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INDUSTRY OUTLOOK

CEMENT INDUSTRY OF INDIA: OUTLOOK AND CHALLENGES

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Introduction

The infrastructure industry in India is crucial to the country's economic growth since it fosters the expansion of a variety of industries, such as, real estate and construction. The growing construction industry, which in turn benefits from the rising need for urban dwelling, facilitates the production of cement. As it is vital to India's overall prosperity and aids in the timely construction of world-class infrastructure, the Indian Government lays an unwavering focus on the sustained growth of this sector. The infrastructure sector includes the provision of utilities, construction of bridges and dams, the construction of roads and the improvement of the metropolitan facilities. The cement Industry is the key sector in achieving these and other objectives.

Amongst the eight core industries, the cement industry has shown relatively robust performance in recent times. Despite several institutional and non-institutional peaks-and-troughs in the last few years, the cement industry stayed strong with robust capacity expansion. A healthy demand from the real estate, rural housing, national infrastructure projects (NIP) and infrastructure construction sectors, has significantly helped the cement industry in driving India's growth and structural transformation.



According to the estimate of the National Council for Cement and Building Materials (NCCBM), India's cement industry is expected to add ~80 million tonne capacity by 2025¹. India, with 298 million tonne (FY 2022) is the second biggest producer of cement in the world after China. It has 8 per cent of the global installed capacity in cement production². It has a total of 210 large cement plants, out of which 77 are in the states of Andhra Pradesh, Rajasthan, and Tamil Nadu. The market size of the India's cement industry was 3,644.5 million tonnes in 2022. The industry hopes to reach 4,832.6 million tonnes by 2028 at a compound annual growth rate (CAGR) of 4.94 per cent during 2023-2028³.

India's cement industry has strong linkages with other sectors, such as, infrastructure, construction, housing, transportation, coal, power, steel, etc. It has a significant role in implementing various Government flagship schemes and visions like housing for all, smart cities, concrete highways, dedicated freight corridors (DFC), clean India mission, ultra-mega power projects, waterways, etc⁴.

Global Scenario

In 2022, the size of the global cement market reached US\$ 363.4 billion, and it is expected to grow at a CAGR of 5.4 per cent during 2023 - 2028 to reach US\$ 498.23 billion by 2028⁵.

The Russia-Ukraine conflict, sticky inflation, and high energy prices continue to hurt logistics and production costs, which have negatively impacted the global economy and the construction industry. Some of the major developments related to global cement market are as follows:

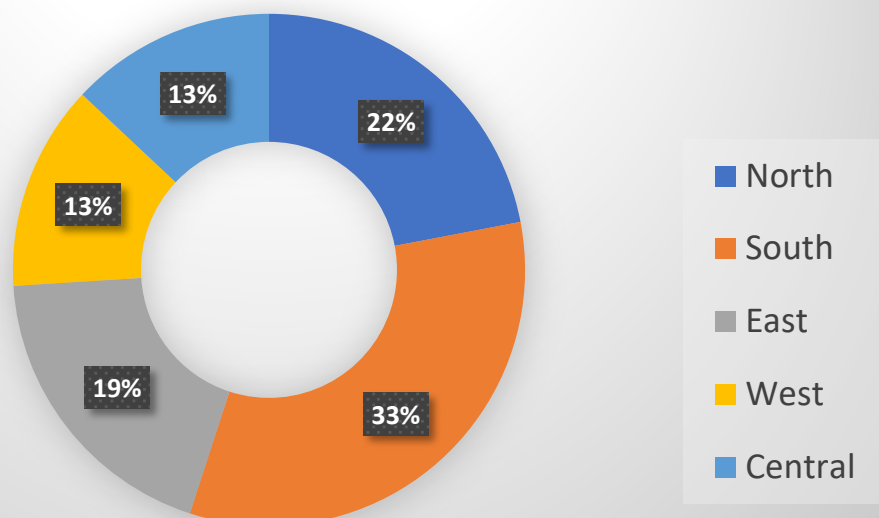
- Cement production in China declined by more than 10 per cent in 2022 compared to 2021, as a result of the Zero-Covid policy by the Chinese Government⁶.
- In Pakistan, cement consumption fell by 7.1 per cent year-on-year (y-o-y) in February 2023 with total dispatches reaching 4.04 Mt (million tonnes) against 4.35 Mt dispatched in February 2022.
- In Brazil, cement demand was down by almost 3 per cent in 2022 compared to the corresponding year 2021.
- In Argentina, cement's demand in 2022 saw an increase of around 6 per cent compared to 2021. In the same period, cement production was also up by ~ 7 per cent.
- In Spain, the demand was up by less than 1 per cent in 2022 led by the robust growth in the first two months of 2022.

Installed Capacity and Capacity Utilisation in Cement Production in India

Being the second largest cement producer in the world after China, India contributes over 8 per cent to the global installed capacity in cement production. India has potentially rich deposits of limestones in different regions of the country essentially required for cement production⁷.

In terms of installed capacity, India's Southern region (33 per cent) has the largest market share in cement production followed by North (22 per cent), East (19 per cent), West (13 per cent), and Central (13 per cent) (see Chart 1).

Chart 1: Region-wise Installed Capacity



Source: CMIE, Infomerics Economic Research.

The cement industry was expected to add 21.2 million tonnes per annum (mtpa) of manufacturing capacity in the year 2022-23. During the period, projects worth ₹ 71.8 billion were expected to get commissioned. This would have been the fourth successive year, wherein the industry added more than 20 mtpa of manufacturing capacity. Between 2019-20 and 2021-22, the industry added a total of 81.1 mtpa of manufacturing capacity⁸. The capacity utilisation of cement industries decreased from 66.2 per cent in 2018-19 to 60.3 per cent in 2021-22. There was contraction in demand and production during the pandemic. Now the industry is showing resilience by getting out of the slump and developing rapidly (See Table: 1).

Table 1: Capacity Utilisation by Cement Industry

Year	Production (Million tonnes)	Cement: Capacity Addition (Million tonnes)	Cement: Outstanding Capacity (Million tonnes)	Cement: Capacity Utilisation (%)
2015-16	273.9	15.54	495.32	62.1
2016-17	270.4	28.09	523.41	58.4
2017-18	288.0	21.42	544.83	60.0
2018-19	327.7	15.54	495.32	66.2
2019-20	327.3	28.09	523.41	62.5
2020-21	284.9	21.42	544.83	52.3
2021-22	350.6	31.62	576.45	60.8

Source: CMIE, Infomerics Economic Research

The Indian cement industry is one of the technologically advanced industries in the country with state-of-the-art plants for the production. Keeping pace with the global advancement, the Indian cement industry has brought about modifications and upgradation in technology, particularly on the energy conservation front⁹.

Consumption and Production

Consumption

India's total cement consumption was projected to cross 370 million tonnes in 2022-23. Domestic consumption was likely to be 373.1 million tonnes during the year, growing by 6.3 per cent over the preceding year. The first half of the FY 2023 did quite well with 10 per cent consumption growth. It was expected that the consumption from the real estate and infrastructure construction sectors will remain steady in the second half of FY 2023.

In 2021-22, cement consumption in India scaled a new high at 351 million tonnes, easily surpassing the pre-covid level of 328 million tonnes. A robust demand from the real estate sector led by an increase in housing and the infrastructure construction backed by rise in the Government spending on infrastructure majorly supported the consumption of cement during the year¹⁰.

Production

In India, the cement manufacturers produce distinct types of cement, such as, Portland Cement, PPC Cement, High Strength Cement, Marine Technology Cement, Blended Cement, Fly Ash Cement, Slag Based Cement, Silica based Cement, and High Alumina Cement.

Overall, the domestic production of cement stood at 351 million tonnes in FY 2022, up from 285 million tonnes in FY 2021. The domestic production with 7 per cent y-o-y growth has surpassed the pre-covid levels (See Table 2).

Year	Production	Consumption
2011-12	223,500.00	222,378.70
2012-13	240,614.00	240,387.60
2013-14	249,826.00	247,480.30
2014-15	261,338.00	257,412.60
2015-16	273,857.00	271,243.50
2016-17	270,375.00	266,823.50
2017-18	287,964.00	284,721.20
2018-19	327,722.00	324,927.90
2019-20	327,266.00	327,928.90
2020-21	284,913.00	285,308.90
2021-22	350,595.00	351,071.90
2022-23	374,558.50	375,190.70

Source: CMIE, Infomerics Economic Research

During the period April to December 2022, there was an uptick of 10.9 per cent in production of cement as compared to corresponding period in 2021. In December 2022 alone, cement production was higher by 2,935 thousand tonnes compared to the production recorded in the December 2021. The contraction in cement production in 2020-21 was due to the pandemic and restrictions put on economic activities after the subsequent lockdowns across the country.

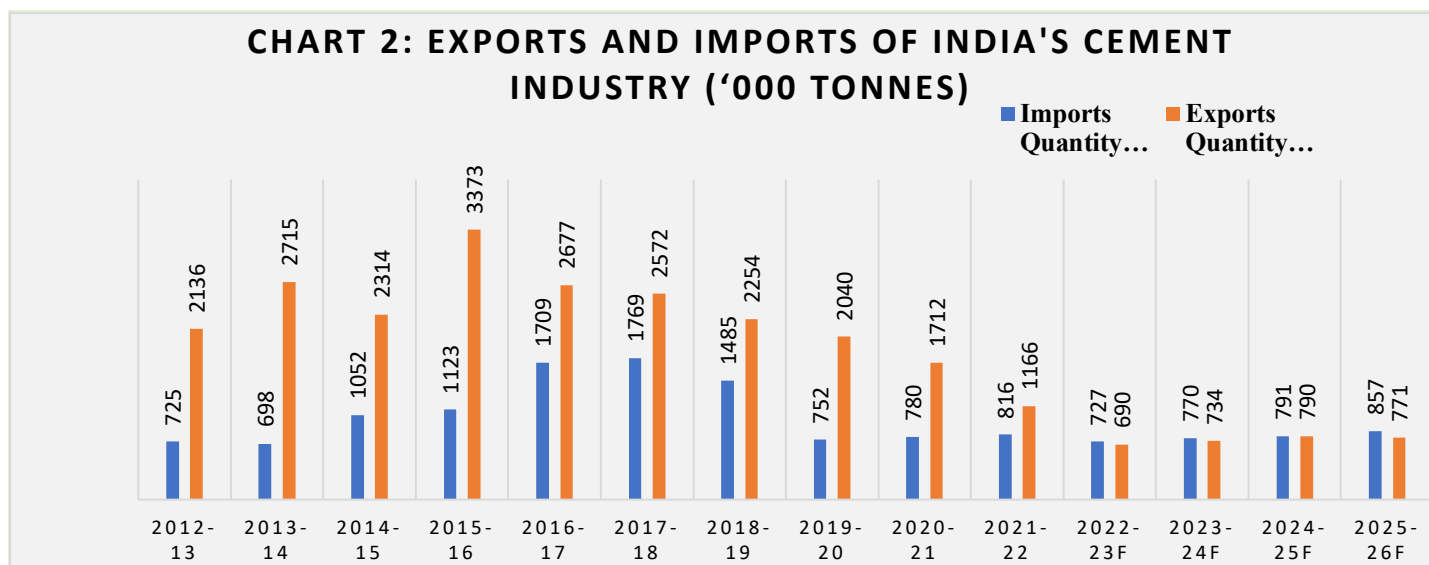
Interestingly, these numbers signify that the cement sector gained the growth momentum it had prior to the Covid-19 pandemic. During the pandemic, the production of cement was adversely affected due to intermittent lockdowns and restriction in mobility. The stringent protocols on economic activities e.g., halt in construction and other infrastructure development works persisted till the first half of the FY 2022. The impact of the second wave can easily be traced in the low figures of consumption and production of cement in India. The cement production dropped to less than 300 million tonnes in FY 2021.

International Economics

As per Directorate General of Commercial Intelligence and Statistics (DGCI&S), India exports Portland cement, aluminous cement, slag cement, super sulphate cement and Hydraulics cements to other countries. India exports most of its concrete cement to Bangladesh, Sri Lanka, and United Arab Emirates (UAE). Currently, India comes after Spain, Germany, Italy, and China in the list of global cement exporters.¹¹

India's cement industry gained the momentum with the Government's big infrastructure push for development projects. Amid global uncertainties caused by the recessionary situation in the US (United States) and EU (European Union) economies, the global demand for cement has been subdued, and accordingly the cement export from India significantly decreased in half of a decade.

The export of cement, which was 33,73,000 tonnes in 2015-16 reduced to 11,66,000 tonnes in 2021-22. Going forward, the global demand for Indian cement is likely to be a bit subdued given the slowdown and looming recessionary fears (See Chart 2).

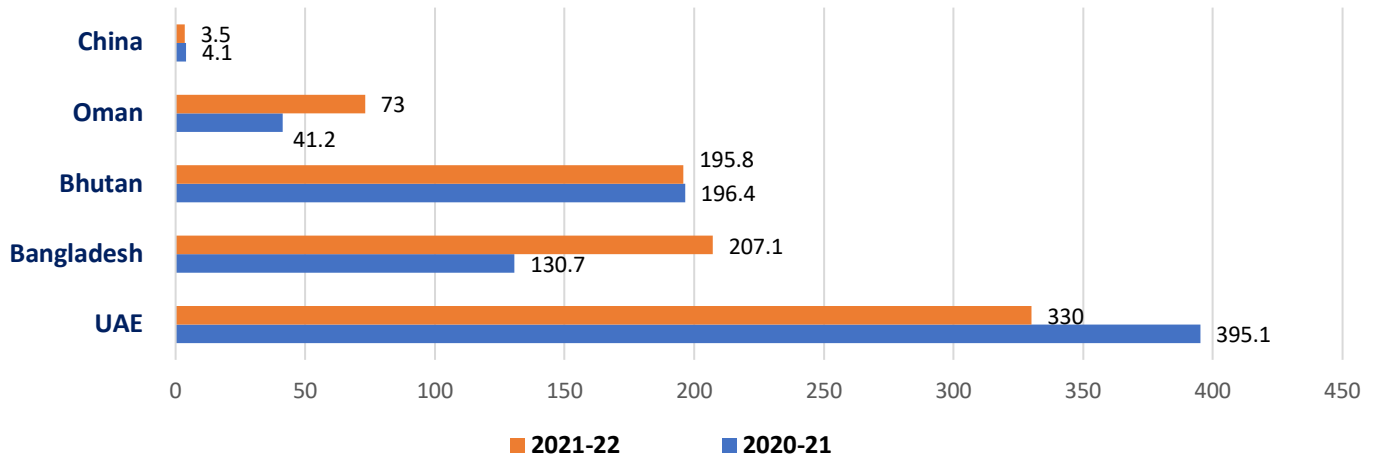


Note: F is for forecasted; Sources: CMIE, Infomeric Research

The cement import by India also significantly declined from 17,69,000 tonnes in 2017-18 to 7,52,000 tonnes in 2019-20 due to the pandemic. With the recovery in domestic demand, imports by India gained traction from 7,52,000 tonnes in 2019-20 to 8,16,000 tonnes in 2021-22¹².

In 2021-22, India imported cement largely from UAE (395.1 thousand tonnes), Bangladesh (130.7 thousand tonnes), Bhutan (196.4 thousand tonnes), and Oman (41.2 thousand tonnes) (See Chart 3).

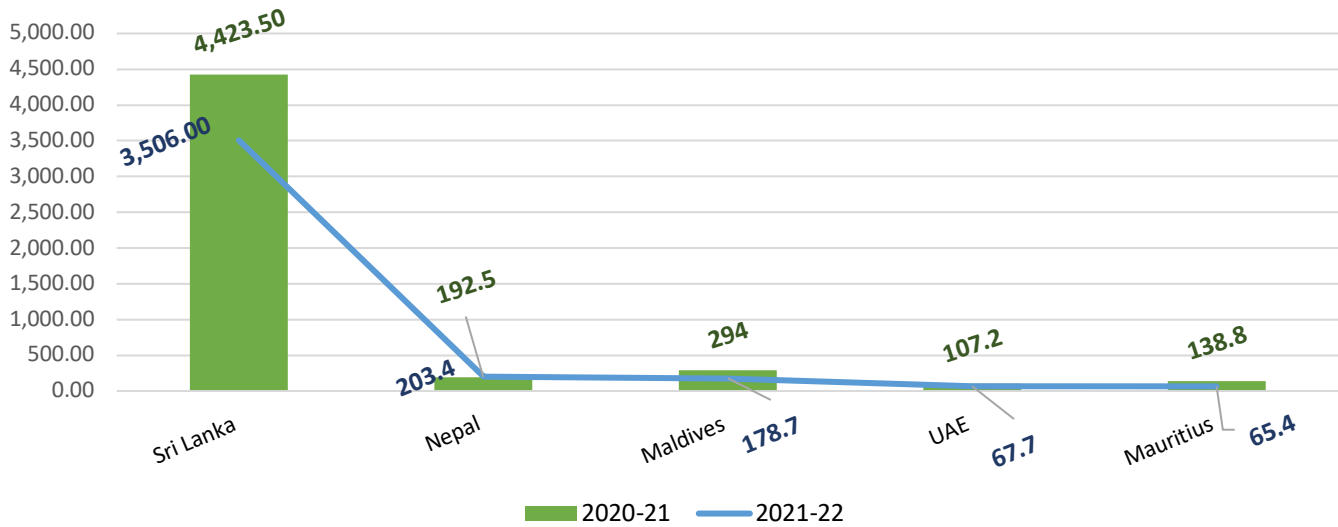
Chart 3: India's Cement Imports from Countries (Values are in '000 tonnes) - Top Five



Source: Infomerics Economic Research

Sri Lanka is the largest buyer of India's cement, whereas it had imported ₹ 350.6 crore of cement from India in 2021-22. Nepal was the second largest importer of India's cement followed by Maldives, UAE, and Mauritius (See Chart 4).

Chart 4: Top Five Destination of India's Cement Exports (₹ million)



Source: CMIE, Infomerics Economic Research

Pricing

As per the Systematic Institutional Research, the all-India average cement prices in 3rd quarter of FY 2023 were up by ~2 per cent q-o-q (quarter on quarter) and 2.5 per cent y-o-y. The increase in cement prices remained uneven in all regions of the country. In Southern and Eastern regions, the cement prices were up by ~4.5 to 5.5 per cent q-o-q followed by North and West, where the prices were up by ~2 to 3 q-o-q per cent. Comparatively,

the cement prices in central region rose by ~2 per cent on q-o-q basis in a muted manner. The All-India average prices improved in the third quarter, as the demand picked up in the 2nd half of the same quarter¹³.

Despite the robust domestic demand, the cement industry's profitability is likely to remain subdued during 2023 due to globally synchronized slowdown. The cement manufacturers refrained from raising prices of cement due to continued elevated cost of inputs. The cost of raw material, power, fuel costs, and freight costs are still on rise in the last few years. The average price of limestone (cement grade) increased by around 17 per cent in 2021-22 and about 10 per cent during the April-November 2022 period. The wholesale prices of other inputs, such as, petroleum coke had also increased by 66.2 per cent in 2021-22 and 37.4 per cent between April 2022 and January 2023. The wholesale price of diesel rose 20 per cent in 2021-22 and 4 per cent till January 2023¹⁴.

Institutional Initiatives

The cement industry is one of the major sectors deriving hefty revenues for the Indian Railways. Cement and its raw materials have the third highest share in the total cargo moved by the railways. Therefore, the Ministry of Railways in a recent announcement is planning to develop dedicated corridors in different parts of the country to meet the requirements of the cement sector. These corridors will be created specifically in areas, where the concentration of cement factories is higher, and those corridors would be interlinked with the source of raw materials, such as, clinker, limestone, and fly-ash. This will help the cement industry significantly to reduce logistic, and operational costs. The effort will be put in place for the next 10 years until the FY 2033.

In the Union Budget 2023-24, the Government allocated US\$ 1.8 billion for the creation of safe housing, clean drinking water, sanitation, and increasing road and telecom connectivity, among other initiatives. It also allocated US\$ 9.6 billion to address urban housing shortages¹⁵.

It is anticipated that India's infrastructure will expand at 7 per cent between the years 2022 and 2027; however, 42 per cent of the projects in the National Infrastructure Pipeline (NIP) are already under implementation.¹⁶ Construction work picked up as a direct result of the Government's investment of US\$ 1.4 trillion in infrastructure projects between 2019 and 2023. Additionally, it is anticipated that over 40 per cent of India's population will migrate to cities by the year 2030, which will create a need for 25 million new dwellings. The cement manufacturers reported a seven-fold increase in demand, which culminated in a two-fold increase in production.

In terms of mergers, the cement industry evoked considerable discussion in 2022. In September, Asia's richest man Gautam Adani's Adani Group bought the cement business of Swiss building materials major Holcim, which included Ambuja Cement and ACC, for \$6.4 billion.¹⁷

The PM Gati-shakti plan was unveiled in October 2021, which had an outlay of ₹ 100 lakh crores. This Plan attempted to incorporate the infrastructure programs of several Ministries and State Governments, such as, Bharat Mala, Sagar Mala, inland waterways, dry/land ports, and UDAN, etc. Further, economic zones, such as, textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fisheries clusters, and agricultural zones would be included in the coverage in order to boost connectivity and make Indian enterprises more competitive. As a result, given the substantial expenditures and extensive reach of the project, the cement sector will almost certainly gain, either directly or indirectly.¹⁸ The Budget 2022-23 put the Gati-Shakti program at the centre of the development process, stressing the significance of high-quality multi-modal transport in attaining total cost competitiveness, which will further help in attracting more investors.

The goal of adding 25,000 kms to the nation's highway network in FY 2023 provided a significant boost to infrastructure and increased the demand for construction equipment and trucks. The Government provided ₹ 20,000 crores for the initiative. The cement manufacturers are also reaping the benefits of these initiatives, such as the construction of 100 cargo facilities and 400 new Vande Bharat trains.¹⁹

In March 2023, 156 critical infrastructure gaps to ports and for movement of bulk commodities, such as, coal, cement, fertilizers and foodgrains, were identified for intervention under the plan.²⁰ As per the latest estimates of ongoing and proposed projects, mega projects worth ₹ 110 trillion in the National Infra Pipeline will be monitored under the PM Gati-Shakti.²¹

Some of the key targets set under the Gati Shakti for diverse infrastructure projects include:

- A total of 11 industrial corridors with defence turnover potential of ₹ 170,000 crore as well as 38 electronics clusters and 109 pharma clusters will be fast-tracked by 2024-25.²²
- Almost doubling the aviation footprint from the current 111 airports to 220 airports by 2024-25²³.
- For a full North-east connectivity, a total of 200,000 KMs of national highways and 5,590 KM of 4/6 Lane highways along coastal areas to be fast tracked by 2024-25.²⁴
- Railways to handle 32 per cent higher cargo of 1,600 million tonnes, decongesting half the Railway network and completing 2 DFCs (Dedicated Freight Corridors) by 2024-25.²⁵ Under the same initiatives, Government has approved 3 railway projects related to doubling of lines between Aurangabad and Ankai in Maharashtra.²⁶
- Shipping cargo capacity to be enhanced by 37 per cent to 1,759 million metric tonnes per annum (MMTPA) by 2024-25.²⁷
- Gas pipeline network under “One nation, One Gas Grid” to be doubled from 17,000 KM to 34,500 KM by 2024-25 with focus on connecting major demand and supply points.²⁸

Risks and Challenges

India's cement industry is facing headwinds, such as, rising input costs including cost of coal and petcoke, and gypsum, which may dent the profitability of cement manufacturers. The most expensive components of logistics are transportation, non-physical handling tasks like accounting, and the time entailed to do these things. Since cement is shipped in copious quantities, its weight adds to the total cost of shipping. In the past, cement plants that were located far from limestone plants and had higher freight costs and less efficient transportation caused some idle capacity, i.e., around 170 million tonnes. Most limestone plants are located in Madhya Pradesh, Rajasthan, Andhra Pradesh, Gujarat, Chhattisgarh, Tamil Nadu, and Karnataka.²⁹

Infrastructure and logistics bottlenecks remain a major challenge for the cement industry. Poor road infrastructure and delays at the ports have adversely affected the timely delivery of cement, which has further led to increased costs and reduced end-use satisfaction. However, the recent announcement of creating dedicated corridors in different parts of the country to meet the requirements of the cement sector by the Ministry of Railways is a welcome move. But it will take time to finish the project and benefits from this effort are difficult to be assessed immediately.

The cement sector may have been subject to considerable disruption due to unexpected rainfall in the last quarter of FY 2023. The actual figures have yet to be released. The durability of concrete suffers when it rains. Water is crucial in the production of concrete. The strength of the hardened mixture depends on the accuracy of the constituent proportions, which include cement, and water³⁰.

As part of the regulatory hurdles, obtaining approvals for new cement plants and expansion of existing ones can be protracted and cumbersome, leading to marked delays in capacity addition. Since the cement industry is a significant contributor to air pollution and greenhouse gas emissions (GHGs), particularly CO₂, the cement industry must meet the emission standards, energy efficiency norms, and the use of alternative fuels. To meet these compliances, more investments in technology upgradations are required.

The global cement industry is going to face a tough 2023. The global demand for cement is sluggish due to geopolitical dynamics arising out of Russia-Ukraine war and the ominous recession in the US and EU countries.

The Road Ahead

In sum, given the need to develop cement production near the sources of demand, the cement industry's strong long-term growth fundamentals would be a significant draw for FDI (FOREIGN DIRECT INVESTMENT) as India seeks foreign investment to promote 'Make in India'. After a dip of ~300 million tonnes in FY 2021 due to decline in domestic demand during the pandemic, the production of cement has been satisfactory in the last few years. Also, the unwavering infrastructure-focused Union Budget gave a boost to the demand for the industry in the coming years. Further, the outlook for India's cement industry is positively driven by strong demand from the infrastructure and housing sector.

It is expected that the cement production will rise by ~ 6-8 per cent in the coming fiscal years 2023 and 2024, i.e., driven by the strong demand from the India's housing sector. The housing sector alone, consumes 60-65 per cent of the India total cement consumption. Also, the large investments in road and highway projects of the Government will play a key role in boosting the demand for the cement. The sector must implement mechanism and modalities to seize this chance and become an integral part of the process and pattern of India's transforming development. Building clean, safe, and fast requires embracing a new industry vision and collaborating throughout the value chain to make these goals a reality in conformity with emerging needs and requirements and the revolution of 'rising expectations'.

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