CBRE

INDIA REAL ESTATE

VARIANCE IN CONSTRUCTION COSTS

THEN AND NOW

CBRE RESEARCH | 2018

INDIA REAL ESTATE - VARIANCE IN CONSTRUCTION COSTS – THEN AND NOW

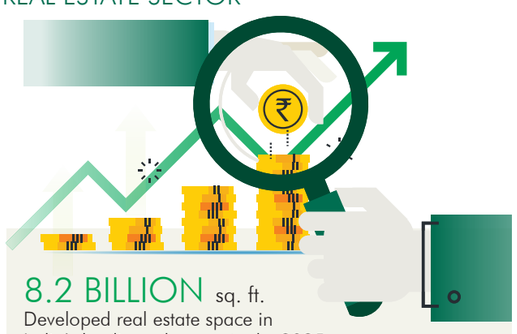
In India, the construction industry is an important indicator of the state of the economy as it is one of the largest employment generators in the country, after agriculture and retail. With strong linkages to industries such as cement, steel, chemicals, paints, tiles, etc., the construction sector also has a strong connection to the real estate sector, which serves as one of the propellers of private sector involvement in the country's built environment.

CBRE research estimates that the overall stock of developed real estate space in India's leading urban centers will reach 8.2 billion sq. ft. by 2025 and provide employment to about 17 million people across the country. The total contribution of the real estate sector in India's GDP in 2025 is likely to reach around 13%[1] . In addition, India is expected to become the third largest construction market in the world by 2020, with the real estate sector expected to reach a size of USD 180 billion[2].

Overall, the real estate sector has undergone a significant metamorphosis in the past couple of years. Expanding urban limits, sustained demand for housing, relaxation of regulatory bottlenecks and inflow of foreign investment have churned activity in this sector. Even though demand for residential real estate has been subdued in leading cities such as Delhi, Gurgaon and Mumbai, other segments such as commercial, industrial and retail have witnessed a significant momentum in both space take-up and construction activity.

1. CBRE report "Assessing the Economic Impact of India's Real Estate', 2013
2. Oxford Economics and Global Construction Perspectives

FIGURE 1 : OUTLOOK FOR THE INDIAN REAL ESTATE SECTOR



8.2 BILLION sq. ft.
Developed real estate space in India's leading urban center by 2025

AROUND 13%
Contribution of real estate sector to India's GDP in 2025

Source : CBRE report "Assessing the Economic Impact of India's Real Estate', 2013

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THE COST PARADIGM - MOVEMENT IN PRICES OF CONSTRUCTION MATERIALS

While the real estate activity has been on a growth trajectory from a construction costs perspective, the continuous increase in input costs has posed issues for the efficacy of cost estimates, leading to increased costs as well as delayed project completions. Soaring prices of cement and steel – the most important construction raw materials – are largely responsible for pushing up construction costs.

According to CBRE estimates, the prices of cement have nearly tripled in the past 16 years, peaking in December 2013 to INR 300 per bag and then declining to INR 270 per bag in November 2017. Steel prices have followed a similar trend, peaking at INR 48,000/MT in December 2013 from INR 17,500/MT in April 2002 and settling at INR 41,577/MT in 2017. Meanwhile, the cost of sand per cubic metre (cu. m.) more than doubled between April 2004 and April 2006, from INR 400/cu. m. to INR 850/cu. m. By November 2017, it had increased to INR 2,400/cu. m., a nearly threefold rise from 2006. The cost of structural steel too more than doubled between April 2005 and November 2017, from INR 27,000/MT to INR 55,000/MT.

FIGURE 2 : PERCENT CHANGE IN MATERIAL COSTS OVER THE YEARS

Source: CBRE Research, Q2 2018

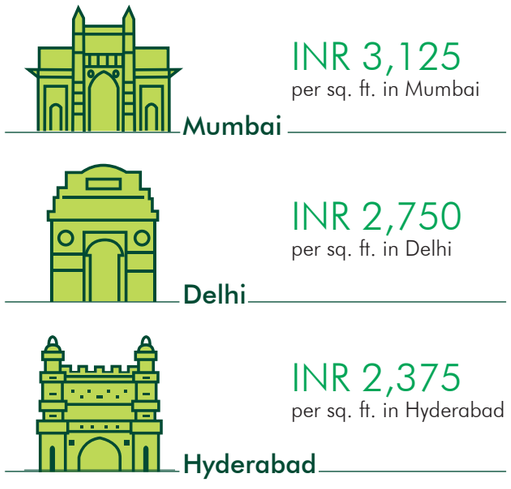
As labour and construction materials are the two most critical components in any real estate project, a continuous rise in material costs has had a cascading impact on asset pricing. While a steady rise in demand across almost all real estate segments as well as the government push on infrastructure development has contributed in pushing up the prices of construction projects, one cannot play down the impact rising inflation and taxes have had on the overall costs. Spiralling construction costs make it difficult for developers to keep their margins intact, which results in upward price revisions in rental and capital values.

COST VARIATION ACROSS INDIA'S LEADING CITIES

CBRE estimates that among the six leading cities in India (Chennai, Bangalore, Hyderabad, Pune, Mumbai and Delhi), Mumbai remains the most expensive in the country while Hyderabad is the most inexpensive city in this regard. Construction costs in Chennai and Bangalore are almost at the same level, as are those in Delhi and Pune. The variation in costs could be primarily attributed to different demand levels, proximity to supply centres as well as the efficiency of logistics networks across these cities. Moreover, engineering costs too vary in accordance to the land quality across cities.

The average cost of construction for a residential apartment in a mid-rise building will be INR 3,125/sq. ft. in Mumbai, while in Delhi and Pune, the price would be INR 2,750/sq. ft. In Chennai and Bangalore, the cost would be INR 2,500/sq. ft., while in Hyderabad such an apartment would command INR 2,375/sq. ft. Similarly, constructing a Grade A 12-floor commercial warm-shell building will cost INR 3,125/sq. ft. in Mumbai and INR 2,750/sq. ft. in Delhi. The table below highlights the variance in construction costs across segments and cities in more detail:

FIGURE 3 : AVERAGE COST OF CONSTRUCTING A RESIDENTIAL APARTMENT IN A MID-RISE BUILDING IN KEY CITIES



Source: CBRE Research, Q2 2018

VARIANCE IN CONSTRUCTION COSTS ACROSS CITIES

Segment	Floors	Chennai (in INR/sq. ft.)	Bangalore (in INR/sq. ft.)	Hyderabad (in INR/sq. ft.)	Pune (in INR/sq. ft.)	Mumbai (in INR/sq. ft.)	Delhi (in INR/sq. ft.)
Mid-rise Average Apartments	15+	2,500	2,500	2,375	2,750	3,125	2,750
Office Grade A	12	2,500	2,500	2,375	2,750	3,125	2,750
Shopping complex, Multiplex	12	4,100	4,100	3,895	4,510	5,125	4,510
5 Star Hotels (includes FF&E)	10	12,000	12,000	11,400	13,200	15,000	13,200
Heavy Industrial Structures	1	4,300	4,300	4,085	4,730	5,375	4,730

Source: CBRE Research, Q2 2018; numbers based on the assumption that the buildings do not have basements and are built on ground with normal soil conditions; the costs exclude components such as land cost, professional charges, external works and cost escalations

THE POST-GST SCENARIO

Implementation of the Goods and Services Tax (GST) has come as a breather for the beleaguered real estate industry. Aimed at introducing country-wide uniform taxation, GST has enabled builders to source materials from only registered suppliers in a transparent manner. Initially the government had placed several goods in the 28% tax slab; later it shifted almost 178 of the 227 listed goods to the 18% slab. These goods included construction raw materials such as marble, granite, ceramic articles and fly-ash bricks. Although cement remains in the 28% tax slab, the government has granted 100% Input Tax Credit (ITC) on raw materials and services used for construction.

To assess the impact of GST on construction costs, CBRE compared the pre-GST taxation rates with the current system. We divided our analysis into two categories – warm shell packages and interior works. Each of the components in both the categories were analysed in terms of the individual change in taxation as well as the overall impact of this change on the project cost, depending upon the component's share in project costs.

For instance, in warm shell packages, taxation increased the most for the vertical transportation component (16%); however, the overall upswing in taxation owing to its share in project costs was limited to around 0.65%. Among interior works components, electrical works, main civil and interior works, and UPS works were some of the components that posted the highest drop in taxation (6.8%). Main civil and interior works also reported the highest overall dip in taxes (1.4%) in terms of its share in project costs. On the other hand, false flooring works saw the highest rise in taxes (15.2%). Along with workstations and modular furniture, this component reported the highest overall upswing in overall project taxation costs (0.6%).

PERCENT CHANGE IN CONSTRUCTION WORKS COMPONENTS AFTER GST

Work Components	Impact
Warm Shell	
BMS Works	15.0% ↑
Security (ACS, CCTV, Turnstile, Boom-barrier)	15.0% ↑
Vertical Transportation	16.0% ↑
DG Sets	15.0% ↑
Electrical Works	-7.0% ↓
PHE Works	-7.0% ↓
HVAC Works (low side works)	-7.0% ↓
Basement Ventilation	-7.0% ↓
Fire Fighting System	-7.0% ↓
Fire Alarm & PA System	-7.0% ↓
STP & WTP	-7.0% ↓
Architectural Finishes	-7.0% ↓
HSD Yard	-7.0% ↓
LPG	-7.0% ↓
Interior Works	
False Flooring Works	15.2% ↑
Carpet Works	11.0% ↑
Workstations & Modular Furniture	11.0% ↑
Chairs / Seating	9.0% ↑
Loose Furniture	9.0% ↑
Networking (Supply & installation)	9.0% ↑
AV Equipment Works	9.0% ↑
Light Fixtures	-2.5% ↓
Electrical Works	-6.8% ↓
Main Civil Works & Interior Works	-6.8% ↓
UPS Works	-6.8% ↓
HVAC Works High and Low side	-6.8% ↓

Source: CBRE Research, Q2 2018

Overall, we found that taxes on warm shell packages had declined by 1.62%[3], while those on interior works had increased by 0.6%. When you look at the overall picture, taxation on construction appears to have decreased by roughly 1%, assuming that both warm shell packages and interior works account for an equal share in construction costs.

3. The analysis for warm shell packages does not include consultancy charges while those for interior works does

CBRE VIEW

The rising demand for real estate as well as infrastructure development is expected to propel the construction industry towards a growth trajectory. Already, the implementation of the GST has stabilised the cost of raw materials and streamlined inter-state and import tax, giving the industry a major boost. However, one of the challenges that the industry needs to counter is the shortage of quality contractors who can complete projects within stipulated time periods. This is likely to provide an opportunity for the entry of international players to plug this gap. As most of these international players use innovative technology for timely completion of projects, we expect technological innovation to radically change the future of Indian real estate. These new technologies have the potential to transform the way we design, construct and operate building assets in the future.

Currently, use of technologies (such as 3D printing), new materials (ALON, Aerogel and self-healing concrete) and robotic equipment in construction development is limited to international projects and players. However, local players are now anticipated to adopt such innovations in the future to ensure fast construction, timely completion and development of products that meet international standards. Overall, CBRE believes that the construction industry is at the brink of entering the next stage of the growth curve. This growth is likely to be supported by the clarity that has been offered by the GST (resulting in standard taxation rates across states) as well as the push from the government to quicken the pace of infrastructure development across the country.

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