

The construction industry ^{p4}/Building and home products ^{p6}

Home improvement The building and home products industry







Preface

The services sector has, over the last few years, accounted for over 60% of India's GDP, and underpinned a significant share of employment creation and growth. Within this, construction has been important, not just for its direct contribution to GDP, but also because it drives demand for a range of manufactured products, from cement to sanitary-ware. Initiatives from the government to support and stimulate this sector would, therefore, have a positive impact on the economy as a whole, and the manufacturing sector in particular.

Urbanisation has been a growing phenomenon that now extends beyond the metros. The emergence of 'Census Towns' and the noticeable 'rurban' sprawl indicating the shift to the tertiary sector as employment patterns shift, is indicative of changing lifestyles and consumption patterns. Rising income and improvement in standards of living will create demand for products such as ceramic tiles and sanitary-ware. Growth of the urban middle class is likely to drive demand for modular kitchens as well as premium bathroom fittings. Our analysis re-confirms the growing demand for a range of home products.

Despite a general slowdown in the economy, growth in the construction sector remained strong over the last two years. Growth in the middle class and the persistence of real estate as a favored store of savings, portend well for real estate construction going forward. In the medium term, with this underlying demand as well as increases in disposable income and consumption, we see potential for continued growth of a range of manufactured products from air conditioning to ceramic tiles and ready-mix concrete.

Our objective, in preparing this report, is to profile trends in the real estate construction industry and outline how these will impact demand for certain manufactured products.

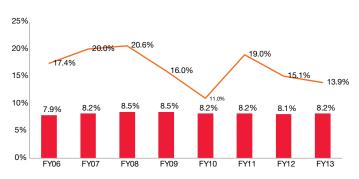
Bimal TannaLeader, Industrial Products PwC India

The construction industry

Introduction

Construction has been a significant contributor to the economy, accounting for approximately 8% of the GDP. In FY13, this sector grew at 13.9% (at market prices) over the previous year, marginally increasing its share of GDP.

Figure 1: Construction sector growth and contribution to GDP



Source: "Planning Commission Data Book" Planning Commission and "Services Sector" - India Budget NIC

After a period of sustained growth, when in seven of the previous nine years economic growth exceeded 8% per annum, GDP estimates for the year ended March 2013 (FY13) indicated that year-on-year growth had dropped to a decadal low of 5%¹ economic performance in the first few months of FY14 has continued to look weak, leading to concerns related to growth in the short term.

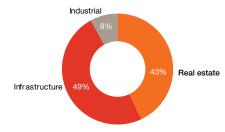
Positives include strong household consumption (real growth in household consumption dropped to 4% in 2012, though it was over 12% at market prices), and growth of the middle class continues to drive demand. The National Council for Applied Economic Research (NCAER) estimates indicate that the middle class grew from 11 million households in FY02 to 31 million households in FY11, and is further expected to grow to 53 million households in FY16 and 114 million households in FY262.

The NCAER findings also illustrate the importance of the middle class to consumption of many products. The segment comprises only 13% of India's population, but owns 49% of cars, 53% of air conditioners and 46% of credit cards in India3.

Real estate construction in India

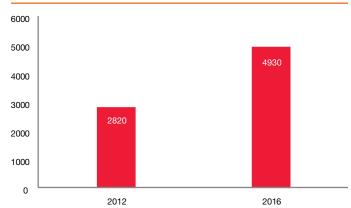
In the last decade, the country has witnessed a significant growth in demand for housing, driven by growth in income and population; this has stimulated growth of the real estate sector. Typically, commercial and residential construction accounts for 40 to 45% of spend on construction in India.

Figure 2: Contribution to construction by segment



Source: "Report on the Working Group on Construction Sector" - Planning Commission), PwC analysis

Figure 3: Size of the Indian real estate construction segment (INR billion)



Source: PwC analysis

Premium real estate construction

An important factor driving the attractiveness of the Indian market is the growing level of urbanisation in India. Urban India accounted for 31.2% of the population in 2011, up from 27.8% in 2001. This implied that the number of urban households grew by over 25 million during that decade. Consequently, this has spurred demand for new housing as well as upgrades to the existing urban infrastructure.

^{1.} The Planning Commission of India

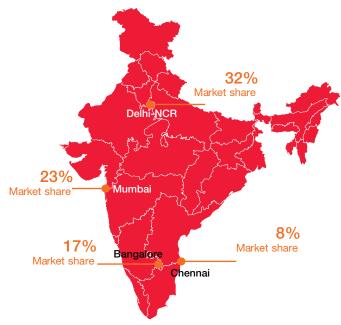
^{2.} National Survey of Household Income and Expenditure 2011- National Council for Applied Economic Research

^{3.} National Survey of Household Income and Expenditure 2011- National Council for Applied Economic Research

^{4.} Census of India, 2011

Premium real estate construction accounts for approximately 7 to 8% of the real estate construction market in India. This segment is concentrated in the major cities, with Mumbai and Delhi alone accounting for approximately 55% of the market. With reports of slowdown in off-take and build up of unsold inventory for premium real estate in certain markets, premium real estate construction could face a slowdown in the next few months.

Figure 4: Premium real estate construction in India (residential and commercial)



Source: Industry discussions, PwC estimates

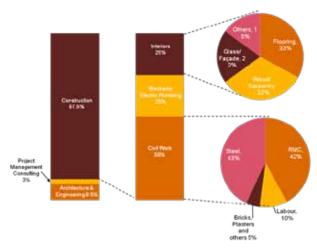
The value chain

Real estate construction comprises both product and service elements. In a typical project, approximately two thirds of the project value goes into various manufactured items, with the rest spent on services and labour.

A typical real estate construction project comprises three parts:

- Architectural and engineering (A&E) design, comprising master planning, detailing and structural engineering phases
- Project management consulting (PMC), pertaining to the activities related to project management
- Construction, comprising civil works, MEP (mechanical, electrical and plumbing) services and interiors, fit-outs phases

Figure 5: Indian real estate construction project cost



Source: Industry discussions, PwC analysis

Household consumption grew over 12% in 2012, at current prices in India. Given India's potential for growth in the longer term, there is substantial headroom for growth in many such industries.

Trends in real estate construction in India

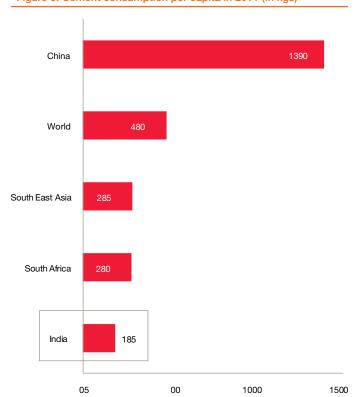
Within real estate construction in India, international suppliers are sometimes selected for certain aspects of A & E (particularly master planning) and project management. Brand name, reputation, technical knowhow and experience are the most common factors driving real estate developers to appoint foreign contractors. In the area of interiors, fit-out and MEP, penetration of international suppliers and contractors is increasing, particularly in the premium space. Real estate developers are beginning to leverage various suppliers for attaining product differentiation. Indian contractors are preferred for construction due to their familiarity with local conditions and ability to manage costs.

Building and home products

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Growth in the construction sector has, over the last few years, driven growth for a variety of products either used directly in the construction process or complementary to it. The intensity of construction in India is still low in comparison with other countries – this is illustrated by the low per capital usage of key materials used in construction.

Figure 6: Cement consumption per capita in 2011 (In kgs)



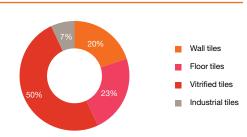
Source: "Indian Cement Industry" - ARC Financial Services

In this section we briefly profile the size, growth and key trends for five building and home product industries, where growth is strongly related to the real estate and construction.

Ceramic tiles

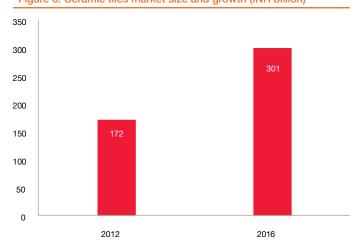
The Indian ceramic tiles market size is estimated to have been 172 billion INR in 2012 and is expected to reach 301 billion INR by 2016 growing at a CAGR of 15%. The Indian ceramic tiles market ranked third globally and accounted for over 6% of the total global production in 2012. The organised segment makes up approximately 50% of the sector, and the top eight manufacturers constitute over 75% of the organised market⁶. A large number of small or medium-scale manufacturers operate in the unorganised segment, mainly through plants in Gujarat. Nearly 50% of the market consists of vitrified tiles⁷.

Figure 7: Ceramic tiles market segmentation



Source: "Ceramic Tiles Market India "- Netscribes, PwC analysis

Figure 8: Ceramic tiles market size and growth (INR billion)

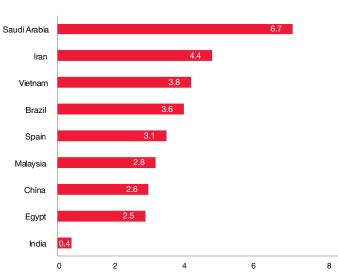


Source: PwC analysis

^{6.} India Building Materials - Anand Rathi 7. India Building Materials - Anand Rathi

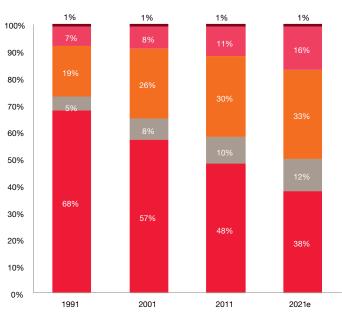
India has one of the fastest growing ceramic tiles markets in the world. Per capita consumption of ceramic tiles in India is only 0.4 square meters in comparison to 2.6 square meters in China, and 6.7 square meters in Saudi Arabia⁸ indicating substantial scope for further growth.

Figure 9: Per capita consumption of tiles in sq.metres (2010)



Source: "Ceramic Tiles Market India "- Netscribes,

Figure 10: Distribution of houses by floor material



Source: Census of India, "India Building Materials" - Anand Rathi

■ Mud ■ Wood, bamboo, brick, stone ■ Cement
■ Mosaic. floor tiles ■ Any other material

The ceramic tiles market is driven by rapid urbanisation and a taste for high-end tiles. The increasing share of pucca houses (i.e. of solid and durable construction; typically of concrete, brick, stone or timber) in India and the growing share of tiles used as flooring material. The share of pucca households is expected to increase from 63% in 2011 to 79% in 20219. The share of tiles used in floor material has increased from 7% in 2001 to over 10% in 2011, and is expected to reach 16% by 202110.

Trends in the ceramic tiles market in India

- *Introduction of nanotechnology:* Use of nanotechnology helps enhance the shelf life and strength of the tile and can make tiles resistant to dirt and bacteria. These tiles are gaining popularity in areas where hygiene is important, such as hospitals, laboratories, food processing plants, etc.
- *Eco-friendly tiles:* Usage of eco-friendly tiles is expected to increase as consumers become more environment-conscious. Recycled eco-friendly tiles are usually made from natural and renewable substances.
- Designer tiles and introduction of 3-D tiles: Titles are now becoming a style statement and are used for bedroom and living room walls as well. 3D tiles are also being used for outdoor cladding, wall cladding, elevation, etc.
- Shift towards vitrified tiles: Vitrified tiles, comprising nearly 50% of the ceramic tiles market have witnessed robust growth in the last five years with increasing demand due to their high durability and easy maintenance.

Sanitary-ware and bathroom fittings

The sanitary-ware and bathroom fittings industry in India together is estimated to be valued around 60 billion INR. The sanitary-ware segment is estimated to have been worth approximately 20 billion INR while the bathroom fittings segment is estimated at approximately 40 billion INR in 2012. The Indian sanitary-ware market accounts for 8% of the global production and ranks second in terms of volume in the Asia-Pacific region.

^{8.} India Building Materials - Anand Rathi

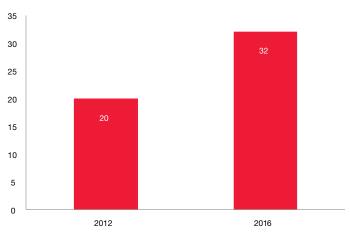
^{9.} Census of India, 2011

^{10.} Census of India 2011, India Building Materials - Anand Rathi

The sanitary-ware market has been growing at a CAGR of 12.5% since 2010, and this trend is expected to continue through 2016. The organised segment currently comprises 60% (approximately) of the sector. The bathroom fittings market is forecast to grow at a CAGR of 15% until 2016. The organised segment makes up almost 45% of the market, and is growing faster than the industry average.

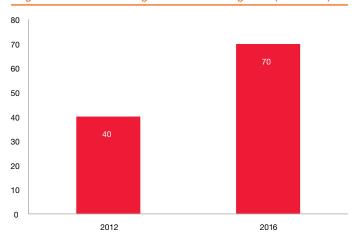
While the organised sector focuses mainly on middle class and affluent segments in urban areas, the unorganised sector has, by and large, targeted the mass end of the urban market and the rural areas. With relatively strong demand growth in India over the last five years, various MNCs have entered the market.

Figure 11: Sanitary-ware market size and growth (INR billion)



Source: PwC analysis

Figure 12: Bathroom fittings market size and growth (INR billion)



Source: PwC analysis

There is a significant growth potential in the in the low-cost or entry-level segment. One in every five urban households, and an even higher proportion of rural households, do not have a bathroom or latrine emphasising on the tremendous potential to expand with rising incomes and pucca houses.

Compared with other countries, replacement demand is low in India, and accounts for only 7% of the market¹².

"As per the Census data, 19% of urban homes do not have a toilet"

Other factors such as increasing disposable incomes, higher standards of living, and increasing expenditure on beautifying homes and using premium products provide a further impetus to the growth of this segment.



^{11.} India Building Materials - Anand Rathi, PwC analysis 12. Sanitaryware Market in India 2012 - Netscribes

Trends in the sanitaryware and the bathroom fittings market

- *Complete bathroom solutions:* Due to the rising popularity of concept washrooms and coordinated sanitary-ware, fittings and accessories, some manufacturers are offering a one-stop shop solution for all sanitary-ware and fittings requirements. The in-store experience has grown in importance, and manufacturers have established 'Experience-Centers', which are one-stop shops where a customer can view a virtual version of their bathrooms, post renovation.
- Water conservation technology: Bathrooms constitute the primary source of water and water usage. With increasing environmental awareness, customers are moving towards eco-friendly sanitary-ware and bathroom fittings that help in the conservation of water. These eco-friendly products offer a 20% savings in water as compared with other products. Solutions such as high efficiency flushing systems, infrared controls, and sensor taps and showers are gaining popularity.
- *Increasing presence of foreign players:* Initially, domestic players dominated the market in this segment. However, foreign players are gaining popularity as more and more customers wish to purchase imported products. There have been some tie ups between foreign players and domestic players in this segment.
- Rise in premium segment products: Indian customers are gradually purchasing more premium and high technology products for their bathrooms due to increase in the spending power. The premium segment is estimated to comprise about 10 to 12% of the total market.

Modular kitchens

The modular kitchen market in India has been growing at a rapid rate, albeit from a low base. According to industry experts, the market was approximately 21 billion INR in size in 2012, and could grow to about 60 billion INR by 2016. The market is largely unorganised with the presence of local and small players. The unorganised market (estimated at 70 to 75% of the total) includes carpenters making custom-designed kitchens based upon the requirements of the households. Modular kitchens account for an estimated 20% of the organised home interior market13.

They account for only about 10% of the overall kitchen equipment and furniture industry. Thus, there is scope for the modular kitchens market to grow.

Figure 13: Modular kitchen market size and growth (INR billion)

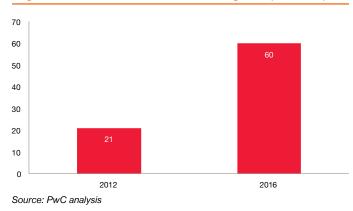
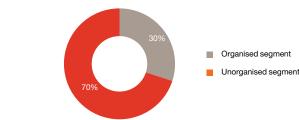


Figure 14: Share of organised and unorganised segment in the modular kitchen market



Source: "Modular Kitchen Market in India" - Netscribes

Modular kitchens are largely focused towards the middleclass and affluent households in urban India and offerings are based on functional practicality, design and appeal. Increase in the number of nuclear families, rise in the number of working couples, higher disposable income, and increased affordability of such offerings are all factors that have driven awareness levels and increased demand for modular kitchens. Owing to their compact design, modular kitchens provide effective space management and hence are preferred over traditional kitchen designs.

The growing hospitality sector and increase in demand for 'service apartments' has also boosted sales of modular kitchens. Service apartments generally prefer modular kitchens because of their sleek design and standardisation.

There has also been a surge in demand from Tier 2 cities and smaller towns resulting in expansion and foray of major brands into these towns.

Trends in the modular kitchen market in India

- European design: There has been an increase in the demand of European style modular kitchens as the design is seen to be clutter-free, trendy and modern and the colour palette is subtle compared to Indian kitchens.
- Key convenience and trendy features: Incorporated lighting, soft closing doors and high end accessories have become common in modular kitchens in India. The current trend includes handle-less doors, soft closing drawers, top open-able glass doors, rust proof and grease resistant counter tops, water-proof cabinets and built-in appliances. Pastel shades and wooden finish kitchens are the fastest growing trends in the modular kitchen segment.
- New players: Several European companies (particularly from Italy, Germany and Austria) as well as the Middle East have recently entered the Indian market.
- *Tie-ups:* Companies engaged in the modular kitchen segment are setting up joint ventures with international players who are engaged in the similar line of business. Domestic players benefit from the technological expertise provided by international players. International players are entering the market through tie-ups with domestic firms for the distribution of their products in India.

Air-conditioning and cooling systems

As per our estimates, the air-conditioning and cooling systems market in India is currently worth INR 155 billion, and is projected to grow at a CAGR of 12% through to 2016. The growth in this segment has however witnesses a recent slowdown. The air-conditioning and cooling systems market can be bifurcated into three segments:

- Room segment (consists of wall units)
- Commercial segment (retail outlets, dairy, pharmaceutical, chemicals, etc)
- Project segment (office complexes, malls, metro rail, airports, hotels, etc)

The room segment accounts for the largest share, with over 45% of the revenue coming from this segment.

Figure 15: Air-conditioning and cooling market size and growth (INR billion)

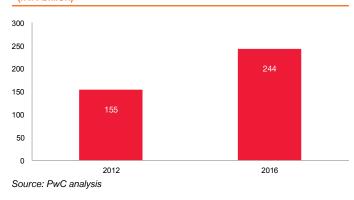
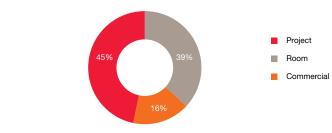


Figure 16: Share of different segments in the air-conditioning and cooling market



Source: PwC analysis

Despite high sales in the room air-conditioning segment in India, penetration of the product is very low, with only 3.8% of households owning an air conditioner. This presents an opportunity for the industry to exploit. Increase in penetration will aid sustained growth momentum.

Growth in the project air-conditioning segment is expected to come from increased investment activities from sectors such as hospitality, power, etc. The railway segment is expected to contribute significantly to the growth due to capacity addition in the sector and construction of metro rail in eight locations across India.

In the commercial segment, the need for quality infrastructure in various sectors is expected to drive growth. The organised retail industry is expected to add over 100 million square feet by 2015¹⁴, and this presents an opportunity for the air conditioning industry. Investments in the cold chain and food processing industries will directly benefit the commercial air conditioning segment.

Trends in the air-conditioning market

- *Price increase and currency devaluation impact:*Drop in the value of the rupee, since January 2013 has resulted in higher costs for air conditioner manufacturers in India, since many of the components are imported. Further price increases, stemming from continued fall in the value of the rupee, could impact demand and growth of the industry in the short term.
- Green solutions: Since consumers are growing more environment conscious, companies are introducing air conditioning technologies that reduce emissions of HFCs and CO2. India is one of the first countries, to have introduced HC-290 and HFC-32 air conditioners, which are more efficient and economical.
- Energy efficient air-conditioning: There is a focus on energy-efficient air conditioners. Several companies have introduced air-conditioners endowed with inverter technology that has a shorter motor run-time and therefore consumes less electricity. Star rating for energy consumption is also followed in India.
- All-year functionality: Some companies are trying to de-risk the AC business and make their products more weatherproof by adding new features. These include an all-weather AC with heating feature that can be used in the winter.

- *Financing and purchase options:* AC manufacturers are looking to bring ACs within the reach of a much larger percentage of the population. Finance driven sales are estimated at between 25 and 30% of total sales of room air conditioners.
- *Growth in variable refrigerant volume systems:* Faster growth of VRV systems and inverter based airconditioning solutions has been witnessed.

Cement and ready-mix concrete

India is the second largest cement manufacturer in the world after China, accounting for about 7% of global production ¹⁶. Cement production in India is a fragmented industry with more than 150 players in the market. However, the top 10 producers of cement control approximately 60% of the domestic market ¹⁷.

Figure 17: Cement production in India (MTPA)



Source: PwC analysis

Since cement is a bulky commodity, that is expensive to transport, the market is regional in nature. The market is divided into five main regions; northern, eastern, western, southern and central. The southern region has the highest installed capacity. The eastern region faces a demand-supply gap, which will lead to capacity additions.

The housing sector is the main driver of demand for cement manufacturing, with approximately 68% of cement production directed towards housing construction¹⁸.

^{14.} Changing Landscape of Indian Retail - Jones Lang LaSalle

^{15.} Cement Production India - Emerging Market Insights

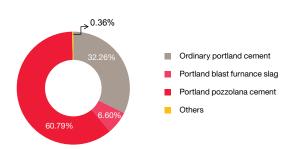
^{16.} Cement Production India- Emerging Market Insights

^{17.} Investor Presentation - ACC

Despite India being the second largest cement manufacturer in the world, the per capita consumption for cement, at 185 kg per annum, is well below the world average of 480 kg^{19} . The low per capita consumption indicates the potential for growth in the cement industry in India.

Recently the cement industry is witnessing a slowdown due to subdued capital investments in the industrial sector and delays in execution of infrastructure projects.

Figure 18: Cement production by variety



Source: "India Cement Sector Report" - Emerging Markets Insight - India

Ready-mix concrete

Ready-mix concrete in India is still in a nascent stage as it consumes only around 5% of the total cement production. In developed nations, RMC accounts for up to 80% of cement production²⁰.

The current market size of RMC is estimated at 50 billion INR to 60 billion INR 21 . Current production of RMC is around 15 to 20 million cubic meters a year, and in terms of volume, the market is growing at the rate of 25 to $30\%^{22}$. Since the demand for RMC is expected to grow significantly over the next few years, several players have forayed into the segment.

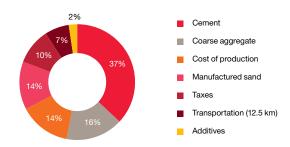
Though the penetration of RMC is higher in the metropolitan cities as compared to all the India average, there is scope for further penetration of RMC in smaller cities due to expected infrastructure development.

At present, there are approximately 380 ready mix concrete plants in India.

Challenges in the ready-mix concrete segment

Higher costs: Ready-mix concrete is slightly
more expensive than site mixed concrete due to
transportation costs and usage of additives. However,
in the long run, it is expected that increase in the usage
of RMC will lead to more cost savings as there is a
decrease in overall wastage on usage of RMC.

Figure 19: Cost break-up of RMC



Source: "Ready Mix Concrete Business: Operational vs Strategic Choices" - IIM Kozhikode

An additional cost factor is the cost of setting up a plant near the construction site. Since RMC cannot be transported over long distances, the plant needs to be within two hours travel distance of the travel site; high real estate prices in urban areas increase the cost of setting up or operating an RMC plant. On the other hand, increasing urban congestion makes the use of RMC more attractive vis-à-vis site-mix as there is less pollution and noise at the construction site.

- Sand availability: Due to the recent ban on illegal mining of sand and depletion of sand resources, sand prices have increased substantially in the past few months. In some cities, the prices of sand have increased over 50% in the last year.
- *Transportation:* The materials for RMC are mixed at a central plant, so the travelling time from the plant to the site is critical. Some sites are far away and RMC has a limited time span before it hardens. Transportation time for RMC should ideally not exceed two hours.
- Taxes: Taxation is another major deterrent since RMC manufacturers have to pay VAT on the concrete, which is not applicable for SMC.

^{19.} Indian Cement Industry - ARC Financial Services

^{20.} Project Profile on Ready Mix Concrete Plant in Kerala - Kerala State Industrial Development Corporation

^{21.} Projects info

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