

India's Booming Chemical
And Petrochemical Industry

UNDERSTANDING INDUSTRY LANDSCAPE



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The report has the insights provided by Institute for Competitiveness. It provides investors with an overview of India's Chemical and Petrochemical industry based on national and state data available from government sources.

MESSAGE



Dr. Mansukh Mandaviya

Minister (Health and Family Welfare and Chemicals & Fertilizers , Government of India)

डॉ. मनसुख मांडवीया
DR. MANSUKH MANDAVIYA



स्वास्थ्य एवं परिवार कल्याण
व रसायन एवं उर्वरक मंत्री
भारत सरकार
Minister for Health & Family Welfare
and Chemicals & Fertilizers
Government of India

24th September 2022

MESSAGE

India has emerged as one of the most attractive destinations in the world, driven by the vision of the Hon'ble Prime Minister of making the country "Atma Nirbhar". Initiatives like Start-up India, Digital India, and Skill India have been implemented in support of the Make in India program, with the aim of placing India on the world map as the manufacturing hub. India carries the ability and the capacity to contribute more than 500 billion USD annually to the global economy by 2030 as a global manufacturing hub.

India's chemical and petrochemical industry is considered a knowledge and capital-intensive industry, having reached a market size of 178 billion USD in recent years. It is a highly diversified industry, manufacturing more than 80,000 commercial products of global excellence. It is an attractive sector for investment as it has witnessed robust growth for more than a decade and is expected to follow the same booming growth trajectory in the upcoming years.

To unlock the sector's immense potential and strengthen its role as the critical enabler of economic growth, this unique body of work can become a significant asset to all stakeholders, especially investors, given the expansive coverage. It provides statistics on the key indicators of the industry like skilled workforce, research and development, international trade, revealed comparative advantage etc, which create a facilitative environment to attract investments.

I would like to congratulate the Department of Chemicals and Petrochemicals, the Government of India and the Institute for Competitiveness for undertaking such an exceptional study on India's chemical and petrochemical industry at the national and state level. I hope the report not only showcases the untapped potential and investment opportunities present in different regions but also assists global and national stakeholders in the process of driving this industry towards a more sustainable and prosperous future.

(Dr. Mansukh Mandaviya)

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MESSAGE



Shri Bhagwanth Khuba

Minister of State (Chemicals & Fertilizers and New & Renewable Energy, Government of India)

भगवंत खुबा
BHAGWANTH KHUBA



75
Azadi Ka
Amrit Mahotsav

रसायन एवं उर्वरक एवं
नवीन एवं नवीकरणीय ऊर्जा राज्य मंत्री
भारत सरकार
Minister of State for
Chemicals & Fertilizers and
New & Renewable Energy
Government of India



MESSAGE

Department of Chemicals and Petrochemicals under Ministry of Chemicals & Fertilizers has instituted the National Petrochemicals Awards for rewarding outstanding professionals in the field of Petrochemicals to open new avenues for further Research and Development.

The Scheme is being successfully implemented through Central Institute of Petrochemicals Engineering & Technology (CIPET), since its launch in 2010-11. Over the years, the awards have achieved a very high stature among professionals and researchers from the industry and R&D Institutions.

To improve competitiveness in manufacturing, research and development has a very important role to play, which enables organizations to achieve faster growth and to generate more wealth over a period of time.

The Eleventh National Petrochemicals Awards will also certainly bring out the most outstanding usage of technology to achieve excellence in performance through innovation in the various fields of Petrochemicals.

My hearty congratulations to all the awardees. I wish them all the best in their pursuit of excellence and hope that their innovation, enthusiasm and dedication will inspire others to embark on the path of innovation.

B. Khuba
(Bhagwanth Khuba)

19th September 2022

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MESSAGE



Ms Arti Ahuja

Secretary (Department of
Chemicals and Petrochemicals)

आरती आहुजा, भा.प्र.से.
Arti Ahuja, IAS



सचिव
भारत सरकार
रसायन और उर्वरक मंत्रालय
रसायन और पेट्रो रसायन विभाग
Secretary
Government of India
Ministry of Chemicals & Fertilizers
Department of Chemicals & Petrochemicals



15th September 2022

MESSAGE

India's envisions to become a global manufacturing hub for chemicals and petrochemicals with special emphasis on speciality chemicals. In addition to the significant improvement in the Global Competitiveness Index, India has also performed well in the Ease of Doing business in recent years. The V-shaped recovery of the economy after the global pandemic Covid-19, along with the above-mentioned factors, has made India lucrative destination for investments around the globe.

The chemical and petrochemical industry occupies a central position in meeting the basic needs and improving the standards of living of the people. From the daily used products like soap, detergents, and cosmetics to omnipresent mobiles to solar panels producing green energy - all are made feasible by the chemical and petrochemical products. The Indian chemical and petrochemical industry has performed exceptionally well in recent years and it has the potential to spur the growth of the economy of the country.

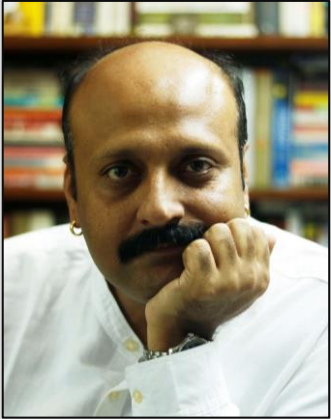
This study is an effort towards highlighting the investment potential of various states and underlines the amicable ecosystem present for attracting mega investment in the sector. This reports intends to provide insights to the investors with a special focus on the policies, supporting factors and performance outcomes of the Chemical and Petrochemical industry.

I thank Dr. Bibek Debroy, Chairman, EAC to PM, who gave valuable insights and supported the endeavour. I would like to specially thank the Institute for Competitiveness (IFC), especially the institute's chairman, Dr Amit Kapoor, and his team, for their invaluable contribution to developing such an insightful report.

I hope the report helps potential investors and other stakeholders to understand the present industry landscape and identify the investment potential in different regions of the country.


(Arti Ahuja)

MESSAGE



Dr. Amit Kapoor

Honorary Chairman,
Institute For Competitiveness

India, after achieving significant dominance in the service sector, is now growing with the aim of becoming the global manufacturing hub of the world, with an expected market size worth one trillion USD by 2025. The prestigious G20 presidency has placed India on the global stage providing strategic opportunities to further strengthen its hold in the world market. Additionally, the Covid-19 pandemic has made businesses worry about their supply chain resilience and are looking forward to expanding their horizon to other countries like India providing favourable competitiveness and investment climate.

The Indian Chemical and Petrochemical industry has entered a new phase of growth, where the world is acknowledging the tremendous potential, it carries to become one of the crucial sectors contributing to the expected 9% growth rate of the economy, which would drive India's quest towards its 5 trillion goal. The growth and development of the sector are crucial as it is the mainstay of industrial and agriculture development in the country, providing building blocks for downstream and upstream related industries like textiles, paper, fertilizers, pharmaceuticals and others.

The industry, currently, is at the cusp of a great economic opportunity. Thus, this document is an attempt to draw the attention of international and national investors toward the industry. The report is a diligently prepared and well-articulated document highlighting the presence of enabling and supporting factors, along with the industry's performance in each state and union territory of the country. Further, it is supported by the chemical cluster trend and analysis as it is one of the vital factors leading to regional competitiveness.

Since the inception of the chemical and petrochemical industry, it has made considerable progress as a result of government efforts and support over the years. I am grateful to the Department of Chemical and Petrochemical for giving the Institute for competitiveness the opportunity to complete the report, which is the first of its kind in the large body of study done by the department in the past. I am confident that the study will enable investors to identify the potential regions of investment in the country and bring the industry in full swing of rapid and sustainable growth.

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PREFACE

In recent years, India is emerging as one of the competitive and high-quality manufacturing destinations in the global market, attracting foreign investments. Presently, India's chemical and petrochemical (CPC) industry holds a significant position in the world market, worth 178 billion USD, and it is expected to grow to about 300 billion USD by 2025. The pandemic has compelled the global chemical and petrochemical industry to diversify its supply chain base to regions which offer a more lucrative business ecosystem with favourable investment policies. India appears as one of the major potential investment regions with Asia's growing contribution to the production and sales of the CPC industry.

The report aims to understand the chemical and petrochemical industry's landscape, especially at the disaggregated level of the states and union territories. It can act as a guide for the stakeholders to help them identify the strengths and weaknesses of the state-level industry. It is crucial for the investors to have knowledge of the region's strengths and opportunities in the industry at the state as well as the national level to facilitate efficient investment decision-making. The information provided can be leveraged to utilize the tremendous untapped potential in the industry. It can also serve as a foundation for new evidence-based policymaking or incentives in the future.

In this regard, the report provides an overview of India's CPC industry in the international and national scenario, highlighting the drivers of growth for the industry. A major focus is laid on bringing out pivotal and relevant information to comprehend the investment potential that lies within the state. It is achieved by providing state-specific incentives available and studying the enabling and supporting ecosystem and performance-outcome factors across the regions. The report is further strengthened by summarizing the state-level cluster analysis of the chemical industry.



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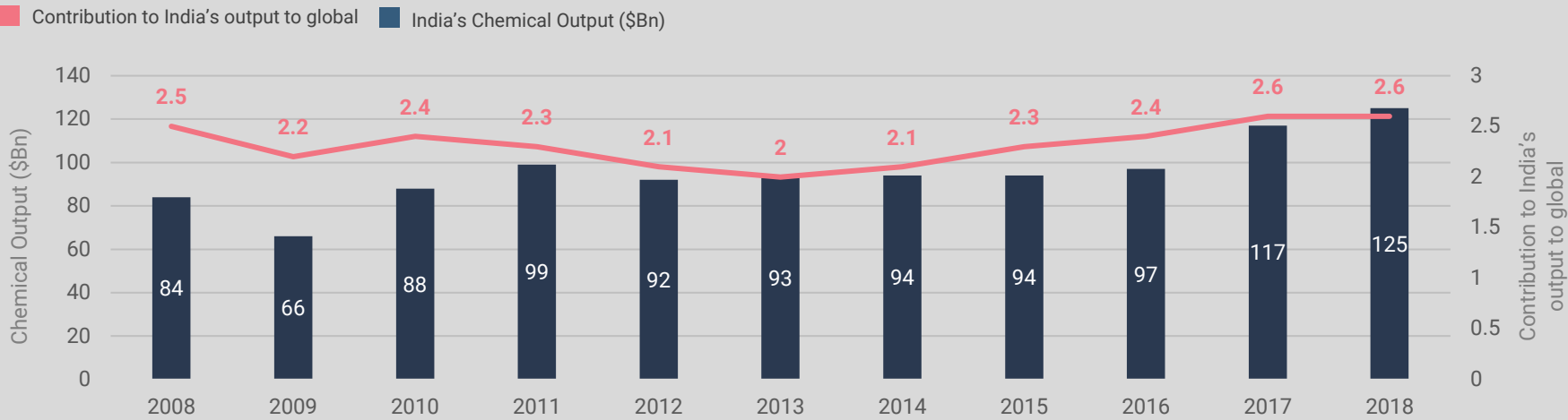
LANDSCAPE OF THE INDUSTRY

GLOBAL SCENARIO

Today, the Indian chemical industry is well known for its prominent position in the world chemical market. It has maintained its position as the sixth and fourth largest producer of chemicals in the world and Asia, respectively. It contributes about 2.6% to the international chemical industry and is expected to grow at 9.3% to reach US\$ 304 billion by 2025 ¹. The boom in the industry is visible in its high growth of 14.09% in production, corresponding to the period of the previous year (up to February 2022) ².

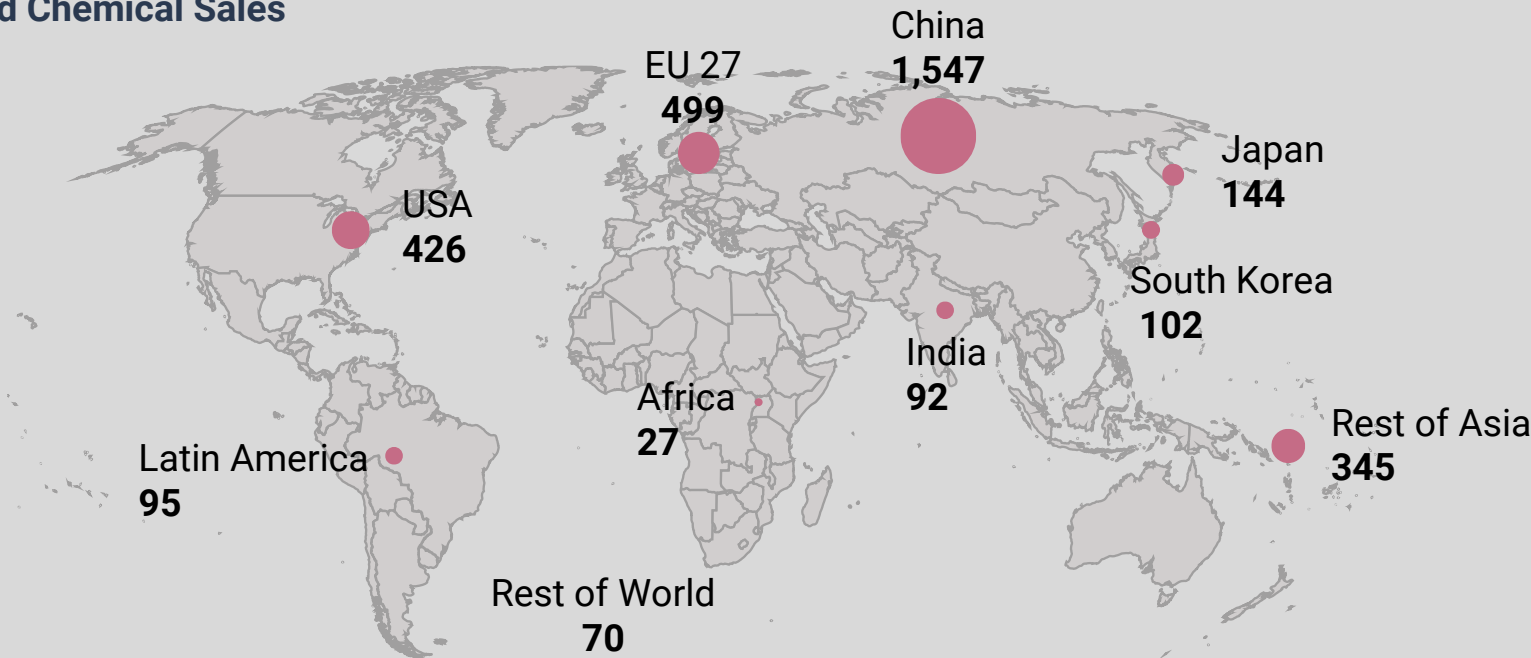
1. India Brand Equity Foundation (IBEF)
2. Invest India

India's Contribution in Global Chemical Industry



Source: Making India A Global Powerhouse: Vision for the 2020s

World Chemical Sales

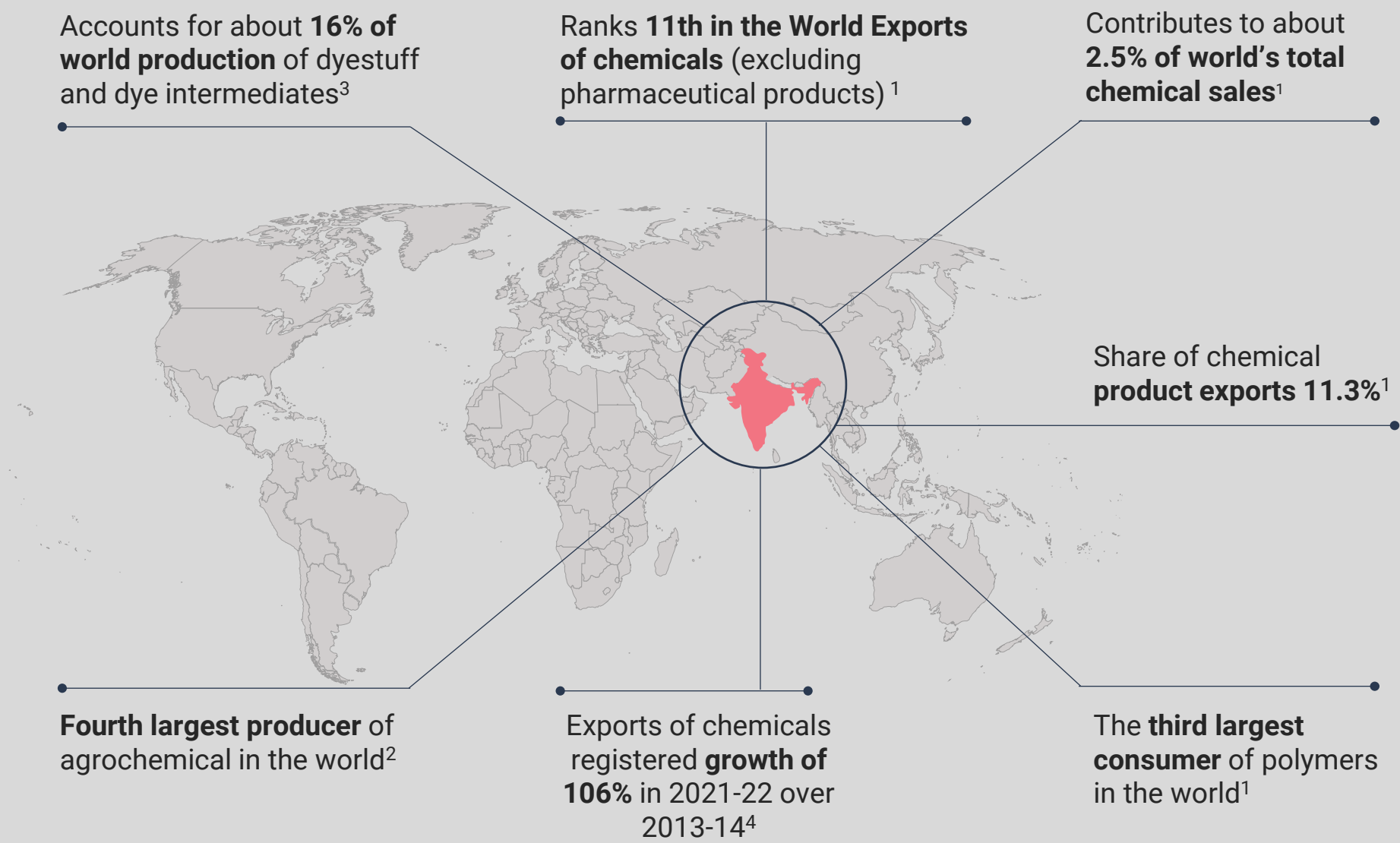


Source: Cefic (European Organization)

The sales figures in the above graph are in billion Euro, as per the year 2020

GLOBAL SCENARIO

The strategic geographical location of India has enabled the country to maintain its key position in the international market. The position of India's Chemical and Petrochemical industry in the global chemical market is summarised in the snapshot presented.

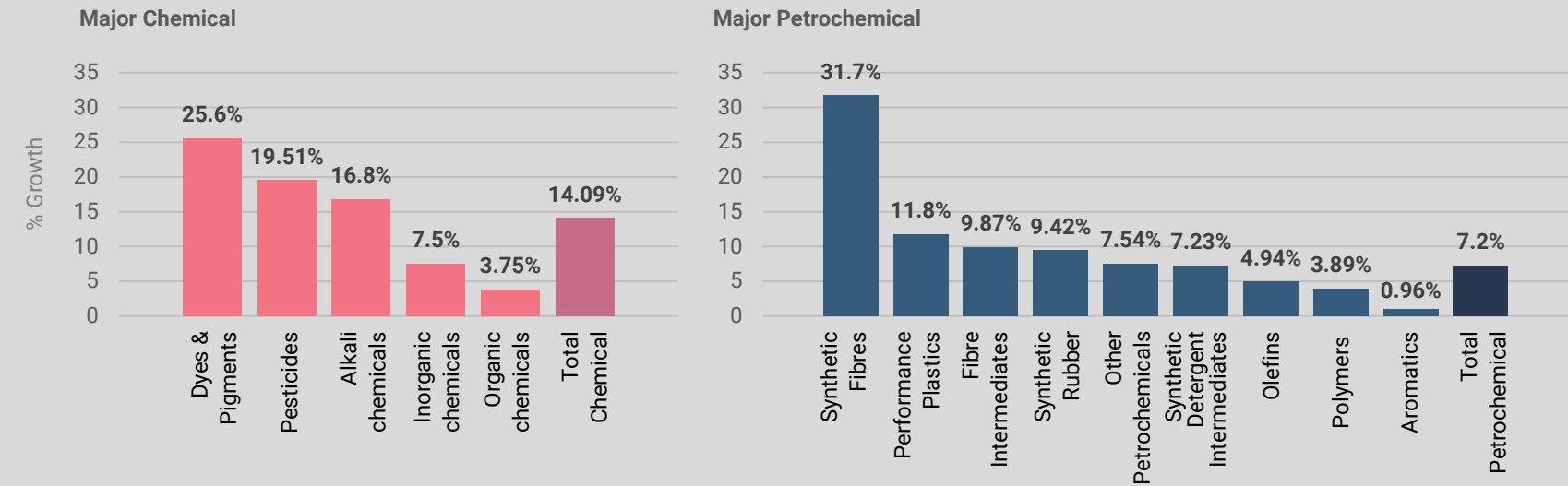


INDIAN SCENARIO

The chemical and petrochemical industry in India also forms an integral part of the growing Indian manufacturing industry and the country's economic growth. It occupies an indispensable position in meeting the basic needs and improving the quality of life of the population through its numerous direct and indirect linkages in most of the industrial segments like agriculture, food and beverages, textile, rubber, petroleum refining, and others. As a result, the chemical industry is closely related to the manufacturing sector's Index for Industrial Production (IIP).

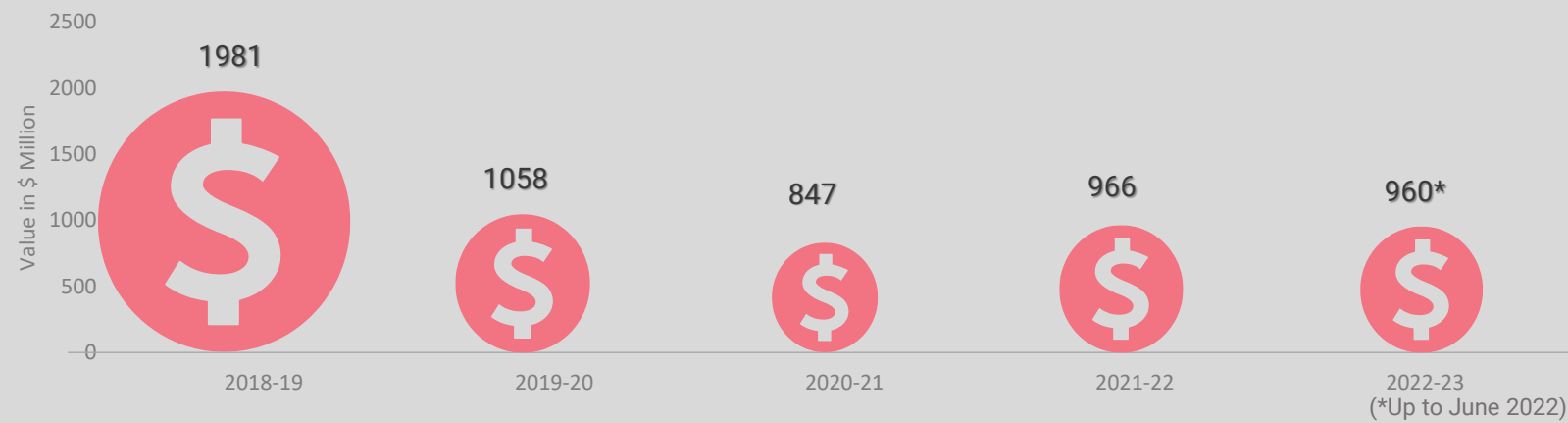
The graph indicates substantial growth in almost all the major chemical and petrochemical sub-sectors in India. In addition, the FDI inflows in the chemical industry (except fertilizers) are also recovering to their pre-covid level, further strengthening its recovery trend.

Growth in Production of Major Chemicals and Petrochemicals



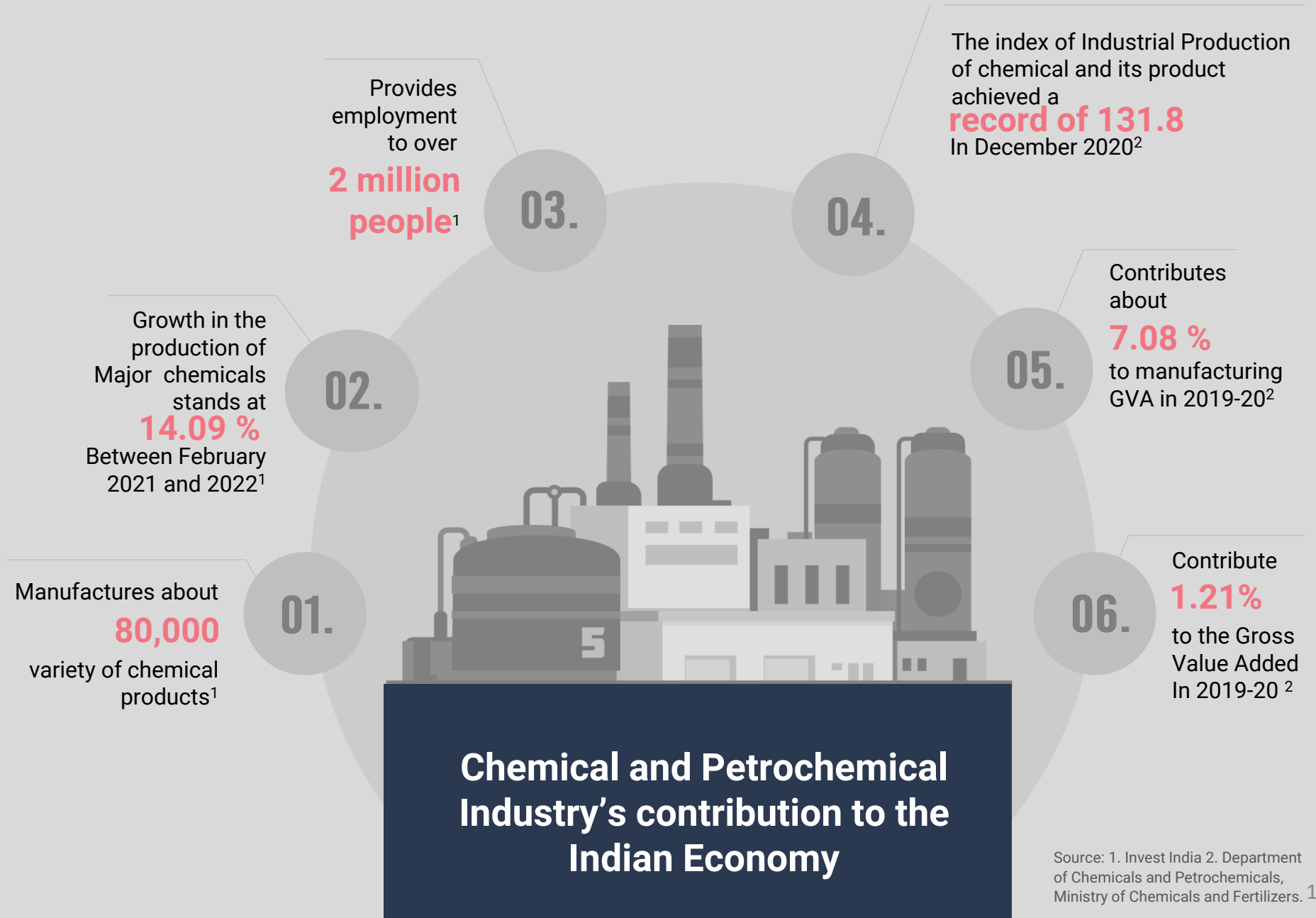
Source: Invest India; Year: 2021-22 (up to February 2022) over 2020-21 (up to February 2021)

FDI Equity Inflow Over The Years in Chemical Industry



Source: Department for Promotion of Industry and Internal Trade (DPIIT)

INDIAN SCENARIO



MARKET SEGMENTATION



CHEMICAL AND PETROCHEMICAL INDUSTRY

BULK CHEMICALS

Chemicals produced in large quantities but with lower value are considered bulk chemicals. They significantly cater to the downstream industries. They are further divided into 3 categories alkali, organic and inorganic. The national consumption of all three types of bulk chemicals has been higher than its production over the years.

PETRO-CHEMICALS

Also known as petroleum distillates, these chemicals are derived from petroleum and natural gas by refining. It includes polymers, and synthetic fibres, performance plastics and others. The production-consumption gap in these has remained negative over the years.

SPECIALTY CHEMICALS

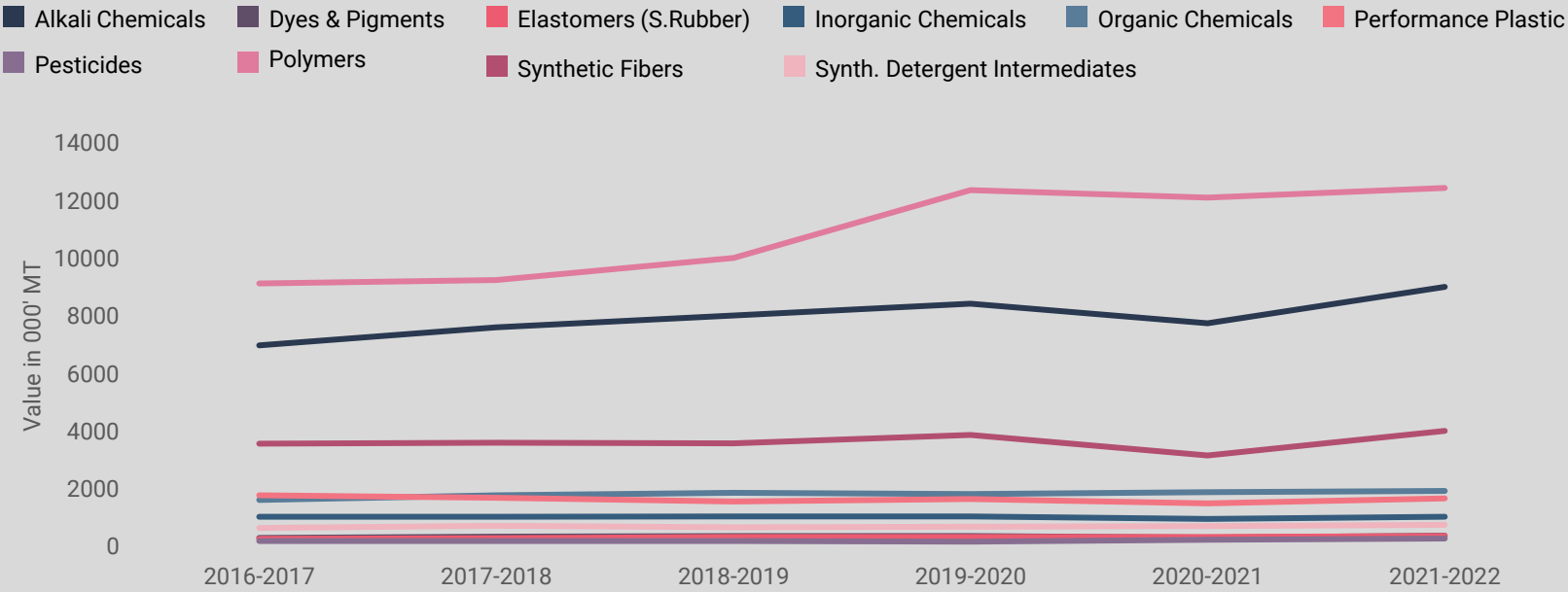
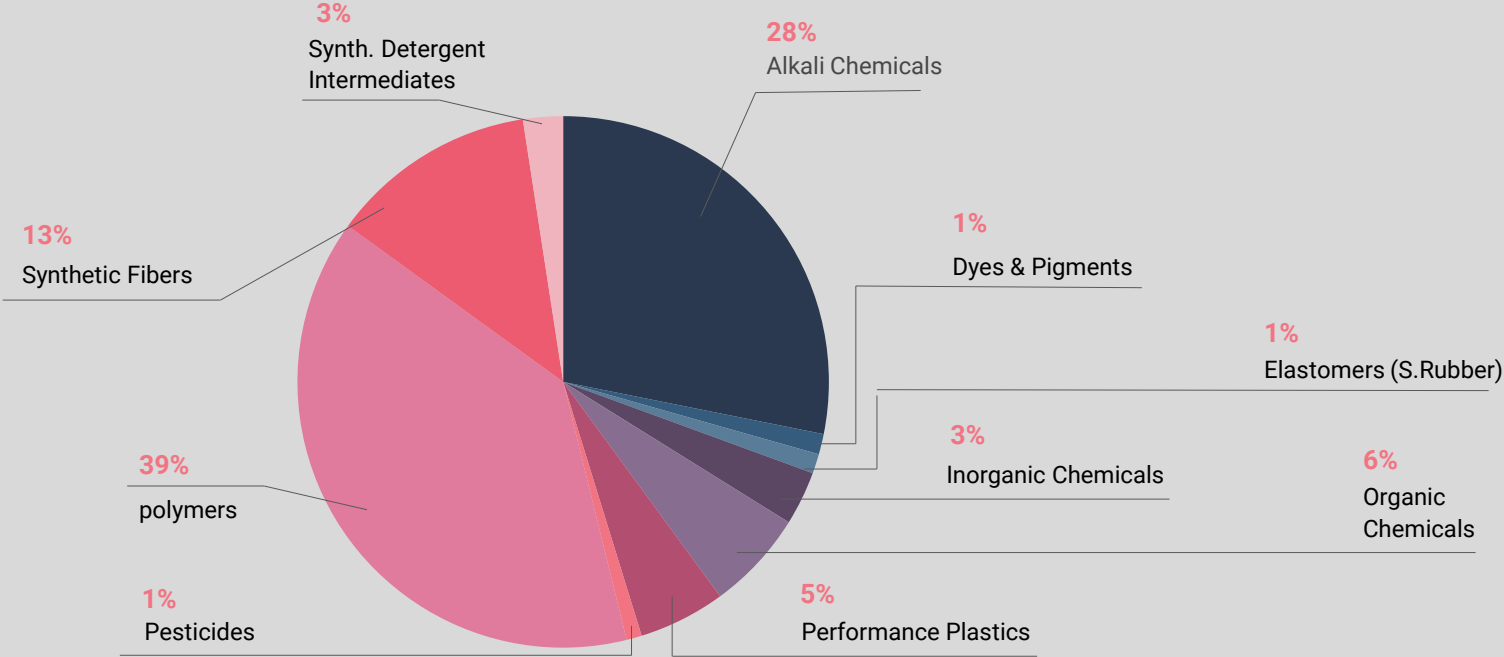
Chemicals with high value but low production volume are considered specialty chemicals like surfactants, textile chemicals, paints and coating, dyes, agrochemicals and others. They are a highly researched and development-intensive category of chemicals. They account for more than 50% of the total chemical exports from India.

PRODUCTION

The graphs show the composition of production of the major chemicals and petrochemicals in the year 2021-22 and their trends over time.

Alkali chemicals and polymers have the highest share of production among all the major chemical and petrochemical segments, respectively. They also recorded a CAGR of 5.22 % and 6.36 % between 2016-17 and 2020-21, among all.

Overall, the industry’s production showed a growth rate of 4.52% over the same time period.



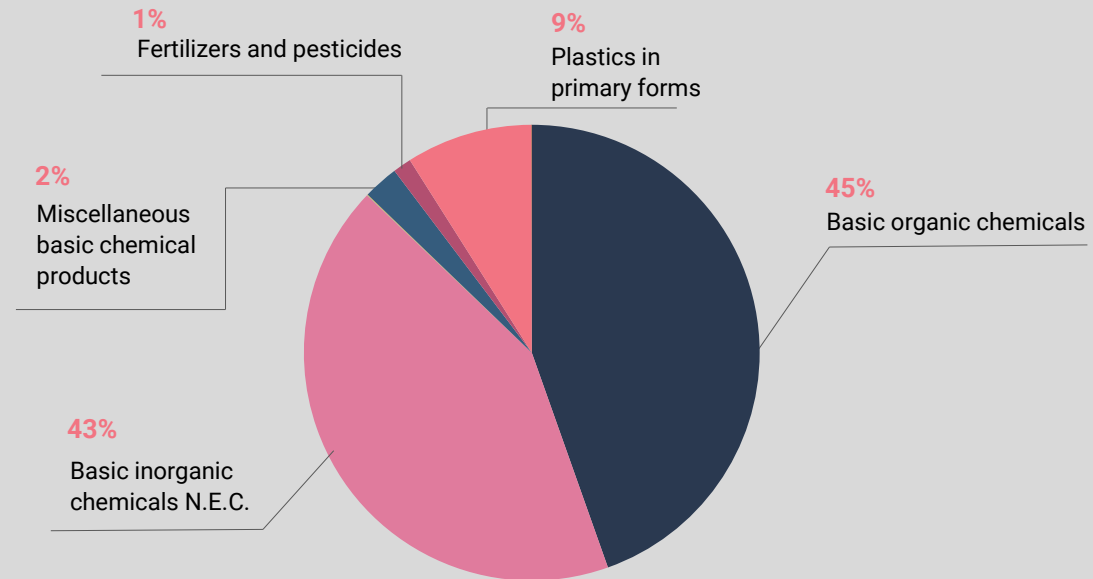
Source: Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers

PRODUCTION AND SALES

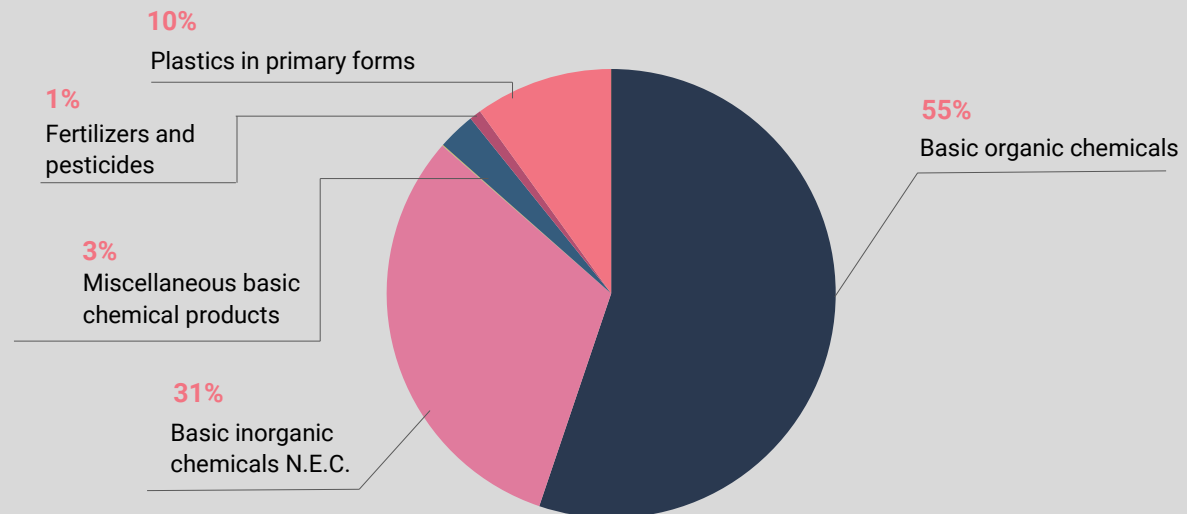
The graphs show the composition of production and sales of the major chemicals according to the National Product Classification for Manufacturing Sector.

Basic Organic chemicals and Inorganic chemicals form the largest share of the production as well as the sales in the chemical sector.

Composition of total production in the chemical industry

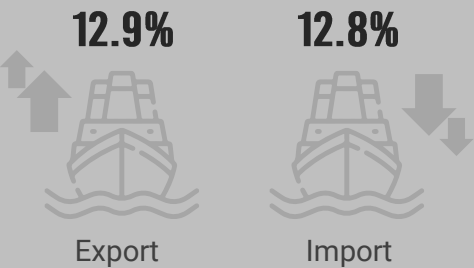


Composition of total sales in the chemical industry



EXPORT AND IMPORT

Industry’s contribution to India’s total export and import is about 12.9% and 12.8%, respectively in the year 2020-21.



The Imports of the industry have grown at a higher rate of 13.79% as compared to the exports of the industry, which have a CAGR of 13.64% between 2016-17 and 2021-22.



Source: Directorate General of Commercial Intelligence and Statistics (DGCIS)

GROWTH DRIVERS OF THE INDUSTRY

Various international and national megatrends like reduction of dependency on single source, shift in consumer preferences and income demographics, improving digitalization and innovation and more, are expected to propel the Indian chemical and petrochemical industry to achieve its goal of a 300 billion USD industry by 2025. Though India at present is well known in the global chemical market, to further strengthen its position, it needs to fully utilize the advantages and opportunities it possesses. These growth drivers are backed up by advantages like lower labor costs and strategic location of the country, which can be leveraged and turned into tangible outcomes for the Chemical and Petrochemical industry.

Growth Drivers of the Chemical and Petrochemical Industry



GROWING DEMAND

- Influx of domestic demand from linked industries as well as direct consumers.
- High expected growth of the market size of the connected industries like textiles (350 billion US \$ by 2024-25), automotive (from 222 billion US \$ to 300 billion US \$ by 2026), construction (1.4 trillion US \$ by 2025), plastics (predicted annual per capita plastic consumption would be 20 kgs by end of 2022) and others.
- Expected increase in the disposable income of the consumer.
- Increase in export demand.



EVOLVING INDUSTRY'S ECOSYSTEM

- 100% FDI is allowed under the automatic route in the chemicals sector (except in the case of certain hazardous chemicals)
- Policies like PCPIRs, Setting up plastic parks for better and larger scale research and development.
- Provision of duty drawbacks, tax incentives.



STRONG POLICY SUPPORT

- \$18.48 billion FDI inflow in chemicals other than fertilizers during April 2000- March 2021 as per FDI policy for the chemical sector.
- Sustainability and circular economy principles being promoted.
- Prioritizing and promoting innovation through schemes like the National Petrochemical Awards and Centres of Excellence (CoE's).
- Increase in Skilled and competent manpower.

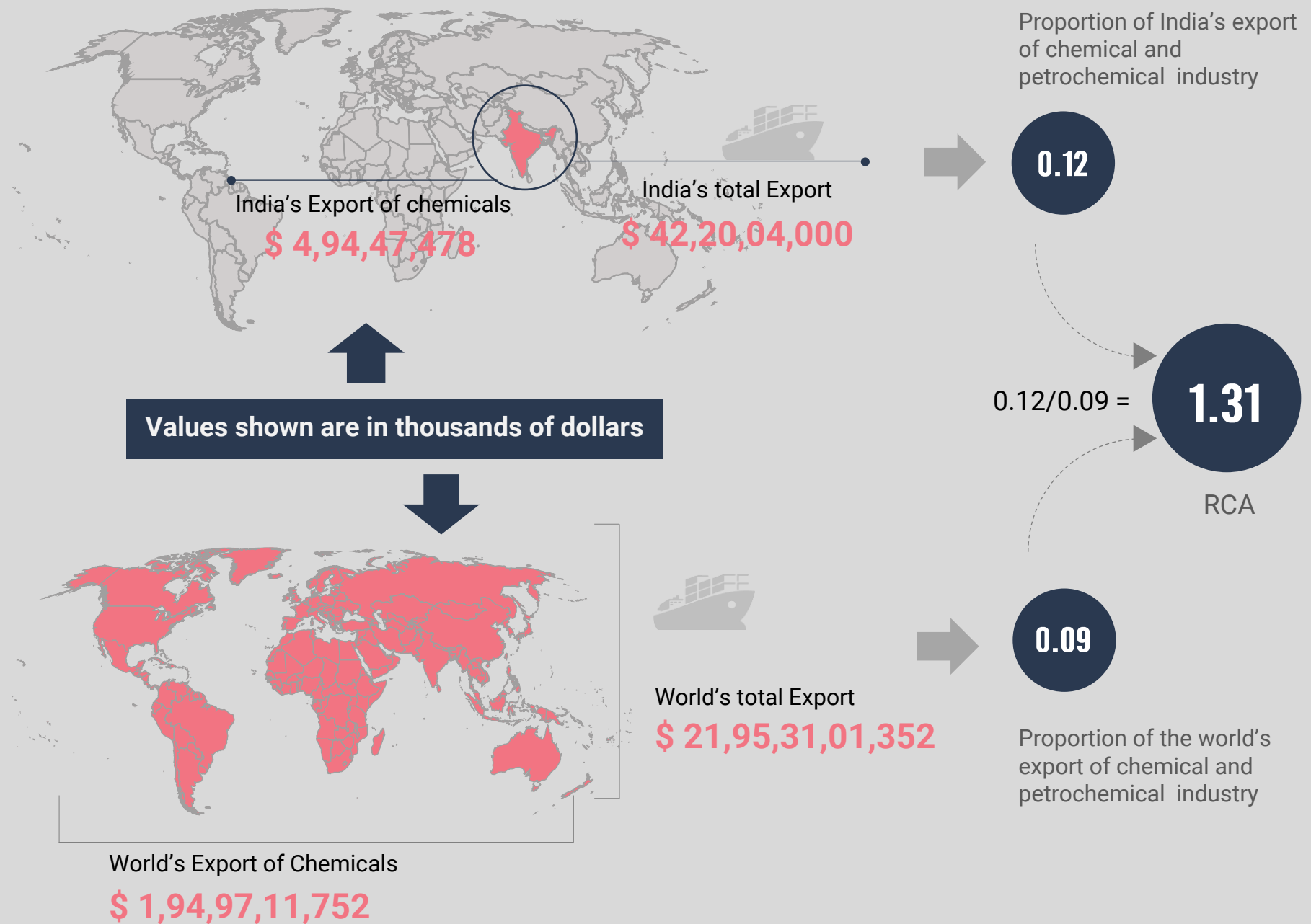
REVEALED COMPARATIVE ADVANTAGE

The concept of the revealed comparative advantage (RCA) measures the relative advantage or disadvantage a country might have in a particular industry as evidenced by the trade flows. It is calculated as the ratio of

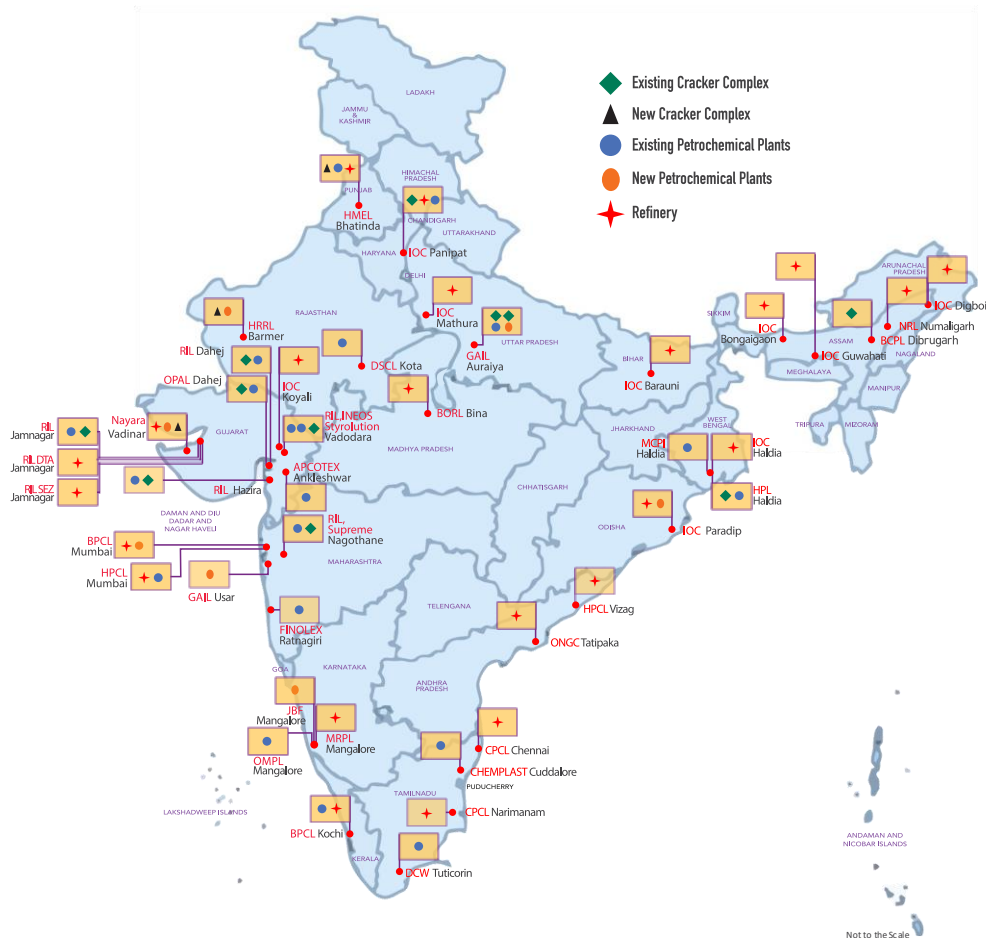
- i) Proportion of the country's export of a certain industry and
- ii) Proportion of the world's export of the same industry.

RCA greater than 1 indicates that the country has a certain relative advantage in the export of goods, compared to other countries.

As shown above, India has RCA equal to 1.31, which signifies the comparative advantage of India in the exports of chemical-related goods.



PETROCHEMICAL MAP



The above figure provides the location of different refineries, existing cracker complexes, and existing and new petrochemical plants across India. The map highlights the concentration of the petrochemical industry in a few states like Gujarat, Maharashtra, and Tamil Nadu. Coastal regions have a higher agglomeration of the refineries and plants when compared to the landlocked regions.

Refineries

- BORL, Bina
- BPCL, Kochi
- BPCL, Mumbai
- CPCL, Chennai
- CPCL, Narimanam
- HMEL, Bhatinda
- HPCL, Mumbai
- HPCL, Vizag
- IOC, Digboi
- IOC, Barauni
- IOC, Bongaigaon
- IOC, Guwahati
- IOC, Haldia
- IOC, Koyali
- IOC, Mathura
- IOC, Panipat
- IOC, Paradip
- Nayara, Vadinar
- NRL, Numaligarh
- MRPL, Mangalore
- ONGC, Tatipaka
- RIL DTA, Jamnagar
- RIL SEZ, Jamnagar

Existing Petrochemical plants

- APCOTEX, Ankleshwar
- BPCL, Kochi
- CHEMPLAST, Cuddalore
- DCW, Tuticorin
- FINOLEX, Ratnagiri
- GAIL, Auraiya
- HMEL, Bhatinda
- HPCL, Mumbai
- HPL, Haldia
- INEOS Styrolution, Vadodra
- IOC, Panipat
- MCPI, Haldia
- OMPL, Mangalore
- OPAL, Dahej
- RIL, Dahej
- RIL, Hazira
- RIL, Jamnagar
- RIL, Nagothane
- RIL, Vadodra
- Supreme, Nagothane

Existing Cracker Complex

- BCPL, Dibrugarh
- GAIL, Auraiya
- HPL, Haldia
- IOC, Panipat
- OPAL, Dahej
- RIL, Dahej
- RIL, Hazira
- RIL, Jamnagar
- RIL, Nagothane
- RIL, Vadodra

New Petrochemical Plants

- BPCL, Mumbai
- GAIL, Auraiya
- GAIL, Usar
- HRRL, Barmer
- IOC, Paradip
- JBF, Magalore
- Nayara, Vadinar

New Cracker Complex

- HMEL, Bhatinda
- HRRL, Barmer
- Nayara, Vadinar
- IOCL, Paradip

Major Petrochemicals Manufacturers in India	
(Capacity in MMTPA)*	
PSUs/JV	
IOCL	3.08
GAIL	0.80
HMEL	0.47
MRPL	0.44
OPAL	1.70
OMPL	0.90
BCPL	0.30
BPCL	0.50
TOTAL	8.19
PRIVATE COMPANIES	
RIL	13.00
MCPI	1.30
HPL	1.06
IGL	0.20
OTHER	5.90
TOTAL	21.46

Refineries Capacities In India	
(Capacity in MMTPA)*	
BORL, Bina	7.80
BPCL, Kochi	15.50
BPCL, Mumbai	12.00
CPCL, Chennai	10.50
CPCL, Narimanam	1.00
HMEL, Bhatinda	11.30
HPCL, Mumbai	7.50
HPCL, Vizag	8.30
IOC, Digboi	0.70
IOC, Barauni	6.00
IOC, Bongaigaon	2.40
IOC, Guwahati	1.00
IOC, Haldia	7.50
IOC, Koyali	13.70
IOC, Mathura	8.00

Refineries Capacities In India	
(Capacity in MMTPA)*	
IOC, Panipat	15.00
IOC, Paradip	15.00
Nayara, Vadinar	20.00
NRL, Numaligarh	3.00
MRPL, Mangalore	15.00
ONGC, Tatipaka	0.10
RIL, DTA	33.00
RIL, SEZ	35.20
TOTAL	249.50

* Capacities of PP, PE,PVC, PTA,MEG, LAB ELASTOMERS



02

POLICY INCENTIVES

DEPARTMENT OF CHEMICALS AND PETRO- CHEMICALS

The Department of Chemical and Petrochemical, Ministry of Chemicals and Fertilizers have introduced the following schemes in the country.



PCPIRs

- Petroleum, Chemical and Petrochemical Investment Regions (PCPIRs) is a hub of high-class infrastructure which creates a competitive environment conducive to setting up new firms.
- Three PCPIRs have been established in the country to promote and attract investment.



NATIONAL AWARD SCHEMES

- It is a medium for providing incentives for meritorious innovations and inventions in different fields of the petrochemicals and downstream plastic processing industry.
- In 2019-20, the 10th National awards were presented.



PLASTIC PARKS

- It aims at contributing more to the economy by increasing investment, production, and exports in the petrochemical sector along with the generation of employment.
- Specifically, it creates a supportive ecosystem through a cluster development approach, accumulating and synergizing the capacities of the domestic plastic processing industry.
- 10 plastics park have been approved till now across the country.



CENTER OF EXCELLENCE

- CoE's provide grants in aid to recognized research institutes with the aim of improving the existing technology and promoting the development of new applications of polymers and plastics.
- 13 CoE's within the premises of reputed educational/ research institutes have been approved.

INCENTIVES AVAILABLE

In addition to the policies implemented by the Department of the Chemical and Petrochemical, the incentives provided by the state governments are also critical in attracting investment in their respective regions.

Given is a snapshot of the existing major incentives given by the states specific to the chemical industry.

Policy/ States		Andhra Pradesh	Gujarat	Karnataka	Madhya Pradesh	Maharashtra	North-Eastern States	Odisha	Punjab	Rajasthan	Tamil Nadu	Telangana	Uttar Pradesh	West Bengal
Incentives for	Diversification		✓		✓	✓			✓					
	Modernization		✓		✓				✓					
	Employment Generation						✓	✓	✓	✓			✓	✓
	Skill Development			✓	✓			✓			✓	✓		
	Green Industry		✓		✓			✓		✓	✓	✓		✓
Subsidy for	Capital	✓		✓				✓	✓	✓	✓			
	Power	✓		✓					✓					✓
	Stamp Duty													✓
	Interest	✓		✓		✓				✓		✓	✓	✓
	Land			✓	✓			✓			✓	✓		
	Goods and Service Tax (GST)													✓
Capital	Investment Subsidy		✓							✓		✓		✓
	Interest Subsidy		✓						✓				✓	
Power	Reimbursement											✓		
	Tariff Subsidy				✓	✓				✓	✓			
Electricity Duty	Exemption/ waiver	✓		✓		✓		✓		✓			✓	✓
	Rebate				✓						✓			
Stamp Duty	Waiver					✓		✓		✓			✓	
	Reimbursement	✓							✓			✓		
Land	Exception of Land tax									✓				
Goods and Service Tax (GST)	Reimbursement	✓			✓		✓	✓			✓	✓	✓	

The details of the incentives of these states are attached in the appendix.

INCENTIVES AVAILABLE

The table presents a comprehensive view of the major fiscal incentives given by the state governments to all the industries, as per their Industrial Policy.

States	Capital Investment Subsidy	Interest Subsidy	Interest Subsidy - working capital loan/ plant machinery	Stamp Duty and Registration Fee	Stamp Duty and Registration Fee	Power Subsidy	Employment Generation Subsidy	Reimbursement of Expenses incurred for patent registration	Reimbursement of SGST	Assistance for Environmental Compliance/ Pollution control incentives/ Green industry incentive
Arunachal Pradesh		✓	✓	✓	✓	✓	✓		✓	
Assam	✓			✓	✓	✓	✓		✓	✓
Bihar			✓	✓						
Chandigarh										
Chhattisgarh	✓		✓	✓	✓		✓	✓	✓	✓
Dadra and Nagar Haveli & Daman and Diu	✓		✓		✓					
Goa	✓	✓			✓		✓	✓		✓
Haryana	✓	✓	✓	✓	✓		✓	✓	✓	
Himachal Pradesh	✓	✓		✓	✓		✓	✓	✓	✓
Jammu and Kashmir	✓								✓	
Ladakh	✓						✓		✓	
Manipur	✓					✓				
Meghalaya	✓		✓	✓	✓	✓			✓	
Mizoram	✓		✓			✓			✓	
Nagaland										
Puducherry	✓		✓	✓	✓	✓	✓	✓	✓	✓
Sikkim	✓	✓	✓							
Tripura	✓	✓	✓						✓	
Uttarakhand	✓	✓	✓	✓	✓	✓			✓	

03

CLUSTER ANALYSIS



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INTRODUCTION



In the pre-globalization era, competition among firms was driven broadly by overall cost reduction, which relied on the cost of inputs, where location played a crucial role. However, with the growing global movement of labor and capital resources, technology and information, the importance of geography has shifted from scale and factor endowments to productivity and its growth. Today, competition is considered dynamic, depending on a firm's ability to innovate and gain an advantage out of strategic differences. Close interaction with the buyers, suppliers, and other supporting institution is crucial for the efficiency and higher rate of growth.

The phenomena of clusters form one of the prime components of the regional competitiveness theory, which focuses on the productivity and prosperity of the nation. Clusters are the geographical concentrations of interconnected backward and forward linkages, service providers, associated institutions etc. Fostering productivity and increasing innovation are the outcomes of the presence of strong clusters in the region, which benefit and create new businesses in the industry. With the same objectives in the chemical and petrochemical industry, cluster analysis is undertaken across all the states and results are presented.

Indian Cluster Definition



The definition of each cluster and sub-cluster category is adopted by mapping the National Industrial Classification *NIC- 5 (2008)* digit Codes to American Industrial Classification System (*NAICS*) codes*. Many countries like the European Union, Mexico, and Vietnam have accepted the identical process of adopting the cluster definition as it is approved by the US Economic Development Association (EDA). The acceptance of common definitions across countries enables global comparison.

Cluster analysis presented in the report is performed using the Annual Survey of Industry dataset of the latest year available- 2018-19, using these definitions.



Cluster Mapping is a quantitative method to measure the presence of clusters across smaller regions in the country. It systematically measures the size, productivity, specialization and growth of clusters across locations. It is done by applying the mapped definitions, which identify cluster categories as groups of industries that empirically tend to be connected through localized spill-overs and linkages.

The US Cluster Mapping sheet with NAICS codes can be found here.
<https://clustermapping.us/content/cluster-mapping-methodology>

CLUSTER ANALYSIS

The process of cluster mapping analysis is kept consistent with the Cluster Mapping in India project, released by Economic Advisory Council to the Prime Minister (EAC-PM). The chemical and petrochemical industry is studied under the four dimensions which are used for evaluating a cluster's performance in the region. They, directly and indirectly, affect the frequency and intensity of the linkages formed by and around the chemical clusters. They are as follows:



SIZE:

It is an absolute measure capturing the total employed workforce engaged in the cluster in the region. In ASI data, it is reflected by the total employees, which is a sum of production workers, skilled workers (Supervisory and Managerial) and other workers.



PRODUCTIVITY:

It aims at capturing the static performance of the region in the CPC related clusters. Average wages of the clusters is used to capture the productivity in the region.



SPECIALIZATION:

Location Quotient is a relative employment measure, trying to capture the strength of the region in upstream and downstream cluster categories compared to other regions. It is calculated by the share of regional employment in regional cluster/ Share of cluster's employment in national employment.



DYNAMISM:

It captures the growth performance of the two clusters through the rate of growth (CAGR) in cluster employment of the region over a time period.

CLUSTER CATEGORIES

As mentioned before, definitions of clusters as well sub-clusters are adopted from the US cluster mapping project after mapping the NIC 2004 5-digit codes to respective NAICS Codes.

A total of 51 traded clusters are created using the NIC 2008 5-digit codes, out of which two are specifically related to the chemical and petrochemical industry- Downstream and Upward chemical products.

The detailed mapping of chemical clusters, along with their sub-clusters, is presented in the appendix.

Cluster Code	Cluster Name
1	Aerospace Vehicles and Defence
2	Agricultural Products, Inputs and Services
3	Apparel
4	Automotive
5	Biopharmaceuticals
6	Business Services
7	Coal Mining
8	Communications Equipment and Services
9	Construction Products and Services
10	Distribution and Electronic Commerce
11	Downstream Chemical Products
12	Downstream Metal Products
13	Education and Knowledge Creation
14	Electric Power Generation and Transmission
15	Environmental Services
16	Financial Services
17	Fishing and Fishing Products
18	Food Processing and Manufacturing
19	Footwear
20	Forestry
21	Furniture
22	Hospitality and Tourism
23	Information Technology and Analytical Instruments
24	Insurance Services
25	Jewelry and Precious Metals
26	Leather and Related Products
27	Lighting and Electrical Equipment
28	Livestock Processing
112	Local Commercial Services
114	Local Community and Civic Organizations
113	Local Education and Training
110	Local Entertainment and Media
107	Local Financial Services
101	Local Food and Beverage Processing and Distribution

Cluster Code	Cluster Name
117	Local Government Organization
103	Local Health Services
111	Local Hospitality Establishments
106	Local Household Goods and Services
116	Local Industrial Products and Services
105	Local Logistical Services
108	Local Motor Vehicle Products and Services
102	Local Personal Services (Non-Medical)
115	Local Real Estate, Construction, and Development
109	Local Retailing of Clothing and General Merchandise
104	Local Utilities
29	Marketing, Design, and Publishing
30	Medical Devices
31	Metal Mining
32	Metalworking Technology
33	Music and Sound Recording
34	Nonmetal Mining
35	Oil and Gas Production and Transportation
36	Paper and Packaging
37	Performing Arts
38	Plastics
39	Printing Services
40	Production Technology and Heavy Machinery
41	Recreational and Small Electric Goods
42	Textile Manufacturing
43	Tobacco
44	Trailers, Motor Homes, and Appliances
45	Transportation and Logistics
46	Upstream Chemical Products
47	Upstream Metal Manufacturing
48	Video Production and Distribution
49	Vulcanized and Fired Materials
50	Water Transportation
51	Wood Products

Subcluster under Downstream Chemical cluster

Sub cluster Code	Subcluster Name
1	Personal Care and Cleaning Products
2	Processed Chemical Products
3	Dyes, Pigments and Coating
4	Explosives

Subcluster under Upstream Chemical cluster

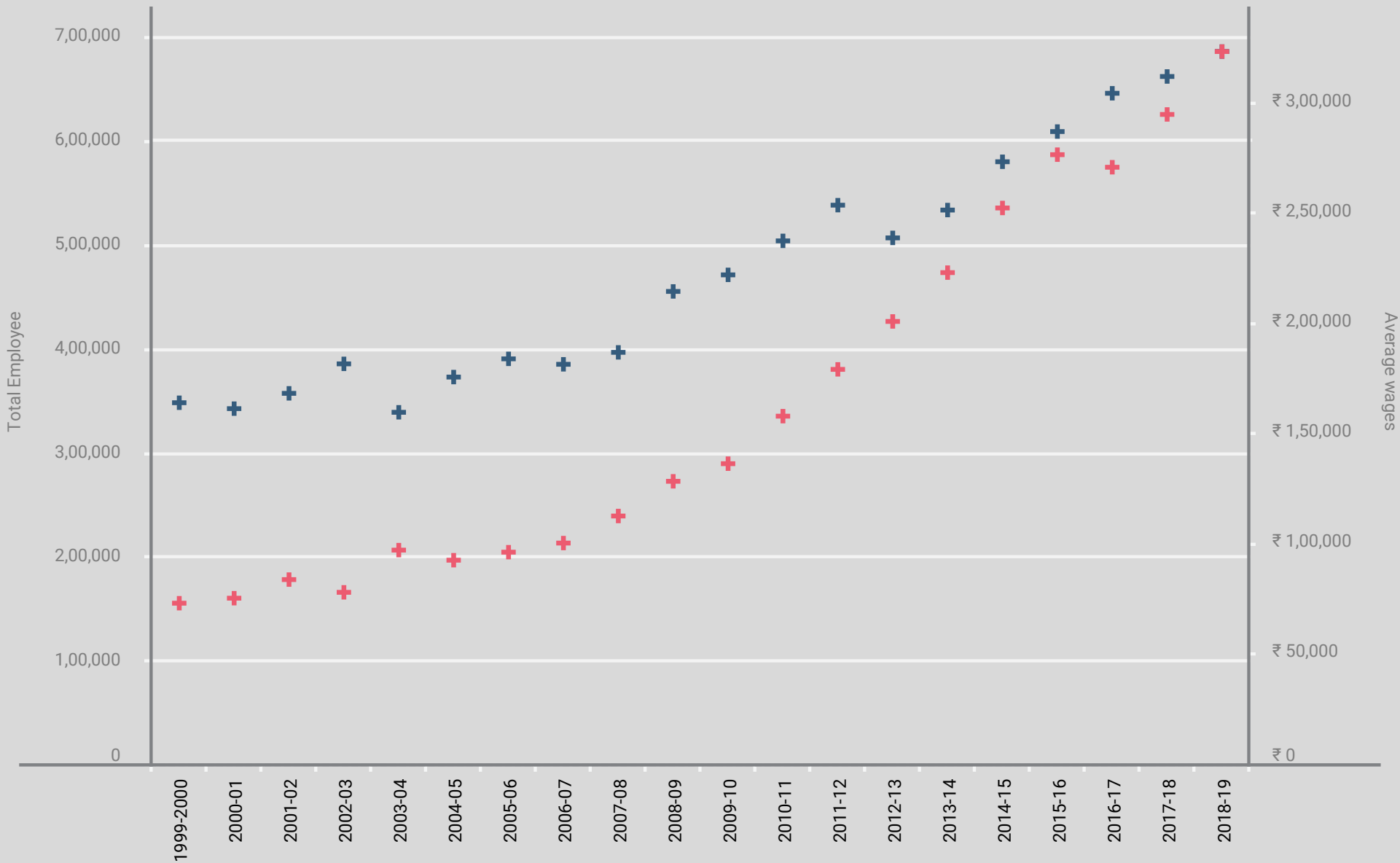
Sub cluster Code	Subcluster Name
1	Organic Chemicals
2	Inorganic Chemicals
3	Industrial Gas
4	Agricultural Chemicals

CHEMICAL CLUSTERS- TREND AND OVERVIEW

Average wages
Total Employees

The figure shows almost a steady and continuous upward trend in both employment and average wages of employees of the upstream and downstream clusters over the years.

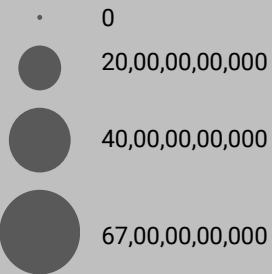
Trend of employees and their average wages over years



Source: Cluster Analysis, ASI

CLUSTER ANALYSIS

Employee's Payroll

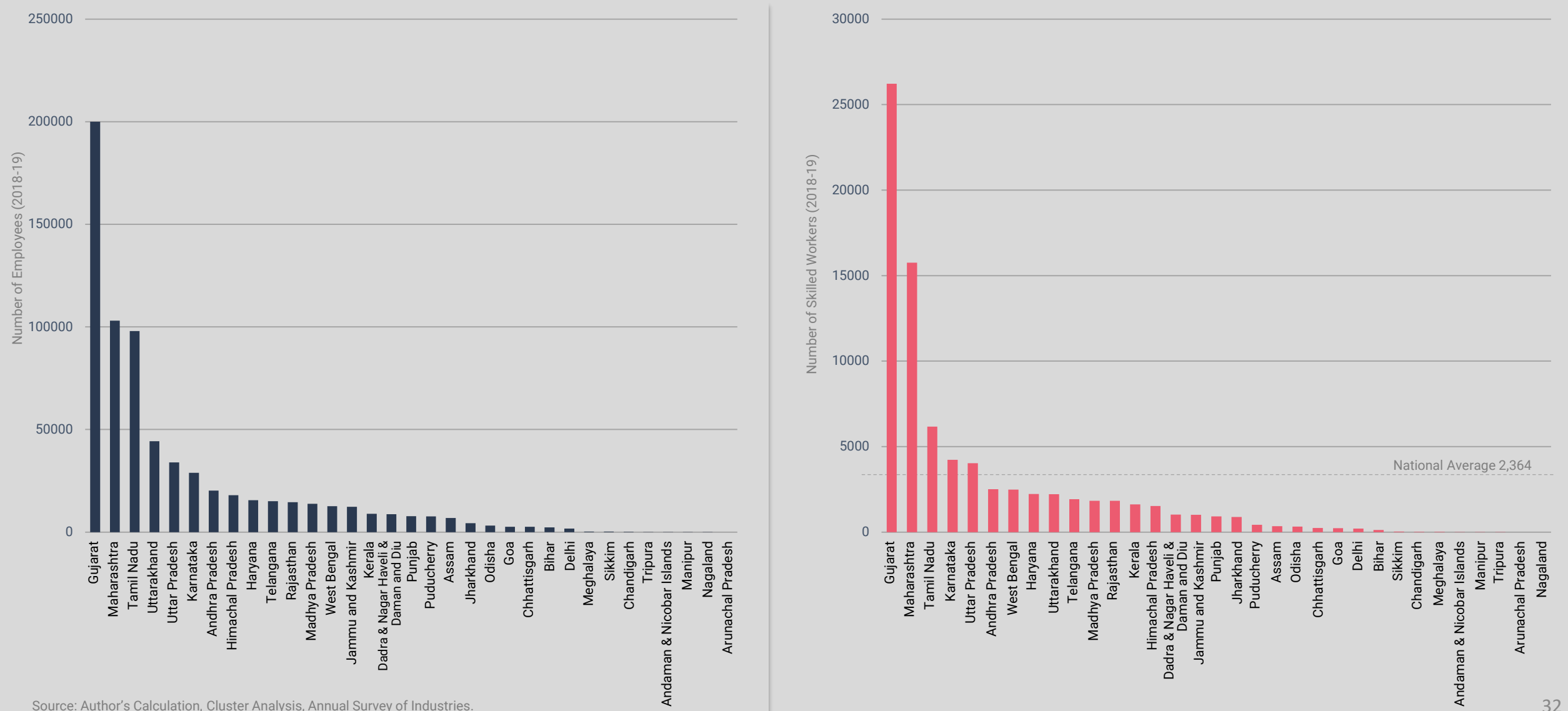


The figure displays an overview of the chemical clusters in each state with respect to employment, employee's total annual wages and annual average wages per employee.



Chemical Clusters Overview- Size

The graph shows the distribution of the employed workforce and skilled workers in the chemical cluster disaggregated at the state level, respectively. The states which have a historical stronghold of the chemical industry in the country like Gujarat, Maharashtra, Tamil Nadu, and Karnataka, tend to contribute significantly to the chemical cluster’s employment. These very states also have the highest number of skilled workers in the country. Other states like Uttarakhand and Andhra Pradesh belong to the fastest-growing states having conducive industrial policies and high investment inflow.

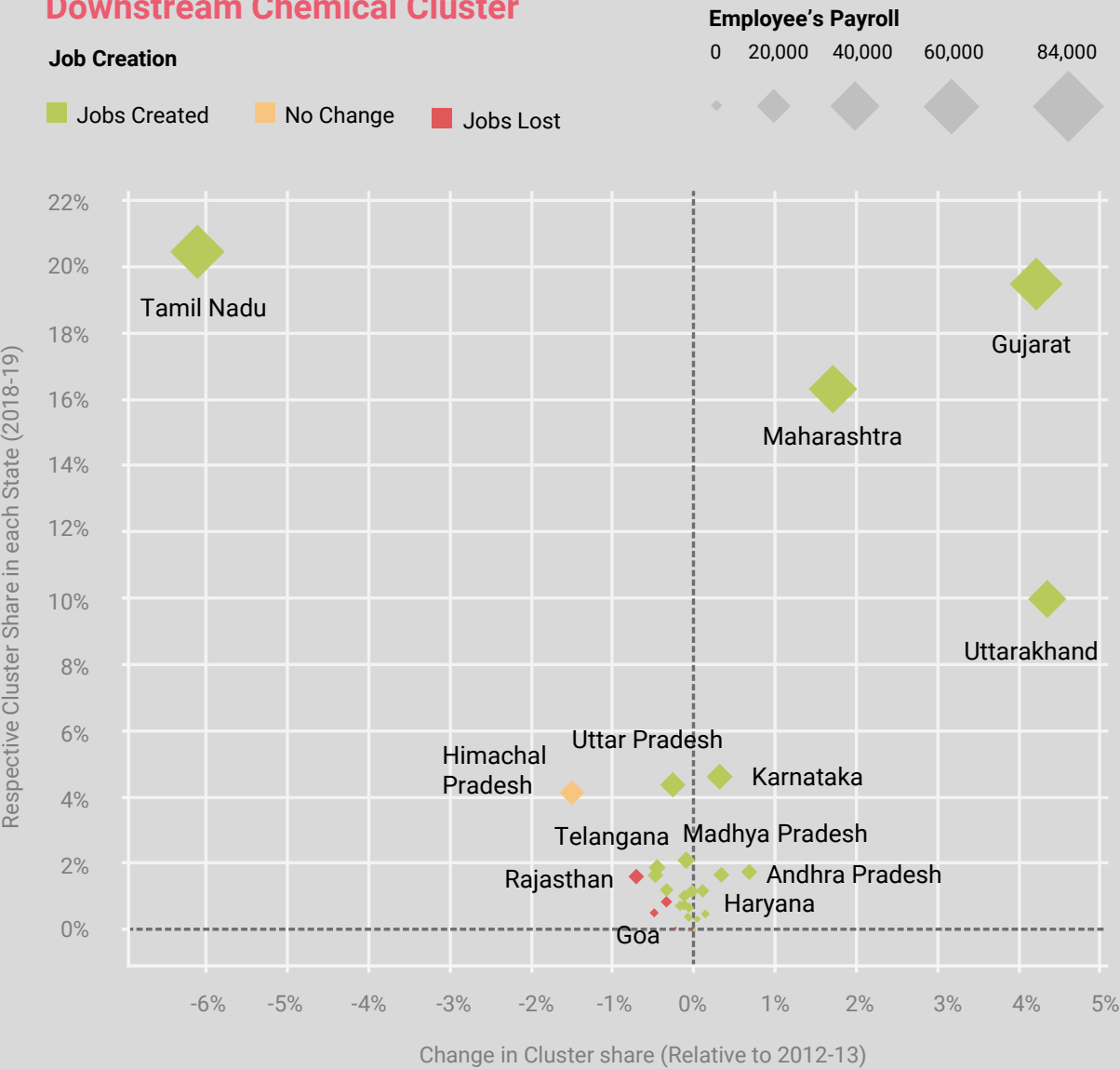


Source: Author’s Calculation, Cluster Analysis, Annual Survey of Industries.

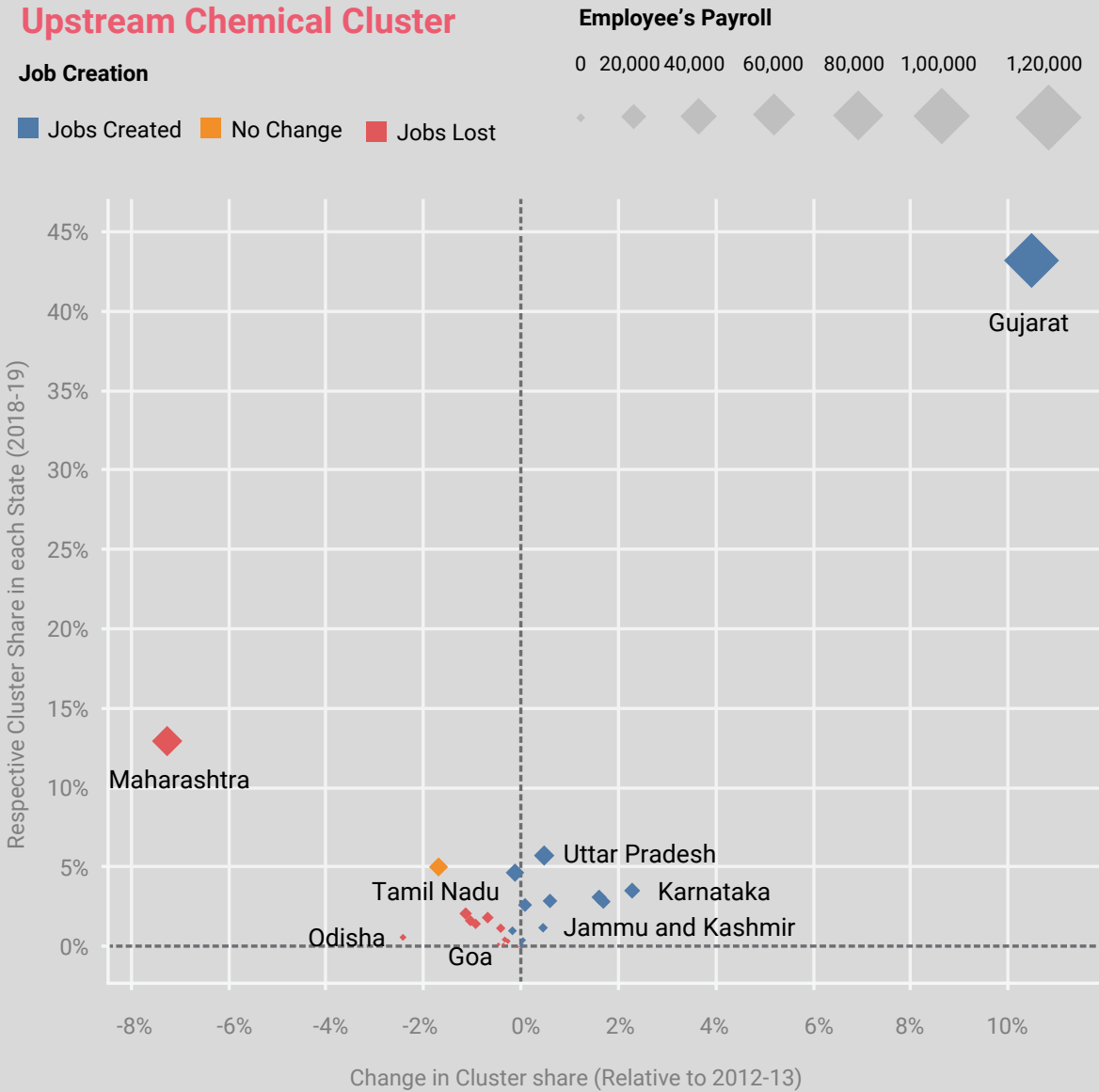
Chemical Clusters Overview- Job Creation

The graphs show the share of the respective cluster in each state in the year 2018-19 with the change in its share from 2012-13. More states have created jobs in the downstream chemical cluster as compared to the upstream chemical cluster.

Downstream Chemical Cluster



Upstream Chemical Cluster

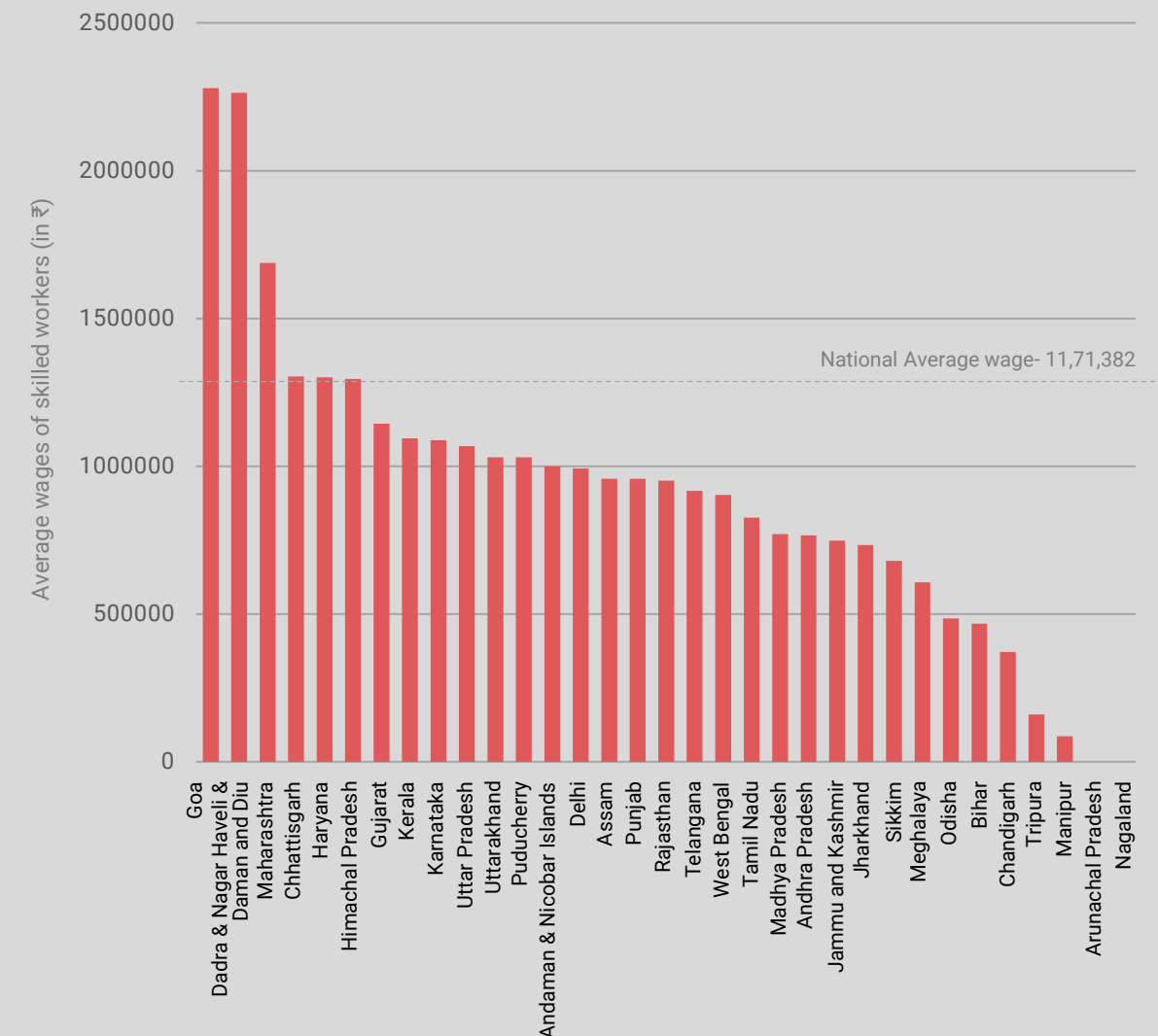
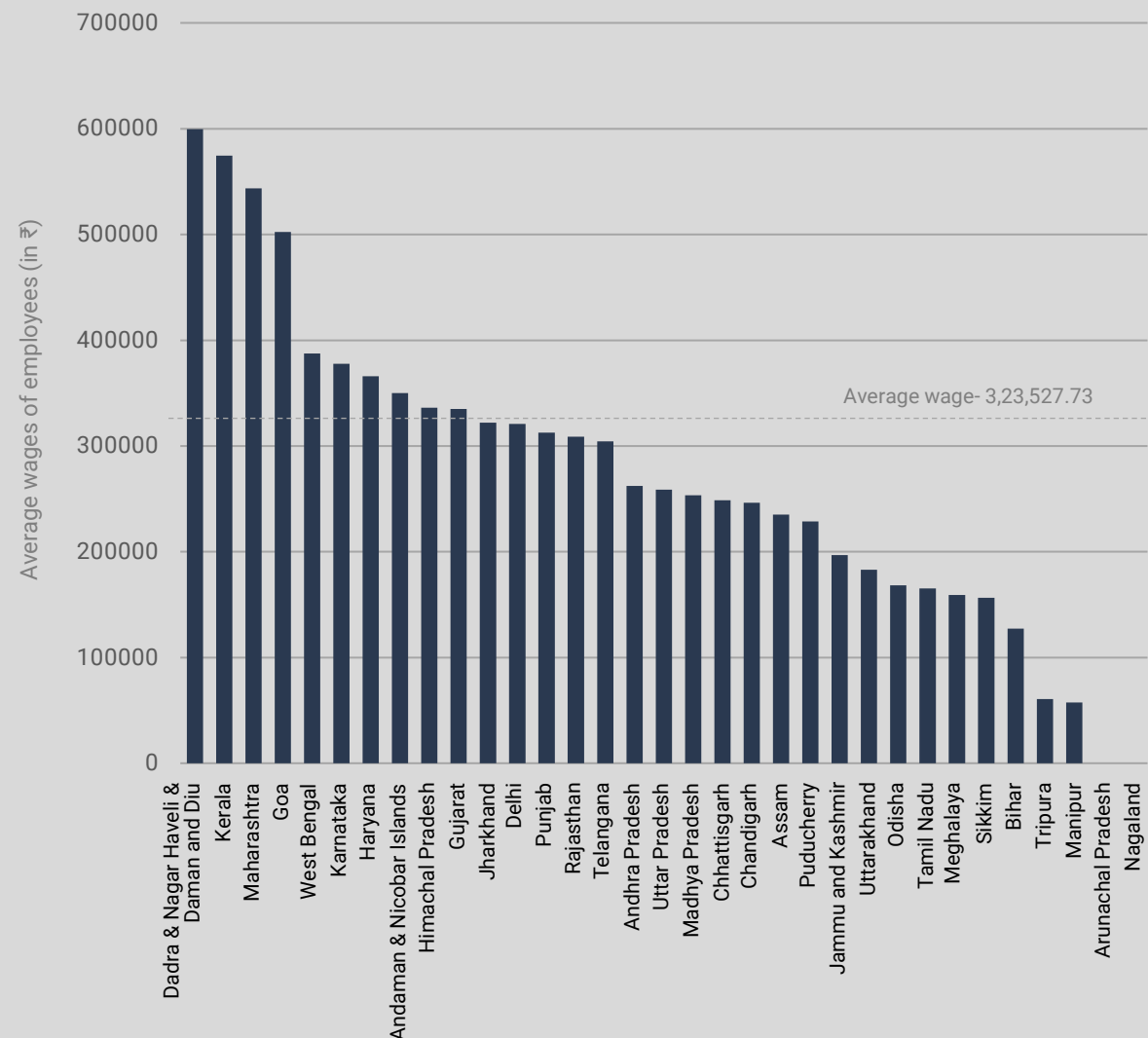


Source: Author's Calculation, Cluster Analysis, Annual Survey of Industries.

Chemical Clusters Overview- Productivity

The distribution of average wages of the overall workforce and of the skilled workers in the chemical clusters across states is shown in the graphs below. The national (yearly) average wage in the chemical industry is about 3.2 lakhs, and ten states provide a higher average wage than the national mark.

The skilled workforce of the industry earns greater average wages in all almost all the states, specifically the industry dominant ones.



Source: Author's Calculation, Cluster Analysis, Annual Survey of Industries.

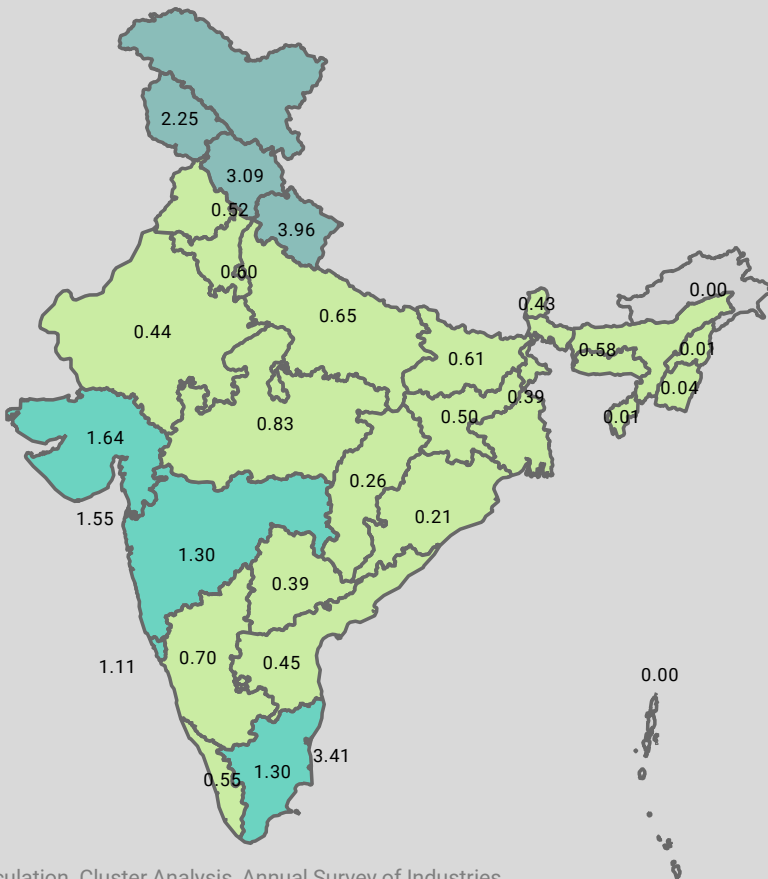
Chemical Clusters Overview- Specialization

Measuring the specialization of the region is crucial in identifying potential economic opportunities in a particular cluster. Location Quotient is calculated to quantify how much specialized or concentrated a cluster is in a region in comparison to a larger geographic area like the nation. It helps to discover which clusters are unique in the smaller region when compared to the national average. LQ is calculated as a ratio of two other proportions: a) ratio of local employment in a particular cluster b) ratio of national employment in that same cluster.

The graph shows the relative concentration of each chemical cluster activity of the states when compared to all India level. The regions with high LQ are generally considered export-oriented industries and are crucial investment hotspots as they have the capacity and ability to increase productivity and competitiveness. The figures in the graphs represent the calculated Location Quotient (LQ).

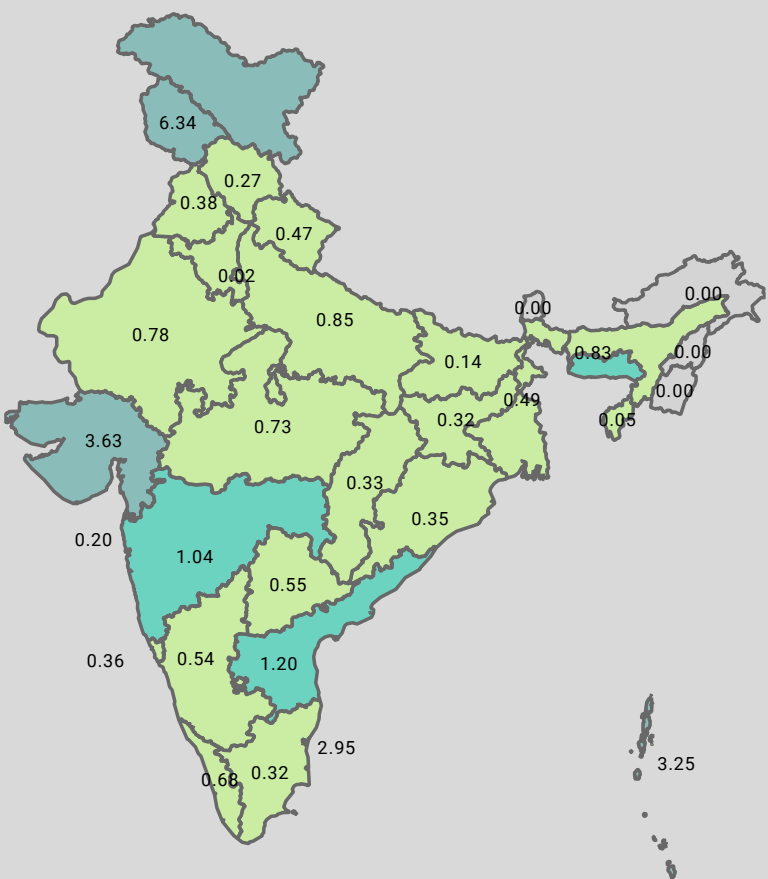
Downstream Chemical Cluster

No Employment Other cluster employment Specialized cluster Strongly Specialized clusters



Upstream Chemical Cluster

No Employment Other cluster employment Specialized cluster Strongly Specialized clusters



Chemical Clusters Overview- Dynamism

The table shows the growth of employment and the average wages of the employees, measured by the CAGR from the year 2012-13 to 2018-19 in the downstream and upstream chemical clusters.

States like Haryana, Uttarakhand, and Karnataka have the highest growth in the chemical clusters. It signifies the shift of industry-related activities in these states. The states which have utilized their first mover advantage like Maharashtra, Gujarat, Tamil Nadu, Dadra and Nagar Haveli and Daman and Diu have low growth rates.

Most of the states have shown significant growth (above 7%) in the average wages of the industry's clusters, despite a few having a low CAGR in employment.

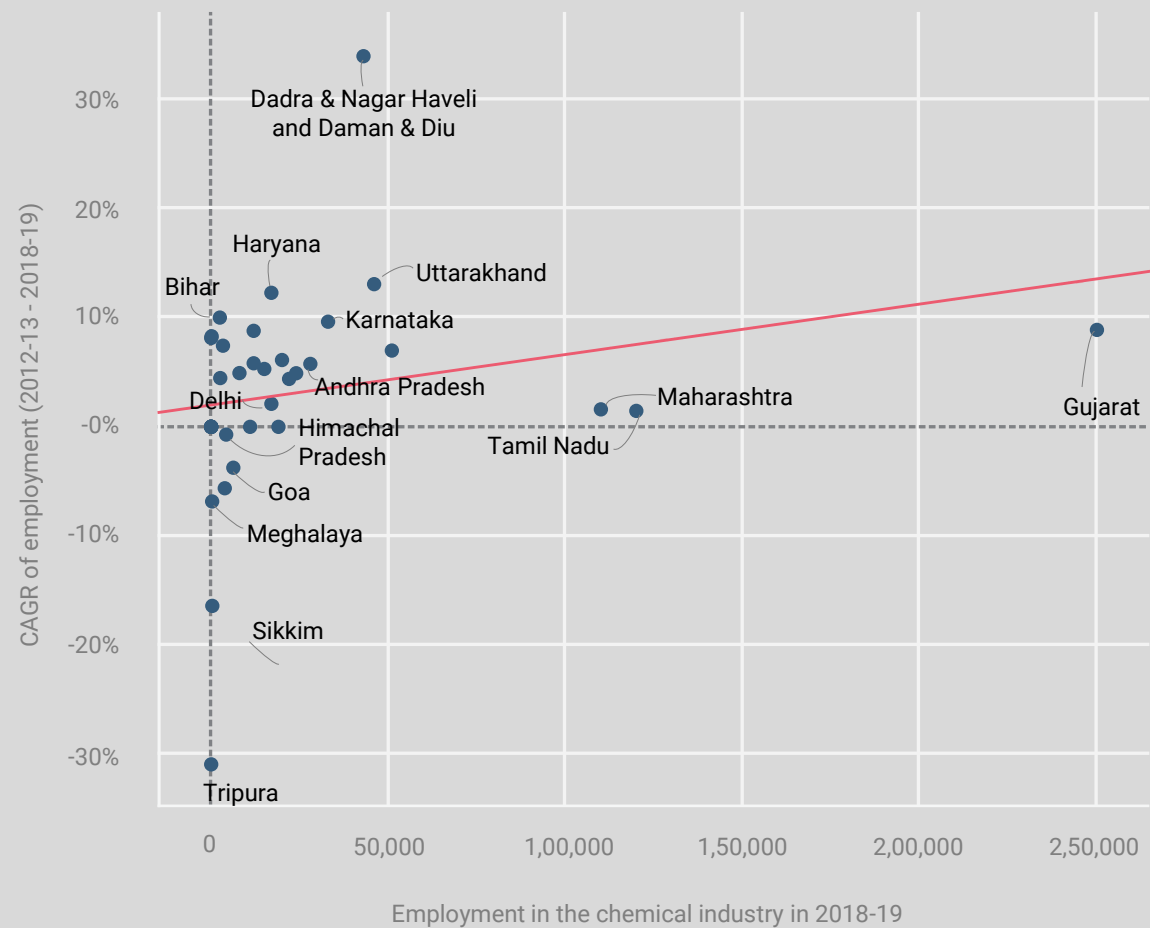
2012-13 to 2018-19		
States	CAGR of employment	CAGR of Average wages
Andaman And Nicobar Islands	8.15%	5.77%
Andhra Pradesh	7.28%	8.17%
Arunachal Pradesh	0.00%	0.00%
Assam	4.72%	6.13%
Bihar	9.93%	9.61%
Chandigarh	8.30%	10.37%
Chhattisgarh	6.69%	17.26%
Dadra and Nagar Haveli and Daman and Diu	0.60%	10.52%
Delhi	0.42%	10.91%
Goa	-8.33%	13.92%
Gujarat	9.82%	7.61%
Haryana	13.59%	7.70%
Himachal Pradesh	-0.30%	11.22%
Jammu and Kashmir	6.77%	9.84%

2012-13 to 2018-19		
States	CAGR of employment	CAGR of Average wages
Jharkhand	-0.44%	10.13%
Karnataka	10.72%	11.37%
Kerala	0.52%	7.92%
Madhya Pradesh	2.44%	3.88%
Maharashtra	3.05%	8.29%
Meghalaya	-6.84%	7.77%
Odisha	-13.43%	-10.29%
Puducherry	4.92%	8.93%
Punjab	-1.15%	4.78%
Rajasthan	7.44%	8.14%
Sikkim	-19.38%	-1.33%
Tamil Nadu	0.70%	10.58%
Telangana	3.32%	9.45%
Tripura	-26.12%	7.32%
Uttar Pradesh	5.26%	9.28%
Uttarakhand	13.84%	5.30%
West Bengal	-0.69%	10.54%

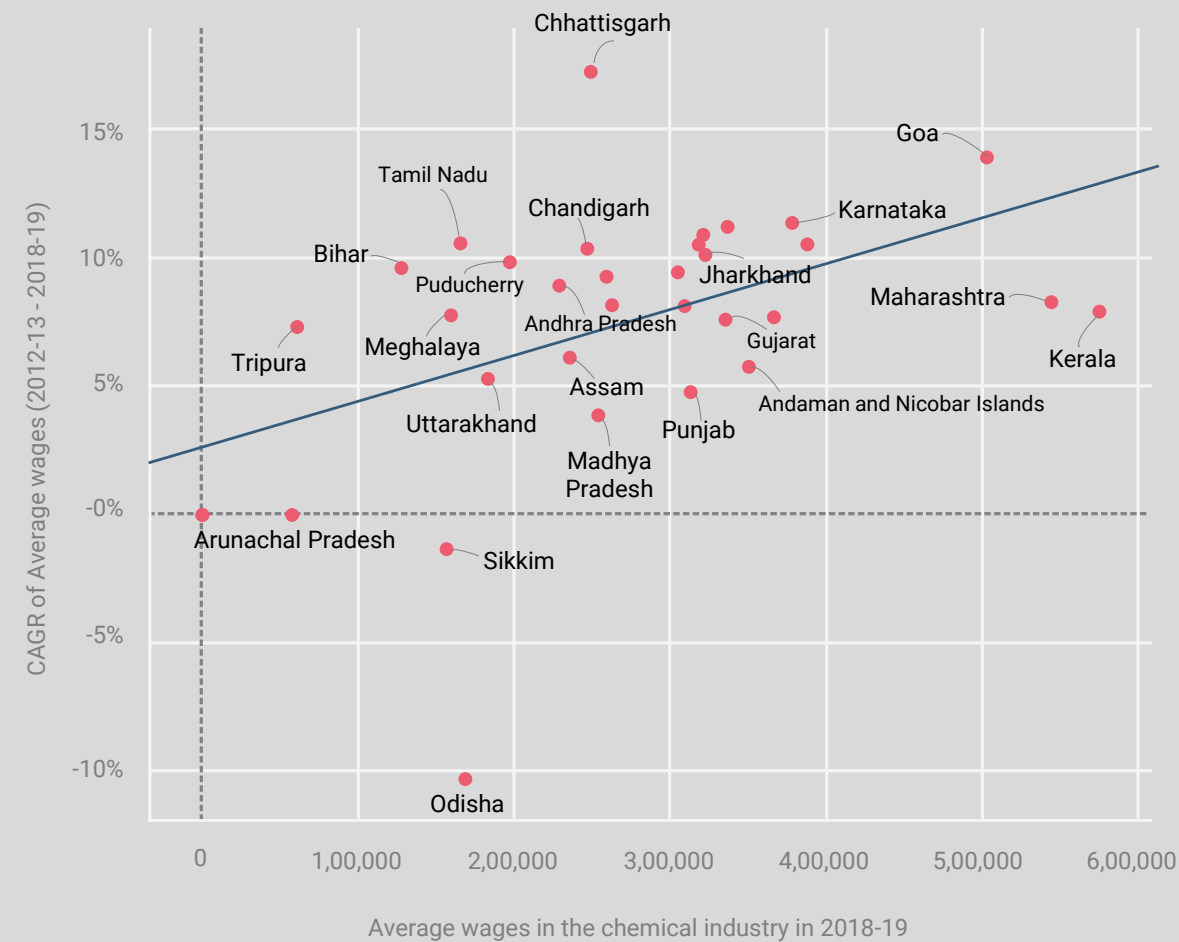
Chemical Clusters Overview- Dynamism

The figures corroborate with the empirical evidence in the literature that there exists a positive relationship between employment and its growth rate. The same is evident in the case of average wages and their growth rate.

Correlation of Employment to its Growth

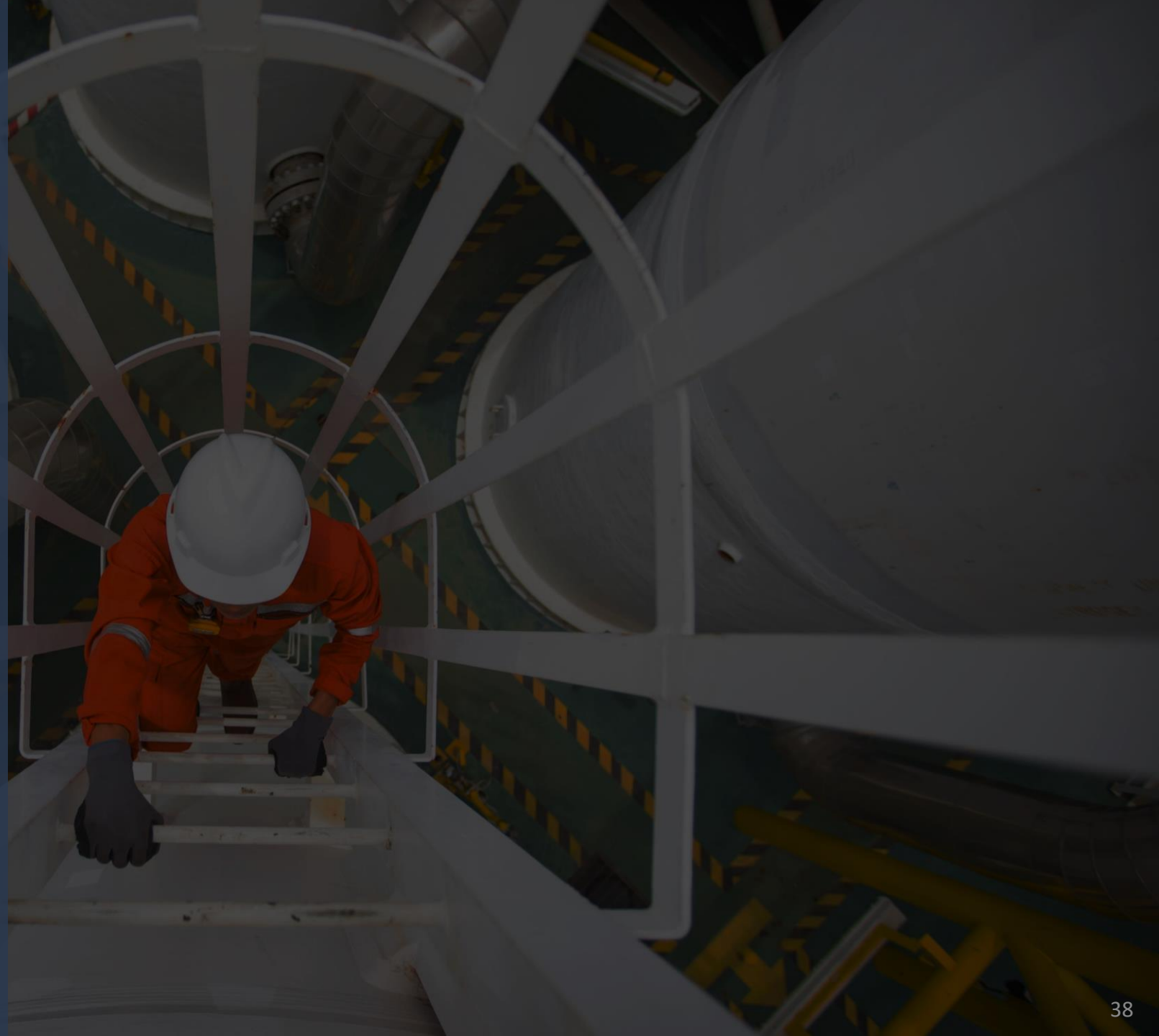


Correlation of Average Wages to its Growth



04

UNDERSTANDING INDUSTRIAL LANDSCAPE OF THE STATES



RATIONALE OF PILLARS

The Chemical and Petrochemical industry being a crucial building block of many other industries, needs a logical and comprehensive information document with the relevant indicators data for the investor to understand the region's ecosystem in and around the industry. Regions are emerging as the new investment hotspots in the country in recent years, which makes examining the chemical industry ecosystem at the disaggregated level even more important.

This part of the report is an attempt in this same direction. It is an extensive exercise of accumulating data points of 52 indicators, and carefully categorizing them under pillars and dimensions, given the rationale and the conceptual linkage between them. The chosen indicators try to capture the information which is relevant and necessary from an investor's point of view through data figures. The study envisages understanding the region-specific incentives and policies, which play a crucial role in establishing and sustaining the presence of the industry in the region.

As the product of the above, this section presents the potential of the States and Union Territories in the industry's ecosystem by identifying their strengths and weaknesses, which is paramount to the investors.

ENABLING CONDITIONS



HUMAN RESOURCES

The labor force is one of the prime inputs required for any economic activity. However, innovation and competitiveness in the industry are driven majorly by skilled workers. Higher education levels particularly in the field of science, technology, design and business management form a large segment of skill-intensive workforce.



FISCAL AND FINANCIAL ECOSYSTEM

To survive and flourish successfully in any region, a sound and strong financial foundation is required for any industry. When supported by favorable fiscal contribution, it helps the industry to achieve its desired financial objectives.



SAFETY AND LEGAL ENVIRONMENT

Fair state of law and order provides a sense of security to the business units and its workforce, which directly affects the productivity and growth of the economic activities in the region.



INFRASTRUCTURE

Robust infrastructure ensures smooth day-to-day operations of the industry through better transport connectivity, power availability and more. It enables the industry to connect with others, equip and grow, along other industries.



POLICY

The presence of favorable policies and incentives in the region gives added strategic advantages to the investors and the industry stakeholders. General policies like Single window clearance or industry-specific policies of tax benefits, export promotion and others directly affect the operation scale of the industry.



SUPPORTING ECOSYSTEM



RESEARCH AND INNOVATION CAPACITY

In order to increase competitiveness, considerable attention must be given to enhance the research and innovative capacity of the region and the industry. It does so by developing new products with better quality giving them edge over their rivals.



BUSINESS ECOSYSTEM

Close and continuous interaction between the industry business and its environment brings forth both opportunities and threats prevailing in the market. Understanding this dynamic ecosystem is critical in identifying the areas of growth and expansion in the region. Moreover, a conducive eco-system with regulatory ease and a facilitative environment spurs economic activity by attracting more investments and businesses in the region.



RELATED AND SUPPORTING INDUSTRIES

Access to capable, locally based suppliers and firms in related fields forming clusters instead of isolated industries drives higher productivity and its growth. Co-location of firms, industries and other institutions increases the potential for local and national value creation within a location through spillovers and linkages.



INVESTMENT

Access to capital and support of the investors for entrepreneurial ventures and business expansion are crucial for encouraging business activities in the state. A robust market ensures a steady flow of FDI, and invested capital for the functioning of the industry.

PERFORMANCE OUTCOME



EXPORT PERFORMANCE

Capturing and evaluating the relative export growth and the reach of the export footprint is necessary to examine the range of achievements and improvements in the export sector of the industry in particular.



MARKET PERFORMANCE

Evaluation of the industry's performance is highly important as it not only reflects the overall domestic performance and growth of the industry but also guides in forming strategic goals for the future.

INDICATORS

To ensure a comprehensive overview and potential of the chemical and petrochemical industry, generic as well as CPC industry-specific data points have been collected and presented at the state/union territory level.

It is crucial to include the generic indicators capturing the overall economic environment of the region as it indirectly affects the industry's operation and efficiency in the region. In addition, the overall level of the economic activities in the region significantly affects the CPC industry because of its strong and widespread backward and forward linkages.

The report provides information on a total of 52 data points, out of which 29 are the generic indicator. Rest 23 indicators are specific to the chemical and petrochemical industry, which provides information about the chemical and petrochemical specific climate of the country.

The data cards of each state are presented in the appendix of the report.

■ Represents indicators general in nature. ■ Represents indicators which are chemical-industry specific.

ENABLING CONDITIONS	SUPPORTING ECOSYSTEM
Human Resources	Research and Innovation Capacity
Professionals in Chemical Industry (%)	Number of Common Facility Centre
Knowledge-intensive employment (%)	Number of Start ups
Participation in Engineering and Technology education (per lakh of 18-23 population)	Factories in chemical industry having R&D units (%)
Higher education institutions having NAAC grade A and above (%)	Number of Research and Development Institutes
People trained in PMKVY Training centre	Spending on Research and Development (Rs Crore)
Trained Population in chemical industry (%)	Business Environment
Workforce share of the industry (%)	Chemical factories with ISO Certification (%)
Financial and Fiscal Ecosystem	Number of Central Institute of Petrochemicals Engineering & Technology Centres (CIPET)
Chemical Industry units having foreign entities in the share capital (%)	Ease of Doing Business Score
Credit to Industry (secondary) Sector (%)	Number of Operational SEZ
Profit of the Industry (Rs Crore)	Number of Industrial Parks
Share of Industry's Fixed Capital (%)	Related and Supporting Industries
Subsidy Share in State Revenue Expenditure (%)	Cluster Strength in manufacturing Sector
Safety and Legal Environment	Revealed Comparative Advantage
Charge Sheeting Rate (%)	Specialization (Location Quotient) of the Downstream Chemical Products
Offence rate of IT/IP related crimes	Average Wage Level of the Chemical Industry (Rs.)
Pendency Rate of Corruption Cases (%)	Specialization (Location Quotient) of the Upstream Chemical Products
Police personnel (per lakh Population)	Investment
Infrastructure	FDI Inflows (Rs Crore)
Industrial land available from total (%)	Invested Capital (Rs Crore)
Number of Industrial Corridors	Gross Fixed Capital Formation of the industry. (Rs Crore)
LEADS Index Score	PERFORMANCE- OUTCOMES
Power Deficit (%)	Export Performance
Factories in the Chemical Industry (%)	Export's Contribution of the industry (Rs Crore)
Renewable Energy generated (%)	Industry's Export Product Concentration
Policy	Export Growth of the Industry (CAGR %)
Does the state have a valid Export Promotion Policy?	Market Penetration of the Industry
Does the state have Green industry incentives?	Market Performance
Does the state have Quality Certification subsidy?	Gross Value Added of the Industry (Rs Crore)
Does the state have Power Subsidies?	Employment Growth in the industry (CAGR %)
Does the state have Single window clearance?	Gross Value Added per employee of the Industry (Rs '000)

05

INDICATOR ANAYLSIS



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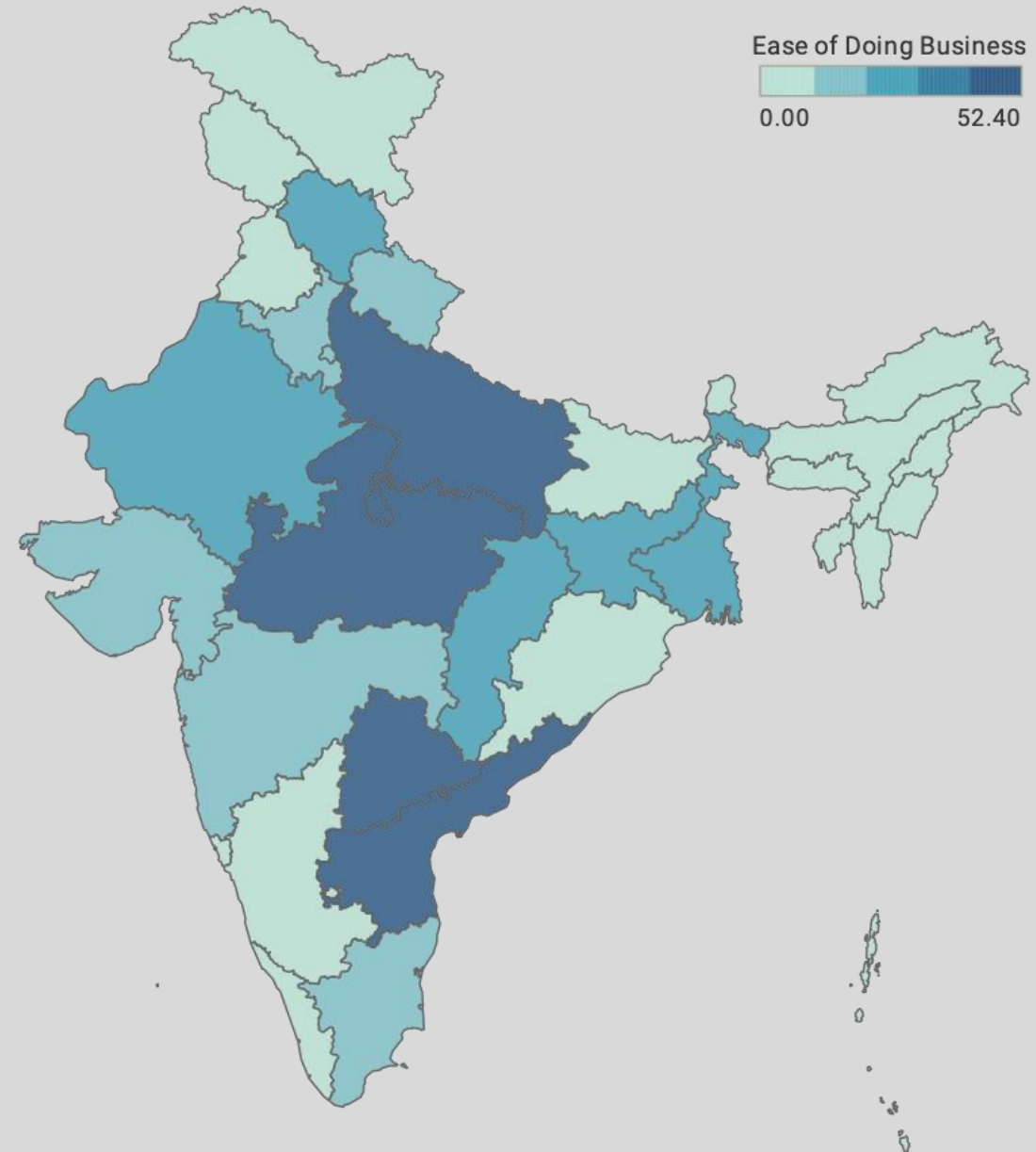
The existence and performance of a clusters are affected by the enabling and supporting ecosystem present in the region in which it operates. Thus, clusters cannot be seen in isolation as the driving force of competitiveness in the chemical and petrochemical industry. Empirically, clusters are seen to flourish where the combination of specific business environment qualities creates unique value for a specific set of related industries. Consequently, to understand the industry's present landscape and its future potential, the examination of various indicators forming the part of enabling and supporting ecosystems of the chemical and petrochemical industry is paramount. To further strengthen our study, indicators of performance-outcome dimensions are also incorporated.

The following slides consist few key indicators, which can guide the investors about the state's strengths and opportunities in the industry's sector across all states.



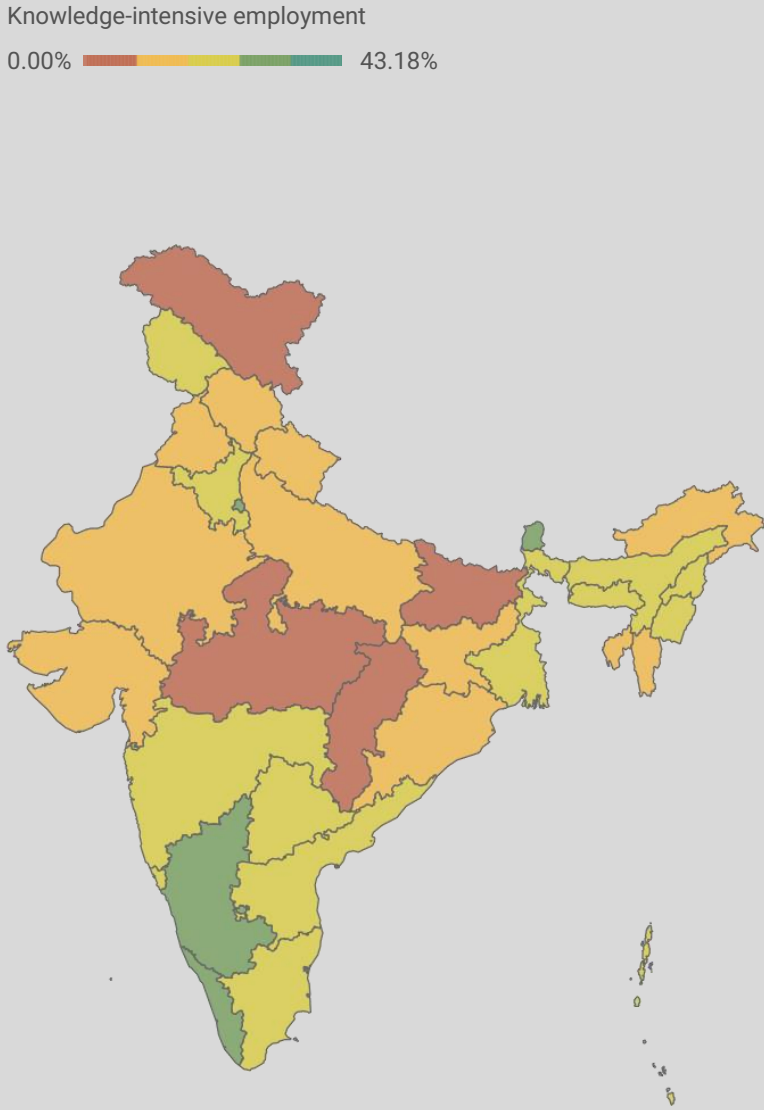
Enabling and Supporting Ecosystem- Ease of Doing Business

The Ease of Doing Business Index is the measure of how easy it is to conduct business in a state that is meant to measure regulations directly affecting businesses. The index captures several important dimensions of the regulatory environment affecting domestic firms and provides quantitative indicators for different regulations on businesses. The broader aim is to boost investor confidence, foster business friendly climate and augment Ease of Doing Business across the country by introducing an element of healthy competition through a system of assessing states based on their performance in the implementation of Business Reforms Action Plan. In a departure from the previous years, where States/UTs were ranked, this year they have been placed under the four categories viz. Top Achievers, Achievers, Aspirers and Emerging Business Ecosystems. The objective of assessing the States/UTs is not to create a hierarchy amongst States/UTs but to rather create an enabling framework wherein learnings can be shared amongst States/UTs which in turn will lead to a nationwide spill over of good practices. The assessment gives full weightage to the feedback obtained from actual users/respondents at the ground level, who provided their feedback about the effective implementation of reforms.

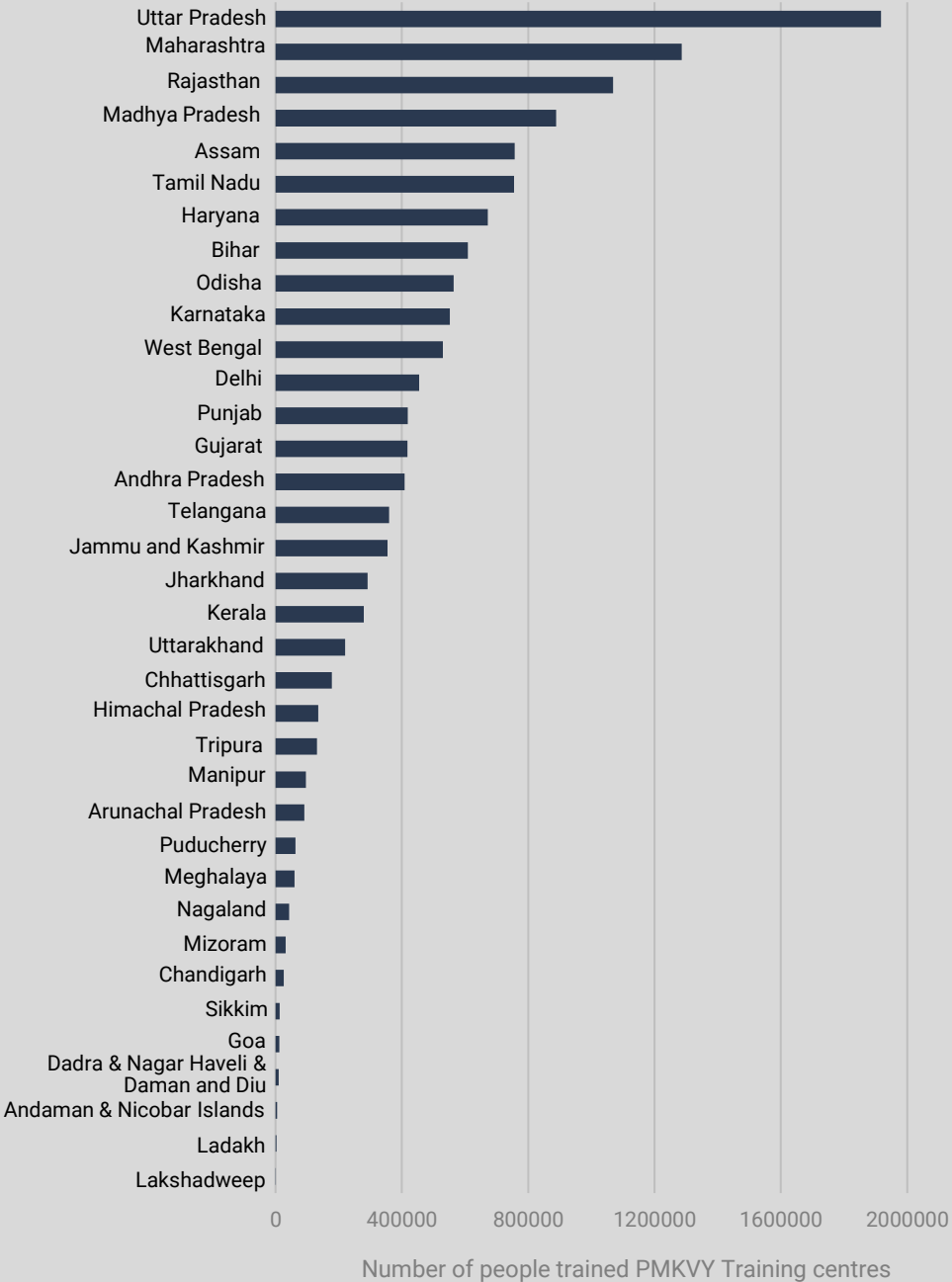


Enabling and Supporting Ecosystem- Human Resources

The two graphs give a general overview of the skilled labour market of the region. The former covers the workforce having skill types 3 and 4, which covers the occupation division of managers, professionals, technical and associate professionals. Predominant states in the chemical industries tend to have a moderate share of knowledge-intensive employment in the overall labour market. The latter shows the frequency of people trained in skill development centres of the state.



Source: Author's Calculation, Periodic Labour Force Survey, 2019-20



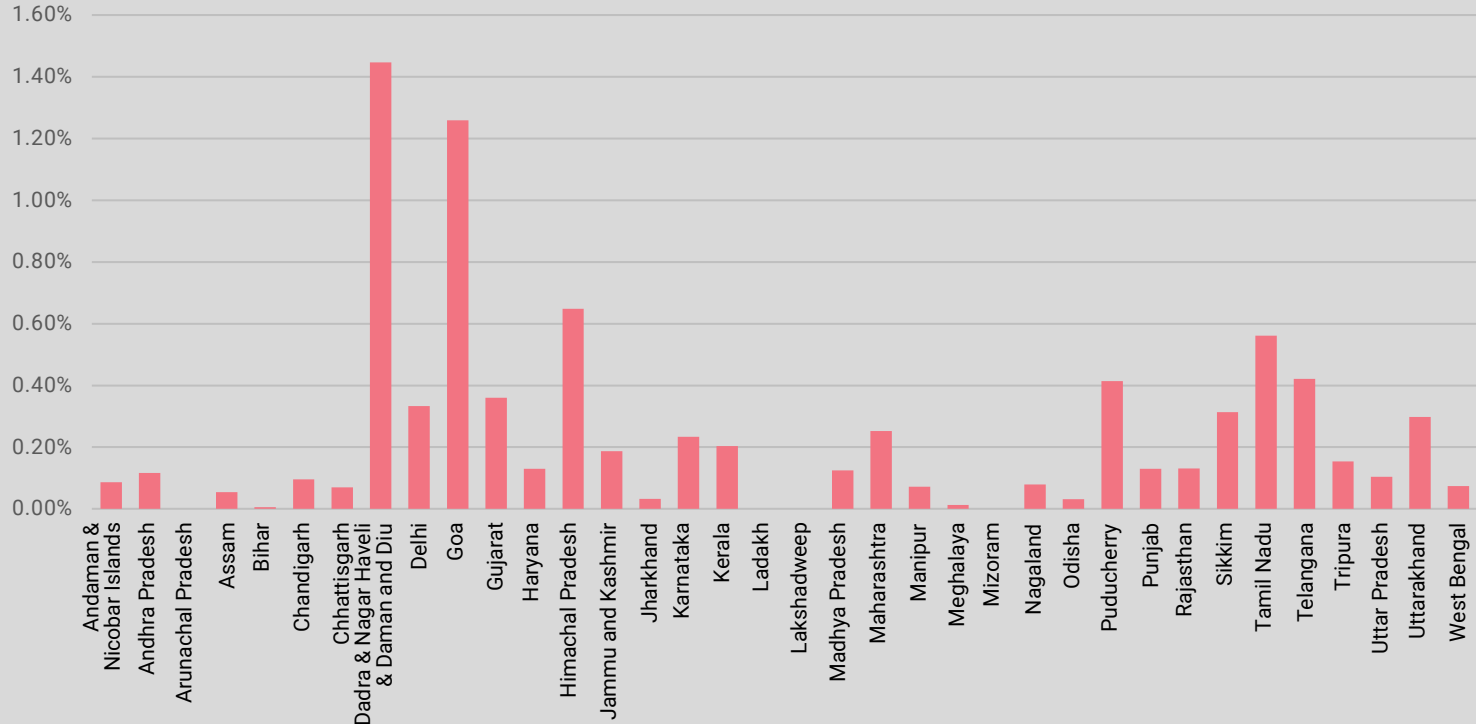
Source: Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Enabling and Supporting Ecosystem- Human Resources in the industry

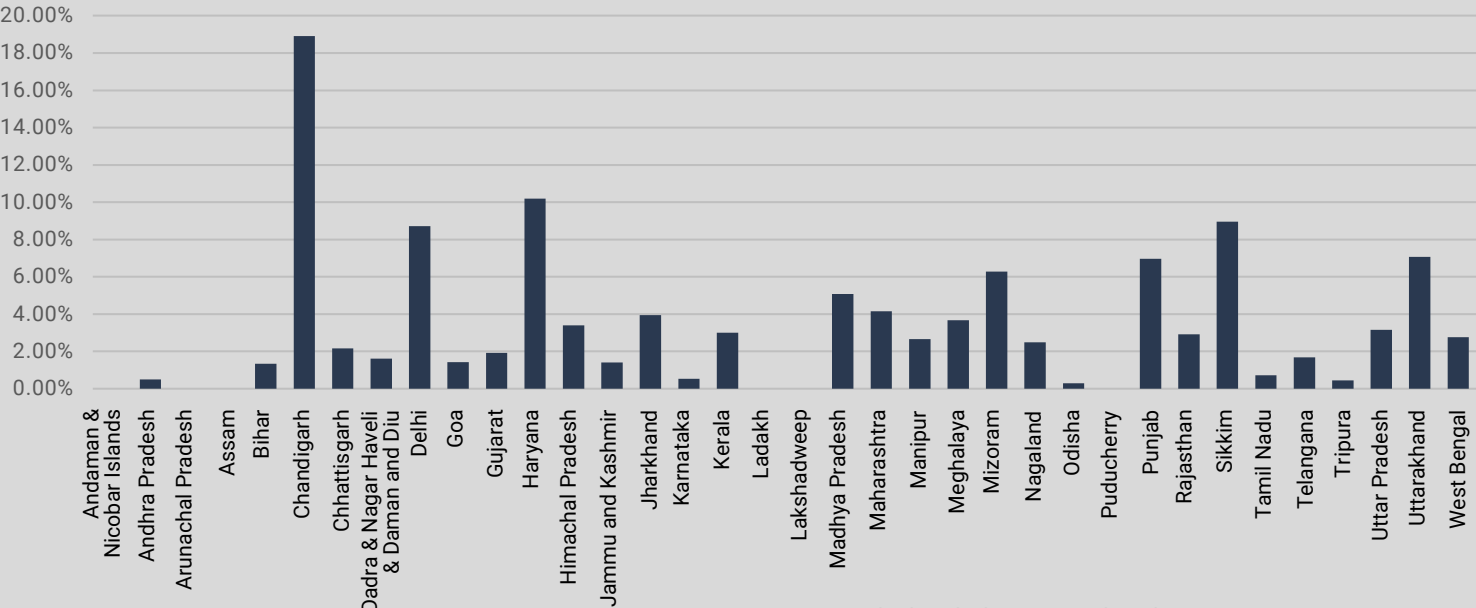
The graphs focus on human resources present only in the chemical and petrochemical industry.

The chemical Industry-related professions include NCO codes 822- Chemical Products Machine Operators; 815 Chemical-Processing- Plant Operators and 211 Physicists, Chemists and Related Professionals.

Chemical Industry related Profession (%)



Trained Population in chemical industry (%)

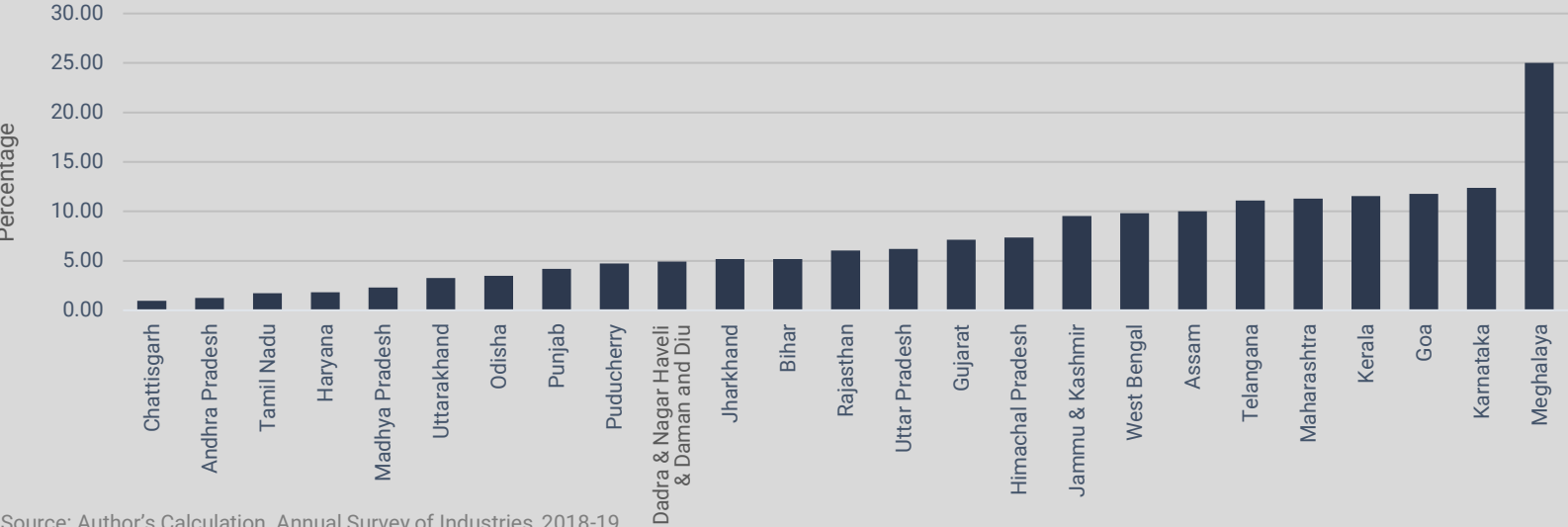


Enabling and Supporting Ecosystem- Research and Development in the industry

The overall research and development ecosystem of the region is captured by the expenditure on R&D by the states as a percentage of its GSDP. While the industry-specific ecosystem is captured by the percentage of factories in the chemical industry having R&D units.

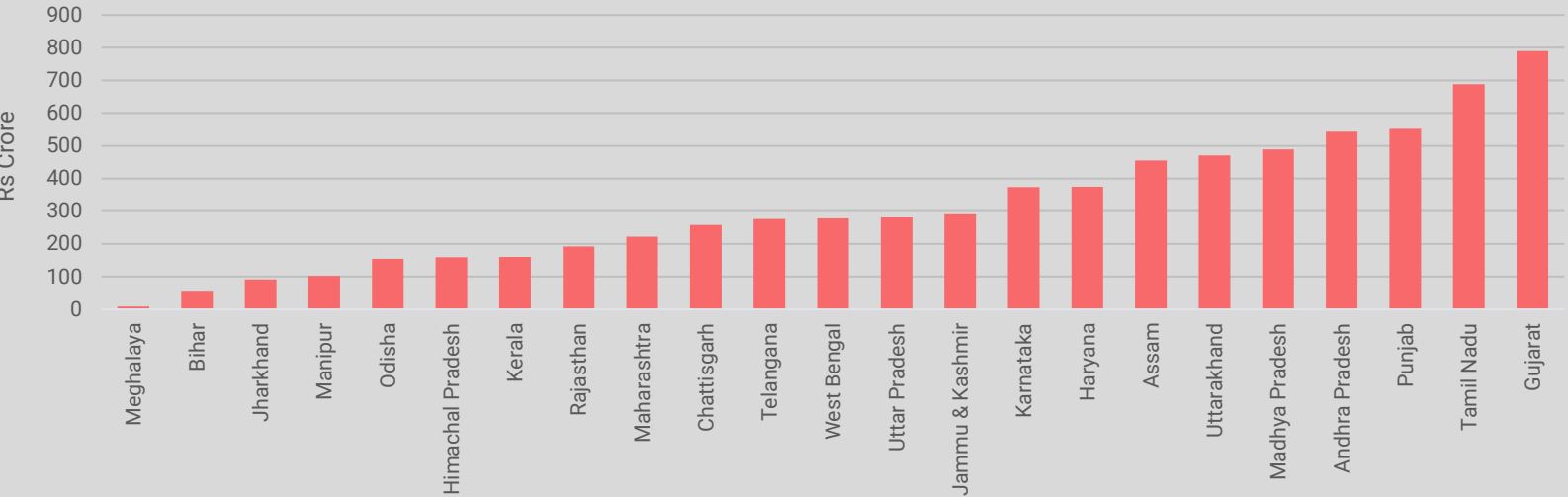
States like Uttarakhand and Himachal Pradesh have a higher share of the former. And the predominant states of the sector like Maharashtra, Gujarat, Goa, and Karnataka, have a high share of the latter.

Factories in chemical industry having R&D units (%)



Source: Author's Calculation, Annual Survey of Industries, 2018-19

Spending on Research and Development (Rs Crore)

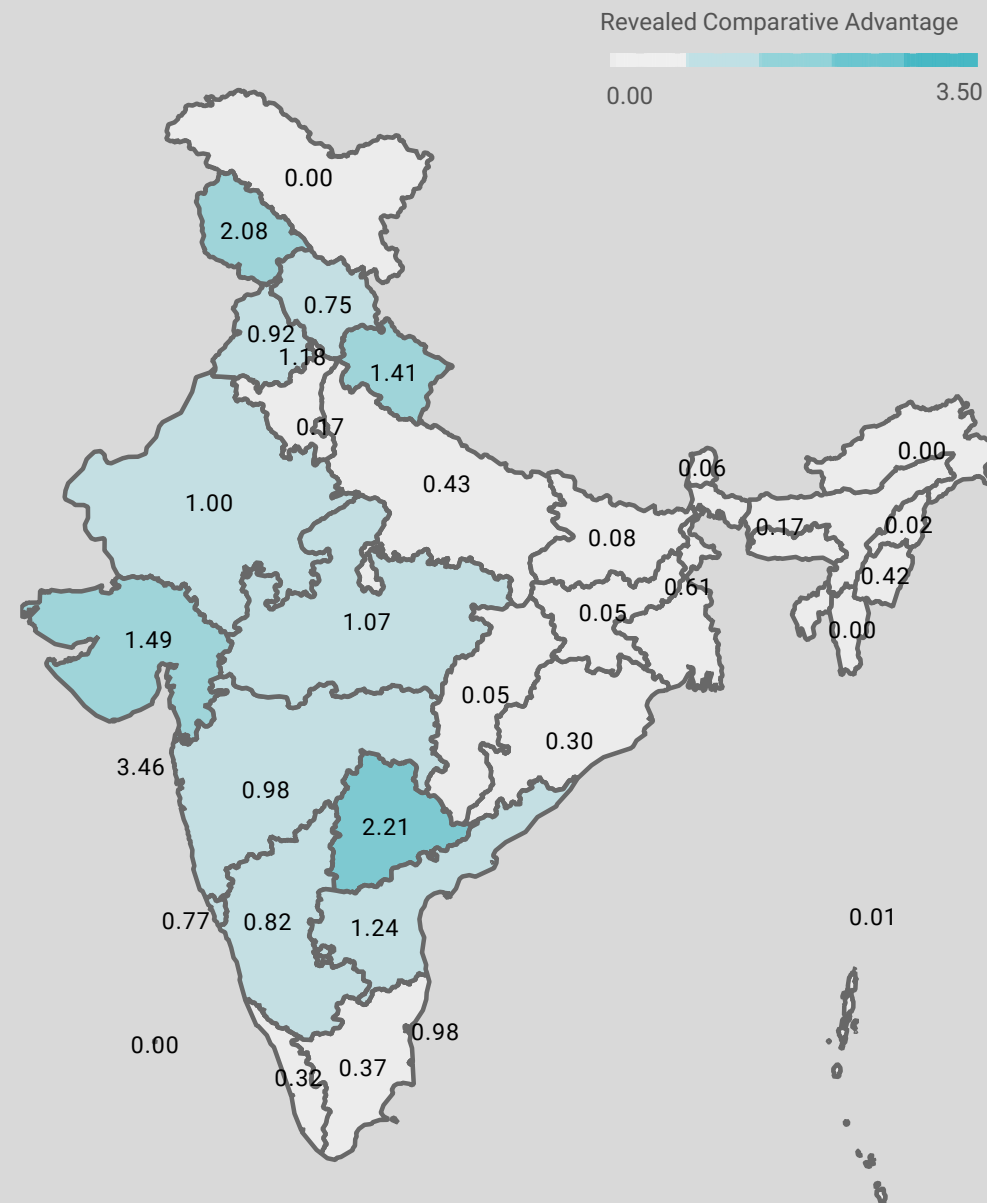


Source: Department of Science and Technology (DST)

Enabling and Supporting Ecosystem- Revealed Comparative Advantage

Having the knowledge of the concentration, penetration and growth levels of the industry's export in the regions is necessary but not sufficient. Which states have gained a comparative advantage in exports within the country and are operating at the optimum levels is also necessary information. The revealed comparative advantage (RCA) measure is used to capture the state's relative advantage or disadvantage in exporting chemical and petrochemical-related goods.

Nine states have a high comparative advantage in the industry, Dadra and Nagar Haveli and Daman and Diu having the highest, followed by Telangana. Potential states of the industry like Uttarakhand and Andhra Pradesh also have RCA greater than 1.



EXPORT PERFORMANCE

In today's globalized economy, exports play a pivotal role in increasing the competitiveness and prosperity of the industry as well as the overall region. A good export performance increases the potential of the industry to generate more employment and enhance productivity by creating new markets in a foreign land. It also provides an opportunity to capture significant market share, locally and globally.

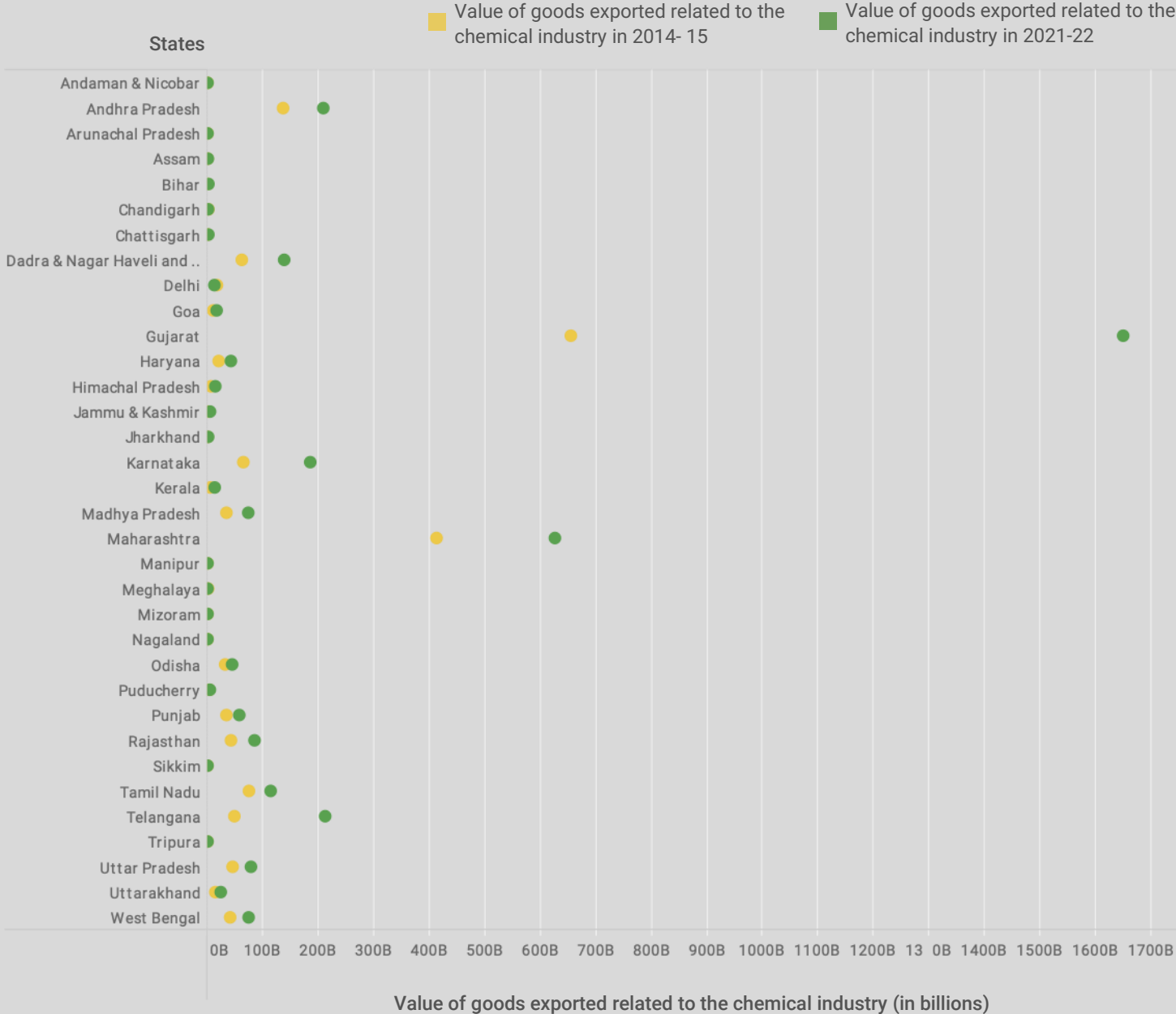
Considering this, parameters like export growth, export concentration and market penetration have been calculated across the states to examine their performance in the industry's exports.

For accurate extraction of state-level chemical and petrochemical industry export following HS codes were used,

Hs Code	HS Code Description
28	Inorganic Chemicals
29	Organic Chemicals
32	Dyeing, Tanning Colouring Matter
38	Miscellaneous Chemical Products
39	Plastics And Articles Thereof
54	Man-Made Filaments
55	Man-Made Staple Fibres
4002	Synthetic Rubber And Factice

Export Performance- Export Growth

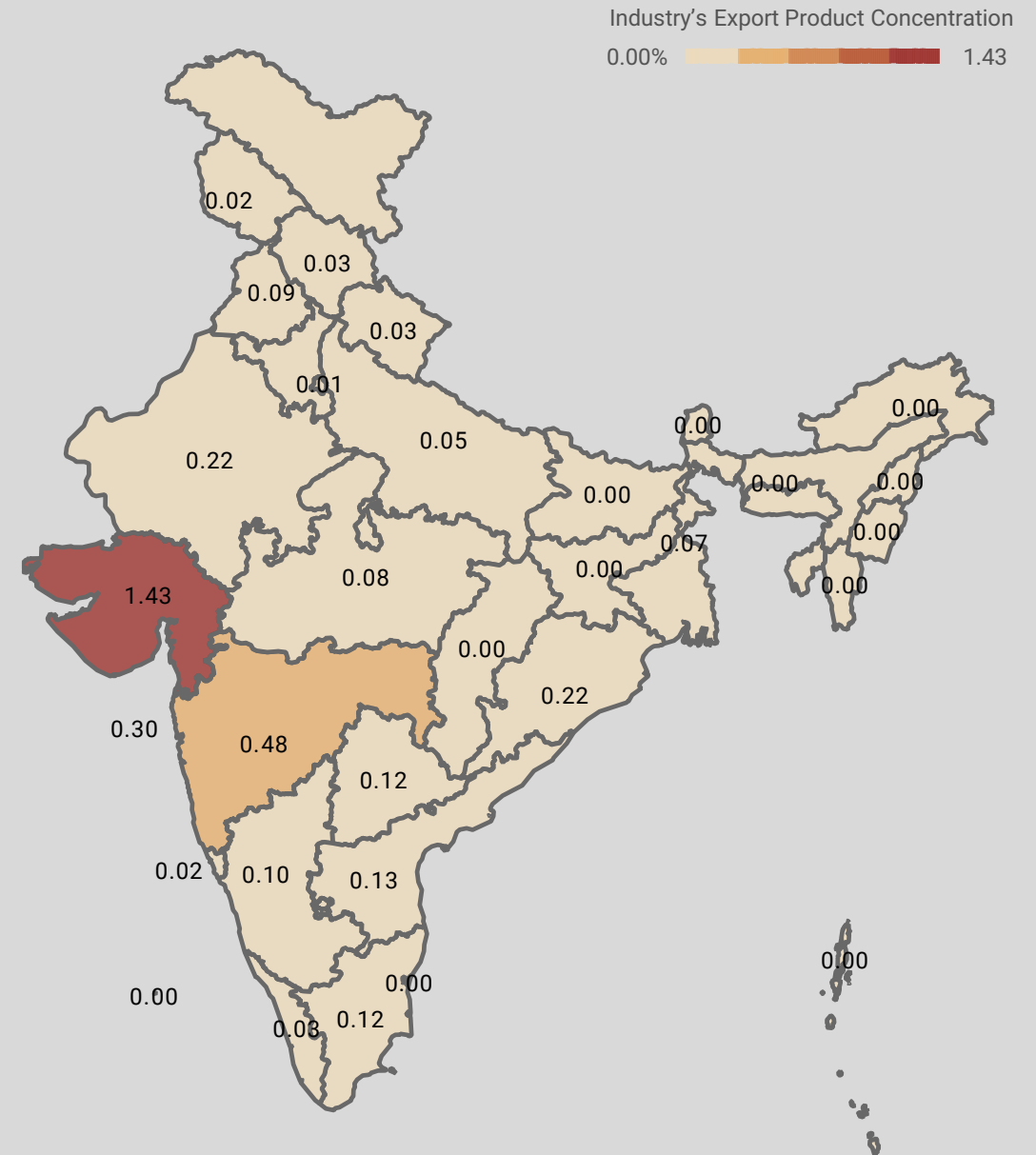
Export growth of the states over a period, which is calculated by CAGR, is one of the elementary variables to measure the region’s export performance. The graph shows the values of the region’s exports of chemical-related goods in two financial years- 2014-15 and 2021-22. In addition, it displays the change in the export value of each state between the two years. Predominant states in the chemical industry such as Gujarat, Maharashtra, Telangana, and Karnataka have experienced an enormous absolute increase in their exports. Two states namely Telangana and Karnataka, have a CAGR greater than 15% during the same period. States like Bihar, Jharkhand and Chhattisgarh; the North-Eastern states of Nagaland and Manipur have high growth rates, compounded annually, highlighting the potential they have for chemical industry export-led growth.



Export Performance- Export Product Concentration

The Product Concentration Index here measures the dispersion in of export value of chemical and petroleum products among all the products of the region. The index is calculated by using the regional Herfindahl-Hirschman Index. Generally, the region with a high prevalence of trade in a smaller variety of products has a value closer to 1.

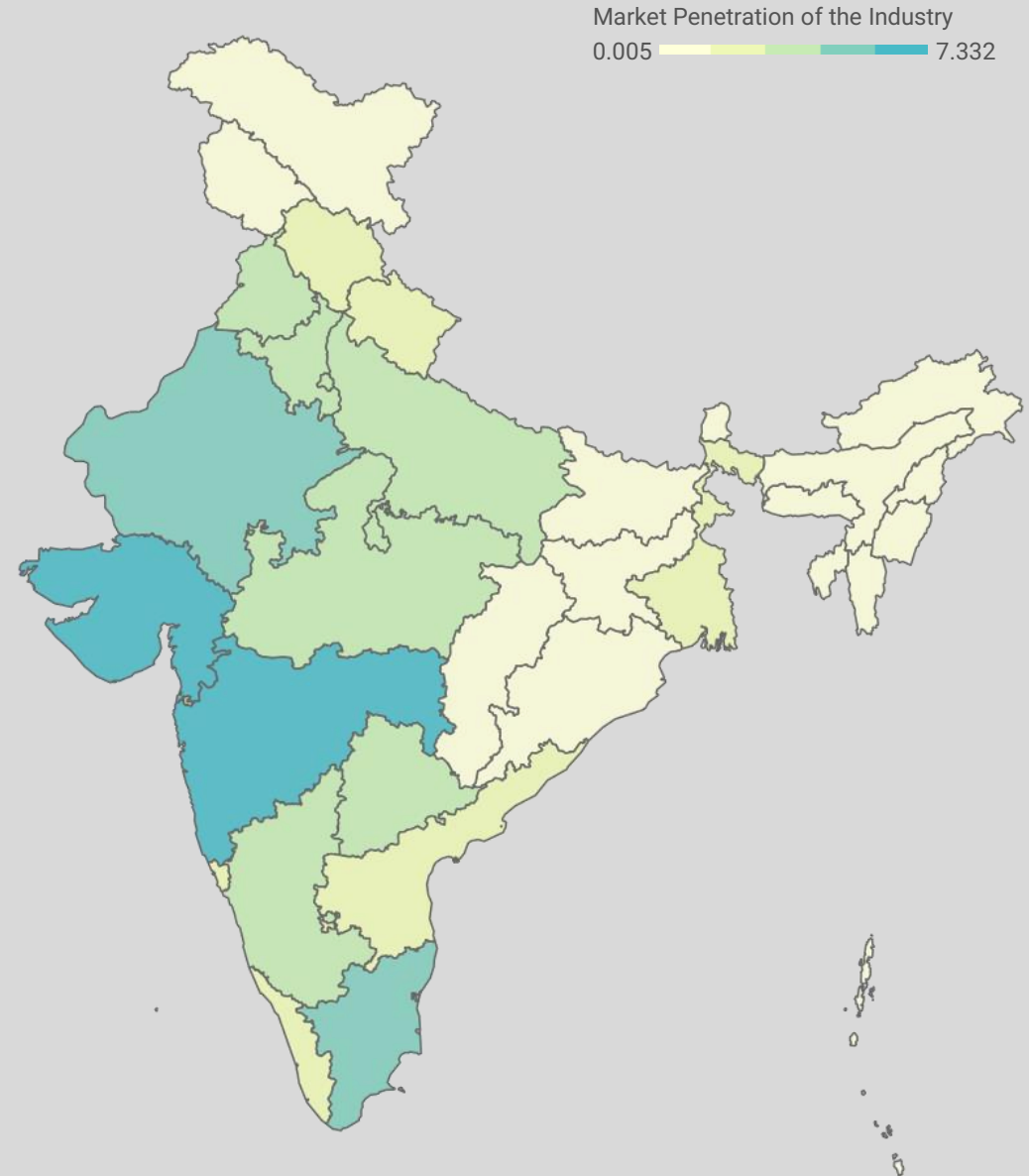
Gujarat stands out to have the highest export product concentration among other states, with the index value is near 1.4. Other States like Karnataka, Telangana, and Goa, have diversified export baskets of goods.



Export Performance- Market Penetration Index

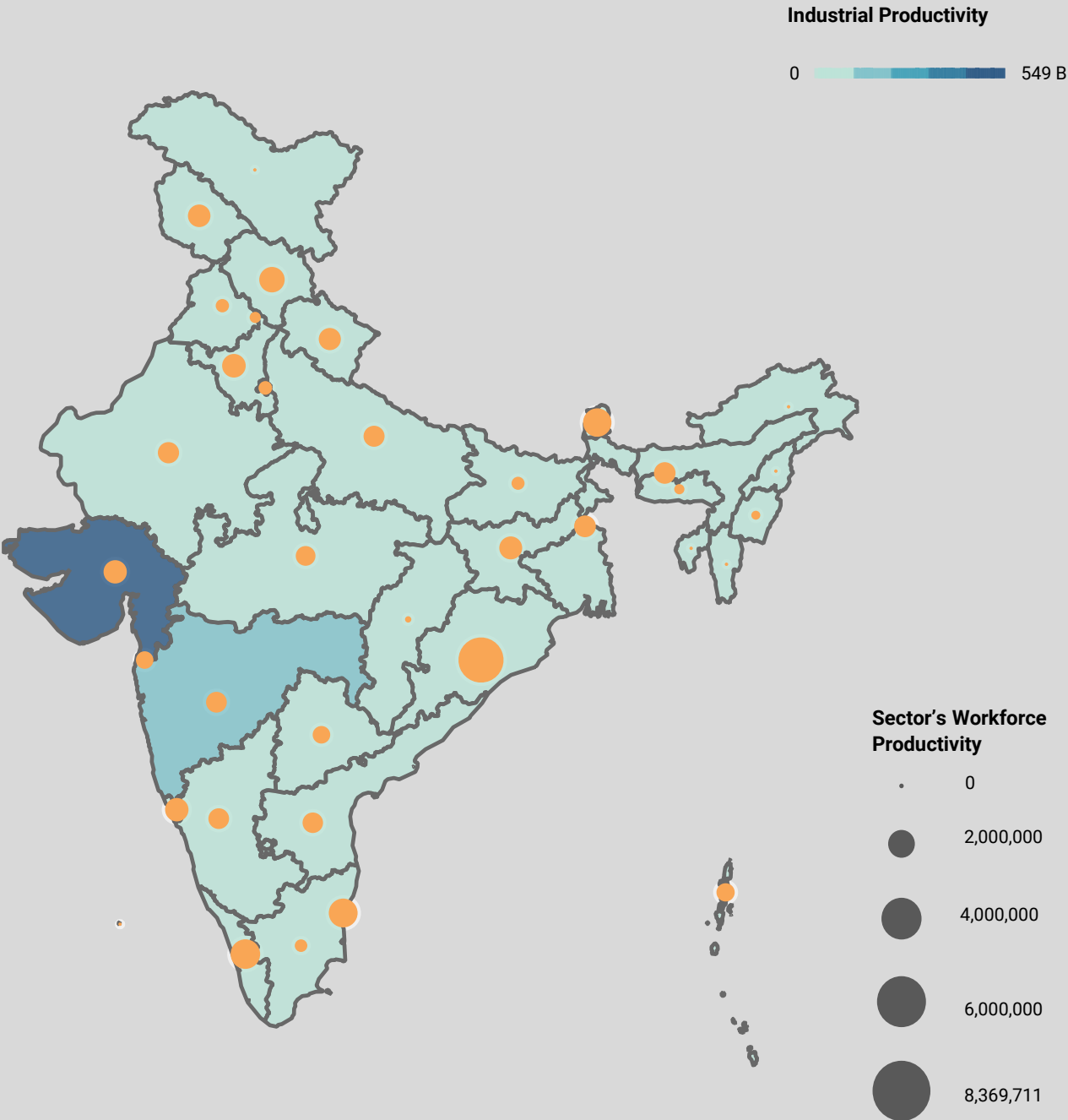
Market Penetration Index measures the extent to which the region's export reach existing proven foreign markets. It is calculated as the number of countries to which the state exports products related to the chemical and petrochemical industry divided by the number of countries that import the same set of products in a particular year.

States where the industry is historically dominant, seem to have a larger global outreach.



Market Performance- Productivity

Gross Value Added is one of the important measures of economic productivity, indicating the contribution of the industry to the region's economy. As expected, the predominant states in the industry have greater GVA, given the strong presence of enabling and supporting ecosystems in the region. Being an absolute output measure at the industry level, GVA is unable to capture the productivity of the labour force. Thus, workforce productivity is calculated by dividing the GVA by the number of employees in the region working in the industry, which is captured by the size of the bubble in the adjacent graph.



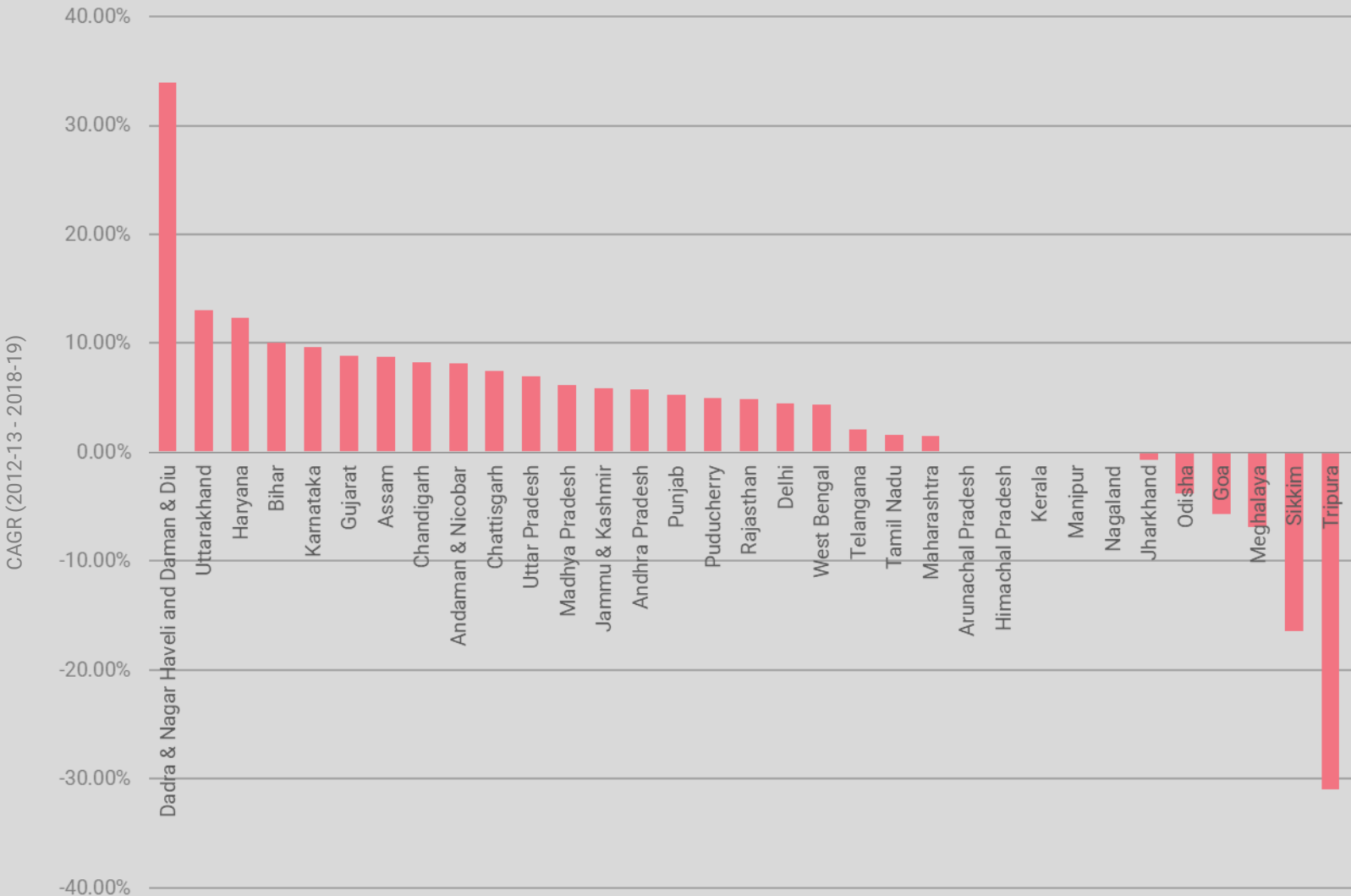
Source: Author's Calculation, Annual Survey of Industries, 2018-19

Market Performance- Employment Growth

The employment growth in the Chemical and Petrochemical industry highlights its potential to absorb labour at a large scale. It is important to capture employment growth as it stimulates the overall economic growth of the region.

The growth of the industry's size as measured by its workforce across all states is presented in the figure, which is calculated by CAGR from 2012-13 to 2018-19.

Employment Growth





CONCLUSION

The report showcases the existing landscape of India's chemical and petrochemical industry, highlighting the distribution of the untapped potential and opportunities across States and Union Territories. To reap the benefits of this expected growth, this document becomes valuable from the perspective of decision facilitation to the investors.



06




APPENDIX




Upstream Chemical Products




5-digit 2008 NIC code	NIC Label	Sub-cluster code	Sub-cluster name
20111	Manufacture of liquefied or compressed inorganic industrial or medical gases (elemental gases, liquid or compressed air, refrigerant gases, mixed industrial gases etc.)	3	Industrial Gas
20112	Manufacture of inorganic acids except nitric acid	2	Inorganic Chemicals
20115	Manufacture of turpentine and resins of vegetable origin	1	Organic Chemicals
20116	Manufacture of basic chemical elements	2	Inorganic Chemicals
20117	Manufacture of distilled water	1	Organic Chemicals
20118	Manufacture of synthetic aromatic products	2	Inorganic Chemicals
20119	Manufacture of organic and inorganic chemical compounds n.e.c.	2	Inorganic Chemicals
20129	Manufacture of other fertilizers n.e.c.	4	Agricultural Chemicals
20132	Manufacture of synthetic rubber in primary forms	1	Organic Chemicals
20133	Manufacture of mixture of synthetic and natural or rubber like gums	1	Organic Chemicals
20211	Manufacture of insecticides, rodenticides, fungicides, herbicides	4	Agricultural Chemicals
20212	Manufacture of disinfectants (for agricultural and other use)	4	Agricultural Chemicals
20213	Manufacture of anti-sprouting products, plant growth regulators	4	Agricultural Chemicals
20219	Manufacture of other agrochemical products n.e.c.	4	Agricultural Chemicals



Other NIC codes, which are covered under Division 20 but are not mentioned above constitute other clusters categories like Agricultural Products, Inputs and Services (includes fertilizers used in agriculture) and Plastics.

5-digit 2008 NIC code	NIC Label	Sub-cluster code	Sub-cluster name
20113	Manufacture of tanning or dyeing extracts; tannings and their derivatives and colouring matter (including manufacture of indigo)	3	Dyes, Pigments and Coating
20114	Manufacture of dyes and pigments from any source in basic form or as concentrate	3	Dyes, Pigments and Coating
20221	Manufacture of paints and varnishes, enamels or lacquers	3	Dyes, Pigments and Coating
20222	Manufacture of prepared pigments, prepared opacifiers and prepared colours, vitrifiable enamels and glazes engobes and similar preparations of a kind used in the ceramic, enamelling or glass industry	3	Dyes, Pigments and Coating
20224	Manufacture of prepared pigments and other colouring matter of a kind used in the manufacture of paints or by artists or other painters	3	Dyes, Pigments and Coating
20229	Manufacture of caulking compounds and similar non-refractory filling or surfacing preparations, mastics, prepared paint or varnish removers, organic composite solvents and thinners and other related products n.e.c.	3	Dyes, Pigments and Coating
20231	Manufacture of soap all forms	1	Personal Care and Cleaning Products
20232	Manufacture of cleaning and polishing products (preparations for perfuming or deodorizing rooms; artificial waxes and prepared waxes; polishes and creams for leather, wood, glass, metal etc.; scouring pastes and powders, including paper, wadding etc. coated or covered with these)	1	Personal Care and Cleaning Products
20233	Manufacture of detergent and similar washing agents excluding soap	1	Personal Care and Cleaning Products
20234	Manufacture of perfumes and cologne de-eau	2	Processed Chemical Products
20235	Manufacture of preparations for oral or dental hygiene (includes manufacture of toothpastes, toothpowder, mouthwash, oral, perfumes, dental fixative pastes and powders etc.)	2	Processed Chemical Products
20236	Manufacture of hair oil, shampoo, hair dye etc. (includes manufacture of shampoos, hair sprays, hair fixers, hair oils, hair creams, hair dyes and bleaches and preparations for permanent waving or straightening of the hair etc.)	2	Processed Chemical Products
20237	Manufacture of cosmetics and toiletries (includes manufacture of preshave, shaving or after shave preparations; personal deodorants and antiperspirants; perfumed bath salts and other bath preparations; beauty or make-up preparations and preparations for the care of the skin, other than medicaments; manicure and pedicure preparations etc.)	2	Processed Chemical Products
20238	Manufacture of "agarbatti" and other preparations which operate by burning	2	Processed Chemical Products
20239	Manufacture of other perfumes and toilet preparations n.e.c.	2	Processed Chemical Products
20291	Manufacture of matches	2	Processed Chemical Products
20292	Manufacture of explosives, ammunition and fire works	4	Explosives
20293	Manufacture of essential oils; modification by chemical processes of oils and fats (e.g. by oxidation, polymerization etc.)	2	Processed Chemical Products
20294	Manufacture of photographic plates, films, sensitized paper and other sensitized unexposed materials, chemical preparations for photographic uses	2	Processed Chemical Products
20295	Manufacture of gelatine and its derivatives, resinoids, glues, prepared adhesives, including rubber-based glues and adhesives	2	Processed Chemical Products
20296	Manufacture of chemical elements and compounds doped for use in electronics	2	Processed Chemical Products
20297	Manufacture of chemical products or preparations of a kind used in the textiles, paper, leather and like industries	2	Processed Chemical Products
20299	Manufacture of various other chemical products n.e.c. (antiknock preparations, anti-freeze preparations, liquids for hydraulic transmission, composite diagnostic or laboratory reagents, writing or drawing ink, chemical substance used in manufacturing of pesticides and other chemical products)	2	Processed Chemical Products

Dimensions/ Pillars	Description/ Explanation	Unit of Measurement	Source
ENABLING CONDITIONS			
 Human Resources			
Professionals in Chemical Industry (%)	Percentage of professionals a) Chemical Physicists, Chemists and Related Professionals b) Chemical Products Machine Operators c) Chemical- Processing- Plant Operators in total employed population	Percentage	PLFS*
Knowledge-intensive employment (%)	Number of people employed as Managers, Professionals, Technicians and Associate professionals as a percentage of total employed population of the state	Percentage	PLFS*
Participation in Engineering and Technology education (per lakh of 18-23 population)	Students intake in Engineering and Technology related courses at UG, PG and Diploma level per lakh of population with age bracket of 18-23 years.	Ratio	AICTE
Higher education institutions having NAAC grade A and above (%)	Percentage of Higher education institutions having NAAC grade A and above of the total institutions graded by NAAC in the state	Percentage	NAAC
People trained in PMKVY Training centre	Frequency of people trained in skill development centres	Number	PMKVY
Trained Population in chemical industry (%)	Percentage of trained people in chemical engineering, hydrocarbons, chemicals and petrochemicals from total trained population.	Percentage	PLFS*
Workforce share of the industry (%)	Percentage of employed population of the industry to the employed population of the state.	Percentage	ASI*
 Financial Ecosystem			
Chemical Industry units having foreign entities in the share capital (%)	Percentage of factory units having foreign entities in the share capital in the chemical industry.	Percentage	ASI*
Credit to Industry (secondary) Sector (%)	Percentage of Credit to Industry sector to total credit given by Scheduled Commercial Banks	Percentage	RBI
Profit of the Industry (Rs Crore)	Total net profit of the industry in the state.	Rupees	ASI*
Share of Industry's Fixed Capital (%)	Percentage of Fixed capital of the chemical industry in the manufacturing sector.	Percentage	ASI*
Subsidy Share in State Revenue Expenditure (%)	Subsidy as percentage of state revenue expenditure.	Percentage	RBI
 Safety and Legal Environment			
Charge Sheet Rate (%)	Charge-sheeting rate is the percentage of Cases Charge sheeted of Cases disposed off by Police.	Percentage	NCRB
Offence rate of IT/IP related crimes	Rate of offences under Information Technology / Intellectual Property related Acts of the state.	Ratio	NCRB
Pendency Rate of Corruption Cases (%)	Ratio of number of cases investigated to total cases reported under Prevention of Corruption Act 1988	Percentage	NCRB
Police personnel (per lakh Population)	Strength of police personnel in the state per one lakh population.	Ratio	BPRD, MHA

Dimensions/ Pillars	Description/ Explanation	Unit of Measurement	Source
ENABLING CONDITIONS			
 Infrastructure			
Industrial land available from total (%)	Percentage of industrial land available to total land area of the state.	Percentage	India Industrial Land Bank
Number of Industrial Corridors	Number of Industrial Corridors	Number	State Government
LEADS Index Score	The indicator captures the assessment of logistic conditions and performance, across the state.	Score	Department of Commerce, Ministry of Commerce and Industry.
Power Deficit (%)	It is calculated by (Peak demand-Peak supply)/(Peak demand)) * 100	Percentage	Central Electricity Authority*
Factories in the Chemical Industry (%)	Percentage of open and working factories in the industry to the total number in the state.	Percentage	ASI*
Renewable Energy generated (%)	Renewable energy generation as a Percentage of total electricity generation in a state.	Percentage	NITI Electricity Dashboard
 Policy			
Does the state have a valid Export Promotion Policy?	Does the state have a valid Export Promotion Policy in place?	Binary	State Government
Does the state have Green industry incentives?	Does the state have a Green industry incentive in place?	Binary	State Government
Does the state have Power Subsidies?	Does the state have a Power Subsidy Policy in place?	Binary	State Government
Does the state have Quality Certification subsidy?	Does the state have Quality Certification subsidy in place?	Binary	State Government
Does the state have Single window clearance?	Facilities like single-window clearance eases the procedures for businesses to obtain various clearances. Does the state provide it?	Binary	State Government
SUPPORTING ECOSYSTEM			
 Research and Innovation Capacity			
Number of Common Facility Centre	Number of Common Facility Centres in the state.	Number	MSME
Number of Start ups	New Businesses registered with the State Startup program.	Number	Start-up India
Factories in chemical industry having R&D units (%)	Percentage of Factories in chemical industry having R&D units	Percentage	ASI*
Number of Research and Development Institutes	The total number of research institutions funded by the state or private stakeholders.	Number	DST
Spending on Research and Development (Rs Crore)	Share of Research and Development by State government	Number	DST, RBI

Dimensions/ Pillars	Description/ Explanation	Unit of Measurement	Source
SUPPORTING ECOSYSTEM			
 Business Environment			
Chemical factories with ISO Certification (%)	Percentage of factory units having ISO certification in the chemical industry	Percentage	ASI*
Number of CIPET Centres	Central Institute of Petrochemicals Engineering and Technology (CIPET) is a centrally funded technical higher education institution under various departments. It mainly covers Skill development programmes related to the industry. The indicator is the total number of such centres in the states.	Number	CIPET
Ease of Doing Business Score	Ease of Doing Business Score of the state	Score	DIPP
Number of Operational SEZ	Total number of Special Economic Zones in the state	Number	DPIIT
Number of Industrial Parks	Total Number of Industrial Parks/ Estates/ Area	Number	State Government
 Related and Supporting Industries			
Cluster Strength in manufacturing Sector	The indicator represents the potential of a region’s cluster portfolio. Cluster mapping describes the process of systematically measuring the size, productivity, specialization and performance growth of clusters across locations, applying common definitions of cluster categories derived from evidence about patterns of location-specific linkages and spill-overs across locations.	Number	ASI*
Revealed Comparative Advantage of the industry	A state attains comparative advantage for the industry, when the ratio of export of the industry goods to its total exports exceeds the same ratio for the nation as a whole. $RCJ = [(State's\ industry\ export/State's\ total\ export)/(Total\ national\ export\ of\ the\ industry's\ goods/\ National\ export\ of\ all\ the\ goods)]$	Ratio	DGCIS*
Average Wage Level of the Chemical Industry (Rs.)	Average wage of the chemical industry	Ratio	ASI*
Specialization (Location Quotient) of the Downstream Chemical Products	Specialization reflects how strong a state is in an industry cluster category compared to all other states, which is measured by location Quotient. It is calculated as: $[(Share\ of\ regional\ employment\ in\ regional\ cluster)/(Share\ of\ cluster's\ employment\ in\ national\ employment)]$	Ratio	ASI*
Specialization (Location Quotient) of the Upstream Chemical Products		Ratio	ASI*
 Investment			
FDI Inflows (Rs Crore)	Amount of FDI inflow in the state in 2019-20	Number	DIPP
Gross Fixed Capital Formation of the industry. (Rs Crore)	Gross Fixed Capital Formation of the industry.	Number	ASI*
Invested Capital in the industry (Rs Crore)	Invested capital is the total of fixed capital and physical working capital.	Number	ASI*

Dimensions/ Pillars	Description/ Explanation	Unit of Measurement	Source
PERFORMANCE- OUTCOMES			
 Export Performance			
Exports of the industry (Rs Crore)	Export value of the chemical industry	Number	DGCIS
Industry's Export Product Concentration	This indicator measures, for each state, the degree of concentration of chemical goods exported. It tells us if a large share of a state's exports is accounted for by a small number of commodities or, on the contrary, if its exports are well distributed among many products. It is measured by calculating Herfindahl–Hirschman Index (HHI). A state with export that is concentrated in very few markets will have an index value close to 1. Similarly, a state with a perfectly diversified trade portfolio will have an index close to zero.	Range of value from 0-1	DGCIS*
Export Growth of the Industry (CAGR %)	Growth (CAGR) of the industry's export of each state	Percentage	DGCIS*
Market Penetration of the Industry	Market Penetration Index measures the extent to which exports from a State reach already proven markets. It is calculated as the number of countries to which a State exports a particular product divided by the number of total countries that import that product in a year.	Ratio	DGCIS, Trade Map*
 Market Performance			
Gross Value Added of the Industry (Rs Crore)	The indicator measures the productivity of the industry.	Number	ASI*
Employment Growth in the industry (CAGR %)	It reflects growth (CAGR) in employment of the industry from 2014-15 to 2018-19	Percentage	ASI*
Gross Value Added per employee of the Industry (Rs '000)	Indicates workforce productivity in the industry	Ratio	ASI*

*Author's Calculations.

Indicators taken from data sets of the Periodic Labour Force Survey (PLFS), and Annual Survey of Industries (ASI) are extracted from their respective micro dataset as per the formula mentioned in their schedule and are presentational.

Absolute data for the remaining indicators were available from the sources mentioned against them.

While extracting variables related specifically to chemical and petrochemical industries, division 20 of NIC-2008 codes were used in data sets of Annual Survey of India 2018-19 and Periodic Labor Force Survey 2019-20.

The Pillar of related and supporting industry under the supporting ecosystem dimension relates to clusters of the industry. A cluster is defined as regional concentrations of economic activities in related industries connected through local linkages and spill-overs. The clusters are formed by mapping the 5digit NIC-2008 codes to 5-digit NAICS codes of the US Cluster Mapping Project.

While extracting export/import-related data following HS Codes were used : 28, 29, 32, 38,39, 54, 55, 4002.



07

DATA CARDS

The data card of each state displays the calculated data for each indicator under its respective pillar and dimensions.

The dots beside the data represent the position of the state in the data distribution of a particular indicator. To assess the distribution spread and the variability of each indicator, one standard deviation from the mean was calculated as the range.

The blue dot represents that the state lies within one standard deviation from the mean range. The orange and green dot represents that the state data lies outside the lower and upper values of the range, respectively.

ANDHRA PRADESH

● Outside Lower Range ● Outside Upper Range
● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	89.10	●
Offence rate of IT/IP related crimes	0.70	●
Pendency Rate of Corruption Cases (%)	97.30	●
Police personnel (per lakh Population)	113.68	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	3.32	●
Credit to Industry (secondary) Sector (%)	16.62	●
Profit of the Industry (Rs Crore)		●
Share of Industry's Fixed Capital (%)	4.61	●
Subsidy Share in State Revenue Expenditure (%)	3.23	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	29.50	●
Number of Industrial Corridors	3	●
LEADS Index Score	3.17	●
Power Deficit (%)	0.12	●
Factories in the Chemical Industry (%)	2.19	●
Renewable Energy generated (%)	15.93	●



Human Resources

Professionals in Chemical Industry (%)	0.12	●
Knowledge-intensive employment (%)	18.00	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	2477.24	●
Higher education institutions having NAAC grade A and above (%)	8.32	●
People trained in PMKVY Training centre	408446	●
Trained Population in chemical industry (%)	0.50	●
Workforce share of the industry (%)	4.44	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	2	●
Number of Start Ups	3590	●
Factories in chemical industry having R&D units (%)	1.27	●
Number of Research and Development Institutes	142	●
Spending on Research and Development (Rs Crore)	543.49	●



Business Environment

Chemical factories with ISO Certification (%)	6.49	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	52.40	●
Number of Operational SEZ	24	●
Number of Industrial Parks	330	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	26	●
Revealed Comparative Advantage	1.24	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.45	●
Average Wage Level of the Chemical Industry (Rs.)	296429	●
Specialization (Location Quotient) of the Upstream Chemical Products	1.20	●



Investment

FDI Inflows (Rs Crore)	1475.99	●
Invested Capital in the industry (Rs Crore)	12900.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	1079.40	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	20846.60	●
Industry's Export Product Concentration	0.13	●
Export Growth of the Industry (CAGR %)	6.29	●
Market Penetration of the Industry	2.32	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	4720.70	●
Employment Growth in the industry (CAGR %)	5.77	●
Gross Value Added per employee of the Industry (Rs '000)	1685.96	●

ARUNACHAL PRADESH

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	52.30	●
Offence rate of IT/IP related crimes	2.10	●
Pendency Rate of Corruption Cases (%)	91.40	●
Police personnel (per lakh Population)	830.31	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	8.09	●
Profit of the Industry (Rs Crore)	0.00	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	0.23	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	66.16	●
Number of Industrial Corridors	0	●
LEADS Index Score	2.43	●
Power Deficit (%)	17.45	●
Factories in the Chemical Industry (%)	0.00	●
Renewable Energy generated (%)	0.16	●



Human Resources

Professionals in Chemical Industry (%)	0.00	●
Knowledge-intensive employment (%)	16.50	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	365.86	●
Higher education institutions having NAAC grade A and above (%)	1.85	●
People trained in PMKVY Training centre	91087	●
Trained Population in chemical industry (%)	0.00	●
Workforce share of the industry (%)	0.00	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	76	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	0	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	0	●
Number of Industrial Parks	15	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	0	●
Revealed Comparative Advantage	0.00	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.00	●
Average Wage Level of the Chemical Industry (Rs.)	0.00	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.00	●



Investment

FDI Inflows (Rs Crore)	4.50	●
Invested Capital in the industry (Rs Crore)	0.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.00	●



Export Performance

Exports of the industry (Rs Crore)	0.00	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	-64.65	●
Market Penetration of the Industry	0.02	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	0.00	●
Employment Growth in the industry (CAGR %)	0.00	●
Gross Value Added per employee of the Industry (Rs '000)	0.00	●

Enabling Conditions



Safety and Legal Environment

Charge Sheetting Rate (%)	47.10	●
Offence rate of IT/IP related crimes	8.40	●
Pendency Rate of Corruption Cases (%)	95.80	●
Police personnel (per lakh Population)	207.49	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	No	●



Human Resources

Professionals in Chemical Industry (%)	0.05	●
Knowledge-intensive employment (%)	18.75	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	203.52	●
Higher education institutions having NAAC grade A and above (%)	3.15	●
People trained in PMKVY Training centre	756645	●
Trained Population in chemical industry (%)	0.00	●
Workforce share of the industry (%)	5.00	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	7.50	●
Credit to Industry (secondary) Sector (%)	10.78	●
Profit of the Industry (Rs Crore)	1311.85	●
Share of Industry's Fixed Capital (%)	31.33	●
Subsidy Share in State Revenue Expenditure (%)	0.87	●



Infrastructure

Industrial land available from total (%)	46.09	●
Number of Industrial Corridors	0	●
LEADS Index Score	2.63	●
Power Deficit (%)	14.54	●
Factories in the Chemical Industry (%)	1.19	●
Renewable Energy generated (%)	0.67	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	1	●
Number of Start Ups	1932	●
Factories in chemical industry having R&D units (%)	10.00	●
Number of Research and Development Institutes	35	●
Spending on Research and Development (Rs Crore)	455.13	●



Business Environment

Chemical factories with ISO Certification (%)	12.50	●
Number of CIPET Centres	2	●
Ease of Doing Business Score	5.93	●
Number of Operational SEZ	0	●
Number of Industrial Parks	51	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	4	●
Revealed Comparative Advantage	0.17	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.58	●
Average Wage Level of the Chemical Industry (Rs.)	225000	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.83	●



Investment

FDI Inflows (Rs Crore)	21.06	●
Invested Capital in the industry (Rs Crore)	10090.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	759.60	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	65.58	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	14.86	●
Market Penetration of the Industry	0.39	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	2253.45	●
Employment Growth in the industry (CAGR %)	8.80	●
Gross Value Added per employee of the Industry (Rs '000)	1877.87	●

ASSAM

● Outside Lower Range ● Outside Upper Range
● Within Range



BIHAR

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	73.60	●
Offence rate of IT/IP related crimes	0.10	●
Pendency Rate of Corruption Cases (%)	100.00	●
Police personnel (per lakh Population)	76.20	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	11.39	●
Profit of the Industry (Rs Crore)	92.32	●
Share of Industry's Fixed Capital (%)	0.91	●
Subsidy Share in State Revenue Expenditure (%)	5.26	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	36.94	●
Number of Industrial Corridors	1	●
LEADS Index Score	2.77	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	1.85	●
Renewable Energy generated (%)	1.09	●



Human Resources

Professionals in Chemical Industry (%)	0.01	●
Knowledge-intensive employment (%)	7.50	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	218.09	●
Higher education institutions having NAAC grade A and above (%)	1.06	●
People trained in PMKVY Training centre	608488	●
Trained Population in chemical industry (%)	1.33	●
Workforce share of the industry (%)	1.89	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	1	●
Number of Start Ups	3702	●
Factories in chemical industry having R&D units (%)	5.19	●
Number of Research and Development Institutes	49	●
Spending on Research and Development (Rs Crore)	53.68	●



Business Environment

Chemical factories with ISO Certification (%)	2.60	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	2.78	●
Number of Operational SEZ	0	●
Number of Industrial Parks	52	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	16	●
Revealed Comparative Advantage	0.08	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.61	●
Average Wage Level of the Chemical Industry (Rs.)	126324	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.14	●



Investment

FDI Inflows (Rs Crore)	40.24	●
Invested Capital in the industry (Rs Crore)	292.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	13.05	●



Export Performance

Exports of the industry (Rs Crore)	165.85	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	22.06	●
Market Penetration of the Industry	0.26	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	162.23	●
Employment Growth in the industry (CAGR %)	10.02	●
Gross Value Added per employee of the Industry (Rs '000)	611.08	●

CHHATTISGARH

● Outside Lower Range ● Outside Upper Range
● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	81.80 ●
Offence rate of IT/IP related crimes	0.50 ●
Pendency Rate of Corruption Cases (%)	87.78 ●
Police personnel (per lakh Population)	220.53 ●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	1.92 ●
Credit to Industry (secondary) Sector (%)	25.51 ●
Profit of the Industry (Rs Crore)	-105.26 ●
Share of Industry's Fixed Capital (%)	0.24 ●
Subsidy Share in State Revenue Expenditure (%)	32.41 ●



Policy

Does the state have a valid Export Promotion Policy?	Yes ●
Does the state have Green industry incentives?	Yes ●
Does the state have Power Subsidies?	Yes ●
Does the state have a Quality Certification subsidy?	Yes ●
Does the state have Single window clearance?	No ●



Infrastructure

Industrial land available from total (%)	7.98 ●
Number of Industrial Corridors	5 ●
LEADS Index Score	3.09 ●
Power Deficit (%)	0.17 ●
Factories in the Chemical Industry (%)	3.39 ●
Renewable Energy generated (%)	0.75 ●



Human Resources

Professionals in Chemical Industry (%)	0.07 ●
Knowledge-intensive employment (%)	6.36 ●
Participation in Engineering and Technology education (per lakh of 18-23 population)	428.72 ●
Higher education institutions having NAAC grade A and above (%)	1.00 ●
People trained in PMKVY Training centre	177964 ●
Trained Population in chemical industry (%)	2.16 ●
Workforce share of the industry (%)	1.59 ●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0 ●
Number of Start Ups	1985 ●
Factories in chemical industry having R&D units (%)	0.96 ●
Number of Research and Development Institutes	30 ●
Spending on Research and Development (Rs Crore)	257.99 ●



Business Environment

Chemical factories with ISO Certification (%)	10.11 ●
Number of CIPET Centres	2 ●
Ease of Doing Business Score	28.71 ●
Number of Operational SEZ	1 ●
Number of Industrial Parks	59 ●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	4 ●
Revealed Comparative Advantage	0.05 ●
Specialization (Location Quotient) of the Downstream Chemical Products	0.26 ●
Average Wage Level of the Chemical Industry (Rs.)	233393 ●
Specialization (Location Quotient) of the Upstream Chemical Products	0.33 ●



Investment

FDI Inflows (Rs Crore)	0.20 ●
Invested Capital in the industry (Rs Crore)	590.00 ●
Gross Fixed Capital Formation of the industry. (Rs Crore)	46.06 ●



Export Performance

Exports of the industry (Rs Crore)	155.70 ●
Industry's Export Product Concentration	0.00 ●
Export Growth of the Industry (CAGR %)	22.82 ●
Market Penetration of the Industry	0.62 ●



Market Performance

Gross Value Added of the Industry (Rs Crore)	48.09 ●
Employment Growth in the industry (CAGR %)	7.44 ●
Gross Value Added per employee of the Industry (Rs '000)	143.90 ●

Enabling Conditions



Safety and Legal Environment

Charge Sheetting Rate (%)	83.90	●
Offence rate of IT/IP related crimes	0.80	●
Pendency Rate of Corruption Cases (%)	95.50	●
Police personnel (per lakh Population)	511.78	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Human Resources

Professionals in Chemical Industry (%)	1.26	●
Knowledge-intensive employment (%)	19.61	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	2193.59	●
Higher education institutions having NAAC grade A and above (%)	15.28	●
People trained in PMKVY Training centre	11396	●
Trained Population in chemical industry (%)	1.42	●
Workforce share of the industry (%)	5.06	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	14.71	●
Credit to Industry (secondary) Sector (%)	17.54	●
Profit of the Industry (Rs Crore)	-349.76	●
Share of Industry's Fixed Capital (%)	11.82	●
Subsidy Share in State Revenue Expenditure (%)	2.95	●



Infrastructure

Industrial land available from total (%)	9.84	●
Number of Industrial Corridors	0.00	●
LEADS Index Score	2.84	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	5.56	●
Renewable Energy generated (%)	0.15	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	1	●
Number of Start Ups	1366	●
Factories in chemical industry having R&D units (%)	11.76	●
Number of Research and Development Institutes	29	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	26.47	●
Number of CIPET Centres	0.00	●
Ease of Doing Business Score	3.33	●
Number of Operational SEZ	0.00	●
Number of Industrial Parks	23	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	20	●
Revealed Comparative Advantage	0.77	●
Specialization (Location Quotient) of the Downstream Chemical Products	1.11	●
Average Wage Level of the Chemical Industry (Rs.)	597558	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.36	●



Investment

FDI Inflows (Rs Crore)	459.92	●
Invested Capital in the industry (Rs Crore)	2800.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	322.00	●



Export Performance

Exports of the industry (Rs Crore)	1639.87	●
Industry's Export Product Concentration	0.02	●
Export Growth of the Industry (CAGR %)	7.00	●
Market Penetration of the Industry	1.61	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	853.14	●
Employment Growth in the industry (CAGR %)	-5.63	●
Gross Value Added per employee of the Industry (Rs '000)	2216.52	●

GOA

● Outside Lower Range ● Outside Upper Range
● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	97.10	●
Offence rate of IT/IP related crimes	0.60	●
Pendency Rate of Corruption Cases (%)	95.80	●
Police personnel (per lakh Population)	122.78	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	2.62	●
Credit to Industry (secondary) Sector (%)	38.68	●
Profit of the Industry (Rs Crore)	25027.00	●
Share of Industry's Fixed Capital (%)	18.84	●
Subsidy Share in State Revenue Expenditure (%)	12.82	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	18.86	●
Number of Industrial Corridors	1	●
LEADS Index Score	3.66	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	11.30	●
Renewable Energy generated (%)	14.00	●



Human Resources

Professionals in Chemical Industry (%)	0.36	●
Knowledge-intensive employment (%)	15.65	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	843.66	●
Higher education institutions having NAAC grade A and above (%)	1.32	●
People trained in PMKVY Training centre	417705	●
Trained Population in chemical industry (%)	1.92	●
Workforce share of the industry (%)	13.16	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	2	●
Number of Start Ups	12543	●
Factories in chemical industry having R&D units (%)	7.15	●
Number of Research and Development Institutes	625	●
Spending on Research and Development (Rs Crore)	789.52	●



Business Environment

Chemical factories with ISO Certification (%)	10.97	●
Number of CIPET Centres	2.00	●
Ease of Doing Business Score	20.19	●
Number of Operational SEZ	21	●
Number of Industrial Parks	351	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	46	●
Revealed Comparative Advantage	1.49	●
Specialization (Location Quotient) of the Downstream Chemical Products	1.64	●
Average Wage Level of the Chemical Industry (Rs.)	364000	●
Specialization (Location Quotient) of the Upstream Chemical Products	3.63	●



Investment

FDI Inflows (Rs Crore)	18964.04	●
Invested Capital in the industry (Rs Crore)	162000.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	18189.00	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	164850.05	●
Industry's Export Product Concentration	1.43	●
Export Growth of the Industry (CAGR %)	14.12	●
Market Penetration of the Industry	7.07	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	54947.00	●
Employment Growth in the industry (CAGR %)	8.89	●
Gross Value Added per employee of the Industry (Rs '000)	2197.88	●



HARYANA

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	47.40	●
Offence rate of IT/IP related crimes	2.00	●
Pendency Rate of Corruption Cases (%)	91.80	●
Police personnel (per lakh Population)	180.19	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	3.29	●
Credit to Industry (secondary) Sector (%)	26.47	●
Profit of the Industry (Rs Crore)	1810.34	●
Share of Industry's Fixed Capital (%)	3.29	●
Subsidy Share in State Revenue Expenditure (%)	8.41	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	16.20	●
Number of Industrial Corridors	5	●
LEADS Index Score	3.52	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	3.43	●
Renewable Energy generated (%)	2.50	●



Human Resources

Professionals in Chemical Industry (%)	0.13	●
Knowledge-intensive employment (%)	21.95	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	990.89	●
Higher education institutions having NAAC grade A and above (%)	2.68	●
People trained in PMKVY Training centre	671867	●
Trained Population in chemical industry (%)	10.19	●
Workforce share of the industry (%)	1.70	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	2	●
Number of Start Ups	9014	●
Factories in chemical industry having R&D units (%)	1.83	●
Number of Research and Development Institutes	348	●
Spending on Research and Development (Rs Crore)	374.58	●



Business Environment

Chemical factories with ISO Certification (%)	11.67	●
Number of CIPET Centres	1.00	●
Ease of Doing Business Score	13.24	●
Number of Operational SEZ	7.00	●
Number of Industrial Parks	61	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	50	●
Revealed Comparative Advantage	0.31	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.27	●
Average Wage Level of the Chemical Industry (Rs.)	405882	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.51	●



Investment

FDI Inflows (Rs Crore)	5198.08	●
Invested Capital in the industry (Rs Crore)	7000.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	263.08	●



Export Performance

Exports of the industry (Rs Crore)	4206.84	●
Industry's Export Product Concentration	0.04	●
Export Growth of the Industry (CAGR %)	11.13	●
Market Penetration of the Industry	4.13	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	3838.36	●
Employment Growth in the industry (CAGR %)	12.29	●
Gross Value Added per employee of the Industry (Rs '000)	2257.86	●



HIMACHAL PRADESH

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	84.70	●
Offence rate of IT/IP related crimes	1.20	●
Pendency Rate of Corruption Cases (%)	95.70	●
Police personnel (per lakh Population)	240.52	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	4.06	●
Credit to Industry (secondary) Sector (%)	16.01	●
Profit of the Industry (Rs Crore)	3432.98	●
Share of Industry's Fixed Capital (%)	5.12	●
Subsidy Share in State Revenue Expenditure (%)	3.46	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	19.27	●
Number of Industrial Corridors	1	●
LEADS Index Score	2.75	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	9.80	●
Renewable Energy generated (%)	6.03	●



Human Resources

Professionals in Chemical Industry (%)	0.65	●
Knowledge-intensive employment (%)	12.06	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	384.49	●
Higher education institutions having NAAC grade A and above (%)	0.89	●
People trained in PMKVY Training centre	135137	●
Trained Population in chemical industry (%)	3.40	●
Workforce share of the industry (%)	9.05	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	811	●
Factories in chemical industry having R&D units (%)	7.35	●
Number of Research and Development Institutes	48	●
Spending on Research and Development (Rs Crore)	158.97	●



Business Environment

Chemical factories with ISO Certification (%)	21.58	●
Number of CIPET Centres	1.00	●
Ease of Doing Business Score	28.49	●
Number of Operational SEZ	0.00	●
Number of Industrial Parks	59	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	20	●
Revealed Comparative Advantage	0.75	●
Specialization (Location Quotient) of the Downstream Chemical Products	3.09	●
Average Wage Level of the Chemical Industry (Rs.)	331579	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.27	●



Investment

FDI Inflows (Rs Crore)	85.13	●
Invested Capital in the industry (Rs Crore)	3200.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	312.97	●



Export Performance

Exports of the industry (Rs Crore)	1403.55	●
Industry's Export Product Concentration	0.03	●
Export Growth of the Industry (CAGR %)	12.65	●
Market Penetration of the Industry	1.84	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	4978.21	●
Employment Growth in the industry (CAGR %)	0.00	●
Gross Value Added per employee of the Industry (Rs '000)	2620.11	●

JHARKHAND

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	66.70	●
Offence rate of IT/IP related crimes	2.60	●
Pendency Rate of Corruption Cases (%)	96.20	●
Police personnel (per lakh Population)	172.18	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	11.21	●
Credit to Industry (secondary) Sector (%)	18.65	●
Profit of the Industry (Rs Crore)	548.41	●
Share of Industry's Fixed Capital (%)	2.60	●
Subsidy Share in State Revenue Expenditure (%)	5.62	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	17.13	●
Number of Industrial Corridors	1	●
LEADS Index Score	3.09	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	2.93	●
Renewable Energy generated (%)	0.07	●



Human Resources

Professionals in Chemical Industry (%)	0.03	●
Knowledge-intensive employment (%)	12.00	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	303.74	●
Higher education institutions having NAAC grade A and above (%)	0.74	●
People trained in PMKVY Training centre	291626	●
Trained Population in chemical industry (%)	3.94	●
Workforce share of the industry (%)	2.02	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	2205	●
Factories in chemical industry having R&D units (%)	5.17	●
Number of Research and Development Institutes	11	●
Spending on Research and Development (Rs Crore)	91.54	●



Business Environment

Chemical factories with ISO Certification (%)	16.38	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	29.54	●
Number of Operational SEZ	0	●
Number of Industrial Parks	34	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	12	●
Revealed Comparative Advantage	0.05	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.50	●
Average Wage Level of the Chemical Industry (Rs.)	329644	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.32	●



Investment

FDI Inflows (Rs Crore)	13207.71	●
Invested Capital in the industry (Rs Crore)	2970.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	173.37	●



Export Performance

Exports of the industry (Rs Crore)	116.66	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	27.61	●
Market Penetration of the Industry	0.52	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	900.61	●
Employment Growth in the industry (CAGR %)	-0.71	●
Gross Value Added per employee of the Industry (Rs '000)	2120.58	●



KARNATAKA

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	78.80	●
Offence rate of IT/IP related crimes	16.30	●
Pendency Rate of Corruption Cases (%)	89.50	●
Police personnel (per lakh Population)	125.95	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	3.09	●
Credit to Industry (secondary) Sector (%)	22.49	●
Profit of the Industry (Rs Crore)	1628.10	●
Share of Industry's Fixed Capital (%)	4.20	●
Subsidy Share in State Revenue Expenditure (%)	14.03	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	9.44	●
Number of Industrial Corridors	3	●
LEADS Index Score	3.18	●
Power Deficit (%)	0.23	●
Factories in the Chemical Industry (%)	5.58	●
Renewable Energy generated (%)	29.38	●



Human Resources

Professionals in Chemical Industry (%)	0.23	●
Knowledge-intensive employment (%)	26.67	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	1386.83	●
Higher education institutions having NAAC grade A and above (%)	3.32	●
People trained in PMKVY Training centre	551576	●
Trained Population in chemical industry (%)	0.52	●
Workforce share of the industry (%)	3.00	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	10	●
Number of Start Ups	18916	●
Factories in chemical industry having R&D units (%)	12.37	●
Number of Research and Development Institutes	625	●
Spending on Research and Development (Rs Crore)	373.48	●



Business Environment

Chemical factories with ISO Certification (%)	13.74	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	7.82	●
Number of Operational SEZ	34	●
Number of Industrial Parks	370	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	30	●
Revealed Comparative Advantage	0.82	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.70	●
Average Wage Level of the Chemical Industry (Rs.)	393939	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.54	●



Investment

FDI Inflows (Rs Crore)	30746.17	●
Invested Capital in the industry (Rs Crore)	11600.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	1762.00	●



Export Performance

Exports of the industry (Rs Crore)	18491.72	●
Industry's Export Product Concentration	0.10	●
Export Growth of the Industry (CAGR %)	16.25	●
Market Penetration of the Industry	3.84	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	5670.10	●
Employment Growth in the industry (CAGR %)	9.64	●
Gross Value Added per employee of the Industry (Rs '000)	1718.21	●



KERALA

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	94.90	●
Offence rate of IT/IP related crimes	1.00	●
Pendency Rate of Corruption Cases (%)	87.78	●
Police personnel (per lakh Population)	152.49	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	4.81	●
Credit to Industry (secondary) Sector (%)	11.30	●
Profit of the Industry (Rs Crore)	1212.10	●
Share of Industry's Fixed Capital (%)	2.98	●
Subsidy Share in State Revenue Expenditure (%)	3.52	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	9.07	●
Number of Industrial Corridors	1	●
LEADS Index Score	3.06	●
Power Deficit (%)	2.20	●
Factories in the Chemical Industry (%)	1.74	●
Renewable Energy generated (%)	8.85	●



Human Resources

Professionals in Chemical Industry (%)	0.20	●
Knowledge-intensive employment (%)	32.73	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	1726.90	●
Higher education institutions having NAAC grade A and above (%)	7.25	●
People trained in PMKVY Training centre	279335	●
Trained Population in chemical industry (%)	3.00	●
Workforce share of the industry (%)	3.14	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	11	●
Number of Start Ups	6425	●
Factories in chemical industry having R&D units (%)	11.54	●
Number of Research and Development Institutes	157	●
Spending on Research and Development (Rs Crore)	160.41	●



Business Environment

Chemical factories with ISO Certification (%)	7.69	●
Number of CIPET Centres	2	●
Ease of Doing Business Score	1.11	●
Number of Operational SEZ	20	●
Number of Industrial Parks	146	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	26	●
Revealed Comparative Advantage	0.32	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.55	●
Average Wage Level of the Chemical Industry (Rs.)	618182	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.68	●



Investment

FDI Inflows (Rs Crore)	409.31	●
Invested Capital in the industry (Rs Crore)	3600.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	138.00	●



Export Performance

Exports of the industry (Rs Crore)	1294.17	●
Industry's Export Product Concentration	0.03	●
Export Growth of the Industry (CAGR %)	14.72	●
Market Penetration of the Industry	2.35	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	3922.71	●
Employment Growth in the industry (CAGR %)	0.00	●
Gross Value Added per employee of the Industry (Rs '000)	3566.10	●

MADHYA PRADESH

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	88.10	●
Offence rate of IT/IP related crimes	0.50	●
Pendency Rate of Corruption Cases (%)	94.00	●
Police personnel (per lakh Population)	120.02	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.38	●
Credit to Industry (secondary) Sector (%)	17.92	●
Profit of the Industry (Rs Crore)	1521.26	●
Share of Industry's Fixed Capital (%)	0.02	●
Subsidy Share in State Revenue Expenditure (%)	8.49	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	13.77	●
Number of Industrial Corridors	14	●
LEADS Index Score	2.90	●
Power Deficit (%)	0.21	●
Factories in the Chemical Industry (%)	6.84	●
Renewable Energy generated (%)	5.82	●



Human Resources

Professionals in Chemical Industry (%)	0.13	●
Knowledge-intensive employment (%)	8.52	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	780.73	●
Higher education institutions having NAAC grade A and above (%)	2.03	●
People trained in PMKVY Training centre	888106	●
Trained Population in chemical industry (%)	5.07	●
Workforce share of the industry (%)	4.88	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	6612	●
Factories in chemical industry having R&D units (%)	2.30	●
Number of Research and Development Institutes	106	●
Spending on Research and Development (Rs Crore)	488.51	●



Business Environment

Chemical factories with ISO Certification (%)	459	●
Number of CIPET Centres	2	●
Ease of Doing Business Score	4344	●
Number of Operational SEZ	5	●
Number of Industrial Parks	119	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	20	●
Revealed Comparative Advantage	1.07	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.83	●
Average Wage Level of the Chemical Industry (Rs.)	255000	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.73	●



Investment

FDI Inflows (Rs Crore)	542.04	●
Invested Capital in the industry (Rs Crore)	4500.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	508.17	●



Export Performance

Exports of the industry (Rs Crore)	7330.62	●
Industry's Export Product Concentration	0.08	●
Export Growth of the Industry (CAGR %)	11.59	●
Market Penetration of the Industry	3.08	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	3123.09	●
Employment Growth in the industry (CAGR %)	6.12	●
Gross Value Added per employee of the Industry (Rs '000)	1561.55	●



MAHARASHTRA

● Outside Lower Range
 ● Outside Upper Range
● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheetting Rate (%)	73.50	●
Offence rate of IT/IP related crimes	0.60	●
Pendency Rate of Corruption Cases (%)	97.70	●
Police personnel (per lakh Population)	174.87	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	5.34	●
Credit to Industry (secondary) Sector (%)	32.06	●
Profit of the Industry (Rs Crore)	349.60	●
Share of Industry's Fixed Capital (%)	0.08	●
Subsidy Share in State Revenue Expenditure (%)	10.20	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	33.27	●
Number of Industrial Corridors	27	●
LEADS Index Score	3.32	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	6.95	●
Renewable Energy generated (%)	8.60	●



Human Resources

Professionals in Chemical Industry (%)	0.25	●
Knowledge-intensive employment (%)	20.00	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	1061.76	●
Higher education institutions having NAAC grade A and above (%)	6.21	●
People trained in PMKVY Training centre	1286374	●
Trained Population in chemical industry (%)	4.15	●
Workforce share of the industry (%)	6.00	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	13	●
Number of Start Ups	33015	●
Factories in chemical industry having R&D units (%)	11.30	●
Number of Research and Development Institutes	1482	●
Spending on Research and Development (Rs Crore)	221.77	●



Business Environment

Chemical factories with ISO Certification (%)	24.09	●
Number of CIPET Centres	2	●
Ease of Doing Business Score	17.50	●
Number of Operational SEZ	37	●
Number of Industrial Parks	447	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	66	●
Revealed Comparative Advantage	0.98	●
Specialization (Location Quotient) of the Downstream Chemical Products	1.30	●
Average Wage Level of the Chemical Industry (Rs.)	₹591667	●
Specialization (Location Quotient) of the Upstream Chemical Products	1.04	●



Investment

FDI Inflows (Rs Crore)	52073.01	●
Invested Capital in the industry (Rs Crore)	51000.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	6169.00	●



Export Performance

Exports of the industry (Rs Crore)	62543.34	●
Industry's Export Product Concentration	0.48	●
Export Growth of the Industry (CAGR %)	6.13	●
Market Penetration of the Industry	7.33	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	20778.00	●
Employment Growth in the industry (CAGR %)	1.46	●
Gross Value Added per employee of the Industry (Rs '000)	1731.50	●

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	18.50	●
Offence rate of IT/IP related crimes	0.20	●
Pendency Rate of Corruption Cases (%)	100.00	●
Police personnel (per lakh Population)	942.93	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	No	●



Human Resources

Professionals in Chemical Industry (%)	0.07	●
Knowledge-intensive employment (%)	19.15	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	69.53	●
Higher education institutions having NAAC grade A and above (%)	1.48	●
People trained in PMKVY Training centre	95786	●
Trained Population in chemical industry (%)	2.66	●
Workforce share of the industry (%)	0.09	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	5.97	●
Profit of the Industry (Rs Crore)	0.10	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	0.72	●



Infrastructure

Industrial land available from total (%)	36.11	●
Number of Industrial Corridors	6	●
LEADS Index Score	2.39	●
Power Deficit (%)	4.33	●
Factories in the Chemical Industry (%)	0.59	●
Renewable Energy generated (%)	0.70	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	312	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	5	●
Spending on Research and Development (Rs Crore)	102.00	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	0	●
Number of Industrial Parks	4	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	0	●
Revealed Comparative Advantage	0.42	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.04	●
Average Wage Level of the Chemical Industry (Rs.)	57500	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.00	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	074	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.00	●



Export Performance

Exports of the industry (Rs Crore)	0.34	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	76.70	●
Market Penetration of the Industry	0.02	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	0.24	●
Employment Growth in the industry (CAGR %)	0.00	●
Gross Value Added per employee of the Industry (Rs '000)	303.88	●

MANIPUR

● Outside Lower Range ● Outside Upper Range
● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheetting Rate (%)	18.10	●
Offence rate of IT/IP related crimes	3.60	●
Pendency Rate of Corruption Cases (%)	85.70	●
Police personnel (per lakh Population)	455.56	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	No	●



Human Resources

Professionals in Chemical Industry (%)	0.01	●
Knowledge-intensive employment (%)	22.73	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	74.44	●
Higher education institutions having NAAC grade A and above (%)	5.63	●
People trained in PMKVY Training centre	60441	●
Trained Population in chemical industry (%)	3.67	●
Workforce share of the industry (%)	2.18	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	18.89	●
Profit of the Industry (Rs Crore)	4.44	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	0.46	●



Infrastructure

Industrial land available from total (%)	0.00	●
Number of Industrial Corridors	0	●
LEADS Index Score	2.51	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	3.01	●
Renewable Energy generated (%)	5.58	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	111	●
Factories in chemical industry having R&D units (%)	25.00	●
Number of Research and Development Institutes	8	●
Spending on Research and Development (Rs Crore)	9.01	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	0	●
Number of Industrial Parks	0	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	4	●
Revealed Comparative Advantage	0.00	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.01	●
Average Wage Level of the Chemical Industry (Rs.)	159011	●
Specialization (Location Quotient) of the Upstream Chemical Products	1.28	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	6.80	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	-0.11	●



Export Performance

Exports of the industry (Rs Crore)	0.02	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	-71.11	●
Market Penetration of the Industry	0.01	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	11.26	●
Employment Growth in the industry (CAGR %)	-6.84	●
Gross Value Added per employee of the Industry (Rs '000)	397.80	●

MEGHALAYA

● Outside Lower Range ● Outside Upper Range
● Within Range

MIZORAM

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	65.30	●
Offence rate of IT/IP related crimes	0.70	●
Pendency Rate of Corruption Cases (%)	92.60	●
Police personnel (per lakh Population)	674.54	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	8.06	●
Profit of the Industry (Rs Crore)	0.00	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	1.57	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	65.67	●
Number of Industrial Corridors	0	●
LEADS Index Score	2.12	●
Power Deficit (%)	0.15	●
Factories in the Chemical Industry (%)	0.00	●
Renewable Energy generated (%)	23.98	●



Human Resources

Professionals in Chemical Industry (%)	0.00	●
Knowledge-intensive employment (%)	16.57	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	177.01	●
Higher education institutions having NAAC grade A and above (%)	5.56	●
People trained in PMKVY Training centre	32217	●
Trained Population in chemical industry (%)	6.28	●
Workforce share of the industry (%)	0.00	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	41	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	0	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	2.99	●
Number of Operational SEZ	0	●
Number of Industrial Parks	3	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	0	●
Revealed Comparative Advantage	0.00	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.00	●
Average Wage Level of the Chemical Industry (Rs.)	0	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.00	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	0.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.00	●



Export Performance

Exports of the industry (Rs Crore)	0.00	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	-46.04	●
Market Penetration of the Industry	0.01	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	0.00	●
Employment Growth in the industry (CAGR %)	0.00	●
Gross Value Added per employee of the Industry (Rs '000)	0.00	●



NAGALAND

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	60.30	●
Offence rate of IT/IP related crimes	0.40	●
Pendency Rate of Corruption Cases (%)	85.70	●
Police personnel (per lakh Population)	1300.93	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	25.74	●
Profit of the Industry (Rs Crore)	0.00	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	1.10	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	7.82	●
Number of Industrial Corridors	0	●
LEADS Index Score	2.02	●
Power Deficit (%)	8.74	●
Factories in the Chemical Industry (%)	0.00	●
Renewable Energy generated (%)	23.79	●



Human Resources

Professionals in Chemical Industry (%)	0.08	●
Knowledge-intensive employment (%)	19.35	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	101.22	●
Higher education institutions having NAAC grade A and above (%)	4.82	●
People trained in PMKVY Training centre	42587	●
Trained Population in chemical industry (%)	2.49	●
Workforce share of the industry (%)	0.00	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	104	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	1	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	0	●
Number of Industrial Parks	6	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	0	●
Revealed Comparative Advantage	0.02	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.01	●
Average Wage Level of the Chemical Industry (Rs.)	0	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.00	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	0.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.00	●



Export Performance

Exports of the industry (Rs Crore)	0.02	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	459.50	●
Market Penetration of the Industry	0.01	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	0.00	●
Employment Growth in the industry (CAGR %)	0.00	●
Gross Value Added per employee of the Industry (Rs '000)	0.00	●



ODISHA

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	70.90	●
Offence rate of IT/IP related crimes	1.60	●
Pendency Rate of Corruption Cases (%)	98.70	●
Police personnel (per lakh Population)	129.31	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	2.33	●
Credit to Industry (secondary) Sector (%)	20.05	●
Profit of the Industry (Rs Crore)	3746.28	●
Share of Industry's Fixed Capital (%)	0.02	●
Subsidy Share in State Revenue Expenditure (%)	3.44	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	3.67	●
Number of Industrial Corridors	2	●
LEADS Index Score	3.20	●
Power Deficit (%)	0.02	●
Factories in the Chemical Industry (%)	3.71	●
Renewable Energy generated (%)	0.74	●



Human Resources

Professionals in Chemical Industry (%)	0.03	●
Knowledge-intensive employment (%)	15.00	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	1152.07	●
Higher education institutions having NAAC grade A and above (%)	2.09	●
People trained in PMKVY Training centre	563859	●
Trained Population in chemical industry (%)	0.29	●
Workforce share of the industry (%)	2.24	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	3	●
Number of Start Ups	3176	●
Factories in chemical industry having R&D units (%)	3.49	●
Number of Research and Development Institutes	65	●
Spending on Research and Development (Rs Crore)	154.85	●



Business Environment

Chemical factories with ISO Certification (%)	16.86	●
Number of CIPET Centres	3	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	5	●
Number of Industrial Parks	110	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	14	●
Revealed Comparative Advantage	0.30	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.21	●
Average Wage Level of the Chemical Industry (Rs.)	559195	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.35	●



Investment

FDI Inflows (Rs Crore)	93.53	●
Invested Capital in the industry (Rs Crore)	8500.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	553.99	●



Export Performance

Exports of the industry (Rs Crore)	4433.43	●
Industry's Export Product Concentration	0.22	●
Export Growth of the Industry (CAGR %)	4.91	●
Market Penetration of the Industry	0.69	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	5238.43	●
Employment Growth in the industry (CAGR %)	-3.75	●
Gross Value Added per employee of the Industry (Rs '000)	8369.71	●



PUNJAB

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	70.40	●
Offence rate of IT/IP related crimes	0.80	●
Pendency Rate of Corruption Cases (%)	92.80	●
Police personnel (per lakh Population)	286.50	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.70	●
Credit to Industry (secondary) Sector (%)	23.48	●
Profit of the Industry (Rs Crore)	-897.08	●
Share of Industry's Fixed Capital (%)	0.07	●
Subsidy Share in State Revenue Expenditure (%)	11.78	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	59.10	●
Number of Industrial Corridors	1	●
LEADS Index Score	3.51	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	1.31	●
Renewable Energy generated (%)	7.67	●



Human Resources

Professionals in Chemical Industry (%)	0.13	●
Knowledge-intensive employment (%)	16.84	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	766.65	●
Higher education institutions having NAAC grade A and above (%)	5.25	●
People trained in PMKVY Training centre	418098	●
Trained Population in chemical industry (%)	6.97	●
Workforce share of the industry (%)	2.14	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	2557	●
Factories in chemical industry having R&D units (%)	4.19	●
Number of Research and Development Institutes	112	●
Spending on Research and Development (Rs Crore)	551.44	●



Business Environment

Chemical factories with ISO Certification (%)	9.08	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	7.61	●
Number of Operational SEZ	3	●
Number of Industrial Parks	59	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	14	●
Revealed Comparative Advantage	0.92	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.18	●
Average Wage Level of the Chemical Industry (Rs.)	360000	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.38	●



Investment

FDI Inflows (Rs Crore)	697.91	●
Invested Capital in the industry (Rs Crore)	4510.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	423.20	●



Export Performance

Exports of the industry (Rs Crore)	5717.16	●
Industry's Export Product Concentration	0.09	●
Export Growth of the Industry (CAGR %)	7.70	●
Market Penetration of the Industry	3.72	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	1043.18	●
Employment Growth in the industry (CAGR %)	5.31	●
Gross Value Added per employee of the Industry (Rs '000)	695.45	●



RAJASTHAN

● Outside Lower Range ● Outside Upper Range
● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	54.20 ●
Offence rate of IT/IP related crimes	0.90 ●
Pendency Rate of Corruption Cases (%)	96.00 ●
Police personnel (per lakh Population)	122.36 ●



Policy

Does the state have a valid Export Promotion Policy?	Yes ●
Does the state have Green industry incentives?	Yes ●
Does the state have Power Subsidies?	Yes ●
Does the state have a Quality Certification subsidy?	Yes ●
Does the state have Single window clearance?	No ●



Human Resources

Professionals in Chemical Industry (%)	0.13 ●
Knowledge-intensive employment (%)	15.00 ●
Participation in Engineering and Technology education (per lakh of 18-23 population)	324.01 ●
Higher education institutions having NAAC grade A and above (%)	0.67 ●
People trained in PMKVY Training centre	1068396 ●
Trained Population in chemical industry (%)	2.92 ●
Workforce share of the industry (%)	4.07 ●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	3.40 ●
Credit to Industry (secondary) Sector (%)	17.86 ●
Profit of the Industry (Rs Crore)	1739.76 ●
Share of Industry's Fixed Capital (%)	0.09 ●
Subsidy Share in State Revenue Expenditure (%)	7.93 ●



Infrastructure

Industrial land available from total (%)	26.98 ●
Number of Industrial Corridors	0 ●
LEADS Index Score	2.96 ●
Power Deficit (%)	0.00 ●
Factories in the Chemical Industry (%)	3.85 ●
Renewable Energy generated (%)	18.46 ●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0 ●
Number of Start Ups	6409 ●
Factories in chemical industry having R&D units (%)	6.04 ●
Number of Research and Development Institutes	138 ●
Spending on Research and Development (Rs Crore)	192.56 ●



Business Environment

Chemical factories with ISO Certification (%)	6.12 ●
Number of CIPET Centres	1 ●
Ease of Doing Business Score	25.92 ●
Number of Operational SEZ	3 ●
Number of Industrial Parks	364 ●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	14 ●
Revealed Comparative Advantage	1.00 ●
Specialization (Location Quotient) of the Downstream Chemical Products	0.44 ●
Average Wage Level of the Chemical Industry (Rs.)	370833 ●
Specialization (Location Quotient) of the Upstream Chemical Products	0.78 ●



Investment

FDI Inflows (Rs Crore)	1347.24 ●
Invested Capital in the industry (Rs Crore)	15000.00 ●
Gross Fixed Capital Formation of the industry. (Rs Crore)	2435.20 ●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	8458.99 ●
Industry's Export Product Concentration	0.22 ●
Export Growth of the Industry (CAGR %)	10.43 ●
Market Penetration of the Industry	4.46 ●



Market Performance

Gross Value Added of the Industry (Rs Crore)	4362.66 ●
Employment Growth in the industry (CAGR %)	4.91 ●
Gross Value Added per employee of the Industry (Rs '000)	1817.78 ●

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	61.20	●
Offence rate of IT/IP related crimes	0.10	●
Pendency Rate of Corruption Cases (%)	100.00	●
Police personnel (per lakh Population)	851.27	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	3.33	●
Credit to Industry (secondary) Sector (%)	5.43	●
Profit of the Industry (Rs Crore)	87.47	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	0.23	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	40.00	●
Number of Industrial Corridors	0	●
LEADS Index Score	2.63	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	3.80	●
Renewable Energy generated (%)	0.67	●



Human Resources

Professionals in Chemical Industry (%)	0.31	●
Knowledge-intensive employment (%)	27.24	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	940.92	●
Higher education institutions having NAAC grade A and above (%)	0.00	●
People trained in PMKVY Training centre	12941	●
Trained Population in chemical industry (%)	8.95	●
Workforce share of the industry (%)	1.42	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	0	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	1	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	0	●
Number of Industrial Parks	0	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	12	●
Revealed Comparative Advantage	0.06	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.43	●
Average Wage Level of the Chemical Industry (Rs.)	229358	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.00	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	34.10	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.00	●



Export Performance

Exports of the industry (Rs Crore)	0.96	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	-12.93	●
Market Penetration of the Industry	0.05	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	107.29	●
Employment Growth in the industry (CAGR %)	-16.42	●
Gross Value Added per employee of the Industry (Rs '000)	3280.90	●



TAMIL NADU

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	91.70	●
Offence rate of IT/IP related crimes	0.80	●
Pendency Rate of Corruption Cases (%)	93.30	●
Police personnel (per lakh Population)	148.54	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	1.87	●
Credit to Industry (secondary) Sector (%)	23.66	●
Profit of the Industry (Rs Crore)	-1344.30	●
Share of Industry's Fixed Capital (%)	0.04	●
Subsidy Share in State Revenue Expenditure (%)	9.75	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	58.56	●
Number of Industrial Corridors	4	●
LEADS Index Score	3.36	●
Power Deficit (%)	0.09	●
Factories in the Chemical Industry (%)	6.90	●
Renewable Energy generated (%)	17.23	●



Human Resources

Professionals in Chemical Industry (%)	0.56	●
Knowledge-intensive employment (%)	23.79	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	2779.33	●
Higher education institutions having NAAC grade A and above (%)	6.69	●
People trained in PMKVY Training centre	755455	●
Trained Population in chemical industry (%)	0.71	●
Workforce share of the industry (%)	4.40	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	24	●
Number of Start Ups	11357	●
Factories in chemical industry having R&D units (%)	1.74	●
Number of Research and Development Institutes	647	●
Spending on Research and Development (Rs Crore)	688.34	●



Business Environment

Chemical factories with ISO Certification (%)	3.18	●
Number of CIPET Centres	2	●
Ease of Doing Business Score	13.61	●
Number of Operational SEZ	50	●
Number of Industrial Parks	153	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	36	●
Revealed Comparative Advantage	0.37	●
Specialization (Location Quotient) of the Downstream Chemical Products	1.30	●
Average Wage Level of the Chemical Industry (Rs.)	181818	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.32	●



Investment

FDI Inflows (Rs Crore)	7230.44	●
Invested Capital in the industry (Rs Crore)	17700.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	1882.00	●



Export Performance

Exports of the industry (Rs Crore)	11365.01	●
Industry's Export Product Concentration	0.12	●
Export Growth of the Industry (CAGR %)	6.20	●
Market Penetration of the Industry	5.23	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	6753.30	●
Employment Growth in the industry (CAGR %)	1.60	●
Gross Value Added per employee of the Industry (Rs '000)	613.94	●

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	83.90	●
Offence rate of IT/IP related crimes	0.90	●
Pendency Rate of Corruption Cases (%)	98.80	●
Police personnel (per lakh Population)	130.88	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	9.82	●
Credit to Industry (secondary) Sector (%)	30.48	●
Profit of the Industry (Rs Crore)	553.55	●
Share of Industry's Fixed Capital (%)	0.02	●
Subsidy Share in State Revenue Expenditure (%)	7.88	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	31.39	●
Number of Industrial Corridors	2	●
LEADS Index Score	3.14	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	3.22	●
Renewable Energy generated (%)	10.96	●



Human Resources

Professionals in Chemical Industry (%)	0.42	●
Knowledge-intensive employment (%)	17.86	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	1644.52	●
Higher education institutions having NAAC grade A and above (%)	3.78	●
People trained in PMKVY Training centre	359159	●
Trained Population in chemical industry (%)	1.68	●
Workforce share of the industry (%)	2.18	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	9047	●
Factories in chemical industry having R&D units (%)	11.10	●
Number of Research and Development Institutes	550	●
Spending on Research and Development (Rs Crore)	276.02	●



Business Environment

Chemical factories with ISO Certification (%)	14.71	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	48.60	●
Number of Operational SEZ	35	●
Number of Industrial Parks	61	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	42	●
Revealed Comparative Advantage	2.21	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.39	●
Average Wage Level of the Chemical Industry (Rs.)	311765	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.55	●



Investment

FDI Inflows (Rs Crore)	4865.19	●
Invested Capital in the industry (Rs Crore)	3200.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	495.00	●



Export Performance

Exports of the industry (Rs Crore)	21174.87	●
Industry's Export Product Concentration	0.12	●
Export Growth of the Industry (CAGR %)	23.49	●
Market Penetration of the Industry	3.49	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	2095.95	●
Employment Growth in the industry (CAGR %)	2.11	●
Gross Value Added per employee of the Industry (Rs '000)	1232.91	●

TELANGANA

● Outside Lower Range ● Outside Upper Range
● Within Range

TRIPURA

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	69.20	●
Offence rate of IT/IP related crimes	0.90	●
Pendency Rate of Corruption Cases (%)	0.00	●
Police personnel (per lakh Population)	568.07	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	7.50	●
Profit of the Industry (Rs Crore)	-0.27	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	0.94	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	38.09	●
Number of Industrial Corridors	0	●
LEADS Index Score	2.50	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	0.26	●
Renewable Energy generated (%)	0.42	●



Human Resources

Professionals in Chemical Industry (%)	0.15	●
Knowledge-intensive employment (%)	10.00	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	219.01	●
Higher education institutions having NAAC grade A and above (%)	62.12	●
People trained in PMKVY Training centre	130907	●
Trained Population in chemical industry (%)	0.44	●
Workforce share of the industry (%)	0.07	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	225	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	3	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	100.00	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	0	●
Number of Industrial Parks	28	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	0	●
Revealed Comparative Advantage	0.00	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.01	●
Average Wage Level of the Chemical Industry (Rs.)	77778	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.05	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	1.53	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.06	●



Export Performance

Exports of the industry (Rs Crore)	0.00	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	-63.24	●
Market Penetration of the Industry	0.01	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	0.04	●
Employment Growth in the industry (CAGR %)	-30.95	●
Gross Value Added per employee of the Industry (Rs '000)	21.64	●

UTTAR PRADESH

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	76.90	●
Offence rate of IT/IP related crimes	4.10	●
Pendency Rate of Corruption Cases (%)	98.60	●
Police personnel (per lakh Population)	133.85	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	4.57	●
Credit to Industry (secondary) Sector (%)	18.06	●
Profit of the Industry (Rs Crore)	1695.10	●
Share of Industry's Fixed Capital (%)	0.14	●
Subsidy Share in State Revenue Expenditure (%)	5.23	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	12.74	●
Number of Industrial Corridors	5	●
LEADS Index Score	3.06	●
Power Deficit (%)	0.89	●
Factories in the Chemical Industry (%)	4.85	●
Renewable Energy generated (%)	3.68	●



Human Resources

Professionals in Chemical Industry (%)	0.10	●
Knowledge-intensive employment (%)	11.89	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	448.84	●
Higher education institutions having NAAC grade A and above (%)	8.14	●
People trained in PMKVY Training centre	1917407	●
Trained Population in chemical industry (%)	3.15	●
Workforce share of the industry (%)	4.64	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	2	●
Number of Start Ups	18943	●
Factories in chemical industry having R&D units (%)	6.21	●
Number of Research and Development Institutes	273	●
Spending on Research and Development (Rs Crore)	281.41	●



Business Environment

Chemical factories with ISO Certification (%)	9.30	●
Number of CIPET Centres	2	●
Ease of Doing Business Score	50.09	●
Number of Operational SEZ	14	●
Number of Industrial Parks	32	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	36	●
Revealed Comparative Advantage	0.43	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.65	●
Average Wage Level of the Chemical Industry (Rs.)	372549	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.85	●



Investment

FDI Inflows (Rs Crore)	1737.62	●
Invested Capital in the industry (Rs Crore)	24400.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	1224.00	●



Export Performance

Exports of the industry (Rs Crore)	7819.09	●
Industry's Export Product Concentration	0.05	●
Export Growth of the Industry (CAGR %)	8.17	●
Market Penetration of the Industry	3.93	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	9084.80	●
Employment Growth in the industry (CAGR %)	6.99	●
Gross Value Added per employee of the Industry (Rs '000)	1781.33	●

UTTARAKHAND

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	78.80	●
Offence rate of IT/IP related crimes	2.10	●
Pendency Rate of Corruption Cases (%)	93.00	●
Police personnel (per lakh Population)	188.16	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	1.64	●
Credit to Industry (secondary) Sector (%)	21.04	●
Profit of the Industry (Rs Crore)	6980.20	●
Share of Industry's Fixed Capital (%)	0.09	●
Subsidy Share in State Revenue Expenditure (%)	0.37	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	Yes	●



Infrastructure

Industrial land available from total (%)	8.47	●
Number of Industrial Corridors	1	●
LEADS Index Score	3.25	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	7.82	●
Renewable Energy generated (%)	6.97	●



Human Resources

Professionals in Chemical Industry (%)	0.30	●
Knowledge-intensive employment (%)	11.76	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	829.81	●
Higher education institutions having NAAC grade A and above (%)	0.10	●
People trained in PMKVY Training centre	219971	●
Trained Population in chemical industry (%)	7.06	●
Workforce share of the industry (%)	11.22	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	1917	●
Factories in chemical industry having R&D units (%)	3.28	●
Number of Research and Development Institutes	48	●
Spending on Research and Development (Rs Crore)	471.02	●



Business Environment

Chemical factories with ISO Certification (%)	27.41	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	19.72	●
Number of Operational SEZ	0	●
Number of Industrial Parks	342	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	20	●
Revealed Comparative Advantage	1.41	●
Specialization (Location Quotient) of the Downstream Chemical Products	3.96	●
Average Wage Level of the Chemical Industry (Rs.)	186957	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.47	●



Investment

FDI Inflows (Rs Crore)	105.19	●
Invested Capital in the industry (Rs Crore)	8300.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	563.20	●



Export Performance

Exports of the industry (Rs Crore)	2380.08	●
Industry's Export Product Concentration	0.03	●
Export Growth of the Industry (CAGR %)	7.87	●
Market Penetration of the Industry	1.88	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	9081.30	●
Employment Growth in the industry (CAGR %)	13.08	●
Gross Value Added per employee of the Industry (Rs '000)	1974.20	●

WEST BENGAL

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	89.40	●
Offence rate of IT/IP related crimes	0.30	●
Pendency Rate of Corruption Cases (%)	100.00	●
Police personnel (per lakh Population)	100.53	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Human Resources

Professionals in Chemical Industry (%)	0.07	●
Knowledge-intensive employment (%)	20.00	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	395.00	●
Higher education institutions having NAAC grade A and above (%)	2.65	●
People trained in PMKVY Training centre	529828	●
Trained Population in chemical industry (%)	2.76	●
Workforce share of the industry (%)	3.14	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	2.37	●
Credit to Industry (secondary) Sector (%)	32.37	●
Profit of the Industry (Rs Crore)	-2407.50	●
Share of Industry's Fixed Capital (%)	0.13	●
Subsidy Share in State Revenue Expenditure (%)	0.00	●



Infrastructure

Industrial land available from total (%)	17.09	●
Number of Industrial Corridors	0	●
LEADS Index Score	3.04	●
Power Deficit (%)	0.03	●
Factories in the Chemical Industry (%)	3.94	●
Renewable Energy generated (%)	1.83	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	6	●
Number of Start Ups	7882	●
Factories in chemical industry having R&D units (%)	9.82	●
Number of Research and Development Institutes	283	●
Spending on Research and Development (Rs Crore)	278.41	●



Business Environment

Chemical factories with ISO Certification (%)	12.53	●
Number of CIPET Centres	1	●
Ease of Doing Business Score	22.85	●
Number of Operational SEZ	7	●
Number of Industrial Parks	6	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	20	●
Revealed Comparative Advantage	0.61	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.39	●
Average Wage Level of the Chemical Industry (Rs.)	372727	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.49	●



Investment

FDI Inflows (Rs Crore)	1363.41	●
Invested Capital in the industry (Rs Crore)	20200.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	404.00	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	7398.85	●
Industry's Export Product Concentration	0.07	●
Export Growth of the Industry (CAGR %)	8.91	●
Market Penetration of the Industry	2.87	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	4168.40	●
Employment Growth in the industry (CAGR %)	4.39	●
Gross Value Added per employee of the Industry (Rs '000)	1894.73	●

ANDAMAN AND NICOBAR

● Outside Lower Range
 ● Outside Upper Range
● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	90.10	●
Offence rate of IT/IP related crimes	1.00	●
Pendency Rate of Corruption Cases (%)	97.10	●
Police personnel (per lakh Population)	1080.90	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	4.34	●
Profit of the Industry (Rs Crore)	1.06	●
Share of Industry's Fixed Capital (%)	1.27	●
Subsidy Share in State Revenue Expenditure (%)	0.00	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	0.00	●
Number of Industrial Corridors	0	●
LEADS Index Score	0.00	●
Power Deficit (%)	6.90	●
Factories in the Chemical Industry (%)	7.69	●
Renewable Energy generated (%)	11.45	●



Human Resources

Professionals in Chemical Industry (%)	0.09	●
Knowledge-intensive employment (%)	17.50	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	762.48	●
Higher education institutions having NAAC grade A and above (%)	11.11	●
People trained in PMKVY Training centre	4401	●
Trained Population in chemical industry (%)	0.00	●
Workforce share of the industry (%)	5.54	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	176	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	0	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	4.64	●
Number of Operational SEZ	0	●
Number of Industrial Parks	0	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	8	●
Revealed Comparative Advantage	0.01	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.00	●
Average Wage Level of the Chemical Industry (Rs.)	350000	●
Specialization (Location Quotient) of the Upstream Chemical Products	3.25	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	0.36	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.03	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	0.01	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	-59.10	●
Market Penetration of the Industry	0.00	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	2.14	●
Employment Growth in the industry (CAGR %)	8.15	●
Gross Value Added per employee of the Industry (Rs '000)	1334.69	●

CHANDIGARH

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	56.00	●
Offence rate of IT/IP related crimes	0.50	●
Pendency Rate of Corruption Cases (%)	85.70	●
Police personnel (per lakh Population)	649.62	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	38.22	●
Profit of the Industry (Rs Crore)	-2.50	●
Share of Industry's Fixed Capital (%)	1.31	●
Subsidy Share in State Revenue Expenditure (%)	0.00	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	21.13	●
Number of Industrial Corridors	0	●
LEADS Index Score	3.06	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	1.13	●
Renewable Energy generated (%)	97.30	●



Human Resources

Professionals in Chemical Industry (%)	0.10	●
Knowledge-intensive employment (%)	34.48	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	1878.57	●
Higher education institutions having NAAC grade A and above (%)	29.73	●
People trained in PMKVY Training centre	26134	●
Trained Population in chemical industry (%)	18.90	●
Workforce share of the industry (%)	1.48	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	1	●
Number of Start Ups	1932	●
Factories in chemical industry having R&D units (%)	10.00	●
Number of Research and Development Institutes	35	●
Spending on Research and Development (Rs Crore)	455.13	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	2	●
Number of Industrial Parks	4	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	6	●
Revealed Comparative Advantage	1.18	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.52	●
Average Wage Level of the Chemical Industry (Rs.)	246479	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.10	●



Investment

FDI Inflows (Rs Crore)	25.58	●
Invested Capital in the industry (Rs Crore)	15.10	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	3.69	●



Export Performance

Exports of the industry (Rs Crore)	101.62	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	-5.69	●
Market Penetration of the Industry	0.58	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	6.84	●
Employment Growth in the industry (CAGR %)	8.30	●
Gross Value Added per employee of the Industry (Rs '000)	481.92	●

DAGRA AND NAGAR HAVELI AND DAMAN AND DIU

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	71.50	●
Offence rate of IT/IP related crimes	0.50	●
Pendency Rate of Corruption Cases (%)	100.00	●
Police personnel (per lakh Population)	142.02	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	3.21	●
Credit to Industry (secondary) Sector (%)	50.10	●
Profit of the Industry (Rs Crore)	2652.56	●
Share of Industry's Fixed Capital (%)	28.33	●
Subsidy Share in State Revenue Expenditure (%)	0.00	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	61.73	●
Number of Industrial Corridors	0	●
LEADS Index Score	0.00	●
Power Deficit (%)	0.17	●
Factories in the Chemical Industry (%)	13.53	●
Renewable Energy generated (%)	95.92	●



Human Resources

Professionals in Chemical Industry (%)	1.45	●
Knowledge-intensive employment (%)	17.78	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	784.17	●
Higher education institutions having NAAC grade A and above (%)	0.00	●
People trained in PMKVY Training centre	10220	●
Trained Population in chemical industry (%)	1.60	●
Workforce share of the industry (%)	17.92	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	0	●
Factories in chemical industry having R&D units (%)	4.93	●
Number of Research and Development Institutes	8	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	9.92	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	5.56	●
Number of Operational SEZ	0	●
Number of Industrial Parks	0	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	9	●
Revealed Comparative Advantage	3.46	●
Specialization (Location Quotient) of the Downstream Chemical Products	2.50	●
Average Wage Level of the Chemical Industry (Rs.)	260465	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.49	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	15600.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	2033.70	●



Export Performance

Exports of the industry (Rs Crore)	13800.99	●
Industry's Export Product Concentration	0.30	●
Export Growth of the Industry (CAGR %)	12.18	●
Market Penetration of the Industry	3.47	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	5262.64	●
Employment Growth in the industry (CAGR %)	18.40	●
Gross Value Added per employee of the Industry (Rs '000)	1223.87	●

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	27.10	●
Offence rate of IT/IP related crimes	1.00	●
Pendency Rate of Corruption Cases (%)	90.50	●
Police personnel (per lakh Population)	410.26	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Human Resources

Professionals in Chemical Industry (%)	0.33	●
Knowledge-intensive employment (%)	27.45	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	554.23	●
Higher education institutions having NAAC grade A and above (%)	23.08	●
People trained in PMKVY Training centre	454846	●
Trained Population in chemical industry (%)	8.72	●
Workforce share of the industry (%)	2.34	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	45.74	●
Profit of the Industry (Rs Crore)	-122.69	●
Share of Industry's Fixed Capital (%)	10.56	●
Subsidy Share in State Revenue Expenditure (%)	9.15	●



Infrastructure

Industrial land available from total (%)	31.31	●
Number of Industrial Corridors	0	●
LEADS Index Score	3.35	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	3.68	●
Renewable Energy generated (%)	5.71	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	22918	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	398	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	2.51	●
Number of CIPET Centres	0.00	●
Ease of Doing Business Score	19.17	●
Number of Operational SEZ	0.00	●
Number of Industrial Parks	30	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	14	●
Revealed Comparative Advantage	0.17	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.60	●
Average Wage Level of the Chemical Industry (Rs.)	369219	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.02	●



Investment

FDI Inflows (Rs Crore)	28487.08	●
Invested Capital in the industry (Rs Crore)	1860.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	17.00	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	1230.82	●
Industry's Export Product Concentration	0.01	●
Export Growth of the Industry (CAGR %)	-4.48	●
Market Penetration of the Industry	4.38	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	188.74	●
Employment Growth in the industry (CAGR %)	4.47	●
Gross Value Added per employee of the Industry (Rs '000)	732.00	●

DELHI

● Outside Lower Range ● Outside Upper Range
● Within Range

JAMMU AND KASHMIR

● Outside Lower Range
 ● Outside Upper Range
● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	81.10	●
Offence rate of IT/IP related crimes	0.70	●
Pendency Rate of Corruption Cases (%)	97.90	●
Police personnel (per lakh Population)	610.25	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	1.36	●
Credit to Industry (secondary) Sector (%)	0.00	●
Profit of the Industry (Rs Crore)	1889.86	●
Share of Industry's Fixed Capital (%)	7.59	●
Subsidy Share in State Revenue Expenditure (%)	0.00	●



Policy

Does the state have a valid Export Promotion Policy?	Yes	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	No	●



Infrastructure

Industrial land available from total (%)	23.01	●
Number of Industrial Corridors	0	●
LEADS Index Score	2.64	●
Power Deficit (%)	20.01	●
Factories in the Chemical Industry (%)	9.82	●
Renewable Energy generated (%)	2.63	●



Human Resources

Professionals in Chemical Industry (%)	0.19	●
Knowledge-intensive employment (%)	18.06	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	328.95	●
Higher education institutions having NAAC grade A and above (%)	2.38	●
People trained in PMKVY Training centre	354550	●
Trained Population in chemical industry (%)	1.41	●
Workforce share of the industry (%)	16.22	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	1	●
Number of Start Ups	1364	●
Factories in chemical industry having R&D units (%)	9.52	●
Number of Research and Development Institutes	25	●
Spending on Research and Development (Rs Crore)	290.68	●



Business Environment

Chemical factories with ISO Certification (%)	27.21	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	5.00	●
Number of Operational SEZ	0	●
Number of Industrial Parks	58	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	2	●
Revealed Comparative Advantage	2.08	●
Specialization (Location Quotient) of the Downstream Chemical Products	2.25	●
Average Wage Level of the Chemical Industry (Rs.)	200000	●
Specialization (Location Quotient) of the Upstream Chemical Products	6.34	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	2130.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	38.94	●



Export Performance

Exports of the industry (Rs Crore)	446.12	●
Industry's Export Product Concentration	0.02	●
Export Growth of the Industry (CAGR %)	16.11	●
Market Penetration of the Industry	0.90	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	2462.42	●
Employment Growth in the industry (CAGR %)	5.82	●
Gross Value Added per employee of the Industry (Rs '000)	2052.02	●



LADAKH

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	88.00	●
Offence rate of IT/IP related crimes	0.00	●
Pendency Rate of Corruption Cases (%)	100.00	●
Police personnel (per lakh Population)	569.05	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Human Resources

Professionals in Chemical Industry (%)	0.12	●
Knowledge-intensive employment (%)	18.00	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	2477.24	●
Higher education institutions having NAAC grade A and above (%)	8.32	●
People trained in PMKVY Training centre	408446	●
Trained Population in chemical industry (%)	0.50	●
Workforce share of the industry (%)	4.44	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.0	●
Credit to Industry (secondary) Sector (%)	7.20	●
Profit of the Industry (Rs Crore)	0.00	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	0.00	●



Infrastructure

Industrial land available from total (%)	6.67	●
Number of Industrial Corridors	0	●
LEADS Index Score	0	●
Power Deficit (%)	20.01	●
Factories in the Chemical Industry (%)	0.00	●
Renewable Energy generated (%)	0.00	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	2	●
Number of Start Ups	3590	●
Factories in chemical industry having R&D units (%)	1.27	●
Number of Research and Development Institutes	142	●
Spending on Research and Development (Rs Crore)	543.49	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	0.00	●
Number of Operational SEZ	0	●
Number of Industrial Parks	0	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	26	●
Revealed Comparative Advantage	1.24	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.45	●
Average Wage Level of the Chemical Industry (Rs.)	₹0	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.00	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	0.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.00	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	20846.60	●
Industry's Export Product Concentration	0.13	●
Export Growth of the Industry (CAGR %)	6.29	●
Market Penetration of the Industry	2.32	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	4720.70	●
Employment Growth in the industry (CAGR %)	5.77	●
Gross Value Added per employee of the Industry (Rs '000)	1685.96	●



LAKSHADWEEP

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	77.80	●
Offence rate of IT/IP related crimes	2.90	●
Pendency Rate of Corruption Cases (%)	0.00	●
Police personnel (per lakh Population)	392.65	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	No	●
Does the state have Power Subsidies?	No	●
Does the state have a Quality Certification subsidy?	No	●
Does the state have Single window clearance?	No	●



Human Resources

Professionals in Chemical Industry (%)	0.00	●
Knowledge-intensive employment (%)	24.76	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	0.00	●
Higher education institutions having NAAC grade A and above (%)	0.00	●
People trained in PMKVY Training centre	270	●
Trained Population in chemical industry (%)	0.00	●
Workforce share of the industry (%)	0.00	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	0.00	●
Credit to Industry (secondary) Sector (%)	4.12	●
Profit of the Industry (Rs Crore)	0.00	●
Share of Industry's Fixed Capital (%)	0.00	●
Subsidy Share in State Revenue Expenditure (%)	0.00	●



Infrastructure

Industrial land available from total (%)	50.00	●
Number of Industrial Corridors	0	●
LEADS Index Score	0.00	●
Power Deficit (%)	0.00	●
Factories in the Chemical Industry (%)	0.00	●
Renewable Energy generated (%)	63.23	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	0	●
Factories in chemical industry having R&D units (%)	0.00	●
Number of Research and Development Institutes	0	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	0.00	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	13.33	●
Number of Operational SEZ	0	●
Number of Industrial Parks	0	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	0	●
Revealed Comparative Advantage	0.00	●
Specialization (Location Quotient) of the Downstream Chemical Products	0.00	●
Average Wage Level of the Chemical Industry (Rs.)	0	●
Specialization (Location Quotient) of the Upstream Chemical Products	0.00	●



Investment

FDI Inflows (Rs Crore)	0.00	●
Invested Capital in the industry (Rs Crore)	0.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	0.00	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	0.00	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	-100.00	●
Market Penetration of the Industry	0.00	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	0.00	●
Employment Growth in the industry (CAGR %)	0.00	●
Gross Value Added per employee of the Industry (Rs '000)	0.00	●

PUDUCHERRY

● Outside Lower Range
 ● Outside Upper Range
 ● Within Range

Enabling Conditions



Safety and Legal Environment

Charge Sheet Rate (%)	57.10	●
Offence rate of IT/IP related crimes	0.80	●
Pendency Rate of Corruption Cases (%)	37.50	●
Police personnel (per lakh Population)	225.28	●



Policy

Does the state have a valid Export Promotion Policy?	No	●
Does the state have Green industry incentives?	Yes	●
Does the state have Power Subsidies?	Yes	●
Does the state have a Quality Certification subsidy?	Yes	●
Does the state have Single window clearance?	No	●



Human Resources

Professionals in Chemical Industry (%)	0.41	●
Knowledge-intensive employment (%)	43.18	●
Participation in Engineering and Technology education (per lakh of 18-23 population)	3323.82	●
Higher education institutions having NAAC grade A and above (%)	6.98	●
People trained in PMKVY Training centre	63075	●
Trained Population in chemical industry (%)	0.00	●
Workforce share of the industry (%)	14.28	●



Financial & Fiscal Ecosystem

Chemical Industry units having foreign entities in the share capital (%)	36.69	●
Credit to Industry (secondary) Sector (%)	9.80	●
Profit of the Industry (Rs Crore)	2156.29	●
Share of Industry's Fixed Capital (%)	0.15	●
Subsidy Share in State Revenue Expenditure (%)	3.88	●



Infrastructure

Industrial land available from total (%)	0.00	●
Number of Industrial Corridors	0	●
LEADS Index Score	0.00	●
Power Deficit (%)	0.06	●
Factories in the Chemical Industry (%)	16.42	●
Renewable Energy generated (%)	1.03	●

Supporting Ecosystems



Research and Innovation Capacity

Number of Common Facility Centre	0	●
Number of Start Ups	0	●
Factories in chemical industry having R&D units (%)	4.73	●
Number of Research and Development Institutes	15	●
Spending on Research and Development (Rs Crore)	0.00	●



Business Environment

Chemical factories with ISO Certification (%)	24.26	●
Number of CIPET Centres	0	●
Ease of Doing Business Score	2.22	●
Number of Operational SEZ	0	●
Number of Industrial Parks	0	●



Related and Supporting Industries

Cluster Strength in manufacturing Sector	18	●
Revealed Comparative Advantage	0.98	●
Specialization (Location Quotient) of the Downstream Chemical Products	3.41	●
Average Wage Level of the Chemical Industry (Rs.)	225169	●
Specialization (Location Quotient) of the Upstream Chemical Products	2.95	●



Investment

FDI Inflows (Rs Crore)	3.18	●
Invested Capital in the industry (Rs Crore)	1060.00	●
Gross Fixed Capital Formation of the industry. (Rs Crore)	272.40	●

Performance - Outcomes



Export Performance

Exports of the industry (Rs Crore)	420.51	●
Industry's Export Product Concentration	0.00	●
Export Growth of the Industry (CAGR %)	3.56	●
Market Penetration of the Industry	1.05	●



Market Performance

Gross Value Added of the Industry (Rs Crore)	2702.18	●
Employment Growth in the industry (CAGR %)	4.93	●
Gross Value Added per employee of the Industry (Rs '000)	3380.26	●



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