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The Role of India's Cement Industry in Economic Growth: an Overview

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Abstract: *The cement sector remarkably plays a critical role in the economic growth of the country and its journey towards decisive growth. Cement is vital to the construction sector and all infrastructural projects. The construction sector alone constitutes 7 per cent of the country's gross domestic product (GDP). The industry occupies an important place in the Indian economy because of its strong linkages to other sectors such as construction, transportation, coal and power. India is the second largest producer of quality cement in the world. The cement industry in India comprises 183 large cement plants and over 365 mini cement plants. Currently there are 40 players in the industry across the country. The cement industry in India is experiencing a boom on account of overall growth in the economy. The demand for cement, being a derived one, depends mainly on the industrial activities, real estate business, construction activities and investment in the infrastructure sector. In this context the present paper emphasis role of India's cement industry in economic growth*

Key words: *infrastructure, construction sector, foreign policies*

Introduction

India's cement industry is a vital part of its economy, providing employment to more than a million people, directly or indirectly. Ever since it was deregulated in 1982, the Indian cement industry has attracted huge investments, both from Indian as well as foreign investors. India has a lot of potential for development in the infrastructure and construction sector and the cement sector is expected to largely benefit from it. Some of the recent major government initiatives such as development of 98 smart cities are expected to provide a major boost to the sector. Expecting such developments in the country and aided by suitable government foreign policies, several foreign players such as Lafarge-Holcim, Heidelberg Cement, and Vicat have invested in the country in the recent past. A significant factor which aids the growth of this sector is the ready availability of the raw materials for making cement, such as limestone and coal.

Historical Background

The indigenous Indian cement industry traces its history back to 1914, at a time when the market was dominated by imports. In that first year the industry produced just 1000t of cement, but over just 10 years this figure increased to 0.26Mt in 1924. In the same 10-year bracket, India consumed a total of 2Mt of cement, with around half imported. From a modern perspective, the need to expand the industry is clear. However, the industry was fighting against poor public perception surrounding not only domestic Indian cement, but cements itself. Many producers went out of business as a result of price-wars between Indian producers who were aiming at a bigger slice of the future market. To end the uncertainty

surrounding the industry and to campaign for tariffs on imported cement, the Indian Cement Manufacturers' Association (ICMA) was set up in 1925. This subsequently transformed into two connected groups. The modern Cement Manufacturers' Association (CMA) was reformed in 1961. Between 1925 and the early 1940s, the capacity of the Indian cement industry gradually increased to 1.8Mt in 1942, with imports dwindling to just ~1000t/yr over the same period. However, all was not well with the industry, which, like many industries across the world, suffered due to the Great depression in the United States and the run-up to the Second World War in Europe. To combat continued price wars, Associated Cement Companies (ACC) was formed from 11 competing firms in 1936.

In 1942 all of India's cement capacity came under the control of Defence for India rules as part of the war effort. With up to 90% of cement heading directly to defence 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. 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.

Government Initiatives

In the 12th Five Year Plan, the Government of India plans to increase investment in infrastructure to the tune of US$ 1 trillion and increase the industry's capacity to 150 MT. The Cement Corporation of India (CCI) was incorporated by the Government of India in 1965 to achieve self-sufficiency in cement production in the country. Currently, CCI has 10 units spread over eight states in India. In order to help the private sector companies thrive in the industry, the government has been approving their investment schemes. Some such initiatives by the government in the recent past are as follows:

- The Parliament of India has cleared amendments to the Mines and Minerals Development and Regulation (MMDR) Act, which will enable companies to transfer captive mines leases similar to mines won through an auction, and which is expected to lead to increased Mergers and Acquisitions (M&A) of steel and cement companies.
- The Government of India is planning to revive the state-run cement factories across India, in order to give a boost to road and realty projects by bringing down their construction costs.
- Budget 2016-17 has proposed a slew of measures to boost infrastructure and investment, which will be positive for the cement sector, as increased spending on infrastructure increases the demand for cement. 100 per cent deduction for profits to an undertaking in housing project for flats up to 30 square metres in four metro cities and 60 square metres in other cities approved during June 2016 to March 2019 and completed in three years

*Incremental spend on smart city development, the government has allocated Rs 7,296 crore (US$ 1.09 billion) towards Urban Rejuvenation

Mission (AMRUT and Mission for Development of 100 Smart Cities

*Rise in allocation under Pradhan Mantri Gram Sadak Yojana (PMGSY) to Rs 19,000 crore (US$ 2.79 billion) for financial year 2017.

- The Government of India plans to enact a law that will allow the companies which have received mining licenses without having gone through the auction process, to transfer these leases, in a move that is expected to make mergers and acquisitions (M&As) easier in the steel, cement, and metals sectors.

- The Government of Tamil Nadu has launched low priced cement branded 'Amma' Cement. The sale of the cement started in Tiruchi at Rs 190 (US$ 2.84) a bag through the Tamil Nadu Civil Supplies Corporation (TNCSC). Sales commenced in five godowns of the TNCSC and will be rolled out in stages with the low priced cement available across the state from 470 outlets.

- The Government of Kerala has accorded sanction to Malabar Cements Ltd to set up a bulk cement handling unit at Kochi Port at an investment of Rs 160 crore (US$ 23.5 million).

- The Andhra Pradesh State Investment Promotion Board (SIPB) has approved proposals worth Rs 9,200 crore (US$ 1.35 billion) including three cement plants and concessions to Hero Motor Corp project. The total capacity of these three cement plants is likely to be about 12 MTPA and the plants are expected to generate employment for nearly 4,000 people directly and a few thousands more indirectly.

- India has joined hands with Switzerland to reduce energy consumption and develop newer methods in the country for more efficient cement production, which will help India meet its rising demand for cement in the infrastructure sector.

The Government of India has decided to adopt cement instead of bitumen for the construction of all new road projects on the grounds that cement is more durable and cheaper to maintain than bitumen in the long run

Cement Industry – An Overview

Although 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.[5] Ultratech Cement, the country's largest firm in terms of cement capacity, holds around 22% of the domestic market, with ACC (50%-owned by Holcim) and Ambuja (50%-owned by Holcim) having 15% and 13% shares respectively. Many of the remaining dozen top players are Indian and are (in order of diminishing market share); Jaiprakash Associates (10%), The India Cements Ltd (7%), Shree Cements (6%), Century Textiles and Industries (5%), Madras Cements (5%), Lafarge (5%), Birla Cement (4%) and Binani Cement (4%). Between them the top 12 cement firms have around 70% 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.

Investment Sector

On the back of growing demand, due to increased construction and infrastructural activities, the cement sector in India has seen many investments and developments in recent

times. Some of the major investments in Indian cement industry are as follows:

- The Gujarat-based Nirma group, with presence in detergent, soap and chemicals sector, has bought Lafarge India's cement business, consisting of 11 MT production capacities, for US$ 1.4 billion.

- FLSmidth, a global engineering company based in Copenhagen, has signed a contract with India's Larsen & Toubro Limited for engineering, procurement and supply of equipment for a complete cement production line with a capacity of 3,000 tonne in Tamil Nadu.

- KKR Mauritius Cement Investments Limited acquired 8.5 per cent stake in Dalmia Bharat Limited (DBL).

- Cement maker Burnpur Cement plans to invest Rs 500 crore (US$ 74.64 million) for expansion of its production capacity to 3 MTPA in the next three to four years.

- India's largest cement maker UltraTech Cement is looking forward to acquire Jaiprakash Associates six cement factories for a total value of Rs 16,500 crore (US$ 2.42 billion)

- Birla Corporation Ltd, a part of the MP Birla Group, has agreed to acquire two cement assets of Lafarge India for an enterprise value of Rs 5,000 crore (US$ 733.6 million).

- Dalmia Cement (Bharat) Ltd has invested around Rs 2,000 crore (US$ 293 million) in expanding its business in North East over the past two years. The company currently has three manufacturing plants in the region — one in Meghalaya and two in Assam.

- JSW Group plans to expand its cement production capacity to 30 MTPA from 50 MTPA by setting up grinding units closer to its steel plants.

- UltraTech Cement Ltd has charted out its next phase of Greenfield expansion after a period of aggressive acquisitions over the last two years. UltraTech has plans to set up two Greenfield grinding units in Bihar and West Bengal.

- UltraTech Cement Ltd bought two cement plants and related power assets of Jaiprakash Associates Ltd in Madhya Pradesh for Rs 5,400 crore (US$ 792.3 million).

- JSW Cement Ltd has planned to set up a 3 MTPA clinkerisation plant at Chittapur in Karnataka at an estimated cost of Rs 2,500 crore (US$ 366.8 million).

Andhra Cements Ltd has commenced the commercial production in the company's cement plants – Durga Cement Works at Dachepalli, Guntur and Visakha Cement Works at Visakhapatnam

Market Size

Cement demand in India is expected to increase due to government's push for large infrastructure projects, leading to 45 million tonnes (MT) of cement needed in the next three to four years. India's cement demand is expected to reach 550-600 Million Tonnes Per Annum (MTPA) by 2025. The housing sector is the biggest demand driver of cement, accounting for about 67 per cent of the total consumption in India. 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. To meet the rise in demand, cement companies are expected to add 56 MT capacities over the next three years. The cement capacity in

India may register a growth of eight per cent by next year end to 395 MT from the current level of 366 MT. It may increase further to 421 MT by the end of 2017. The country's per capita consumption stands at around 190 kg. The Indian cement industry is dominated by a few companies. The top 20 cement companies account for almost 70 per cent of the total cement production of the country. A total of 188 large cement plants together account for 97 per cent of the total installed capacity in the country, with 365 small plants account for the rest of these large cement plants, 77 are located in the states of Andhra Pradesh, Rajasthan and Tamil Nadu.

Cement Industry - Sustainability

The Indian cement industry, though large, is also one of the most energy efficient, according to the World Business Council for Sustainable Development's (WBCSD) Cement Sustainability Initiative's (CSI) Getting the Numbers Right (GNR) data programme.[7] In 2010, the most recent year for which data is available, India performed very favourably in terms of specific energy consumption per tonne of clinker produced, with an average 3130MJ/t across the 50% of cement capacity that the GNR programme received data on. Brazil and China, which also have rapidly-developing large cement industries, performed slightly less well. In all three cases, it is the recent expansion of the industry in that nation that provides this thermal efficiency, a consequence of modern plants simply being more efficient than older ones. The comparison with the EU- 27 group of countries (and the USA to a greater extent), both of which have older industries, is clear. In the specific case of India, the efficiency of the new capacity is enhanced by the work of dedicated plant engineers who seek to maximise the efficiency of the equipment in front of them. The fact that (expensive foreign) coal is the dominant fuel for the cement industry acts as a strong driver towards efficiency. Coal is also a reliable and stable kiln fuel, which means that Indian kilns can be very finely tuned and hence can be made more efficient than if a less reliable or variable/alternative fuel mix were to be used. When it comes to CO_2 emissions per tonne of clinker, India performs less well, making 837kg/t of clinker, this is close to the global average but behind those industries that have successfully implemented alternative fuel substitution such as Germany. See page 18 for more on alternative fuels in the Indian cement industry.

Consumption by Use

Between 2006 and 2011 inclusive, cement consumption in India was dominated by residential real-estate construction to the tune of 63%. The second largest type of use over the period was infrastructure, which accounted for 20% of all cement used, followed by commercial real-estate construction (13%) and industrial construction (4%).

Future Forecasts

Given the rampant growth of the Indian cement industry, few are betting against continued capacity additions in the short- to medium-term. The extent of capacity addition, however, and whether or not demand will rise to match it more closely than at present, is up for debate. In November 2012 the India Brand Equity Foundation (IBEF) said that it expected double-digit growth in the cement industry for the 2013 and 2014 fiscal years, which end on 31 March 2013 and 31 March 2014 respectively.[12] It reported

that the cement industry would increase production by around 71Mt/yr over the same time-frame to reach over 300Mt/yr in 2014. Meanwhile, the Indian Government's 12th Five-Year Plan, which runs for 2013 to 2017, states that India will require a cement capacity in the region of 480Mt/yr by the end of 2017.12 It states that a further 150Mt/yr of capacity will be required to accomplish this. In the midst of this, smaller companies are likely to suffer more than most, possibly making them acquisition targets for better-equipped multinationals. Indeed, in January 2013 Prism Cement, one of India's smaller cement producers actually reported a net loss for the quarter to 31 December 2012. It cited low demand, high fuel costs and increased electricity prices.

An academic report carried out for the Competition Commission of India in 2012 hints at this possibility of future consolidation in the industry. The study found that, despite capacity utilisation falling across all cement producers in India from 2006 to 2011, it was those with the smallest market share that experienced by far the worst reduction. Binani Cement, for example, recorded utilisation rates of only around 55-60%. Conversely mega-players like Ultratech have been more stable, with rates of 80-95%. In January 2013 India Ratings reported that smaller businesses were less likely to benefit from the expected improvement in the industry.

A major reason behind this phenomenon is increasing fuel costs, which have hit producers from two directions in the past year. Firstly, demand for power in India is high and domestic fuels are dedicated predominantly to electrical generation. Industrial companies are forced, in many cases, to import costly foreign fuel, which must be shipped inland to be used. A second effect of increased fuel prices is that cement is more costly to transport once it has left the factory. Due to their size allowing greater economies of scale, larger cement companies are better positioned to import fuel on a large scale and are more likely to have flexible vehicle fleets to respond as demand fluctuates in different areas. Another crucial difference between the larger and smaller companies is that larger players are more likely to have a pan-Indian presence. This enables them to ride-out periods of difficulty in one area while maximising margins elsewhere. Local producers do not have this luxury. Smaller local producers are less well equipped to deal with expansion and their relative size will gradually diminish compared to the top 12 producers. As this happens, it is likely that they will become the acquisition targets of the larger firms.

Conclusion

The Indian cement industry is large, growing and with consumption of just 185kg/capita/yr in 2011 (compared to global average of 300kg/capita/yr) the country itself has the capacity to demand significantly more cement as it develops. However, the industry is at a tricky point in its development. Capacity is way ahead of actual consumption. However, cement producers are keen to maintain their market share and so expand to secure future demand. Producers in this situation should bear in mind the Indian cement industry of the early 20th Century, when companies expanded, lowered prices and, in many cases, went out of business. Some have cautioned against rapid capacity addition in the coming years, it is foreseeable that the Indian cement industry will see consolidation over the coming years.

Producers that can differentiate their cement from others or can make savings on production costs by, for example, using alternative fuels, will be able to take advantage of increasing demand while remaining ahead of their competitors.

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