

Current Challenges and Opportunities in the Indian Cement Sector



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The Indian Cement Industry is currently in the throes of comparatively challenging times with relatively low consumption growth rates and an over-built capacity. Even though the cumulative annual growth in the Industry was 7.8% over the last decade, the last two years have witnessed a steep decline to about 4 - 4.5% pa in the wake of the sharp slowdown in the Indian economy.

The threat of looming overcapacity, however, is possibly overemphasized. Players with an intent of sustained presence in capital-intensive industries are well aware of the significance of industry cycles and have devised suitable buffering mechanisms to counter negative impacts in the short term.

A supportive feature has been the low breakeven points in India, effected principally by the very high percentage of blended cement consumption. In the FY 2013-14, consumption in India at 262 mio t was about 78% of the effective installed capacity, over 25 percentage points above the average breakeven! Thus, industry plight, although poorer than before, is nowhere as bad as it is made out to be.

With the new government declaring its intention to unshackle the impediments in economic and infrastructural growth, the years ahead are expected to bring in more cheer. Cement demand, could enjoy a compound growth rate of the order of 8 - 9% pa over the next five years and thus touch 425 mio tpa in FY 2019-20. The projected capacity utilization, in what would then be a 470 mio tpa industry, could consequently exceed 90%!

Cement prices, over the last decade, have grown steadily at 7-8% pa. Holtec's proprietary Price Model, which maps the impact of over 40 variables on cement price, indicates that the CAGR of cement prices would be of the order of 7% pa. The current average price of about Rs. 300-325/ 50 kg bag could thus reach a level of Rs. 400 by 2020.

Despite a positive outlook, over capacity and low margins would continue to plague weaker players in the short-term. This, coupled with the recent interventions by the Competition Commission of India as also those by populist State Governments, could perpetuate the downward pressure on prices. With cost pressures, particularly those for process and fuel, likely to increase, valuations of financially weak players, operating in surplus regions, could see a decline. In such a scenario, PE Firms would possibly expand their role in funding cash strapped companies. M&A activities could also see an upsurge. Ownership exchange, at least in the near future,

would however mature, only if the agreed valuations are in the range of USD 120-140/ t.

This period could also witness several players creating overseas manufacturing presence in limestone-rich, economically-deprived countries. The principal objective would be to offset domestic risks such as those caused by depleting mineral resources, cyclic over-capacity, high borrowing rates, threat of a really meltdown, difficulties in land acquisition, impediments in acquiring environmental & other clearances, etc.

Around 50% of the current cement capacity is concentrated in the hands of 7 players. The next 25% is held by 10 players with the balance 25% being constituted by nearly 75 players. The top 7 players in India are UltraTech, ACC, Ambuja, Jaypee, Dalmia, India Cements and Shree. Jaypee has recently been divesting capacity to improve its financial leverage. Multinational presence in the industry includes Holcim, Lafarge, Italcementi, VICAT, Heidelberg, CRH and Votorantim. Holcim controls both ACC and Ambuja Cement. The recently merged Holcim-Lafarge entity, once consolidated, could well become the numero-uno in the Indian market unless it divests capacity to balance its overall financial portfolio. It is also possible that its position could be upstaged by the increasingly aggressive initiatives of Ultratech.

Several progressive companies in the Indian cement industry are at the forefront in contemporary technology adoption. This is reflected in terms of their achievements in physical indicators such as energy consumption, kiln productivity, operating hours/year, limestone content in cement, etc. Technology developments, that are being harnessed include the increased use of marginal grades of limestone to produce clinker, installation of 6-stage, twin-string preheaters with clinkering capacity exceeding 10,000 -12,000 tpd, increased adoption of walking-floor coolers, use of large VRMs (325-350 tph) for cement grinding, higher use of automation to reduce human intervention, adoption of Waste Heat Recovery Systems, etc.

Penetration of Alternative Fuels in India is still in a stage of infancy. The average Thermal Substitution Rate (TSR) is only around 1%. The main alternative fuels considered are biomass, RDF, hazardous waste, used tyre chips, rubber waste, LD slag from the steel industry, etc.

One of the key reasons for this low penetration is a lack of facilitating infrastructure to dispose and collect wastes. Institutional intervention by private companies/ government agencies in waste classification & segregation is thus a necessary precursor to accelerate usage, which is currently projected to reach TSR levels of 8-12% by the end of FY 2019-20.

Given the recent trends in the industry and those foreseen, the challenges likely to be faced in the coming years, include:

- Dwindling of natural resources like limestone, fossil fuel

Resource	Unit	FY 2013-14	FY 2019-20	Increment
Limestone	Mio t	308	433	125
Correctives	Mio t	13	18	5
Fly Ash/ Pozzolana	Mio t	42	65	23
Slag	Mio t	9	16	7
Gypsum	Mio t	13	20	7
Fuel (Coal Equivalent)	Mio t	39	53	14
Land	Hectares		18,000	
Power	MW	4,300	6,400	2,100
Water	Mio cu m	133	195	62
Manpower	Nos	48,000	57,000	9,000
Logistics	Trucks (Nos)	57,500	91,500	34,000
	Dumpers (Nos)	2,050	2,500	450
	50- Wagon Rakes (Nos)	2,200	2,600	400
Investment	INR Crore		75,000	

and water. If these are not conserved, it could inhibit the long-term growth of the industry.

- Given the exponential growth in cement capacity, shortage of human skills is likely to aggravate. To overcome this handicap, higher attention needs to be accorded to automation, training and creation of improved operating practices.
- Project gestation period in the future is likely to be in the range of 5+ years, as activities like land acquisition and statutory clearances are likely to take a longer time. The positive impact on this, though expected in the wake of recent policy pronouncements by the new government, is yet to be realised.
- Shortage of domestic coal and increasing cost of imported coal would remain a major area of concern. Use of alternative fuels, gas and Waste Heat Recovery could give some relief to the cement industry.
- Increase in production costs are likely to continue. Cost reduction imperatives are likely to remain a focus area over the next few fiscals during which price pressures are expected to prevail vis-à-vis relatively higher increase in production costs. Adequate attention has only been recently directed at one of the largest components of delivered cost, viz. input & output freight. Optimization of transportation logistics, spanning modes, nodes and routes, is thus an area that could gain enhanced attention. Also, the potential for reducing costs in non-equipment related domains, e.g. material inventories, consumable consumption rates & tariffs, financial expenses, etc. is yet to be adequately harnessed.
- While the cement industry has been around for a long time, opportunities for innovations continue to arise due to changes in the external situation. Notably, significant opportunities remain untapped in the areas of resource conservation, environment management and customer service.
- Innovations, in the industry, have largely been supply-driven. As a possible alternative, manufacturing “affordable

cement” is possibly the one major innovation that could dwarf all other innovations through the sheer dimension of its implications. The thrust of innovation could be market-driven affordability and demands on technology could be placed to realise a cement plant of the future, radically different from the ones that the industry is familiar with. The global average for per capita cement consumption (PCC) is currently of the order of 485 kg per person per annum. To even attain this average, a rough computation shows that the cement spend in deprived economies (those with a lower than average PCC) would need to increase by almost Rs. 600,000 crores! In light of the current disposable income of those who are unable to afford cement today, such an increase in cement spend appears improbable. The “affordable cement” innovation would be to harness technology to effect a quantum increase in the customer base and consequentially the size of the cement market pie!

Given the growth plans of the industry, an estimate of the demands on principal resources is tabulated as above:

In summary it may be mentioned that given the fact that per capita consumption of cement in India still lags the world average by over 40%, the continued existence of the industry is indisputable. Cycles of troughs and peaks, as witnessed in most capital intensive industries, would certainly occur. While weaker players could well be the casualties, management efficacy and foresight would constitute the necessary “mantras” for ensuring continued success.

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