Chapter - 3
An Overview of Cement Industry in India

3.0 INTRODUCTION
An extensive review of literature has been made in the previous chapter. In the present chapter, an overview of Cement industry of India has been discussed in details along with some other major players of cement industry in India.

Cement is a kind of substance which sets and hardens independently and it is also a binding agent that can bind other materials jointly. The term ‘cement’ was originally traced back to the Romans term ‘opus caementicium’. They employed the term to describe masonry, which is similar to a concrete and was made from crushed rock with burnt lime as binder. The volcanic ash and pulverized bricks were combined to the burnt lime to acquire a hydraulic binder. They were later come to be known as cementum, cimentum, cament and cement (Varma & Sirisha, 2013). Cement can be regarded as one of the basic materials needed for construction programs of various Infrastructures such as transport, water and power supply, dams, roads as well as housing and industrial plants. Apart from its use as an in-situ material, it is also used for the production of a wide range of basic components such as blocks, bricks and tiles or very complex components such as precast and prestressed frames and articles. It is, however, used more particularly for the production of concrete. Some form of cement has been used by man in building works for over 2010 years (Low & Tan, 1993).

Apart from all other products, cement has been a major contributor to the modernization of human civilization. The massive urban infrastructure that we see today across the world would have been far from imagination without cement. Cement is the root substance that has given the essential element of strength and durability to our houses, schools, offices and other buildings so that we survive in them without any fear. The word “cement” literally means a substance that can bind material together and can acquire strength on hardening. Cement, as we know today, is a specialized building material which is a product of various innovations in the past and is made in sophisticated manufacturing facilities. In eighteenth century’s England, John Smeaton, a British engineer, was assigned the task of reconstructing the Eddy stone lighthouse, a structure that had witnessed repeated structural failure. In 1756, Smeaton conducted a number of experiments which led to the discovery that cement
made up of limestone contains a considerable proportion of clay that would harden under water. Subsequently, based on this discovery until the early part of the nineteenth century, large quantity of natural cement was used, that was made by combining naturally occurring lime and clay. In 1824, Joseph Aspdin and a British mason obtained a patent on his hydraulic cement formula that is very much similar to the modern cement as we know today. He called it Portland cement and it was made through the process of proportionate mixing, burning and the subsequent grinding of a combination of clay and limestone. Cement goes through many more improvements and developments during nineteenth and twentieth centuries. The industrial revolution and the subsequent development of the rotary kiln paved the way for huge and sophisticated cement manufacturing plants. These plants possess the capacity of homogenies mixing and intense heating of the raw materials thus vastly improving the quality of the cement produced (Hewlett, 2003).

In Britain particularly, good quality building stone became ever more expensive during a period of rapid growth and it became a common practice to construct prestige buildings from the new industrial bricks and to finish them with a stucco to imitate stone. Hydraulic limes were favored for this, but the need for a fast set time encouraged the development of new cements. The Parker’s Roman cement became more popular among all these cement. This was produced by James Parker in the 1780s and finally patented in 1796 (Francis, 1977). The prosperity of “Roman Cement” leads other manufacturers to compose rival products by burning artificial mixtures of clay and chalk.

While planning the construction of the third Eddy Stone Lighthouse in the English Channel, John Smeaton made worthwhile contribution to the progress of cements. He needed a hydraulic mortar that would set and develop some strength in the twelve hour period between successive high tides and performed an exhaustive market research on the available hydraulic limes, visiting their production sites and pointed out that the "hydraulicity" of the lime was directly linked to the clay content of the limestone from which it was made up of. Smeaton was a civil engineer by profession, and he didn’t take up the idea any further. Apparently unaware of Smeaton's work, the same principle was identified by Louis Vicat in the first decade of the nineteenth century. Vicat went on to devise a method of combining chalk and clay into an intimate mixture and burning this produced ‘artificial cement’ in 1817. James Frost, working in Britain, formed what he called "British cement” in a similar
manner around the same time, but he did not obtained a patent until 1822. In 1824, Joseph Aspdin patented asimilar material, which was called Portland cement, because the render made from it was in color similar to the prestigious Portland stone (Tharumar, 2010).

3.1 CEMENT INDUSTRY OF INDIA: AN OVERVIEW

Cement is one of the essential industries which play a vital role in the growth and development of a nation. The Indian cement industry is the 2nd largest industry in the world after China accounting for about 8 per cent of the total global production (Cement Sector Analysis Report April 2014). The indigenous Indian cement industry traces its history back to 1914. It was the time when market was dominated by the imports. The First cement factory in India named, South India Limited, was established in 1879 in Madras (now Chennai). It began its production during 1904, but the factory was not so successful. During this period, three new factories came into existence. First successful factory was set up in 1914 by Tata at Porbander in Gujarat. It was known as Indian Cement Company Ltd. Second factory was set up in Rajasthan and third in Madhya Pradesh. By the end of World War I (1918), India was producing 85,000 tonnes cement (Jain & Khanna, 2010).

After World War I, the industry made a rapid progress. During 1925, the cement Industry received protection. In 1926, cement producers founded Indian Cement Manufacturers Association to end the competition which was prevailing among them. During the period of 1927, in order to develop production and distribution of cement, Concrete Association of India was set up. Due to the efforts of these organisations, production of cement expanded. In 1930, Cement Marketing Company of India was established. In 1936, with a view to making cement industry well organised and in order to eliminate competition, all companies jointly set-up Associated Cement Company which is popularly known as ACC. Barring one or two factories, management and sale of production of almost all other factories was arranged by this company. In 1938, cement companies of Dalmia group, formed a separate group. In this way, private sector was divided into two groups i.e. ACC Group and Dalmia Jain Group. In 1938, first factory of public sector was established at Bhadravati in Karnataka (Jain et al, 2010).

In 1942, Indian cement industry’s production capacity came under the control of defense for India rules as part of the war effort. With up to 90 per cent of cement
heading directly to defense purposes, the apparent private market shrank by a factor of 10. After the conclusion of the Second World War, during which capacity reached 3.2Mt/yr, controls stayed in place. From 1945 to 1956, the government regulated prices directly. However, it became increasingly obvious that regulated prices from central government could not provide the cement that the country was demanding of. The controls were relaxed in steps, with a free market from 1989 onwards. The result of de-regulation was a massive expansion of cement capacity, which has since only accelerated as the country has developed and opened up its economy (Suseela & Maruthamuthu, 2014).

During early 1980s, the process of liberalization was started in the Indian cement industry. Prior to this, the cement industry had been subjected to strict government control with regard to pricing, production and distribution. In 1982, controls were partially deregulated which lead to an enlargement in cement production capacities. During 1989, the industry was further deregulated to allow the market forces to determine the prices and distribution. Due to this liberalized environment, several existing and new enterprises were encouraged to set up large cement capacities during 1990s. By the end of this decade, supplies increased substantially and the earlier existing cement shortage disappeared from the Indian market. However, the intense competition amongst manufacturers was one of the crucial reasons for a fall in prices and it rendered several smaller and less-efficient manufacturers uncompetitive in the new environment. In such an environment, companies want to expand their size so as to gather the benefits of economies of scale experienced by a large company. Since the cost of setting up a new plant is quite high in capital-intensive industries, companies are going for mergers and acquisitions. Currently, this industry is going through a phase of consolidation where larger companies are acquiring capacities to consolidate their market shares through mergers and acquisitions (Sharma, 2008).

In 1947, at the time of partition of the count, there were 18 cement factories in India, producing 14.5 lakh tonnes of cement. Actual growth of cement industry in public sector was commenced from 1965 when the government set-up Cement Corporation of India. This corporation installed 11 factories in different states, viz, M.P., Karnataka, Assam and Himachal Pradesh. The cement industry was delicensed in 1991 and was set free from all types of government control. In 2007-08 cement
industry had 140 large cement plants and 365 mini cement plants in India. (Jain et al, 2010).

The Indian cement industry has evolved significantly during the last two decades, going through all the phases of typical cyclical growth process. The industry went into a consolidation phase after a period of over-supply and a phase of massive capacity additions. Due to the sturdy economic growth and infrastructure development, the demand for cement goes up. Further addition to capacity is coming up to cater to the increasing demand for cements. The per capita consumption of cement in India is 125 kg which is only about a third of the world average. It pointed out the growth potential for this industry. The demand for cement is mainly rely upon the level of development and the rate of growth of the economy. In the post deregulation era, production of cement rose from 23.5 million tons in 1983 to 44.1 million tons in 1989 and to 142 million tons in 2006 (Kumar et al., 2013).

The structure of the industry is fragmented and can broadly be classified into three categories; namely companies with all India presence, regional presence and marginal presence. The first category consists of two groups with all India presence viz., Holcim (the Swiss multinational) controlled ACC and Ambuja cements; Aditya Birla group controlled Grasim Industries, Century Textiles and UltraTech Cement. The second category consisted of companies whose presence is restricted to one region but with a stronghold in markets of their respective operations. This segment includes firms like Lafarge (east), India Cement (south), Shree Cement (North), Birla Corp (north and east), Binani Cement (north and west) and Madras Cement (south) etc. The third category consists of small companies with marginal presence, constituting the balance capacity of the Indian cement industry. Companies like CCI, J&K Cement, Panyam Cement, Penna Cement etc., fall in this category (Mukhopadhyaya et al, 2012).

As on March 2007, the installed capacity of the cement industry stood at 160 mt but the capacity utilisation was 83 percent. The rise in demand for cement has attracted global majors in India. In a short span of one year (2005-06), four of the top five cement companies of the world entered into India either through mergers or acquisitions or joint ventures or green field projects. These include France’s Lafarge, Switzerland’s Holcim, Italy’s Italcementi and Germany’s Heidelberg cement. The industry has observed flurry of mergers and acquisitions among domestic players also, bringing smaller players under the umbrella of large players, such as ACC, Gujarat
Ambuja, Grasim Industries, Ultratech and India Cements which in turn have come under the leadership of global players like Lafarge, Holcim, Italcementi and Heidelberg. Over the past three years, the share of the top five players in India has increased in each region due to the on-going consolidation in the industry. Now, the top five players share 58 per cent of the market (Kumar, 2013).

India’s cement industry retrieved in the following financial year, after displaying the poorest show in a decade during 2010-11, at a sales growth rate of less than 5 per cent, according to the business standard newspaper (13 January, 2013), with 330Mt/yr-capacity, industry grew by 6.4 per cent against less than 5.5 per cent in the prior financial years. This was better than the cement maker’s earlier estimates of 6 per cent. However, later in the year when demand revived, Industry officials and sectors analysts turned positive, with projections of 6.5-7.0 per cent, the industry sold 223 Mt of cement, compared with 209.5 Mt, a rise of 6.2 per cent according to the latest report from the working group on the industry for the 12th Five –year plan 2012-17. India would need overall cement capacity of around 480 Mt/yr. This would mean that the Industry would have to add another 150 Mt/yr. of capacity during the same period. Currently, the top players namely Ultratech cement, ACC Ambuja Cements, Jai Prakash Associates, India Cements and Shree Cement, collectively control more than half of the cement market in the country. There are 40 players in the industry across the country as reported by the business standard (GCM, 2013).

To meet the cement demand, a manufacturing unit requires gypsum, fly ash, water and colossal amount of energy. The wet process requires 0.28 tons of coal and 110 kWh of power to manufacture one tonnes of cement, whereas dry process requires 0.18 tons of coal and 100 kWh of power. The manufacturing of cement has expanded at a compound annual growth rate (CAGR) of 9.7 per cent to reach 272 million tonnes (MT) during FY 06–13. The production capacity is expected to grow to 550 MT by FY 20 (Sharma & Tiwari, 2014). India's potential in infrastructure is enormous. 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 US$ 1 trillion a year market, according to a study by Global Construction Perspectives and Oxford Economics. Nevertheless its current position as one of the leaders in cement production, India’s riches in the sector remain somewhat untapped. India is among the best cement markets in Asia; according to Switzerland-based cement major Holcim. The company operates in India through group companies, ACC and Ambuja Cements.
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(Krishna, 2014). The Indian cement sector is expected to witness positive growth in coming years, with demand set to increase at a CAGR of more than 8 per cent during 2013–14 to 2015–16, according to the latest RNCOS report titled, ‘Indian Cement Industry Outlook 2016’. After examining the regional trend of cement consumption, the report further discovered that the Southern region is creating maximum demand, which is expected to expand in future. The cement industry has been expanding on the back of increasing infrastructure activities and demand from the housing sector over the past many years. According to data released by the Department of Industrial Policy and Promotion (DIPP), cement and gypsum products attracted foreign direct investment (FDI) worth Rs 13,370.32 crore (US$ 2.24 billion) between April 2000 and February 2014. (IBEF, April 2014)

Cement is a cyclical commodity with a high correlation with GDP. The housing sector is the biggest demand driver of cement, accounting for about 67 per cent of the total consumption. The other major consumers of cement include infrastructure (13 per cent), commercial construction (11 per cent) and industrial construction (9 per cent). The Indian cement industry grew at a commendable rate in the last decade, registering a compounded growth of about 8 per cent. However, the growth has slowed down in recent years, owing to the sluggishness in the economy. Moreover, the per capita consumption of cement in India still remains substantially poor when compared with the world average. This underlines the tremendous scope for growth in the Indian cement industry in the long term. Cement, being a bulk commodity, is a freight intensive industry and transporting it over long distances would prove it to be uneconomical. This has resulted in cement being largely a regional play with the industry divided into five main regions viz. north, south, west, east and the central region. The Southern region of India has the highest installed capacity, accounting for about one-third of the country's total installed cement capacity. Given the high potential for growth, quite a few foreign transnational companies have ventured into the Indian markets. Already, while companies like Lafarge, Heidelberg and Italcementi have made a couple of acquisitions, Holcim has increased its stake in domestic companies Ambuja Cements and ACC to over 50 per cent to gain controlling interest. Consolidation has taken place with the top two cement groups controlling nearly one-third of the total domestic capacity. However, the balance capacity still remains quite fragmented (Cement Sector Analysis Report April, 2014).
India is the second largest cement producer in the world with nearly 300 million tons of cement production capacity. By 2020, cement production will reach to 550 million tons of the total capacity, 98 per cent lies with the private sector and the rest with public sector. 185 large cement plants together account for 97 per cent of the total installed capacity, while 365 small plants account for the rest of the total 185 large cement plants in India, 77 are located in the states of Andhra Pradesh, Rajasthan and Tamil Nadu. Currently, India has 185 large cement plants spread across all states and Andhra Pradesh is the leading state with 37 large cement plants, followed by Rajasthan and Tamil Nadu having 21 and 19 plants, respectively. Cement production increased at a CAGR of 9.7 per cent to 272 million tons over FY06–13. As per the 12th Five Year Plan, production is expected to reach 407 million tons by FY17. Cement production (weight: 2.41 per cent) increased by 6.7 per cent in April, 2014 over April, 2013 while its cumulative growth during April to March, 2013-14 was 3.0 per cent over the corresponding period of previous year (IBEF, March 2014).

The Indian cement industry has some multinational cement giants, like Holcim and Lafarge, which have interests such as ACC, Ambuja Cement and Lafarge Birla Cement, the Indian cement industry is broadly home-grown. Ultratech Cement which is regarded as the country's largest firm in terms of cement capacity, holds around 22 per cent of the domestic market, with ACC (50 per cent owned by Holcim) and Ambuja (50 per cent owned by Holcim) having 15 per cent and 13 per cent shares respectively. Many of the remaining dozen top players are Indian and are (in order of diminishing market share): Jaiprakash Associates (10 per cent), The India Cements Ltd (7 per cent), Shree Cements (6 per cent), Century Textiles and Industries (5 per cent), Madras Cements (5 per cent), Lafarge (5 per cent), Birla Cement (4 per cent) and Binani Cement (4 per cent). Between them the top 12 cement firms have around 70 per cent of the domestic market. Around 100 smaller players produce and grind cement on a wide range of scales but are often confined to small areas (Patil & Sawant, 2014). Between 2006 and 2011 inclusive, cement consumption in India was dominated by residential real-estate construction to the tune of 63 per cent. The second largest type of use over the period was infrastructure, which accounted for 20 per cent of all cement used, followed by commercial real-estate construction (13 per cent) and industrial construction 4 per cent (Edwards, 2013).

The cement industry is energy intensive and thus power costs form the most critical cost component in cement manufacturing, of about 35 per cent to total cost of
production. The issues here is the technology used (dry versus wet process), fuel efficiency (efficient use of coal/lignite/another material used for burning) and power efficiency (power availability, use of alternative fuels, unit power consumption, cost and availability of captive power). The scope for cost reduction through better energy efficiency may now be limited for better performing companies since they have already reached the best feasible levels. One more characteristic of the industry is the capital intensiveness. Since the capital intensity of a new cement project is high, access to capital has become a significant entry barrier. The cost of a new cement plant can be equivalent to about 3 years of revenue (WBCSD, 2002).

Another distinguishing characteristic comes from it being cyclical in nature as the market and consumption is closely linked to the economic and climatic cycles. In India, cement production normally peaks in the month of March while it is at its lowest in the month of August and September. The cyclical nature of this industry has meant that only large players are able to withstand the downturn in demand due to their economies of scale, operational efficiencies, centrally controlled distribution systems and geographical diversification. Lastly, it is worth mentioning that cement industry has a significant role in the climate change debate and issue of sustainable development. The cement industry produces 5 per cent of global man-made carbon dioxide, a major gas contributing to climate change (WBCSD, 2005). In short, the main environmental challenges facing the cement manufacturing industry are, releases to air of oxides of nitrogen, sulphur dioxide, particulates and carbon dioxide, use of resources, especially primary raw materials and fossil fuel and generation of waste.

There are, at present, seven clusters, where Satna (Madhya Pradesh) cluster is the leader in capacity as well as production. Others are Chandrapur (North Andhra Pradesh and Maharashtra), Gulbarga (North Karnataka and East AP), Chanderia (South Rajasthan, Jawad and Neemuch in MP), Bilaspur (Chattisgarh), Yerraguntla (South AP), and Nalgonda (Central AP) (Burange&Yamini, 2009).
Figure 3.1: Contribution of Indian Cement Industry in World Cement Production

The above Figure presents the production of cement by different countries and regions in 2014. Figure 3.1 shows the share of top countries and regions in world in terms of cement production in 2014. The countries like China, India, USA and Japan are the top cement producers in world in 2014. The China is on top of the list in cement production with 56.5 per cent of total cement production and covers major share in world cement production. India is second largest producer of cement with the share of 7.0 per cent in 2014. Annual cement production for Asia (excl. china, India and Japan) was 15 per cent in 2014, whereas the Africa and America (excl. USA) produced 4.8 per cent and 4.6 per cent of total cement production in 2014, respectively. The CEMBUREAU contribute 5.5 per cent in world cement production.

3.2 ROLE OF CEMENT INDUSTRY IN INDIAN ECONOMY
The economic development strategy chosen by India after the Second World War was very identical to China’s industrialization and the dominance of the state in the economy. Development was regarded synonymous with industrialization and industry was concentrating mainly on basic goods like steel and machinery. Private capital was
not seen as an effective measure for development and it was assumed to have a inclination towards monopolization. Because of that, state control was considered to be effective. The chosen development strategy was one of import substitution. Development policies included licensing of industrial activity, the reservation of key areas for state activity, controls over foreign direct investment and interventions in the labor market (Kaplinsky, 1997).

The Indian cement industry is the second largest producer of quality cement in the world preceded only by China. Indian Cement Industry is engaged in the production of several varieties of cement such as Ordinary Portland Cement (OPC), Portland Pozzolana Cement (PPC), Portland Blast Furnace Slag Cement (PBFS), Oil Well Cement, Rapid Hardening Portland Cement, Sulphate Resisting Portland Cement, White Cement, etc. They are produced strictly as per the Bureau of Indian Standards (BIS) specifications and their quality is comparable with the best in the world.

The industry occupies an important place in the national economy because of its strong linkages to other sectors such as construction, transportation, coal and power. The cement industry is also one of the major contributors to the exchequer by way of indirect taxes.

**Key Drivers of Cement Industry**

- Real Estate Market
- Infrastructure Spending
- Various Governmental programs like National Rural Employment Guarantee
- Low-cost housing in urban and rural areas under schemes like Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and Indira Awas Yojana
- New Township Development

The overall performance of cement market during the period, April 2013 to March 2014, was poor due to certain reasons. The major reason among them was non-release of Government funds and no new major projects came in for execution. Construction activities lagged behind private sector as there has been a ban on sand mining. The real estate, especially in Mumbai and Pune, which was vibrant in previous years, is now witnessing stagnation and the last quarter saw the implementation of Code of
Conduct for the Lok Sabha Election. The funds which were released in March normally were absent. Hence, the economy of the country came to a grinding halt.

The economy of India is the tenth largest in the world by nominal GDP and the third largest by Purchasing Power Parity (PPP). The country is one of the G-20 major economies, a member of BRICS and a developing economy that is among the top 20 global traders according to the WTO (WTO, 2013). India was the 19th-largest merchandise and the 6th largest services exporter in the world in 2013. It imported a total of $616.7 billion worth of merchandise and services in 2013, as the 12th-largest merchandise and 7th largest services importer (WTO Press Release, 2014). India's economic growth slowed to 4.7 per cent in 2013–14, in contrast to higher economic growth rates in 2000s. IMF projects India's GDP to grow at 5.4 per cent over 2014-15. In the Indian economy, Agriculture sector is the largest employer in India's economy but contributes a declining share of GDP 13.7 per cent in 2012-13 (The Economic Times, 2014). The manufacturing industry has held a constant share in economic contribution, while the fastest-growing part of the economy has been its services sector which includes construction, telecom, software and information technologies, infrastructure, tourism, education, health care, travel, trade, banking and others components of its economy (Indian Fiscal Budget 2014).

Economic development of any nation totally depends upon its industries. Industries play a significant role in the Indian Economy. Without industries, economic development is impossible. A growing industrial sector is crucial to greater economic development and takes in a number of areas as a country expands. Steady industrial growth helps to compliment and sustain continued economic development. A well-developed industrial sector, covering various different areas, is vital to the economic development of a country. With a variety of different industrial sectors that feed off each other, a well balanced industrial sector is at the centre of economic development. With a strong industrial base, economic planning becomes less risky, being able to plan ahead also assists industrial growth with profits re-invested into infrastructure development which in turn helps to boost and attract industry. In a developing economy like India, industries are indispensable. Development of industries is not only indispensable for India, but there is also a good scope for the development of industries in India. India has many favorable factors for the development of industries (Khuba, 2013).
According to the World Bank, India's industrial manufacturing GDP output in 2012 was 10th largest in the world on current US dollar basis ($239.5 billion) and 9th largest on inflation adjusted constant 2005 US dollar basis ($197.1 billion) (United Nations Statistics Division, 2013). The Indian industrial sector underwent significant changes as a result of the economic liberalization in India in 1991, which removed import restrictions, brought in foreign competition, led to the privatization of certain government owned public sector industries, liberalized the FDI regime, improved infrastructure and led to an expansion in the production of fast moving consumer goods. Post-liberalization, the Indian private sector faced increasing domestic as well as foreign competition, including the threat of cheaper Chinese imports. It has since handled the change by squeezing costs, revamping management and relying on cheap labor and new technology. However, this has also reduced employment generation even by smaller manufacturers, who earlier relied on relatively labor intensive processes.

The cement industry in India, after being delicensed in 1991, has shown remarkable growth. India has emerged as the second largest country in the world after China in the production of cement. Cement is a basic construction material in housing, infrastructure and large projects for social development like irrigation dams, hospitals, roads, etc. It has become synonymous with construction. Per capita consumption of cement is accepted as an important index of the country's economic growth. In terms of quality, technology, productivity and efficiency, India compares well with the best in the world. The Indian cement industry plays a key role in the national economy for generating substantial revenue for State and Central Governments as well as employment. Cement is the basic building material in India and is used extensively in urban housing, industrial sector and developing infrastructure (Indian Minerals Yearbook, 2011).

The Role of Cement Industry in India GDP is significant in the economic development of the country. The Cement industry is one of the major and oldest manufacturing industries in the modern sector of the Indian economy. It is both a basic and consumer industry which produces a commodity that enters into various construction, investment and welfare activities in almost every segment of an economy. Its product required by firms, factories and households and for construction of dams, highways and bridges etc. Its contribution to the development of modern civilization is evidenced by the innumerable ways in which its product is being used.
from massive dams and towering sky-scrappers to dainty gardens walks and shimmering fountains. It is thus a vital industry which assumes a crucial part in the economic growth and development of a country, thus it is regarded as a major nation building industry, whose importance in a developing economy can never be over emphasized, therefore ,with the ushering in the era of planned economy development in India , cement industry has been assigned important role and has been accorded a pride place in the scheme of priorities for development of industries ( Das, 1987).

Cement industry, which has a direct co-relation of 1.1 to 1.2 with GDP, plays a pivotal role in the infrastructure development of the country. Buoyed with various infrastructure policies and schemes of the government, particularly after 1982 (partial decontrol) of cement, this industry had added substantial cement capacities year after-year, much ahead of the actual cement demand taking place. However, the overall slowdown in the economy at 6.5 per cent in FY12, the cement industry has recently been criticized and also harshly penalized for under-utilizing the cement capacity, without appreciating the ground realities and the factors which have contributed to reduced capacity utilization. Today, because of the huge mismatch between demand and supply of cement, the country is having about 93 million tonnes of excess cement capacity created after making colossal investments. To revive the economy from its present slackening mode, it is now imperative for the government to enhance cement demand by taking some positive and concrete policy measures (Indian Cement Review august 2012).

It is a cyclical commodity of a high correlation with GDP. The housing sector is the biggest demand driver of cement, accounting for about 67 per cent of the total consumption. The other major consumers of cement include infrastructure at 13 per cent, commercial construction at 11 per cent and industrial construction at 9 per cent. The Government of India's keen focus on the development of infrastructure in the country has given a big boost to the cement industry in India. In its 12th Five Year Plan, the government plans to increase investment in infrastructure to the tune of US$ 1 trillion and increase the industry's capacity to 150 MT (IBEFAUG 2014).

The Planning Commission of India estimates total infrastructure spending to be about 10 per cent of the GDP during the 12th Five-Year Plan (2012–17), up from 7.6 per cent during the previous five-year plan (2007–12)(IBEF,2013). The cement and gypsum products sector has attracted foreign direct investments (FDI) worth US$
2,909.15 million, between April 2000 to November 2012, according to the data published by the Department of Industrial Policy and Promotion (DIPP, 2014).

3.3 PERFORMANCE OF CEMENT INDUSTRY OF INDIA

Cement industry play a vital role in the socio-economic development of the nation. It is one of the vital components for infrastructural facilities and public welfare constructions. The performance of Indian cement industry has been presented in the form of graphs which are described below:

**Figure 3.2: Production of Cement Industry of India**

The above Figure 3.2 (see Appendix 1, Table 1a) indicates the production of cement in India for the period from 2005-06 to 2013-14. The production of cement was in an increasing trend throughout the study period as it was 140,512 tonnes in 2005-06 which increased to 167,580 tonnes in 2007-08. In 2008-09, it was 181,400 tonnes and reached to 200,651 tonnes in 2009-10. In 2010-11, production of cement slightly increased to 209,660 tones. Further, during the remaining years, it seems that the production level of cement has increased considerably and reached to 240,614 tonnes in 2012-13 which finally stood at 260,980 tonnes in 2014-15.

*Source: Industry Outlook, CMIE Database*
Figure 3.3: Imports of Cement by India

Source: Industry Outlook, CMIE Database

The above Figure 3.3 (see Appendix 1, Table 1c) represents the import trend of cement from 2005-06 to 2014-15. The imports of cement was very low during the initial year of the study. It was 20.80 tonnes in 2005-06, which increased and reached to 211.80 tonnes in 2006-07. From 2007-08, the import of cement followed an increasing trend and reached at maximum import of 2112 tonnes in 2009-10. Further, it shows a mixed trend of import during remaining years of study period and stood at 677.80 tonnes in 2013-14. Finally, in last year of the study 2014-15, the import of cement again increased and reached to 1100 tonnes.

Figure 3.4: Exports of Cement by India

Source: Industry Outlook, CMIE Database
The above Figure 3.4 *(see Appendix 1, Table 1d)* indicates the exports trend of cement from 2004-05 to 2014-15. The export of the cement has been in fluctuating trend during the study period due to the economic crises in the international market. It was 6,864.50 tonnes in 2004-05 which declined steeply and stood at 2689.50 tonnes in 2008-09. Further, it increased to 6,287.60 tonnes in 2014-15.

**Figure 3.5: Consumption of Cement in India**

![Consumption of Cement in India](image)

*Source: Industry Outlook, CMIE Database*

The above Figure 3.5 *(see Appendix 1, Table 1b)* shows the consumption of cement in India from 2005-06 to 2014-15. Cement consumption in India has been in an increasing trend during the study period as it was 134,894 tonnes in 2005-06 which increased to 164,779 tonnes in 2007-08 and reached to 200,073 tonnes in 2009-10. In 2011-12, it was 221,112 tonnes and finally stood at 260,980 in 2014-15.

### 3.4 MAJOR PLAYERS OF CEMENT INDUSTRY IN INDIA

**Ultratech Cement**

Ultratech cement is one of the India's biggest cement companies and India’s largest exporter of cement clinker based in Mumbai, India. The company is a division of Grasim Industries. It has an annual capacity of 48.75 million tonnes as on 31st October 2012 *(DIPP, n.d.)*. UltraTech’s inception can be traced back to the mid-1980s with the establishment of Grasim’s first cement plant at Jawad in Madhya Pradesh. In 2001, with the objective of making it reachable, Grasim acquired a stake in L&T Cement Ltd. The stake was further increased to a majority stake in 2003 thereby giving Grasim a pan-India presence and an increased market share. In 2004, the
demerger of L&T’s cement business was completed and Grasim acquired a controlling stake in L&T Cement Ltd and the name was subsequently turned into UltraTech cement. The cement business of Grasim was demerged and vested in Samruddhi Cement Limited in May 2010, with Samruddhi Cement Limited consequently being amalgamated with UltraTech Cement Limited in July 2010. In September 2010, UltraTech Cement Middle East Investments Limited, a wholly owned subsidiary of UltraTech Cement acquired management control of ETA Star Cement Company, along with its operations in the UAE, Bahrain and Bangladesh, thereby putting UltraTech on the global map. Today, in this globe UltraTech Cement is amongst the top cement producers. It has a diverse presence across the globe. The company has eleven composite plants, one white cement plant, one wall care putty plant and one clinkerisation plant, which are located in UAE. Furthermore, UltraTech has 15 grinding units across the world: 11 in India, 2 in UAE and 1 each in Bahrain and Bangladesh. It also has 6 bulk terminals (5 in India and 1 in Sri Lanka). UltraTech has 101 concrete plants across 35 locations in India. UltraTech Cement is considered as the most unique brand in its category. The consumer perception of UltraTech is built around the attributes of ‘modernity’, ‘quality’ and ‘technological superiority’. Based on these defining attributes, the brand is regarded as the expert for all construction needs. UltraTech has been recently bestowed with the title of consumer validated ‘Superbrand’ by the Superbrands Council and consumer selected ‘Powerbrand’ by Powerbrands India (UltraTech overview, n.d)

ACC Cement

ACC was settled on August 1, 1936 when 10 existing cement companies came together under one umbrella in a historic merger of the cement industry. These companies were belonged to four prominent business groups - Tatas, Khataus, Killick Nixon and FE Dinshaw groups. ACC’s registered office was situated at Mumbai (ACC Corporate Profile, n.d). ACC (ACC Limited) is India’s foremost manufacturer of cement and concrete. ACC’s operations are widespread throughout the country with 17 modern cement factories, more than 40 Ready mix concrete plants, 21 sales offices, and several zonal offices. It has a workforce of about 9,000 persons and a countrywide distribution network of over 9,000 dealers. ACC has a unique track record of innovative research, product development and specialized consultancy services. The company's various manufacturing units are backed by a central technology support services centre - the only one of its kind in the Indian cement
industry. Being the largest user of limestone, ACC has a rich experience in mining. As the one of the largest cement producer in India, it is also the biggest customers of domestic coal industry, of Indian Railways, and a considerable user of the country’s road transport network services for inward and outward movement of materials and products. Among the first companies in India to include commitment to environmental protection as one of its corporate objectives, the company installed sophisticated pollution control equipment as far back as 1966, long before pollution control laws came into existence. Today each of its cement plants has state-of-the art pollution control equipment and devices. ACC plants, mines and townships visibly demonstrate successful endeavours in quarry rehabilitation, water management techniques and ‘greening’ activities. The company actively promotes the use of alternative fuels and raw materials and offers total solutions for waste management including testing, suggestions for reuse, recycling and co-processing. ACC has taken purposeful steps in knowledge building. We run two institutes that offer professional technical courses for engineering graduates and diploma holders which are relevant to manufacturing sectors such as cement. The main beneficiaries are youth from remote and backward areas of the country. ACC has made significant contributions to the nation building process by way of quality products, services and sharing expertise. Its commitment to sustainable development, its high ethical standards in business dealings and its on-going efforts in community welfare programmes have won it acclaim as a responsible corporate citizen. ACC’s brand name is synonymous with cement and enjoys a high level of equity in the Indian market. It is the only cement company that figures in the list of Consumer Super Brands of India (ACC Company Profile, n.d).

Ambuja Cement Ltd
Ambuja Cements Ltd is a part of a global conglomerate Holcim, is the India’s leading cement manufacturers and has also completed over 25 years of operations. The cement industry is literally the building block of nation. In that context Ambuja plays a key role in India’s development and its blueprint for the future. It has always stayed on the fast track to growth and has gone on to become a major player in the country’s cement sector. The company, initially called Gujarat Ambuja Cements Ltd, was founded by Narotam Sekhsaria in 1983 in partnership with Suresh Neotia. Global cement major Holcim acquired management control of Ambuja in 2006. The Company has also made strategic investments in ACC Limited. Ambuja Cement is a
well established brand in India for Ordinary Portland Cement (OPC) and Pozzolana Portland Cement (PPC), with significant footprints across western, eastern and northern markets of India. Our customers range from individuals’ house builders (IHB) to governments to global construction firms. Over the past decade, Ambuja has grown dynamically. Its current cement capacity is 27.25 million tons. The Company has five integrated cement manufacturing plants and eight cement grinding units across the country. It is also the first Indian cement manufacturer to build a captive port with three terminals along the country’s western coastline to facilitate timely, cost effective and environmentally cleaner shipments of bulk cement to its customers. The Company also owns fleet of ships. Today, the Company has established itself as one of the most efficient cement manufacturers in the world. Its environment protection measures are on par with the finest in the country. It is one of the most profitable and innovative cement companies in India. The Company has also pioneered the development of multiple bio-mass co-fired technologies for generating greener power in its captive plants. The Company’s most distinctive attribute is its approach to business. Ambuja follows a unique home grown philosophy called I CAN, that provides the authority to people to set their own targets and the freedom to achieve their goals. Its focus has been consistent on two major building blocks that are resonated through its daily operations i.e. Quality of the product and Safety of the human resources involved in the creation of the product (Company profile, n.d).

Jaypee Group

Jaypee group is the 3rd largest cement producer in the country. The groups cement facilities are located in the Satna Cluster (M.P.), which has one of the highest cement production growth rates in India. The group produces special blend of Portland Pozzolana Cement under the brand name ‘Jaypee Cement’ (PPC). Its cement division currently operates modern, computerized process control cement plants with an aggregate capacity of (commissioned/under commissioned) 28.80 MTPA in FY’ 12. The company is among the capacity expansion of its cement business in Northern, Southern, Central, Eastern and Western parts of the country and has achieved 41.40 MTPA in total cement capacity (commissioned/under commissioned) in FY’ 13 with Captive Thermal Power plants totaling 672 MW. Keeping pace with the advancements in the IT industry, all the 260 cement dumps are networked using TDM/TDMA VSATs along with a dedicated hub to provide 24/7 connectivity between the plants and all the 120 points of cement distribution in order to ensure
“track – the – truck” initiative and provide seamless integration. This initiative is the first of its kind in the cement industry in India. In the near future, the group plans to enlarge its cement capacities via acquisition and Greenfield additions to grow economies of scale and build on vision to focus on large size plants from inception. The Group is committed towards the safety and health of employees and the public (Jaypee Cement, n.d).

India Cements

In 1946, when the Second World War was over and political freedom was round the corner, the India Cements Ltd. began its humble moorings in the form of a cement factory at Talaiyuthu, an almost unmapped tiny hamlet in Tirunelveli district, Tamil Nadu. As one of the oldest Indian corporates, established in 1946, the company set up its first plant in 1949 at Sankarnagar (Talaiyuthu). The India Cements Ltd. is indeed a pioneer enterprise during the post-independence era to become a public limited company. India cements Ltd was discovered in the year 1946 by two men, Shri S.N. N. Sankaralinga Iyer and Sri T. S. Narayanaswami. From a two plant company having a capacity of just 1.3 million tonnes in 1989, the company has robustly grown in the last two decades to a total capacity of 15.5 million tonnes per annum. It has 7 integrated cement plants in Tamil Nadu and Andhra Pradesh, one in Rajasthan (through its subsidiary, Trinemetra Cement Ltd) and two grinding units, one each in Tamil Naidu and Maharashtra. While retaining cement over the years as its mainstay, India Cements has ventured into related fields like shipping, captive power and coals mining that have purposeful synergy to the core business. This also stemmed from the company’s strategy of emerging as an integrated plan.

The present chapter gives an overview of Indian cement industry. The next chapter discusses about the profile of Cement Corporation of India limited.
REFERENCES


Chapter 3

An Overview of Cement Industry In India


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