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Research Report

On

Cement Industry

September 24, 2024

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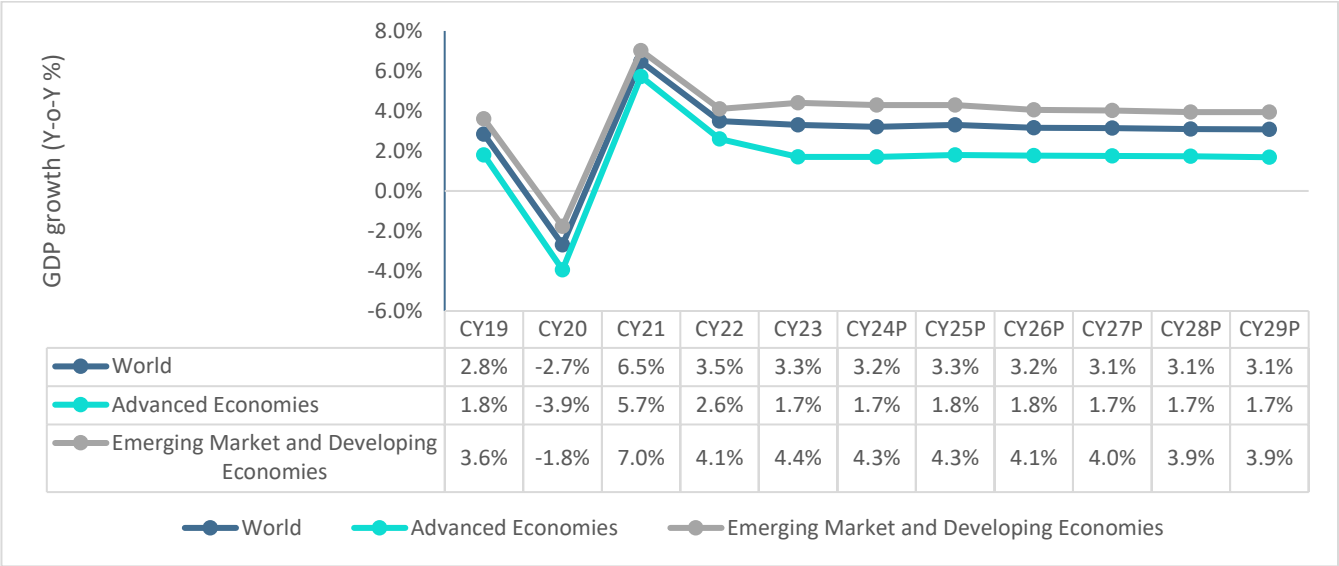
1 Economic Outlook

1.1 Global Economy

Global growth, which stood at 3.3% in CY23, is anticipated to fall to 3.2% in CY24 and then bounce back again to 3.3% in CY25. The CY24 forecast has remained same compared to the April 2024 World Economic Outlook (WEO) Update, and increased by 0.1 percentage point compared to the January 2024 WEO. Despite this, the expansion remains historically low, attributed to factors including sustained high borrowing costs, inflation woes, reduced fiscal support, lingering effects of Russia's Ukraine invasion, Iran–Israel Cold War, sluggish productivity growth, and heightened geo-economic fragmentation.

Chart 1: Global Growth Outlook Projections (Real GDP, Y-o-Y change in %)



	CY19	CY20	CY21	CY22	CY23	CY24P	CY25P	CY26P	CY27P	CY28P	CY29P
World	2.8%	-2.7%	6.5%	3.5%	3.3%	3.2%	3.3%	3.2%	3.1%	3.1%	3.1%
Advanced Economies	1.8%	-3.9%	5.7%	2.6%	1.7%	1.7%	1.8%	1.8%	1.7%	1.7%	1.7%
Emerging Market and Developing Economies	3.6%	-1.8%	7.0%	4.1%	4.4%	4.3%	4.3%	4.1%	4.0%	3.9%	3.9%

Notes: P-Projection; Source: IMF – World Economic Outlook, July 2024

Table 1: GDP growth trend comparison - India v/s Other Economies

	Real GDP (Y-o-Y change in %)									
	CY20	CY21	CY22	CY23	CY24P	CY25P	CY26P	CY27P	CY28P	CY29P
India	-5.8	9.7	7.0	8.2	7.0	6.5	6.5	6.5	6.5	6.5
China	2.2	8.5	3.0	5.2	5.0	4.5	3.8	3.6	3.4	3.3
Indonesia	-2.1	3.7	5.3	5.0	5.0	5.1	5.1	5.1	5.1	5.1
Saudi Arabia	-3.6	5.1	7.5	-0.8	1.7	4.7	4.0	3.5	3.0	3.5
Brazil	-3.3	4.8	3.0	2.9	2.1	2.4	2.1	2.0	2.0	2.0
Euro Area	-6.1	5.9	3.4	0.5	0.9	1.5	1.4	1.3	1.3	1.2
United States	-2.2	5.8	1.9	2.5	2.6	1.9	2.0	2.1	2.1	2.1

P- Projections; Source: IMF- World Economic Outlook Database (July 2024)

Advanced Economies Group

Advanced economies are expected to experience a gradual increase in growth, remaining same at 1.7% in CY23 and CY24 and increasing to 1.8% in CY25. The projection for CY24 and CY25 remains unchanged compared to the April 2024 WEO Update.

The United States is expected to see growth rise to 2.6% in CY24, followed by a slight slowdown to 1.9% in CY25. This deceleration is attributed to gradual fiscal tightening and labor market softening, which dampens aggregate demand. The CY24 projection has been revised downward by 0.1 percentage points since the April CY24 WEO Update. This revision primarily reflects carryover effects from stronger-than-expected growth in the fourth quarter of CY23, with some of this momentum expected to continue into CY24.

The Euro Area's growth is anticipated to rebound from its sluggish rate of 0.5% in CY23, mainly influenced by significant exposure to the conflict in Ukraine. Projections indicate an increase to 0.9% in CY24 and further to 1.5% in CY25. This recovery is driven by stronger household consumption, as the impact of elevated energy prices diminishes and declining inflation bolsters real income growth. Additionally, strong momentum in services, higher than expected net exports, and higher investments have further driven this growth. But, countries like Germany are expected to have a sluggish recovery on account of weak manufacturing growth.

Emerging Market and Developing Economies Group

Emerging market and developing economies are forecasted to maintain stable growth at 4.3% in both CY24 and CY25. This forecast has been revised upwards by 0.1 percentage point as compared to the April 2024 WEO update on account of stronger activity in Asia, particularly China and India. Growth prospects in economies across the Middle East and Central Asia continue to be weighed down by oil production and regional conflicts. Growth forecast of sub-Saharan Africa has also been revised downward on account of weak economic activity. Low-income developing countries are anticipated to experience a gradual growth uptick, starting at 3.9% in CY23 and climbing to 4.4% in CY24 and 5.3% in CY25, as certain constraints on near-term growth begin to ease.

The economic forecast for emerging and developing Asia reveals a modest deceleration in growth, with projections indicating a decline from 5.7% in CY23 to 5.4% in CY24 and 5.1% in CY25. **China's** trajectory reflects a slowdown, transitioning from 5.2% in CY23 to 5.0% in CY24 and 4.5% in CY25 due to fading post-pandemic stimuli and ongoing property sector challenges. In contrast, **India's** growth remains robust, with anticipated rates of 7.0% in CY24 and 6.5% in CY25, bolstered by resilient domestic demand and a burgeoning working-age populace.

The **Indonesian** economy is expected to register growth of 5.0% in CY24 and 5.1% in CY25 with a strong domestic demand, a healthy export performance, policy measures, and normalization in commodity prices. **Saudi Arabia's** growth slowed at -0.8% in CY23 attributed to lower oil production. CY24 is predicted to see a revamp in the growth rates to 1.7% on account of Vision 2030 reforms that helped advance the country's economic diversification agenda, including through reduced reliance on oil. The forecast for CY24 has been revised downward as compared to the April 2024 WEO update on account of extension of oil production cuts. Going forward, GDP is expected to grow at 4.7% and 4.0% in CY25 and CY26, respectively. On the other hand, **Brazil's** growth is projected to ease to 2.1% in CY24, driven by fiscal consolidation, the lingering impact of tight monetary policies, and reduced contributions from the agricultural sector. There has been a downward revision in forecast for CY24 compared to April 2024 WEO update on account of the near-term impact of flooding. Going forward, GDP is expected to grow at 2.4% in CY25 on account of reconstruction following the floods and supportive structural factors.

Despite the turmoil in the last 2-3 years, India bears good tidings to become a USD 5 trillion economy by CY27. According to the IMF dataset on Gross Domestic Product (GDP) at current prices, the nominal GDP has been at USD 3.6 trillion for CY23 and is projected to reach USD 5.3 trillion by CY27 and USD 6.4 trillion by CY29. India's expected GDP growth rate for coming years is almost double compared to the world economy.

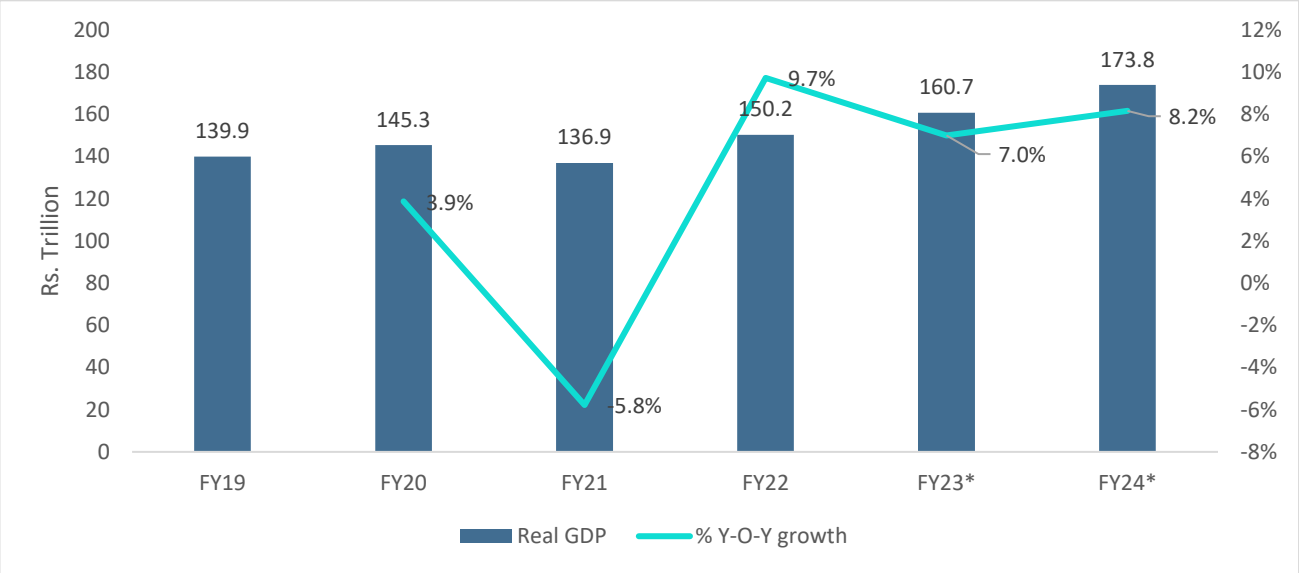
Besides, India stands out as the fastest-growing economy among the major economies. The country is expected to grow at more than 6.5% in the period of CY24-CY29, outshining China's growth rate. By CY27, the Indian economy is estimated to emerge as the third-largest economy globally, hopping over Japan and Germany. Currently, it is the third-largest economy globally in terms of Purchasing Power Parity (PPP) with a ~7.6% share in the global economy, with China [~18.7%] on the top followed by the United States [~15.6%]. Purchasing Power Parity is an economic performance indicator denoting the relative price of an average basket of goods and services that a household needs for livelihood in each country.

Despite Covid-19's impact, high inflationary environment and interest rates globally, and the geopolitical tensions in Europe, India has been a major contributor to world economic growth. India is increasingly becoming an open economy as well through growing foreign trade. Despite the global inflation and uncertainties, Indian economy continues to show resilience. This resilience is mainly supported by stable financial sector backed by well-capitalized banks and export of services in trade balance. With this, the growth of Indian economy is expected to fare better than other economies majorly on account of strong investment activity bolstered by the government's capex push and buoyant private consumption, particularly among higher income earners.

1.2 Indian Economic Outlook

1.2.1 GDP Growth and Outlook

Resilience to External Shocks remains Critical for Near-Term Outlook



Source: MOSPI, CareEdge Research
Note: GDP is taken at constant prices; * denotes FRE – First Revised Estimates for FY23 & PE – Provisional Estimate for FY24

India's real GDP grew by 7.0% in FY23 and stood at ~Rs. 161 trillion, as per the First Revised Estimate, despite the pandemic in previous years and geopolitical Russia-Ukraine spillovers. In Q1FY24, the economic growth accelerated to 8.2%. The manufacturing sector maintained an encouraging pace of growth, given the favorable demand conditions and lower input prices. The growth was supplemented by a supportive base alongside robust services and construction activities. This momentum remained in the range in the Q2FY24 with GDP growth at 8.1%, mainly supported by acceleration in investments. However, private consumption growth was muted due to weak rural demand and some

moderation in urban demand amid elevated inflationary pressures in Q2FY24. The GDP growth number improved for Q3FY24 at 8.6%.

India's GDP at constant prices surged to Rs. 47.24 trillion in Q4FY24 from Rs. 43.84 trillion in Q4FY23, marking a 7.8% growth rate. This upswing was fueled by robust performances in construction, mining & quarrying, utility services, and manufacturing sectors and investment drove the GDP growth, while both private and government consumption remained subdued.

Real GDP in the year FY24 is estimated to grow at 8.2% at Rs. 173.8 trillion as per provisional estimate of the Ministry of Statistics and Programme Implementation. It is expected that domestic demand, especially investment, to be the main driver of growth in India, amid sustained levels of business and consumer confidence.

GDP Growth Outlook

- Driven by fixed investment and improving global environment, domestic economic activity continues to expand. The provisional estimates (PE) placed real GDP growth at 8.2% for FY24.

- Industrial activity led by manufacturing continues its momentum on the back of strengthening domestic demand. Moreover, the services sector maintained buoyancy as could be observed by growth in high frequency indicators such as E-way bills, GST revenues, toll collections, aggregate, and a healthy growth in domestic air cargo and port cargo. The purchasing managers' index for both manufacturing and services continues to exhibit a sustained and healthy expansion.

- Domestic economic activity remains strong. On the supply side, the south-west monsoon is progressing well, with higher cumulative kharif sowing and improving reservoir levels, which bodes well for kharif output. The potential development of La Niña conditions in the latter half of the monsoon season could impact agricultural production in 2024-25. On the demand side, household consumption is bolstered by a recovery in rural demand and consistent discretionary spending in urban areas. Fixed investment activity is robust, supported by the government's ongoing focus on capital expenditure, healthy balance sheets of banks and corporates, and other policy measures. Private corporate investment is picking up, driven by an increase in bank credit. Merchandise exports grew in June, albeit at a slower rate, while the growth in non-oil-non-gold imports accelerated, indicating resilience of domestic demand. Services exports saw double-digit growth in May 2024 before slowing down in June 2024.

- Improved agricultural activity would improve rural consumption, while urban consumption would be supported by buoyancy in services activity. Additionally, improvement in global trade prospects are expected to support external demand.

Persistent geopolitical tensions and volatility in international financial markets and geo-economic fragmentation do pose risk to this outlook. Based on these considerations, the RBI, in its August 2024 monetary policy, has projected real GDP growth at 7.2% y-o-y for FY25.

Table 2: RBI's GDP Growth Outlook (Y-o-Y %)

FY25P (complete year)	Q1FY25P	Q2FY25P	Q3FY25P	Q4FY25P	Q1FY26P
7.2%	7.1%	7.2%	7.3%	7.2%	7.2%

Source: Reserve Bank of India; Note: P-Projected

1.2.2 Gross Value Added (GVA)

Gross Value Added (GVA) is the measure of the value of goods and services produced in an economy. GVA gives a picture of the supply side whereas GDP represents consumption.

Industry and Services sector leading the recovery charge

• The gap between GDP and GVA growth turned positive in FY22 (after a gap of two years) due to robust tax collections. Of the three major sector heads, the service sector has been the fastest-growing sector in the last 5 years.

• The **agriculture sector** was holding growth momentum till FY18. In FY19, the acreage for the rabi crop was marginally lower than the previous year which affected the agricultural performance. Whereas FY20 witnessed growth on account of improved production. During the pandemic-impacted period of FY21, the agriculture sector was largely insulated as timely and proactive exemptions from COVID-induced lockdowns to the sector facilitated uninterrupted harvesting of rabi crops and sowing of kharif crops. However, supply chain disruptions impacted the flow of agricultural goods leading to high food inflation and adverse initial impact on some major agricultural exports. However, performance remained steady in FY22.

In FY23, the agriculture sector performed well despite weather-related disruptions, such as uneven monsoon and unseasonal rainfall, impacting yields of some major crops and clocked a growth of 4% y-o-y, garnering Rs. 22.3 trillion.

In Q1FY24, this sector expanded at a slower pace of 3.7% y-o-y growth compared to y-o-y growth a quarter ago. This further stumbled to 1.7% in Q2FY24.Further, it experienced y-o-y growth of 0.4% in Q3 and 0.6% in Q4. leading to expectations of a modest 1.4% rise for the full year, contrasting sharply with the 4.7% growth recorded in FY23. In the Budget 2024-25, the government plans to boost private and public investment in post-harvest activities and expand the application of Nano-DAP across agro-climatic zones. Strategies for self-reliance in oilseeds and dairy development are to be formulated, alongside ramping up the Pradhan Mantri Matsaya Sampada Yojana and establishing Integrated Aquaparks. Allocation for PM-Formalisation of Micro Food Processing Enterprises scheme has increased from Rs. 639 in FY24 to Rs. 880 crores in FY25.

Going forward, rising bank credit to the sector and increased exports will be the drivers for the agriculture sector. However, a deficient rainfall may have impact on the reservoir level, weighing on prospects of Kharif sowing. Considering these factors, the agriculture sector is estimated to attain Rs. 23.7 trillion and mark 1.4% y-o-y growth for complete FY24.

• From March 2020 onwards, the nationwide lockdown due to the pandemic significantly impacted the **industrial sector**. In FY20 and FY21, this sector felt turbulence due to the pandemic and recorded a decline of 1.4% and 0.9%, respectively, on a y-o-y basis. With the opening up of the economy and resumption of industrial activities, it registered 11.6% y-o-y growth in FY22, albeit on a lower base.

The industrial output in FY23 grew by only 2.1% with estimated value Rs. 44.74 trillion owing to decline in manufacturing activities.

The industrial sector grew by 6.0% in Q1FY24, while Q2FY24 growth was up by 13.6% owing to positive business optimism and strong growth in new orders supported manufacturing output. The industrial growth was mainly supported by sustained momentum in the manufacturing and construction sectors. Within manufacturing, industries such as pharma, motor vehicles, metals, petroleum and pharma witnessed higher production growth during the quarter. The construction sector (13.6% growth in Q2FY24) benefited from poor rainfall during August and September and higher implementation of infrastructure projects. This was reflected in robust cement and steel production and power demand in Q2FY24. Overall, H1FY24 picked up by 9.3% with manufacturing and construction activities witnessing significant acceleration. In Q3FY24, growth rate slowed down to 10.5%. It further fell down to 8.4% in Q4FY24.

India's industrial sector is experiencing strong growth, driven by significant expansion in manufacturing, mining, and construction. This growth is supported by positive business sentiment, declining commodity prices, beneficial government policies like production-linked incentive schemes, and efforts to boost infrastructure development. These factors collectively contribute to the sustained buoyancy in industrial growth due to which the industrial growth is estimated at 9.5% on y-o-y basis registering the value of Rs. 48.9 trillion in FY24.

• The **Services sector** was the hardest hit by the pandemic and registered an 8.2% y-o-y decline in FY21. The easing of restrictions aided a fast rebound in this sector, with 8.8% y-o-y growth witnessed in FY22.

Overall, in FY23, benefitting from the pent-up demand, the service sector was valued at Rs. 80.6 trillion and registered growth of 10.0% y-o-y.

In Q1FY24, the services sector growth jumped to 10.7%. Within services, there was a broad-based improvement in growth across different sub-sectors. However, the sharpest jump was seen in financial, real estate, and professional services. Trade, hotels, and transport sub-sectors expanded at a healthy pace gaining from strength in discretionary demand. The service sector growth in Q2FY24 moderated to 6.0% partly due to the normalization of base effect and some possible dilution in discretionary demand. Considering these factors, service sector marked 8.3% growth in H1FY24. In Q3FY24 growth increased to 7.1% compared to 7.2% last year in the same quarter. In Q4FY24, growth declined to 6.7% compared to 7.2% last year in the same quarter.

With this performance, steady growth in various service sector indicators like air passenger traffic, port cargo traffic, GST collections, and retail credit are expected to support the services sector. With this, the growth of service sector is estimated at Rs. 86.7 trillion registering 7.6% growth in FY24 overall.

Table 3: Sectoral Growth (Y-o-Y % Growth) - at Constant Prices

At constant Prices	FY19	FY20	FY21	FY22	FY23*	FY24*
Agriculture, Forestry & Fishing	**2.1**	**6.2**	**4.1**	**3.5**	**4.7**	**1.4**
Industry	**5.3**	**-1.4**	**-0.9**	**11.6**	**2.1**	**9.5**
Mining & Quarrying	-0.9	-3.0	-8.6	7.1	1.9	7.1
Manufacturing	5.4	-3.0	2.9	11.1	-2.2	9.9
Electricity, Gas, Water Supply & Other Utility Services	7.9	2.3	-4.3	9.9	9.4	7.5
Construction	6.5	1.6	-5.7	14.8	9.4	9.9
Services	**7.2**	**6.4**	**-8.2**	**8.8**	**10.0**	**7.6**
Trade, Hotels, Transport, Communication & Broadcasting	7.2	6.0	-19.7	13.8	12.0	6.4

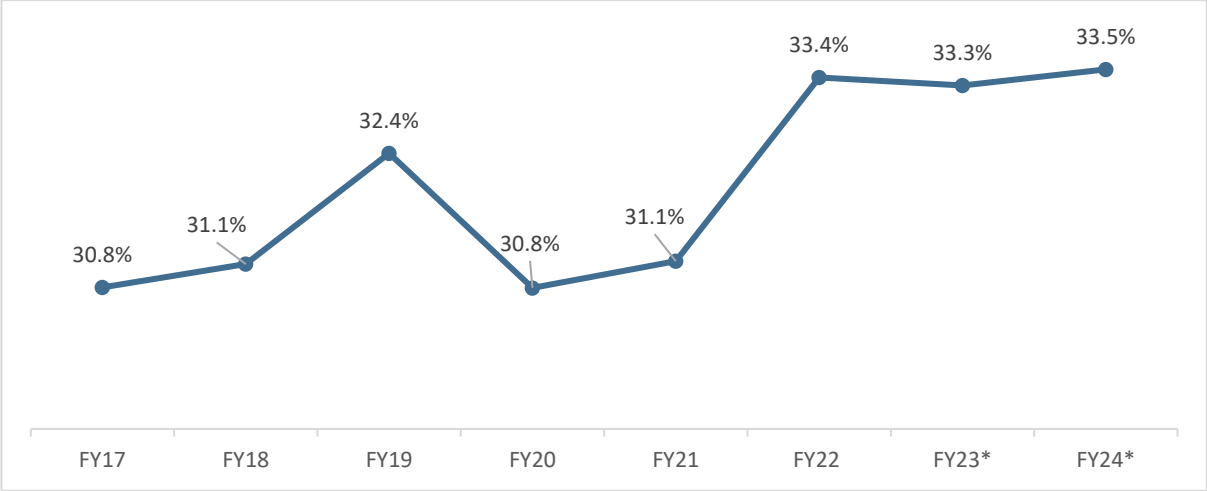
At constant Prices	FY19	FY20	FY21	FY22	FY23*	FY24*
Financial, Real Estate & Professional Services	7.0	6.8	2.1	4.7	9.1	8.4
Public Administration, Defence and Other Services	7.5	6.6	-7.6	9.7	8.9	7.8
GVA at Basic Price	**5.8**	**3.9**	**-4.2**	**8.8**	**6.7**	**7.2**

Source: MOSPI
Note: * denotes FRE – First Revised Estimates for FY23 & PE – Provisional Estimate for FY24

1.2.3 Investment Trend in Infrastructure

Gross Fixed Capital Formation (GFCF), which is a measure of the net increase in physical assets, witnessed an improvement in FY22. As a proportion of GDP, it is estimated to be at 33.4%, which is the highest level in 5 years (since FY17). In FY23, the ratio of investment (GFCF) to GDP remained flat at 33.3%. Continuing in its growth trend, this ratio has reached 33.5% in FY24.

Chart 2: Gross Fixed Capital Formation (GFCF) as % of GDP (At constant prices):



Source: MOSPI
Note: * denotes FRE – First Revised Estimates for FY23 & PE – Provisional Estimate for FY24

Overall, the support of public investment in infrastructure is likely to gain traction due to initiatives such as Atmanirbhar Bharat, Make in India, and Production-linked Incentive (PLI) scheme announced across various sectors.

1.2.4 Industrial Growth

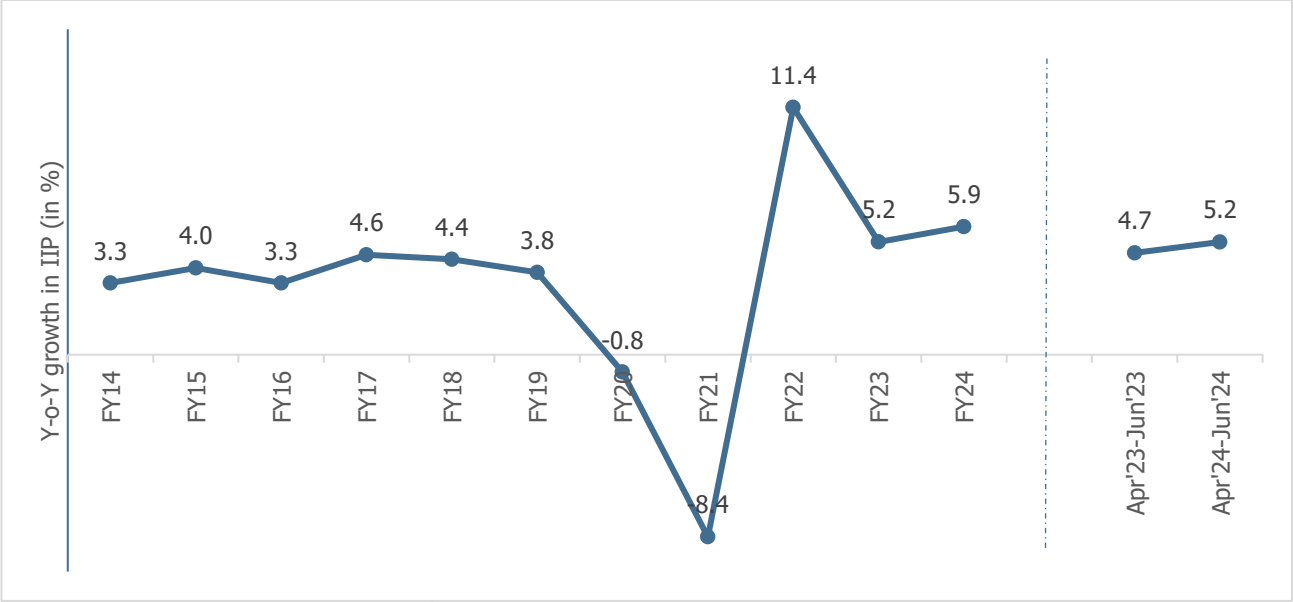
Improved Core and Capital Goods Sectors helped IIP Growth Momentum

The Index of Industrial Production (IIP) is an index to track manufacturing activity in an economy. On a cumulative basis, IIP grew by 11.4% y-o-y in FY22 post declining by 0.8% y-o-y and 8.4% y-o-y, respectively, in FY20 and FY21. This high growth was mainly backed by a low base of FY21. FY22 IIP was higher when compared with the pre-pandemic level of FY20, indicating that while economic recovery was underway. During FY23, the industrial output recorded a growth of 5.2% y-o-y supported by a favorable base and a rebound in economic activities.

During FY24, the industrial output recorded a growth of 5.9% y-o-y supported by growth in manufacturing and power generation sectors. The period April 2024 – June 2024, industrial output grew by 5.2% compared to the 4.7% growth in the corresponding period last year. For the month of June 2024, the IIP growth increased to 4.2% compared to the last year's 4.0%, on account of growth in mining. The manufacturing sector showed a decline in June 2024 from 3.5% in June 2023 to 2.6% in June 2024. Within the growth in manufacturing, the top three positive contributors were Manufacture of basic metals, Manufacture of electrical equipment, and Manufacture of motor vehicles, trailers, and semi-trailers.

So far in the current fiscal, the government's spending on infrastructure has been strong, and there are visible signs of pick up in private investment. Consumer durables production increased due to favorable conditions, while non-durables saw a slight decline. Urban demand is driving consumption, while rural demand is recovering. Good monsoon forecasts are positive, but high unemployment and food inflation pose challenges. Infrastructure/construction output is growing well due to government spending. Private investment and manufacturing capacity utilization are increasing, supporting hopes for private sector growth. Good monsoon could boost rural demand, but food inflation remains a concern. Overall, sustained improvements in consumption and private investment are crucial for industrial performance.

Chart 3: Y-o-Y growth in IIP (in %)



Source: MOSPI

1.2.5 Consumer Price Index

India's consumer price index (CPI), which tracks retail price inflation, stood at an average of 5.5% in FY22 which was within RBI's targeted tolerance band of 6%. However, consumer inflation started to upswing from October 2021 onwards and reached a tolerance level of 6% in January 2022. Following this, CPI reached 6.9% in March 2022.

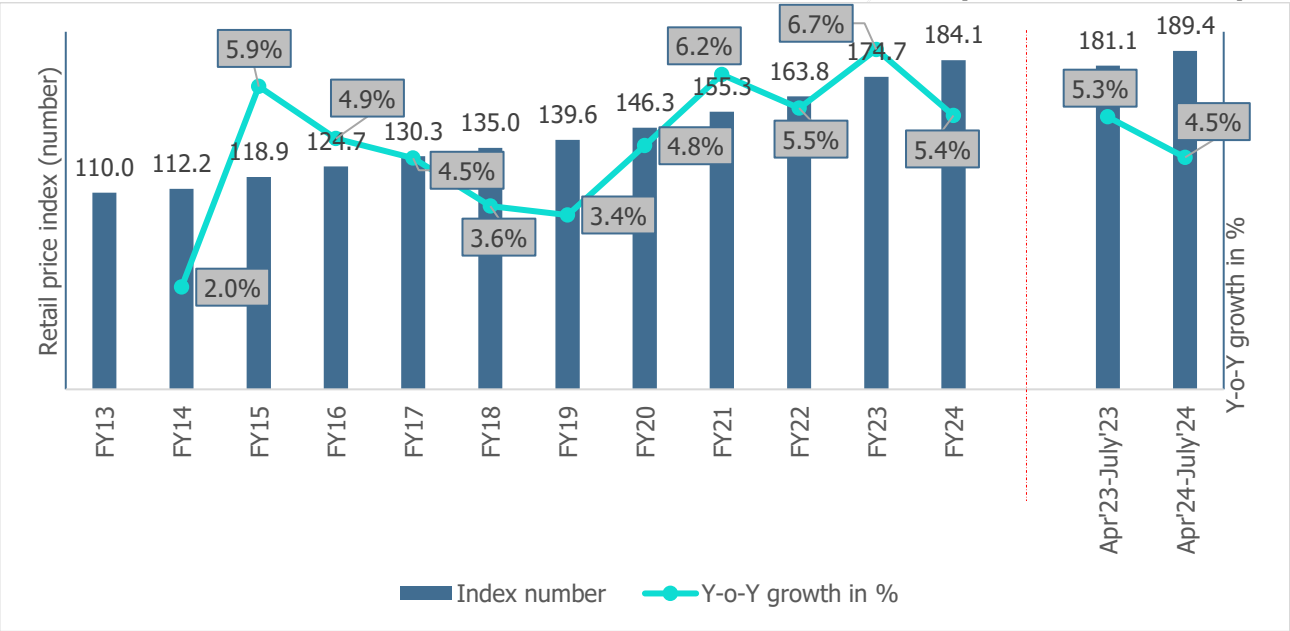
CPI remained elevated at an average of 6.7% in FY23, above the RBI's tolerance level. However, there was some respite toward the end of the fiscal wherein the retail inflation stood at 5.7% in March 2023, tracing back to the RBI's tolerance band. Apart from a favorable base effect, the relief in retail inflation came from a moderation in food inflation.

In FY24, the CPI moderated for two consecutive months to 4.7% in April 2023 and 4.3% in May 2023. This trend snapped in June 2023 with CPI rising to 4.9%. In July 2023, the CPI had reached its highest point at 7.4%, this was largely due to increase in food prices. The notable surge in vegetable prices and in other food categories such as cereals,

pulses, spices, and milk have driven this increase. In August 2023, the food inflation witnessed some moderation owing to government's active intervention. This was further moderated for second consecutive month in September 2023 to 5%, led by a sharp correction in vegetables prices and lower LPG prices. Helped by deflation in the fuel and light category, the retail inflation in October 2023 softened at 4.9%. This trend reversed in November 2023 due to spike in certain vegetable prices as well as sticky inflation in non-perishable food items such as cereals, pulses and spices and the CPI rose to 5.6%. In the month of December 2023, elevated food prices and an unfavourable base drove headline inflation to a four-month peak of 5.7%. However in the month of January and February, food prices softened and the inflation was reported at 5.1% for both the months. March witnessed furthur softning of prices registering 4.9% growth. For FY24 inflation moderated to 5.4% which are within the boundaries set of 2% to 6% by the RBI.

High inflation in specific food items poses inflation risk, even though an improvement in south-west monsoon and progress in sowing are improving the food inflation outlook. This makes it crucial to monitor monsoon distribution. Additionally, global food prices also show some softening in July, post increases in March 2024. While government initiatives are expected to mitigate upward price pressure, external risks from geopolitical tensions may affect supply chains and commodity prices. The numbers for April 2024-July 2024 show a decline in inflation growth y-o-y to 4.5% as compared to inflation growth y-o-y of 5.3% in April 2023-July 2023 period. For July 2024, CPI inflation stood at 3.5% which has been the lowest retail inflation in the last 5 years. There was a decline in inflation among all groups with significant decline in vegetables, spices, and fruits subgroup. Additionally, food inflation was also at the lowest in this month since June 2023.

Chart 4: Retail Price Inflation in terms of index and Y-o-Y Growth in % (Base: 2011-12=100)

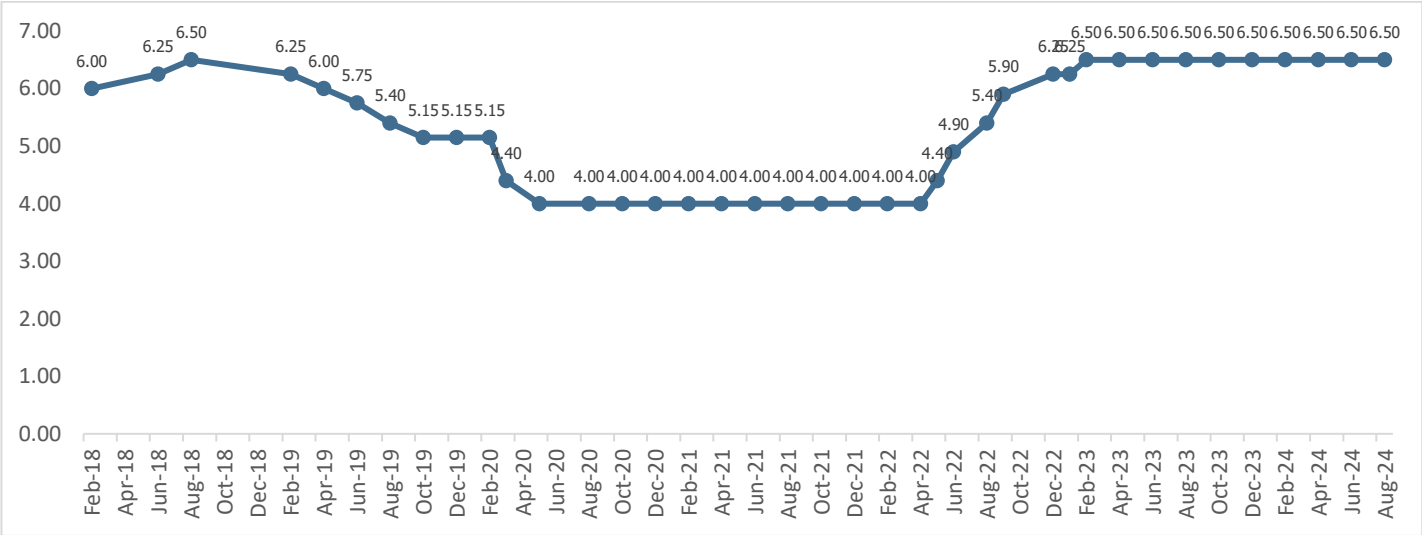


Source: MOSPI

The CPI is primarily factored in by RBI while preparing their bi-monthly monetory policy. At the bi-monthly meeting held in August 2024, RBI projected inflation at 4.5% for FY25 with inflation during Q2FY25 at 4.4%, Q3FY25 at 4.7%, Q4FY25 at 4.3%, and Q1FY26 at 4.4%.

Considering the current inflation situation, RBI has kept the repo rate unchanged at 6.5% again in the August 2024 meeting of the Monetary Policy Committee.

Chart 5: RBI historical Repo Rate



Source: RBI

In a meeting held in August 2024, RBI also maintained the liquidity adjustment facility (LAF) corridor by adjusting the standing deposit facility (SDF) rate of 6.25% as the floor and the marginal standing facility (MSF) at the upper end of the band at 6.75%.

Further, the central bank continued to remain focused on the withdrawal of its accommodative stance. While headline inflation has started easing due to softening in core component and economic activity has been resilient supported by domestic and investment demand, volatility in food proces due to adverse weather conditions pose a risk to the path of disinflation. Given the uncertainities in food prices that might derail the path to bring down inflation, the Central Bank has decided to be vigilant and maintain an active disinflationary stance to ensure complete transmission of past rate cuts and anchoring of inflation expectations until a better alignment of the headline CPI inflation with the target is achieved, while supporting growth.

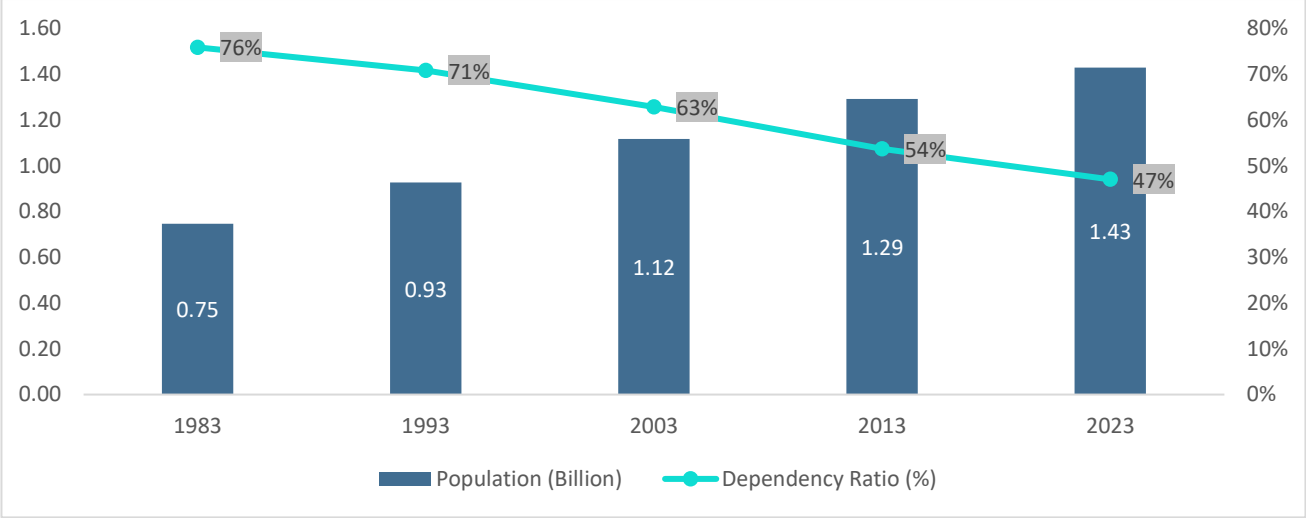
1.2.6 Overview on Key Demographic Parameters

- **Population growth and Urbanization**

The trajectory of economic growth of India and private consumption is driven by socio-economic factors such as demographics and urbanization. According to the world bank, India's population in 2022 surpassed 1.42 billion slightly higher than China's population 1.41 billion and became the most populous country in the world.

Age Dependency Ratio is the ratio of dependents to the working age population, i.e., 15 to 64 years, wherein dependents are population younger than 15 and older than 64. This ratio has been on a declining trend. It was as high as 76% in 1983, which has reduced to 47% in 2023. Declining dependency means the country has an improving share of working-age population generating income, which is a good sign for the economy.

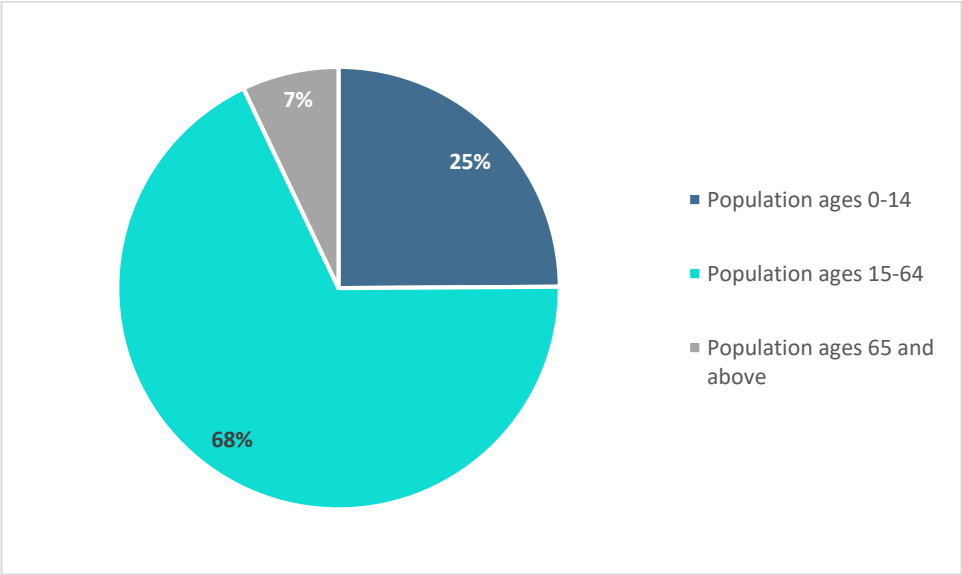
Chart 6: Trend of India Population vis-à-vis dependency ratio (2023)



Source: World Bank Database

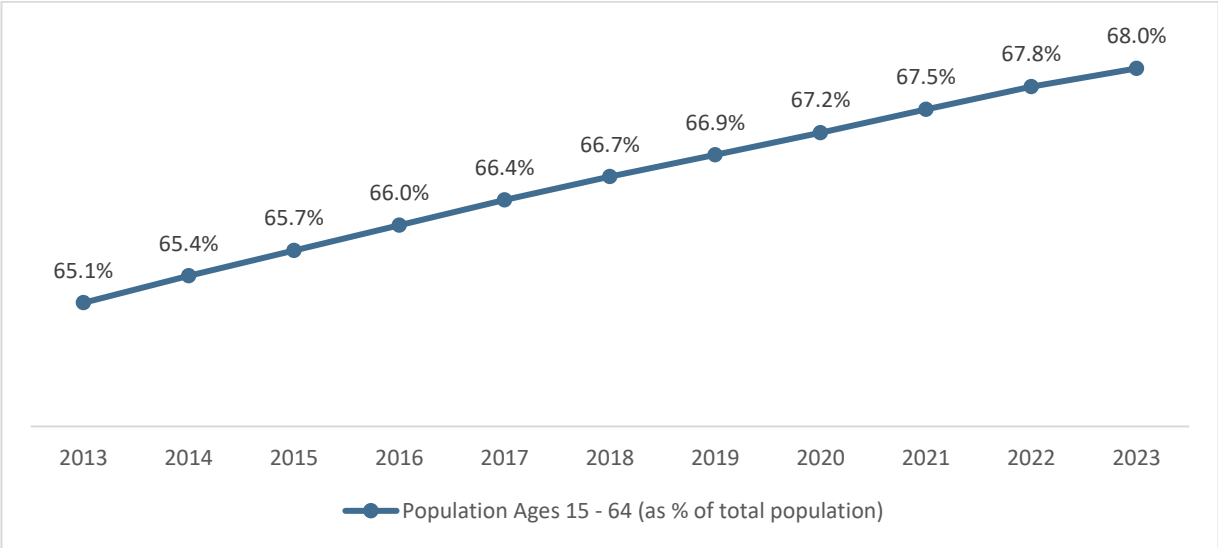
With an average age of 29, India has one of the youngest populations globally. With vast resources of young citizens entering the workforce every year, it is expected to create a 'demographic dividend'. India is home to a fifth of the world's youth demographic and this population advantage will play a critical role in economic growth.

Chart 7: Age-Wise Break Up of Indian population (2023)



Source: World Bank Database

Chart 8: Yearly Trend - Young Population as % of Total Population (2023)

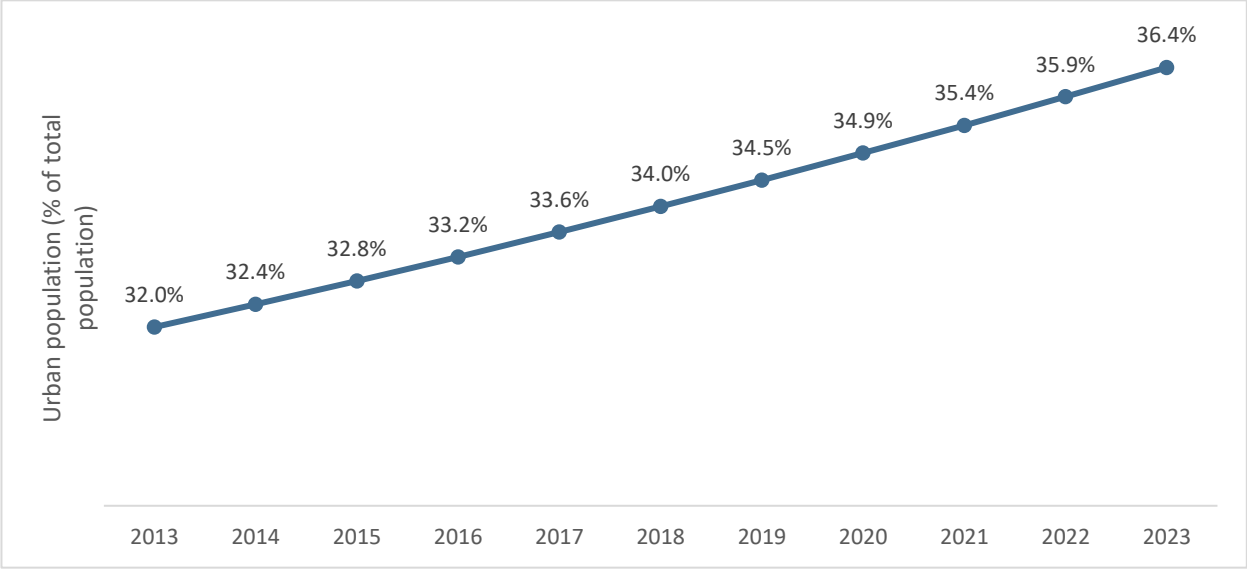


Source: World Bank database

- **Urbanization**

The urban population is significantly growing in India. The urban population in India is estimated to have increased from 413 million (32% of total population) in 2013 to 519.5 million (36.4% of total population) in the year 2023. People living in Tier-2 and Tier-3 cities have greater purchasing power.

Chart 9: Urbanization Trend in India (2023)



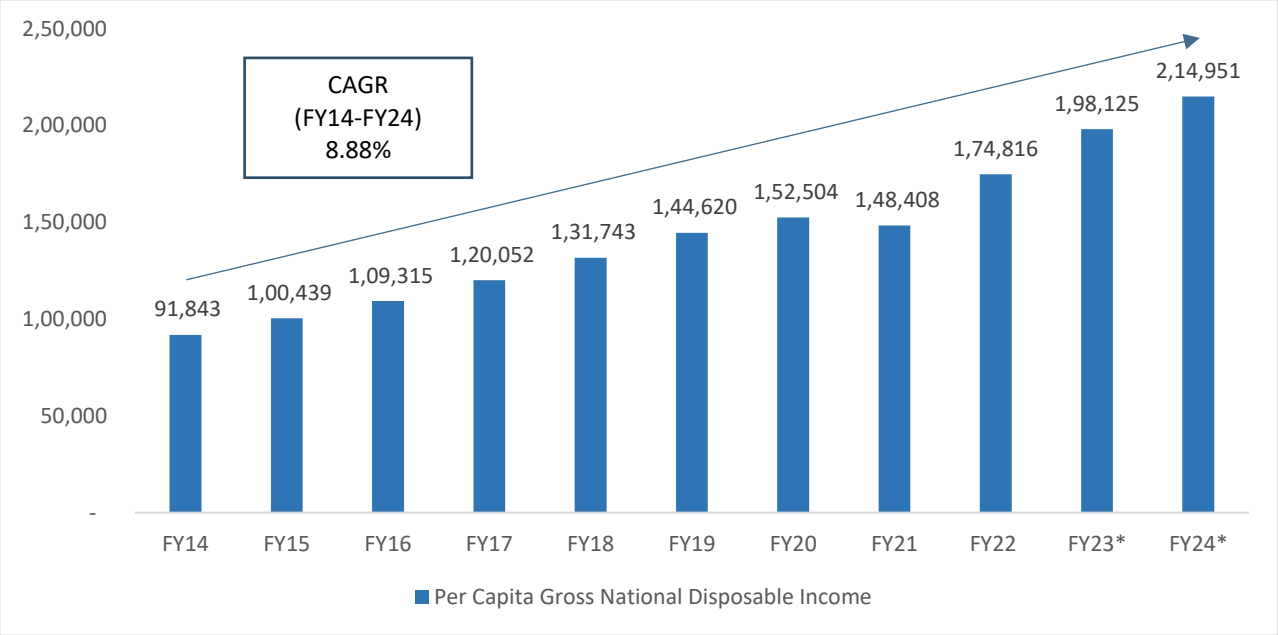
Source: World Bank Database

- **Increasing Per Capita Disposable Income**

Gross National Disposable Income (GNDI) is a measure of the income available to the nation for final consumption and gross savings. Between the period FY14 to FY24, per capita GNDI at current prices registered a CAGR of 8.88%. More disposable income drives more consumption, thereby driving economic growth.

The chart below depicts the trend of per capita GNDI in the past decade:

Chart 10: Trend of Per Capita Gross National Disposable Income (Current Price)

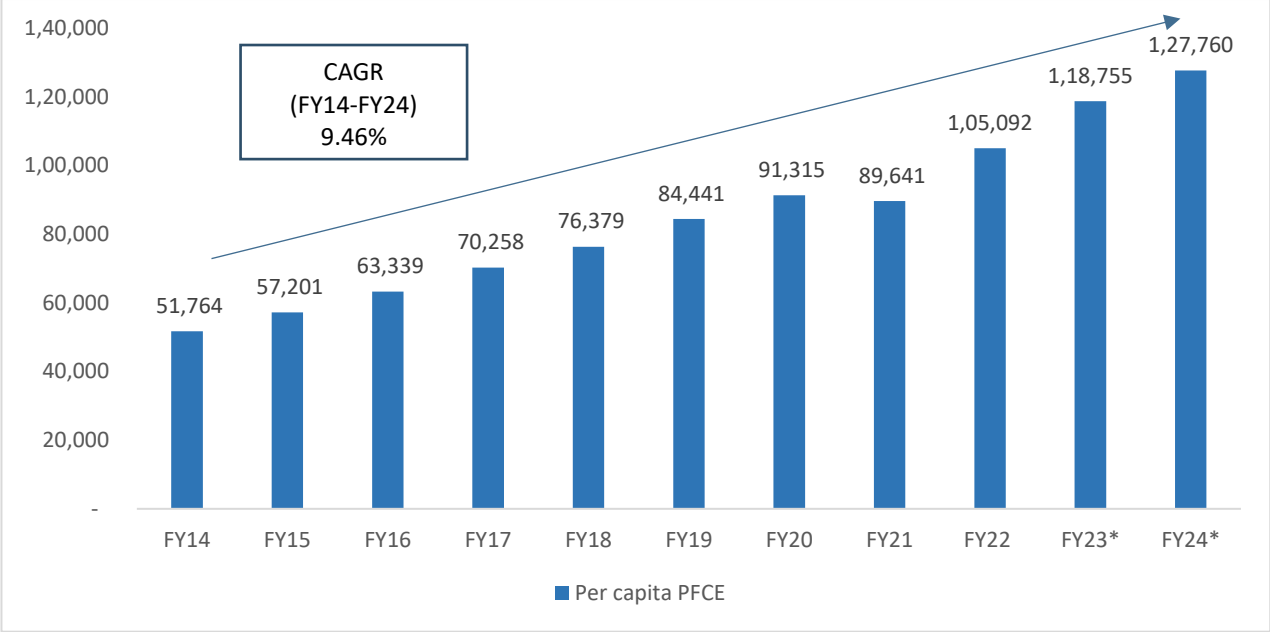


Note: * denotes FRE – First Revised Estimates for FY23 & PE – Provisional Estimate for FY24
Source: MOSPI

- **Increase in Consumer Spending**

With increase in disposable income, there has been a gradual change in consumer spending behaviour as well. Private Final Consumption Expenditure (PFCE) which is measure of consumer spending has also showcased significant growth in the past decade at a CAGR of 9.46%. Following chart depicts the trend of per capita PFCE at current prices:

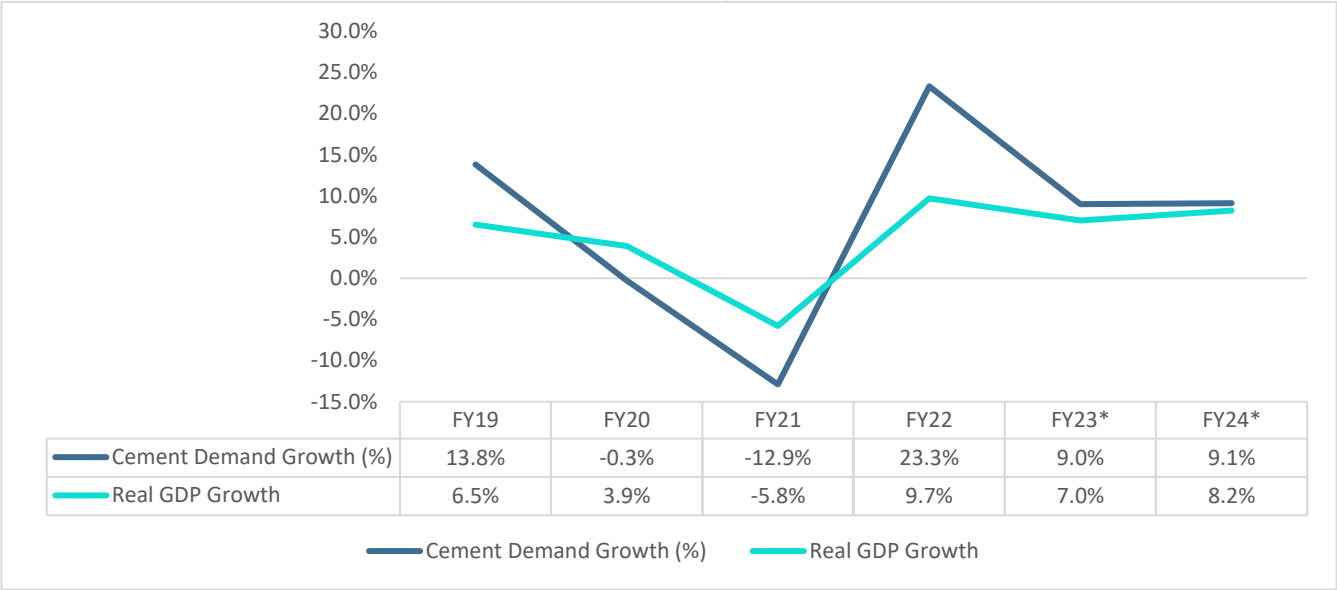
Chart 11: Trend of Per Capita Private Final Consumption Expenditure (Current Price)



Note: * denotes FRE – First Revised Estimates for FY23 & PE – Provisional Estimate for FY24
Source: MOSPI

1.2.7 India cement demand as compared to growth over India GDP growth

Chart 12: Growth in Cement Demand vs. Real GDP growth



	FY19	FY20	FY21	FY22	FY23*	FY24*
Cement Demand Growth (%)	13.8%	-0.3%	-12.9%	23.3%	9.0%	9.1%
Real GDP Growth	6.5%	3.9%	-5.8%	9.7%	7.0%	8.2%

Source: MOSPI, CareEdge Research
Note: * denotes FRE – First Revised Estimates of GDP for FY23 & PE – Provisional Estimate of GDP for FY24

The growth in cement demand correlates with growth in real GDP, as the economic development of a country requires large investments in infrastructure development such as roads, highways, ports, housing and more. The construction industry is a major consumer of cement, hence cement demand would be higher when the economy is growing. The demand for cement witnessed a decline during the pandemic period, as the economy came to a halt and that led to

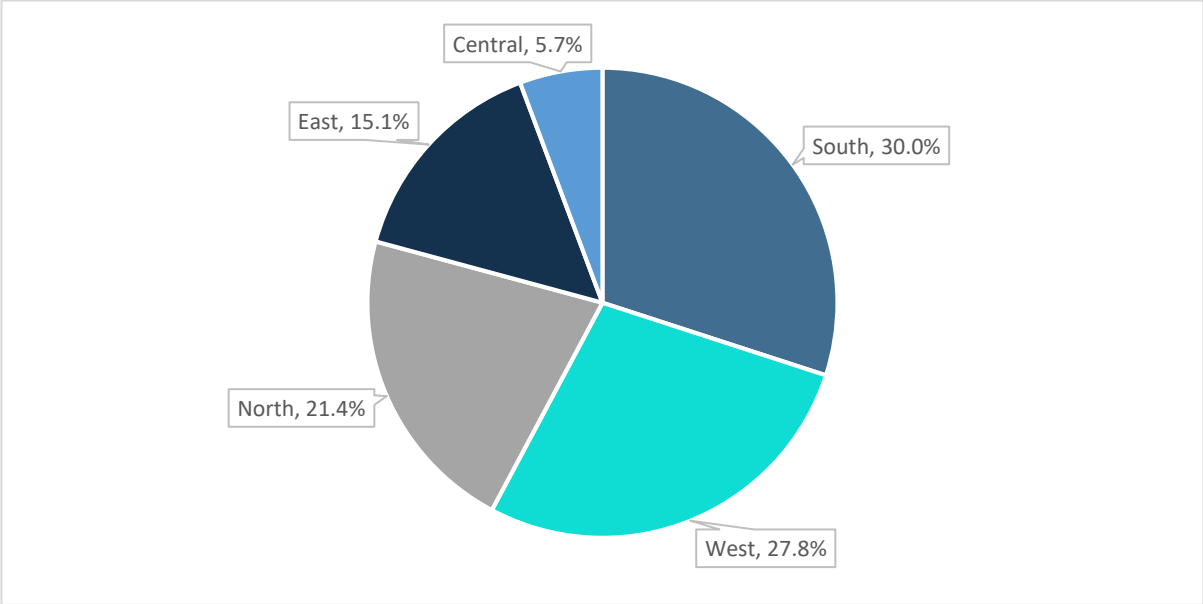
slowdown in economic growth. However, in the post-pandemic period, the cement demand has grown significantly higher as compared to the Real GDP growth. This is largely on account of Government's push towards infrastructure industry and significant ramp up in construction activities that were impacted during the pandemic.

Table 4: Region-wise Share in Real GDP - Constant Prices

Region	FY19	FY20	FY21	FY22	FY23
South	29.6%	29.5%	30.2%	30.2%	30.0%
West	27.6%	27.9%	27.6%	27.7%	27.8%
North	21.9%	21.7%	21.4%	21.3%	21.4%
East	15.2%	15.1%	15.1%	15.1%	15.1%
Central	5.7%	5.8%	5.7%	5.7%	5.7%

Source: MOSPI, CareEdge Research

Chart 13: Region-wise Share in Real GDP - FY23



Source: MOSPI, CareEdge Research
Note: South India consists of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Telangana, Andaman & Nicobar Islands, and Puducherry
West India consists of Goa, Gujarat, Maharashtra, and Rajasthan
North India consists of Haryana, Himachal Pradesh, Punjab, Uttarakhand, Chandigarh, Delhi, Jammu & Kashmir, and Uttar Pradesh
Central India consists of Madhya Pradesh, Chattisgarh
East India consists of Arunachal Pradesh, Assam, Bihar, Jharkhand, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Sikkim, Tripura and West Bengal

The South region continues the largest contributor to India's real GDP, and its share has grown significantly in the post-pandemic period. The region has steadily increased its contribution towards real GDP from 29.6% in FY19 to 30.0% in FY23.

The West region is the second largest contributor to India's real GDP, with its share at 27.8% in FY23. Whereas, the North has consistant share in real GDP. The real GDP contribution of north region moved from 21.9% in FY19 to 21.4% in FY23 and that of eastern region has remained at 15.1% in FY23.

The Central region has been the smallest contributor to India's real GDP, however, the region's contribution towards real GDP has remained at 5.7% in FY23.

1.2.8 Concluding Remarks

The major headwinds to global economic growth are escalating geopolitical tensions, volatile global commodity prices, high interest rates, inflation woes, volatility in international financial markets, climate change, rising public debt, and new technologies. Despite the global economic growth uncertainties, the Indian economy is relatively better placed in terms of GDP growth compared to other emerging economies. According to IMF's forecast, it is expected to be 7% in CY24 compared to the world GDP growth projection of 3.2%. The bright spots for the economy are continued healthy domestic demand, support from the government towards capital expenditure, moderating inflation, investments in technology and improving business confidence.

Likewise, several high-frequency growth indicators including the purchasing managers index, E-way bills, bank credit, toll collections and GST collections have shown improvement in FY24. Moreover, normalizing the employment situation after the opening up of the economy is expected to improve and provide support to consumption expenditure.

The India Meteorological Department (IMD) has made a significant forecast earlier, predicting "above normal" rainfall for the monsoon season, marking the first time in a decade that such an optimistic outlook has been declared. This forecast, coupled with an anticipated eight-year-high rainfall, offers promising prospects for the agrarian economy and inflation. The development of La Nina conditions in the second half of the year (August-September) further added to the positive outlook. La Nina is a climate patter that tends to enhance rainfall activity. IMD's more optimistic prediction is expected to bolster agricultural growth and incomes, while also potentially alleviating stubborn food inflation pressures.

At the same time, public investment is expected to exhibit healthy growth as the government has allocated a strong capital expenditure of about Rs. 11.11 lakh crores for FY25. The private sector's intent to invest is also showing improvement as per the data announced on new project investments and resilience shown by the import of capital goods. Additionally, improvement in rural demand owing to healthy sowing, improving reservoir levels, and progress in south-west monsoon along with government's thrust on capex and other policy support will aid the investment cycle in gaining further traction.

2 Indian Cement Industry

The cement industry is a core industrial sector in India. For a developing economy such as India, cement as a commodity holds significant value. This is attributed to the immense infrastructure requirements of a growing and urbanizing country and its contributions by way of direct and indirect employment.

Also, the Government of India (GoI) has time and again emphasized its focus on infrastructure development with the announcement of several schemes, such as Housing for All and National Infrastructure Pipeline (NIP).

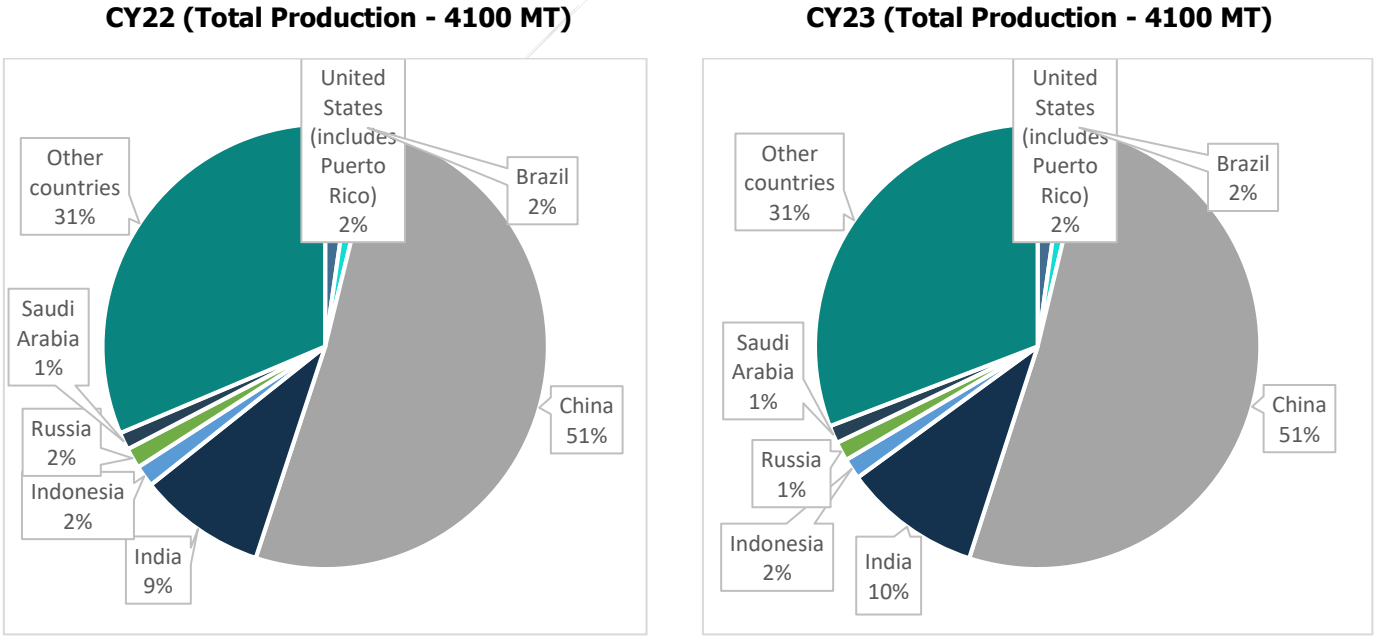
The cement industry is indicative of the overall growth in the economy. Gypsum and cement products attracted Foreign Direct Investment (FDI) inflows totaling USD 6.12 billion from April 2000 to March 2024.

Cement production is a fundamental component of the construction industry, with cement used primarily as a binding agent in concrete, mortar, and other construction materials. It is driven by factors such as population growth, urbanization, infrastructure development, and economic expansion. Demand for cement is closely tied to construction activity, including residential, commercial, and infrastructure projects and reflects the infrastructure development of a country.

The distribution of global cement production is uneven, with certain regions and countries contributing significantly more to overall production than others. China is the largest producer of cement in the world, accounting for approximately half of global cement production. Other major cement-producing countries include India, the United States, Brazil, and Russia.

Global cement demand is forecasted to remain stable during the period from 2024 to 2030, with notable growth expected in the Middle East, India, and Africa. Conversely, weaker cement markets are anticipated in Turkey, China, and Europe. The most promising cement markets worldwide are projected to be Sub-Saharan Africa, India and North America in the foreseeable future.

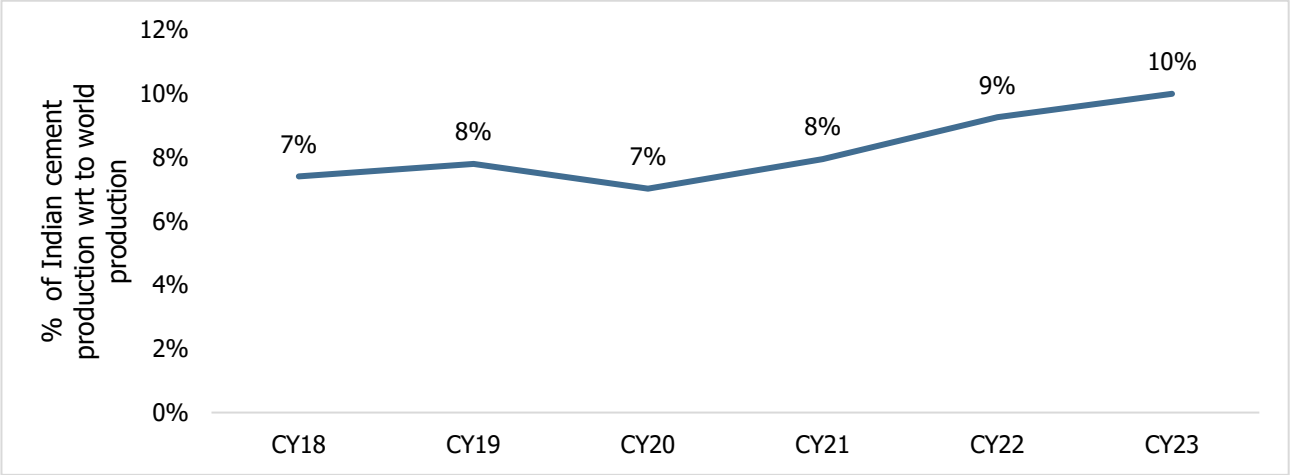
Chart 14: Country wise Cement Production



Source: U.S. Geological Survey, Mineral Commodity Summaries

The cement production by India has remained in the range of 7% to 8% of the total world output in the last 5 years but have increased to 10% in CY23.

Chart 15: Percentage of Cement Produced by India w.r.t. World Cement Production



Source: U.S. Geological Survey, Mineral Commodity Summaries

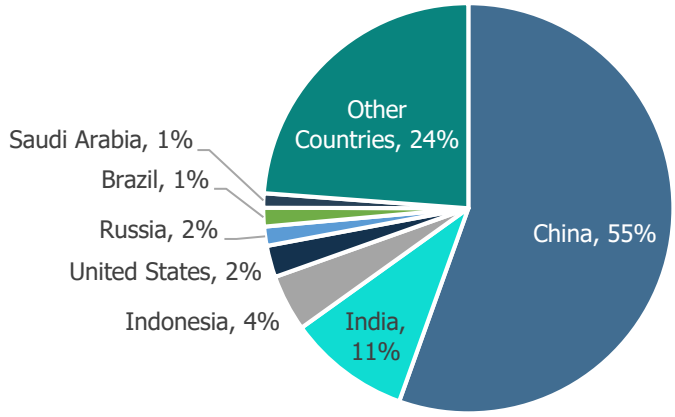
The world consumes over 4 billion tonnes of cement annually. In the past five years, cement consumption has increased from 4.06 billion tonnes in CY18 to 4.11 billion tonnes in CY23. In addition, the global cement industry's market size has witnessed notable expansion in the past five years (CY18-CY23).

The global cement sector is witnessing robust growth driven by rapid urbanization, infrastructure development, favorable government initiatives & policies, rising disposable incomes, and increasing construction activities, especially in emerging economies.

In the short-medium term, the growing residential constructions across the Asia-Pacific region and the growing infrastructural activities in the Middle East & Africa region are among the factors expected to fuel the market demand. By the year 2027, the consumption is forecasted to reach 4.81 billion tonnes.

Even though India is the second-largest producer of cement in the world, the market is highly underpenetrated. The per capita consumption of cement is only between 250-270 kg/per capita as compared to the world average of 500-550 kg/per capita. The eastern and central regions are anticipated to experience strong growth due to significant housing shortages and relatively lower per-capita cement consumption levels, with the northern region following the suit.

Chart 16: World Cement Consumption Percentage in CY22

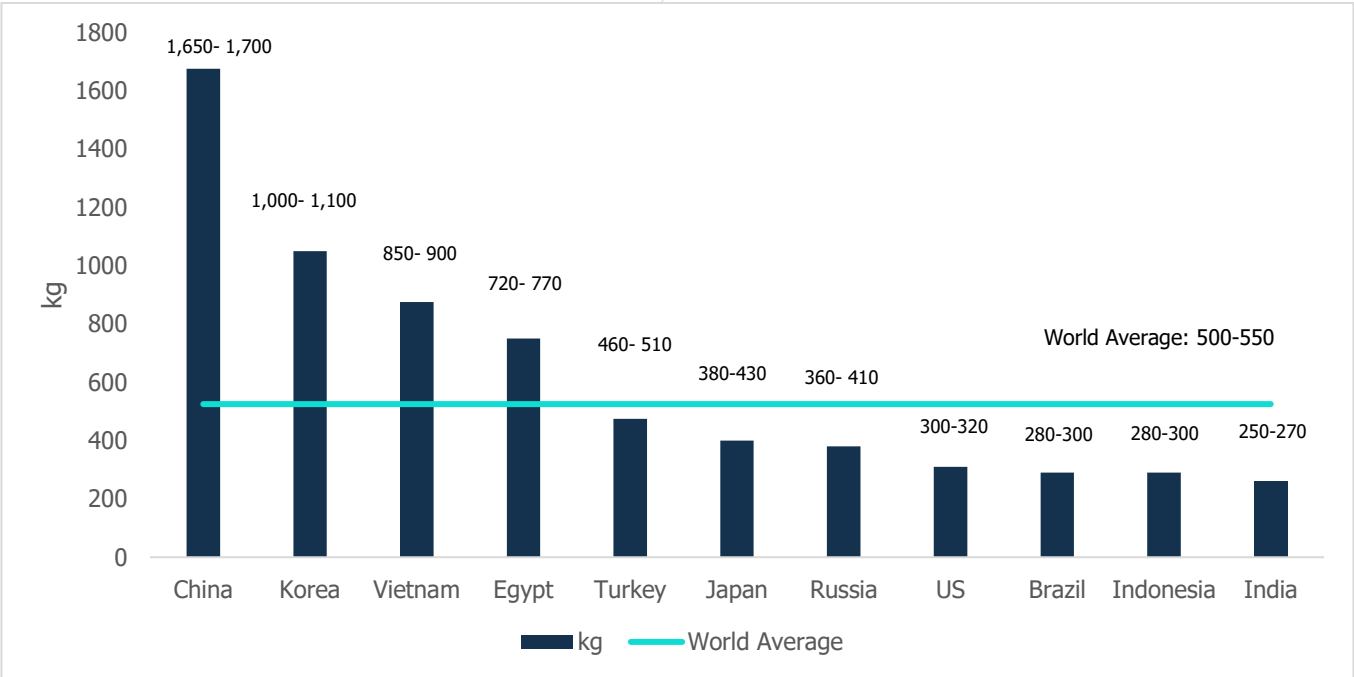


Source: Maia Research, Careedge Research

The global cement market size was estimated at USD 296.8 billion in 2022, registering a 5.7% CAGR in the past five years. Cement prices also soared from 59 USD per ton in 2018 to 72 USD per ton in 2022. Factors like geopolitical tensions, sticky inflation, and high energy prices led to increased input costs, which were passed on to the consumers.

In the forecast period 2022-2027, the global cement market is expected to register a 1.6% CAGR to reach the market size of USD 321.7 billion by 2027.

Chart 17: Per Capita Consumption of Cement FY24



Source: Company Reports, CareEdge Research

Per capita consumption of cement in India is a key indicator of the country's construction and infrastructure development activity. It represents the average amount of cement consumed by an individual within a specific timeframe, typically measured in kilograms per person per year

India's per capita consumption of cement has been on the rise in recent years, reflecting the growth in infrastructure projects, urbanization, and construction activities across the country. As of FY24, India's per capita cement consumption stood between 250-270 kilograms per person per year, which is considerably lower as compared to developed countries, but indicative of a growing economy with increasing infrastructure needs.

The variation in per capita cement consumption across regions within India is influenced by factors such as population density, urbanization rate, level of industrialization, and government spending on infrastructure. States with higher levels of urbanization and industrial activity tend to exhibit higher per capita cement consumption rates.

The southern and western regions of India traditionally have higher per capita cement consumption compared to the northern, eastern, and central regions. This disparity can be attributed to differences in economic development, infrastructure investment, and construction demand across these regions. But the recent Government initiatives is expected to drive the growth in Eastern and Central India.

Government initiatives such as "Housing for All" and investments in smart cities are expected to drive increased cement consumption in India in the coming years. These initiatives aim to address housing shortages and promote sustainable urban development, thereby boosting demand for construction materials including cement.

It's important to note that India's per capita cement consumption is expected to continue its upward trajectory as the country invests in infrastructure projects, housing, transportation networks, and urban development. The construction sector, which is a major consumer of cement, plays a vital role in driving economic growth and employment opportunities across India.

Overall, the per capita consumption of cement in India reflects the country's development trajectory, with increasing urbanization and infrastructure expansion contributing to higher demand for cement and related materials in both rural and urban areas.

2.1 Types of Cement

Ordinary Portland Cement (OPC)

-Most widely used type of cement in the construction industry.
-Basic form of cement commonly used for general construction purposes, offering a balance of strength and durability.
-Manufactured by grinding clinker with gypsum or other additives to control the setting time.

Strength: OPC provides good compressive strength, making it suitable for a wide range of applications.
Versatility: OPC can be used in various construction projects such as residential buildings, commercial structures, bridges.
Setting Time: The setting time of OPC can be adjusted by adding gypsum during the manufacturing process

-OPC is used in general construction applications where high early strength is not a critical requirement.
-It is commonly used in the production of concrete for foundations, columns, beams, slabs, and other structural elements.
-Suitable for mortar production in brickwork and plastering

Portland Slag Cement (PSC):

-Unlike Portland Pozzolana Cement (PPC), Portland Slag Cement (PSC) incorporates granulated blast furnace slag as the pozzolanic material.

-The slag is a byproduct of the iron manufacturing process and is added to the cement during its production.

-PSC combines the properties of Ordinary Portland Cement (OPC) with the benefits of slag, resulting in a cement with specific advantages

Durability: PSC provides enhanced durability and resistance to aggressive environmental conditions, making it suitable for marine and coastal constructions.

Reduced Heat of Hydration: Similar to PPC, PSC generates less heat during the hydration process, making it suitable for mass concrete works.

Improved Workability: PSC concrete often exhibits better workability compared to plain OPC concrete

Marine Structures: PSC is commonly used in the construction of marine structures, such as ports, harbours, and coastal structures, due to its resistance to chloride and sulfate attacks.

Mass Concrete Construction: Suitable for projects where the heat generated during curing needs to be minimized, such as in dams and large foundations.

Portland Pozzolana Cement (PPC)

-A type of blended cement manufactured by combining Ordinary Portland Cement (OPC) clinker with a pozzolanic material.

-The pozzolanic material, usually fly ash, is added to the cement during the grinding of clinker and gypsum. This blending imparts certain properties and benefits to PPC that make it suitable for specific construction applications

PPC is a type of blended Portland cement manufactured by combining Ordinary Portland Cement (OPC) with pozzolana particles such as fly-ash and volcanic ash in the ratio of 15% to 35%. By blending the pozzolana material with OPC, cement manufacturers lower their power and fuel and raw material costs, thereby improving their operating margins and profitability. Further, PPC has greater durability and strength than OPC and since it uses a lesser concentration of cement, it is more environment friendly than OPC as well.

Workability: PPC provides better workability and finishing properties compared to pure OPC.

Durability: The presence of pozzolanic material enhances the long-term durability of concrete.

Reduced Heat of Hydration: PPC generates less heat during the hydration process, making it suitable for mass concrete construction.

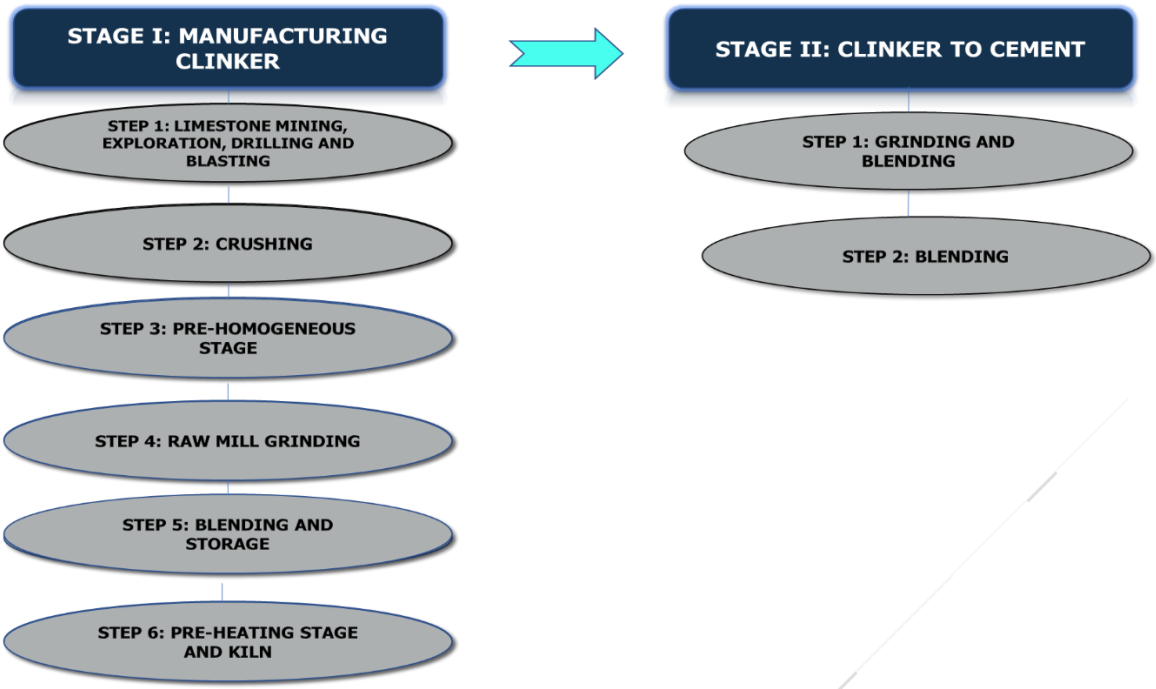
Improved Impermeability: PPC can lead to more impermeable concrete, reducing the risk of water ingress

Hydraulic Structures: PPC is commonly used in the construction of dams, bridges, and other hydraulic structures due to its durability and resistance to sulfate attacks.

Mass Concrete: Suitable for large concrete structures where reduced heat generation is important.

Residential and Commercial Construction: Used in various building elements such as foundations, columns, and slabs

2.2 Cement Manufacturing Process



There are 4 stages in the manufacturing of Portland cement:

1. Crushing and grinding the raw materials
2. Blending the materials in the correct proportions
3. Burning the prepared mix in a kiln
4. Grinding the burned product known as clinker together with some 5% of gypsum.

<u>Details of cement manufacturing process:</u>

Mining and Quarrying: The raw materials required for cement production, such as limestone, clay, shale, iron ore, and gypsum, are extracted from quarries or mines. These raw materials are typically sourced locally or transported to the cement plant from nearby locations.

The excavated materials are then transported to the crushing plants by trucks, railway freight cars, conveyor belts, or ropeways. They also can be transported in a wet state or slurry by pipeline.

Crushing and Grinding: The extracted raw materials are crushed and ground into a fine powder. Limestone and other raw materials are crushed using crushers while grinding mills are used to grind the raw materials into a fine powder, known as raw meal. The grinding process ensures homogeneity and proper blending of the raw materials.

Preheating and Pre-calcining: The raw meal is then preheated and pre-calcined in a preheater and pre-calciner system. This process involves heating the raw meal to temperatures of around 900°C to 1000°C to partially decompose the raw materials and initiate the chemical reactions necessary for cement formation.

Clinker Production: The preheated and pre-calcined raw meal is fed into a rotary kiln, where it is subjected to high temperatures (up to 1450°C) and continuous rotation. Inside the kiln, chemical reactions occur, resulting in the formation of clinker nodules. The clinker is a nodular material with varying compositions of minerals, mainly calcium silicates and aluminates.

Cooling: The hot clinker discharged from the rotary kiln is cooled rapidly to ambient temperature using air or water in a clinker cooler. This rapid cooling helps stabilize the crystalline structure of the clinker and prevents it from reacting prematurely.

Grinding and Blending: The cooled clinker is ground into a fine powder, known as cement. Gypsum is added during the grinding process to regulate the setting time of the cement. Other additives, such as fly ash, slag, or pozzolans, may also be added to the cement to enhance its properties.

Packaging and Distribution: The finished cement is transported to storage silos and then packaged into bags or bulk containers for distribution to customers. Cement may be transported by truck, rail, or ship to various construction sites, ready-mix concrete plants, or distribution centres.

2.3 India – Cement Consumption Trends

In recent years, the cement industry has benefitted from high volume growth, majorly driven by good demand from the housing sector, numerous infrastructure projects such as construction of roads, expressways, airports, metro rail, and generous rural demand. FY23 registered volume growth of 9%. Cement demand continued its uptrend even in FY24 with 9% volume growth year-on-year showcasing the ability of local producers to offer competitive products on the global market. The range of popular products from local plants includes OPC (Ordinary Portland Cement), hydrophobic Portland cement, PPC, white cement, and various others.

Cement volume growth is expected to moderate over FY25 to FY29, on the high base of earlier three fiscals. The slowdown in demand growth is also from rural housing with a high base of growth observed over the recent past on account of the PMAY-G scheme. Currently, out of 29.5 million units, only 4.1 million housing units are pending which is expected to be completed by December 2024. An additional 20 million houses have been announced in the interim budget 2024, however, spread over the next 5 years under the rural low-cost housing. As on June 2024, 29.4 million houses have been sanctioned out of which 26.2 million houses are completed. The budget allocation for PMAY Urban grew by about 20% in FY25 whearas the budget allocation for PMAY rural remained at the same levels as compared to FY23.

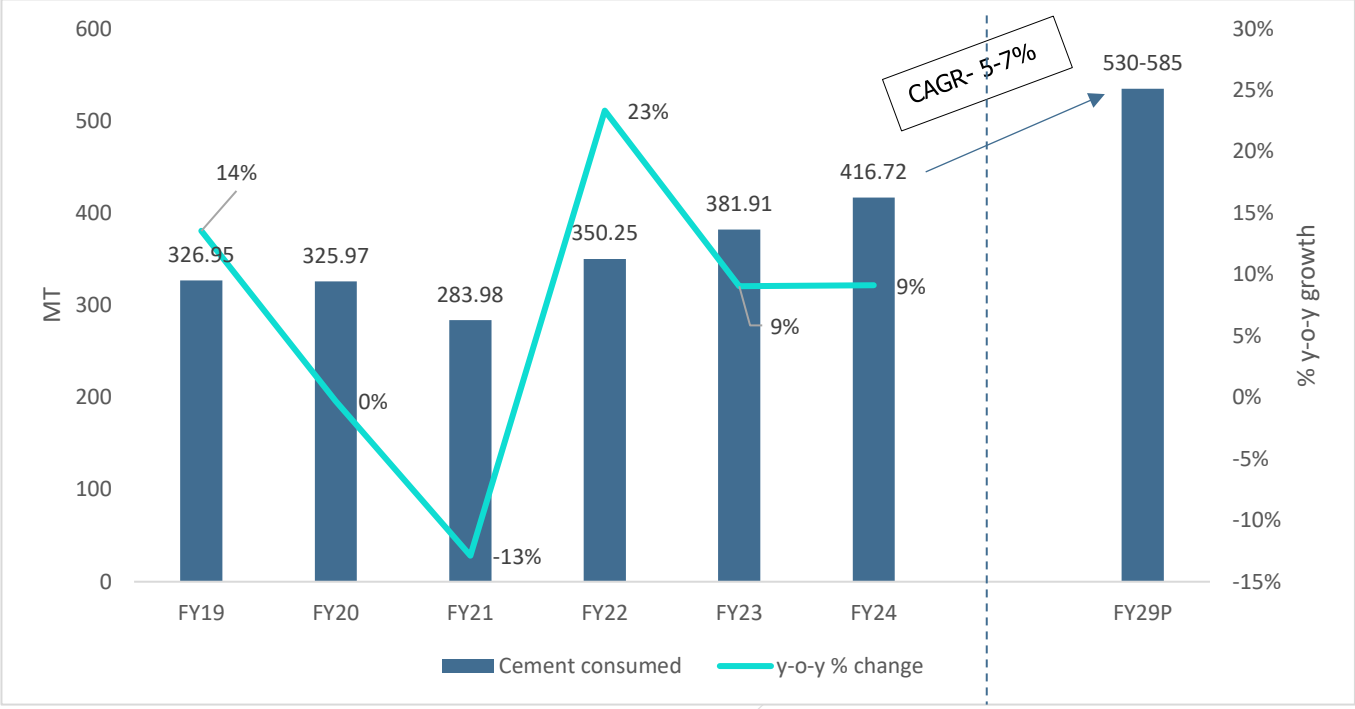
In contrast, infrastructure will provide higher growth with the government focusing on infrastructure spending through its flagship schemes, such as PM Gati Shakti, rising investments in roads, railways, metros, airports, and irrigation.

Currently, the Bharatmala project has a target to lay down 60,000 km of road with a total outlay of Rs.6.9 lakh crore, out of which 34,800 km are targeted in Phase I (between 2015 and 2028). Till February 2024, road projects spanning 34,800 km have been built under Phase-I.

Another major focus on infrastructure has been metros. Around 874 km of metro rail is operational in 20 cities and about 980 km is approved & under construction. The FY24–25 Budget mentioned the expansion of Metro projects and Namo Bharat trains in cities focusing on transit-oriented development.

The central government's thrust on infrastructure with a plethora of projects in the National Infrastructure Pipeline, step-up budgets along individual state government's efforts to increase capex will drive healthy infrastructure-led demand growth for the cement sector in the medium term. Hence, the demand for cement is expected to grow by 5% to 7% to reach 530- 585 MT by FY29.

Chart 18: Cement Consumption (MT)



Source: CMIE, CareEdge Research
Note- P- projected

2.4 India – Cement Production Trends

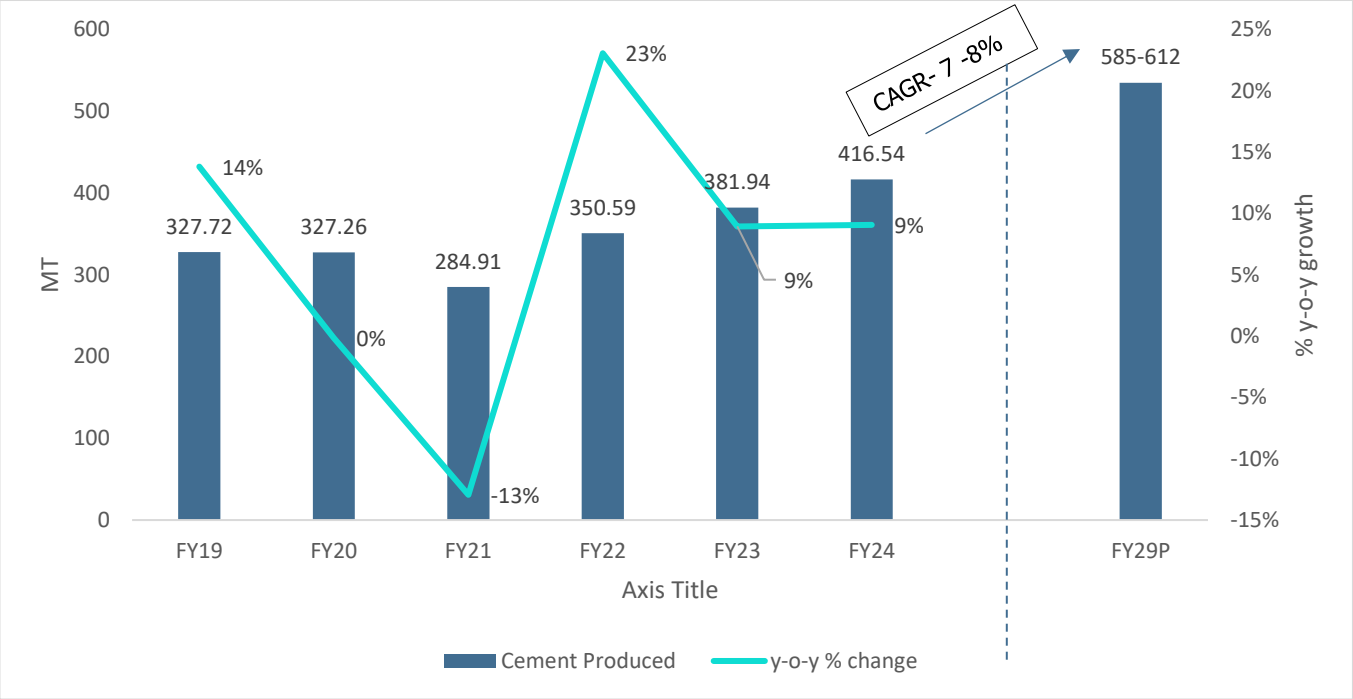
Continued healthy growth in cement production

The cement production surpassed the pre-pandemic level and grew by a further 9% to 416.54 MT in FY24, as compared with 381.94 MT in FY23. In FY24, the growth was mainly driven by high demand on the back of the government's push for infrastructure development especially in the rural segment, urban housing, and construction activities like metros, highways, smart cities, etc., in different regions of India.

Further, there is a cyclical trend in cement consumption, as it is low during April to October mainly on account of monsoon and picks up subsequently over the November to March period with pick-up in construction activity. As a result, the production is lower in the 1st and 2nd quarter of the financial year, and usually witnesses a significant growth in the 3rd and 4th quarters of the financial year.

To meet the consumption demand, cement companies are expected to do capacity addition and the projected cement production is expected to grow at a CAGR of 7%-8% to reach 585-612 MT by FY29.

Chart 19: India Cement Production (MT)



Source: CMIE, CareEdge Research
Note- P- projected

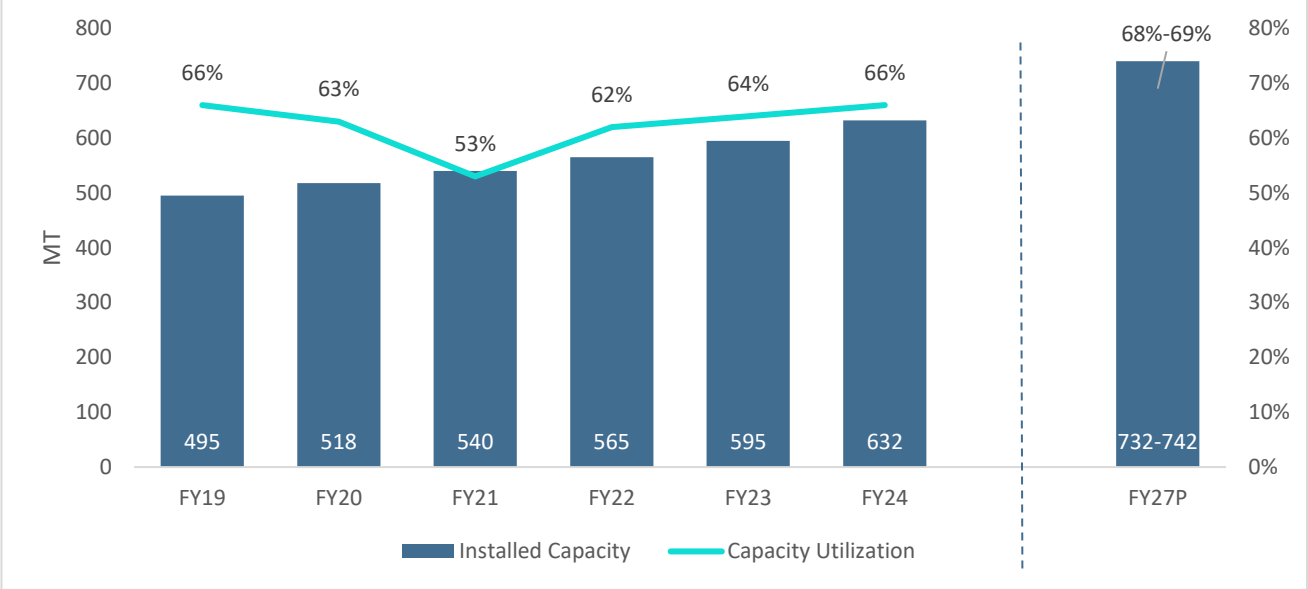
2.5 Installed Capacity

The long-term growth story of India supported by continuous thrust on infrastructure, revival in the real estate sector and expected unveiling of industrial capex going forward has led to significant capacity addition plans, especially by large players. In the future, i.e. till FY27, the industry is expected to add 100-110 MTPA cement capacity. In the long term, currently announced capacities are expected to result in capacity addition of 140-150 MTPA by FY28-FY30.

However, it should be noted that current capacity utilizations are at a moderate level. Between FY15 and FY20, the industry witnessed capacity expansion of around 103 MT. But demand grew only by 66 MT in that period leading to lower utilization levels at the pan-India level, except FY19, which was a pre-election year.

With strong demand in recent fiscal years, including the current fiscal year, the capacity utilization is estimated to peak at around 70%-71%. This is 400-500 basis points higher than FY24. However, considering moderation in demand growth vis a vis new supply of capacities, the capacity utilization is expected to remain between 68%-69% on an average over the medium term at Pan-India level.

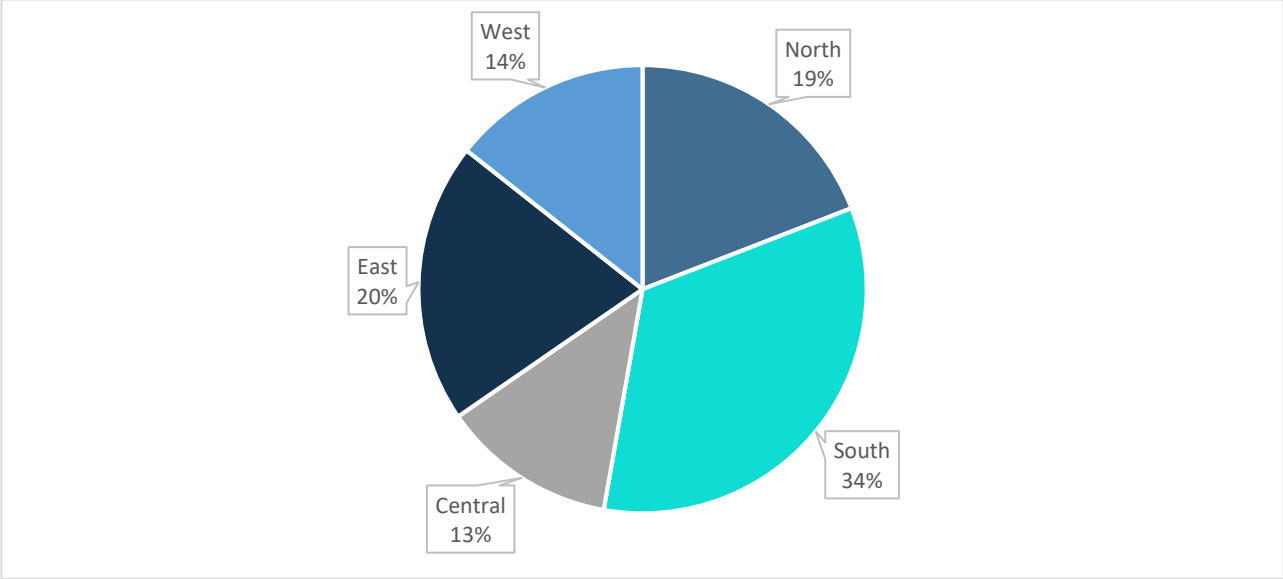
Chart 20: Installed Capacity and Capacity Utilization of Cement Sector



Source: CMIE, Care Edge Research

The installed capacity differs region-wise. The Southern region accounts for the highest share in installed capacity at 34%, since it accounts for 26% of India's proved limestone deposits. It is followed by the Eastern region with a share of 20% and the Northern region with a share of 19%. Whereas the Western and Central regions account for 14% and 13% share of the installed capacity, respectively.

Chart 21: Region-Wise Percentage Share in Installed Capacity (FY23)



Note:

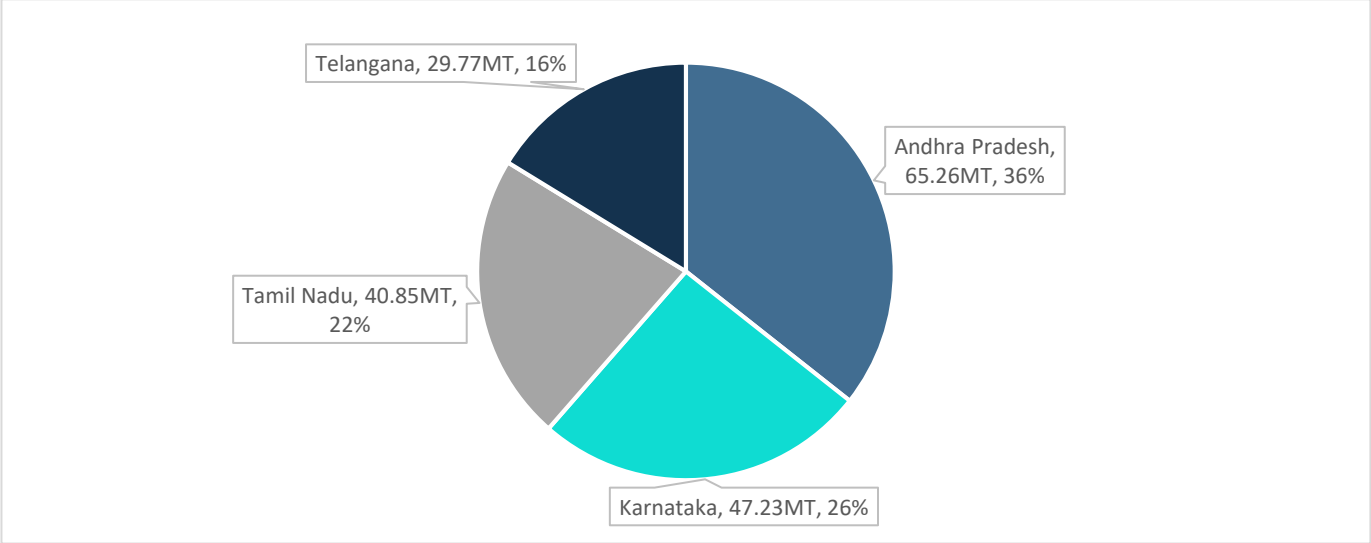
- **North region** includes installed capacities in J&K, Punjab, Haryana, Himachal Pradesh, Uttarakhand and Rajasthan
- **South region** includes installed capacities in Andaman Nicobar Islands, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Telangana
- **Central region** includes installed capacities in Madhya Pradesh and Uttar Pradesh

- **East region** includes installed capacities in Bihar, Chhattisgarh, Jharkhand, Odisha, West Bengal, Assam, Meghalaya, Sikkim, Arunachal Pradesh, Nagaland, Manipur and Mizoram.
- **West region** includes installed capacities in Gujarat and Maharashtra

Source: Cement Manufacturer's Association

The installed capacity of South India constitutes the highest of the total installed capacity in India in FY23, which makes it one of the major regions for cement production in the country. South India has experienced rapid urbanization and industrialization, leading to significant demand for cement in construction activities, infrastructure projects, and real estate development. The presence of a robust market for cement products drives the establishment and expansion of cement companies in the region. South India is also rich in limestone deposits, which are essential for cement production which makes it potential expansion regions for Cement companies.

Chart 22: Installed Capacity Trends in South Indian States (FY23)



Source: Cement Manufacturer's Association

Note: The South Indian Region consists of Telangana(29.77 MT), Andhra Pradesh(65.26MT), Karnataka(47.23MT),Kerela(0.86MT) and Tamil Nadu(40.85MT). Kerela is not included in the above chart.

2.6 Cement Capacity Trends by Players

The Indian cement sector is expected to add around 140 to 150 Million Tonne per Annum (MTPA) capacity by FY28-FY30, through both organic and inorganic routes. Addition of around 70 to 75 MT is expected to be added in by FY25 with major additions in the North and Central regions of the country.

Robust demand has led to increase in profitability of the players and healthy cash accrual encouraging them to expand their capacities.

According to the cement capacities, Ultratech Cement is the largest cement manufacturing company in India followed by Shree Cement Ltd and ACC Ltd. UltraTech Cement has experienced the highest capacity additions in absolute terms, while other major players like Dalmia Bharat and Shree Cement have also significantly increased their capacity. In the mid-sized segment, JK Cement, JK Lakshmi, and Ramco Cements have witnessed robust capacity growth primarily driven by organic expansion into new regions.

Table 5: Consolidated Cement Capacities of the Major Cement Players (MT)

Sr. No.	Company	FY19	FY20	FY21	FY22	FY23	FY24
1	Ultratech Cement Ltd.	109.35	111.35	111.35	114.55	126.95	152.70
2	Shree Cement Ltd.	37.90	40.40	43.40	46.40	46.40	53.40
3	A C C Ltd.	33.05	33.05	34.50	36.05	36.05	39.90
4	Ambuja Cements Ltd.	29.65	29.65	29.65	31.45	31.45	31.50
5	Nuvoco Vistas Corporation Ltd.*	19.60	22.10	22.32	23.82	23.82	25.00
6	Ramco Cements Ltd.	16.69	18.79	19.40	19.40	21.99	22.80
7	J K Cement Ltd.	11.10	14.70	14.70	14.70	20.67	23.70
8	Birla Corporation Ltd.	15.50	15.50	15.50	19.30	20.00	20.00
9	J K Lakshmi Cement Ltd.**	12.50	13.30	13.30	13.90	13.90	16.50
10	Sagar Cements Ltd.***	4.50	4.50	5.75	8.25	10.85	10.50
11	Star Cement Ltd.	4.30	4.30	5.70	5.70	5.70	7.70
12	Prism Johnson Ltd.	7.00	7.00	5.60	5.60	5.60	7.00
13	J S W Cement Ltd.	12.80	14.00	14.00	15.10	16.60	18.60
15	Shree Digvijay Cement Co. Ltd.	1.08	1.08	1.20	1.20	3.00	3.00
16	N C L Industries Ltd.	2.70	2.70	2.70	2.70	3.00	3.1
17	Udaipur Cement Works Ltd.	NA	2.20	2.20	2.20	2.20	4.7
18	Tamilnadu Cements Corpn. Ltd.	1.92	1.92	1.92	1.92	1.92	NA
20	Malabar Cements Ltd.	0.66	0.66	0.66	0.66	0.66	0.70
21	India Cements Ltd.	15.50	15.50	15.50	15.50	15.50	15.60
22	Chettinad Cement Corpn. Pvt. Ltd.	11.70	11.70	11.70	11.70	11.70	16.80
23	Mangalam Cement Ltd.	4.50	4.50	NA	NA	NA	4.40
	Companies Total	**352.00**	**368.90**	**371.05**	**390.10**	**417.96**	**477.60**

Source: Company Reports

*Nuvoco Vistas Corporation Limited consists of consolidated numbers for the company and Nu Vista Limited.

** J K Lakshmi Cement Ltd includes Udaipur Cement capacity as well.

***Sagar Cement Ltd includes Andhra Cement Ltd capacity as well.

2.7 India Cement: Trade and Non- Trade Segments

Higher profitability in trade segment makes it more attractive

Trade is the more preferred segment for manufacturers as it fetches higher realizations. While, the manufacturer has to invest on the distribution channel the returns on the same is relatively higher. The difference between trade and non-trade price varies from Rs 30-80 for the same manufacturer. The difference in prices are based on a multitude of factors like:

- **Region** – difference between trade and non-trade segment is highest in the southern region.
- **Volume** – Higher the volume, higher the difference. For large scale projects buyers negotiate to get better prices.
- **Project type**: For infra projects prices are often fixed at ex-FOR (freight on road) basis. Ex-freight cement prices in Andhra was set at Rs 225 in the previous year while retail/ trade prices were above Rs 350 for CAT A brands.

- **Relationship** – The relationship between the construction company and the cement manufacturer often players a key role in the determining the quantum of discount

While non-trade cement trades at a discount, it comes with several cost advantages as well. The key cost advantage are:

- A large part of the non-trade cement is transported in the form of bulk cement which helps down in cutting freight as well as packaging cost
- Since dealer is not involved the company does not have to pay dealer commissions
- Further, company has to spend less in setting up dealer network

Despite these cost advantage trade segment remains more attractive due to higher prices. Thus, it often leads to higher profitability. The difference in profitability of trade and non-trade segment varies between **100-400** bps depending on the difference in prices as well as volumes.

Table 6: Percentage Sales of Trade and Non-Trade Cement

Company Name	Capacity (MTPA)	Trade Sales %	Non-trade Sales %
Players with >20 MTPA Cement Capacity			
Ultratech Cement Ltd.	152.7	68%	32%
Dalmia Bharat Ltd	44.6	64%	36%
Shree Cement Ltd.	53.4	76%	24%
A C C Ltd.	39.9	77%	23%
Ambuja Cements Ltd.	31.5	77%	23%
Nuvoco Vistas Corporation Ltd.	25	73%	27%
J K Cement Ltd.	23.7	61%	39%
Ramco Cements Ltd.	22.8	65%	35%
Birla Corporation Ltd.	20	70%	30%
Players with 10-20 MTPA Cement Capacity			
India Cements Ltd.	15.6	57%	43%
J K Lakshmi Cement Ltd.	16.5	56%	44%
Kesoram Industries Ltd	NA	NA	NA
Players with <10 MTPA Cement Capacity			
Orient Cement Ltd	8.5	56%	44%
Sagar Cements Ltd	10.5	55%	45%
Heidelberg Cement India Ltd	6.5	82%	18%
Sanghi Industries Ltd	6.1	NA	NA
Star Cement Ltd.	7.7	85%	15%
Prism Johnson Ltd.	7	73%	27%
Udaipur Cement Works Ltd	4.7	53%	47%
KCP Ltd/The	4.3	NA	NA
Mangalam Cement Ltd	4.4	NA	NA
Shree Digvijay Cement Co Ltd	3	NA	NA
NCL Industries Ltd	3.1	85%	15%
Deccan Cements Ltd	2.3	NA	NA

Source: Industry Sources

Note: All the data have been taken from the latest call transcripts and company documents.

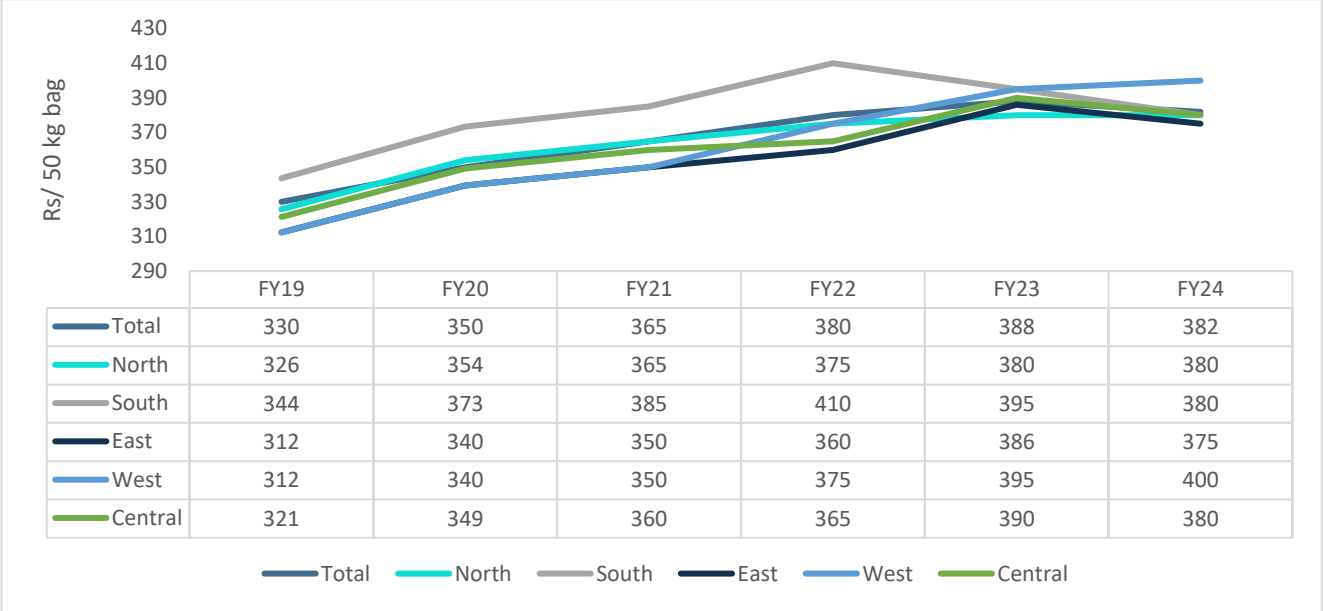
2.8 India Cement Price Movement

Cement prices continue to rise on a Y-o-Y basis on account of increased raw material costs due to inflationary pressure and supply chain disruption. The price increase started in CY22 with the Russia-Ukraine conflict which raised the costs of Petcoke and Brent Crude, and international coal prices. Due to pressure on operating margins, cement players passed on rising cost to consumers, thereby resulting in hike in cement prices in India. The power and fuel cost which accounts for almost 30% of the industry cost elevated further at the start of FY23 due to Russia -Ukraine war. The petcoke prices and crude oil prices though started cooling down in FY23, it further effected the costs which led to hike in prices by 4-5% in FY23 to safeguard the cement players' profitability.

The cement players have taken multiple price hikes since Q4FY23 to partially pass on the increase in production costs. The fuel cost and raw material cost has normalized over the past year, thereby easing pressure on the operating profitability of cement players. The overall prices have decreased slightly by 2% y-o-y in FY24. This was because of the decline in crude and coal prices. The players are hence unable to hike the prices despite strong demand to capture the market.

The prices in Southern and Northern regions have remained on the higher side than that of Eastern region due to higher demand in these regions.

Chart 23: Cement Price Movement



	FY19	FY20	FY21	FY22	FY23	FY24
Total	330	350	365	380	388	382
North	326	354	365	375	380	380
South	344	373	385	410	395	380
East	312	340	350	360	386	375
West	312	340	350	375	395	400
Central	321	349	360	365	390	380

Source: Industry Sources, CareEdge Research

2.9 Investment Trends

Increasing investment in the construction segment is one of the key factors for the sector's growth. The rising need for better public infrastructure and residential as well as non-residential buildings is significantly supporting the cement market.

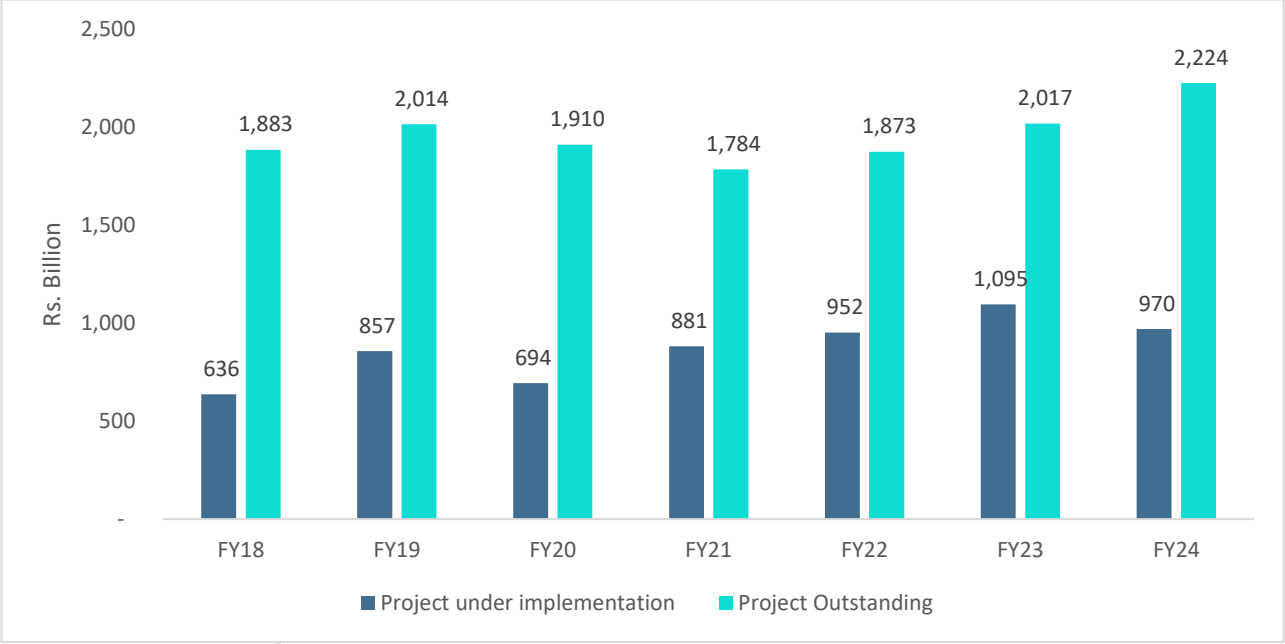
Investment trends in the cement sector in India are influenced by various factors, including infrastructure development, urbanization, government policies, technological advancements, and economic growth.

Cement companies in India continue to invest in expanding their production capacities to meet the growing demand for cement. Apart from this, companies are focusing on modernizing and upgrading their manufacturing facilities to improve energy efficiency, reduce emissions, and comply with environmental regulations. Investments are made in installing advanced kiln systems, waste heat recovery systems, and pollution control equipment to minimize environmental impact. Cement companies are also undertaking both greenfield and brownfield projects to expand their manufacturing capacities.

With the aim of reducing reliance on traditional fossil fuels and promoting sustainability, cement companies are investing in alternative fuel utilization. This includes co-processing of alternative fuels such as biomass, municipal solid waste, and agricultural residues in cement kilns. Investments are made in waste processing facilities and logistics infrastructure to enable the efficient sourcing and utilization of alternative fuels.

Overall, the investment trends in the Indian cement sector reflect the industry's focus on sustainable growth, technological innovation, and value creation to meet the growing demand for cement in India and international markets. The project under implementation has degrew by 11% y-o-y FY24, while the projects outstanding grew by 10% y-o-y. A slowdown in government spending on infrastructure projects amidst the Lok Sabha election and completion of the PMAY scheme has impacted the projects under implementation.

Chart 24: Investments in Cement Sector

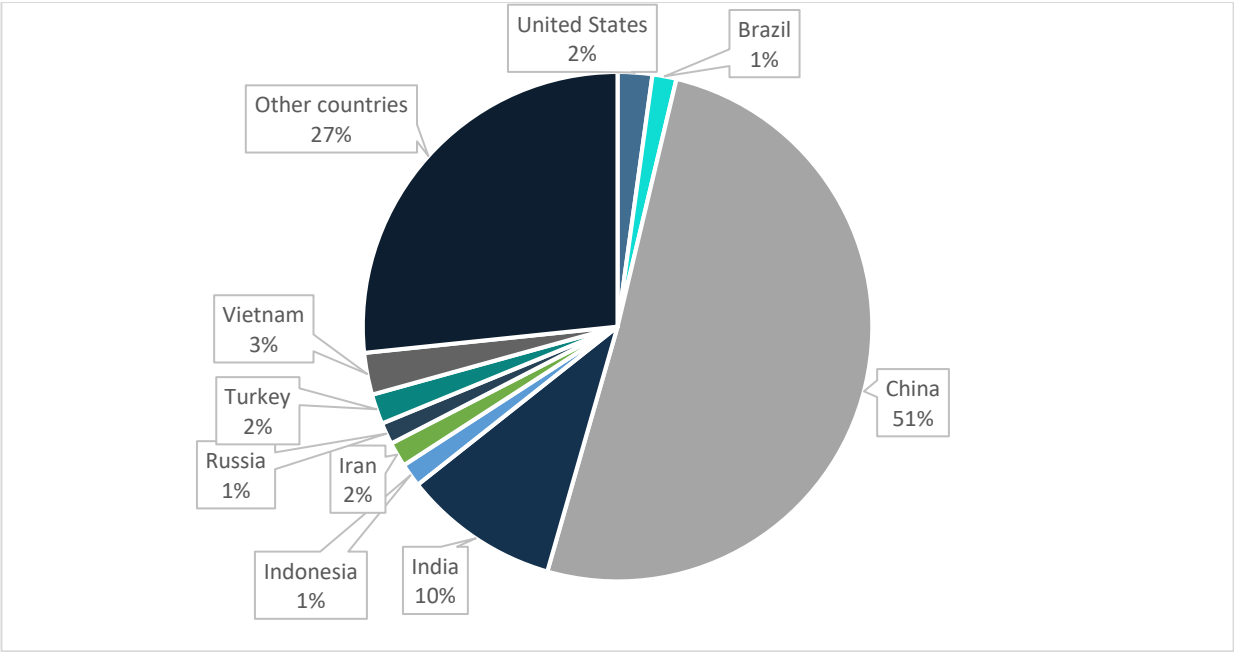


Source: CMIE

2.10 India Cement Trade Scenario

India is one of the major producer and consumer of cement in the world. While China continues to dominate the world's cement production and accounted for about 51% share in CY23, India accounted for the second-largest share at 10% followed by the Vietnam, United States, Russia, and Egypt. In terms of cement consumption, China and India continued to claim the top two positions.

Chart 25: World Cement Production Ranking in CY23



Source: U.S. Geological Survey - Mineral Commodity Summaries (January 2024), CareEdge Research

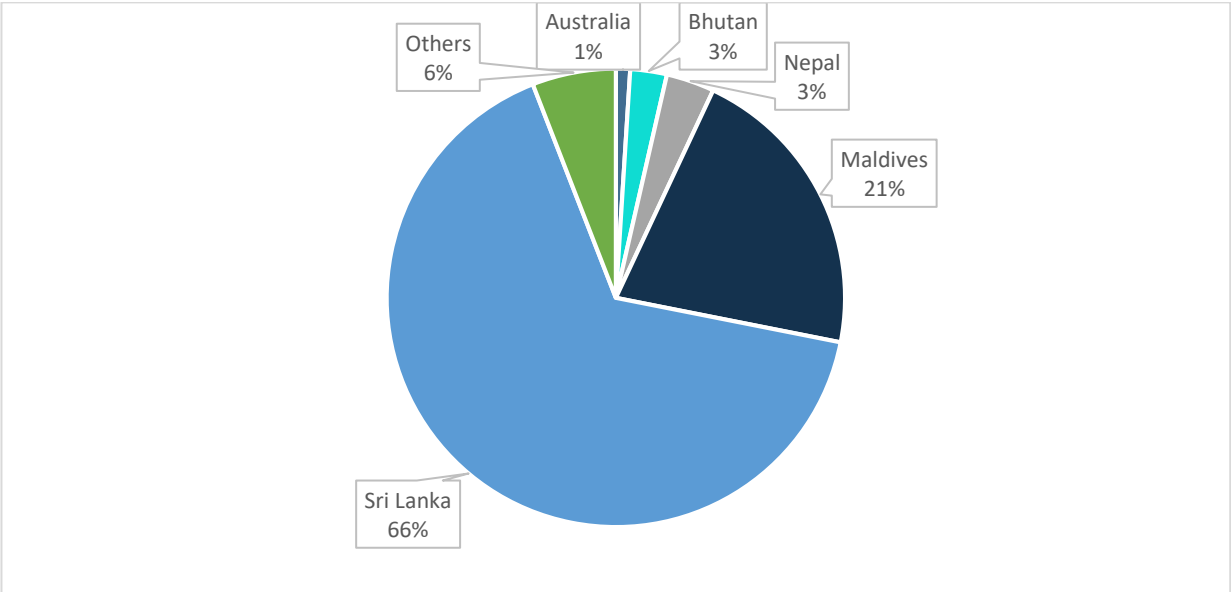
India has remained a net exporter of cement during the last five years. Exports declined from 2.2 MT in FY19 to 0.6 MT in FY23, but improved to 0.8MT in FY24. Similarly, imports also contracted from 1.5 MT in FY19 to 0.6 MT in FY23 but improved to 1MT. The growing imports are attributed to the increased demand for cement clinker in the country due to the increased pace of infrastructure development.

Chart 26: Exports and Import of Cement – India

Source: CMIE

India majorly exports cement to the neighboring country Sri Lanka, which accounts for 66% of Indian exports, followed by Maldives with the second-highest share of 21%.

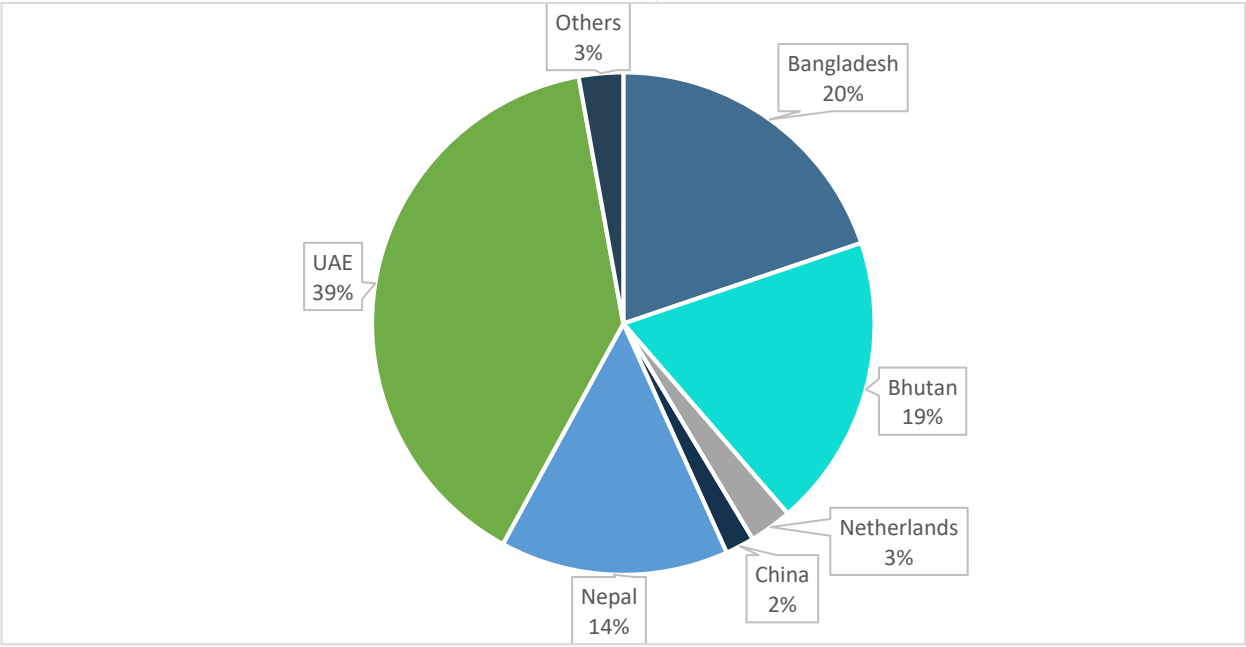
Chart 27: Country-Wise Export Mix of Cement by India in FY24



Source: CMIE

Whereas India imports cement majorly from the UAE, which accounts for a share of about 39% in total cement imports, followed by Bangladesh at 20% and Bhutan at 19%.

Chart 28: Country-Wise Import Mix of Cement to India in FY24



Source: CMIE

2.11 Trend in Usage of Alternate Power in the Industry

Cement manufacturers are increasingly turning to alternative fuels such as biomass, municipal solid waste, industrial waste, and used tires to partially replace traditional fossil fuels like coal and petcoke in cement kilns. This helps reduce greenhouse gas emissions, dependence on finite fossil fuels, and disposal of waste materials. Many industry players have also installed Captive thermal and solar power plants as well as Waste Heat Recovery Systems (WHRS), which utilizes waste heat generated from the clinkerization process and converts it to steam to generate power. Further, to reduce power and fuel consumption many players are now manufacturing blended cement varieties which consume less power per tonne.

The players are investing in waste-to-energy conversion technologies to utilize various types of waste as alternative fuels. Waste materials such as shredded tires, plastics, sewage sludge, and agricultural residues are processed and used as fuel sources in cement kilns, contributing to waste management and energy generation. Waste materials like fly ash, slag, and bottom ash from industrial processes are incorporated into cement production to replace conventional raw materials like limestone and clay.

Cement plants are also exploring opportunities to integrate renewable energy sources such as solar, wind, and hydroelectric power into their operations. Advanced kiln designs, waste heat recovery systems, and energy management strategies are implemented to minimize energy consumption and maximize the utilization of alternative fuels and raw materials.

Apart from this, regulatory frameworks and environmental standards mandate the adoption of cleaner production practices and emissions reduction measures in the cement industry. Cement companies are aligning with regulations by investing in sustainable fuel and raw material substitution strategies to meet compliance requirements.

Table 7: AFR Trend in Various Cement Manufacturing Companies in FY24

Sr. No.	Name of companies	Total Energy Consumed (TJ)	% of energy consumed from renewable sources	AFR Integration Measures	Future Targets
1	Ultratech Cement Ltd.	3,19,951	22%	• Reduce reliance on fossil fuels and natural resources by incorporating waste materials into fuel mix., • Ultratech has increased the consumption of solid Alternate Fuel Resources (AFR) in kiln feed process, resulting in significant financial savings. • Ultratech increased TSR by 4%, reducing its dependence on fossil fuels and supporting commitment to circular economy principles.	UltraTech will use 85% green power by 2030 and targets to meet 100% of its electricity requirement through renewable sources by 2050, as part of its RE100 commitment. As a member of EP100, it plans to double its energy productivity.
2	Shree Cement Ltd.	1,09,206	7.42%	• The company has Alternate Fuels and Raw Materials (AFR) laboratory at Ras testing the use of major technologies like	Targeting increased usage of AFR up to 15% by FY 2023-24 and aiming to achieve green power consumption up to 55%.

Sr. No.	Name of companies	Total Energy Consumed (TJ)	% of energy consumed from renewable sources	AFR Integration Measures	Future Targets
				Inductively Coupled Plasma (ICP) which carry out elemental composition analysis of waste material including hazardous waste. • It also facilitates measuring the concentration of all waste to ppm/ppb level. This has helped maintain the fuel consistency by ensuring optimum fuel usage. • Modification in Solid AFR Feeding Circuit to increase consumption of AFR	
3	A C C Ltd.	66,379.78	13%	• As a part of ongoing commitment towards achieving Net Zero CO_2 emissions, ACC will continue to expand portfolio of renewable and green energy sources. This includes the installation of systems to increase the co-processing of Alternative Fuels and Raw Materials (AFRs). • Additionally, upgradation of AFR pre- and coprocessing system at various plant would help to achieve 18% TSR by 2024 (after complete realisation of projects).	Committed to reducing CO2 emissions by Science Based Targets Initiative (SBTi) approved reduction in absolute group-wide Scope 1 and Scope 2 emissions and aim to become carbon neutral by 2050.
4	Ambuja Cements Ltd.	70,330.84	34.35%	• Use of alternative Fuel and Raw Materials (AFR) and enhancing the utilisation of renewable power including its onsite and offsite solar, wind, hydro power and Waste Heat Recovery System (WHRS). Geoclean, EcomaxX, AFR, WHRS initiatives to build circularity & accelerate green products	Announced plans to expand capacity by 14 MTPA for producing blended cement with a WHRS capacity of 42 MW, provision to utilise 50% AFR and increase the share of renewables. These projects, to be executed over the next 24 months, will be funded through internal accruals.

Sr. No.	Name of companies	Total Energy Consumed (TJ)	% of energy consumed from renewable sources	AFR Integration Measures	Future Targets
5	Nuvoco Vistas Corporation Ltd.	42,434	13%	• Novoco has AFR at 9% in FY 2022-23 doubled from 4.5% clocked in FY 2021-22. It is making efforts to increase the AFR feeding capacity at our plant in Nimbol, Rajasthan, and Risda, Chhattisgarh. • All integrated plants are equipped with modern Waste Heat Recovery Systems ("WHRS") with a total capacity of 44.7 MW. • The Company has a Captive Power Plant ("CPP") capacity of 150 MW and a Solar Power Plant capacity of 1.5 MWp.	The company aims to use power from renewable sources that accounts for more than 16% of the total power.
6	Ramco Cements Ltd.	47,384.00	6.28%	• Ramco cement ensures usage of alternate fuel and wind power and maintaining prudent fuel mix as per cost scenarios. These helps better manage costs. • RAMCO has 13 % Alternate fuel consumption in fuel mix	It has also commissioned 9 MW of WHRS and modernised and digitised plants.
7	J K Cement Ltd.	43,765.55	51%	• JK Cement ensures usage of Alternate fuel i.e. AFR in Line-1 (26841 MT), Line-2 (119765 MT) & Line-3 (144544 MT) by substituting primary fuel resulted in an overall saving of 7397.87 Lacs KWH equivalent to 63610.2 MTOE and H6850.46 Lacs with the expenditure of H1051.98 Lacs.	
9	J K Lakshmi Cement Ltd.	26,003.07	38%	• JK Lakshmi cement has placed an order for an AFR pre and co-processing system for one of our kilns in Sirohi. Additionally, it has begun renovating its existing AFR facilities in two other kilns at SirohiIn the rest phase of the project	Currently working on enhancing the AFR (Alternative Fuel and Raw Material) capability at Sirohi plant. Goal is to achieve a Thermal Substitution Rate (TSR) of 20% by FY 2029-30. It aims to increase TSR to 12% and in the second phase, further raise it to the desired 20% level.

Sr. No.	Name of companies	Total Energy Consumed (TJ)	% of energy consumed from renewable sources	AFR Integration Measures	Future Targets
10	Sagar Cements Ltd.	15,211.51	11.41%	• The company is using Chemical Gypsum, Fly ash, Slag, Spent Carbon, Carbon Black, Iron Sludge, Shredded Plastic, Residue Derived Fuels, Organic Residue, Organic Liquid Solvents, Rice Husk, Organic Waste, Chrome Sludge, Wooden Chips, Dolachar as AFR • Minimising waste generation by adopting a hierarchal approach to reduce, reuse, recycle and recover by making use of viable technologies	• Ensuring all waste collected, stored, transported, and disposed in an environmentally acceptable manner • Promoting the use of blended cements, thereby utilising the waste/by-products of other industries • Implement best practices to source and consume Refuse Derived Fuel (RDF) in the kiln process with the larger objective of reducing environmental impact • Framework development for using construction waste in production processes

Source: Company Annual Reports

2.12 Cement Plants in India

India's cement plants are strategically located based on raw material availability, market demand, and logistical considerations. Each region plays a vital role in the country's cement production landscape, meeting the construction needs of local and national infrastructure projects. The regional concentration of cement plants reflects India's diverse geographical and economic characteristics, driving the growth and development of the cement industry across the country.

There are more than 200 large cement plants and up to four hundred small production facilities scattered throughout the country. Private companies dominate the cement production market in India, with large corporations holding nearly three-fourths of the market share, according to rough estimates. The contribution of the public sector to this market is minimal.

The modern Indian cement industry comprises numerous facilities that vary in size and production capacity, ranging from small units to large bulk terminals and integrated industrial complexes.

States with a high concentration of cement companies include Andhra Pradesh, Tamil Nadu, Rajasthan, Karnataka, and Gujarat. The increasing demand for cement is closely linked to the growth of civil construction and infrastructure sectors, driven by rapid urbanization, industrialization, and extensive government initiatives.

Table 8: Cement plants in India broken down by Region, Type of Plant and Capacity

Sr. No.	Company Name	Region Focus	Cement Capacity (MTPA)	Clinker Capacity (MTPA)	Number of Integrated Units	Number of Grinding Units
1	JK Lakshmi Cement Ltd[1]	West - Gujarat, Rajasthan; North - Haryana; East - Odisha	16.50	10.0	3	4
2	Prism Johnson Ltd	Central - Madhya Pradesh	7.00	-	2	-
3	Star Cement Ltd	North East - Meghalaya, Assam, West Bengal	7.70	6.10	1	2
4	The India Cements Ltd	South- Tamil Nadu, Andhra Pradesh; West- Maharashtra, Rajasthan; Andaman & Nicobar Islands	15.6	-	9	2
5	Kesoram Industries Ltd	South - Karnataka, Telangana	10.8	-	2	-
6	Orient Cement Ltd	South - Karnataka Telangana	8.5	5.5	2	1
7	Heidelberg Cement India Ltd	South - Karnataka; Central - Madhya Pradesh; North- Uttar Pradesh	6.5	3.1	1	2
8	Sagar Cements Ltd[2]	South - Andhra Pradesh, Tamil Nadu, Telangana, Karnataka; Central - Madhya	10.5	6.60	4	2

[1] J K Lakshmi Cement Ltd includes Udaipur Cement Works
[2] Sagar Cement Limited is at a consolidated level includes Andhra Cements Limited.

		Pradesh, East - Odisha				
9	Sanghi Industries Ltd	West - Gujarat	6.1	6.6	1	-
10	The KCP Ltd	South - Andhra Pradesh	4.3	3.1	2	1
11	Udaipur Cement Works Ltd	West- Rajasthan	4.7	3.0	1	-
12	Mangalam Cement Ltd	West- Rajasthan; North - Uttar Pradesh	4.0	2.7	1	1
13	Shree Digvijay Cement Co Ltd	West - Gujarat	3.0	2.2	1	-
14	NCL Industries Ltd	South- Andhra Pradesh & Tamil Nadu	2.7	2.6	1	1
15	Deccan Cements Ltd	South- Telangana	1.80	-	1	-
16	Anjani Portland Cement Ltd	South-Tamil Nadu	1.2	-	1	-
17	Andhra Cement Ltd	South - Andhra Pradesh	2.25	1.85	1	-

Source: Company Annual Reports
Note: All the data is as per the latest company reports

2.13 Input Cost Trends

The cement industry demands substantial power, influenced by the type of heat treatment process employed in cement plants. Procuring limestone constitutes a significant portion of the raw material cost, which is a substantial component of overall cement production expenses. Additionally, due to its nature as a high-volume, low-value commodity, transporting cement incurs considerable costs. The primary expenses related to cement production include those associated with power and fuel, raw materials, and selling activities.

The cost of cement manufacturing and distribution has also been assessed as a percentage of revenue as depicted in the table below. The power and fuel cost remains the major part of the expenditure.

Table 9: Attributes as a Percentage of Revenue

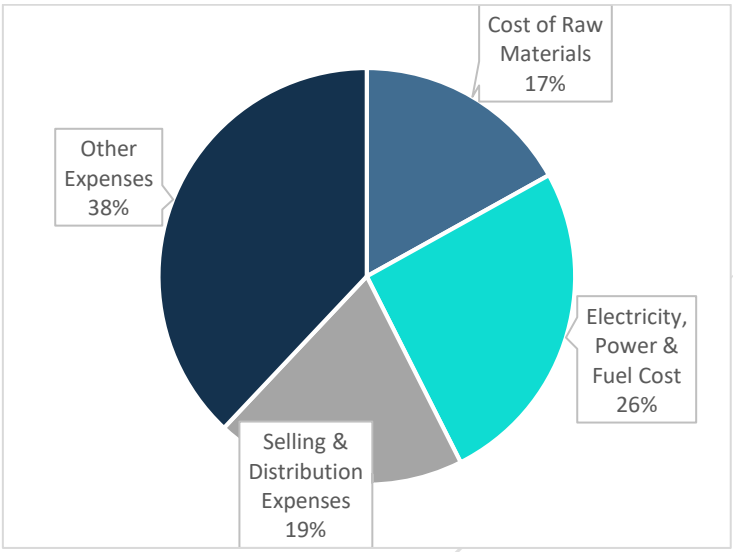
	FY20	FY21	FY22	FY23	FY24
Revenue	100%	100%	100%	100%	100%
Total Expenditure	76%	72%	73%	79%	75%
Cost of Raw Materials	17%	15%	16%	17%	18%
Electricity, Power & Fuel Cost	18%	16%	20%	26%	22%
Selling & Distribution Expenses	21%	20%	20%	19%	19%

Note: Based on the aggregate financials of 15 cement companies. It is the average for the cement sector.
Source: Ace Equity, Care Edge Research

Chart 29: Input cost trends as percentage of total Revenue

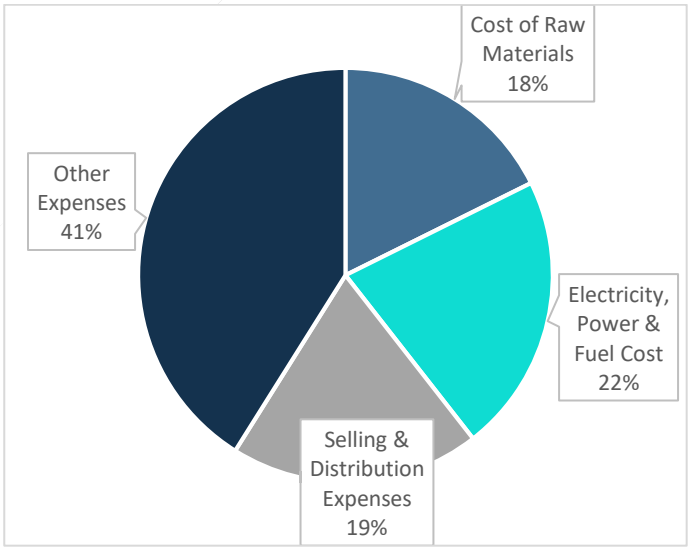
FY23

Total Expenditure =79% of the Total Revenue



FY24

Total Expenditure =75% of the Total Revenue



Source- Ace Equity
Note: Based on the financials of 15 companies. It is the average for the cement sector.

The major costs incurred in cement manufacturing include costs of raw materials, power, fuel and logistics which majorly account for 40-50% of net sales of the cement players.

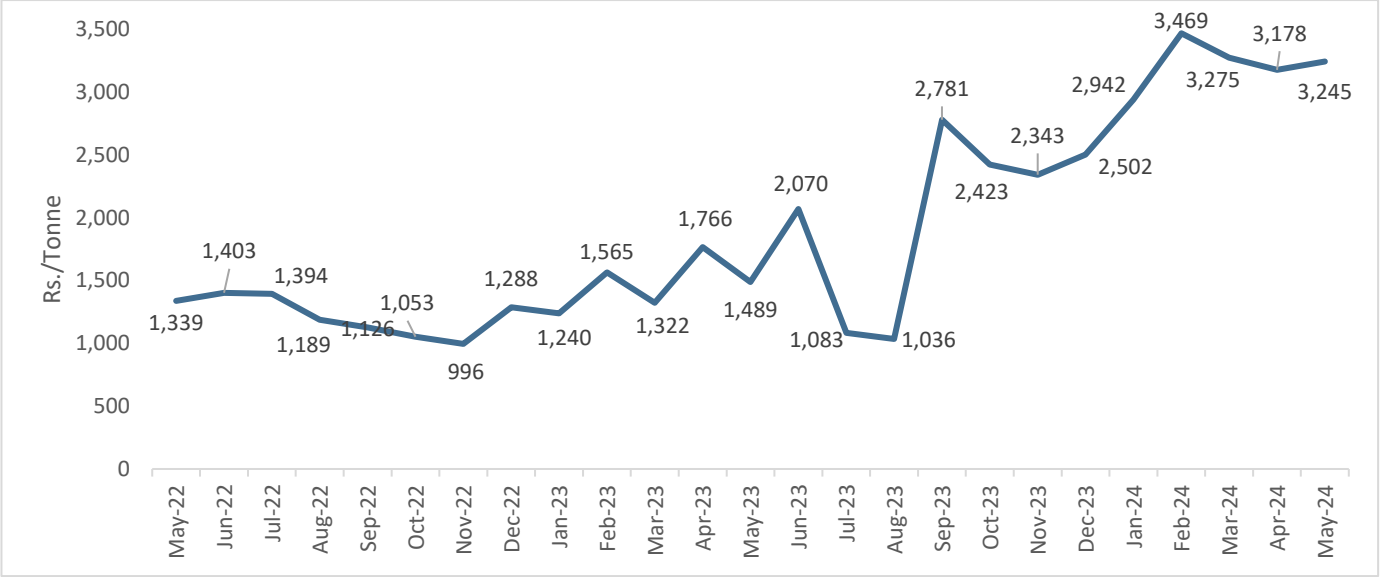
Raw materials: The cost of raw materials accounts for about 10-16% of the total revenue earned by cement players. Limestone is the major raw material used in the manufacturing of cement. Other raw materials include gypsum, bauxite, etc.

The average limestone sale price reached a high of Rs. 1,403 per tonne during the quarter ended June 2022 due to inflationary pressures.

However, they began to soften in the next quarters due to increased domestic production. Increased demand for cement and infrastructure development, growth in housing, and an uptick in construction activities have further supported the growth in prices during FY23.

Moreover, the prices began to rise during FY24 on account of the growing usage of minerals in end-user industries. During the first two months of FY25, the average limestone sale price stood at Rs. 3,212 per tonne, a growth of 97% on a y-o-y basis. The increase in limestone prices can be mapped to the decrease in Limestone production in the country.

Chart 30: Average Sales Price Trend of Limestone



Source: CMIE

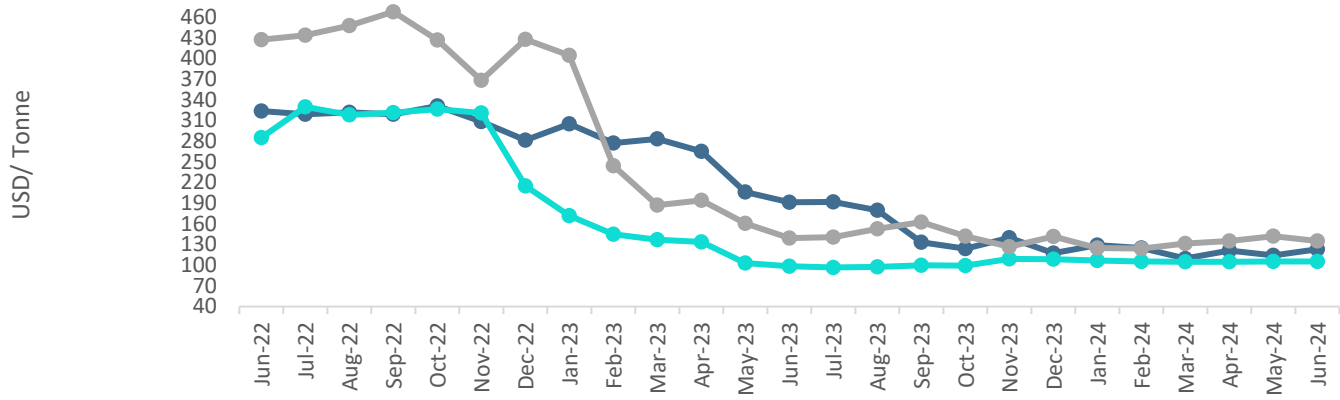
Power & Fuel: Cement is a power and fuel-intensive industry, which accounts for 20% to 26% of the total revenue earned by players. In recent years, many industry players have set up their own captive power plants in order to lower their cost of production. Further, coal and petcoke are used to meet the fuel requirements in the manufacturing process of cement.

Further, coal prices have been softening since November 2022 as the increased supplies from South Africa and Columbia have alleviated the demand crunch in European countries caused by the reduction of coal imports from Russia. These factors have led to a reduction in international coal prices.

As of the quarter that ended December 2023, the average coal prices for Indonesian coal, South African, coal and Australian coal were 59%, 63% and 40% lower, respectively, as compared to prices during the same time period in FY23.

Furthermore, international coal prices of major global benchmarks are expected to continue to be low in FY25. This is because the oversupply of coal from China leading to lower of coal prices around the world.

Chart 31: **International Coal Prices**



	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
Coal, Indonesia	324	319	322	319	331	308	282	305	277	283	265	206	191	192	180	133	124	140	117	129	125	110	121	114	123
Coal,South Africa	285	330	318	322	327	321	215	172	145	137	134	103	99	97	98	100	100	109	109	107	105	105	105	106	105
Coal,Australia	427	434	447	468	427	368	428	405	244	187	194	161	139	141	153	163	142	127	142	125	124	132	135	142	135

Source: World Bank, CMIE

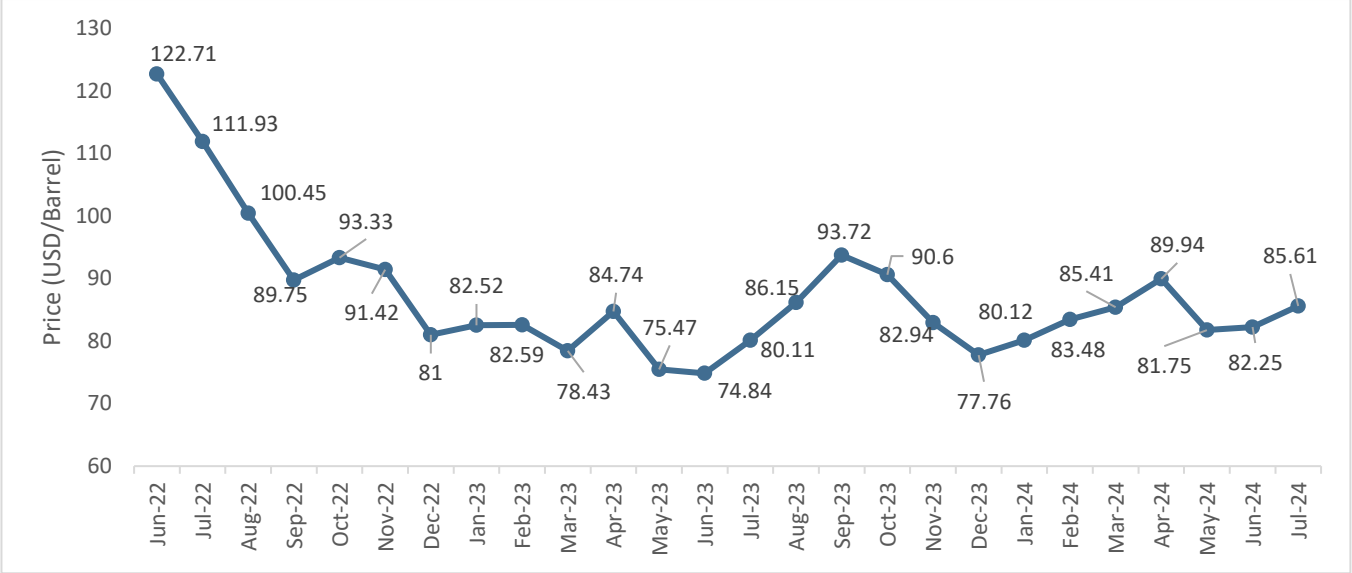
Freight: Freight (selling & distribution expenses) account for 15% to 22% of the total revenue earned by cement players. Limestone and coal, being low-value high-bulk commodities, lead to high costs of transportation. Similarly, cement being a bulk commodity is transported through either road, rail or sea routes. Railway is the preferred mode of transport for longer routes, while roadways are used for short distances.

Further, the ban on the purchase of Russian oil by the USA and the UK amid the Russia-Ukraine tensions significantly increased the price of crude oil with the benchmarks trading above USD 100 towards the end of FY22. The price was passed on to the consumers which increased the cost of goods and services, leading to high inflation.

However, crude oil prices are now cooling down after reaching an all-time high in June '22. The prices are expected to continue in the same range in the coming year. The curtailed prices are likely to bring relief to sectors like aviation, paints, petrochemicals, textiles, tyres and cement.

Recently, crude oil prices declined as concerns over ultimate demand levels overshadowed those over the Middle East crisis and its impact on supply. Nonetheless, the market is impacted by the flood of developments in Gaza and Ukraine. The consequences are all too evident in the Persian Gulf and the Red Sea, where Yemeni insurgents continue to block shipping.

Chart 32: Crude Oil Price Trend (Brent)



Source: CMIE, CareEdge Research

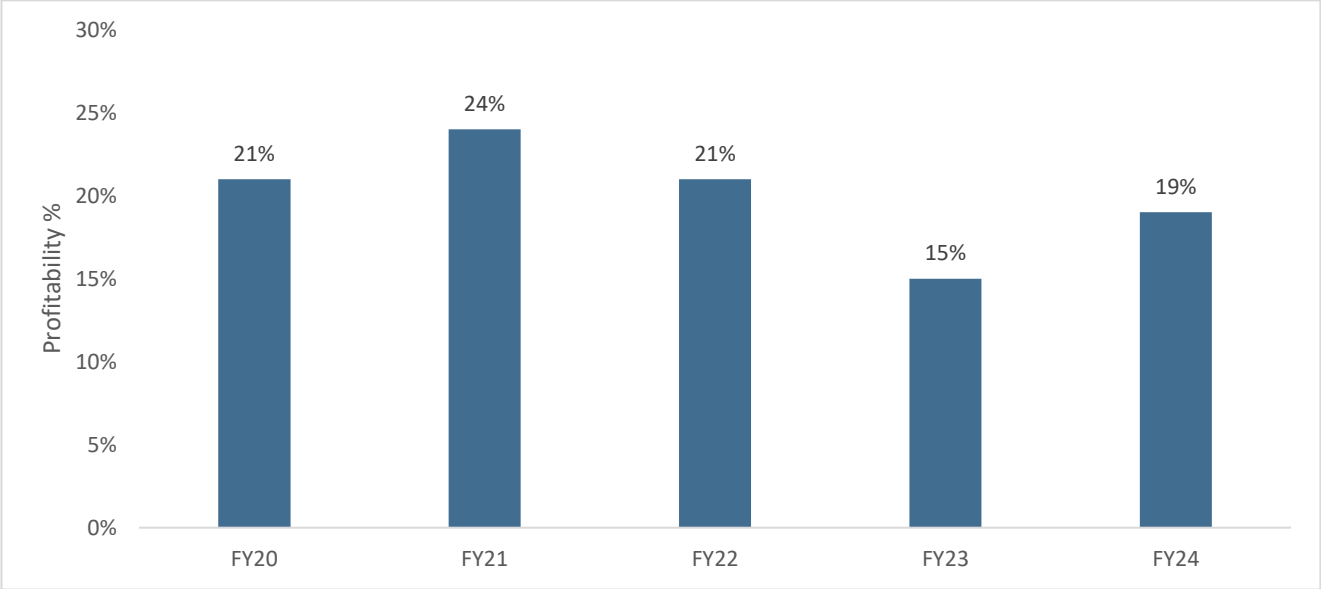
2.14 Operating Profitability

Operating profitability (EBITDA margin) of cement players improved steadily between FY19 and FY21. The operating profitability was highest at 24% in FY21, due to various price hikes taken despite low consumption and production as compared to the previous years.

In FY22, the operating profitability of the players declined due to rising raw material and fuel, mainly limestone and coal. The price hikes taken by the cement companies were not commensurate to the cost escalations which led the EBITDA margins to decline by 300 bps y-o-y to 21% in FY22.

Moreover, the EBITDA margin of the cement companies has further declined y-o-y to 15% during FY23, due to continued higher raw materials even though the cost of fuel, power, and freight have softened. In FY24, the profitability margin increased to 19% because of the reduction in expenditure especially in the fuel and power because of the stabilization of the fuel prices globally.

Chart 33: Operating Profitability (EBITDA Margin) Trend of Cement Players



Source: Ace Equity, Care Edge Research

Note: The margins have been calculated on an aggregate analysis of 15 cement companies. It is the average for the cement sector.

Care Edge Research expects the operating profitability of cement players to improve in the medium-to-long term. This growth is expected to be on the basis of higher volumes and lower power and fuel costs. The cement players have also taken several price hikes during the past year adding to the profitability of the players.

The following table depicts the annual percentage change in total expenditure incurred by cement manufacturers.

The revenue in FY23 and FY24 has increased by 23% and 4% respectively y-o-y, and the electricity, power, and fuel costs have decreased due the increase of adoption of green energy and alternative fuels and reduced coal prices. However,the raw material costs increased slightly in FY24, while the selling and distribution increased by 4% in the same period as compared to y-o-y.

Table 10: Year-on-Year Percentage Change in Expenditure

Particulars	FY20	FY21	FY22	FY23	FY24
Revenue	-2%	2%	21%	23%	4%
Total Expenditure	-6%	-3%	22%	33%	-0.3%
Cost of Raw Materials	-2%	-5%	25%	31%	9%
Electricity, Power & Fuel Cost	-9%	-8%	48%	57%	-11%
Selling & Distribution Expenses	-8%	-1%	17%	21%	4%

Note: Based on the financials of 15 companies. It is the average for the cement sector.

Source: Ace Equity, Care Edge Research

2.15 Limestone Reserves by region

The proved limestone reserves in India as per Cement Manufacturer's Association is 9,437 Million tonnes. Rajasthan has the highest share of proved limestone reserves i.e. 26% of the total proved reserves followed by Chhattisgarh (11%) and Andhra Pradesh (11%). The Northern region of India accounts for 37% of the total proved limestone reserves followed by Southern region with 26% of the reserves.

Table 11: Limestone Proved Reserves (FY22)

States	Million Tonnes
North	
Himachal Pradesh	555
Rajasthan	2,471
Jammu & Kashmir	443
North Total	**3,469**
West	
Gujarat	750
Maharashtra	424
West Total	**1,174**
Central	
Madhya Pradesh	816
Central Total	**816**
East	
Chhattisgarh	1,025
Meghalaya	136
Odisha	256
Assam	26
Bihar	12
Jharkhand	88
East Total	**1,543**
South	
Tamil Nadu	334
Telangana	626
Karnataka	461
Kerala	11
Andhra Pradesh	1003
South Total	**2,435**
Total	**9,437**

Source: Cement Manufacturers Associations

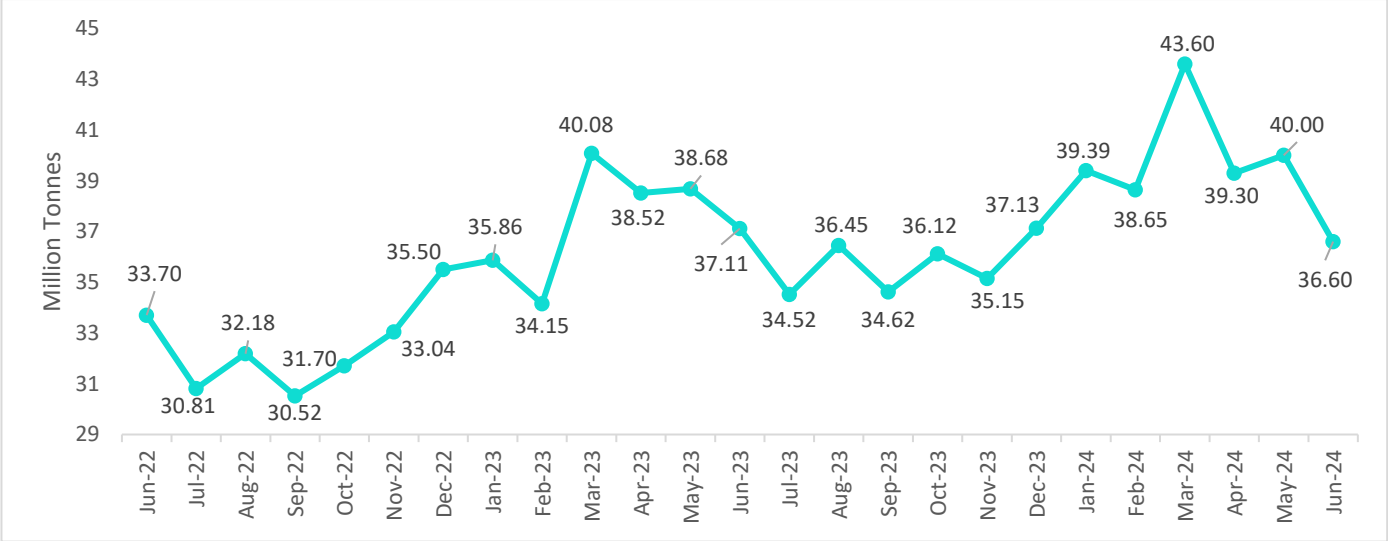
The limestone production is 406.96 Million tonnes as on February 2024, which is 11% more than last year. The states like Madhya Pradesh and Chhattisgarh, is known for its large limestone reserves. Limestone is a fundamental raw material in the production of cement, a critical component of the construction industry. The rising demand for limestone in various sectors such as construction, cement manufacturing, steel production, agriculture, and chemical industries is driving the production growth. The expanding infrastructure projects, urbanization, and industrialization in India have led to an increased requirement for limestone as a raw material.

Apart from this, The Indian government's focus on infrastructure development projects such as roads, bridges, airports, and housing schemes has stimulated demand for limestone. Limestone is widely used in the construction of roads, bridges, and buildings as aggregates, fillers, and in the production of concrete. The cement industry is one of the largest

consumers of limestone in India. With the growing demand for cement driven by infrastructure development, housing projects, and urbanization, the cement sector requires substantial quantities of limestone for clinker production.

Government policies aimed at promoting industrial growth, infrastructure development, and mineral exploration have provided impetus to limestone production. Policies such as the National Mineral Policy and ease of doing business initiatives have encouraged investments in limestone mining and processing.

Chart 34: **Production of Limestone**



Source: CMIE

2.16 Government Policies and Regulations

The government has from time to time announced schemes with regards to infrastructure development including affordable housing which augurs well for the cement industry. The central government continues to focus on increasing capex outlay to spur growth in light of the 2024 general elections. The infrastructure Capex for FY2023-24 (Budget Estimate) at Rs. 10 lakh crores are almost three times the capital expenditure in FY2019-20. The Government also increased outlay on railways and included plans for 50 new airports in the Union Budget 2023-24.

The Capex increase is in line with the central government's aim to make growth more inclusive as investment in infrastructure and productive capacity have a multiplier effect on economic growth. The public sector capex has focused on improving the connectivity within the country, with the allocation towards highways and railways surging from 35% of total infrastructure capex in FY18 to 64% in FY24.

Some of the measures undertaken by the government are stated below:

a. PM GatiShakti

This scheme was launched in October 2021. The PM GatiShakti - National Master Plan for Multi-modal Connectivity is primarily a digital platform to bring several ministries together to ensure integrated planning and coordinated implementation of infrastructure connectivity projects. The approach under this scheme will be driven by 7 engines:

- Roads
- Railways
- Airports

- Ports
- Mass transport
- Waterways
- Logistics infrastructure

In the Union Budget 2022-23, the government announced that projects pertaining to these 7 engines in the National Infrastructure Pipeline will be aligned with PM GatiShakti framework.

In addition, PM GatiShakti will also include infrastructure developed by State governments as per the GatiShakti Master Plan. Further, assistance will be provided to states for PM GatiShakti-related investments and other capital expenditures through the allocation of Rs 1 lakh crore through 50-year, interest-free loans to states. This assistance will be beyond the normal borrowings allowed to the States.

Some other initiatives as part of PM GatiShakti announced in the budget include a target to expand the National Highways network by 25,000 km, a master plan for expressways to be formulated, contracts for multimodal logistics parks in four locations to be awarded, 100 cargo terminals to be developed in next 3 years, innovative ways of financing metro projects, development initiative for North East (PM-DevINE), etc.

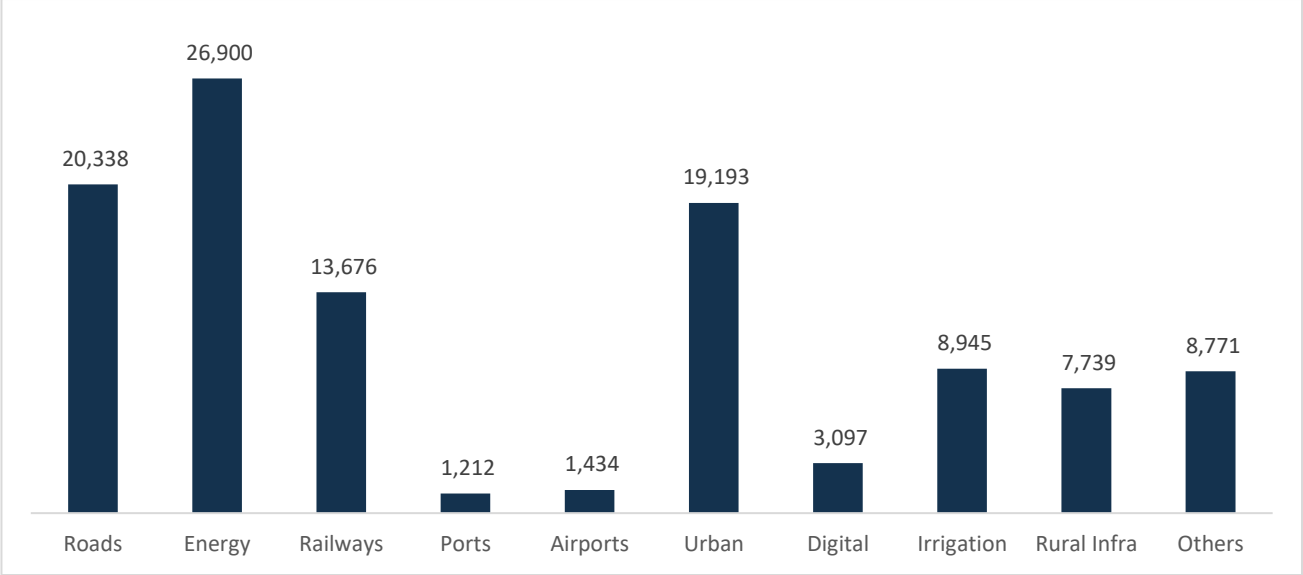
The Prime Minister announced a National Master Plan as a critical tool for integrating economic and infrastructural planning and development. Under PM GatiShakti 100 infrastructure gap projects have been prioritised for development in FY2023-24 with Rs 75,000 crore allocated to it.

b. National Infrastructure Pipeline (NIP)

The National Infrastructure Pipeline (NIP) was launched in 2019, is a plan acts as a roadmap for investing a staggering ₹1,08,880 billion between 2020-25 in infrastructure development across various sectors over a five-year period. The NIP encompasses a wide range of projects, including building new roads, railway lines, airports, power plants, and urban infrastructure. Each of these projects requires vast quantities of cement for construction activities. This substantial increase in infrastructure spending translates to a significant and sustained rise in demand for cement, propelling industry growth.

The NIP's five-year horizon provides a clear picture of upcoming infrastructure projects. This allows cement manufacturers to plan their production capacities, raw material procurement strategies, and workforce requirements more effectively. With a clear understanding of future demand, cement companies can invest strategically in expanding their production capabilities to meet the anticipated rise in consumption. This long-term vision fosters industry stability and reduces risks associated with sudden fluctuations in demand of cement.

Chart 35: Segment-Wise Breakup of NIP Investments over FY20-25 (Rs. Bn)



Source: Report of the Task Force, NIP, Care Edge Research

During FY20-25, the sectors-wise breakup of NIP investment comprises energy contributing the highest at Rs 26,900 Bn around 24% of the total plan followed by roads at Rs. 20,338 Bn at 18%, urban Rs. 19,193 Bn at 17%, and railways with an investment of Rs. 13,676 which contributes 12% amount to ~71% of the projected infrastructure investments in India.

b. Pradhan Mantri Awas Yojana (PMAY)

Pradhan Mantri Awas Yojana ("PMAY"), which was launched in June 2015 to provide affordable housing to the urban poor. This scheme aims to resolve the urban housing shortage among the low and middle-income groups, it also aims to promote homeownership among women. PMAY envisions constructing a large number of affordable houses across the country, this target is likely to translates with cement industry experiences a lasting growth, in terms of overall demand and market penetration.

PMAY taps into a previously untapped segment of the population - individuals and families who might not have opted for new constructions due to financial constraints. This broadens the consumer base for the cement industry, ensuring long-term market expansion. While individual PMAY houses might utilize slightly less cement compared to luxury constructions due to simpler designs and prefabricated components, the sheer volume of houses built under the scheme translates into a substantial overall demand boost.

As on 1st February 2024, during the union budget announcement the Government has extended the PMAY scheme to December 31, 2024, in order to complete the houses sanctioned till March 31, 2022. The Government has allocated an outlay Rs. 80,671 crores under PMAY towards the completion of existing projects. Data as per PMAY-U, since inception, the Government has sanctioned 118.6 lakh houses under PMAY, of which over 81 lakh houses were completed as of March 29, 2024. As on June 2024, 4.21 crore hpuses are sanctioned till 2024 which includes 3 crore additional rural and urban houses.

PMAY's impact extends beyond the direct demand for building houses. The large-scale construction of affordable housing projects necessitates the development of surrounding infrastructure like roads, sewage systems, and water lines. This additional infrastructure development creates a further demand for cement, creating a ripple effect that

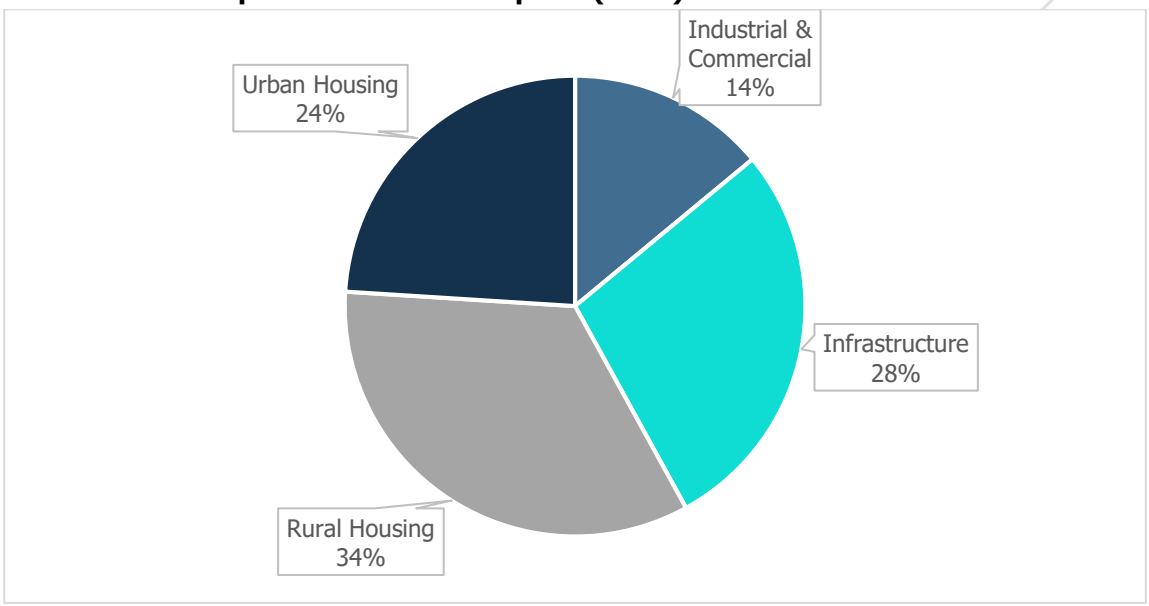
benefits the entire industry. Cement manufacturers not only witness increased demand for construction of houses but also for these crucial infrastructure projects.

Numerous significant projects within the Pradhan Mantri Awas Yojna (PMAY) are expected to reach completion during the current fiscal year. In the Union Budget for 2024, the allocation for PMAY was increased to a total of Rs. 79,590 crores.

2.17 Demand Drivers

The cement demand is strongly tied to the broader economic expansion, especially in the housing and infrastructure sectors. Approximately 56% of this industry's demand stems from the housing sector, encompassing affordable housing initiatives. The government's substantial investments in infrastructure development, including road construction, railways, highways, rural development, and transportation projects like metro rail, are favorable indicators for the cement industry.

Chart 36: Break-Up of Cement Consumption (FY24)

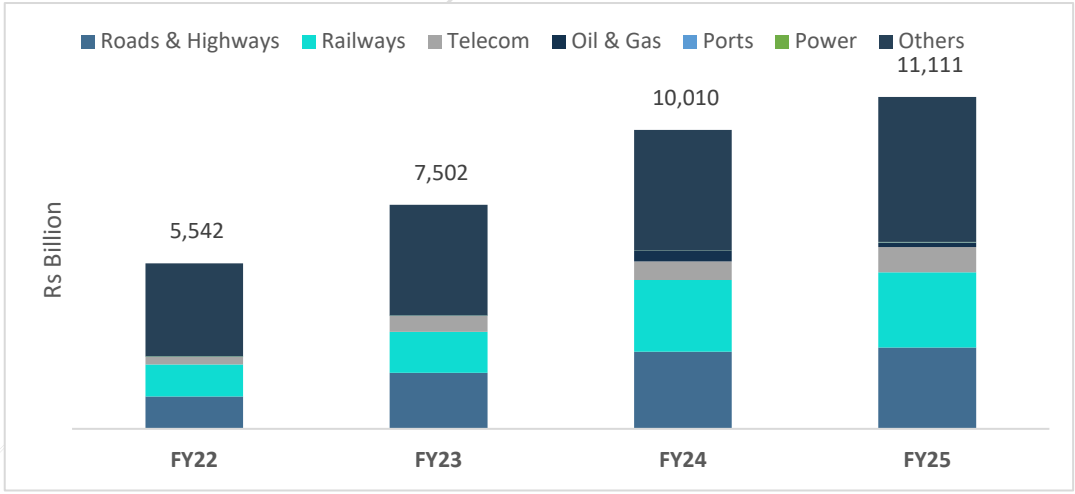


Source: Company Reports, Care Edge Research

- **Government's Focus on Infrastructure & Real Estate Development**

Segments	
Infrastructure	One of the key drivers for economic growth is the increased infrastructure investment thrust by the government. In the Union Budget 2024-25, the government continued its focus on infrastructure development with budget estimates of capital expenditure toward the infrastructure sector of Rs. 11,111 Billion. Furthermore, continuous efforts by the Government of India to make the business environment convenient to operate and streamline the regulatory process will support the growth of investments in the infrastructure segment.

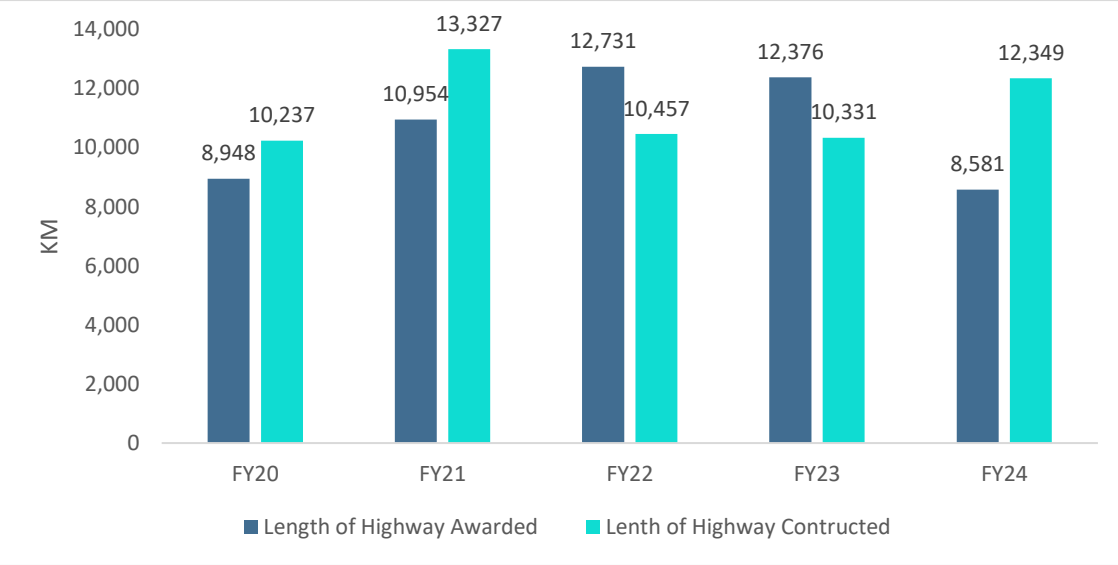
Chart 37: Key Infrastructure Sectors for Capital Expenditure in Budget 2024-25



Source: Union Budget 2024-25 Analysis

	• The government has expanded the National Infrastructure Policy (NIP) to 7,400 projects from 6,835 projects and announced plans for the National Monetization Pipeline and Development Finance Institution (DFI) to improve the financing of infrastructure projects. • The NIP covering rural and urban infrastructure, entails investments to the tune of Rs. 111 lakh crore, which is being undertaken by the central government, state governments, and the private sector during FY20-25. • Moreover, the alignment of PM Gati Shakti National Master Plan and NIP will aid in debottlenecking hurdles for faster execution of projects.
 **Road Infrastructure**	• India's road infrastructure has seen consistent improvement in the last few years. For instance, connectivity has improved and road transportation has become a focus of rapid development. • Total highway construction in India during the period FY24 was 12,349 km compared to 10,993 km in FY23, indicating a construction run rate of 33.8 km per day. • The highway construction activityincreased by 12.3% in FY24 as compared to FY23.

Chart 38: Road Projects Awarded and Constructed

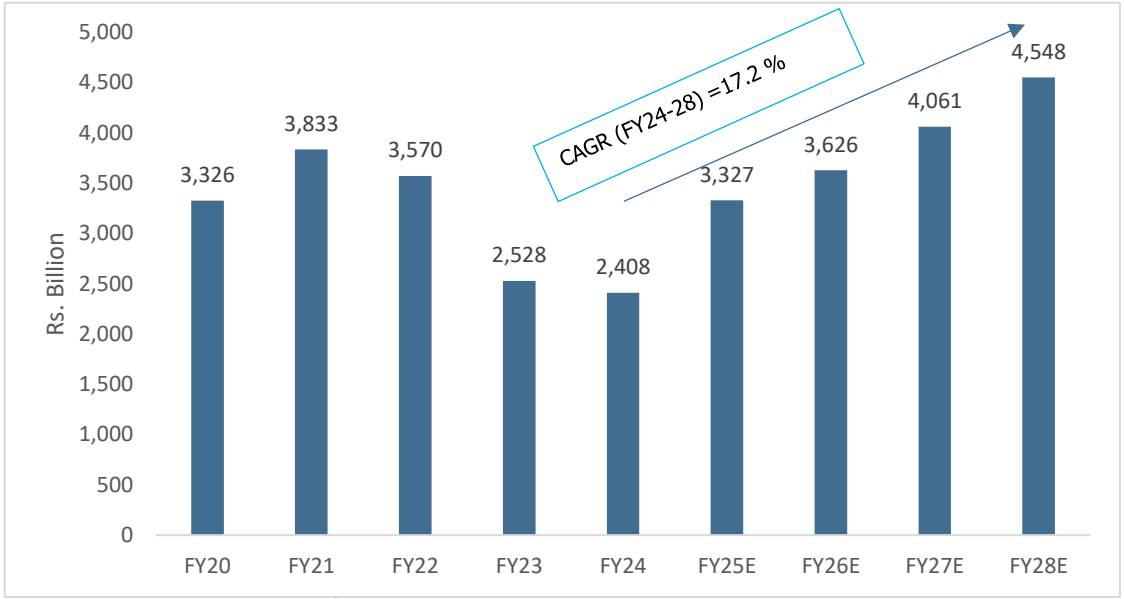


Source: Ministry of Road Transport and Highways of India Annual Reports & CareEdge Research
Note: * refers to period April to November 2023

- This slowdown can be attributed to an increase in input cost, longer-than-usual monsoon, and problems related to land acquisition and environmental clearance.

- About 12,000 km of highways are expected to be constructed in FY24 at an estimated capital expenditure of Rs 4 lakh crore.

Chart 39: Investments in Roads sector



Source: Niti Aayog report on National Infrastructure Pipeline, Care Edge Research

The status of Bharatmala Pariyojana Phase 1 entails a total length of 34,800 km in 31 States and UTs, 550+ Districts. The length awarded is 26,425 km and the length constructed is 17,411 km so far. The program is expected to be completed by 2027-28.

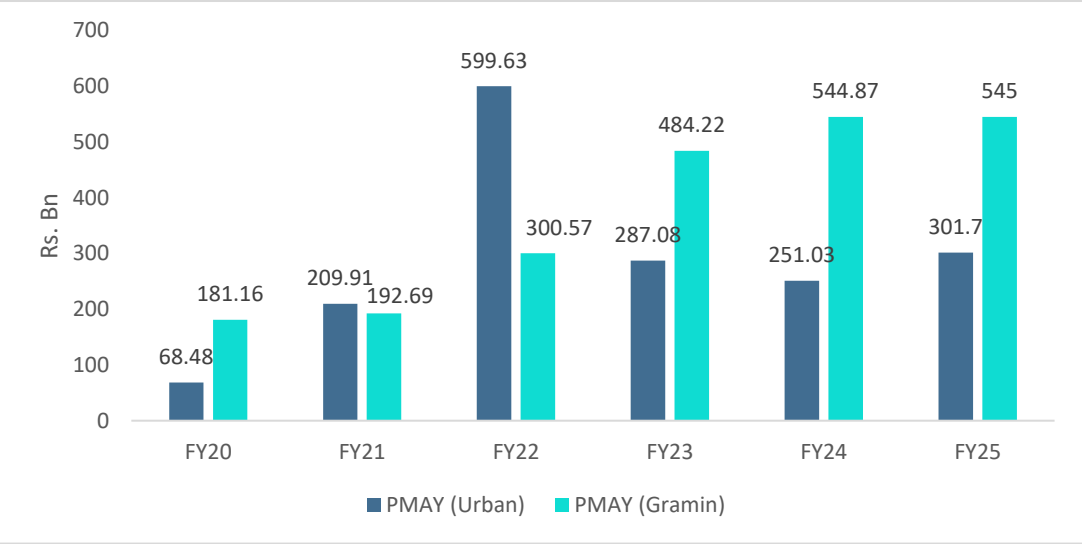
Airport Infrastructure

- India has seen significant growth in the airport infrastructure sector with investments from both the government and private sector. The country has become the third-largest domestic civil aviation market in the world and has immense potential to grow further.

- The Ministry of Civil Aviation (MoCA) envisages 100 new airports to be built in the country over the next 10 to 15 years. To further improve regional air connectivity, the government has announced the revival of 50 additional airports, heliports, water aerodromes, and advanced landing grounds and allocated Rs 3,113 crore in the Union Budget 2023-24.

	• Further, the government has envisaged an investment of more than Rs. 1,43,000 crore in airports under the National Infrastructure Pipeline (NIP) over a period of 5 years.
 **Housing**	• In FY23, the housing market witnessed steady growth with increased sales momentum supported by past inventory levels and continued new project launches specifically in the affordable and mid-size segments. • The housing market in general is witnessing growth due to increased commercial activities, the need for upgraded infrastructure and living spaces, and an improved economic scenario. • Growth in various sectors like BFSI and e-commerce segment, increase in savings due to the work-from-home trend in the last 2 years, and growing demand for better spaces to live have led to an increase in first-time home buyers. Also, there has been a rise in the mid-segment housing projects due to increased urbanization and per capita income. • Government initiatives like Pradhan Mantri Awas Yojna (PMAY), the Urban Development Plan, and the digitization of land records have also added to the growth in the sector. The rural and urban housing construction under the Pradhan Mantri Awas Yojana has gained traction in FY23. • Under the PMAY scheme of the Union Ministry of Housing and Urban Affairs, more than 1.19 crore houses have been sanctioned under the PMAY-Urban, out of which 77.02 lakhs have been completed as of September 25, 2023, and the rest are under construction.

Chart 40: Budgetary Allocation Under PMAY (Urban and Gramin)



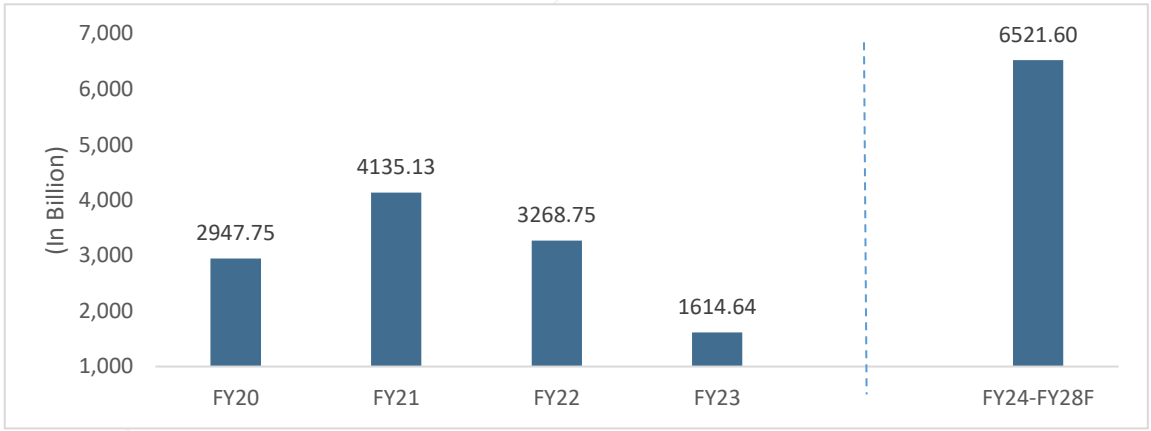
Source: Budgetary Documents

Commercial and Industrial

- In FY23, the commercial real estate market witnessed booming demand from office and retail segments, backed by strong growth in the e-commerce industry and India emerging as the fastest-growing business and IT hub.

- The demand for office space will be driven by the expansion of the co-working segment, an increase in hiring across various sectors like e-commerce, services, etc., and increased connectivity due to the augmentation of infrastructure and overall sound economic growth in India

- The absorption of commercial real estate in India is expected to remain healthy in the near to medium term.

	• The government's commitment is evident through its allocation of 3.3% of GDP to the infrastructure sector in the fiscal year 2024, with particular focus on the transport and logistics segments.
Metro & smart cities	**Trend in Investments in Metro and Smart Cities Projects** The investments from FY20 to FY23 have degrown at 18.20%. This is majorly on account of projects being executed between FY19 and FY21. Around 74.00% of projects are completed in SCM and 90% of funds are utilized. However, in the case of metros, it is proposed to be expanded to 1,700 Km across 27 cities by 2025 and subsequently to 50 cities. The investment is expected to grow at a CAGR of 5-10% in the range of Rs. 6,500 to Rs. 6,700 Billion from FY24 to FY28. **Chart 41: Trend in Investments in Metro and Smart Cities Projects**  Source: National Infrastructure Pipeline 2020 Government-led initiatives such as the Smart Cities Mission, Metro Rail projects, Housing for All, and infrastructure development schemes prioritize investment in metros and smart cities. These initiatives provide a conducive environment for construction activities and boost the demand for cement as a key construction material.

2.18 Challenges

The cement industry in India has witnessed systematic and gradual advancement over the years. Additionally, there are several challenges faced in the current scenario in the cement industry.

Below are some of the key challenges:

- **Inability to Fully Pass on the Increase in Input Prices:** The domestic demand for cement is price-sensitive. Accordingly, the cement players have been unable to pass on the increase in input prices fully to the end-users. In FY23, the sharp increase in coking coal prices led to increased production costs. However, the players were unable to take any significant price hikes, which led to a 590-bps y-o-y decline in the EBITDA margins. This remains a risk to the profitability of cement players.

- **Environmental Regulations:** The cement industry is a major contributor to air pollution and greenhouse gas emissions. Stringent environmental regulations have been put in place to reduce emissions, which require significant investments in cleaner technologies and pollution control measures. The cement industry is required to comply with various environmental acts and regulations covering different spheres of the environment like emissions of air pollutants, consumption of water, generation and discharge of trade effluents, utilisation and storage of hazardous waste, noise generation, and utilisation of forest land and wildlife areas. Compliance with these regulations can be costly and challenging.

- **Energy Costs:** The cement manufacturing process is energy-intensive, and the industry is highly dependent on fossil fuels. Energy cost represents almost 20% to 26% of the overall expenses of manufacturing cement. Therefore, it is critical for the industry to explore the latest technologies and alternative ways of becoming energy-efficient. Moreover, fluctuating energy prices and the need to reduce carbon emissions have put pressure on cement manufacturers to adopt alternative energy sources and more energy-efficient technologies.

- **Logistics and Transportation:** The cement industry relies heavily on the efficient transportation of raw materials and finished products. Poor infrastructure and transportation bottlenecks can lead to delays and increased costs. Furthermore, poor road infrastructure and vehicle movement restrictions on routes passing through villages and towns, add to delays and underutilisation of logistics assets, incurring more input costs.

- **Land Acquisition and Permitting:** Setting up new cement plants or expanding existing ones often requires acquiring land and obtaining various permits and approvals. Land acquisition can be time-consuming and may face opposition from local communities concerned about environmental impacts.

- **Technological Upgradation**: To stay competitive and meet environmental standards, cement manufacturers must continuously invest in modernizing their production processes. This requires substantial capital expenditure and technical expertise.

- **Skilled Labor Shortage:** Cement manufacturing requires a skilled workforce. Finding and retaining skilled labour can be a challenge, especially in remote or rural areas where many cement plants are located.

2.19 Industry Trends

Some of the key industry trends in the Indian cement sector are mentioned below:

- **Industry Consolidation**

The cement industry has seen consolidation in the past few years. Some of the recent transactions include:

- Acquisition of Holcim Group's 63.11% stake in Ambuja Cement (which holds 50.05% in ACC Limited) and 4.48% direct stake in ACC Limited in September 2022.
- Dalmia Cement's acquisition of Jaiprakash Associates cement plants (under approval)
- Acquisition of 100% stakes in Penna Cement Industries Ltd and 62.4% stakes in Sanghi Industries by Adani Group's Ambuja Cements Ltd
- Acquisition of 32.7% stakes in India Cement by Ultratech Cement Ltd
- Acquisition of Kesoram Industries by Ultratech Cement Ltd is scheduled for November 2024

The consolidations are expected to enable the resultant entities to have better economies of scale and operating synergies, thereby improving market reach, efficiency, and profitability.

- **ESG Initiatives**

  - **Optimising Specific Energy Consumption**

  The energy efficiency within the cement industry is measured as a combination of two factors – thermal-specific energy consumption and electrical-specific energy consumption. Currently, about 99% of the Indian cement companies have transitioned to a water-efficient dry process technology, thereby conserving a significant fraction of energy in drying the raw mix. The implementation of process optimisations, installation of the latest generation of clinker coolers, grinding systems, multichannel burners, and digitalisation have enhanced the energy efficiency of the cement industry**.**

  - **Waste Heat Recovery System (WHRS)**

  According to the Ministry of New and Renewable Energy (MNRE), the Indian cement industry has the highest potential (amongst identified sectors) to generate 1,100 MW (2016 estimates) of clean energy through the installation of WHRS. This capability continues to grow proportionately with increased cement manufacturing capacity, bringing it close to 1.3 GW at current production capacity levels. At full potential, WHRS would help replace the energy requirement equivalent to 8.6 million tonnes of coal, resulting in emissions savings of 12.8 million tonnes of CO2 (MtCO2) by the Indian cement industry.

- **Green Growth Initiatives**

The Indian cement industry has been implementing significant technological measures to reduce emissions. The industry has voluntarily devised a Low Carbon Technology Roadmap aimed at reducing its direct CO2 emission intensity by 45% by 2050 from a 2010 baseline. Over the years, the Indian cement industry has developed blended types of cement to the extent of 73% in 2017 compared to 28% in 1992.

Some of the initiatives by the cement companies are as below:

- Major cement companies plan to invest around Rs. 55 billion toward renewable energy in the next couple of years. The companies plan to add 537 MW of green power, including Solar and Waste Heat Recovery Systems (WHRS), during the period.
- In August 2023, the corporate renewable energy solutions provider Vibrant Energy signed an agreement with UltraTech Cement to provide 21.60 MW of wind projects in Maharashtra. The project will deliver green power to UltraTech Cement's multiple facilities in Maharashtra. The project is likely to generate about 72 million units of green power on an annual basis, which would help UltraTech Cement reduce its carbon footprint.
- In October 2022, UltraTech announced that it has been granted Environmental Product Declaration (EPD) certificates for four of its cement products, which are Ordinary Portland Cement (OPC), Portland Pozzolana Cement (PPC), Portland Slag Cement (PSC), and PCC (Portland Composite Cement).
- Dalmia Cement (Bharat) Limited and Carbon Clean Solutions have teamed up to build the cement industry's largest Carbon Capture Plant. The carbon capture plant is a large-scale facility of 500,000 tonnes per year of carbon capture in Tamil Nadu, India. Further, Dalmia Cement signed a Memorandum of Understanding with Carbon Clean Solutions Limited (CCSL) the U.K., a leader in low-cost carbon dioxide separation technology to provide technology and operational services for the plant based on its patented CDRMax Technology.

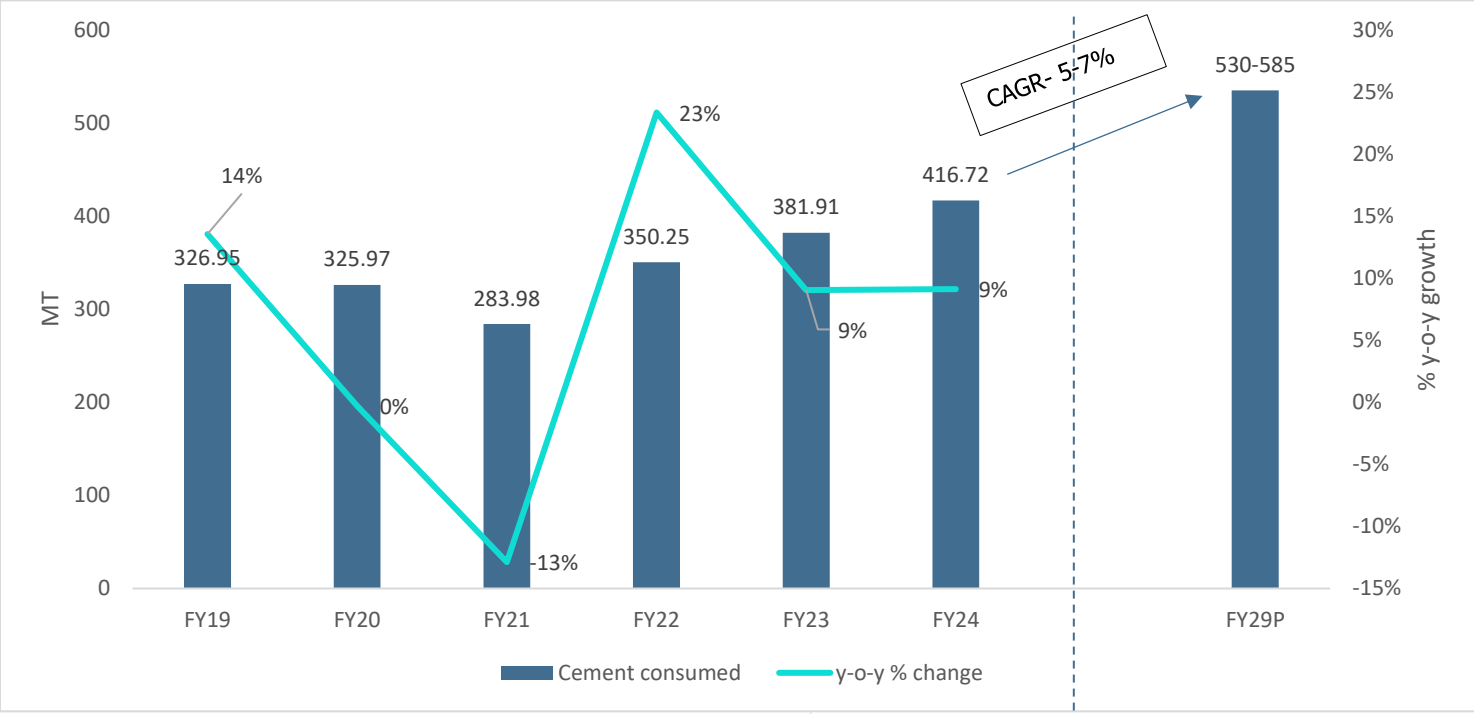
- **Digitalization and Automation**

Cement manufacturers are investing in digitalization and automation to enhance operational efficiency, reduce energy consumption, and optimize production processes. This trend includes the use of IoT (Internet of Things) sensors, AI (Artificial Intelligence), and data analytics.

2.20 Outlook

The cement demand is expected to grow at 5-7% over FY24-29 to reach 530-585 MT driven by a growing government push for infrastructure development especially in the rural segment, urban housing growth, and public infrastructure developments like metros, NHAI, smart cities, etc., in different regions of India.

Chart 42: Domestic Cement Consumption Outlook



Source: CMIE, CareEdge Research
Note- P- projected

The central government is expected to continue its infrastructure focus in FY25. The announced Capex of Rs. 11,11,111 crores for FY25 (Budget Estimate) is almost three times the capital expenditure in FY20, and is focused towards the development of highways, internal road connectivity, and railways.

Similarly, the government has increased the allocation to the PM Awas Yojana, with budgetary allocation higher by 66% for FY24, which will further support strong cement demand. The private CapEx is also expected to pick up in the coming years with the support of rising domestic demand and policies like the PLI scheme announced by the government for 13 manufacturing sectors.

Moreover, increased spending on infrastructure & real estate and low per capita consumption of cement augur well for India's cement industry. Accordingly, the domestic cement volumes are expected to witness steady growth in the medium term with Central and Eastern regions witnessing higher traction. Subsequently, the long-term outlook of the cement industry is expected to be driven by infrastructure impetus provided by the government as evidenced by continuously increasing budgetary allocation. Several schemes have been announced to aid the development and

improvement of public infrastructure. These encompass roads, highways, metros and railways, airports, ports, logistics infrastructure, etc. Alongside initiatives like PM Gati Shakti, National Infrastructure Pipeline (NIP), Urban Rejuvenation Mission: AMRUT, and Smart Cities Mission. In addition, schemes such as Pradhan Mantri Awas Yojana (PMAY), particularly aimed at affordable housing, are likely to drive the low-cost housing segment.

The outlook for investments in India's cement industry appears positive, primarily due to factors such as government infrastructure investments, urbanization, and population growth. Initiatives like "Housing for All" and "Smart Cities" launched by the Indian government are expected to boost cement demand in the coming years. Furthermore, the emphasis on sustainable construction and green building materials is likely to shape the industry's trajectory, leading to the adoption of eco-friendly cement production practices.

2.21 Peer Comparison

Brief Profile

Company Name	Company Profile
India Cements Ltd	ICL is one of the largest producers of cement in south India with a total installed cement manufacturing capacity of 15.6 million tonnes per annum (MTPA) as on December 31, 2023. ICL was established in 1946 by Sankaralinga Iyer and T S Narayanswami, and is presently headed by N. Srinivasan, Vice Chairman and Managing Director. ICL's first cement plant in Sankarnagar, Tamil Nadu, was commissioned in 1949. ICL owns and operates 10 cement manufacturing units (including two split grinding units) in the states of Telangana, Andhra Pradesh (AP), Tamil Nadu (TN), Maharashtra (MH) and Rajasthan. The company primarily manufactures two standard types of cements: Ordinary Portland Cement (OPC) and Portland Pozzolana Cement (PPC), the mix being 35:65.
Kesoram Industries Ltd	Kesoram Industries Limited (KIL) is a part of B.K. Birla Group of Companies, whichis a well-diversified conglomerate, having interests in cement, rayon, transparent paper and chemicals. KIL was set up in 1919 and has two integrated cement manufacturing plants at present, one at Sedam (Karnataka) and the other one at Basantnagar (Telangana) with a total capacity of 10.8 MTPA. The cement business also has a 0.66 MTPA packing plant in Solapur, Maharashtra.
Orient Cement Ltd	Orient Cement Ltd (OCL) was incorporated in July 2011 and is a part of the C.K. Birla group promoted by late B M Birla. The company was incorporated to acquire the cement division of Orient Paper & Industries Ltd (OPIL). Pursuant to the approval of Honorable Orissa High Court, the cement undertaking of OPIL was transferred to OCL on a going concern basis w.e.f. April 01, 2012. The cement division of OPIL, i.e., OCL was set up in 1979, and the division’s first cement plant began production in 1982. The company’s cement plants having aggregate installed capacity of 8.5 MTPA are located at Telangana, Maharashtra and Karnataka.
Sagar Cements Ltd	Incorporated in 1981, Sagar Cements Ltd has a consolidated cement manufacturing capacity of 10.5 MTPA (including Andhra Cement Limited acquisition). SCL's manufacturing units are located in the southern, central, and eastern regions of the country. The company has significant presence in the southern markets (Tamil Nadu, Telangana, Andhra Pradesh, Karnataka) and the company is looking to expand their footprint in the central and western markets (Madhya Pradesh and Maharashtra), eastern markets (Odisha) of the country. The company primarily manufactures two standard types of cements: Ordinary Portland Cement (OPC) and Portland Pozzolana Cement (PPC), the mix being 50:35

Company Name	Company Profile
	respectively and other products such as Portland Slag (PSC), Ground Granulated Blast-furnace Slag (GGBS) and Sulphate Resistant Cement (SRC) forming the remaining SCL product portfolio.
The KCP Ltd	The KCP group was founded in 1941 by Mr. V Ramakrishna, who began operations by setting up a sugar unit. In 1958, the cement division commenced operations and currently there are two units, one each at Macherla, Guntur district with a capacity of 0.82MTPA, Muktyala with a capacity of 3.52 MTPA in Andhra Pradesh and clinker capacity of 3.06 MTPA. The KCP also has one packing plant at Arakkonam in Tamil Nadu with capacity of 0.3 MTPA. In 1955, the group set up a heavy engineering division at Tiruvottiyur in Chennai that undertakes casting, fabrication and machining of heavy equipment for core industries (sugar, cement, steel and power). KCP Vietnam Industries Ltd, which commenced operations in 1999, has a sugar crushing capacity of 11,000 tpd. The group also has a 127-room four-star hotel in Hyderabad named 'Mercure', which began operations in April 2016.
NCL Industries Ltd	NCL Industries Limited (NCL), previously known as Nagarjuna Cements Limited, was founded on September 10, 1979. It is a part of the NCL group, an established industrial conglomerate in the regions of Andhra Pradesh and Telangana, with a significant presence in the building and construction materials sector. NCL's core operations encompass the manufacturing of cement, cement particle boards, and Ready-Mix Concrete. NCL has one unit at Simhapuri, Tamil Nadu with, 1.7 MTPA cement capacity and 2.6 MTPA clinker capacity along with one grinding unit at Kondipalli, Andhra Pradesh with 1 MTPA capacity.
Deccan Cements Ltd	Deccan Cements Limited (DCL) was set up in 1979 as a public limited company and DCL manufactures cement at its plant in Nalgonda, Telangana that DCL began commercial production in 1982. The plant has capacity of 1.8 MTPA.
Anjani Portland Cement Ltd	Anjani Portland Cement Limited (APCL) is part of the Chettinad group and a subsidiary of Chettinad Cement Corporation Pvt Ltd (CCCPL), the group's flagship company. APCL has an integrated cement unit in Suryapet, Telangana at standalone level with installed capacity of 1.2 MTPA (clinker backed capacity of 1.16 MTPA) while its wholly owned subsidiary BCPL has an integrated cement unit in Tangeda, Andhra Pradesh with installed capacity of 1.4 MTPA (clinker backed capacity of 1.28 MTPA) as on December 31, 2023.
Andhra Cement Ltd	Andhra Cement Limited (ACL) was acquired by Sagar Cements Limited (SCL) through the Insolvency and Bankruptcy Code route in March 2023. ACL's cement assets consist of an integrated unit at Durga Cement Works (DCW), which is located at Dachepalli, Guntur, Andhra Pradesh. The plant has clinker capacity of 1.85 MTPA and cement capacity of 2.25 MTPA.

Table 12: Cement capacities, integrated units and grading units

Company Name	Region Focus	Cement Capacity (MTPA)	Clinker Capacity (MTPA)	Integrated Units	Grinding Units
The India Cements Ltd (acquired by Ultratech)	South- Tamil Nadu, Andhra Pradesh; West- Maharashtra, Rajasthan; Andaman & Nicobar Islands	15.6	-	Unit 1 - Chilamkur, AP Unit 2 - Dalavoi, TN Unit 3 - Malkapur, TG Unit 4 - Sankaridurg, TN Unit 5 - Sankarnagar, TN Unit 6 - Banswara works, RJ Unit 7 - Visnupuram, TG Unit 8 - Yerraguntla, AP Unit 9 - Andaman & Nicobar Islands	Unit 1 - Parli, MH (Acquired by Ultratech in April 2024) Unit 2 - Vallur, TN
Kesoram Industries Ltd (acquired by Ultratech)	South - Karnataka, Telangana	10.8	-	Unit 1 - Sedam, KA, Unit 2 - Basantnagar, TG,	-
Orient Cement Ltd	South - Karnataka Telangana	8.5	5.5	Unit 1 - Chittarpur, KA, 3 MTPA Unit 2 - Devapur, TG, 3.5 MTPA	Unit 1 - Jalgaon, MH, 2 MTPA
Sagar Cements Ltd[3]	South - Andhra Pradesh, Tamil Nadu, Telangana, Karnataka; Central - Madhya Pradesh, East - Odisha	10.50	6.60	Unit 1 - Sagar Cements (M) Pvt Ltd., MP, 1 (cement) + 1 (clinker) MTPA Unit 2 - Mattampally, Telangana, 3 (cement) + 2.75 (clinker) MTPA Unit 3 - Andhra Cements Ltd., 2.25 (cement) + 1.85 (clinker) MTPA Unit 4 - Gudipadu, AP, 1.25 (cement) + 1 (clinker) MTPA	Unit 1 - Bayyavaram, AP, 1.5 MTPA Unit 2 - Jaipur, Odisha, 1.5 MTPA
The KCP Ltd	South - Andhra Pradesh	4.3	3.1	Unit 1 - Mutkyala, AP, 3.52 (cement) + 3.06 (clinker) MTPA	Unit 1 - Guntur, AP, 0.82 (cement) MTPA

[3] Sagar Cement Limited is at a consolidated level includes Andhra Cements Limited.

Company Name	Region Focus	Cement Capacity (MTPA)	Clinker Capacity (MTPA)	Integrated Units	Grinding Units
NCL Industries Ltd	South- Andhra Pradesh & Tamil Nadu	2.7	2.6	Unit 1 - Simhapuri, TN, 1.7 (cement) +2.6 (clinker) MTPA	Unit 1 - Kondipalli, AP, 1 MTPA
Deccan Cements Ltd	South-Telangana	1.80	-	Unit 1 - Nalgonda, TG, 2.25 MTPA (cement), 1.80 MTPA (clinker)	-
Anjani Portland Cement Ltd	South-Tamil Nadu	1.2	-	Unit 1 - Nalgonda, TN, 1.2 MTPA (cement), 1.16 MTPA (clinker)	-
Andhra Cement Ltd	South - Andhra Pradesh	2.25	1.85	Unit 1 - Dachepalli, AP, 2.25 MTPA (cement), 1.85 (clinker)	-

Source: Company Report

Table 13 Overview of Financial Performance of Peers (Figures in Rs. Million)(Consolidated)

Company Name	India Cements Limited				Kesoram Industries Limited				Orient Cement Limited			
	FY21	FY22	FY23	FY24	FY21	FY22	FY23	FY24	FY21	FY22	FY23	FY24
Revenue	45,105	48,584	56,081	51,122	26,528	36,059	37,781	39,869	23,241	27,254	29,375	31,851
EBITDA	7,878	5,086	-1,431	990	3,755	5,120	2,706	4,008	5,507	5,911	3,645	4,647
EBITDA Margin	17.5%	10.5%	-2.6%	1.9%	14.2%	14.2%	7.2%	10.1%	23.7%	21.7%	12.4%	14.6%
EBIT	5,412	2,831	-3,848	-1,446	2,576	4,002	1,680	2,639	4,088	4,459	2,177	3,156
EBIT Margin	12.6%	5.8%	-7%	3%	9.7%	11.1%	4.4%	6.6%	17.6%	16.4%	7.4%	9.9%
Interest	2,710	1,977	2,193	2,256	2,758	5,017	4,500	4,885	936	514	378	342
PAT	2,068	2,783	-1,269	-2,267	1,401	-773	-1,943	-3,841	2,142	2,633	1,228	1,749
PAT Margin	4.6%	5.7%	-2.2%	-4.4%	5.3%	-2.1%	-5.1%	-9.6%	9.2%	9.7%	4.2%	5.5%
Equity Capital	56,977	59,470	57,763	55,993	1,975	5,106	4,732	948	13,059	15,254	16,037	17,432
Borrowings	30,412	30,906	29,453	26,119	19,620	18,113	19,025	22,233	7,966	3,097	3,915	1,295
Debt-Equity Ratio	0.5	0.5	0.5	0.5	1.0	0.4	0.4	2.4	0.6	0.2	0.2	0.1

Company Name	India Cements Limited				Kesoram Industries Limited				Orient Cement Limited			
	FY21	FY22	FY23	FY24	FY21	FY22	FY23	FY24	FY21	FY22	FY23	FY24
Interest Coverage Ratio	2.0	1.4	NA	NA	1.6	1.1	0.8	0.54	6.5	16.3	23.0	9.24
Return on Equity	3.6%	4.7%	-2.2%	-4.0%	70.9%	-15.1%	-41.1%	-405.1%	16.4%	18.8%	7.9%	10.0%
Return on Capital Employed	6.3%	3.1%	-4.5%	-1.8%	11.9%	16.6%	7.0%	11.4%	19.6%	24.2%	10.9%	13.9%
EBITDA /ton	401	246	-73	31	349	476	252	256	648	695	429	354

Company Name	The KCP Limited				Sagar Cement Limited				Andhra Cement Limited			
	FY21	FY22	FY23	FY24	FY21	FY22	FY23	FY24	FY21	FY22	FY23	FY24
Revenue	16,925	21,082	22,537	28,467	13,713	15,969	22,295	25,046	1.3	-	-	2,681
EBITDA	3,635	3,743	2,120	4,237	4,082	2,892	3,758	3,000	-293	-306	-254	-33
EBITDA Margin	21.5%	17.8%	9.4%	14.9%	29.6%	18%	17%	12%	NA	NA	NA	-1.2%
EBIT	2,718	2,872	1,220	3,344	3,272	1,965	2200	859	-769	-772	-722	-544
EBIT Margin	16.1%	13.6%	5.4%	11.7%	23.7%	12.2%	10%	3.4%	NA	NA	NA	-22%
Interest	464	338	380	409	466	925	2,016	1,848	1,297	1,584	157	705
PAT	1,888	2,391	897	2,762	1,861	592	96	-521	-2,050	-2,363	9,496	-656
PAT Margin	11.2%	11.3%	4.0%	9.7%	13.5%	3.7%	0.4%	NA	NA	NA	NA	NA
Equity Capital	9,956	11,770	12,243	14,100	11,909	12,554	16,375	20,197	-6,803	-9,166	3,552	2,968
Borrowings	4,656	4,343	5,552	4,777	8,065	15,034	14,721	14,390	9,635	9,703	6,752	5,249
Debt-Equity Ratio	0.5	0.4	0.5	0.3	0.68	1.2	0.90	0.71	NA	NA	1.9	1.8
Interest Coverage Ratio	5.9	8.5	3.2	8.2	7.03	2.12	1.09	0.46	NA	-0.5	-4.6	-0.8
Return on Equity	12.9%	9.2%	7.3%	19.6%	15.6%	4.7%	0.6%	NA	NA	NA	NA	NA
Return on Capital Employed	16.3%	15.5%	6.9%	17.7%	16.4%	7.1%	6.4%	2.6%	NA	NA	NA	NA
EBITDA /ton	845	870	404	558	485	334	186	422	-113	-118	-100	-559

Company Name	NCL Industries Limited				Deccan Cements Limited				Anjani Portland Cement Limited			
	FY21	FY22	FY23	FY24	FY21	FY22	FY23	FY24	FY21*	FY22	FY23	FY24
Revenue	13,837	16,334	16,097	18,714	7,580	7,918	7,815	7,994	4,142	8,013	6,615	6,239
EBITDA	2,817	2,064	1,478	2,257	1,759	1,613	972	1,098	1,224	1,441	214	299
EBITDA Margin	20.4%	12.6%	9.2%	12.1%	23.2%	20.4%	12.4%	13.7%	30%	18.0%	3.2%	4.8%
EBIT	2,374	1,597	986	1,696	1,527	1,354	698	822	1022	857	-323	-182
EBIT Margin	17.2%	9.8%	6.1%	9.1%	20.1%	17.1%	8.9%	10.3%	25%	10.7%	-4.9%	-2.9%
Interest	217	252	262	230	76	104	125	124	7	300	345	322
PAT	1,454	944	443	932	1,151	876	493	373	850	420	-585	-393
PAT Margin	10.5%	5.8%	2.8%	5.0%	15.2%	11.1%	6.3%	4.7%	21%	5.2%	-8.8%	-6.3%
Equity Capital	6,647	7,408	7,699	8,491	5,650	6,456	6,875	7,190	3,463	3,183	3,337	2,971
Borrowings	2,662	3,185	2,923	1,456	1,038	1,663	2,653	5193	0	4,968	4,357	4,265
Debt-Equity Ratio	0.4	0.4	0.4	0.2	0.2	0.3	0.4	0.7	0	1.6	1.3	1.4
Interest Coverage Ratio	11.0	6.3	3.8	7.4	21.9	14.3	6.3	6.6	157.2	2.9	-0.9	-0.56
Return on Equity	21.9%	12.7%	5.8%	11%	20.4%	13.6%	7.2%	5.2%	25%	13.2%	-17.5%	-13.2%
Return on Capital Employed	25.5%	15.1%	9.3%	0.1%	22.8%	15.0%	7.3%	7.1%	30%	26.6%	-9.6%	-2.3%
EBITDA /ton	1,043	764	547	588	977	896	540	457	1,472	1,242	185	160

Note- *Anjani Portland Cement Limted financials are standalone in FY21

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