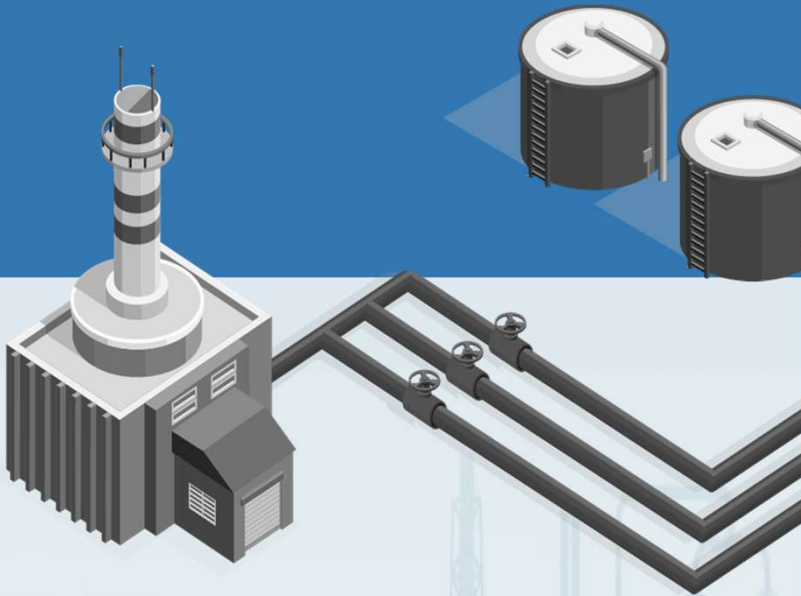




2025

CHEMI-SANKHYA

Data Chronicles



Insights from Department of
Chemicals & Petrochemicals

(Status as on 31.03.2025)



CHEMI-SANKHYA 2025

Data Chronicles

**Insights from Department of
Chemicals & Petrochemicals**

(Status as on 31.03.2025)



**Statistics & Monitoring Division
Department of Chemicals and Petrochemicals
Ministry of Chemicals and Fertilizers
Government of India**





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1. Introduction

The Ministry of Chemicals and Fertilizers formulates and implements policies to ensure the availability, affordability, and quality of chemical and fertilizer products while promoting productivity, sustainability, innovation, and self-sufficiency in these sectors.

The Chemical and Petrochemical sector plays a crucial role in meeting society's essential needs, including food, water, shelter, and healthcare. In order to enhance domestic production, achieve self-reliance, and reduce import dependency, India has initiated perspective planning for the chemical industry by assessing existing and upcoming capacities to support sustainable economic growth.

The Statistics and Monitoring (S&M) Division of the Department of Chemicals and Petrochemicals (DCPC) is responsible for compiling statistical information relating to the production and installed capacity of selected chemical and petrochemical industries. In addition, the Division also compiles data on the Import and Export of basic chemical and petrochemical products, which is sourced from the Directorate General of Commercial Intelligence and Statistics (DGCI&S) under the Ministry of Commerce and Industry.

The chemical industry permeates every segment of the national economy and plays a vital role in shaping individual lives as well as contributing significantly to India's overall industrial and economic growth.

The share of Gross Value Added (GVA) of the Chemicals Sector in the Manufacturing Sector during FY 2023-24 was about 8.1% at current prices, contributing 1.2% to the national GVA (as compared to 9.8% in FY 2019-20). The GVA of the Chemicals Sector has recorded an average CAGR of 4.8% during the period FY 2018-19 to FY 2023-24.

The Compound Annual Growth Rate (CAGR) of production of Basic Major Chemicals during FY 2024-25 was 3.9% over the past ten years. In comparison, the annual production of Basic Major Petrochemicals increased by 5.8% over the preceding year, with a CAGR of 2.5% over the same ten-year period.

The installed capacity utilization rates for Basic Major Chemicals and Basic Major Petrochemicals during FY 2024-25 were 79.2% and 85.3%, respectively. The overall capacity utilization for the sector during the same period stood at 83.8%.

2. Vision of DCPC

Sustainable Growth

To promote eco-friendly technologies, waste reduction, resource optimization, and energy efficiency.

Global Leadership

To establish India as a global leader in the CPC sector, excelling in quality, cost-effectiveness, and reliability.

Innovation & Research

To foster a culture of continuous learning and support cutting-edge research, leading to the development of novel and sustainable products, processes, and technologies.



Circular Economy

To embrace the principles of a circular economy, promoting recycling, upcycling, and waste-to-value approaches to minimize waste and resource depletion.

Skill Development and Employment

To empower the Indian workforce through comprehensive skill development programs, creating employment opportunities and enhancing industry productivity.

Inclusive Growth

To promote inclusive growth by encouraging the participation of small and medium-sized enterprises (SMEs) and entrepreneurs, facilitating their integration into the global value chain.

3. Activities of S&M Division of DCPC

ChemIndia – Chemical Inventory of India



Collection, compilation and management of Statistical data on various factors of selected CPC indicators .



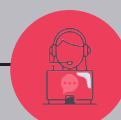
Resource Mapping of CPC Industries



Publication of “Chemical and Petrochemical Statistics at a Glance.



To Provide monthly data support to NSO, MoSPI in respect of CPC Sector for the compilation of Index of Industrial Production (IIP)



To provide Data support to various Divisions in the Department for formulation of policies and programme.



4. National Industrial Classification (NIC)

NIC-2008: The Central Statistics Office (CSO), MOSPI being nodal Statistical Authority in the Country is vested with the responsibility of setting up Standards for collection, compilation and dissemination of Statistical data. The need for comparability of Statistics available from various sources, on different aspects of the economy and usability of such data for economic analysis necessitated the need of standardization of a system of classification.

CSO being responsible for coordination of statistical activities in the country and with a view to evolve and maintain statistical standards, initiated task of bringing out Standard Industrial Classification as early as in 1960 and evolved a Standard Industrial Classification (SIC) in 1962. At present, NIC-2008 is applicable.

Activities are categorized into hierarchical "activity groups." The hierarchy includes sections (alphabetically coded from A to U), divisions (2-digit numeric code), groups (3-digit numeric code), classes (4-digit numeric code), and sub-classes (5-digit numeric code).

Level		Description
Section		Manufacturing
Division 20		Manufacture of Chemicals and Chemical Products
Group	201	Manufacture of Basic Chemicals, Fertilizer and Nitrogen Compounds, Plastics and Synthetic Rubber in Primary Forms
	203	Manufacture of man-made Fibre
Class	2011	Manufacture of Basic Chemicals
	2030	Manufacture of man-made Fibre
Sub-Class	20111	Manufacture of liquefied or compressed inorganic industrial or medical gases (elemental gases, liquid or compressed air, refrigerant gases, mixed industrial gases etc.)
	20301	Manufacture of synthetic or artificial filament
Division 22		Manufacture of rubber and plastics products
Group	221	Manufacture of rubber products
	222	Manufacture of plastics products
Class	2211	Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres
	2220	Manufacture of plastics products
Sub-Class	22111	Manufacture of rubber tyres and tubes for motor vehicles, motorcycles, scooters, three-wheelers, tractors and aircraft
	22201	Manufacture of semi-finished of plastic products (plastic plates, sheets, blocks, film, foil, strip etc.)

Salient Features of NIC-2008

- NIC-2008 replaces sections A to Q of NIC-2004 with sections A to U. NIC-2008 has 21 sections, 88 divisions, 238 groups, 403 classes, and 1304 sub-classes.
- NIC-2008 aligns with ISIC Rev.4 up to 4-digit classes.
- The concept of shadow classes from NIC-2004 is eliminated in NIC-2008, focusing more on activity rather than operation type and scale.
- Some 5-digit sub-classes in NIC-2004 are now separate 4-digit classes in NIC-2008.
- Explanatory notes from ISIC Rev.4 are incorporated as Annexure in NIC-2008.

5. Glossaries



Polymer: Large molecule made up of repeating subunits (monomers) used in plastics and fibers.



Monomer: Small molecule that combines with others to form a polymer.



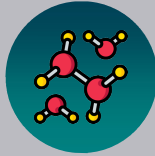
Catalyst: Substance that speeds up chemical reactions without being consumed.



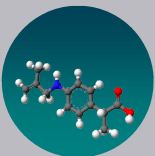
Feedstock: Raw material used in chemical and petrochemical production.



Distillation: Process of separating liquids based on boiling points.



Olefins: Unsaturated hydrocarbons with carbon-carbon double bonds used in plastics production.



Aromatics: Chemical compounds with ring structures used in polymers and solvents.



Cracking: Cracking is the process of breaking down large hydrocarbon molecules into smaller ones.



Harmonized System (HS): Internationally standardized system for classifying traded products. It consists of six digits, with additional digits added by countries for further classification.

6. Economic Indicators



Gross Domestic Product (GDP): Measure of total economic output within a country.

$$\text{GDP} = \text{C} + \text{I} + \text{G} + (\text{X} - \text{M})$$

- **C** represents private consumption expenditures, including spending on goods and services by individuals and households.
- **I** represents gross private domestic investment, including business investments in machinery, equipment, and construction of structures.
- **G** represents government spending on goods and services.
- **X** represents exports of goods and services.
- **M** represents imports of goods and services.

$$\text{GDP} = \text{Total Value of Output} - \text{Value of Intermediate Goods}$$



Market Size: The market size refers to the total potential demand for goods and services within the country.

$$\text{Market Size} = \text{GDP (at Current Prices)}$$



Gross Value Added (GVA): Measure of the economic value created by a sector or entity, excluding input costs. It is used to assess productivity and is a component of GDP.

$$\text{GVA} = \text{GDP} - \text{Taxes} + \text{Subsidies}$$



Compound Annual Growth Rate (CAGR): Measure of how an investment or business has grown over a specific period of time. It takes into account the effect of compounding, which means that the growth builds upon itself.

$$\text{CAGR} = \left(\frac{\text{Ending Value}}{\text{Beginning Value}} \right)^{\left(\frac{1}{\text{Number of Years}} \right)} - 1$$

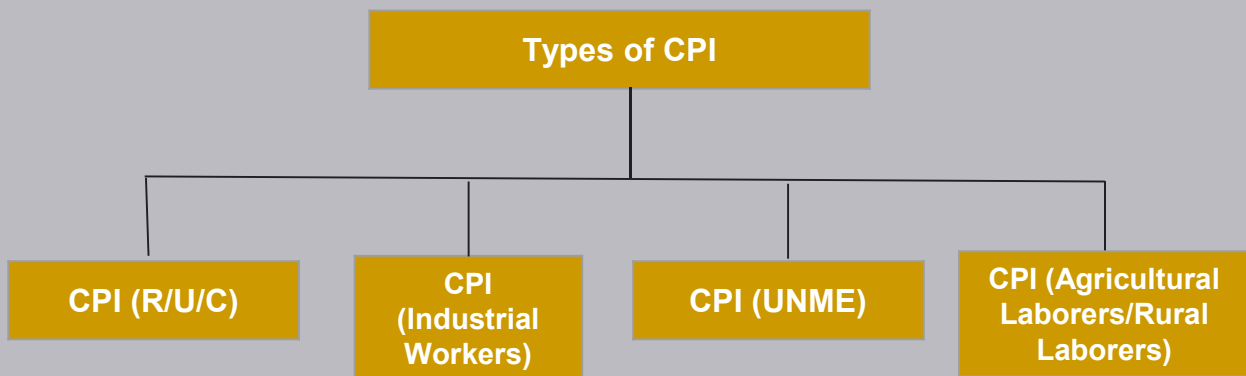
7. Indices



Index of Industrial Production (IIP): It is a key economic indicator that measures the changes in the production volume of various industrial sectors within a country over a specific period of time.



Consumer Price Index (CPI): It is a crucial economic indicator used to measure the average change in the prices of a basket of goods and services consumed by households over a period.



Wholesale Price Index (WPI): Measures price changes for goods at the wholesale level. It helps track inflation and price trends in the wholesale market.

$$\text{WPI} = (\text{Current Period Price} - \text{Base Period Price}) / \text{Base Period Price} \times 100$$

8. Global Scenario



Ranking

India ranked 7th in the world and 4th in Asia in terms of global sale of chemicals.



Exports

Exports of major chemicals and petrochemicals from India stood at USD 20.4 billion in 2024, accounting for a 2.5% share of World (excluding pharmaceuticals) <https://indiantradeportal.in/>



Imports

India ranks 8th in world imports & 14th in the world exports of chemicals (excluding pharmaceutical products)



Chemical Products

Covers > 80,000 products, inevitable part of daily life & employs ~1 million People



FDI Inflow

Contributed 3.0% of total FDI equity inflows

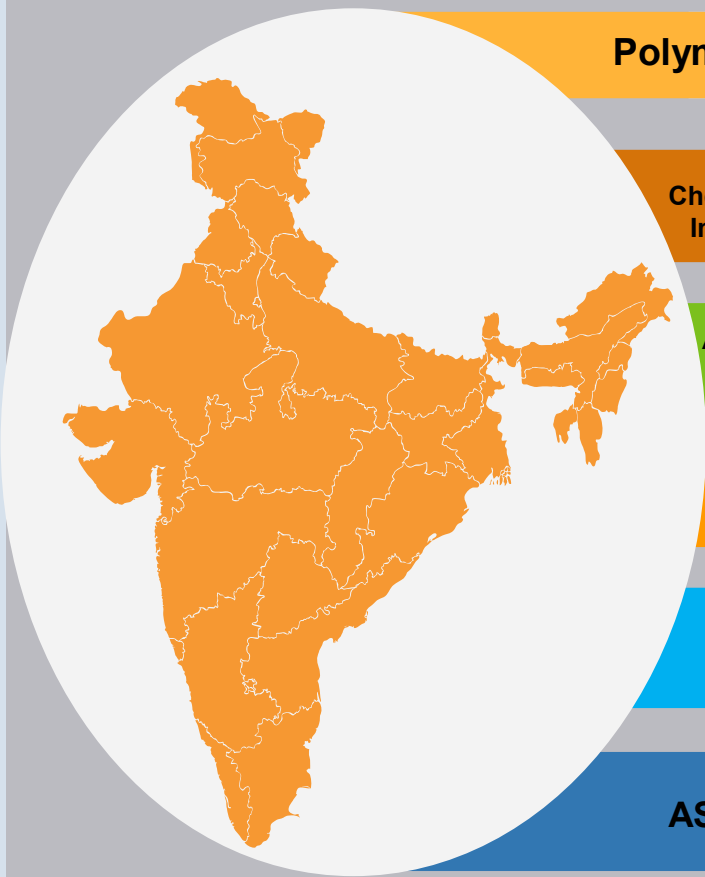


Market Size

The Indian chemical and petrochemical market, valued at around \$250 billion in 2024.



9. Indian Scenario



Polymer

The production of polymers has increased from 10.04 million tonne in 2018-19 to 13.37 million tonne in 2024-25.

Chemical Import

India's imports of chemicals (excluding pharmaceutical products) were 75 US\$ billion in 2023, India's share in the world imports during 2022-23 is 3.1% share of World imports of chemicals (excluding pharmaceutical products).

All Economic Activity

Chemical and Chemical products sector, excluding pharmaceuticals (Industry Division 20 of NIC 2008), accounted for 1.2% of the GVA for All Economic Activity in 2023-24.

GVA

GVA of Chemical Sector has grown with CAGR of 4.8% during the period 2018-19 to 2023-24.

IIP

The average Indices of Industrial Production (IIP) for the Chemical and Chemical products (Industry Division 20 of NIC 2008) for the year 2024-25 stood at 129.3, which is 1.5% more as compared to the previous year.

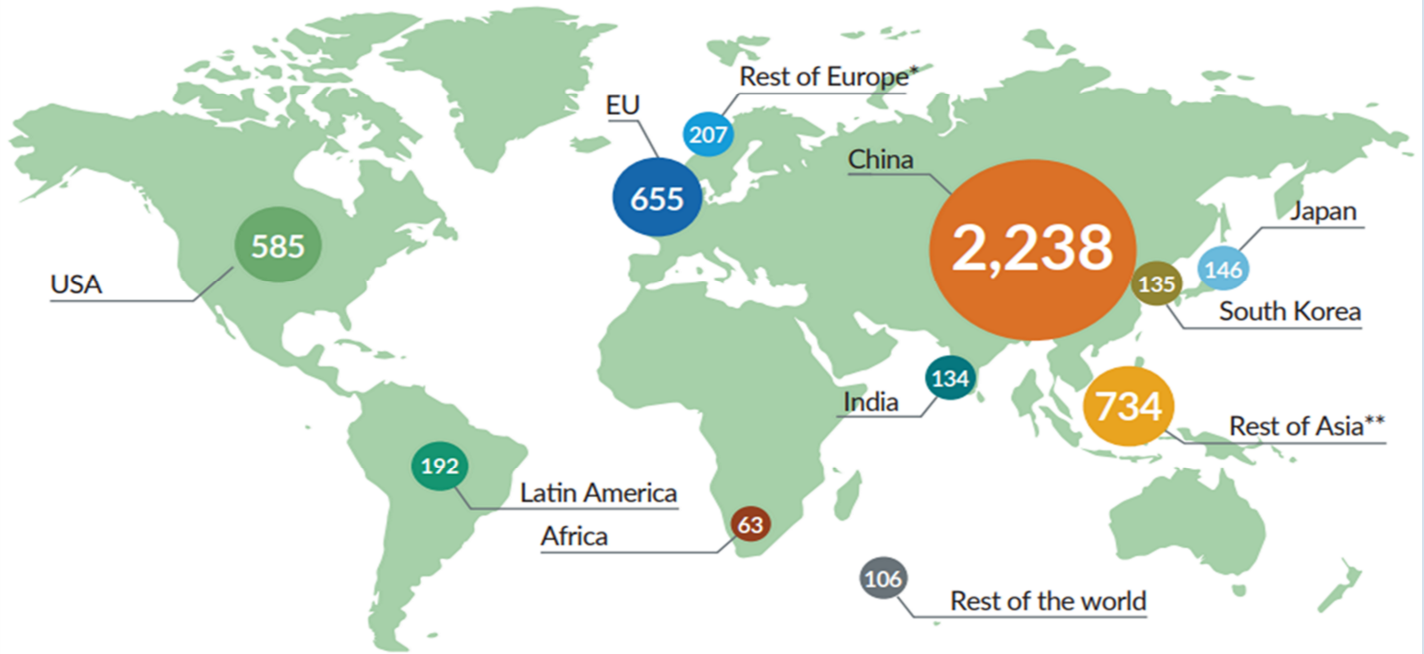
ASI

According to the Annual Survey of Industries (ASI) 2023-24 (factory sector), 11.41 lakh persons were engaged in Chemicals and Chemical Products (Industry Division 20, NIC 2008), in organized sector in medium and large-scale industries, whereas 1.96 crore persons engaged in all industries during 2023-24.

10. Market Share in the World

10.1 World Chemical Sales

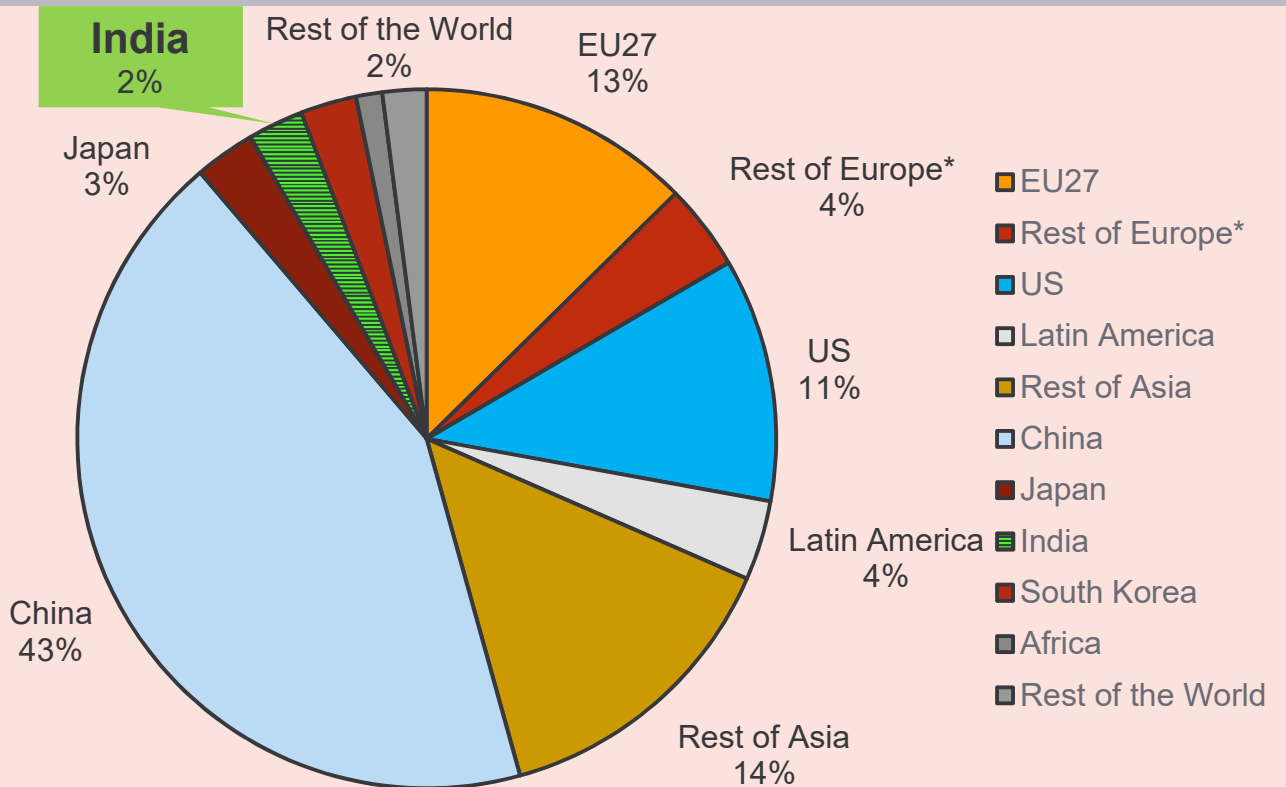
World chemical sales (2023, €5,195 billion)



Source: Cefic Chemdata International
 *Rest of Europe covers UK, Switzerland, Norway, Turkey, Russia and Ukraine
 **Asia excluding China, India, Japan and South Korea

Unless specified, chemical industry excludes pharmaceuticals
 Unless specified, EU refers to EU 27

10.2 Top 10: Sales – Chemical (20) – World Market Share (%)



Source: Cefic

10. Market Share in the World

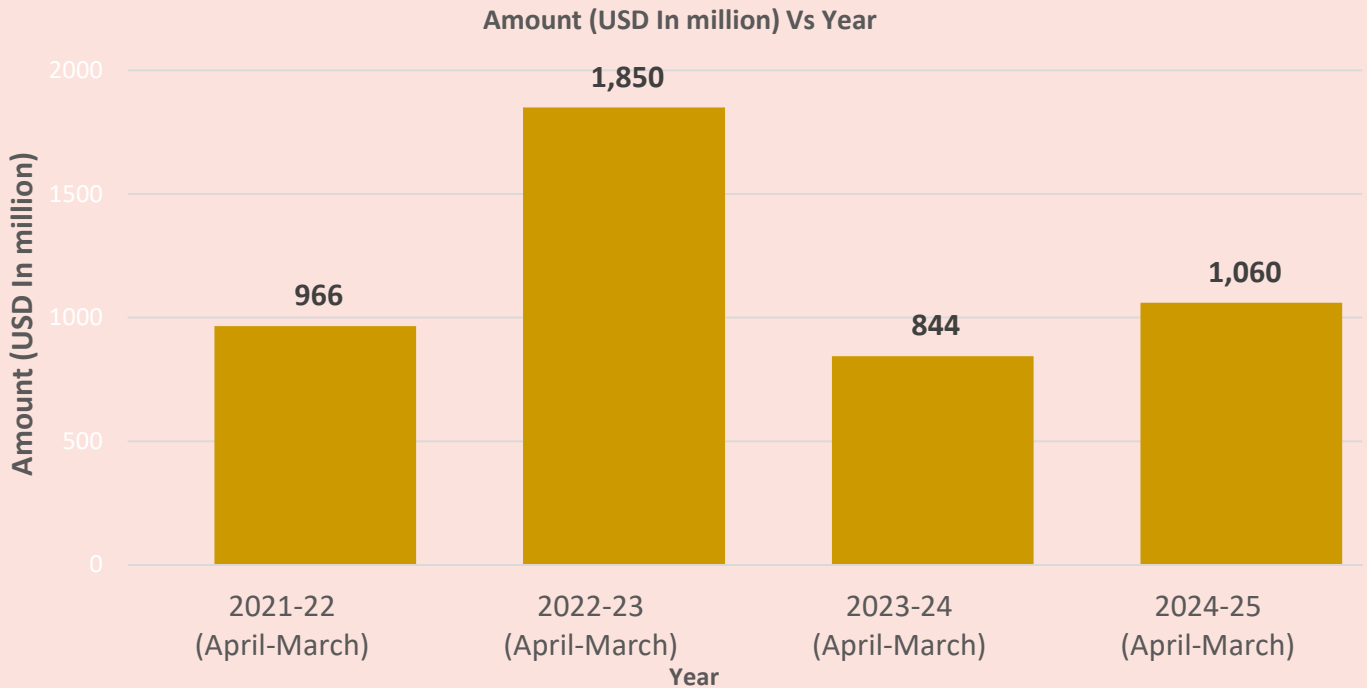
10.3 India's share in World Export and Import of Chemicals

Chapters	Description	India's Share in World Export	Rank	India's Share in World Import	Rank
Chapter 28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare- earth metals, of radioactive elements or of; isotopes	2.2%	15	5.8%	4
Chapter 29	Organic chemicals	4.5%	8	5.3%	5
Chapter 32	Tanning Or Dyeing	5.0%	5	3.5%	8
Chapter 38	Miscellaneous chemical products	2.6%	11	2.9%	10
Chapter 39	Plastics and articles thereof	1.1%	23	3.2%	7
Chapter 40 Subgroup 02 (EXIM 2002)	Synthetic rubber and factice derived from oils, in primary Forms or in plates, sheets or strip; mixtures of any product of heading 4001 with any product of this heading, in primary forms or in plates, sheets or strip	0.7%	23	5.0%	4
Chapter 54	Man-made filaments	3.4%	5	4.1%	7
Chapter 55	Man-made staple Fibre	4.6%	5	3.0%	9

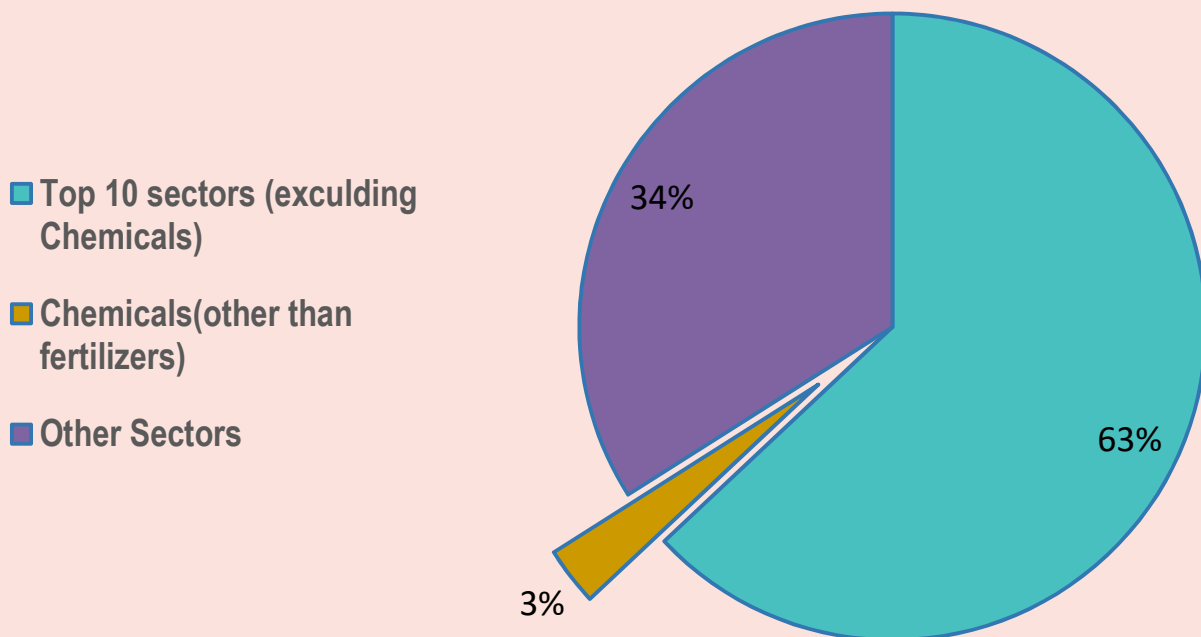
Source: UN Comtrade Database

11. Market Share in India

11.1 FDI Equity inflow over the years in Chemical Industry in India (2021- 2025)



11.2 Sectors Attracting Highest FDI Equity Inflow (2024-25)

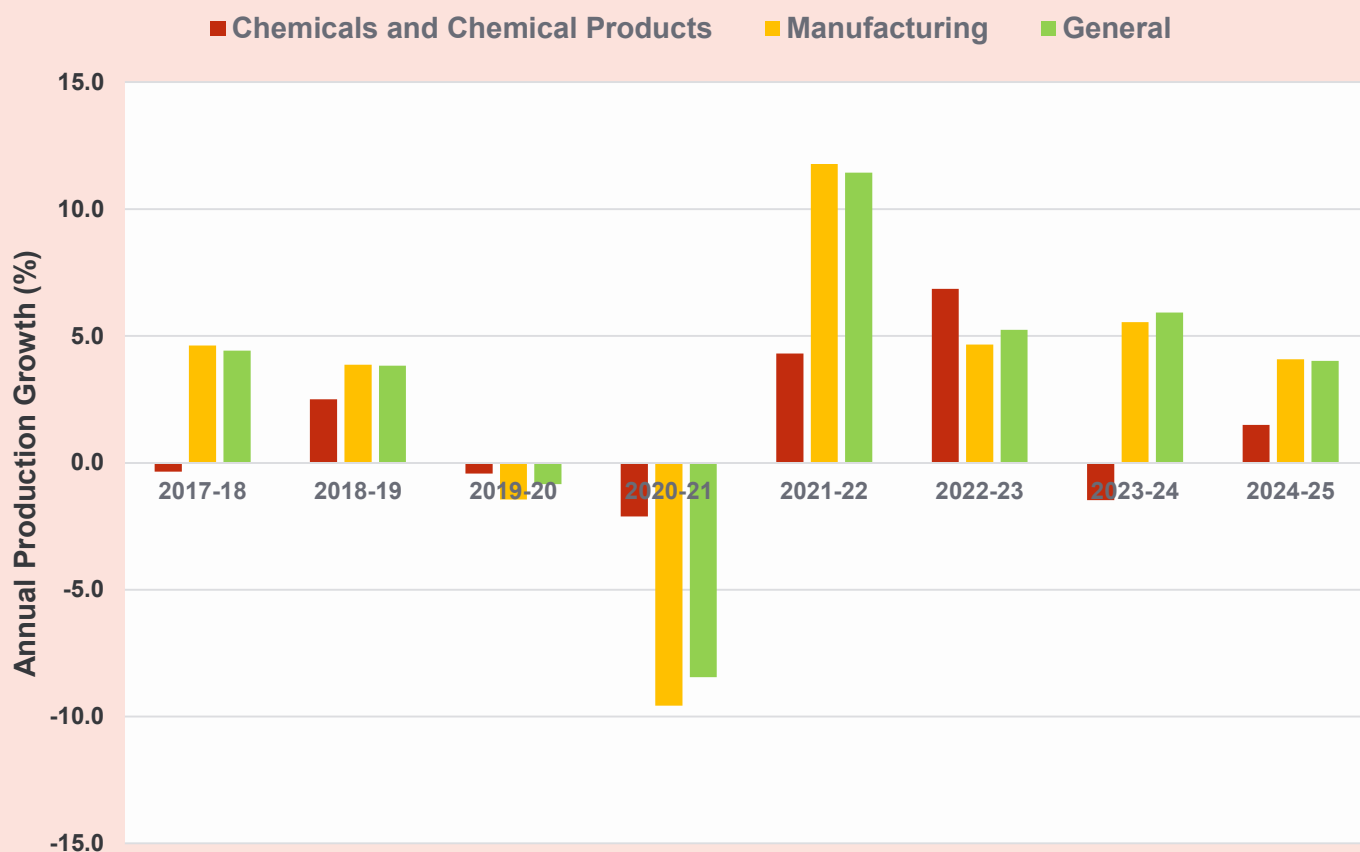


11. Market Share in India

11.3 Annual growth rate for Industrial Production (%)

(Based on Index of Industrial Production with Base year: 2011-12)

Year	Chemicals and Chemical Products	Manufacturing	General
2017-18	-0.3	4.6	4.4
2018-19	2.5	3.9	3.8
2019-20	-0.4	-1.4	-0.8
2020-21	-2.1	-9.6	-8.4
2021-22	4.3	11.8	11.4
2022-23	6.9	4.7	5.2
2023-24	-1.5	5.5	5.9
2024-25	1.5	4.1	4.0



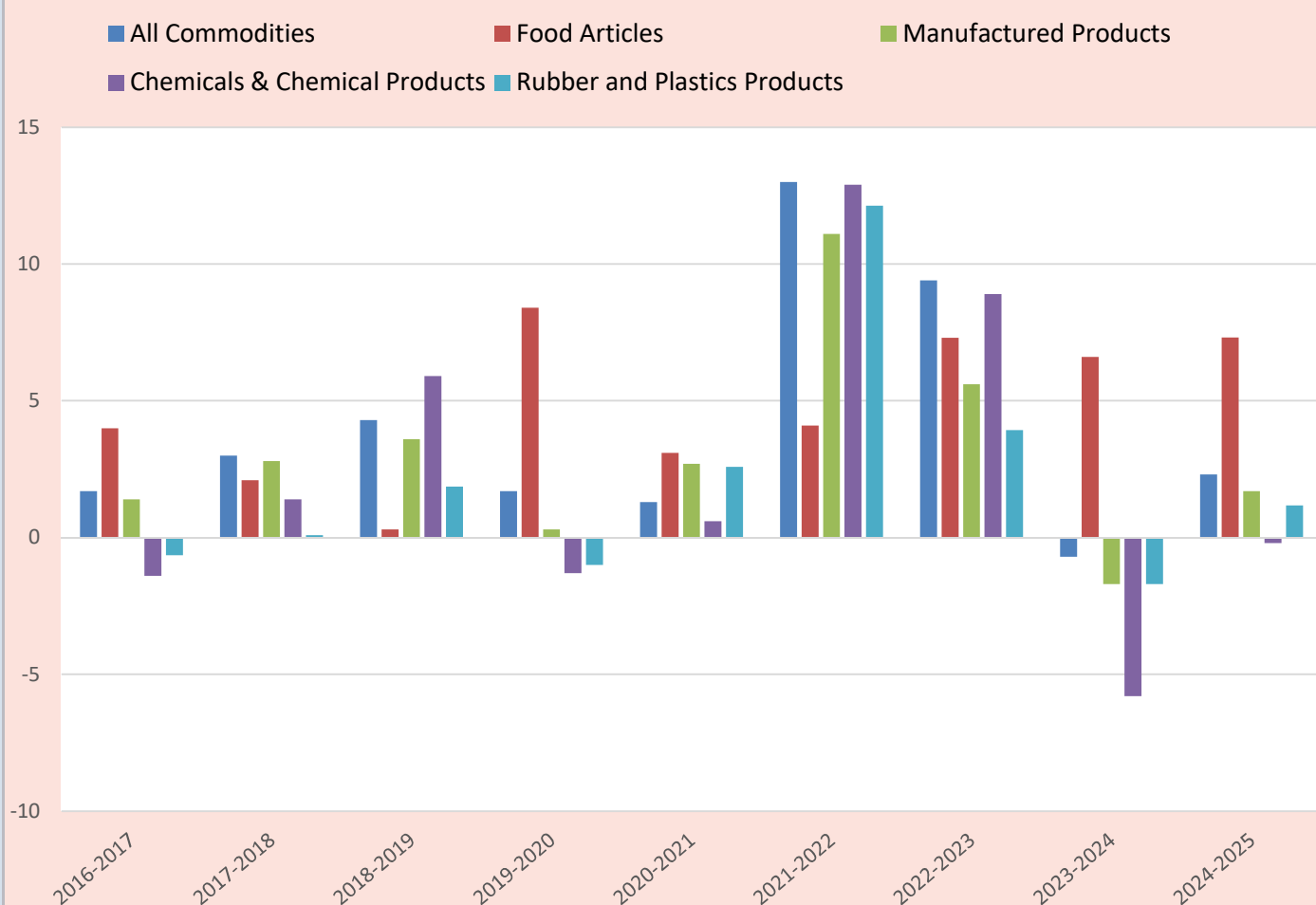
Source: MoSPI

11. Market Share in India

11.4 Annual Inflation (%)

(Based on Wholesale Price Index with Base year: 2011-12)

Year	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products	Rubber and Plastics Products
2016-2017	1.7	4	1.4	-1.4	-0.65
2017-2018	3	2.1	2.8	1.4	0.09
2018-2019	4.3	0.3	3.6	5.9	1.86
2019-2020	1.7	8.4	0.3	-1.3	-1.00
2020-2021	1.3	3.1	2.7	0.6	2.58
2021-2022	13	4.1	11.1	12.9	12.13
2022-2023	9.4	7.3	5.6	8.9	3.93
2023-2024	-0.7	6.6	-1.7	-5.8	-1.70
2024-2025	2.3	7.3	1.7	-0.2	1.18

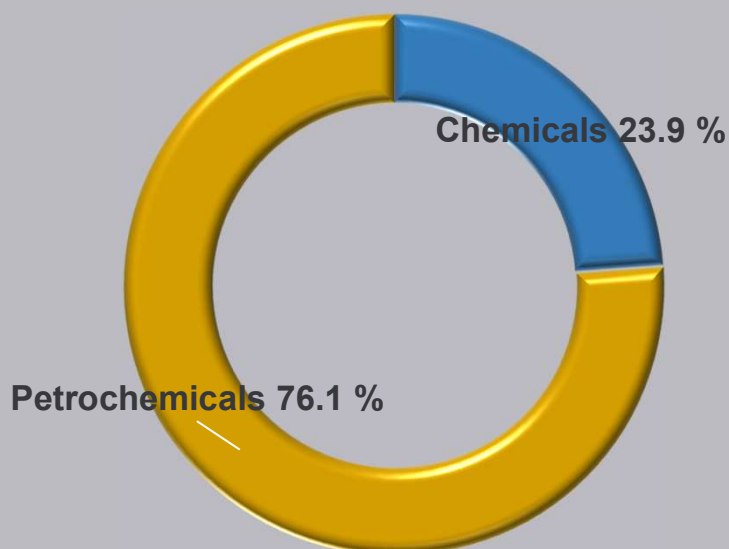


Source: DPIIT

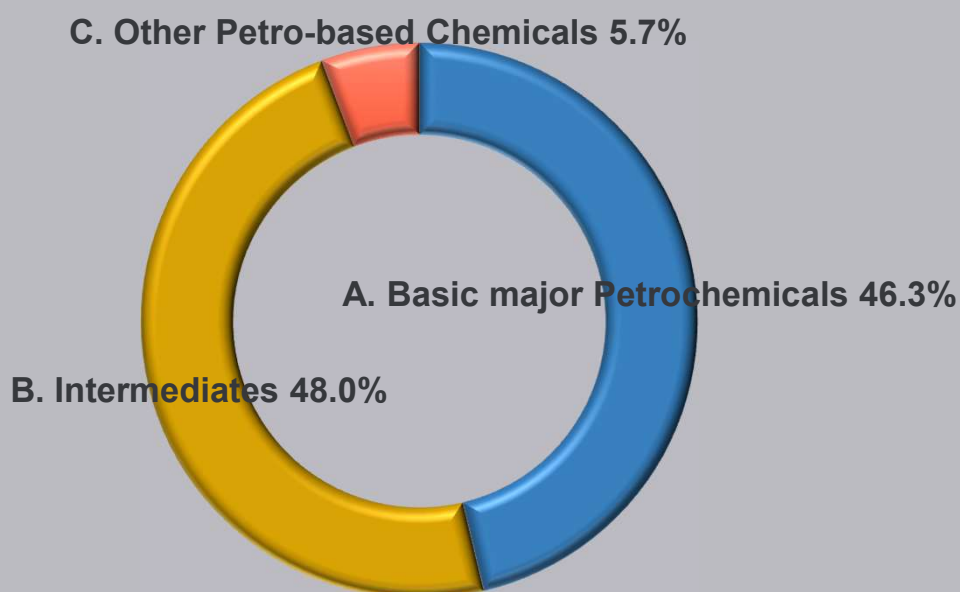
11. Market Share in India

11.5. Production of Major Chemicals & Petrochemicals in India (2024-2025)

11.5.1. Production of Major Chemicals & Petrochemicals in India



11.5.2. Production of Selected Petrochemicals in India



Source: DCPC

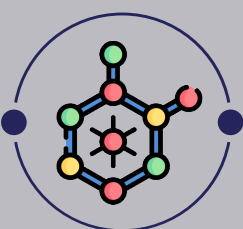
12. Group-wise Bifurcation of Chemical & Petrochemical Products and their Uses:

Chemical



Alkali Chemicals

1. Soap and detergent manufacturing
2. Water treatment to adjust pH levels
3. pH regulation in agriculture



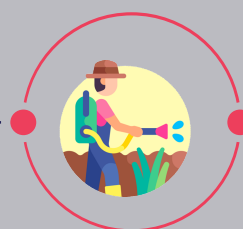
Inorganic Chemicals

1. Fertilizers for improved crop yield
2. Pigments and dyes in paints and textiles
3. Construction materials like cement and gypsum



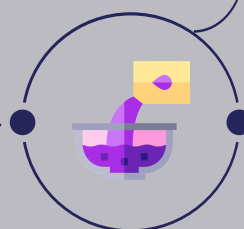
Organic Chemicals

1. Active ingredients in drugs.
2. Building blocks for the production of plastics, synthetic fibers, coatings, and adhesives
3. Preservatives, flavourings, and colorants in processed foods



Pesticides (Technical Grade)

1. In agriculture to protect crops from pests such as insects, weeds, and diseases.
2. For controlling parasites, such as ticks and fleas that can infest livestock and cause harm to their health.
3. Reduce the spread of diseases like malaria, dengue fever, and Lyme disease.

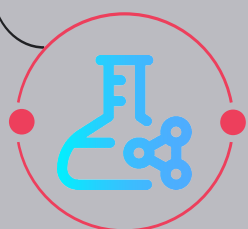


Dyes & Pigments

1. In the textile industry to colour fabrics and fibers, such as cotton, silk, wool, and synthetic materials.
2. In printing inks for applications like newspaper printing, packaging materials, labels, and decorative printing.
3. Essential components in paints, varnishes, and coatings

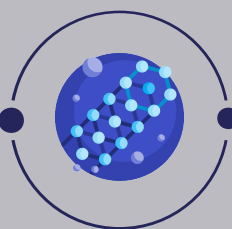
12. Group-wise Bifurcation of Chemical & Petrochemical Products and their Uses:

Petrochemical



Synthetic Fibres

1. Polyester, nylon, acrylic, and spandex are widely used in the production of textiles and clothing.
2. Manufacturing of carpets, rugs, upholstery, curtains, and bedding materials.
3. Reinforcement materials in composites for construction, automotive, and aerospace industries.



Polymers

1. In a vast array of products, including packaging materials, containers, toys, automotive parts, electronics, pipes, and furniture.
2. Formulation of adhesives and sealants.
3. Binders in coatings and paints forming a protective layer on surfaces, providing durability, resistance to weathering, and aesthetic appeal.



Synthetic Rubber (Elastomers)

1. Manufacturing of automobile tires, including passenger car tires, truck tires, and motorcycle tires.
2. Production of industrial belts for power transmission and conveyor systems.
3. Production of sporting goods such as balls, grips, and protective gear.



Synthetic Detergent Intermediates

1. Production of personal care products, including shampoos, body washes, hand soaps, and facial cleansers.
2. Formulation of dishwashing detergents, including dishwashing liquids, powders, and dishwasher detergents.
3. Specialty cleaning products designed for specific applications, such as carpet cleaners, upholstery cleaners, and stain removers.

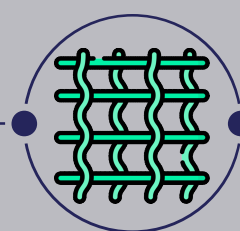
12. Group-wise Bifurcation of Chemical & Petrochemical Products and their Uses:

Petrochemical



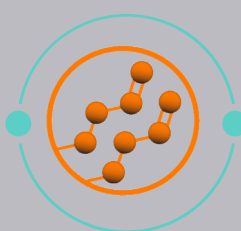
Performance Plastics

1. In engine components, fuel systems, electrical connectors, interior trims, body panels, and lightweight structural parts.
2. Medical devices, implants, surgical instruments, diagnostic equipment, and pharmaceutical packaging.
3. In connectors, insulators, circuit boards, cable insulation, and electronic enclosures.



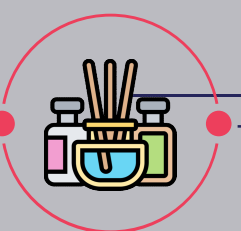
Fiber Intermediates

1. Purified Terephthalic Acid (PTA) is a key fiber intermediate used in the production of polyester fibers
2. Caprolactam is a fiber intermediate used in the production of nylon 6 fibers.
3. Production of nylon 6,6 fibers.



Olefins

1. Olefins, such as Propylene and butene, used as solvents in various industrial processes for dissolving or dispersing substances, cleaning surfaces, and as reaction media in chemical reactions.
2. Olefins, such as polyalphaolefins (PAO), are used as base oils in the production of lubricants.
3. Olefins, particularly ethylene and propylene, serve as important feedstock's for the production of fuels and energy sources.



Aromatics

1. Enhance the performance of paints, varnishes, and protective coatings.
2. Building blocks in the synthesis of pharmaceutical compounds.
3. Perfumes, colognes, cosmetics, soaps, and household products to impart pleasant scents.



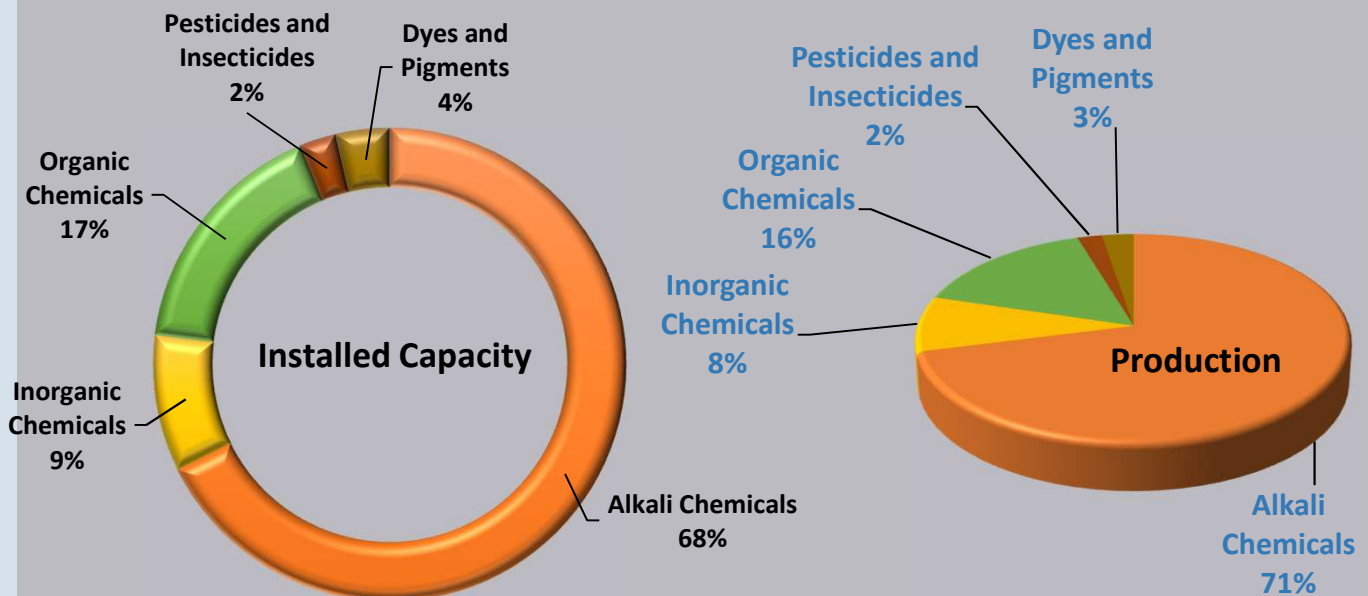
Other Petro-based Chemicals

1. Butanol can be used as a growth regulator in agriculture to promote fruit development and improve crop yield.
2. Polyols are utilized in the production of resins and coatings.
3. Production of pharmaceuticals, pesticides, and rubber chemicals.

13. Current Scenario

13.1 Major Chemicals and their share in Installed Capacity & Production during 2024-2025

Group	Capacity	Production
<i>(Figures in 000'MT)</i>		
Alkali Chemicals	11 943	9 938
Inorganic Chemicals	1 650	1 197
Organic Chemicals	2 971	2 189
Pesticides (Tech.)	438	287
Dyes & Pigments	647	372

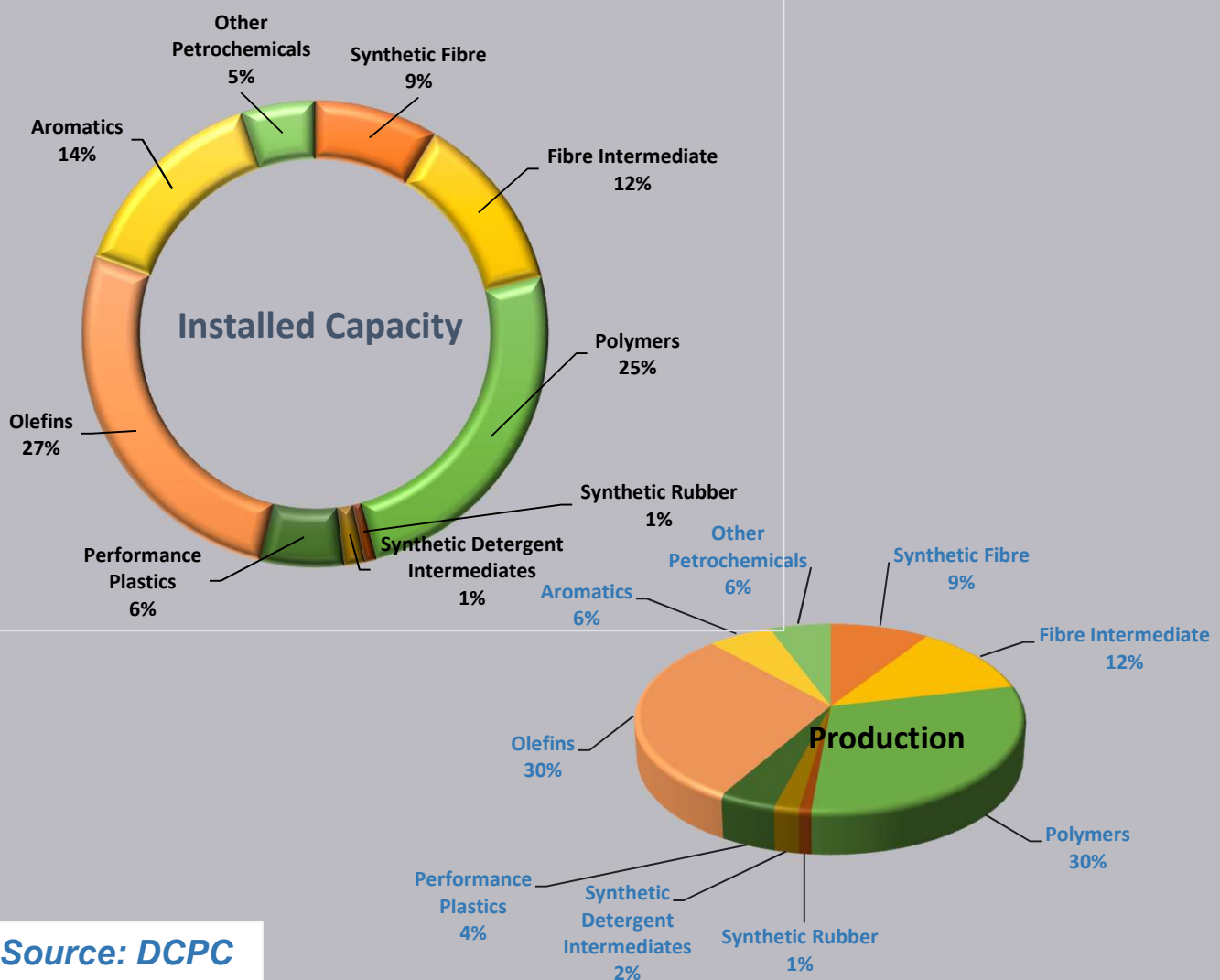


Source: DCPC

13. Current Scenario

13.2 Major Petrochemicals and their share production during 2024-2025

Group	Capacity	Production
<i>(Figures in 000'MT)</i>		
Synthetic Fibre	4504	4137
Fibre Intermediate	6500	5440
Polymers	12952	13367
Synthetic Rubber	403	411
Synthetic Detergent Intermediates	722	823
Performance Plastics	3060	1904
Olefins	13904	13284
Aromatics	7561	2696
Other Petrochemicals	2689	2572



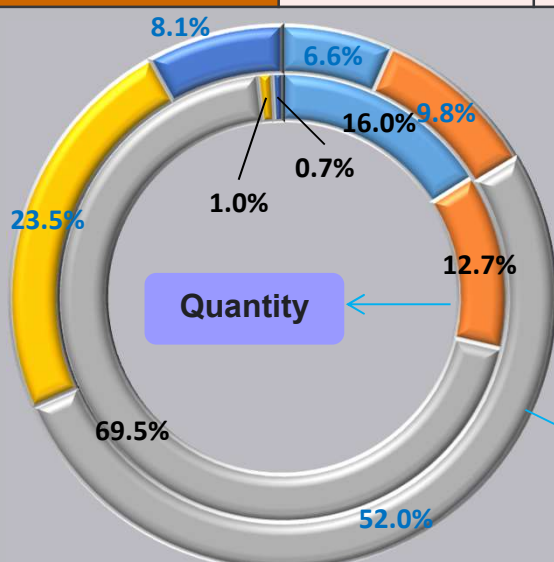
Source: DCPC

13. Current Scenario

13.3 Major Chemicals and their share in Import and Export quantity and value during 2024-2025

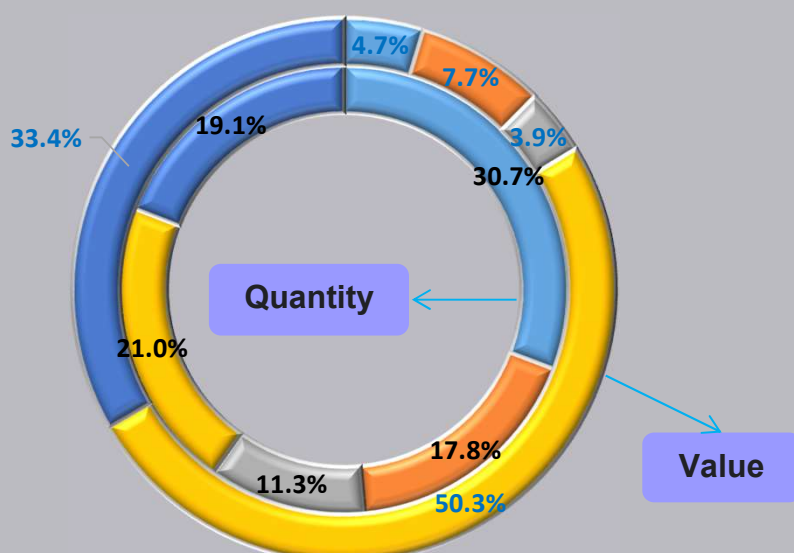
Group	Import		Export	
	Quantity	value	Quantity	Values
(Quantity in MT, Values in Rs. Lakh)				
Alkali Chemicals	1176093	261710	862868	293860
Inorganic Chemicals	928074	387640	499412	482483
Organic Chemicals	5099717	2055883	318247	244114
Pesticides and Insecticides	75636	930296	590526	3145412
Dyes and Pigments	54942	319220	535642	2089476

Import



- Alkali Chemicals
- Inorganic Chemicals
- Organic Chemicals
- Pesticides and Insecticides
- Dyes and Pigments

Export



- Alkali Chemicals
- Inorganic Chemicals
- Organic Chemicals
- Pesticides and Insecticides
- Dyes and Pigments

Source: DCPC

13. Current Scenario

13.4 Major Petrochemicals and their share in Import and Export quantity and value during 2024-2025

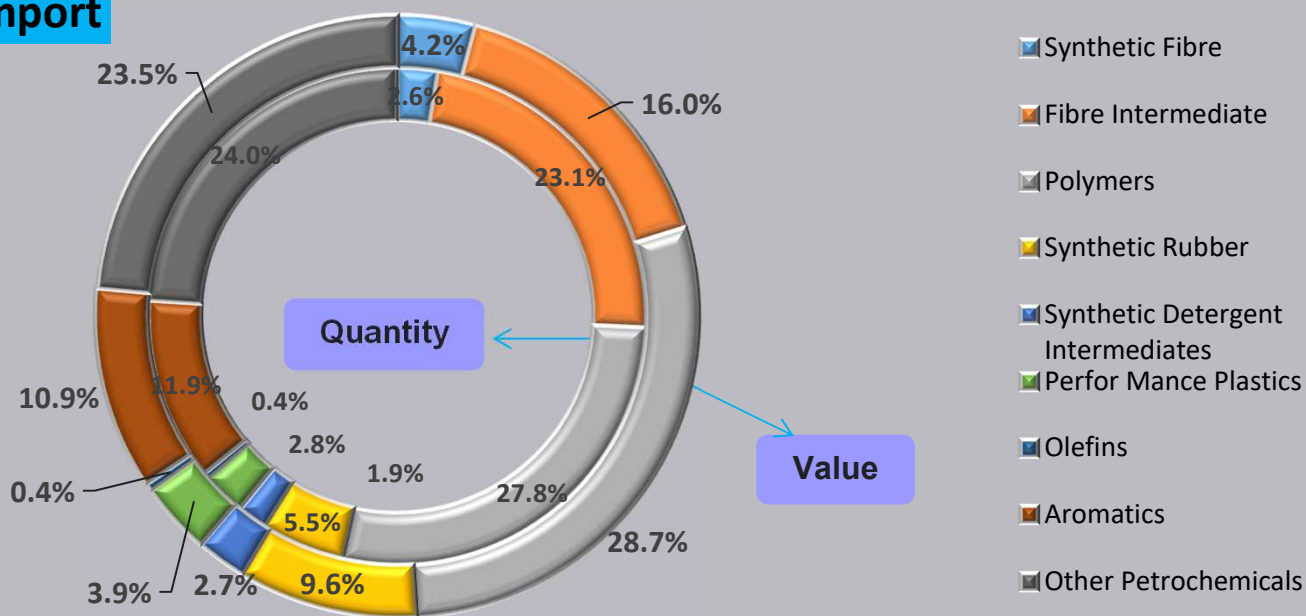
Group	Import		Export	
	Quantity	value	Quantity	Values
<i>(Quantity in MT, Values in Rs. Lakh)</i>				
Synthetic Fibre	397816	576082	806398	993853
Fibre Intermediate	3486813	2191973	36919	43434
Polymers	4191350	3932223	743167	704720
Synthetic Rubber	829492	1319243	111210	132704
Synthetic Detergent Intermediates	287428	368395	3158	4962
Performance Plastics	426614	532831	141716	224729
Olefins	63174	57361	188344	192291
Aromatics	1795425	1486329	1697190	1381349
Other Petrochemicals	3620579	3219382	216469	215932

Source: DCPC

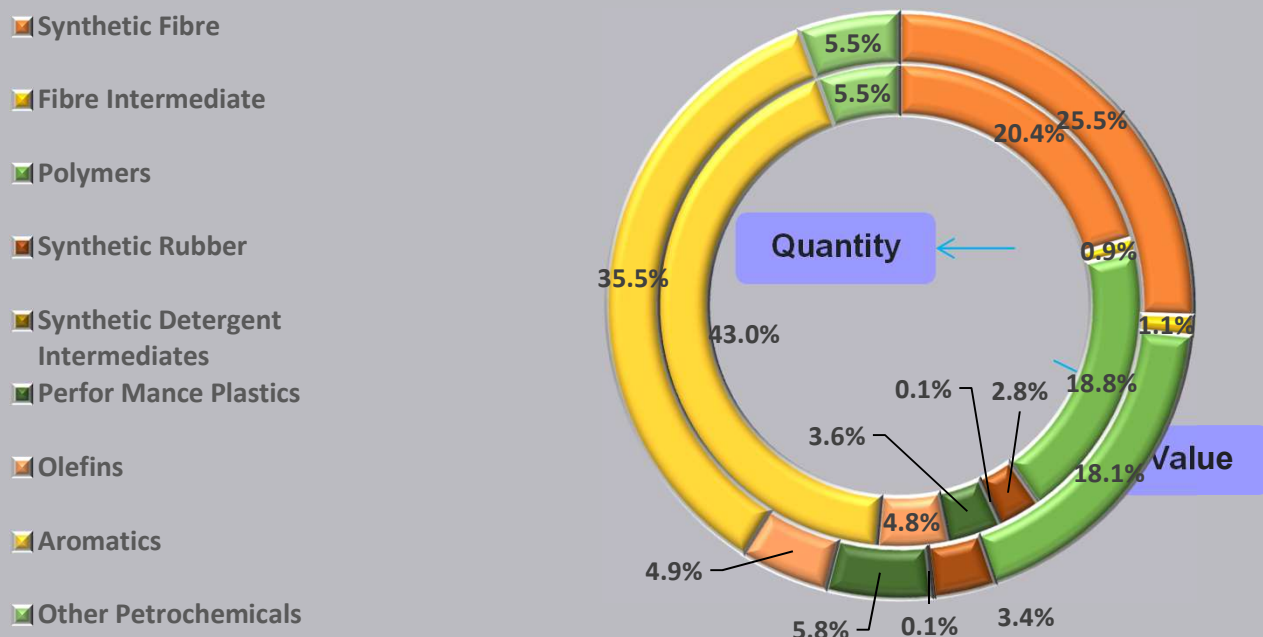
13. Current Scenario

13.4 Major Petrochemicals and their share in Import and Export quantity and value during 2024-2025

Import



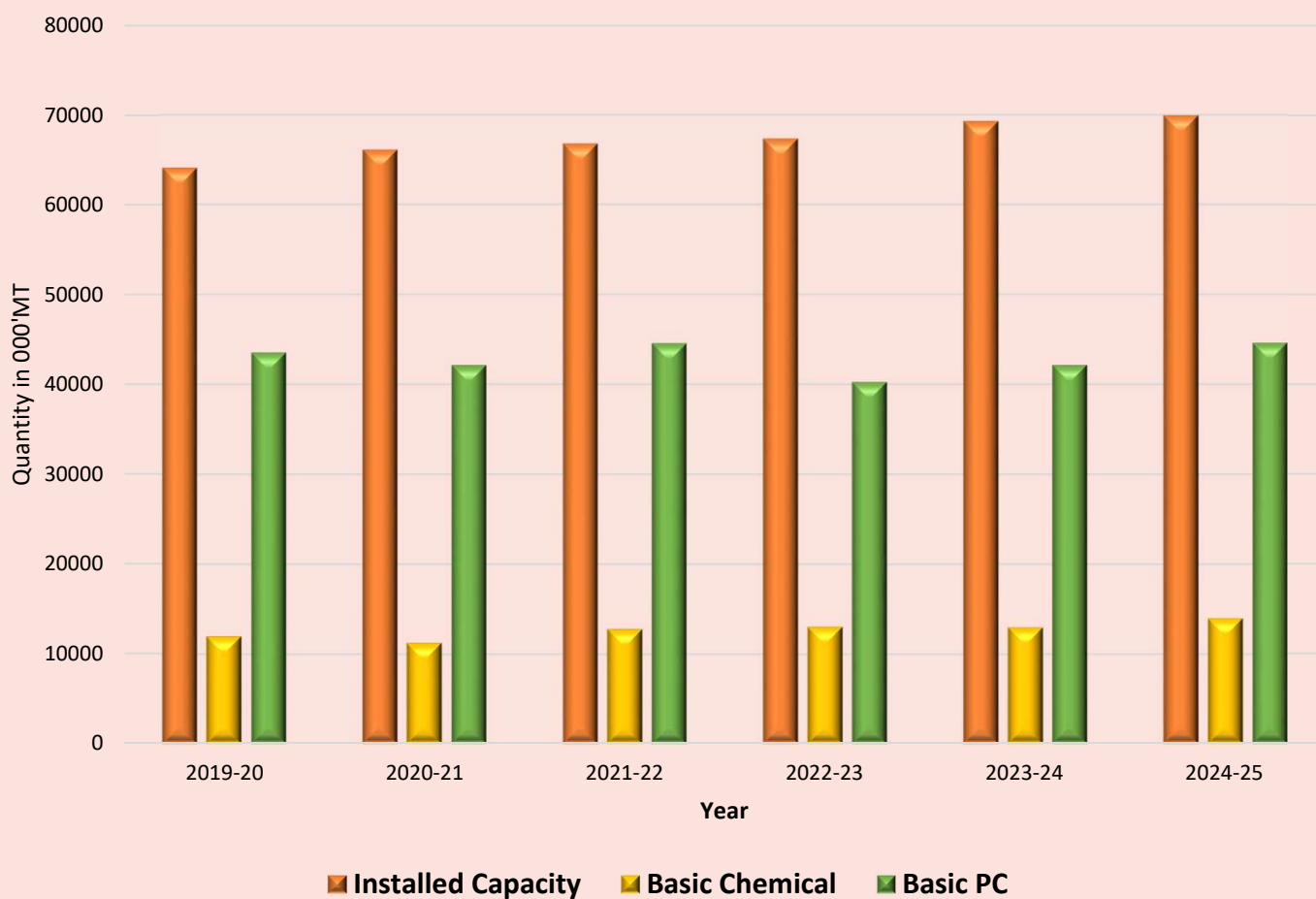
Export



Source: DCPC

14. Status of Selected CPC Sector (Installed Capacity and Production)

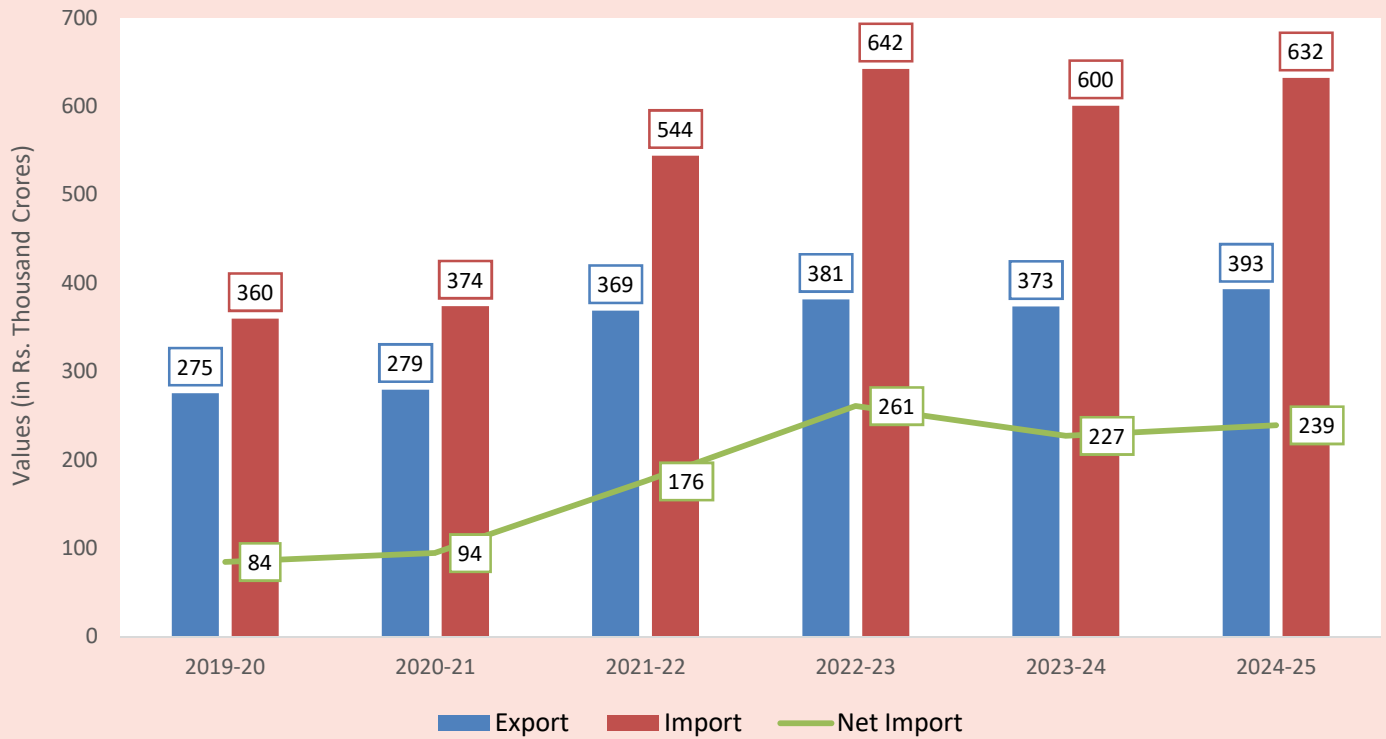
Year	Installed Capacity	Production		
		Basic Chemical	Basic PC	Total
(Figures in 000'MT)				
2019-20	64093	11943	43524	55467
2020-21	66091	11243	42159	53402
2021-22	66790	12743	44589	57332
2022-23	67317	13039	40292	53331
2023-24	69308	12979	42161	55140
2024-25	69942	13983	44634	58617



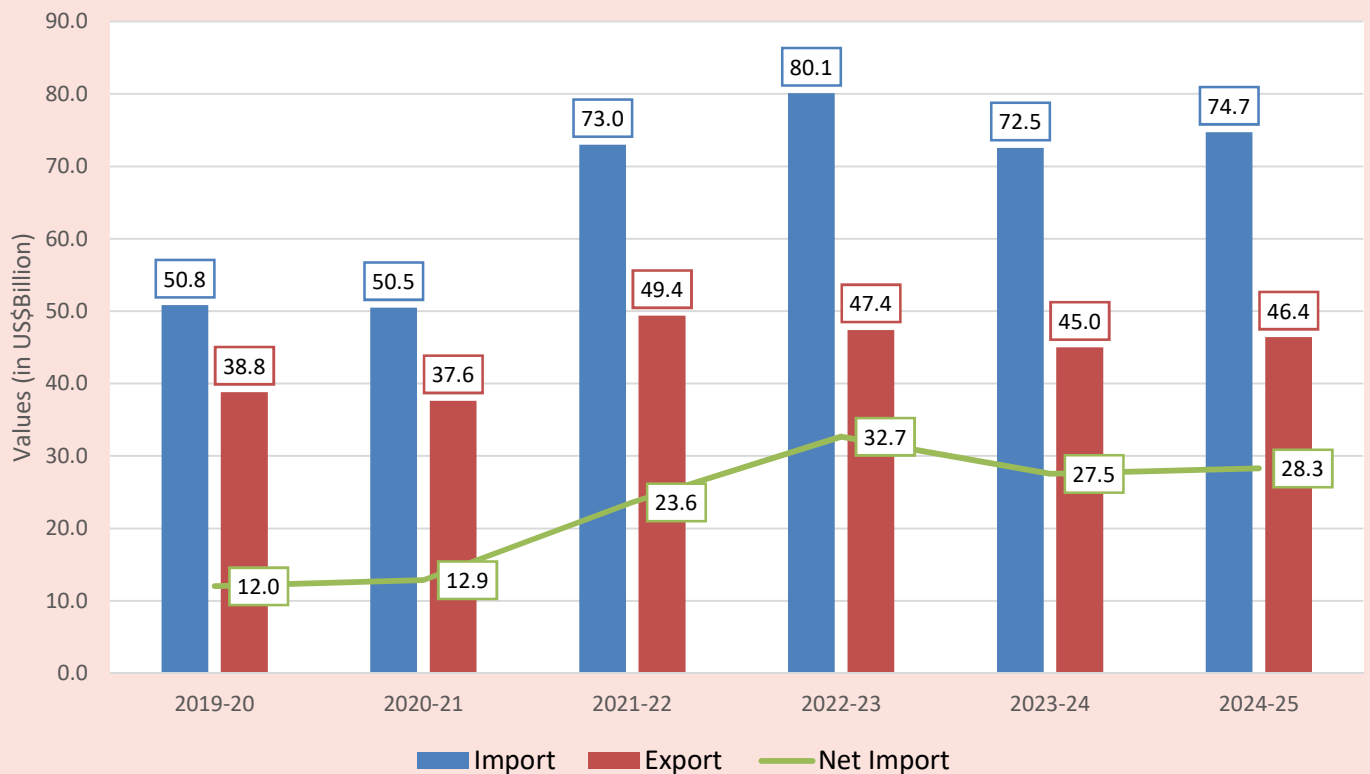
Source: DCPC

15. Indian Selected CPC Industry Scenario

Export, Import and Net Import of Chemicals & Chemical Products (In Rs. Thousand Crore)



Export, Import and Net Import of Chemicals & Chemical Products (in US\$ Billion)

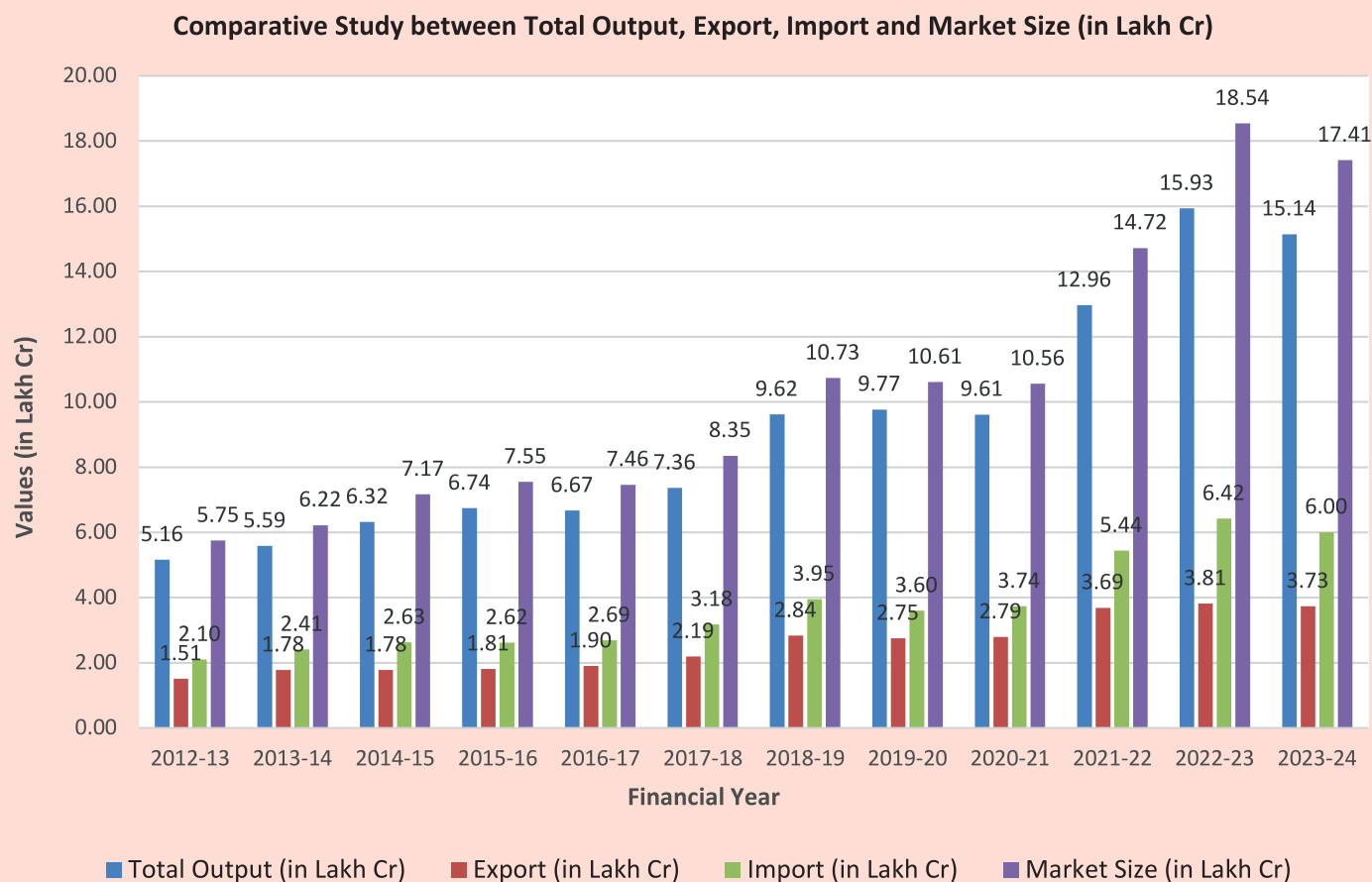


Source: DGCIS

16. Comparative Study between Total Output, Export, Import and Market Size

16.1 Comparative Study between Total Output, Export, Import and Market Size (in Crore)

Year	Total Output (in Lakh Cr)	Export (in Lakh Cr)	Import (in Lakh Cr)	Market Size (in Lakh Cr)
2012-13	5.16	1.51	2.10	5.75
2013-14	5.59	1.78	2.41	6.22
2014-15	6.32	1.78	2.63	7.17
2015-16	6.74	1.81	2.62	7.55
2016-17	6.67	1.90	2.69	7.46
2017-18	7.36	2.19	3.18	8.35
2018-19	9.62	2.84	3.95	10.73
2019-20	9.77	2.75	3.60	10.61
2020-21	9.61	2.79	3.74	10.56
2021-22	12.96	3.69	5.44	14.72
2022-23	15.93	3.81	6.42	18.54
2023-24	15.14	3.73	6.00	17.41



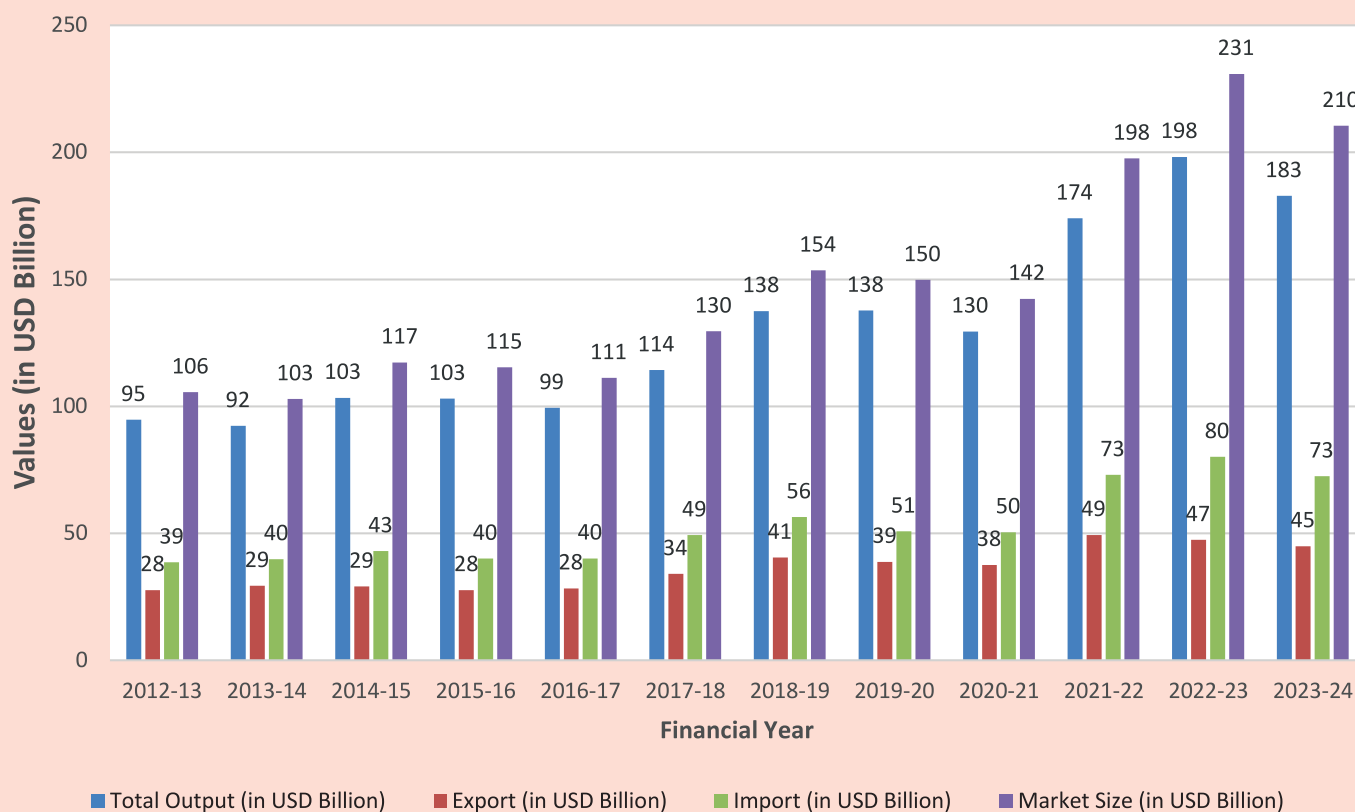
Source: MoSPI and DGCIS

16. Comparative Study between Total Output, Export, Import and Market Size

16.2 Comparative Study between Total Output, Export, Import and Market Size (in USD Billion)

Year	Total Output (in USD Billion)	Export (in USD Billion)	Import (in USD Billion)	Market Size (in USD Billion)
2012-13	95	28	39	106
2013-14	92	29	40	103
2014-15	103	29	43	117
2015-16	103	28	40	115
2016-17	99	28	40	111
2017-18	114	34	49	130
2018-19	138	41	56	154
2019-20	138	39	51	150
2020-21	130	38	50	142
2021-22	174	49	73	198
2022-23	198	47	80	231
2023-24	183	45	73	210

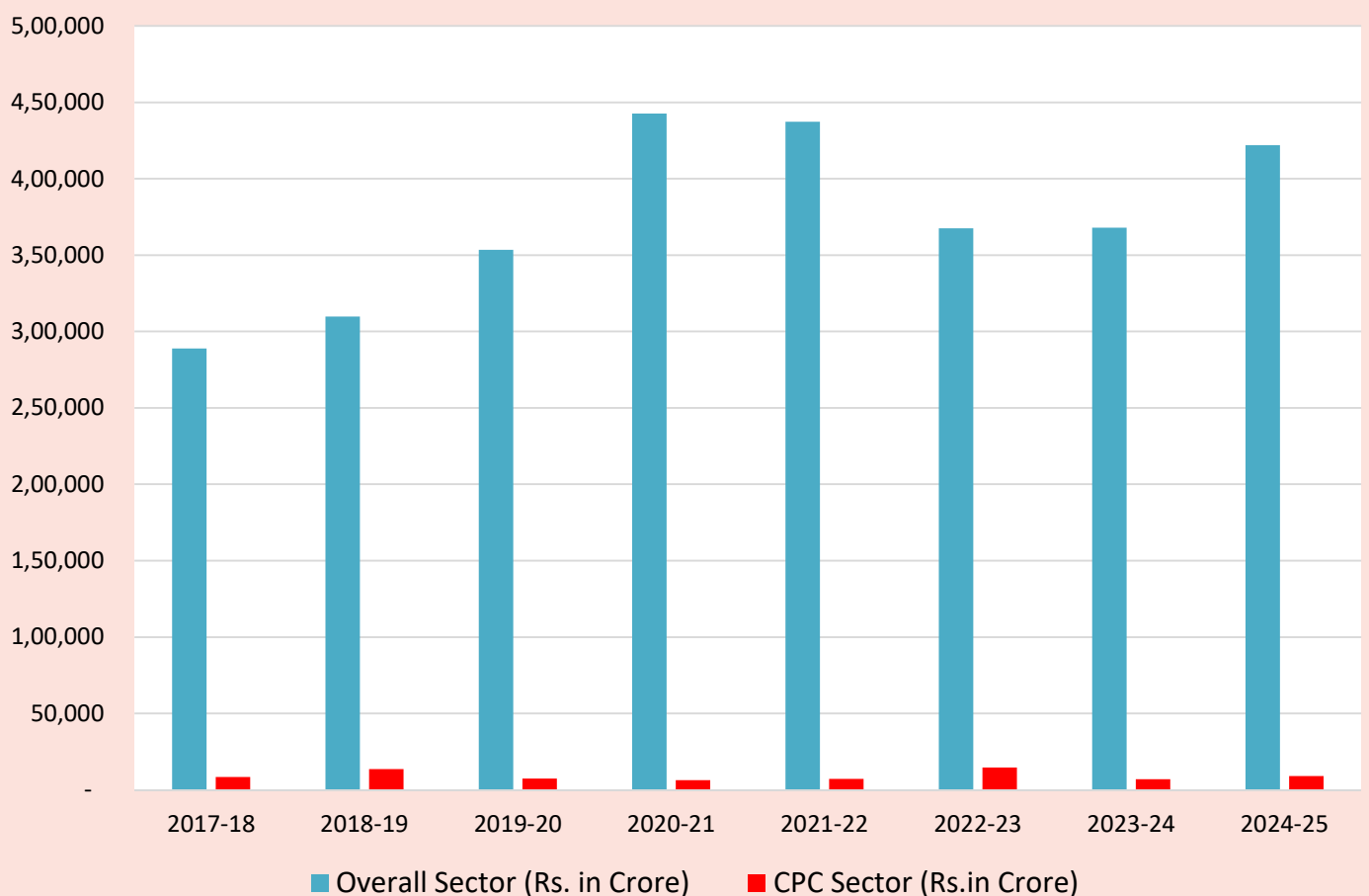
Comparative Study between Total Output, Export, Import and Market Size (in USD Billion)



Source: MoSPI and DGCIS

17. Comparative study on FDI of Growth Rate of CPC Sector vis-a-vis all sector

Year	Overall Sector (Rs. in Crore)	CPC Sector (Rs.in Crore)
2017-18	2,88,889	8,425
2018-19	3,09,867	13,685
2019-20	3,53,557	7,492
2020-21	4,42,569	6,300
2021-22	4,37,188	7,202
2022-23	3,67,435	14,662
2023-24	3,67,899	6,985
2024-25	4,21,929	8,942



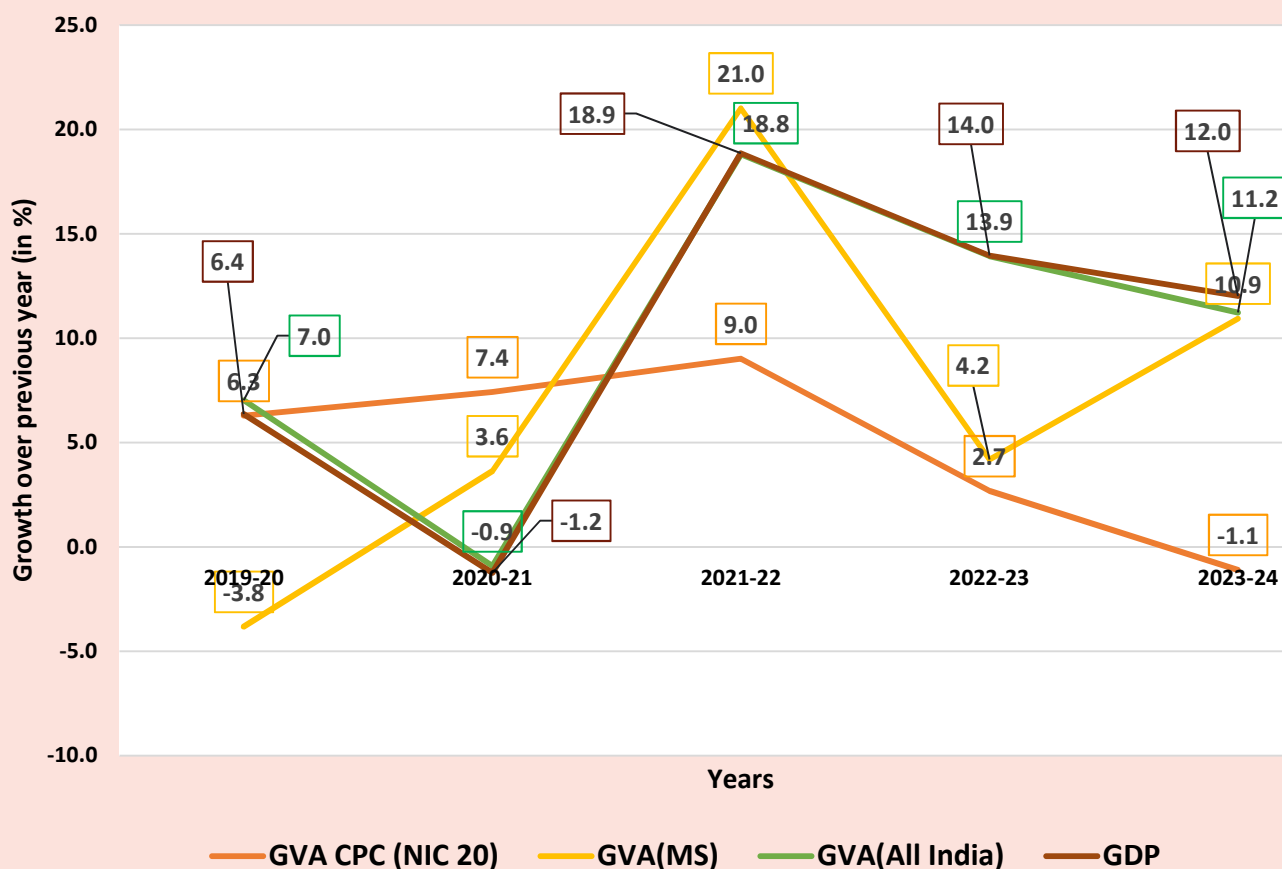
Source: DPIIT

18. Comparative study on GVA of CPC Sector at Current Prices

18.1 Comparative study on GVA of CPC Sector (NIC 20)

(Rs.in Crore)

Year	GVA CPC (NIC 20)	GVA(MS)	GVA(All India)	GDP
2019-20	265747	2705101	18381117	20103593
2020-21	285458	2803495	18210997	19854096
2021-22	311203	3392605	21635584	23597399
2022-23	319535	3534867	24646698	26890473
2023-24	316036	3921596	27412888	30122956



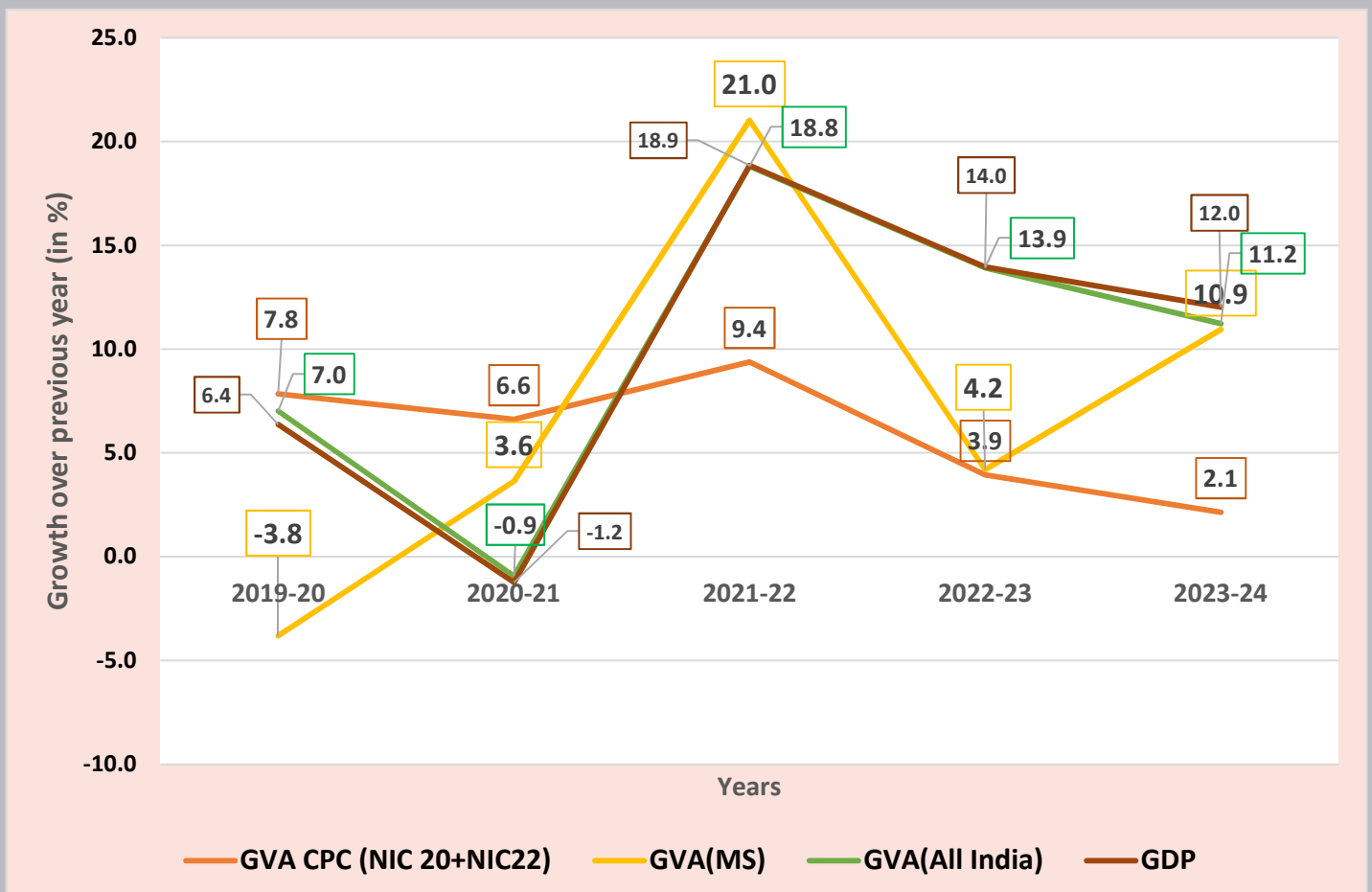
Source: MoSPI

18. Comparative study on GVA of CPC Sector at Current Prices

18.2 Comparative study on GVA of CPC Sector (NIC 20 + NIC 22)

(Rs.in Crore)

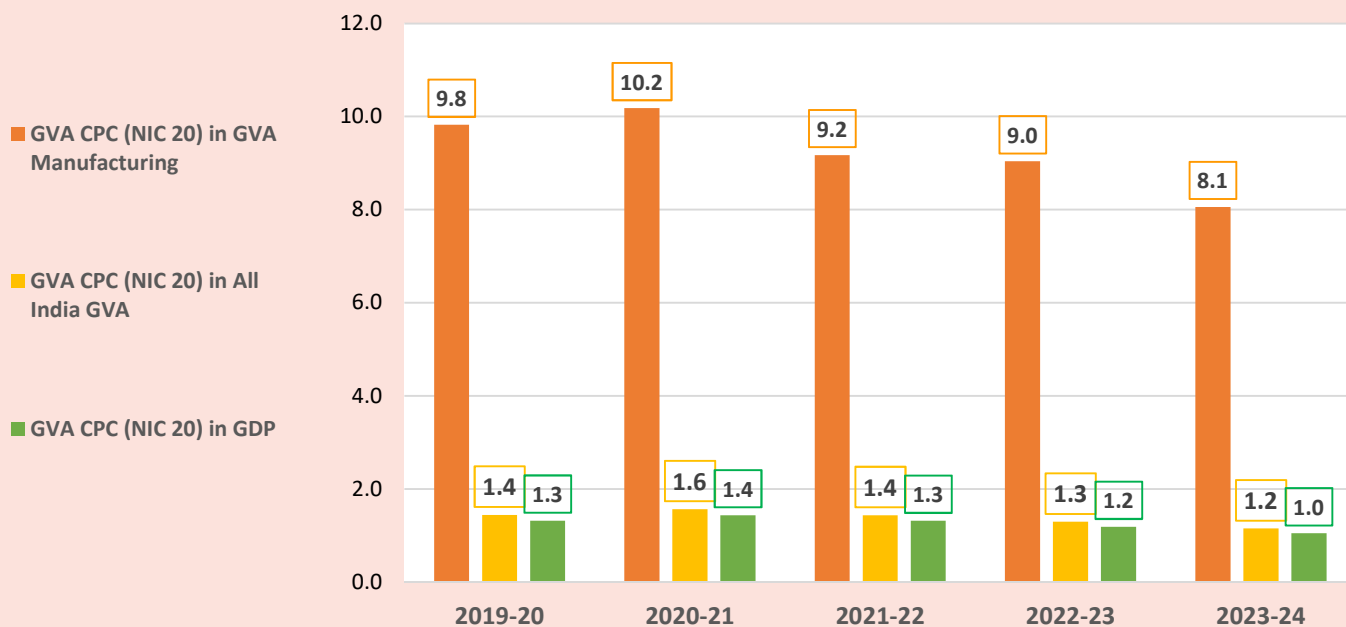
Year	GVA CPC (NIC 20+NIC22)	GVA(MS)	GVA(All India)	GDP
2019-20	385460	2705101	18381117	20103593
2020-21	410973	2803495	18210997	19854096
2021-22	449528	3392605	21635584	23597399
2022-23	467224	3534867	24646698	26890473
2023-24	477234	3921596	27412888	30122956



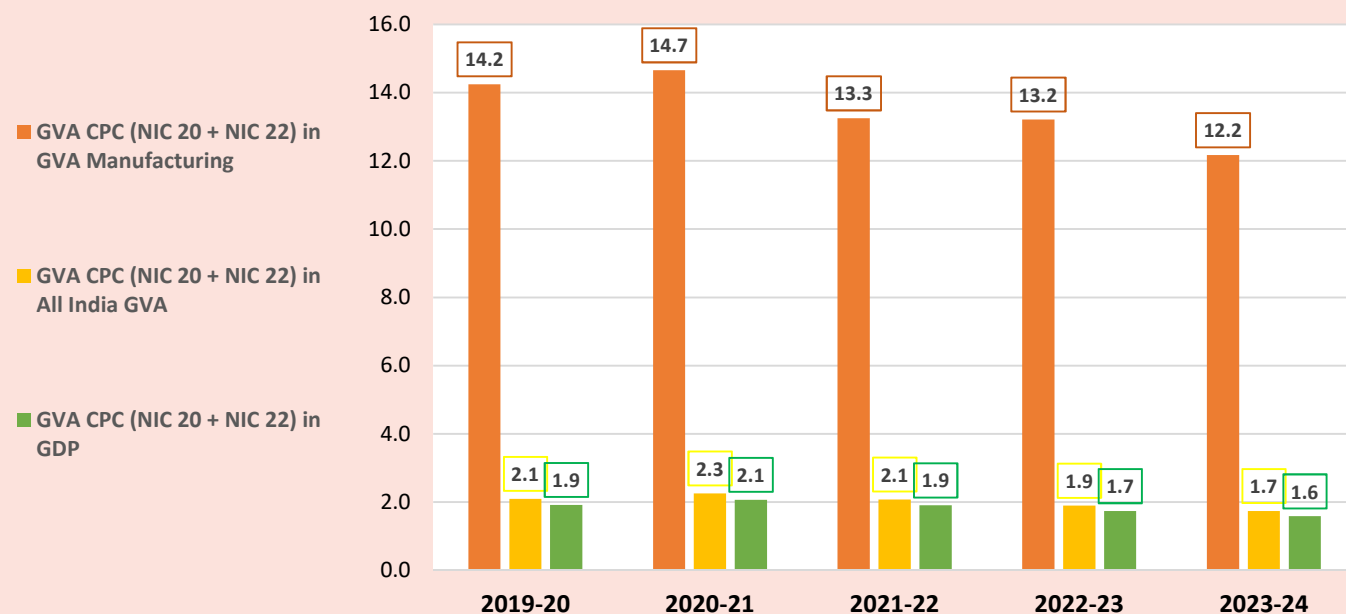
Source: MoSPI

18.A. Share of GVA (CPC) at Current Prices

18.A.1 Share of GVA CPC (NIC 20)



18.A.2 Share of GVA CPC (NIC 20 + NIC 22)



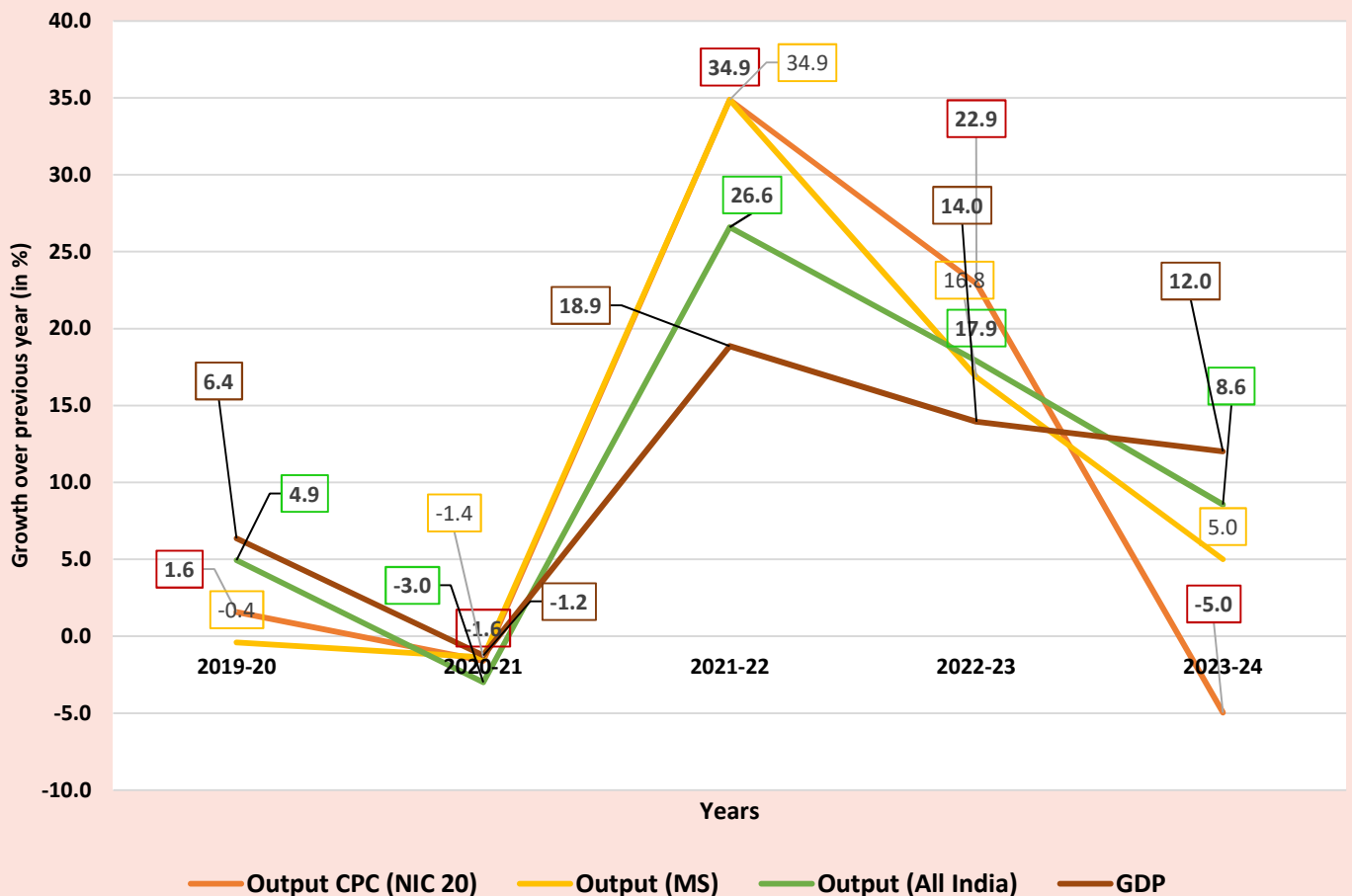
Source: MoSPI

19. Comparative study on Output of CPC Sector at Current Prices

19.1 Comparative study on Output of CPC Sector (NIC 20)

(Rs.in Crore)

Year	Output CPC (NIC 20)	Output (MS)	Output (All India)	GDP
2019-20	976854	11856161	36486542	20103593
2020-21	961222	11693810	35399855	19854096
2021-22	1296422	15772252	44814549	23597399
2022-23	1593333	18429228	52837827	26890473
2023-24	1514351	19350303	57362300	30122956



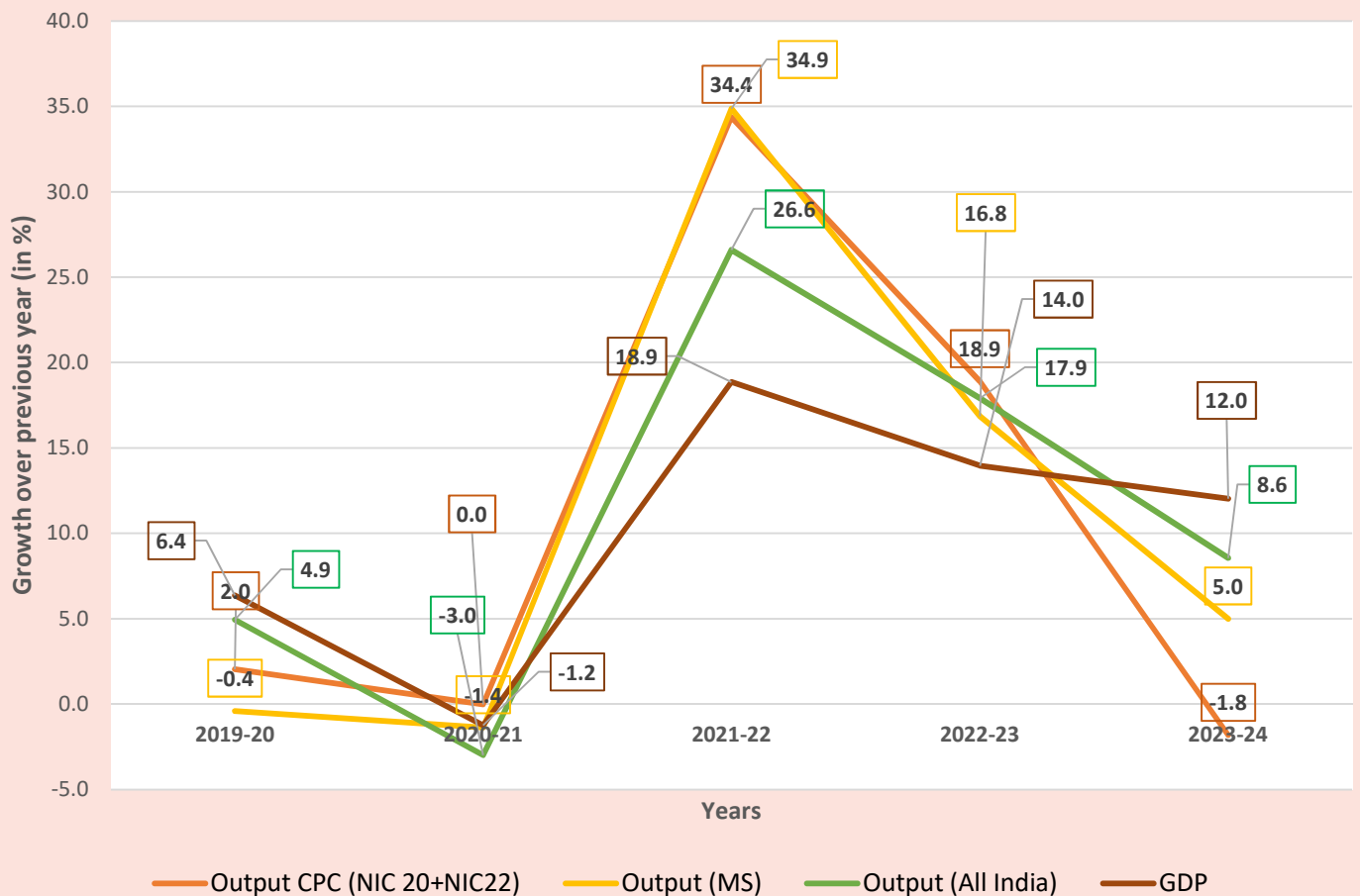
Source: MoSPI

19. Comparative study on Output of CPC Sector at Current Prices

19.2 Comparative study on Output of CPC Sector (NIC 20 + NIC 22)

(Rs.in Crore)

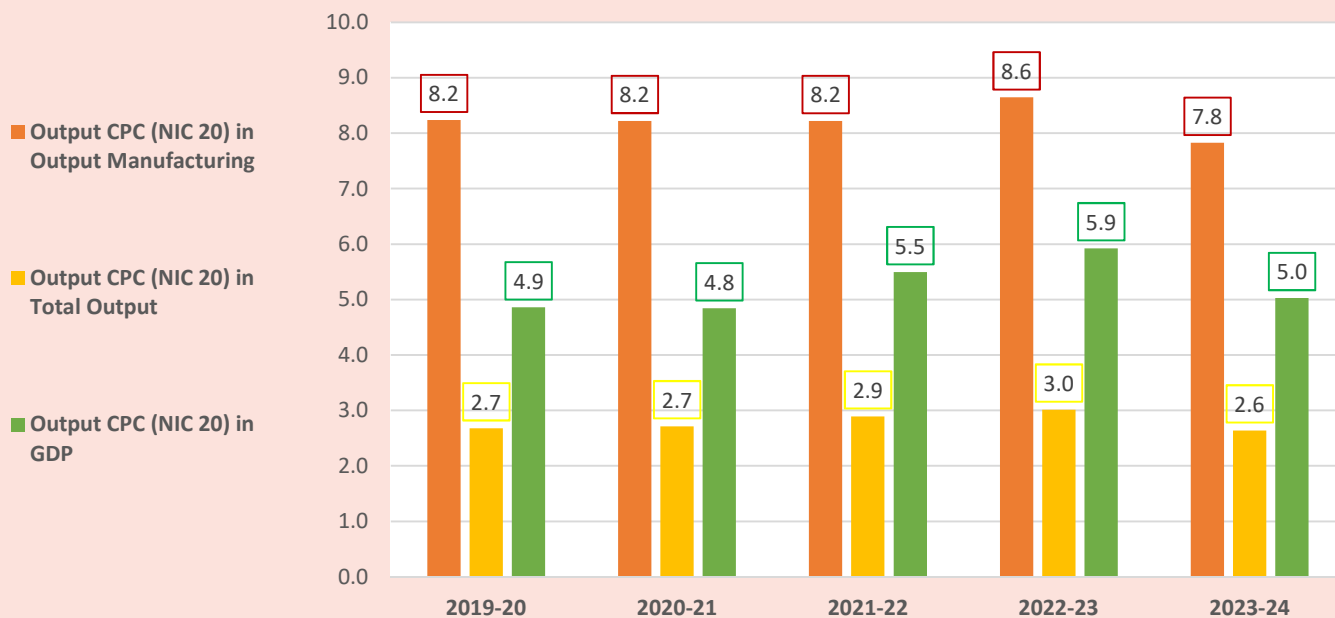
Year	Output CPC (NIC 20+NIC22)	Output (MS)	Output (All India)	GDP
2019-20	1421764	11856161	36486542	20103593
2020-21	1421485	11693810	35399855	19854096
2021-22	1910016	15772252	44814549	23597399
2022-23	2270780	18429228	52837827	26890473
2023-24	2229535	19350303	57362300	30122956



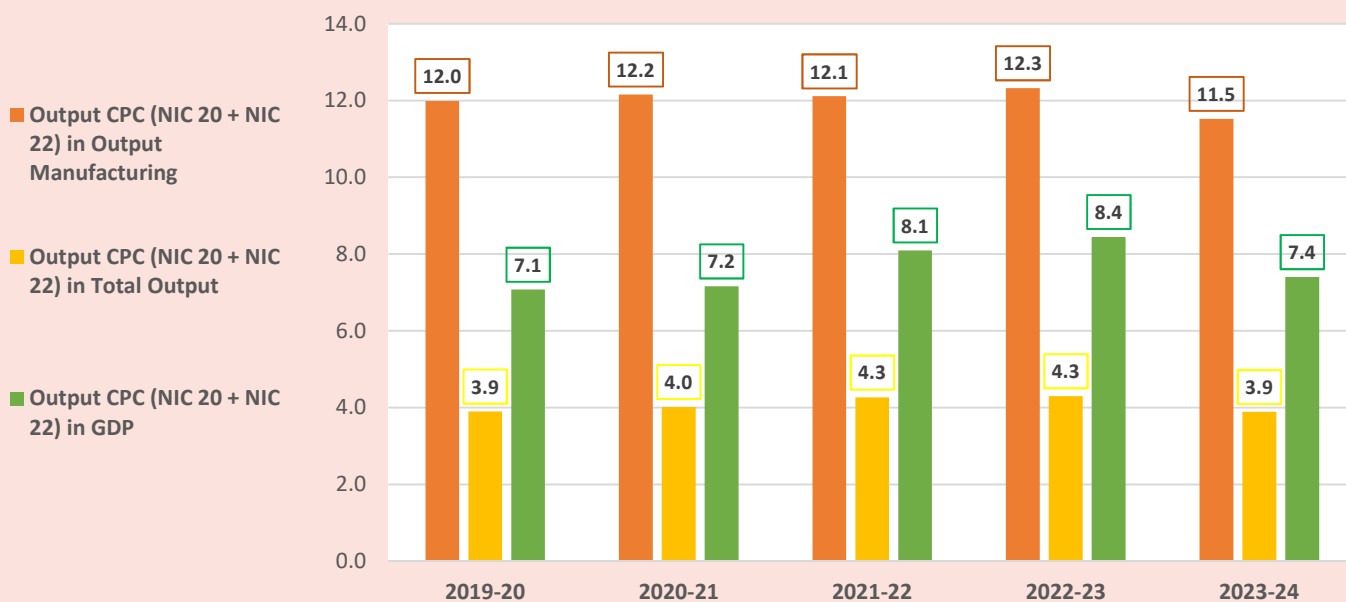
Source: MoSPI

19.A. Share of Output (CPC) at Current Prices

19.A.1 Share of Output CPC (NIC 20)



19.A.2 Share of Output CPC (NIC 20 + NIC 22)

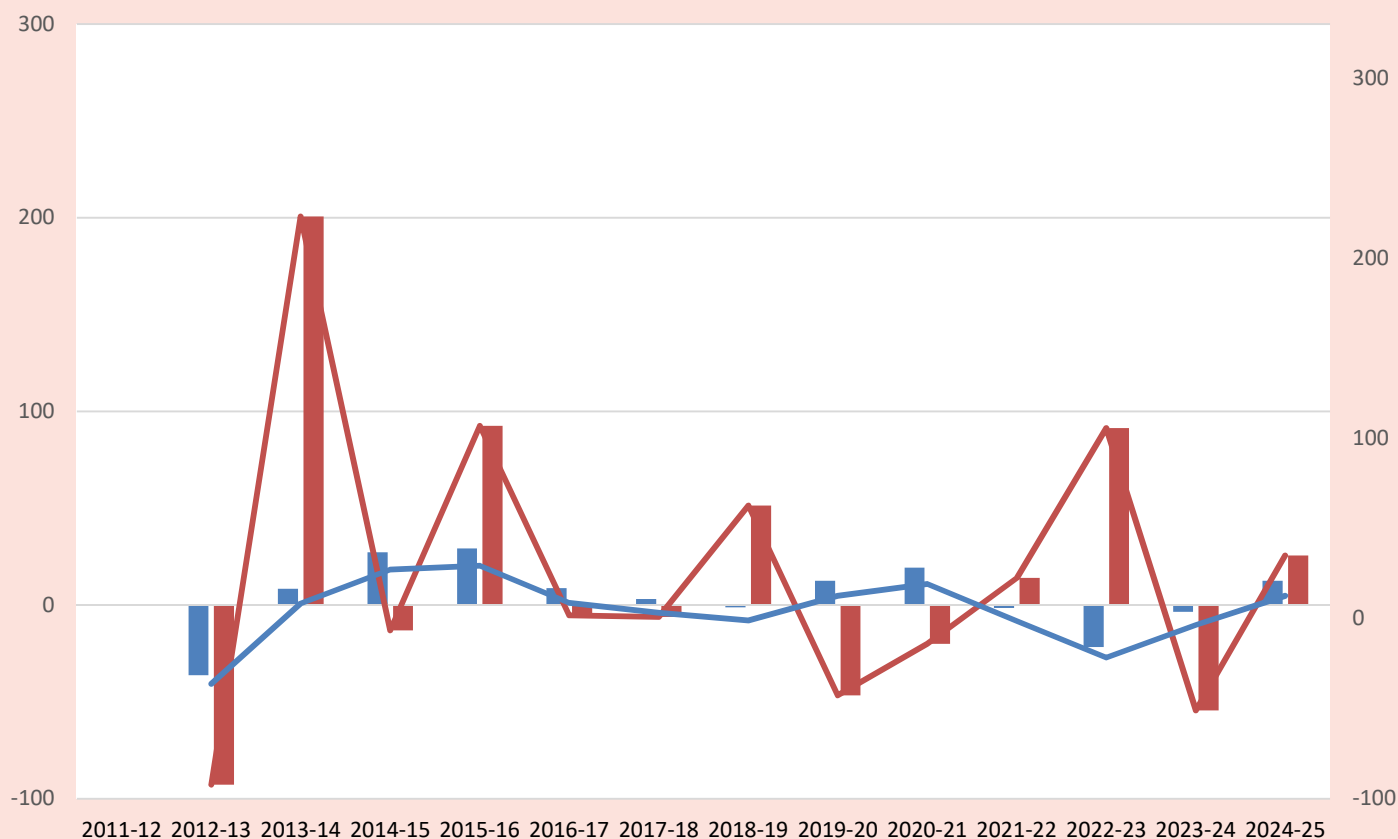


Source: MoSPI

20. FDI Inflow Growth Rate in India viz-a-viz Chemical Sector

Year	Overall Sector (in USD Million)	Chemical (in USD Million)	Growth over previous Year (Overall)	Growth over previous Year (Chemical)
2012-13	22,423	292	-36.16	-92.77
2013-14	24,299	878	8.37	200.68
2014-15	30,931	763	27.29	-13.1
2015-16	40,001	1,470	29.32	92.66
2016-17	43,478	1,393	8.69	-5.24
2017-18	44,856	1,308	3.17	-6.1
2018-19	44,366	1,981	-1.09	51.45
2019-20	49,977	1,058	12.65	-46.59
2020-21	59,636	847	19.33	-19.94
2021-22	58,773	966	-1.45	14.05
2022-23	46,034	1,850	-21.67	91.51
2023-24	44,423	844	-3.50	-54.38
2024-25	50,018	1,060	12.59	25.59

FDI Growth over previous Year (Overall) and Growth over previous Year (Chemical) (in % age values)



Source: DPIIT

21. Principal Characteristics by Major Industry Group in ASI 2023-2024

21.1 Principal Characteristics for CPC Sector (NIC 20)

(Value Figures in Rs. Lakh & Others in Number)

Description	Chemicals Industry (NIC 20)	All India	Share of Chemical Industries (%)
Factories	14387	260061	5.5
Fixed Capital	45626721	462409035	9.9
Productive Capital	56538797	632134848	8.9
Invested Capital	62216674	680132999	9.1
Workers	851378	15519957	5.5
Total Persons Engaged	1140695	19589131	5.8
Wages to Workers	2026703	33598653	6.0
Total Emoluments	5216357	71646903	7.3
Total Input	102324664	1286883003	8.0
Total Output	123971097	1532716609	8.1
Depreciation	3196221	35519270	9.0
Net Value Added	18450212	210314335	8.8
Rent Paid	39072	633398	6.2
Interest Paid	1697402	22293338	7.6

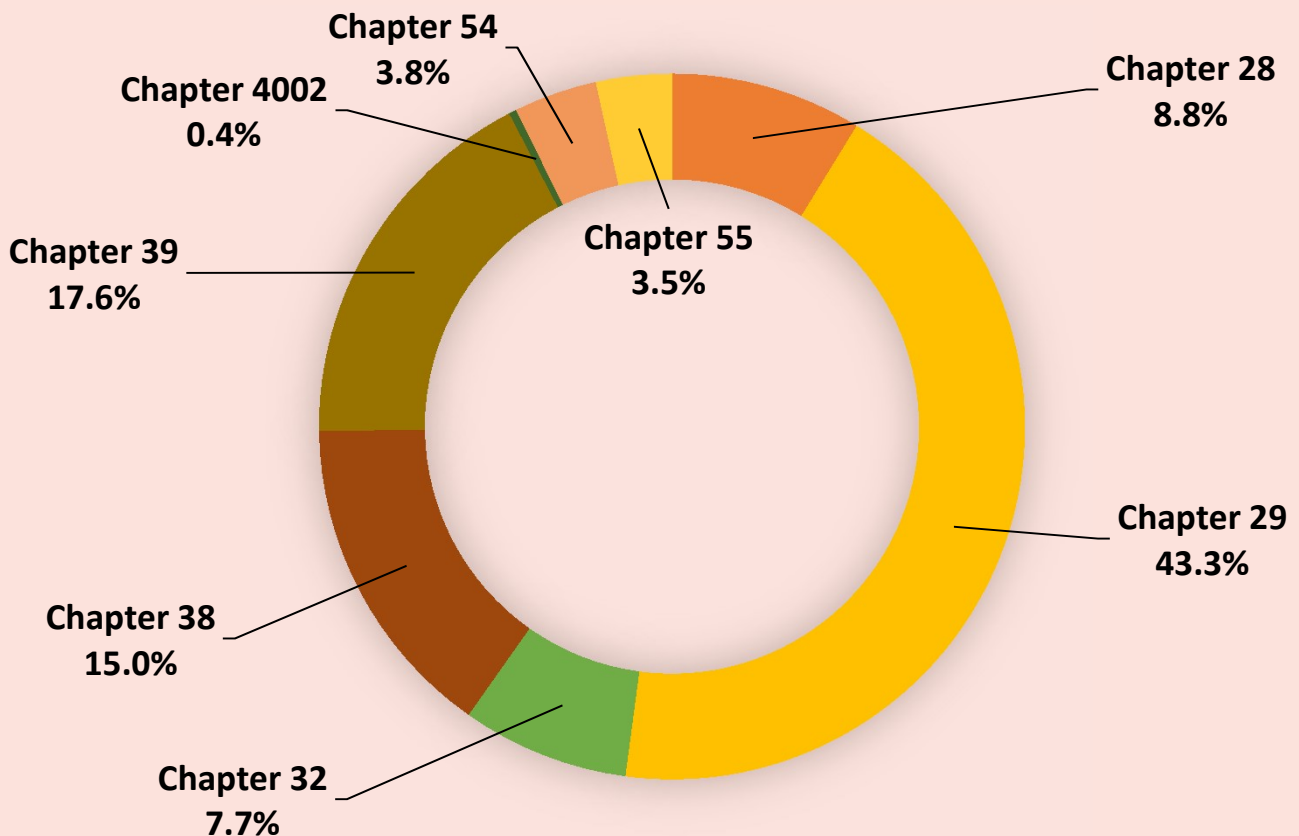
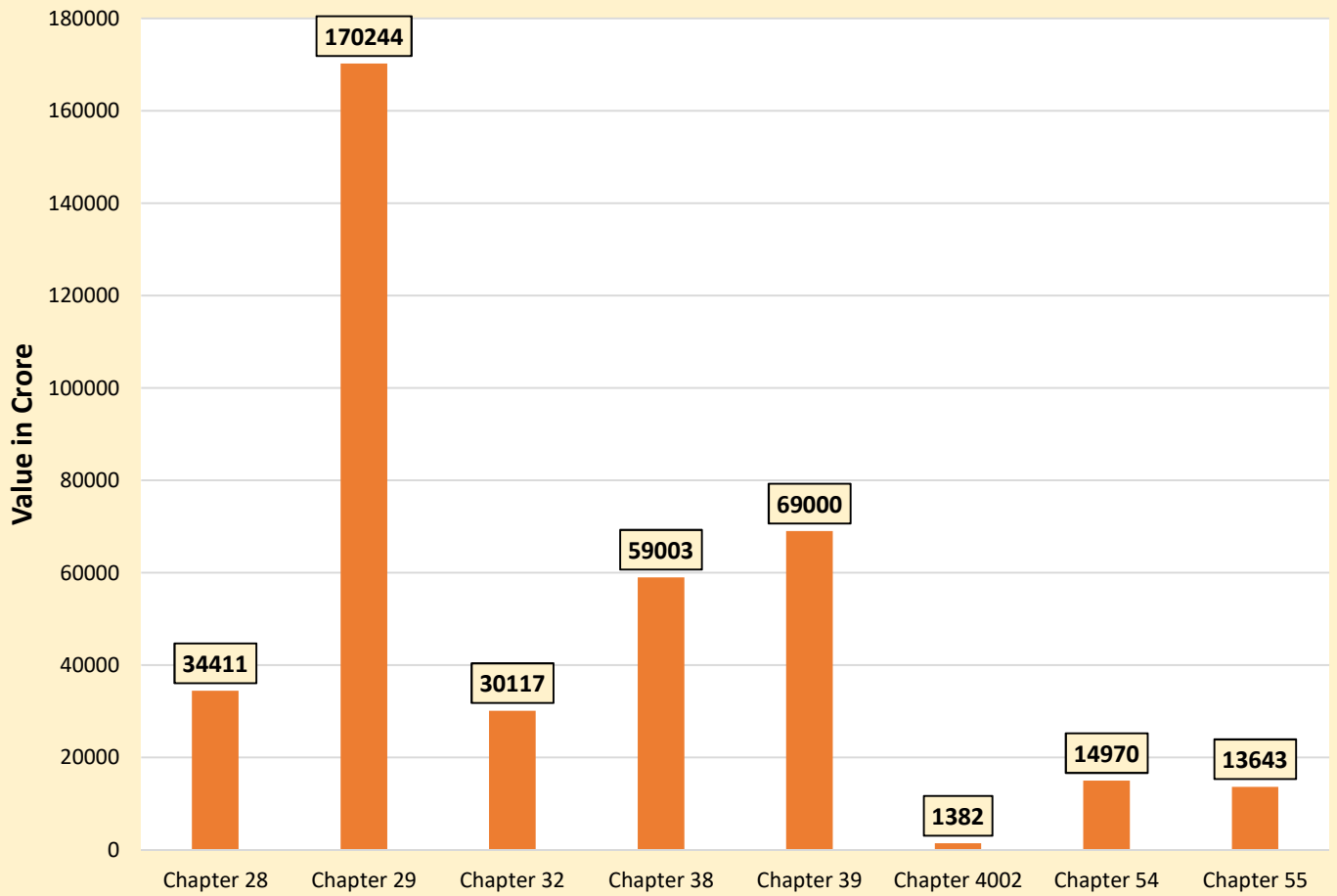
21.2 Principal Characteristics for CPC Sector (NIC 20 + NIC 22)

(Value Figures in Rs. Lakh & Others in Number)

Description	Chemicals Industry (NIC 20 + NIC 22)	All India	Share of Chemical Industries (%)
Factories	30294	260061	11.6
Fixed Capital	66348530	462409035	14.3
Productive Capital	82884977	632134848	13.1
Invested Capital	90970863	680132999	13.4
Workers	1687678	15519957	10.9
Total Persons Engaged	2177023	19589131	11.1
Wages to Workers	3804600	33598653	11.3
Total Emoluments	8687426	71646903	12.1
Total Input	147138817	1286883003	11.4
Total Output	179525268	1532716609	11.7
Depreciation	5278831	35519270	14.9
Net Value Added	27107620	210314335	12.9
Rent Paid	60265	633398	9.5
Interest Paid	2729371	22293338	12.2

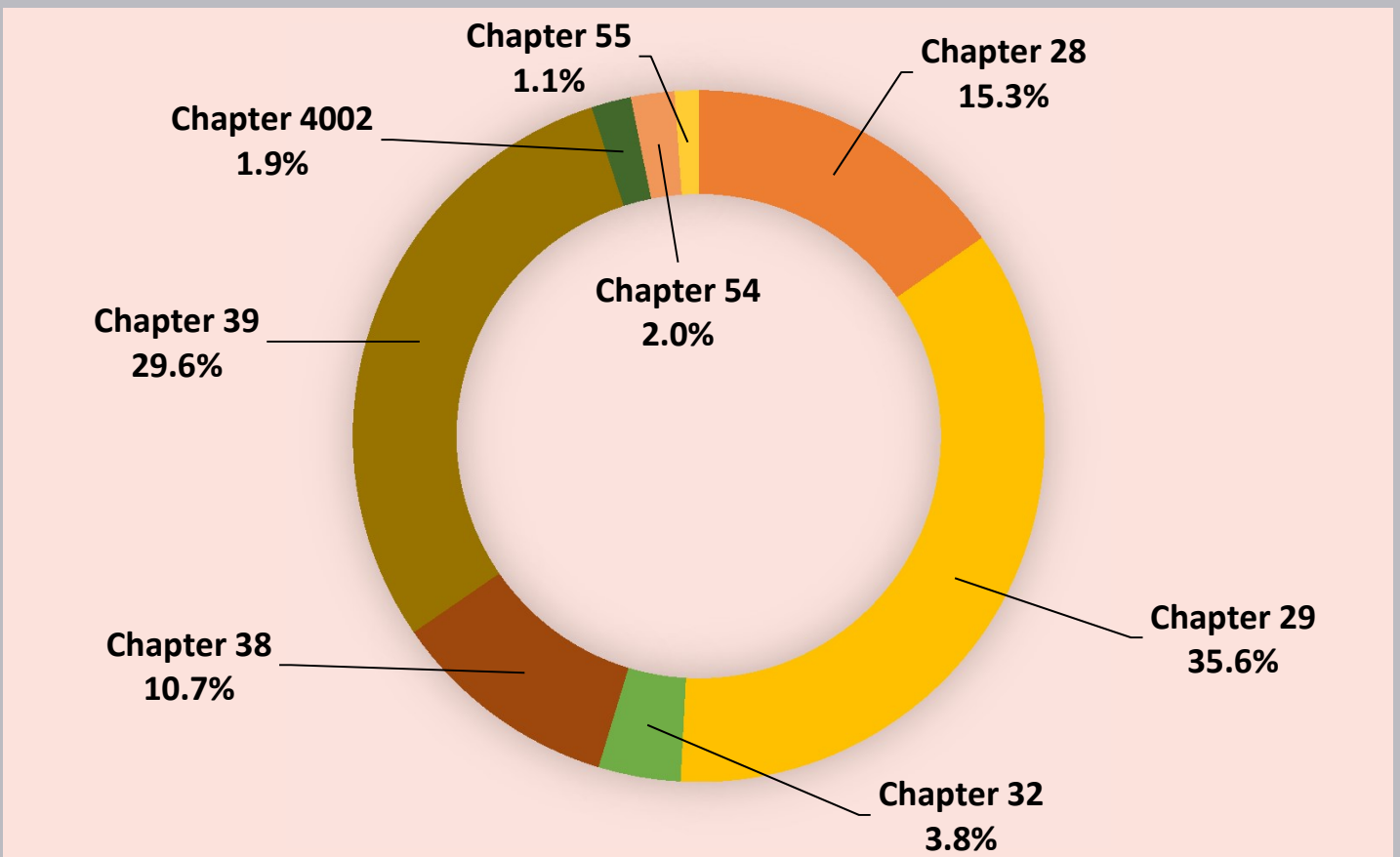
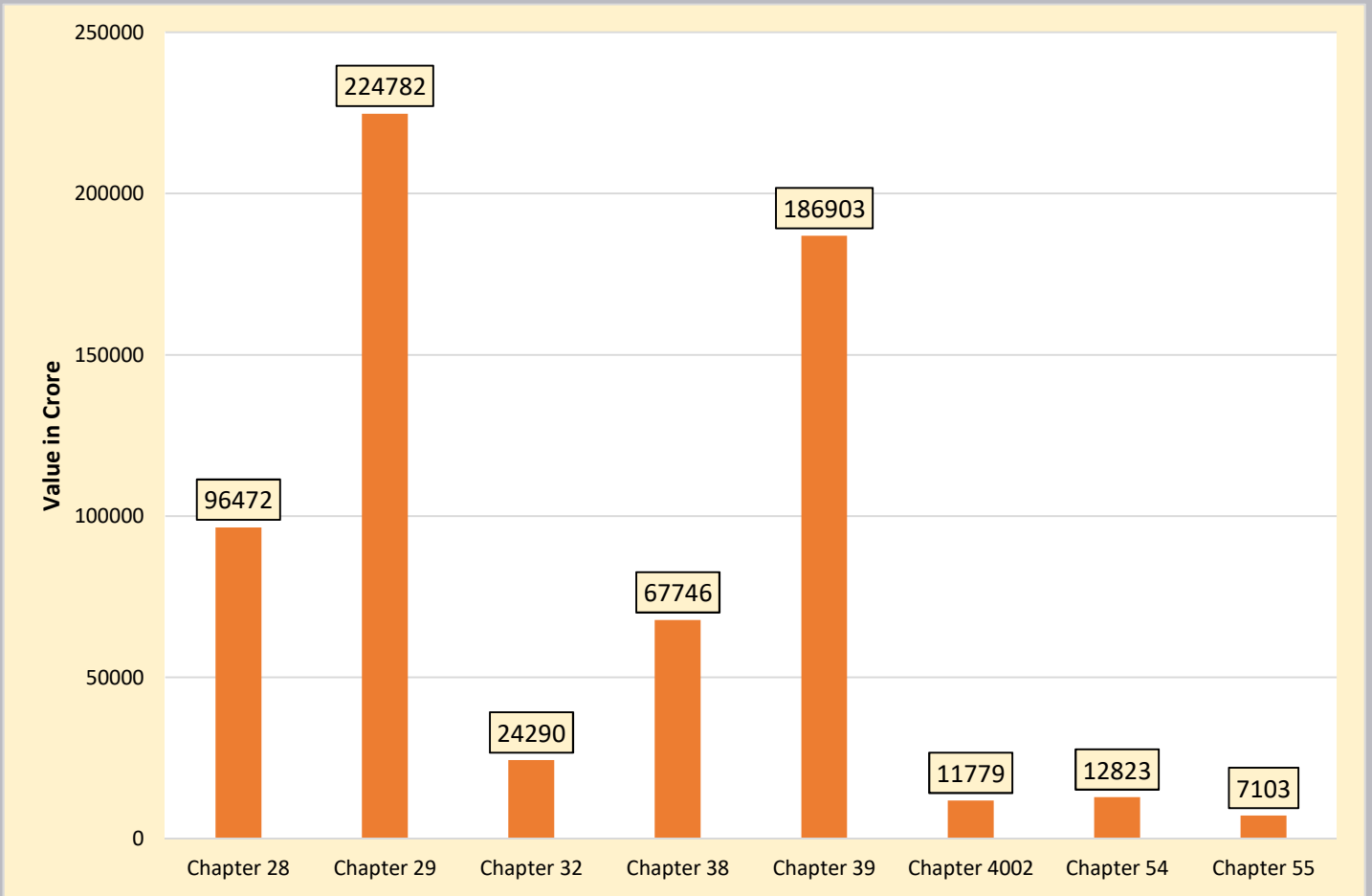
Source: MoSPI

22. Import of Chemical and Chemical Products (2024-25)



Source: DGCIS

23. Export of Chemical and Chemical Products (2024-25)



Source: DGCIS

24. Forecasting

24.1 Production of Chemical and Petrochemical products

(A) Chemicals

(Figures in 000'MT)

Group	2014-15	2019-20	2024-25	2027-28	2032-33	2037-38	2042-43	2047-48
1. Alkali Chemicals	6625	8457	9938	12870	19802	30467	46877	72127
2. Inorganic Chemicals	944	1063	1197	1550	2385	3669	5645	8686
3. Organic Chemicals	1619	1847	2189	2835	4363	6712	10328	15891
4. Pesticides (Tech.)	186	192	287	372	572	881	1355	2085
5. Dyes & Pigments	285	384	372	482	742	1141	1756	2702
Total Chemicals (1 to 5)	9660	11943	13983	18109	27863	42870	65962	101490

(B) Petrochemicals

(Figures in 000'MT)

Group	2014-15	2019-20	2024-25	2027-28	2032-33	2037-38	2042-43	2047-48
1. Synthetic Fibre	3532	3893	4137	5358	8244	12685	19517	30029
2. Fibre Intermediate	4877	5359	5440	7045	10840	16678	25662	39484
3. Polymers	7558	12404	13367	17311	26635	40981	63054	97017
4. Synthetic Rubber	172	358	411	533	820	1261	1940	2985
5. Synthetic Detergent Intermediates	596	715	823	1066	1640	2523	3883	5974
6. Performance Plastics	1591	1672	1904	2465	3793	5836	8980	13816
7. Olefins	7301	11835	13284	17203	26469	40725	62661	96412
8. Aromatics	4638	4925	2696	3491	5371	8265	12716	19565
9. Other Petrochemicals	1963	2364	2572	3330	5124	7884	12131	18665
Total Chemicals (1 to 9)	32227	43524	44634	57802	88936	136839	210544	323948

* Projected based on CAGR @ 9.0%

24. Forecasting

24.2 Export of Chemical and Petrochemical products

(A) Chemicals

(Figures in 000'MT)

Group	2014-15	2019-20	2024-25	2027-28	2032-33	2037-38	2042-43	2047-48
1. Alkali Chemicals	74	329	863	1117	1719	2645	4070	6263
2. Inorganic Chemicals	164	196	499	647	995	1531	2356	3625
3. Organic Chemicals	241	245	318	412	634	976	1501	2310
4. Pesticides (Tech.)	230	398	591	765	1177	1810	2786	4286
5. Dyes & Pigments	353	530	536	694	1067	1642	2527	3888
Total Chemicals (1 to 5)	1061	1698	2807	3635	5593	8605	13240	20371

(B) Petrochemicals

(Figures in 000'MT)

Group	2014-15	2019-20	2024-25	2027-28	2032-33	2037-38	2042-43	2047-48
1. Synthetic Fibre	887	1059	806	1044	1607	2472	3804	5853
2. Fibre Intermediate	73	234	37	48	74	113	174	268
3. Polymers	903	1615	743	962	1481	2278	3506	5394
4. Synthetic Rubber	26	74	111	144	222	341	525	807
5. Synthetic Detergent Intermediates	28	1	3	4	6	10	15	23
6. Performance Plastics	409	969	142	184	282	434	668	1029
7. Olefins	72	336	188	244	375	577	888	1367
8. Aromatics	1888	4271	1697	2198	3382	5203	8006	12318
9. Other Petrochemicals	124	238	216	280	431	664	1021	1571
Total Chemicals (1 to 9)	4412	8798	3945	5108	7860	12093	18607	28629

* Projected based on CAGR @ 9.0%

24. Forecasting

24.3 Import of Chemical and Petrochemical products

(A) Chemicals

(Figures in 000'MT)

Group	2014-15	2019-20	2024-25	2027-28	2032-33	2037-38	2042-43	2047-48
1. Alkali Chemicals	1134	1157	1176	1523	2343	3606	5548	8536
2. Inorganic Chemicals	912	1532	928	1202	1849	2845	4378	6736
3. Organic Chemicals	2886	3775	5100	6604	10162	15635	24056	37013
4. Pesticides (Tech.)	41	43	76	98	151	232	357	549
5. Dyes & Pigments	52	51	55	71	109	168	259	399
Total Chemicals (1 to 5)	5025	6557	7334	9498	14614	22486	34598	53233

(B) Petrochemicals

(Figures in 000'MT)

Group	2014-15	2019-20	2024-25	2027-28	2032-33	2037-38	2042-43	2047-48
1. Synthetic Fibre	236	347	398	515	793	1220	1877	2887
2. Fibre Intermediate	2180	1920	3487	4516	6948	10690	16448	25307
3. Polymers	3737	3430	4191	5428	8352	12850	19771	30420
4. Synthetic Rubber	578	575	829	1074	1653	2543	3913	6020
5. Synthetic Detergent Intermediates	134	264	287	372	573	881	1356	2086
6. Performance Plastics	395	741	427	552	850	1308	2012	3096
7. Olefins	49	76	63	82	126	194	298	459
8. Aromatics	1023	1328	1795	2325	3577	5504	8469	13031
9. Other Petrochemicals	2373	3543	3621	4689	7214	11100	17079	26278
Total Chemicals (1 to 9)	10705	12222	15099	19553	30085	46290	71222	109584

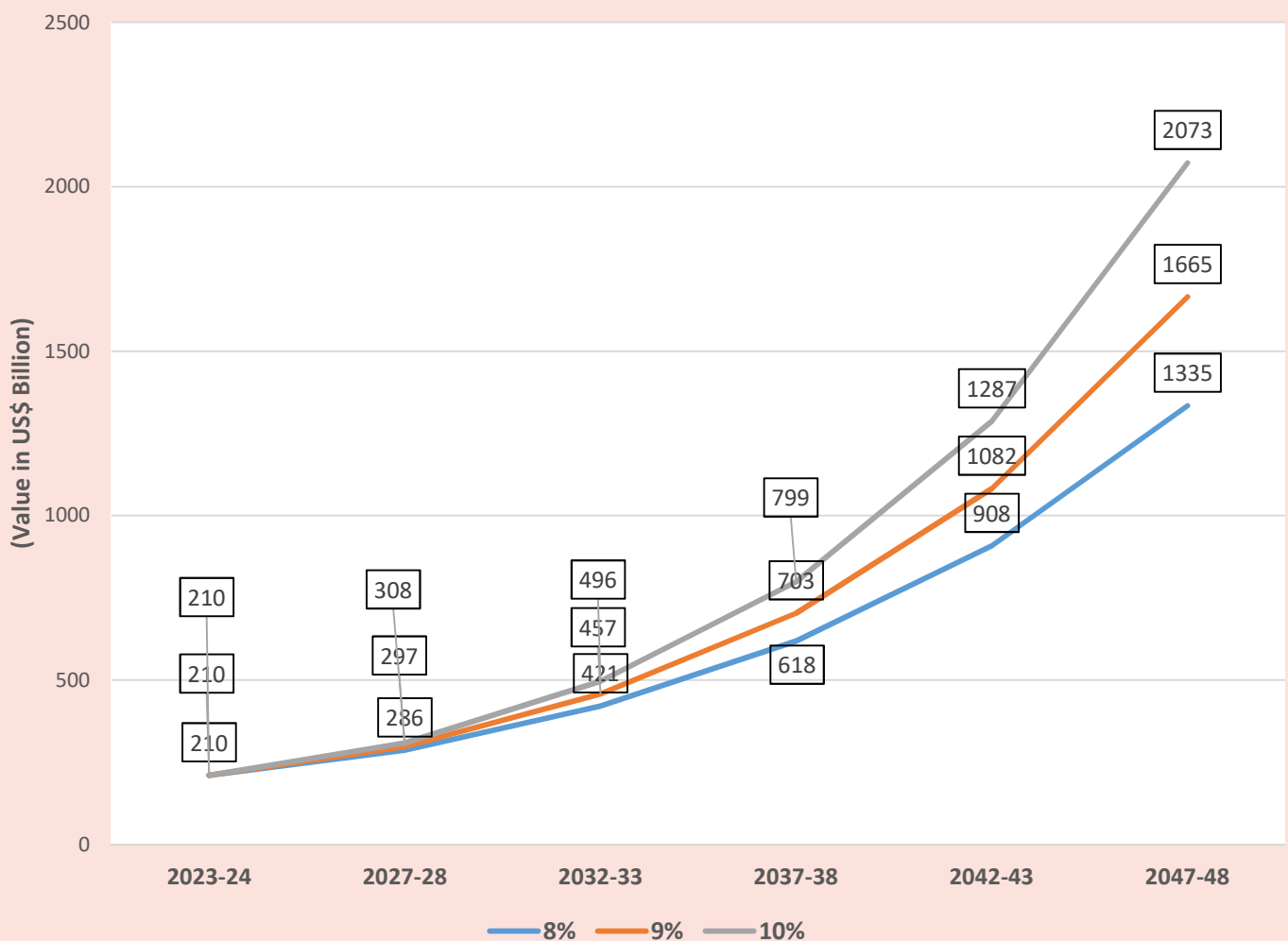
* Projected based on CAGR @ 9.0%

25. Projected Market Size of CPC Sector at different CAGR

(in US\$ Billion)

Year	8%	9%	10%
2023-24	210	210	210
2027-28	286	297	308
2032-33	421	457	496
2037-38	618	703	799
2042-43	908	1082	1287
2047-48	1335	1665	2073

CPC Sector (in USD Billion)



Source: MoSPI, DGCIS & RBI

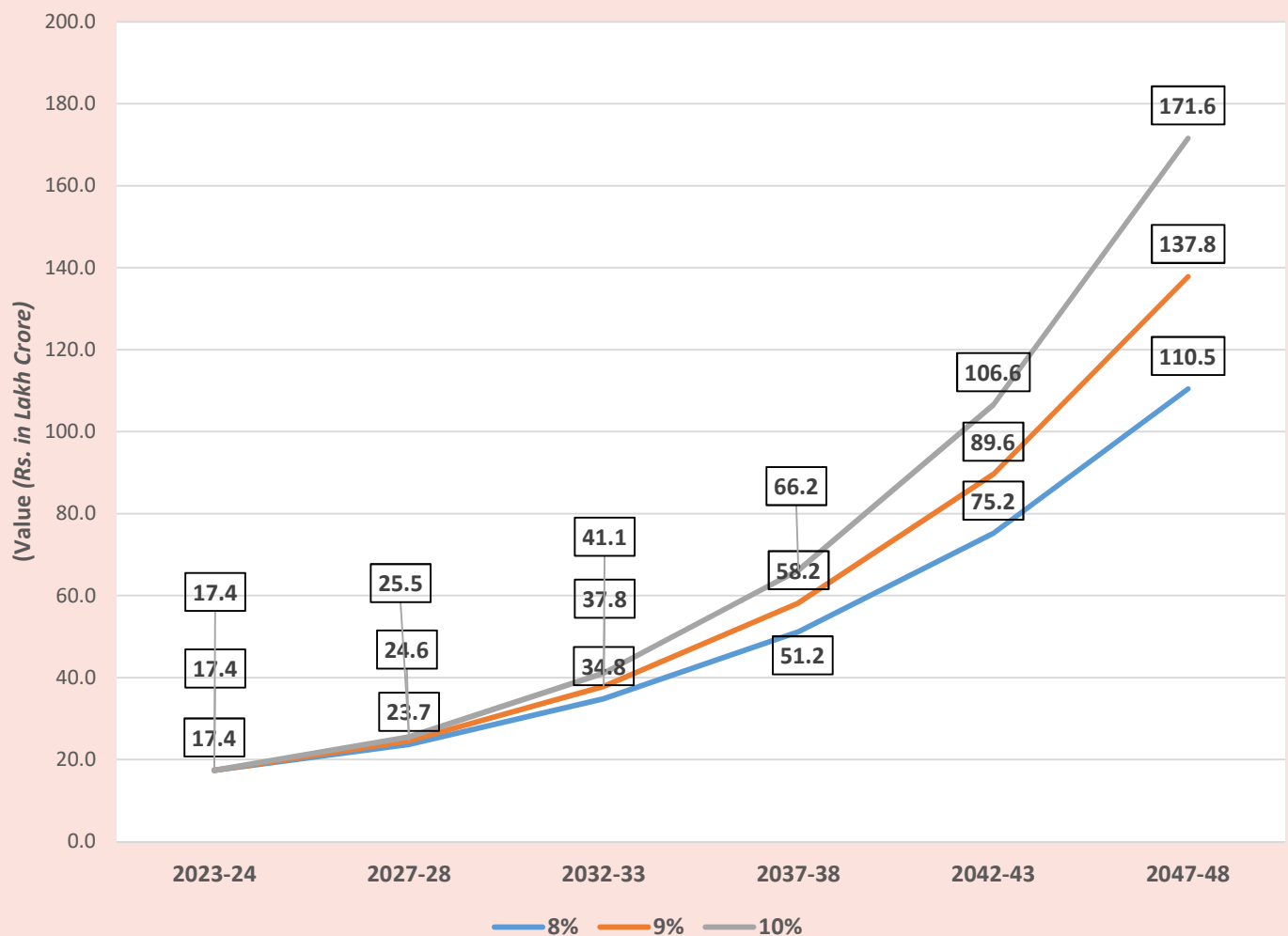
* Projection based on CAGR @ 8%, 9% and 10%

25. Projected Market Size of CPC Sector at different CAGR

(Rs. In Lakh Crore)

Year	8%	9%	10%
2023-24	17.4	17.4	17.4
2027-28	23.7	24.6	25.5
2032-33	34.8	37.8	41.1
2037-38	51.2	58.2	66.2
2042-43	75.2	89.6	106.6
2047-48	110.5	137.8	171.6

CPC Sector (Rs. in Lakh Crore)



Source: MoSPI, DGCIS & RBI

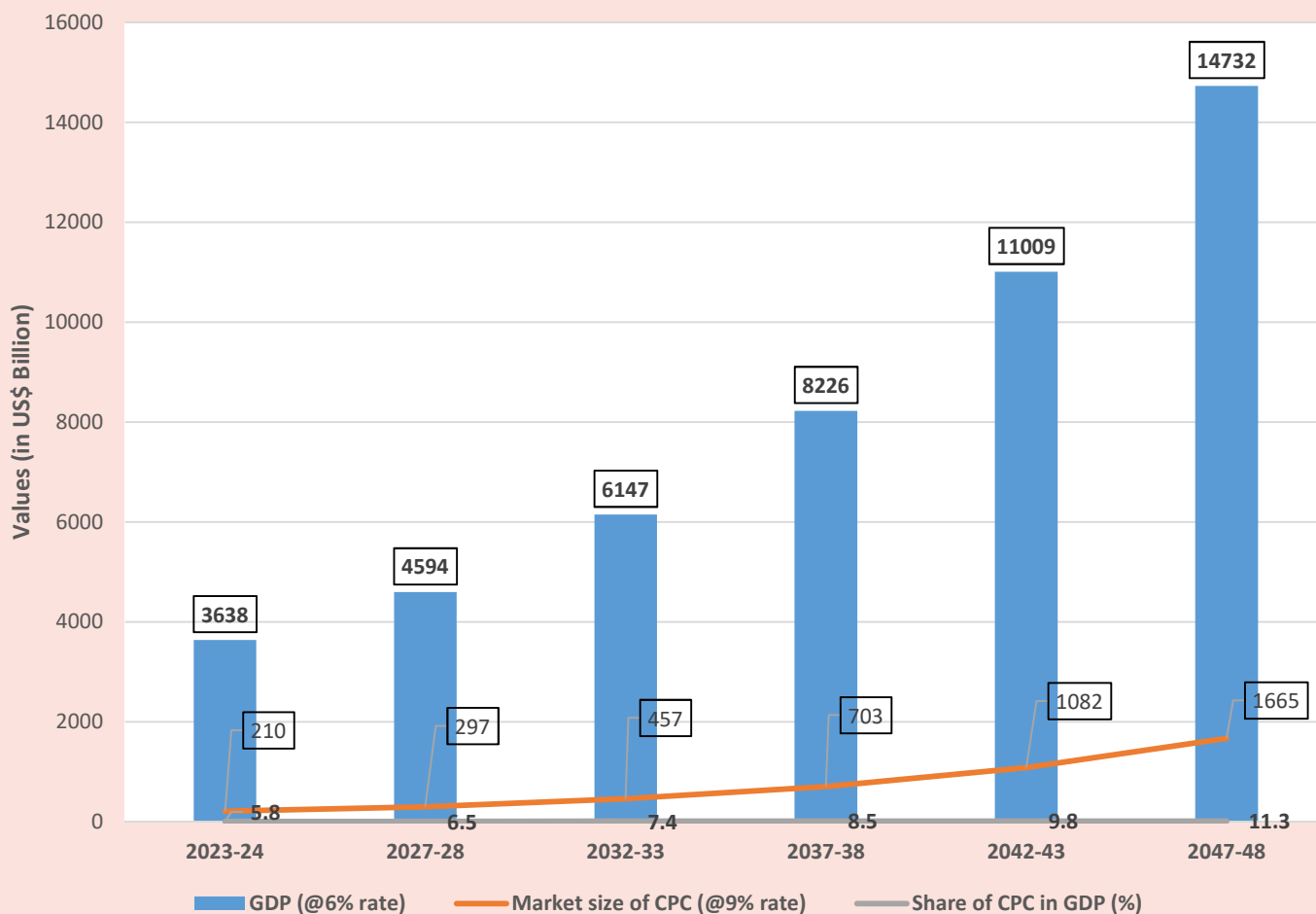
* Projection based on CAGR @ 8%, 9% and 10%

26. Projected Market Size of CPC vs GDP

(US\$ Billion)

Year	GDP (@6% rate)	Market size of CPC (@9% rate)	Share of CPC in GDP (%)
2023-24	3638	210	5.8
2027-28	4594	297	6.5
2032-33	6147	457	7.4
2037-38	8226	703	8.5
2042-43	11009	1082	9.8
2047-48	14732	1665	11.3

Comparison of Market Size of CPC vs GDP (MP)

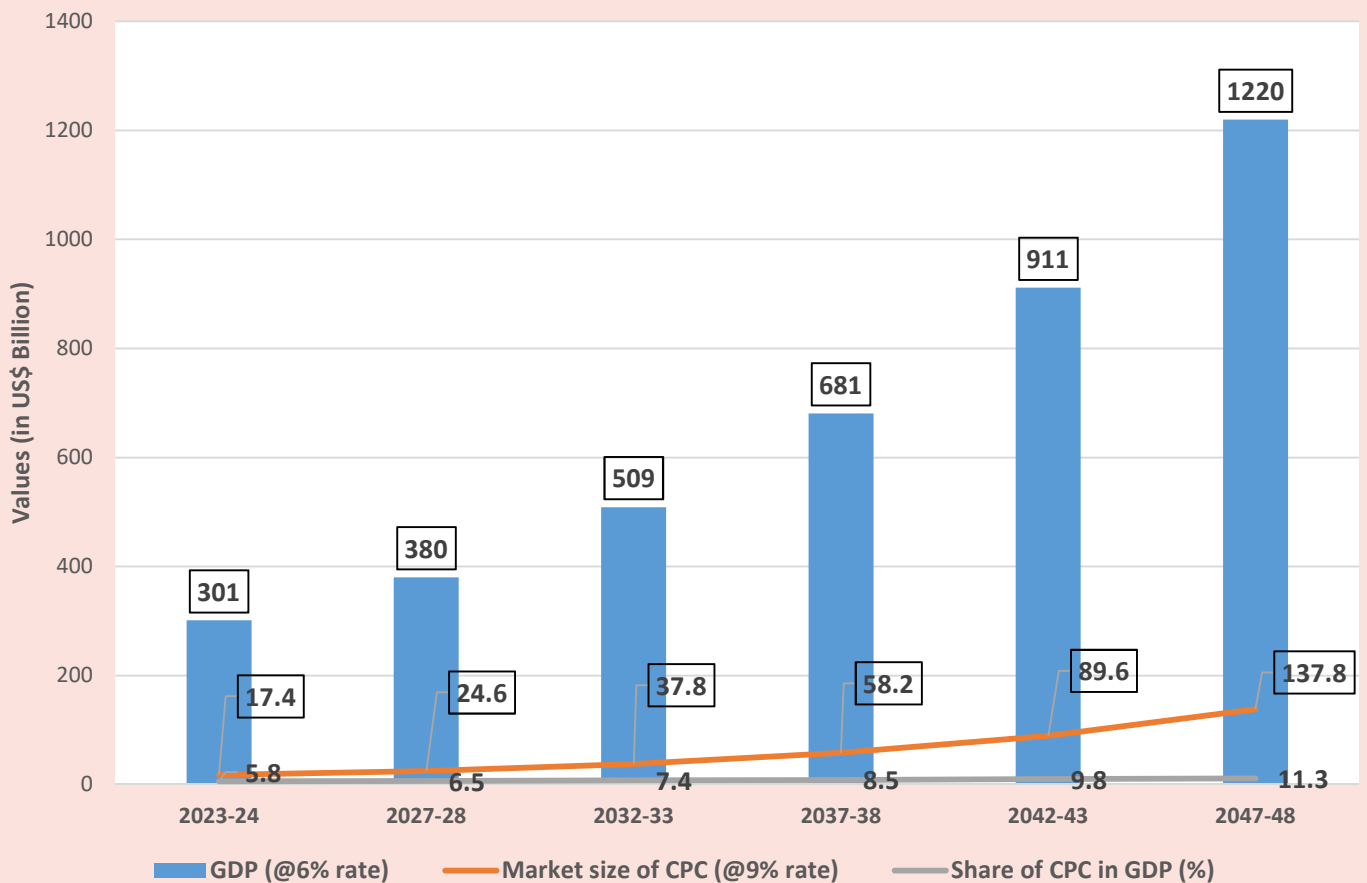


26. Projected Market Size of CPC vs GDP

(Rs. in Lakh Crore)

Year	GDP (@6% rate)	Market size of CPC (@9% rate)	Share of CPC in GDP (%)
2023-24	301	17.4	5.8
2027-28	380	24.6	6.5
2032-33	509	37.8	7.4
2037-38	681	58.2	8.5
2042-43	911	89.6	9.8
2047-48	1220	137.8	11.3

Comparison of Market Size of CPC vs GDP (MP)



27. Government Initiatives

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 establishing in the country to promote and attract investment
- ❖ Regions equipped a dedicated investment with necessary infrastructure for establishment of manufacturing facilities for domestic and export-led production of petrochemicals.
- ❖ Till now four PCPIRs have been notified by the Government:
 - Gujarat (Dahej) in 2009,
 - Andhra Pradesh (Vishakhapatnam) in 2009
 - Odisha (Paradeep) in 2010
 - Tamil Nadu (Cuddalore and Nagapattinam) in 2012

Training Programme on Industrial Safety

- ❖ As part of the government's action plan for Viksit Bharat@2047, the DCPC launched the first-ever training programme focused on "Chemical and Petrochemical Industrial Safety."

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.
- ❖ Grants-in-Aid: 50% of the project cost or up to Rs. 40 Cr, whichever is less.
- ❖ So far 10 plastic parks have been approved.

Center of Excellence

- ❖ Center of Excellence'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
- ❖ Grant up to Rs.5 Cr each to premier public research institutions
- ❖ 18 CoEs have been approved so far.

27. Government Initiatives

Quality Control Orders (QCOs)	<ul style="list-style-type: none">❖ Quality Control Orders (QCOs) issued by DCPC mandates compliance with specified quality standards (e.g., BIS standards) for manufacturing, importing, and selling chemical and petrochemical products. Their purpose is to ensure product safety, enhance quality, protect consumer interests, and promote environmental sustainability.
Duty rationalisation	<ul style="list-style-type: none">❖ Duty rationalization inputs and recommendation are given by the DCPC as the line department of the Ministry to the Customs and Excise Department involves adjusting customs and excise duties on chemical and petrochemical products. The objective is to promote domestic manufacturing, reduce dependency on imports, enhance export competitiveness, and support the growth of the sector in line with national economic goals.
Chemical Promotion Development Scheme (CPDS)	<ul style="list-style-type: none">❖ CPDS is being implemented since 1997 in the Chemical Division of DCPC under Plan Head of Account.❖ The aim of the Scheme is basically to extend soft support in the form of Grants-in-Aid (General) to various organisations / industry associations, etc. to conduct workshops, seminars, studies, etc. to obtain necessary inputs for enabling the Department to firm its views on various policy matters relating to the Chemical and Petrochemical sector.
ChemIndia Web-Portal	<ul style="list-style-type: none">❖ DCPC has taken initiative to establish the online data management system for the coverage of more than 13000 chemical and petrochemical industries located across the country. The ChemIndia Portal was launched to serve as a central hub for gathering data related to production, installed capacity, purchases, and sales.





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DEPARTMENT OF
CHEMICALS & PETRO-CHEMICALS