



CEMENT

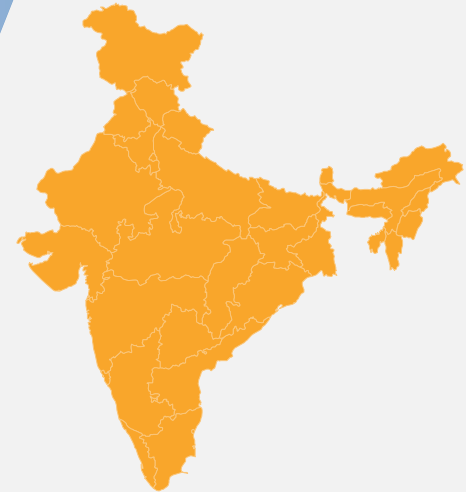
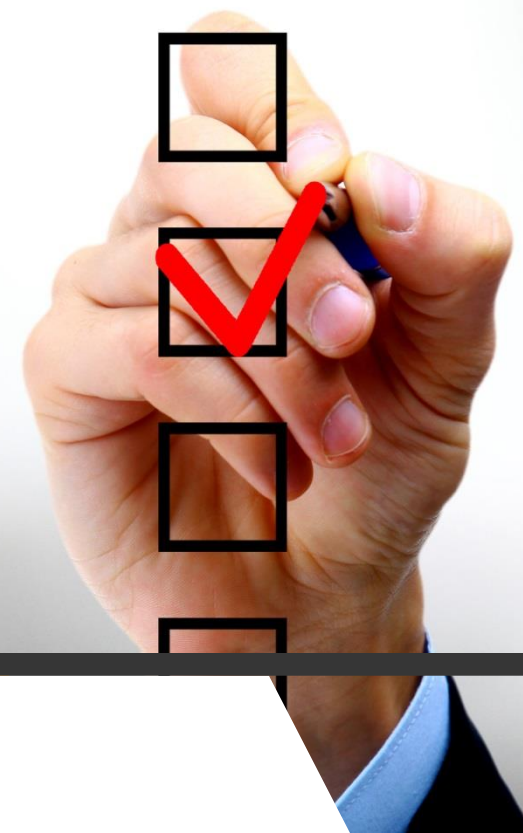


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Second largest cement market

- Cement production capacity of nearly 425 million tonnes, as of September 2017.
- India's cement production capacity is expected to reach 550 million tonnes by 2025.
- India is the second largest cement producer in the world.

Dominated by private players

- Of the total capacity, 98 per cent lies with the private sector & the rest with public sector.
- The top 20 companies accounting for around 70 per cent of the total production

Higher share of large plants

- 210 large cement plants account for a cumulative installed capacity of over 350 million tonnes, while over 350 mini cement plants have an estimated production capacity of nearly 11.10 million tonnes, as of 2016.

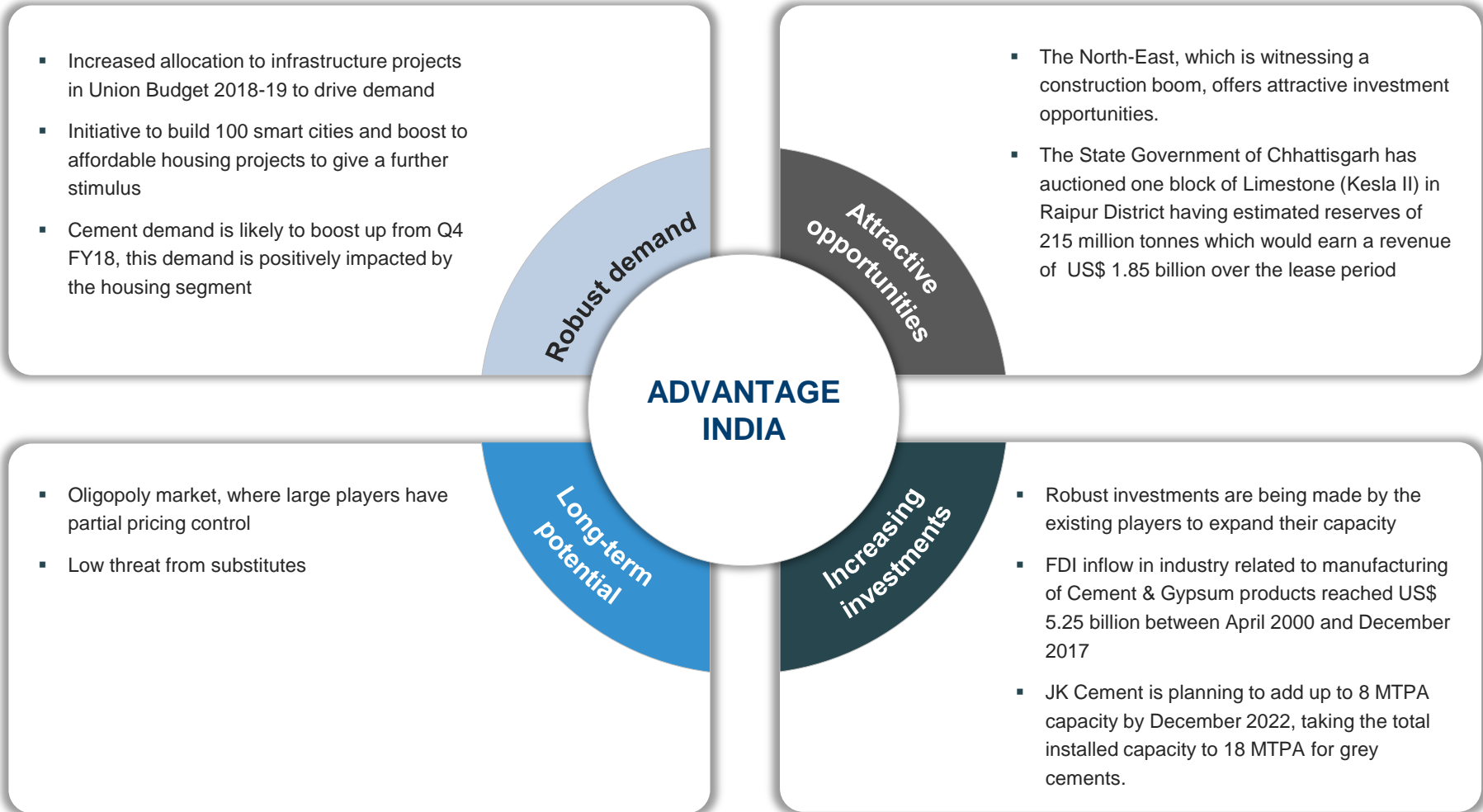
Large concentration in south and west

- Of the total 210 large cement plants in India, 77 are situated in the states of Andhra Pradesh, Rajasthan & Tamil Nadu.

Source: Business Standard, Ministry of External Affairs,

ADVANTAGE INDIA





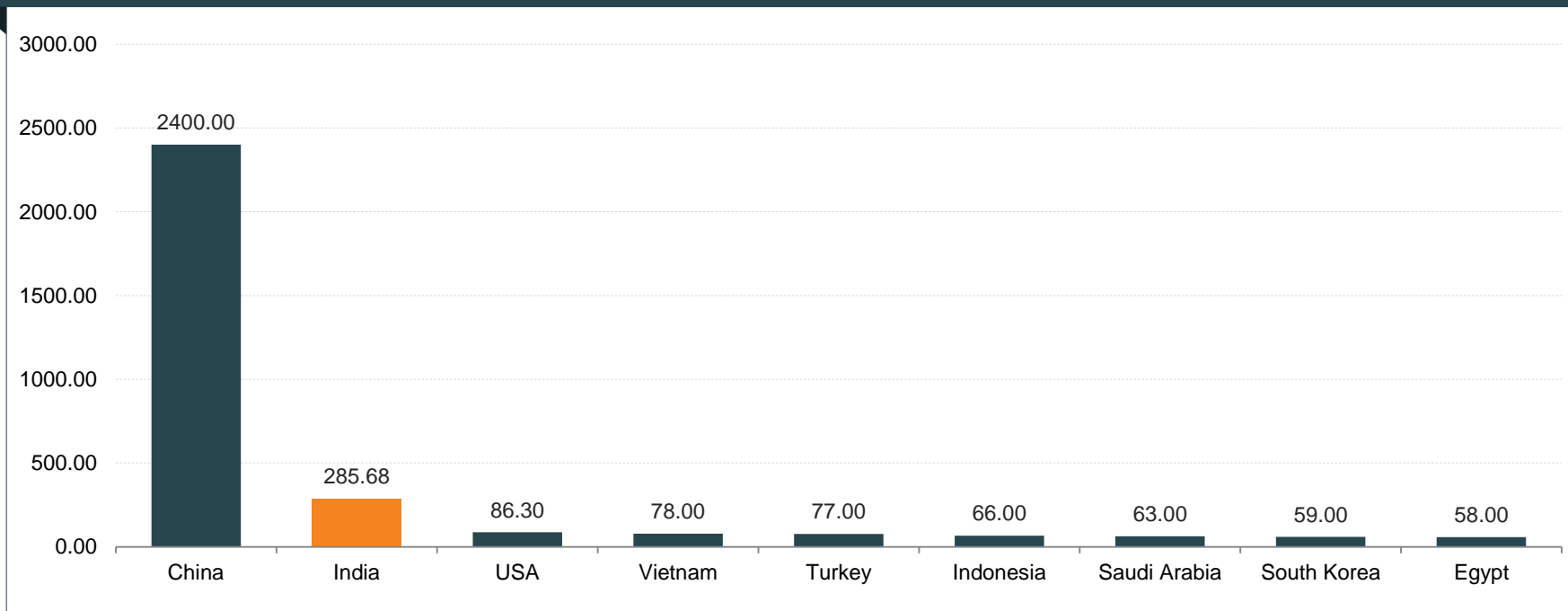
Source: Budget 2017-18, News Articles, Aranca Research, DIPP

MARKET OVERVIEW AND TRENDS



- India - world's 2nd largest cement market, both in production and consumption.
- Supported by high level of activity going on in real estate and high government spending on smart cities and urban infrastructure.
- As of FY17, a total of 575 operational cement plants in the country.
- Capacity of 425 MTPA as of September 2017.

Top Cement Producers in 2017E (in MTPA)

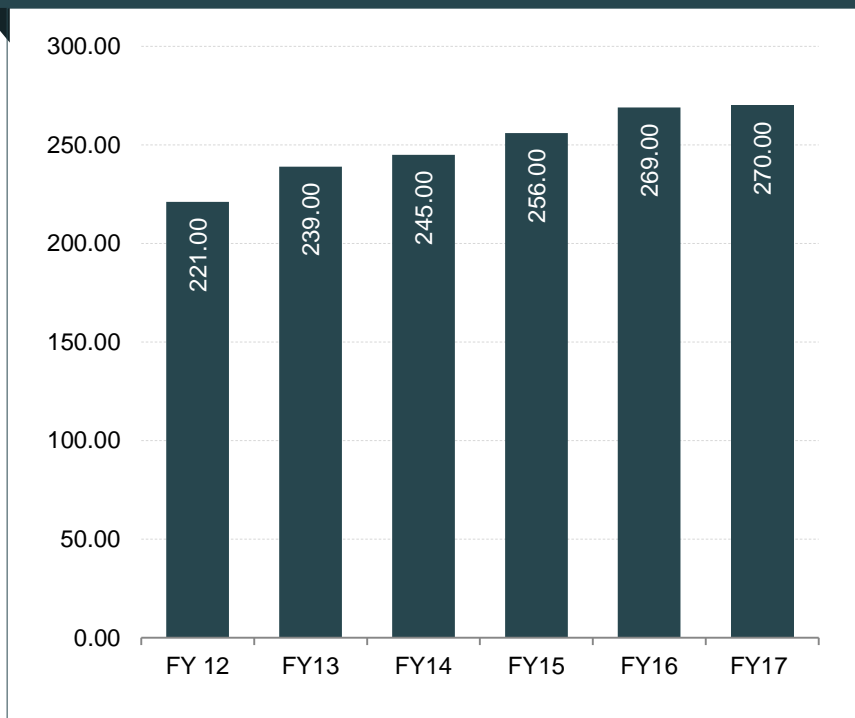


Note: E - Estimate

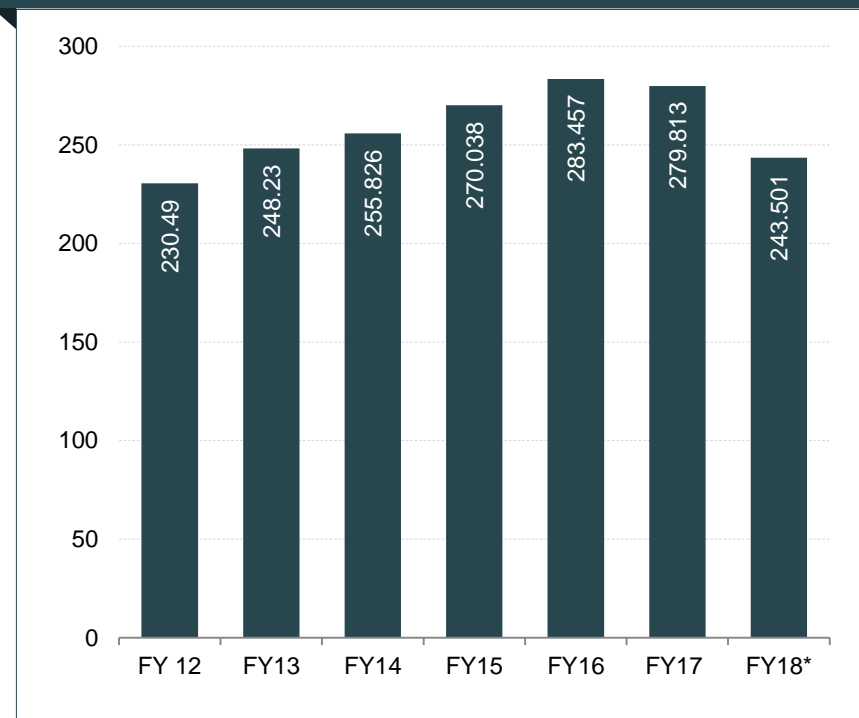
Source: International Cement Review, Statista, Office of the Economic Advisor

- Industry to grow at 5-6 per cent CAGR between FY17 – FY20.
- Capacity addition of 133 million tonnes per annum (mtpa) between FY13-17.
- Cement consumption is expected to grow by 5.0-5.5 per cent in FY18 on the back of increased spends on roads and railways, push towards affordable housing by central government and materialisation of pent-up demand.^

Cement consumption (million tonnes)



Cement Production in India (million tonnes)

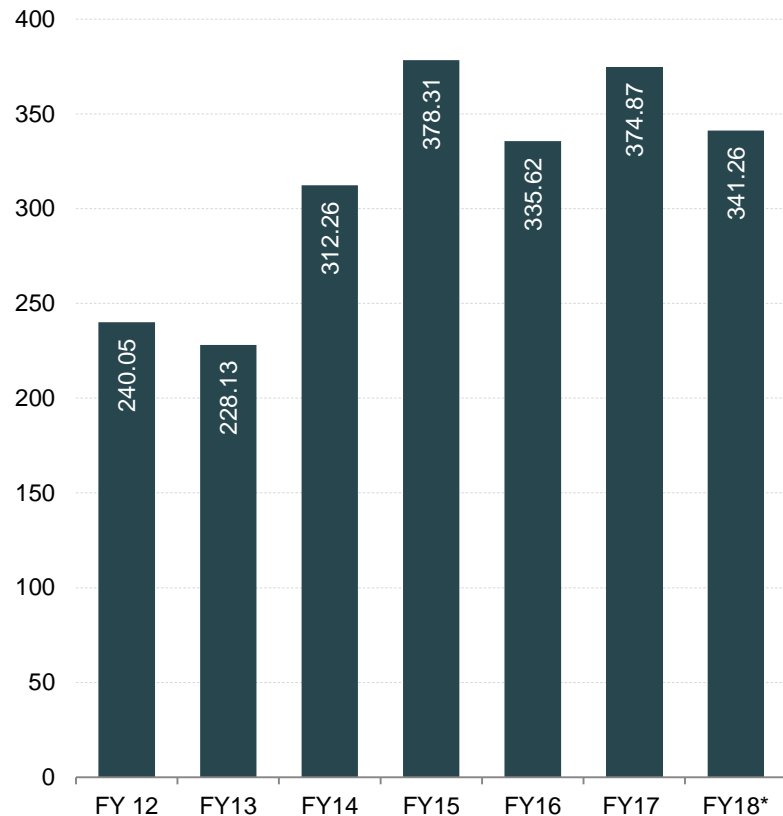


Note: FY18 - From April to January 2017-18, ^As per CRISIL*

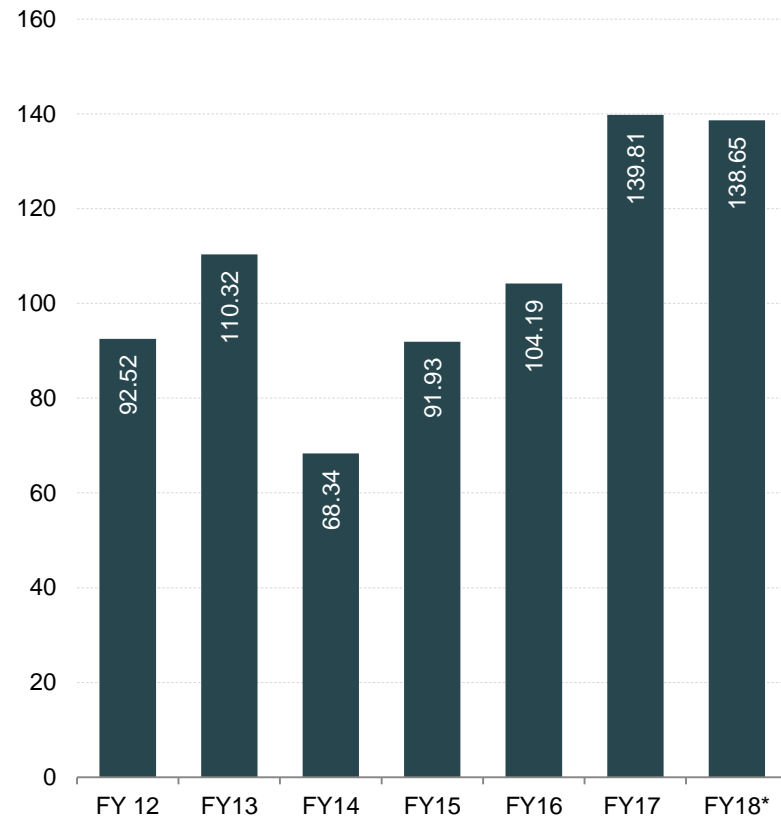
Source: Media sources, Aranca Research, CRISIL

EXPORT AND IMPORT OF CEMENT

Cement Exports from India# (US\$ million)



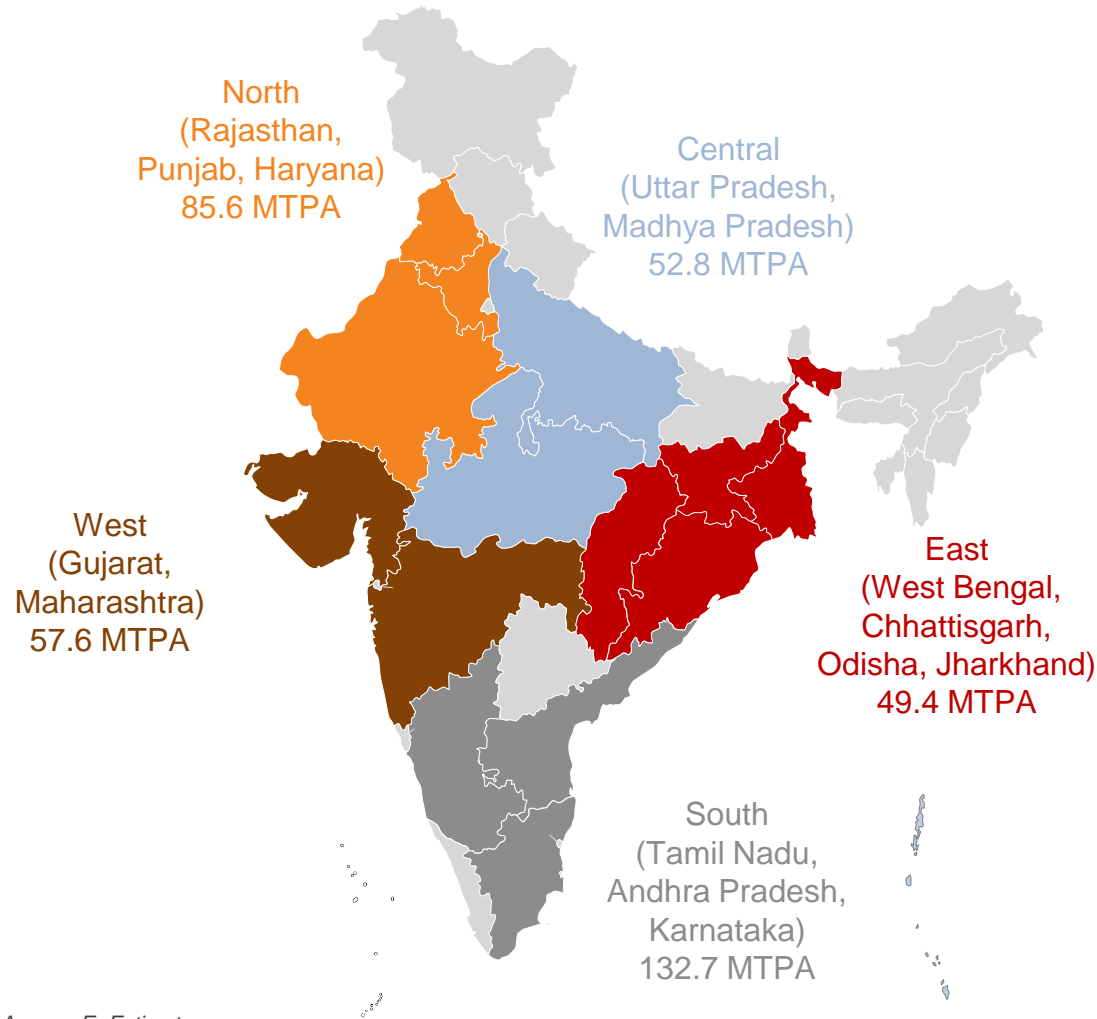
Cement Imports to India# (US\$ million)



Note: FY18 - From April to January 2017-18, #Including Cement, Clinker and Asbestos Cement*

Source: DGCIS

INSTALLED CAPACITY AND KEY MARKETS IN EACH OF THE GEOGRAPHIC REGIONS



Notes: mtpa - Million Tonnes Per Annum, E- Estimates

Source: Indian Minerals Year Book by Indian Bureau of Mines, TechSci Research

RECENT TRENDS AND STRATEGIES

Increasing presence of cement players

- Presence of small & mid-size cement players across regions is increasing, which helps to diminish market concentration of industry leaders
- A large number of foreign players have also entered the market owing to the profit margins, constant demand & right valuation.

Tie – up with overseas

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

Housing for All

- Under Union Budget 2018-19, allocation for affordable housing has been doubled to US\$ 123.57 million
- Housing sector accounts for nearly 67 per cent of the total cement consumption in India.

Adoption of cement instead of Bitumen and Ready Mix Concrete (RMC)

- 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 & cheaper to maintain than bitumen in the long run.
- Companies are trying to develop a niche market for RMC (Ready Mix Concrete)

Mergers & Acquisitions

- Consolidation seen in 2016, with two out of top five M&A deals taking place in the cement industry.
- UltraTech Cement acquired Jaypee Group's cement business for US\$ 2.38 billion.
- Lafarge India sold its business to Nirma for US\$ 1.4 billion in 2016.

Mergers & Acquisitions

- In September 2017, the National Company Law Tribunal (NCLT) approved the amalgamation of Trinetra Cement Ltd. and Trishul Concrete Products Ltd. with The India Cements Ltd.
- As of March 2018, Ultratech Cement has purchased a 98.47 per cent stake in Binani Cements for Rs 7,266 crore (US\$ 1.12 billion). The deal will help Ultratech achieve greater capacity and markets its product in north-India.

Source: Union Budget 2016 – 17, Union Budget 2017-18, Emkay Global Financial Services, News Articles

SUCCESSFUL USE OF ALTERNATE FUELS IN CEMENT PRODUCTION

Company/Plant	Strategy	Benefits
Madras Cement's Alathiyur plant	Module Use bioenergy through burning of coffee husk & cashew nut shells	Annual cost savings of US\$ 1.7 million
India Cements Ltd's Dalavoi plant	Use Low Sulphur Heavy Stock (LSHS) sludge as alternate fuel	Annual savings of US\$ 6,500 approx
UltraTech's Gujarat Cement Works	Use tyre chips & rubber dust as alternate fuel	Reduction of about 30,000 tonnes of carbon emissions annually
Lafarge's Arasmeta plant	Substitute 10 per cent of coal used in kilns with rice husk	Higher energy savings and lower carbon emissions

Source: CMA

Porter's Five Force Framework Analysis

Threat of Substitutes

- **Low** – Although there are partial substitutes such as asphalt, glass, steel, wood, etc.; practically cement has no direct substitutes

Bargaining Power of Suppliers

- **Moderate** – Cement players have to depend on the railways for carriage outward & local coal companies for fuel, although diversification of freight options & fuel sources is diminishing the suppliers' power

Competitive Rivalry




- **Low** – The Indian cement market is oligopolistic in nature, characterised by tacit collusion, where large players partially control supply for better price discipline

Bargaining Power of Buyers

- **Low** – Substantial market concentration among large players ensures low bargaining power of buyers

Threat of New Entrants

- **Low** – Huge capital investments required present substantial barriers to entry & achieving economies of scale

-  Positive Impact
-  Neutral Impact
-  Negative Impact

Source: Aranca Research

GROWTH DRIVERS AND OPPORTUNITIES



GROWTH DRIVERS AND OPPORTUNITIES

Housing

- Forms the major portion of cement demand at around 67 per cent
- Real estate market to increase at 11.6 per cent CAGR in 2011-20.
- Government initiatives like Housing for all to push demand in the sector.

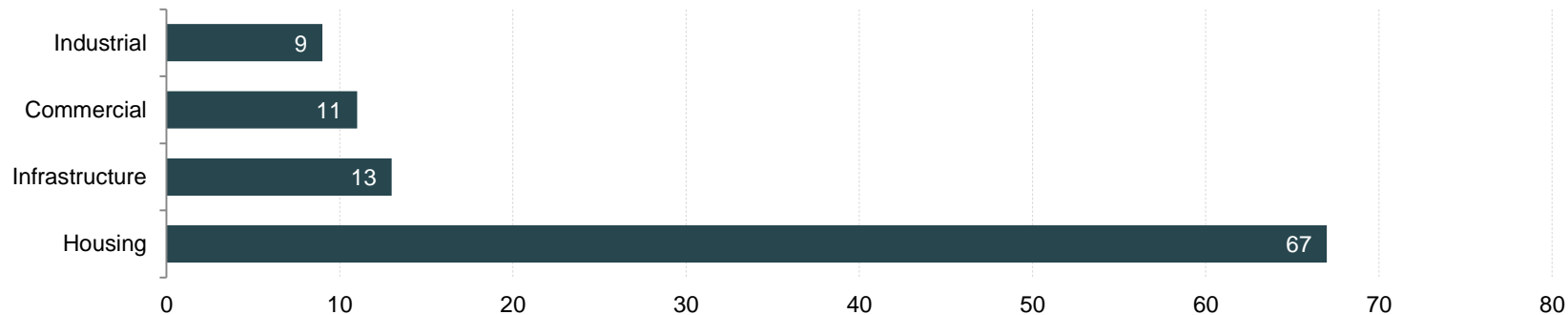
Infrastructure

- Strong focus of government
- 100 smart cities planned
- Projects like Dedicated Freight Corridors and ports under development.
- Metro rail projects already underway in most major cities.

Urbanisation

- Development of 500 cities with population of more than 100,000 under new Urban Development Mission

% share of cement demand in FY17



Source: Ministry of External Affairs (Investment and Technology Promotion Division), AT Kearney, CARE Ratings

INVESTMENT SCENARIO



Emami Cement

- Emami Cement, a renowned brand of Emami Group, announced expansion plans with an investment of about US\$ 74.7 million in 2016.
- The company plans to commission a grinding plant in Odisha by March 2018. An investment of US\$ 94 million has been made in the plant.
- The company plans to increase its capacity from existing 2.4 MT to 15-20 MT by 2021, with an investment of US\$ 1.27 billion.

Shree Cement

- The company has undertaken two greenfield projects in West Bengal and Odisha to increase its presence in eastern India. These projects will attract an investment of US\$ 78 million and will be commissioned by late 2018.

Ambuja Cement

- Lafarge Holcim, the parent company of Ambuja Cement, is planning to merge Ambuja Cement with ACC cement. The merger is expected to be completed in the next six months. (by FY18)
- In June 2017, Odisha Government gave its nod to Ambuja Cements for setting up a cement grinding unit of 1.5 million tonnes per annum at a cost of US\$ 66.43 million.
- As of March 2018, the company is going to invest Rs 1,391 crore (US\$ 214.86 million) for setting up a 1.7 MTPA greenfield clinker plant in Rajasthan which is expected to be operational by second half of 2020.

Ultratech Cement

- Ultratech plans to build a new plant with capacity of 3.5 MTPA* at Dhar in Madhya Pradesh with an investment of US\$ 400 million. The plant is expected to start commercial production by 2019.
- The company is planning to build a US\$ 287 million plant in Rajasthan. The plant will have a capacity of 3.5 million tonnes per annum and is expected to commence operations by June 2020.
- The company has received approval for a US\$ 9.04 million opencast limestone mine project in Gujarat. The project has a capacity of 2.07 MTPA* of limestone which will be used to support a proposed cement plant in Bhavnagar district.

Note: MTPA – Million Tonnes Per Annum

Source: Aranca Research, News Articles

ACC

- The subsidiary of Holcim, has plans for a US\$ 500 million capacity expansion in India
- ACC will upgrade and expand its Jamul unit in Chattisgarh & its grinding unit in Jharkhand. This will increase ACC's capacity to 38 mtpa from 30 mtpa in a phased manner by 2016 & 55 mtpa in 2020

Heidelberg Cement

- Heidelberg Cement, a Germany-based cement manufacturer has commissioned Phase-I of its Jhansi grinding unit
- The company has undertaken an investment worth US\$ 259.4 million for expanding its capacity to 2.9 MT
- Heidelberg aims to ramp up the operational capacity to 6 MT at its Damoh plant in Madhya Pradesh, striving to add an additional 9 MT by 2017

Dalmia Cement

- Dalmia Bharat is planning to expand its capabilities in East India. The company already has a 14 per cent market share in the region, as of FY17.
- It is the preferred bidder for one block of Limestone (Kesla II) in Raipur, with reserves of 215 million tonnes. The deal is expected to generate cumulative revenues worth US\$ 1.76 billion for the state government.

JK Cement

- JK Cement is planning to invest Rs 1,500 crore (US\$ 231.7 million) over the next 3 to 4 years (from September 2017) to increase its production capacity at its Mangrol plant from 10.5 MTPA to 14 MTPA.
- The company is aiming to further increase its production capacity to reach 18 MTPA by 2022.

Amrit Cement

- Amrit Cement India Ltd (ACIL) has announced the launch of Amrit Cement in the North-Eastern market
- The company plans to achieve a production level of 5 million tonnes per annum by FY16, through capacity expansion in North-Eastern Bihar and Nepal

Source: Aranca Research, News Articles

Union Budget 2018-19

- The Union Budget has allocated US\$ 92.22 billion for infrastructure development in 2018-19 as compared to US\$ 76.31 billion in 2017-18 (RE). Government's infrastructure push combined with housing for all, Smart Cities Mission and Swachh Bharat Abhiyan is going to boost cement demand in the country.

Affordable Housing Fund

- In Budget 2018-19, Government of India announced setting up of an Affordable Housing Fund of Rs 25,000 crore (US\$ 3.86 billion) under the National Housing Bank (NHB) which will be utilised for easing credit to homebuyers. The move is expected to boost the demand of cement from the housing segment.

Pradhan Mantri Awaas Yojana - Gramin scheme

- An outlay of Rs 33,000 crore (US\$ 5.097 billion) has been proposed for building 4.9 million houses under Pradhan Mantri Awas Yojana – Gramin in Union Budget 2018-19.

Auction of one block of Limestone (Kesla II)

- The State Government of Chattisgarh has auctioned one block of Limestone (Kesla II) in Raipur District having estimated reserves of 215 million tonnes valued at Rs 10,367 crore (US\$ 1.62 billion), and would earn a cumulative revenue of Rs 11,894 crore (US\$ 1.85 billion) to State Government over the lease period.

Note: RE – Revised Estimate

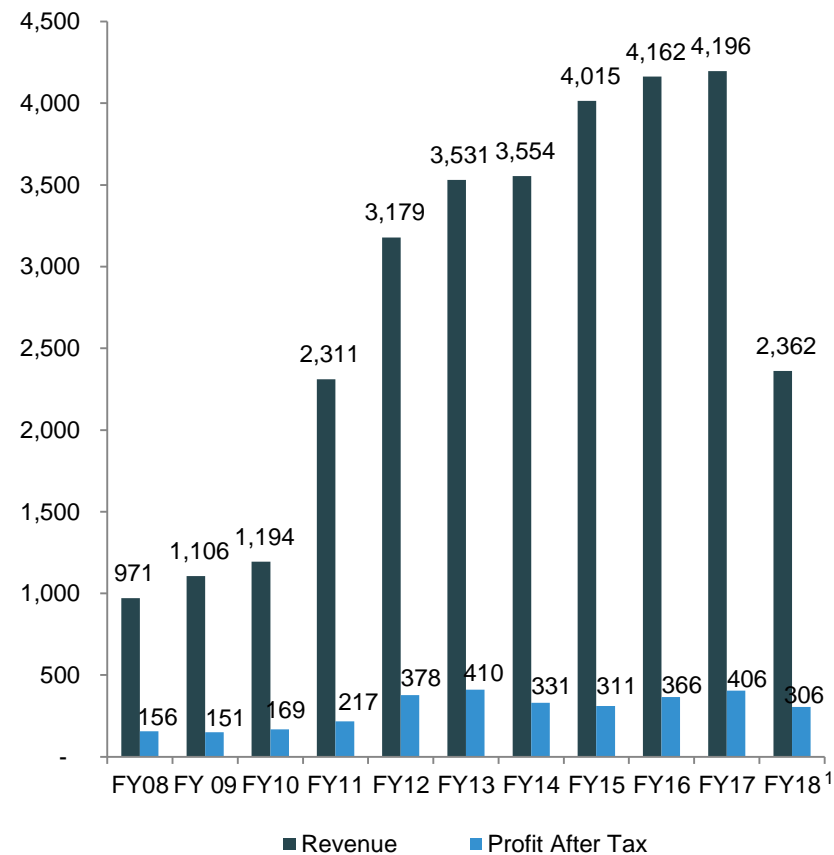
Source: Aranca Research. News Articles

CASE STUDIES



- Ultratech is the largest cement player in India and fifth largest globally.
- It is India's largest exporter of cement meeting demands in countries across the Indian Ocean, Africa, Europe & Middle East
- Its operations span across India, UAE, Bahrain, Bangladesh and Sri Lanka
- It has 18 integrated plants, 1 white cement plant, 1 clinkerisation plant, 2 WallCare putty plants, 25 grinding units, 7 bulk terminals & 101 Ready Mix Concrete (RMC) plants.
- Projects: Mumbai Metro, Bangalore Metro Rail, Kolkata Metro Rail, Monorail, Coastal Gujarat Power
- During FY 2016-17, the company reported EBITDA of US\$ 873 million.

Financial Performance (US\$ million)



Note: ¹ From April to September 2017

Source: Annual Report, Aranca Research, Moneycontrol

ULTRATECH CEMENT: MILESTONES

Narmada Cement Company Limited amalgamate with UltraTech

Buys Jaypee Cement's Gujarat unit



2004

2006

2010

2013

2016

Acquisition of L&T's Cement Business: UltraTech Cement Ltd

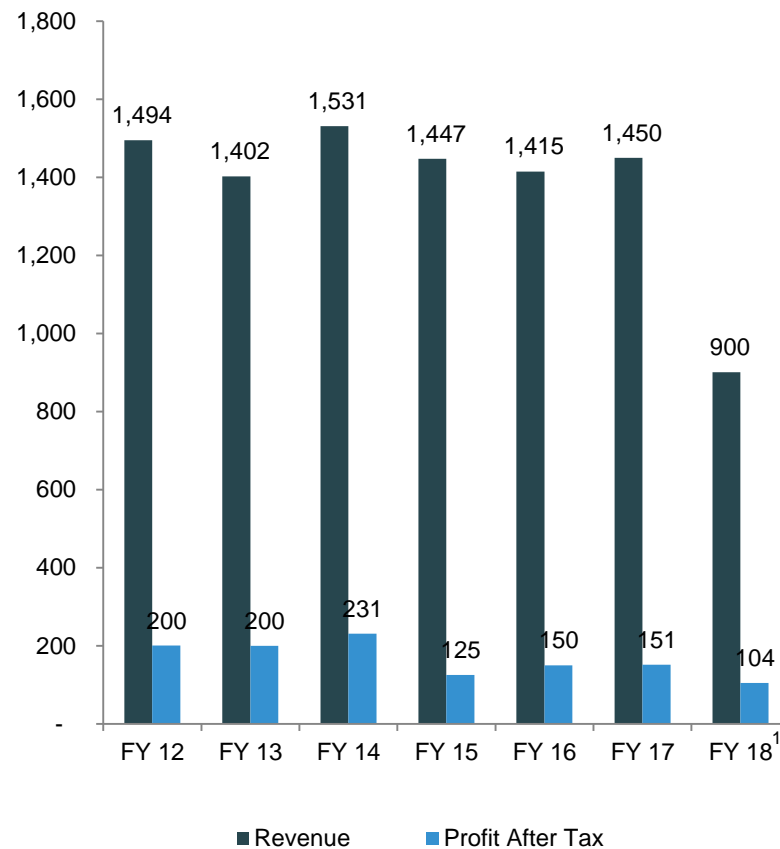
Samruddhi Cement Limited amalgamated with UltraTech Cement Limited

Greenfield & Brownfield expansion. Capacity: 67.7 mtpa (including 3 mtpa overseas)

Source: Aranca Research, Annual Report

- Ambuja Cements Ltd (ACL) is one of the leading cement manufacturing companies in India.
- The company, initially called Gujarat Ambuja Cements Ltd, was founded by Narotam Sekhsaria in 1983
- Ambuja Cements is the 2nd largest cement manufacturer in India, with nearly 10 per cent of the market share of total installed capacity
- It is the market leader in Northern India with 29 per cent of the total installed capacity.

Financial Performance (US\$ million)



Note: ¹ From April to September 2017

Source: Aranca Research, Annual Report, Moneycontrol

AMBUJA CEMENT: MILESTONES

Acquired 85 per cent stake in Nepal-based Dang Cement

Acquiring Holderind Investments Ltd, Mauritius (Holcim), These transactions will result in Ambuja holding 50.01 per cent stake in ACC

2010

2011

2012

2013

2015

Started cement plant at Nalagarh, Himachal Pradesh & Dadri, Uttar Pradesh with a capacity of 1.5 million tonnes

Expansion of Sankrail Grinding Unit, thereby increasing the capacity from 1.5 mtpa to 2.4 mtpa

Ambuja Cement becomes the leading water positive cement company in India with 4.03 times water positive factor

Source: Aranca Research, Annual Report

KEY INDUSTRY ORGANISATIONS



Cement Manufacturers' Association (CMA)

CMA Tower, A-2E, Sector 24 NOIDA – 201 301
Uttar Pradesh, India
Phone: 91-120-2411955, 2411957, 2411958
Fax: 91-120-2411956
E-mail: cmand@vsnl.com
Website: www.cmaindia.org/index.html

Indian Concrete Institute

Ocean Crest 79, Third Main Road, Gandhi Nagar, Adyar, Chennai – 600 020
Phone: 91-44-24912602
Fax: 91-44-24455148
E-mail: ici3@vsnl.in, ici4@airtelmail.in, vj6314@gmail.com
Website: www.indianconcreteinstitute.org

National Council for Cement and Building Materials

34th Milestone, Delhi-Mathura Road, Ballabgarh – 121 004 Haryana, India
Phone: 91-129-2242051/52/53/54/55/56; 4192222
Fax: 91-129-2242100; 2246175
E-mail: nccbm@vsnl.com; info@ncbindia.com

USEFUL INFORMATION



- CMA: Cement Manufacturers' Association
- GDP: Gross Domestic Product
- Gol: Government of India
- INR: Indian Rupee
- MTPA: Million Tonnes Per Annum
- NE India: North-East India
- FY: Indian Financial Year (April to March)
- (FY10 implies April 2009 to March 2010)
- US\$: US Dollar
- Wherever applicable, numbers have been rounded off to the nearest whole number

EXCHANGE RATES

Exchange Rates (Fiscal Year)

Year INR	INR Equivalent of one US\$
2004-05	44.81
2005-06	44.14
2006-07	45.14
2007-08	40.27
2008-09	46.14
2009-10	47.42
2010-11	45.62
2011-12	46.88
2012-13	54.31
2013-14	60.28
2014-15	61.06
2015-16	65.46
2016-17	67.09
Q1 2017-18	64.46
Q2 2017-18	64.29
Q3 2017-18	64.74

Exchange Rates (Calendar Year)

Year	INR Equivalent of one US\$
2005	43.98
2006	45.18
2007	41.34
2008	43.62
2009	48.42
2010	45.72
2011	46.85
2012	53.46
2013	58.44
2014	61.03
2015	64.15
2016	67.21
2017	65.12

Source: Reserve bank of India, Average for the year

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