

3000

pharma companies with a strong network of over 10,500 manufacturing facilities

\$19 bn

India's pharmaceuticals export

Anti Infective

Cardiac

Gastro Intestinal

Anti Diabetic

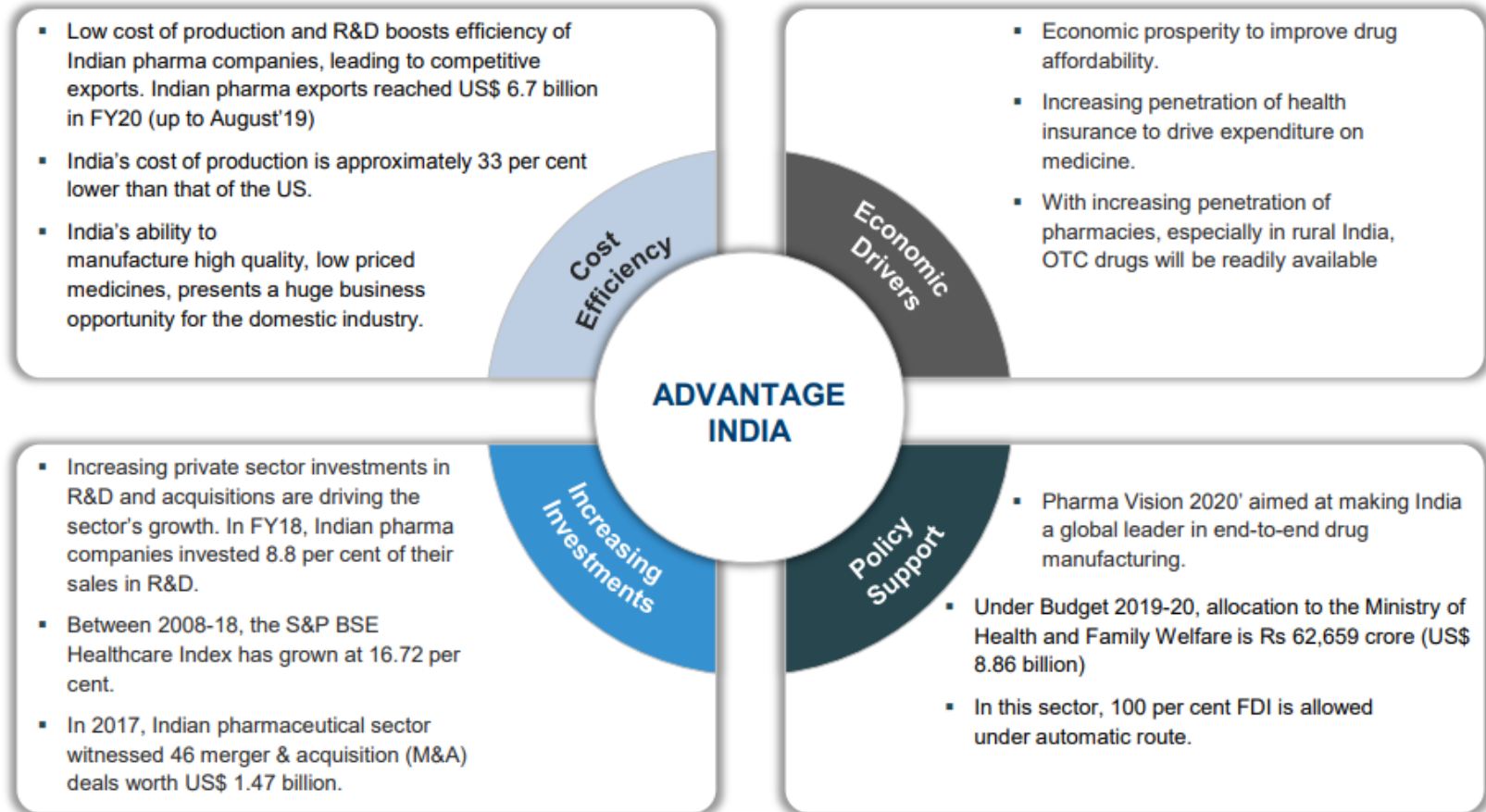
Cancer

Neuro

Vitamins and Minerals

Analgesics

and many more...



Factors influencing the Pharma industry over the last 4-5 years..



Price controls



Demonetisation and GST



Combination products guidelines



Gx-Gx enforcement



Sharp increase in competition



Increased regulatory oversight



Price erosion driven by consolidation



Currency devaluations with economic instability



Political instability across markets

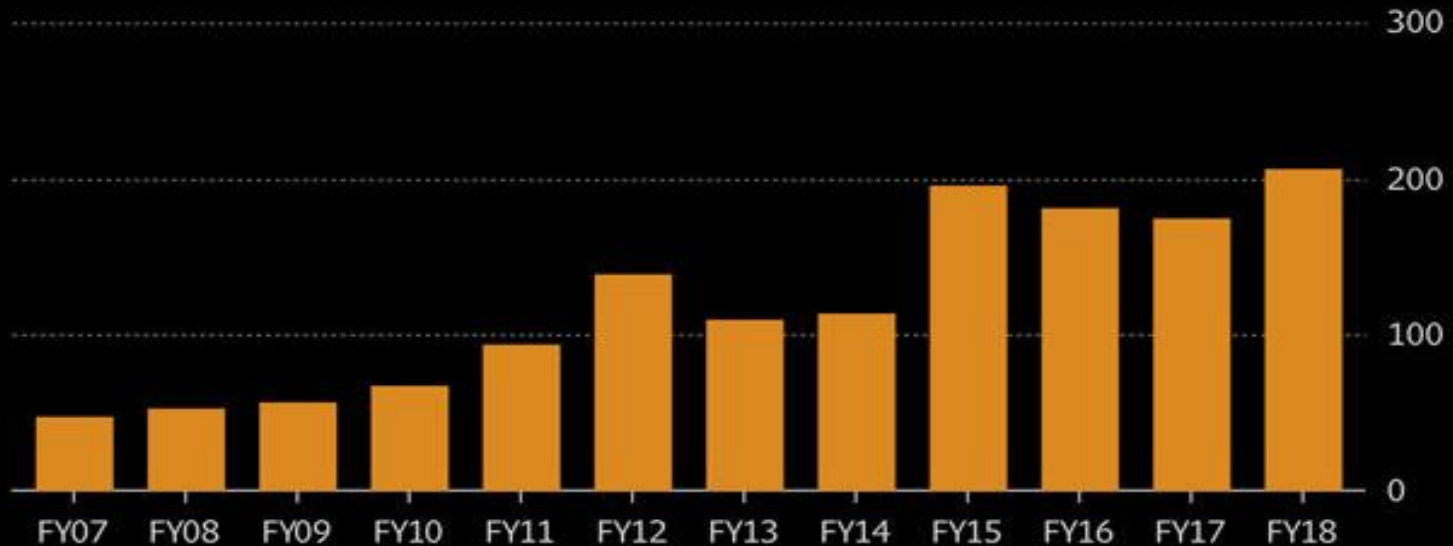


Emerging Markets

Indian Pharma has seen intense regulatory scrutiny; likely to continue owing to rigorous and holistic assessment by regulators

India Inspections

FDA drug-quality checks increased 18 percent in fiscal 2018 to a new peak



*Fiscal years for the federal government run Oct. 1 to Sept. 30

Source: FDA data via public records request

Bloomberg

Indian Chemical Companies have grown their sales and market cap tremendously over the last 5 years..

Company	FY 2019 Rev (INR cr)	PAT (INR cr)	Market Cap (INR cr)	Revenue growth (%)	PAT Growth (%)	Mcap Growth (%)
UPL	21,609	1,447	47,223	↑ 62%	↑ 27%	↑ 110%
PI Industries	2,841	410	20,411	↑ 46%	↑ 68%	↑ 70%
SRF	7,541	642	19,026	↑ 79%	↑ 68%	↑ 191%
Aarti Industries	4,548	481	13,650	↑ 58%	↑ 157%	↑ 358%
Atul	3,983	432	11,690	↑ 53%	↑ 97%	↑ 136%
Solar	1,663	191	9,625	↑ 64%	↑ 77%	↑ 56%
Vinati Organics	1,108	282	8,600	↑ 44%	↑ 144%	↑ 202%
Deepak Nitrite	1,792	138	3,711	↑ 35%	↑ 158%	↑ 289%
NOCIL	1,043	184	2,442	↑ 45%	↑ 224%	↑ 270%
Sudarshan	1,443	152	2,389	↑ 32%	↑ 257%	↑ 287%

On the other hand, Indian Pharma companies have shown a mixed performance due to reasons discussed earlier...

Company	FY 2019 Rev (INR cr)	PAT (INR cr)	Market Cap (INR cr)	Revenue growth (%)	PAT growth %	Mcap Growth (%)
Sun Pharma	28,868	2,666	104,023	↑ 29%	↓ 41%	↓ 56%
Divi's Labs	4,880	1,352	48,560	↑ 58%	↑ 57%	↑ 91%
Dr. Reddy's	15385	1,950	47,638	↑ 6%	↓ 18%	↓ 21%
Cipla	12,374	1,888	37,747	↑ 22%	↑ 60%	↓ 26%
Biocon	5,381	1,001	35,256	↑ 29%	↑ 90%	↑ 299%
Lupin	16,369	611	34,896	↑ 16%	↓ 75%	↓ 62%
Piramal	13,138	1,150	32,392	↑ 53%	↓ 57%	↑ 208%
Torrent Pharma	7,641	436	30,866	↑ 66%	↓ 42%	↑ 59%
Aurobindo Pharma	19,225	2,361	27,580	↑ 61%	↑ 50%	↑ 27%
Cadila Healthcare	6,493	1,602	26,735	↑ 23%	↑ 26%	↓ 4%

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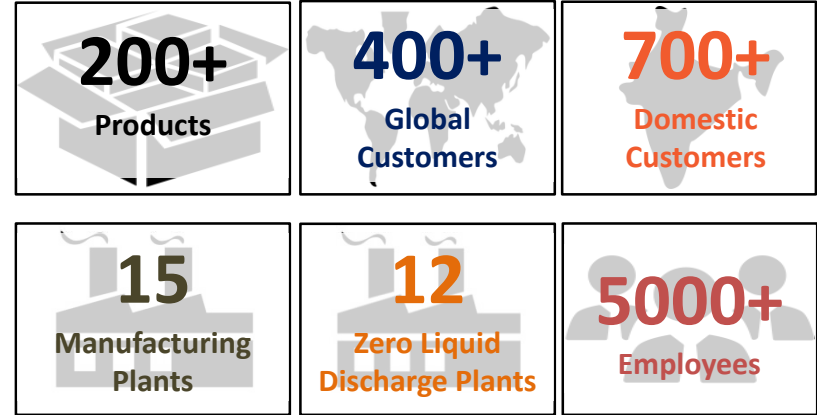
03 About Aarti Industries..

Aarti Industries - Company Overview

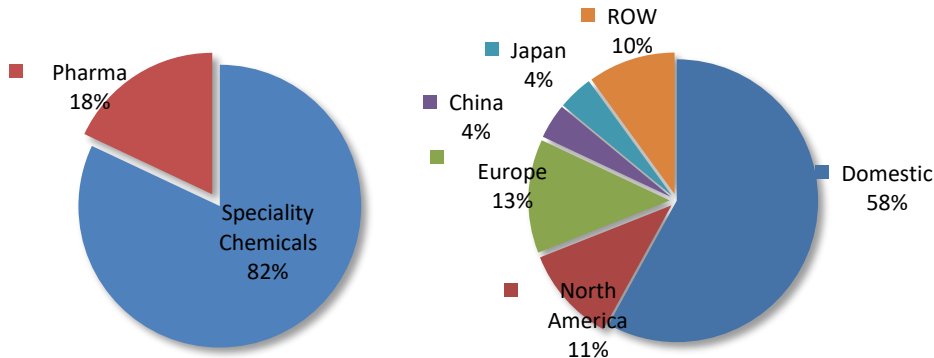
Overview

- A leading Speciality Chemicals company in Benzene based derivatives with integrated operations and high level of cost optimization
- Established by first generation technocrats in 1984
- Pharma operations spanning APIs, intermediates and Xanthene derivatives
- Strong R&D capabilities – 3 R&D facilities; dedicated pool of over 170 engineers & scientists; IPRs for developing customized products.
- Plants located in western India with proximity to ports
 - 11 for Speciality chemicals; 4 for Pharma (2 USFDA and 2 WHO/GMP)
 - 2 upcoming project sites at Dahej SEZ and 4th R&D center at Navi Mumbai

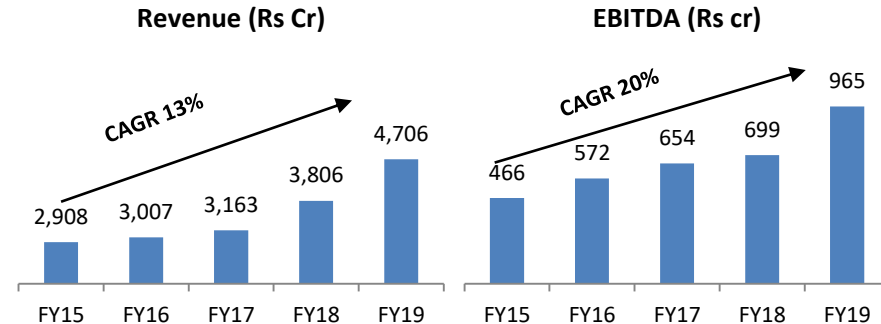
Key Metrics



Revenue split - Segmental and Geographical – FY19



Key Financials



While our strategy has changed over the years, our values have provided us with a strong backbone for creating a world class organization

Care



We care for our people, our customers, our suppliers, our assets and our community. Care for our people is reflected in our people policies, programs and developmental efforts

Integrity



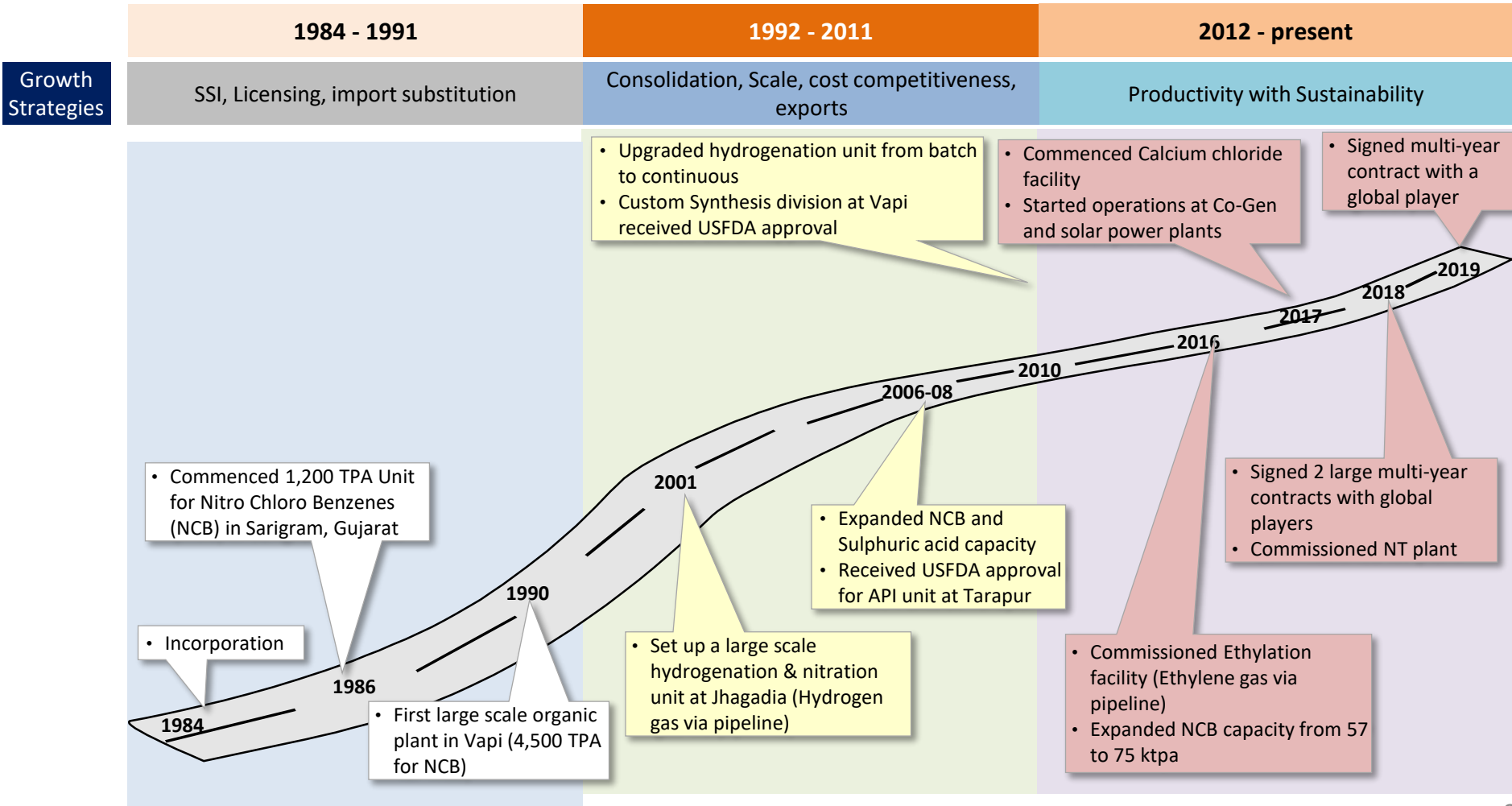
We strive to maintain the highest ethical and moral standards. We honour our commitments towards our people, co-workers, partners, community and society

Excellence



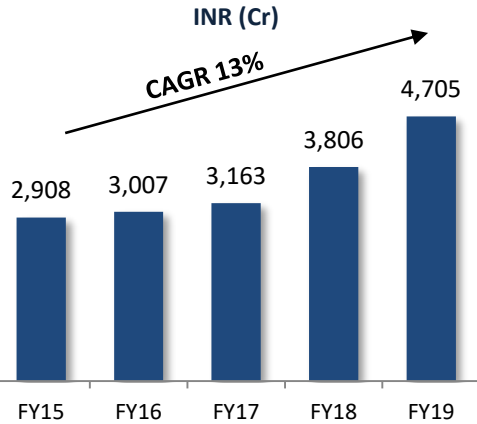
We continuously raise the bar for our performance standards in safety, productivity and employee & customer satisfaction, We encourage innovative ideas & creativity by promoting a learning culture

Key Milestones with Adaptive Growth Strategies

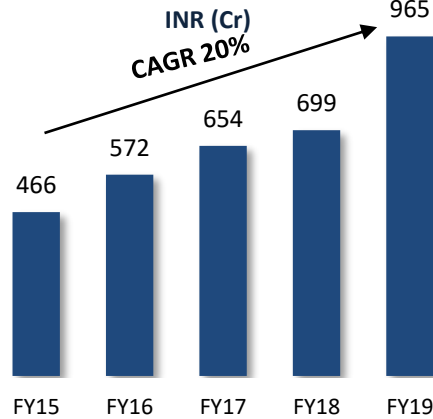


Financials - Consolidated

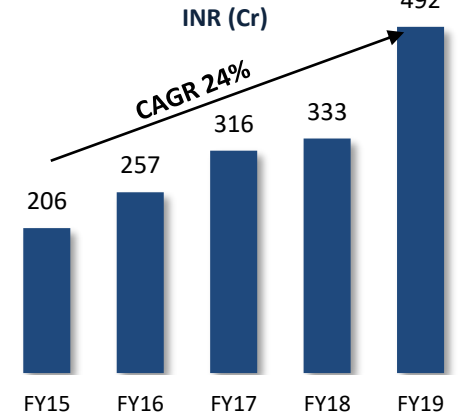
Robust Revenue Growth



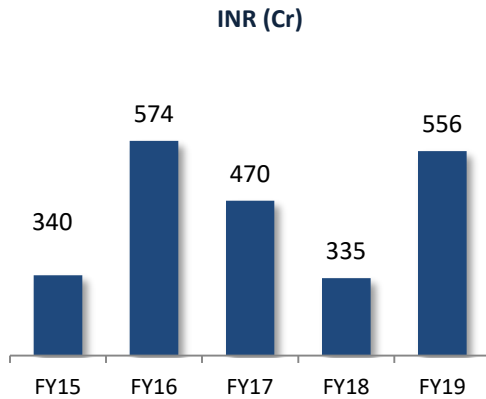
Strong EBITDA Growth



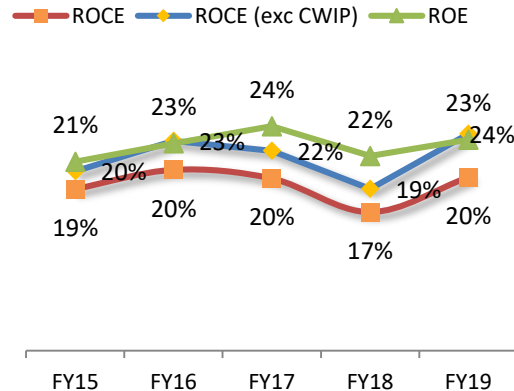
Strong PAT Growth



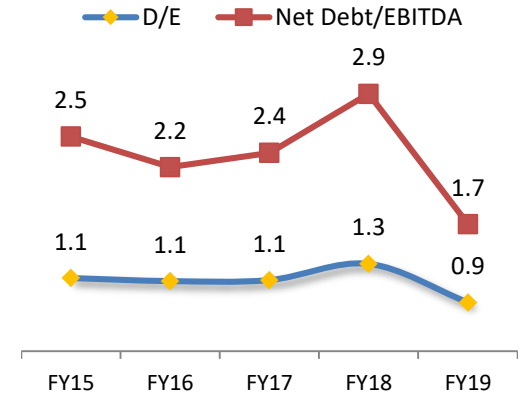
Strong Operating Cash Flows



Strong Return Ratios



Debt Profile



EBITDA = Profit before Tax + Interest Expense + Depreciation - Other Income; EBIT = EBITDA-Depreciation; Capital Employed= Net Worth + LT Debt+ ST debt+ current maturity of long term debt- cash; Capital Employed adj for CWIP= Capital Employed -CWIP; ROCE= EBIT/(Average of Capital employed of current & previous year); ROCE (exc CWIP) = EBIT/(Average of Capital employed adj for CWIP of current & previous year); ROE = Net Income/Average of Net Worth of current & previous year; D/E = Total Debt/ Total Equity; Net Debt/EBITDA = (Gross Debt- cash)/ EBITDA

Strategically Located Plants

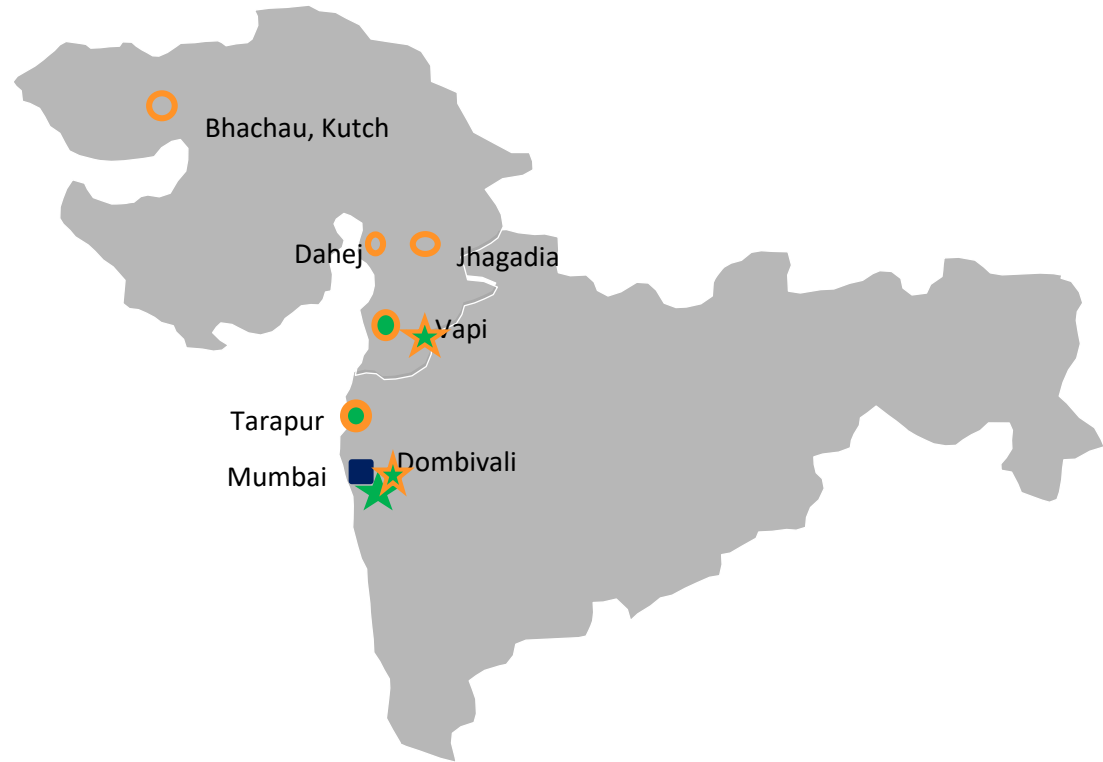


○ Chemical Plants

■ Head Office

● Pharma Plants

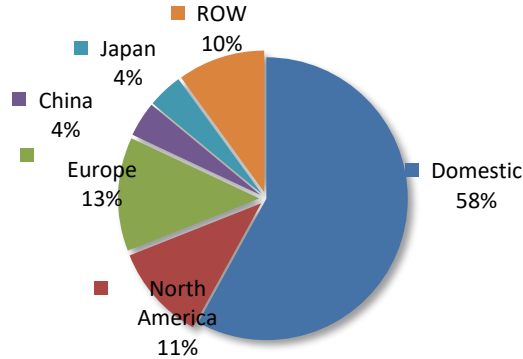
★ R&D Center



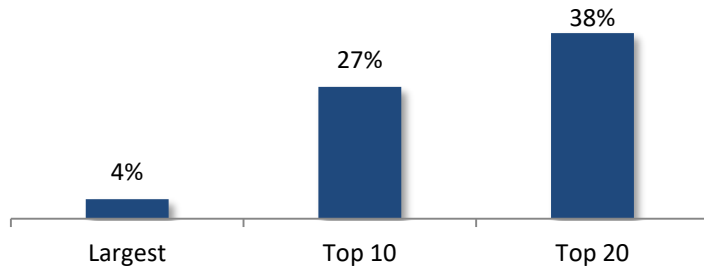
- Over 100 acres of land available in Jhagadia for future development

Well Diversified Across Multiple Dimensions

High level of geographic diversification...

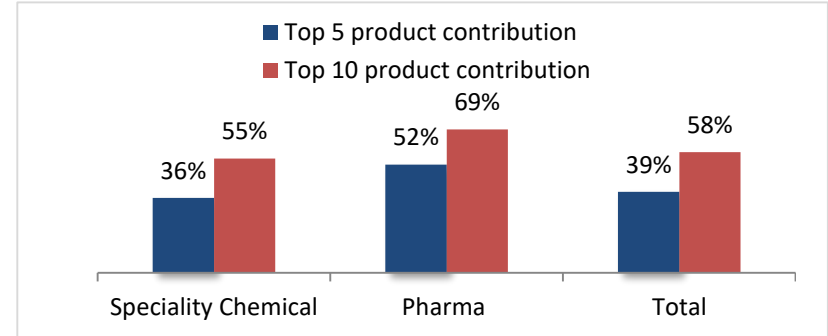


Supplier to leading chemical companies across the globe, with largest customer contributing to less than 5% of sales



- 85% revenue in FY19 was from customers of over 5 years

...with a well diversified product portfolio, and low dependence on individual products



Products are used across different end industries and have different business cycles

Segments	End usage industries	Product cycle	FY18-23 CAGR
Agrochem	Pesticides, Insecticides, Fungicides, Herbicides, Nutrients	Agrochemical cycle	7-9%
Dyes & Pigments	Printing inks	Normal Business cycle	10-12%
Polymer and Additives	Aircrafts, Automobiles, Cruise Liners, Bullet-proof jackets, Electronic products	Normal Business cycle	7-9% 10-11%
Pharma	Intermediates used in drugs catering to anticancer, anti-asthma and anti-hypertensive drugs oncology therapies	Non cyclical	12-13%
Others	Fuel additives, Rubber chemicals		

Our strategy is “Growth with Sustainability for Sustainable Growth”..

Our Strategy

Growth with Sustainability for a Sustainable Growth

Commitment
to Safety and
Health

Commitment
to
Environment

Commitment
towards
Society

Commitment
to Energy
Efficiency

An industrial facility with a large blue sign on a metal structure. The sign contains the text 'PRODUCTIVITY WITH SAFETY IS OUR MOTTO' and its Hindi equivalent 'उत्पादकता के साथ सुरक्षा हमारा लक्ष्य है'. The background shows various industrial tanks, pipes, and a clear blue sky. A green tree is in the foreground on the right.

PRODUCTIVITY WITH SAFETY IS OUR MOTTO
उत्पादकता के साथ सुरक्षा हमारा लक्ष्य है

Thank You