

India's Cement Industry Key Dynamics, Drivers and Deterrents

***Devraj Meena**

Abstract

The Indian cement industry is the second largest in the world, as measured by production (502 million tonnes per annum in 2018), with over 8% (502 million tonnes per annum in 2018) of the global installed capacity and supporting over 1 million jobs. However, unfortunately, this production does not fully convert into consumption because the demand-supply situation is highly skewed, with the latter being significantly higher than the former. Therefore researcher has focused on Cement Industry Key Growth Drivers and Deterrents while concentrating on industry present scenario, industry dynamics also has been touched upon and discussed in detail along with growth prospectus for the industry in next decade.

Introduction

An independent study claims that India is the second-largest cement producer worldwide. India's cement industry became an important part of its economy in 1982 and directly or indirectly employed more than a million people. No wonder that the Indian cement industry has attracted enormous investors from both Indian and foreign experts.

India has a lot of potential for the infrastructure and construction sector to develop and is expected to benefit to a large extent from the cement sector. It is expected to provide a major boost to the sector because of some of the recent major initiatives, such as the development of smart cities.

Several foreign players have recently invested in the country and are expected to contribute to major developments in the country, assisted by appropriate foreign government initiatives. The growth of this sector is predicted due to the ready availability of cement-making raw materials such as calcareous and coal (Furnace).

Over the last five years, global cement production has continued to grow at an average rate of 6.4 percent, from 2568 million tonnes in 2006 to 3294 million tonnes in 2010. Around 56% of manufacturing originates in China. The growth in global cement output was driven by China (with an average annual growth of 11.4 percent) and India (with an average annual growth of 9.8 percent).

After China, India is the world's second largest producer of cement. Other major producers, with the exception of India and China, have a production range of 45 - 65 million tonnes (as against 52 - 86 million tonnes in 2008).

India's Cement Industry Key Dynamics, Drivers and Deterrents

Devraj Meena

Today, 183 large cement plants and over 360 mini cement plants are part of the cement industry. Large manufacturers contribute about 97 percent of the installed capacity, while the rest is made up of mini-plants. Of these, 98% of the capacity is in the private sector and the remainder is in the public sector.

The cement industry's turnover in 2010-11 was estimated at US \$ 25 billion. At a compound annual growth rate (CAGR) of 8.8 percent during 2001-2011, the installed capacity increased and matched production growth, which averaged 8.7 percent. However, while installed capacity increased at an average annual rate of 13.6 percent during the last five years (2006-2011), production increased by 9.1 percent during this period.

The total capacity expected to be generated / commissioned by 2011-12 at the end of the Eleventh Five Year Plan is 331 million tonnes, approximately 10 percent higher than the target of the plan. As GDP growth and demand for cement have moderated, particularly in 2009-2012, this additional capacity has been reflected in lower capacity utilization. Capacity utilization decreased from 94% during 2006-07 and 88% during 2008-09 and further to 84% during 2009-10 and is now expected to be around 75% due to higher capacity and lower demand.

As cement is a low-value high volume production, international trade is very limited. International trade amounted to 151 million tonnes in 2010, only 5 percent of global cement production. The largest importers were Bangladesh, Nigeria, the USA, Iraq, Afghanistan, and Singapore. Turkey, China, Thailand, Japan, Pakistan, Germany and India are the major cement exporting countries.

According to the latest Indian cement plants, they are on par with world-class plants around the world. Currently 1.7 million metric tons of gross installed capacity per plant is greater than Japan's total capacity of 2.1 million metric tons. The overall energy consumption of the industry is calculated to be approximately 725 kcal/kg of clinker thermal energy and 80 kWh/t of electrical energy produced from cement. India's cement industry currently obtains the most thermal and electrical energy used at 667 kcal/kg clinker and 67 kWh/t cement, which is equivalent to the most recent measurements taken in Japan of 660 kcal/kg clinker and 65 kWh/t cement.

The emission standards for cement plants were reported by the Ministry of Environment and Forests in 1987 and subsequently revised in February 2006. In India, for existing cement plants, permissible stack dust emissions from different sources are 150 mg/Nm³ and 100 mg/Nm³ for plants located in critically polluted areas. However, 50 mg/Nm³, which is at par with some of the developed countries, is the limit for new plants in our country. In order to control dust emissions, all major plants have provided the necessary air pollution control equipment.

Approximately 27% of the fly ash generated by thermal power plants was used by cement plants in India and almost all the granulated slag generated by steel plants in 2010-11.

As a percentage of Gross Domestic Product (GDP), R&D expenditure in India is about 0.8 percent, one of the lowest compared to most developed countries, which spend between 1.23 percent and 3 percent of their GDP on research and development.

India's Cement Industry Key Dynamics, Drivers and Deterrents

Devraj Meena

Industry Dynamics

Instead of national ones, the Indian cement industry consists mostly of regional players. The reason for this is that cement is a bulk commodity and therefore freight-intensive, proving to be uneconomical to transport it over long distances. And, therefore, this industry has largely played a regional role. There has been a lot of consolidation lately - large players have been pushing vigorously to acquire smaller regional players. This trend is likely to continue and, in the near future, we may witness even more acquisitions.

Three categories of cement firms are defined by the industry. Quality and price are mainly the differentiating factors between one category and the other. Let us delve into these variables a little deeper and understand how the industry works, playing with either or both of these variables. The difference between good and not-so-good cement is not visible to the final consumer at the time of construction. And that's why many low-priced cement firms are thriving on the market today. The consumer has little or no idea about how, after some years, the cement used in their construction will behave. Therefore, he doesn't put much emphasis on determining the quality and goes after a lower price instead.

There are companies which, to the extent that they have automated systems for regular quality tests, focus on the quality of their cement. These systems ensure that not only a sample of cement is tested, but that all of the production is regularly tested. The cement produced is, understandably, of superior quality and provides greater value for the price paid. For most individuals, building one's own house is a dream fulfillment, and individual house builders (IHBs) need to realize that their house construction is a one-time investment. In the long run, saving a certain amount of cement, which would be quite negligible when calculated and compared to the total investment in construction, can prove to be an uninformed decision.

New Shifts in Consumer Connect

Historically, cement manufacturers have mainly emphasized functional benefits in their connect programs and advertisements with the objective of educating the end user. The consumer today, however, is not only well-equipped to research what they don't know, but they are also flooded with multi-source advertisements and information.

In such a 'information overload' world, the functional advantages can not attract the attention of the consumer the way they used to earlier. Rather, it is the emotional connection in today's times that has the potential to tap into the attention span of the consumer and, subsequently, his purchase decision. Most companies in the industry have recognized this, which is why cement advertising has more emotional content these days and connects with customers.

Scenario In 2019

During the first half of FY 2019, demand for cement showed a downward trend, largely due to lower government spending, which accounted for about 40 percent of demand. As well, the real estate sector was hurt by several factors that are occurring at the same time - a lack of workers, a lack of

India's Cement Industry Key Dynamics, Drivers and Deterrents

Devraj Meena

liquid funds, weak project execution, and an inability to source sand and water in many states. Notably, such events as cyclone Fani (in case of Bihar, Odisha, and West Bengal) and excessive rainfall also influenced demand.

In light of this, we can anticipate that demand growth in the second half will increase as a result of an increased release of government funds for institutional projects. Higher revenues and profits would be anticipated as a result of lower raw material costs, falling global commodity prices, and reduced power and fuel costs. Cement demand in India is primarily driven by the housing and real estate sector (65%), public infrastructure (20%), and industrial development (15%). (15 percent). Investments of these drivers are anticipated to boost demand in the short term.

The Indian cement industry is the second largest in the world, as measured by production (502 million tonnes per annum in 2018), with over 8% (502 million tonnes per annum in 2018) of the global installed capacity and supporting over 1 million jobs. While unfortunately, this production does not fully translate into consumption, supply-demand conditions are highly imbalanced with the former being significantly higher than the latter. Can India's cement industry become the driver of growth for the country when per capita cement consumption is under 200 kg compared to the rest of the world, where consumption averages 500 kg?

Covid pandemic has lowered demand in end-user industries, which will result in a 25-30% decline in cement production this fiscal year. This is widely known to be the most difficult year for the industry. Capacity utilization in FY21 is estimated to be at 40-45%.

There was a harsh economic condition before the outbreak of Covid-19. Production of cement decreased by 0.8%, while the growth rate in the previous fiscal was 13.3%.

As a result of the overall economic downturn in the economy, the cement industry has had to add to the problems it previously faced, such as the slump and the Covid-19 pandemic. But, on the macro stage, things remain good on the long term. Although the market for cement is normally within a small range, it is also expected to drop dramatically as the virus shows no signs of lessening. As construction activities are at their height, the national lockdown has arrived, and it will be accompanied by the monsoon season, which will subsequently impact the demand-supply dynamics for cement, according to a survey from CARE Ratings.

Cement producers have resumed production after loosening lockdown curb constraints. However, plants are working at reduced capacity due to labor and logistics constraints. Logistics and shipping prove to be troublesome for railroads because of the shipment of vital commodities.

Owing to the gloomy forecast and adverse market circumstances, as demand stays the same, cement producers will not be doing any new Capex (Capital expenditure). Furthermore, some of the players are expected to delay spending on capital expenditures.

As India is the second largest cement sector in the world, the lack of domestic demand has worried cement manufacturers.

Weakness in housing demand, prolonged rainfall in many parts of the world, and infrastructure-related decline have had a negative effect on the production of cement in the domestic markets

India's Cement Industry Key Dynamics, Drivers and Deterrents

Devraj Meena

because of lack of funds and temporary/stopping stoppage of state projects after state elections. In the Indian subcontinent, the emergence of the Covid-19 pandemic that necessitated the national lockdown from March 25th onward also impacted cement production within the country during FY20. Since building was briefly halted nationally, the cement offtake was affected. Output dropped by 24.7% in March 2019, as opposed to the 15.7% rise seen in March 2019, according to the survey.

Eight percent of the world's cement production potential is based in India, according to the Cement Manufacturers Group. At a CAGR of 7.1%, the nameplate potential of cement producers improved. Manufacturers were able to achieve a capacity utilization rate of 65-70% from FY15 to FY19. However, persistent drought and government-enforced national lockout have lowered power utilization from 70% in FY19 to 61% in FY20.

Market Insights

Cement production in India is expected to grow at a compound annual growth rate (CAGR) of ~3.83% over the FY 2019-FY 2024 period due to rising demand from the government and building contractors.

Cement usage is projected to rise at a CAGR of ~4.38% due to the approval of road and highway connectivity and housing-related projects, as well as increasing demand from the commercial real estate market. There are a few major players in the Indian cement industry, including UltraTech Cement Limited, Ambuja Cements Limited, JK Lakshmi Cement, and Ramco Cements Limited.

In FY 2018, the southern states of Tamil Nadu, Andhra Pradesh, and Karnataka accounted for 35% of the total installed cement production capacity in India, followed by the northern states (Rajasthan, Punjab, and Haryana), which accounted for 23% of the total capacity.

The housing sector was the main market driver for cement industries in FY 2018. In this case, the rural housing industry was responsible for the demand of approximately 38% of the total, while the urban housing industry had to bear the demand for approximately 32% of the total. High demand for cement from the housing sector can be credited for speeding the introduction of affordable government housing schemes such as Pradhan Mantri Awas Yojna and Housing for All by 2022. Apart from housing, commercial, and industrial investments, India's infrastructure sector demanded a significant amount of cement.

Key Growth Drivers

Right now, the most important demand drivers of cement are the housing and real estate industries, which account for 65% of total consumption in India. In terms of use, the largest consumers of cement are public infrastructure (20%) and industrial development (15%).

Due to rising construction and infrastructure activities, India's cement industry has seen many developments in the recent past. In order to help the private sector firms prosper in the industry, the government has been approving their investment schemes. While setting up an affordable housing fund of Rs 25,000 crore in 2018-19, the Indian government has also announced the budget to launch

India's Cement Industry Key Dynamics, Drivers and Deterrents

Devraj Meena

a housing loan programme worth Rs 25,000 crore under the National Housing Bank (NHB). Cement demand is expected to increase as a result of this action. The sector will continue to grow, with government assistance in the form of friendlier laws, lower taxation, and increased infrastructure spending. Additionally, according to market expectations, the cement industry will see up to 550-600 million tonnes per annum by 2025 due to increased demand from different sectors such as residential and commercial construction, as well as industrial construction.

The Indian government has undertaken a number of infrastructure development projects such as the construction of roads and highways in both rural and urban areas, in addition to the development of industrial hubs throughout the country. These plans and programs are projected to help fuel the growth of the Indian cement industry, since it is critical for the successful implementation of such projects.

In various parts of India, different types of essential minerals such as limestone (which is mostly calcium), bauxite (which is mostly aluminum), iron ore, and coal are in abundant supply. This has caused zero or near-zero import costs for raw materials for cement manufacturers, and as a result, cement businesses are making money in India. Cement manufacturing has grown steadily over the years, pushing up the supply of cement in the Indian cement industry.

Key Deterrents Key Growth Drivers

Due to governmental support, many major cement companies in India have greatly increased their production capacity in the last few years. However, production has not increased at the same rate as capacity has expanded. Delays in processes related to construction project award and project decision-making at government offices are mainly responsible for the discrepancy between installed capacity and actual production.

Consequently, the demand for cement has diminished, thus making a portion of newly installed production capacities idle. Consequently, there would be an increase in the per capita price of cement in India, which would lead to a rise in plant maintenance costs.

Conclusion

The industry believes that due to the requirements of a strong infrastructure framework that the nation strives to implement through its government as well as housing projects, there will be an increase in demand. Through the PPP model, demand for the housing segment is expected to grow at 6% per year (Public Private Partnership). As a consequence, the country's per capita cement consumption is expected to increase from 225 kg in 2018 to 435 kg by 2030.

This will allow us to meet the nation's future cement demand by 2030 with an additional 365 MMT capacity expansion; an increase of almost 82 percent of current demand. Thus, although in the last few years it has been a bumpy ride for the cement industry, the future looks very optimistic and promising.

India accounts for ~8 percent of the installed capacity of global cement production. India occupied

India's Cement Industry Key Dynamics, Drivers and Deterrents

Devraj Meena

the second position in the global cement industry in FY 2018, with a production volume of 297.56 Mn tons compared to 2170 Mn tons in China. High FDI supports the cement industry in India. FDI in the cement and gypsum products industry was INR 369.38 Bn during the period April 2000-March 2019.

***Assistant Professor
Department of ABST
Government College Kherwara,
Dist. Udaipur (Raj.)**

References

1. Sinha, J.N. and Sawhney, P.K.; Wages and Productivity in Selected Indian Industries, Vikas Publications, Delhi, 1970.
2. Ahluwalia, I.J., (1991): Productivity and Growth in Indian Manufacturing. (Oxford University Press, Delhi).
3. Ruddar, Datt, K.P.M. Sundharam, (1998): Indian Economy, New Delhi, Chand & Company Ltd.
4. Sivayya and V.B.M. Das (2001) S. Chand and Company Ltd., New Delhi 11th Edition, Indian Industrial Economy; pp 403 – 406.
5. Sawhney, P.K.; (1967). Productivity Trends in Indian Cement Industry; Asian Economic Review, 9(3): 255-272.
6. Katja Schumacher and Jayant Sathaye (1999): India's Cement Industry: Productivity, Energy Efficiency and Carbon Emissions; Energy Analysis Program; Environmental Energy (Technologies Division Lawrence Berkeley National Laboratory Berkeley, July. 1999)
7. Financial Integration and Capital Markets in Developing Countries: A study of Growth, Volatility and Efficiency in the Indian Capital Market; JEL Classification: F36, Institute of Economic Growth, Delhi University Enclave Delhi, 2000.

India's Cement Industry Key Dynamics, Drivers and Deterrents

Devraj Meena