



**LIFE LINE OF INDIAN INFRASTRUCTURE: CEMENT**

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**ABSTRACT**

Cement industries are the primary industry which marks the second ranking after iron and steel industry. It contributes to major portion of GDP. Cement is also benchmarked as the barometer and forms the backbone regarding the progress of the developing country and indicator of economic infrastructure. The main objective highlighting through this paper is to evaluate the consumption & investment and the market size of the cement industries in India. In India, there are 69 industries producing cement, which contributes in the geographical and economical spread of Indian cement industry. There are many barriers that encountered during the growth and progress of cement industry. Various deviations and trend line behavior accounts for the growth of cement industry. To overcome the hurdles, strategies are adopted in industry. This paper also highlights the key players, demand drivers; growth trends etc. of cement industry.

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**INTRODUCTION**

Cement industries contributes to a major role in the growth of nation economy. Cement is used in housing, dams, bridges, industrial construction, roads etc., so cement is basic material which is used in all types of constructions. The foundation or backbone of Indian Cement industry was laid in 1914, when a Cement plant was established at Porbandar. Today, [8] the Indian cement industry marks second to China in terms of installation capacity. Since 1992 India's cement production has more than quadrupled from around 50Mt/yr to 220Mt/yr. The country is expected to become the world's third largest construction market by 2025, adding 11.5 million homes a year to become a [1] US\$ 1 trillion a year market, according to a study by a Global construction Perspectives and Oxford Economics.

**Objective**

An attempt is made in the present study to highlight and get the overview of the following facts and figures:

- To evaluate and analyze the consumption & investment of cement industries in India.
- To analyze the maximum consumption of cement industries in different sectors in India.

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**LITERATURE REVIEW**

Prof. Acharekar 2013 studied the numerous factors that affect the working capital requirement of cement industry. Focused on the relative significance of the various sources and to evaluate relative assets and finance liquidity in industry.

In 2013, Dr. P. Krishna Kumar conducted the investigation on the progress of Indian cement industry since 1991, in terms of its growth in installed [1] capacity, production, exports and value additions and analyses the trend line data from the past years.

In 2009, Bhayani & Sanjay an attempt has been made to identify the parameters which are judging the profitability of Indian Cement Industry. The study covers all the listed cement firms working in India for the period of 2001 to 2008.

**Goel and Nair** have 2289 made an important contributions and show landmarks on Productivity trends of the cement industry in India.

Dr. Parikh, 1965, conducted a magnificent study on economic factors affecting the investment in plants and machinery and technology.

**Market Size and Investment Demonstration**

**Geographical Sprawl of Indian Cement Industry**

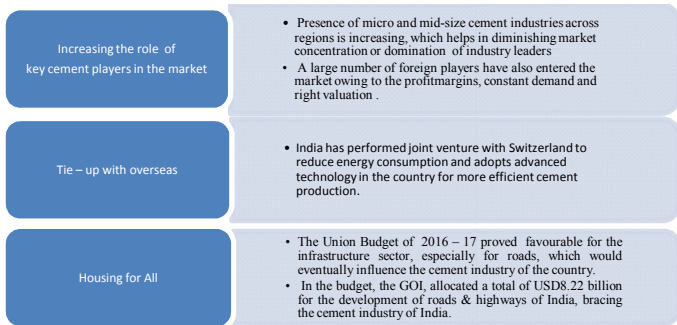
Cement industry accounts for the largest consumer of limestone in India (75-80%). To prepare cement, limestone with a minimum [9] CaO content of 44% is necessary. Typically, 1.4-1.5 MT of limestone is required for producing one tonne of clinker.

So, for a 1 MTPA cement plant, assured availability of cement grade limestone reserves of the order of 50-60 MTPA in the close proximity is important to reduce the transportation cost is important.

**Table 1** Concentration of Cement Plants in India [9]

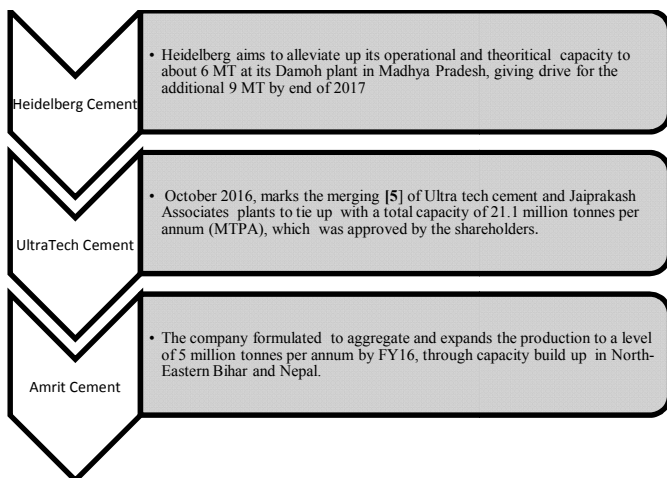
| Sr. No. | Cluster      | No. Of Plants | Installed Capacity (Mtpa) | % Share |
|---------|--------------|---------------|---------------------------|---------|
| 1.      | Gulbarga     | 7             | 20.4                      | 7.35    |
| 2.      | Yerraguntla  | 8             | 18.59                     | 6.70    |
| 3.      | Satna        | 9             | 17.82                     | 6.42    |
| 4.      | Chandera     | 7             | 14.45                     | 5.21    |
| 5.      | Nalgonda     | 9             | 14.36                     | 5.18    |
| 6.      | Bilaspur     | 9             | 12.84                     | 4.63    |
| 7.      | Chandrapur   | 6             | 11.51                     | 4.15    |
| 8.      | Clusters (7) | 55            | 109.97                    | 39.63   |
| 9.      | Others       | 110           | 167.49                    | 60.37   |

**Remarkable Trends in the [4] Cement Industry**

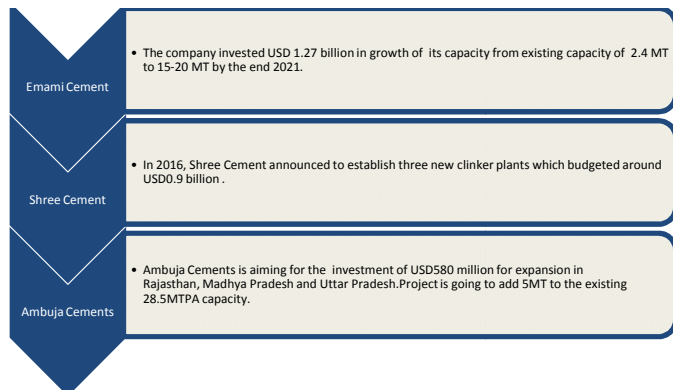


**Figure 1** Trends in Cement Industry

**Capacity Expansion or building Plans by Key Players of cement industry**



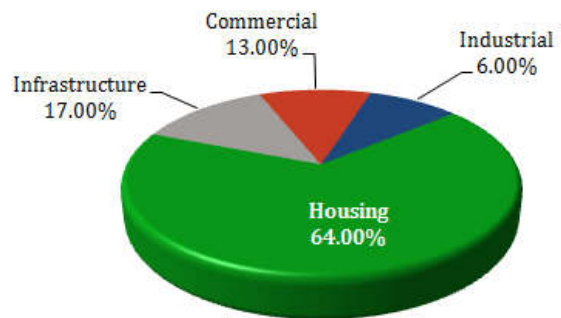
**Figure 2** Key Players of Cement Industry



**Figure 3** Strategies adopted

**Potential Demand Drivers**

1. The Housing sector accounts for a large proportion of the total domestic demand for cement in India.
2. The Government of India is strongly focused and investing [7] on infrastructure development to boost economic growth and concentrating on 100 smart cities.
3. It plans to increase the potential investment in infrastructure to USD1 trillion in accordance with the 12th Five Year Plan (2012–17), as compared with USD514 billion under the 11th Five Year Plan (2007–12).
4. The metro rail projects in Mumbai, Bangalore and Hyderabad and the expansion phase in Delhi drives cement demand in huge amount which plays an important role in infrastructure.
5. Projects investment in like smart cities and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is expected to lead surge in the demand for cement in the upcoming years.



Source: HDFC Bank Investment Advisory Group, Sector Update, July 17, 2014

**Figure 4** Demand Sectors of Cement Industry

**Five Forces Evaluation Model [11]**

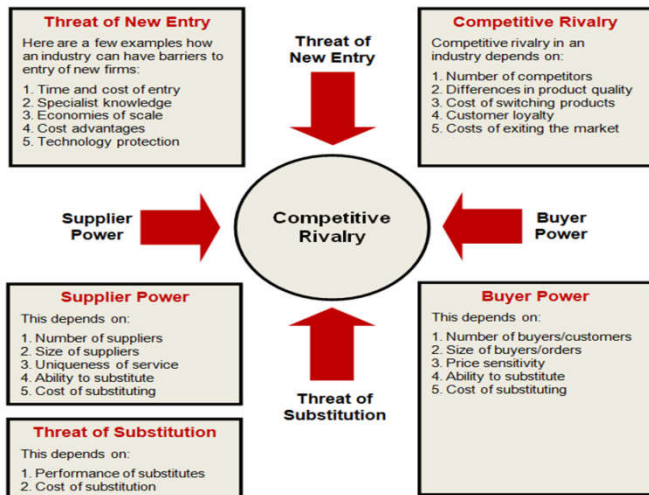


Figure 5 Force Analysis of Cement Industry

**CONCLUSION**

The housing sector plays a significant role in accounting for a major portion of total domestic demand for cement in India. The GOI[1] strongly focused on infrastructure development to boost economic growth capacity and formulated plans to increase investment in 12th five year plan (2012-17). According to implementation of the plan, the industry is estimated to contribute and add marginal capacity of 150 MT of Cement productions. India was the second largest cement producer in the world with cement production capacity of nearly 366 MT by the end of 2015. In 2016, country’s cement production capacity is expected to reach 395 MT, which is expected to further increase to 550 MT by 2025.

1. Of the total capacity, 98 per cent lies within the private sector boundaries and the rest dealing with public sector, with the top 20 companies accounting for around 70 per cent of the total production.
2. 210 large cement plants account [2] for a cumulative installed capacity of over 350 MT, while over 350 mini cement plants have an estimated production capacity of nearly 11.10MT, as of 2016.
3. Of the total 210 large cement plants in India, 77 reside in the states of Andhra Pradesh, Rajasthan and Tamil Nadu.

4. The NITI Aayog estimated total infrastructure investment around to be of 9 % of GDP in accordance of the 12th Five Year Plan(2012-17), increased from 7.2 % in the previous plan (2007-12)
5. Cement production increased at a CAGR of 6.44 per cent to 282.79 MT over FY07–16.
6. As per the 12th Five Year Plan, production is expected or crossed to 407 MT by FY17
7. Availability of fly-ash [3] (from TPP) and adoption of advance technology has increased production of blended cement instead of bitumen. The eco-friendly blended cement is more economical to produce, as it requires lesser input of clinker and energy.

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