India Real Estate: A Decade From Now

2024

Assessing the economic and real estate sector potential in the next decade

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Foreword

Neel Raheja

Chairman, CII National Committee on Real Estate and Housing
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"India Real Estate: A Decade from Now," provides a comprehensive roadmap for the evolution of India's real estate sector up to 2034.

Looking ahead to 2034, the prospects for India's real estate sector appear highly re-assuring, driven by a confluence of factors such as shifting demographics, rapid technological advancements, and supportive policy measures. This confluence is expected to catalyse significant investments in the sector, buoyed by strategic foresight and innovative approaches. Going forward, the real estate market is poised to offer a myriad of opportunities for investors across its asset classes.

Private equity continues to infuse the sector with robust capital inflows. Also, India as an investment destinations continues to attract overseas pension funds. Besides, new option of monetisation and liquidity creation such as REITs and InvITs shall gain further traction. Amidst this dynamic landscape, the role of advisory services remain strategic. Advisers are instrumental in navigating the complexities of the real estate market, identifying emerging trends, and unlocking latent opportunities, thereby facilitating sustainable growth and value creation.

As the country embarks on the growth trajectory, the emerging markets of Tier-II & Tier-III cities shall subsequently dominate the infrastructure and real estate development scenario. This would be coupled with new destination evolvement in form of satellite centres for Tier-I metros. The consequence of such multi-dimensional growth would be a boost for the nascent asset classes of logistic hubs and healthcare infrastructure.

In the next decade, with a significant growth in the size of the economy, the real estate industry is poised for enormous opportunities in terms of shifts in consumption patterns as well as in revenue expansion. I look forward to this report defining the real estate growth story, in turn reflecting upon its role as a leading engine which will take the Indian economy to its path of success.

Shishir Baijal

Chairman and Managing Director
Knight Frank (India) Pvt. Ltd.

As we venture into the realms of the future, the landscape of India's real estate sector in 2034 appears both promising and dynamic. The trajectory that the sector has embarked upon, fueled by a multitude of factors, sets the stage for unprecedented growth and transformation. With each passing year, the contours of real estate investments in India evolve, guided by shifting demographics, technological advancements, and policy interventions. In this journey towards 2034, the real estate sector emerges not just as a harbinger of economic prosperity but also as a catalyst for societal progress and sustainability.

Investments in India's real estate sector in 2034 are poised to be driven by a convergence of strategic foresight and innovative solutions. The allure of real estate as an asset class remains steadfast, offering investors a diverse array of opportunities across residential, commercial, industrial, and retail segments. The emergence of India Real Estate Investment Trusts (REITs) has democratized access to real estate investments, providing investors with avenues for portfolio diversification and capital appreciation. Moreover, private equity investments continue to flow into the sector, drawn by the promise of robust returns and strategic partnerships.

Amidst this landscape, advisory in real estate in 2034 assumes paramount importance, guiding stakeholders towards sustainable growth and value creation. As the sector embraces innovation and sustainability, advisors play a pivotal role in navigating through complexities, identifying emerging trends, and unlocking latent opportunities. From harnessing the potential of demographic dividends to championing green building initiatives, advisors serve as catalysts for transformative change, shaping the trajectory of real estate investments in 2034 and beyond.

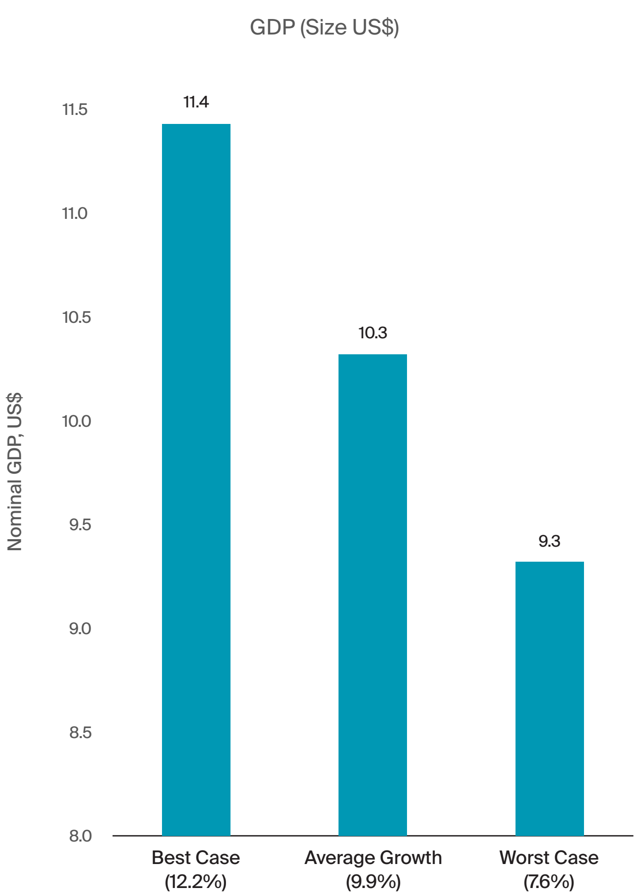
In conclusion, as we envisage the real estate sector in 2034, we stand at the threshold of a new era defined by innovation, resilience, and inclusivity. Through strategic investments and informed advisory, we have an opportunity to chart a course towards a future where India's real estate sector not only thrives but also serves as a beacon of sustainable growth for generations to come. As we embark on this journey, let us seize the opportunities that lie ahead, forging partnerships and fostering collaborations to realize the full potential of India's real estate landscape in 2034 and beyond.

India Economy today and in 2034

In the aftermath of global economic challenges posed by the COVID-19 pandemic, several major economies are grappling with a slowdown aggravated by increased inflation and interest rates. However, India's economy has showcased a resilient economic performance, attributed to strong domestic fundamentals, primarily the revival in domestic consumption, a shift towards domestic manufacturing and the growing service sector. In Q3 FY 2024, India's economy surged by an impressive 8.4% surpassing market expectations and setting a positive trajectory for future growth.

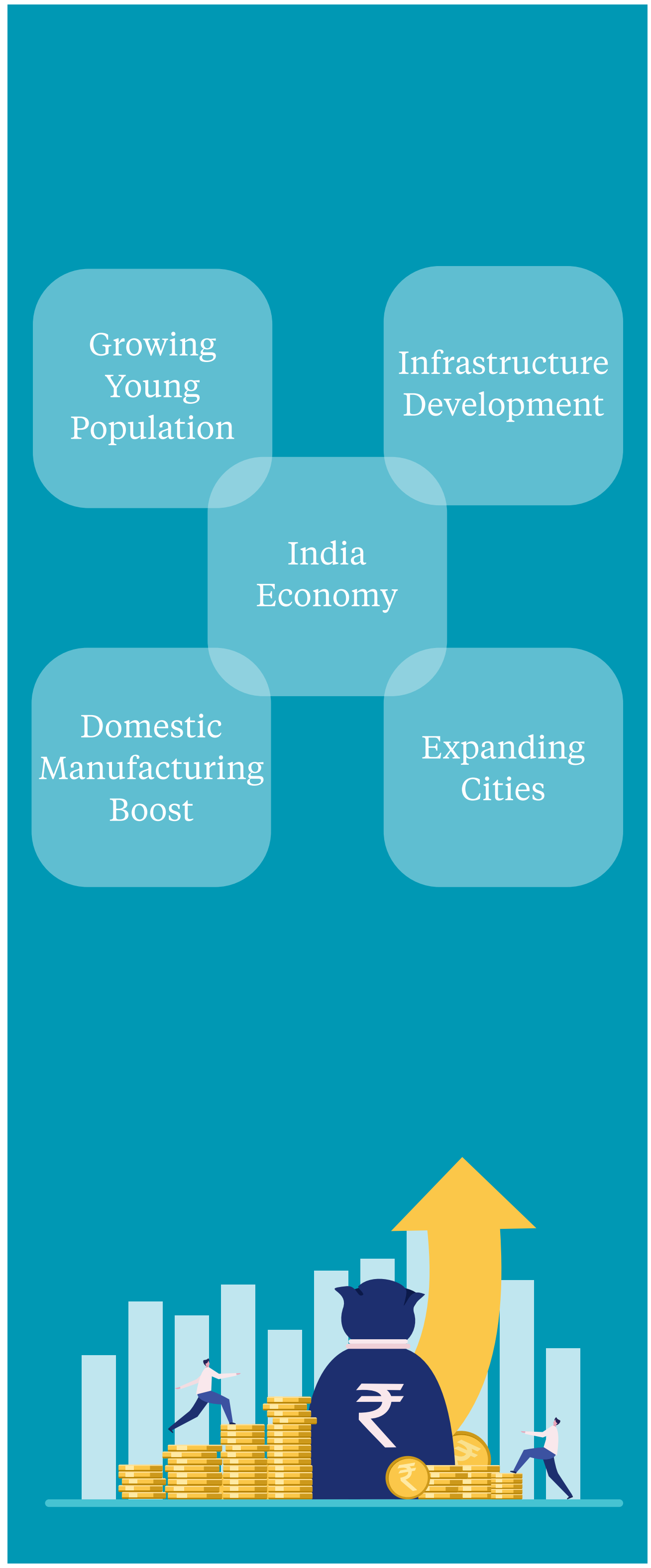
Key factors, such as growing wealth stimulating consumer spending, focus on infrastructure development, burgeoning entrepreneurship, and initiatives like “Make in India” boosting domestic manufacturing, rise in talent pool and capacity building etc. will play a substantive role to catapult India's economic transformation. These growth drivers also position India as an appealing destination for foreign investors looking to expand their businesses or manufacturing operations. Assuming favourable conditions to these growth drivers India's GDP has the potential to reach US$ 10.3 tn by 2034.

INDIA'S POTENTIAL GDP SIZE UNDER VARIOUS SCENARIO IN 2034



Source: Knight Frank Research

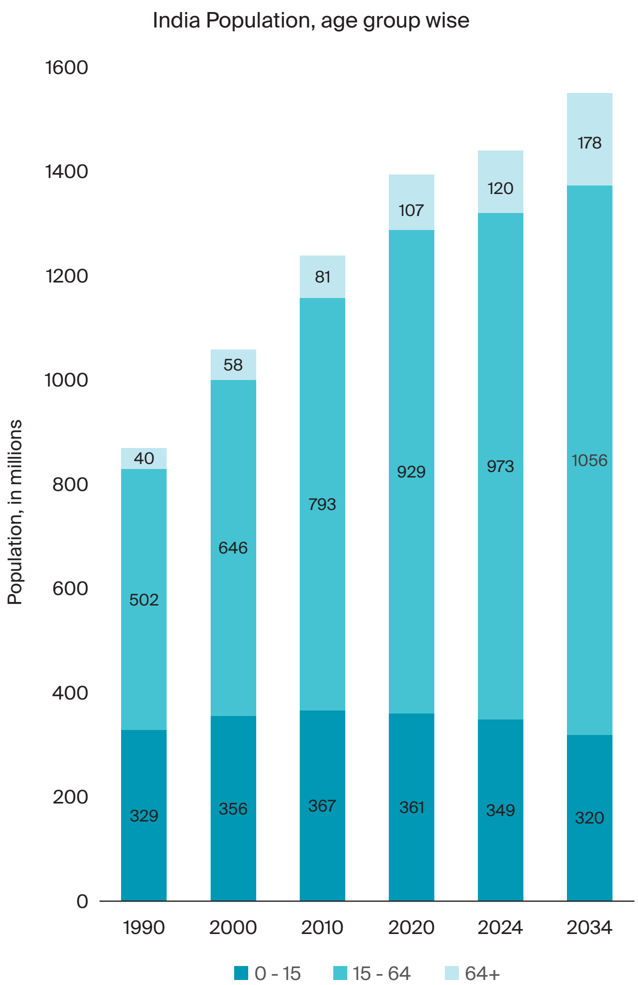
While broader domestic and external economic fundamentals can catapult India's economic growth in the next decade, the transition of the economy will largely be reliant on;



Burgeoning young population boosts workforce requirement

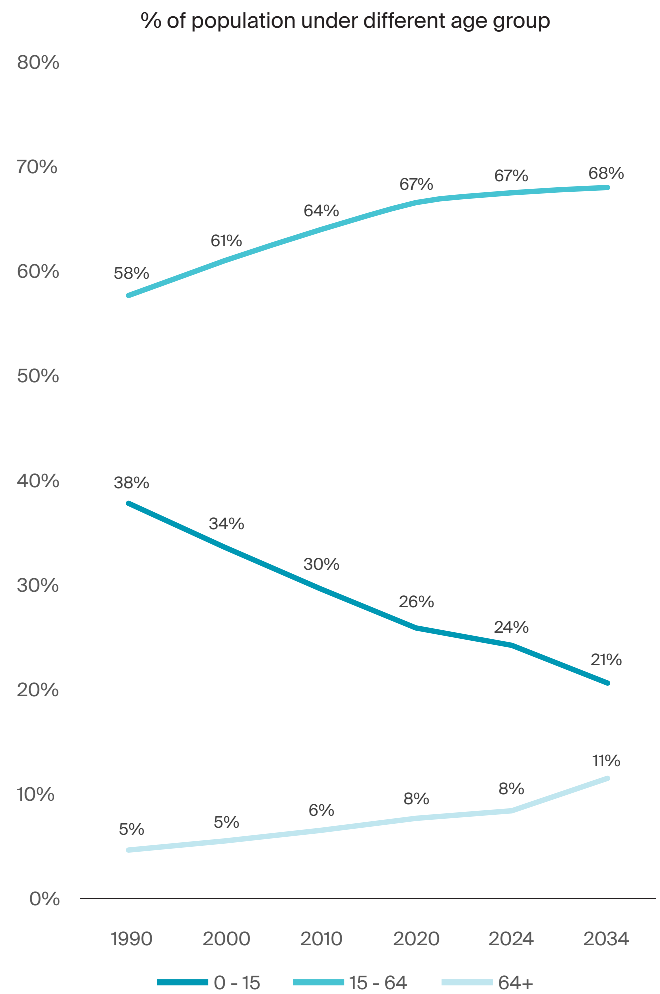
With an estimated population of 1.4 bn India currently is the world's most populous country, outweighed by a largest share of young population. As of 2023, the average age in India is 28 years, which is likely to go up to 31 years by 2034[1] . In 2034, an estimated 1bn people in India will fall under the age category of 15-64, constituting the workforce population. The presence of a young population is a massive advantage for its skilled force requirement and adds to the spending capacity. When well equipped with adequate skills, India's young population holds the potential to cater to the employment needs of the country poised to expand. Factors such as – domestic manufacturing, expanding research and development, proliferation of entrepreneurship, growing service sector etc will drive the demand for a skilled workforce in India. Therefore, it is essential to prioritize investment in human development, particularly in healthcare and education, to harness the potential of this youthful demographic and propel India's socio-economic growth. By nurturing and empowering the young population, India can capitalise on this demographic dividend and fuel its economic growth and enhance global competitiveness.

AN ESTIMATED 1BN POPULATION LIKELY TO BE IN THE AGE GROUP OF 15-64, ENABLING MASSIVE WORKFORCE AVAILABILITY



Source: World Bank, Knight Frank Research
[1]World Bank

68% OF INDIA'S POPULATION WILL BE UNDER THE AGE BRACKET OF 15-64



Source: World Bank, Knight Frank Research;
Note: 2020-2034 are estimated values

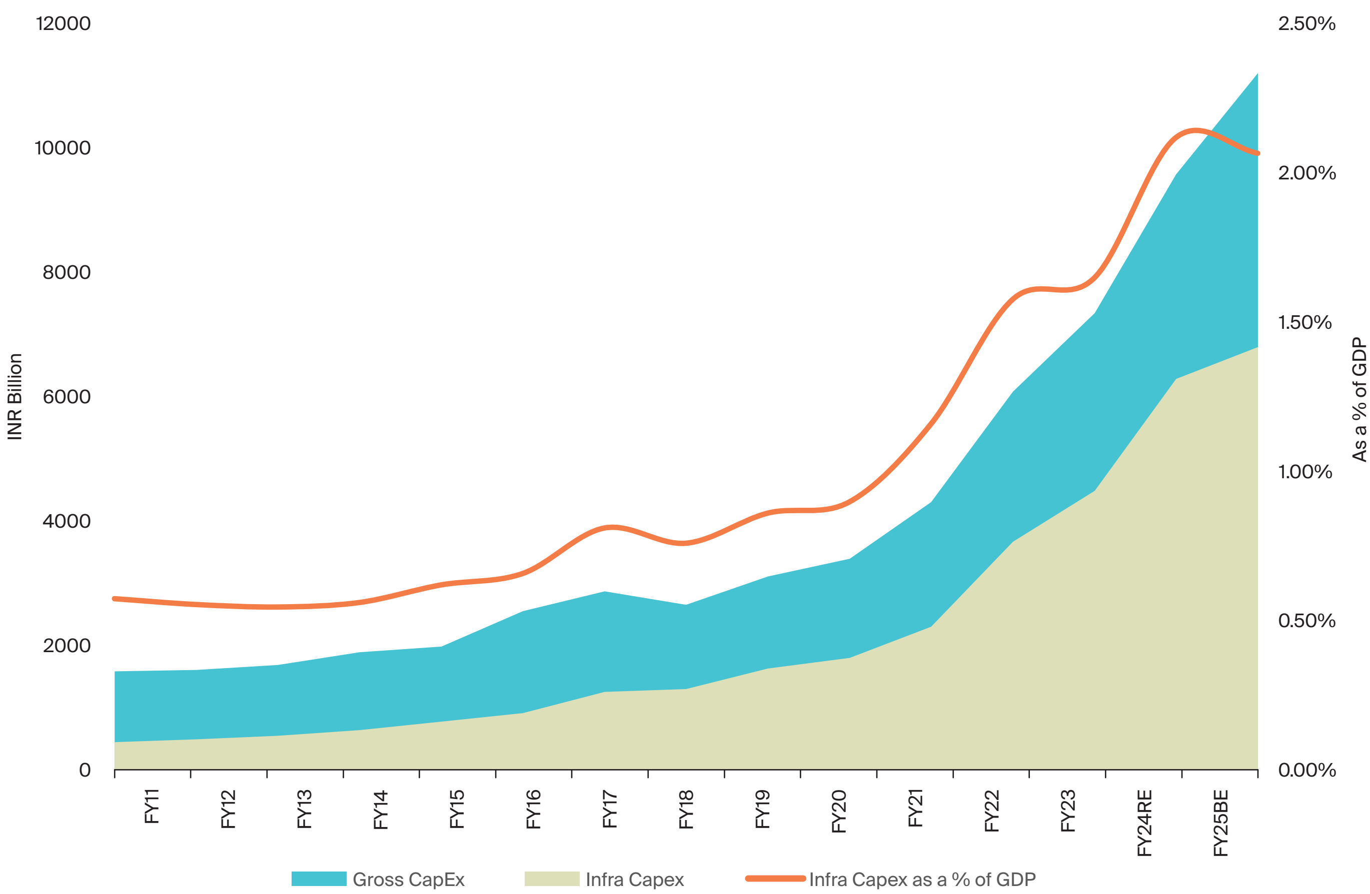
Infrastructure development: Strengthening Connectivity to Aid the Economy

Infrastructure development plays a pivotal role in driving the country's economic growth. As per various studies, a 1% increase in infrastructure spending relative to the GDP leads to a 2% increase in overall GDP[2]. With an objective to foster economic growth, the central government in the last few years has implemented proactive measures to develop and expand the country's infrastructure.

In FY'2014 - 15, the central government's capital expenditure towards infrastructure development stood at 0.6% of the GDP. This has now surged to 2% in the FY 2024-25 budgetary allocation (BE). Furthermore, the share of infrastructure in the aggregate capex has increased from 33% in FY 2015 to an estimated 61% in FY 2025 BE. For FY 2025 budgetary allocation, the central government has earmarked an aggregate capital expenditure of INR 11 tn, of which Rs 6.7 tn is allocated for infrastructure development across sectors such as roads, railways, energy, port development etc.

This robust allocation underscores the emphasis laid by the policy makers to bolster the nation's infrastructure and is a critical stride towards fostering economic prosperity and long-term development.

CENTRAL CAPITAL EXPENDITURE FOR INFRASTRUCTURE HAS INCREASED FROM 0.6% OF THE GDP IN FY 2011 TO 2% IN FY 2025 BE



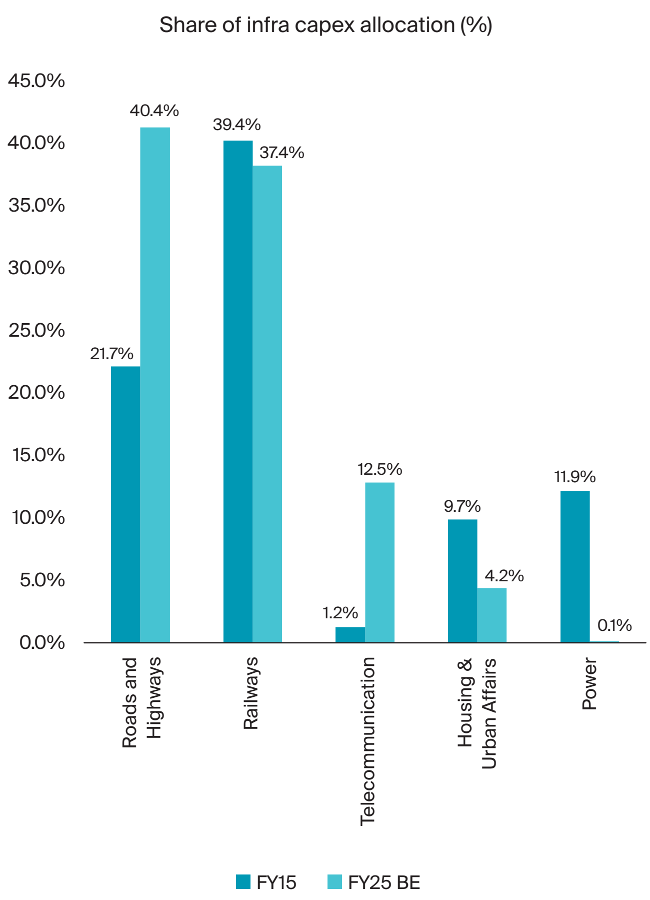
Source: GoI, Knight Frank Research

[2]"The missing piece in India's economi growth story; Robust Infrastructure". S&P, 2016

The notable focus in the last decade has been on enhancing transport infrastructure aiming to cater to the growing population and facilitate smoother movement of goods and services and ease supply chains. This emphasis is particularly evident in the allocation of capital expenditure, with the strategic objective of improving efficiency and reducing logistical costs. For instance, in FY'15, a significant portion of capital expenditure was directed towards roads and highways, recognizing the fundamental importance of basic transport infrastructure. In the FY'25 budgetary estimates, however, there has been a shift in allocation, with a greater emphasis on railway development, encompassing an budgetary allocation of 39.4% of total infra capex. This realignment reflects a strategic objective to optimize the railway infrastructure, with the overarching goal of reducing the country's logistics costs from 14% of GDP to the targeted 7-8% of GDP.

This shift underscores a deliberate effort to enhance the efficiency and competitiveness of the nation's transportation networks, recognizing the pivotal role they play in fostering economic growth and competitiveness on both domestic and global scales.

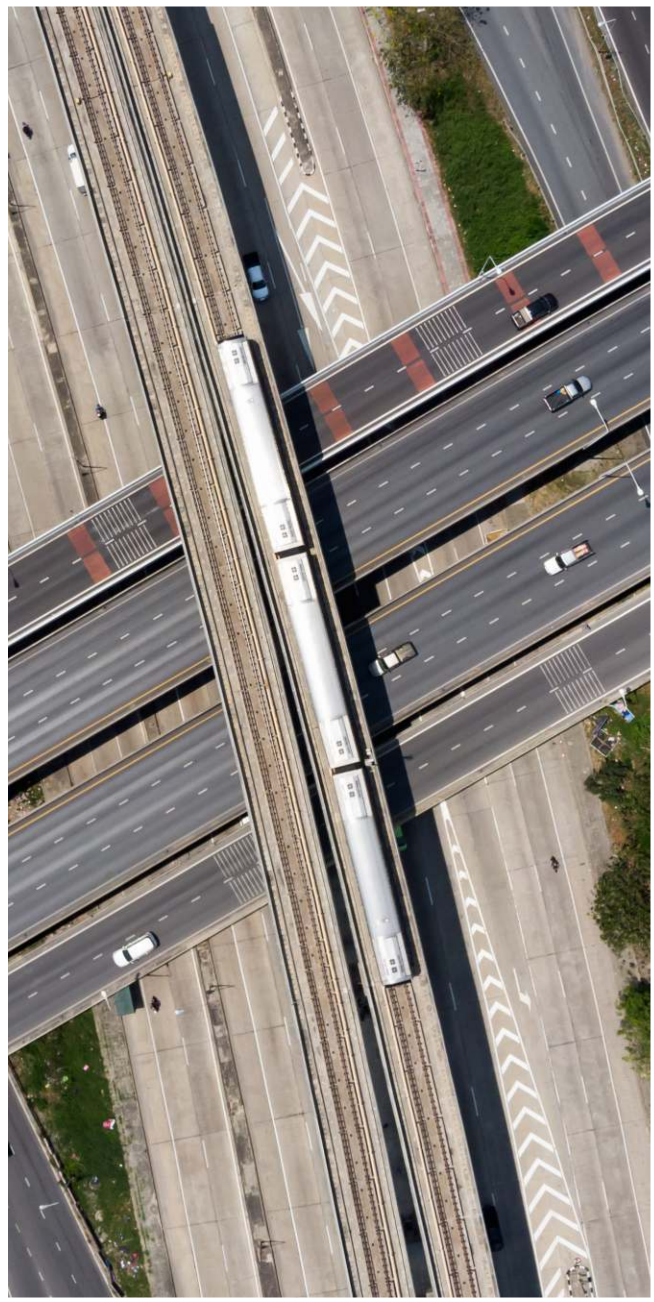
KEY FOCUS ON ROADS AND RAILWAYS DEVELOPMENT



Source: India budget document, Knight Frank Research

In the last few years, with a focus on infrastructure, the central government has unveiled policy initiatives towards infrastructure development and investments such as Bharatmala Pariyojana, National Infrastructure Pipeline (NIP), and the National Monetisation Plan (NMP) etc.

Looking ahead, to reach an economic size target of USD 10.3 tn by 2034, an estimated 4.2% of the GDP will need to be spent on infrastructure development, up from the existing 2%. Expanding cities, increase in population and focus on economic development, will necessitate a continued focus on infrastructure.



Cities and urbanisation: Loci of economic growth

Cities in India occupy merely 3% of the country's land, however, their contribution to the GDP is an estimated 60%[3]. Additionally, as per various estimates, one percentage point increase in a district's population increases its GDP by 2.7%[4], further enabling the country's overall economic growth. The ongoing demographical shift is contributing to a rapid urbanisation and expansion of cities. Currently, India's urbanisation rate is pegged at 36.5% translating into 79 mn households. In the next one decade, an estimated 42.5% of India's population or 164 mn households will be residing in urban centres in India. Currently, India has 64 cities with 1 million plus population which may likely increase to 70 by 2034.

CITIES WITH 1 MN PLUS POPULATION

Source: India Census, UN World Urbanisation Prospects, 2018, Knight Frank Research

While the existing Tier 1 cities such as Mumbai, Delhi, Bengaluru etc continue to generate maximum economic output; the Tier 2 and 3 cities are as well booming. As per Oxford Economics, the top 10 fastest growing cities in the world by GDP growth rate between 2019-2035 will be in India, led by Surat and Agra.

SURAT TOPS THE LIST OF TOP 10 FASTEST GROWING CITIES IN THE WORLD BETWEEN 2019-2035

	City	Growth (% YoY)	2018 GDP ($ bn, Constant 2018 prices)	2035 GDP ($ bn, Constant 2018 prices)
1	Surat	9.17	28.5	126.8
2	Agra	8.58	3.9	15.6
3	Bengaluru	8.5	70.8	283.3
4	Hyderabad	8.47	50.6	201.4
5	Nagpur	8.41	12.3	48.6
6	Tiruppur	8.36	4.3	17
7	Rajkot	8.33	6.8	26.7
8	Tiruchapalli	8.29	4.9	19
9	Chennai	8.17	36	136.8
10	Vijayawada	8.16	5.6	21.3

Source: Oxford Economics

[3]Cities as engines of growth, Niti Aayog, 2022
[4]Cities as engines of growth, Niti Aayog, 2022

Cities are the loci of economic growth as they enable the interaction between the firms and job seekers; providing immense employment opportunities and output generation. This is especially notewrothy in the formal or the services sector. Currently, 15.3% of the urban population in India is formally employed. Buoyed by growing employment opportunities, this will likely increase to 28% by 2034. Each formal job has a capacity to generate 8 informal jobs, amplifying employment opportunities andfurther enlarging the influx of population. Increase in employment will fuel consumption aspirations of the population raising the demand for various consumer goods and services including that of the real estate.

While rapid urbanisation brings new avenues of growth, it also poses various challenges in terms of a comprehensive development of physical, social, and economic infrastructure. In response to these challenges, there have been multiple intervention from the policy makers over the last few decades to address the same. In 2005, Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched as a comprehensive and integrated urban development scheme with an objective to encourage reforms and fast track planned development of 65 identified cities. The focus was on efficiency in urban infrastructure and service delivery mechanisms, community participation, and accountability of the ULBs/ parastatal agencies towards citizens. An investment of more than INR 1tn during the seven-year period from 2005-06 to 2011-12 was envisaged in the mission.

To escalate the momentum of urban development to match the global aspirations and to incorporate the rising technological interventions, in 2015, the central government launched the **Smart Cities Mission (SCM)** for a period of five years. The key objective of the Mission was to promote cities that provide core infrastructure, clean and sustainable environment and give a decent quality of life to their citizens through the application of 'smart solutions'. A total of 100 cities have been selected for development as smart cities at different timelines wherein the projects were expected to be completed in 2023. These now have been further extended till June 2024. Owing to the economic opportunities that cities can potentially generate, the focus of policy makers towards long term sustainable development of the urban centres will be necessitated.

Domestic manufacturing: Key growth engine

The contribution of manufacturing sector to India's GDP has remained stagnant hovering around 13-15% over the last decade. However, recognising the imperative to diversify the economic landscape of the country the policy makers in India have undertaken numerous initiatives with a focus on developing and expanding the country's manufacturing sector. Through these initiatives, the policy makers seek to catalyse favourable business conditions that can foster public private partnerships, improve global competitiveness, create dedicated manufacturing zones, and empower the human capital with adequate skills to cater to the employment needs of the manufacturing sector.

KEY POLICY INTERVENTIONS TO BOOST MANUFACTURING SECTOR IN INDIA

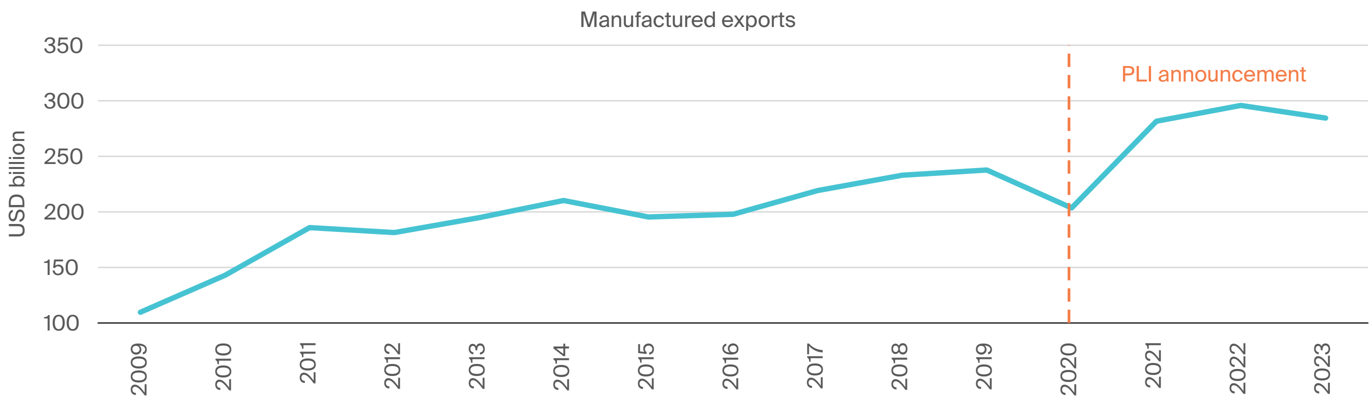
	Policy	Key Objective
1951	Industrial Licensing Policy	To regulate entry and exit of Industries
1973	FERA Act	To restrict entry of foreign companies to core sector
1991	Liberalisation	To increase FDI limits under automatic route
2000	SEZ Policy	To boost exports and attract investments through tax exemptions and initiatives
2011	National Manufacturing Policy (NMP)	To boost manufacturing production via National Investments and Manufacturing Zones (NMPZs)
2014	Make In India	To promote India as the most preferred global manufacturing destination
2020	Production Linked Incentive Schemes	To attract investments and bring economies of size and scale in manufacturing sector through incentivising companies

Source: GoI, Knight Frank Research

With the initiatives undertaken over the last few decades, India is now emerging as one of the key manufacturing hubs globally. Factors such as the – demographic advantage, with 63% of the population falling in the category of workforce, improved connectivity through infrastructure initiatives, and the China plus One strategy, wherein globally, firms are diverging from China as an alternative manufacturing hub; additionally cost competitiveness provide a massive opportunity for the expansion of the manufacturing sector in the country.

Some recent initiatives such as the PLI schemes indicate at a sustainably growth of manufacturing activities in India. In the Union Budget FY 2021-22, the finance minister announced an outlay of INR 1.97 tn for the Production-Linked Incentive (PLI) Schemes for 13 key sectors aiming at a minimum production to be over US$ 500 billion in 5 years. The expansion in the manufacturing activities post implementation of the PLI scheme has a notable improvement. This can be witnessed in growing exports of manufacturing goods from India which stood at USD 284bn in 2023, a 19% growth from 2019.

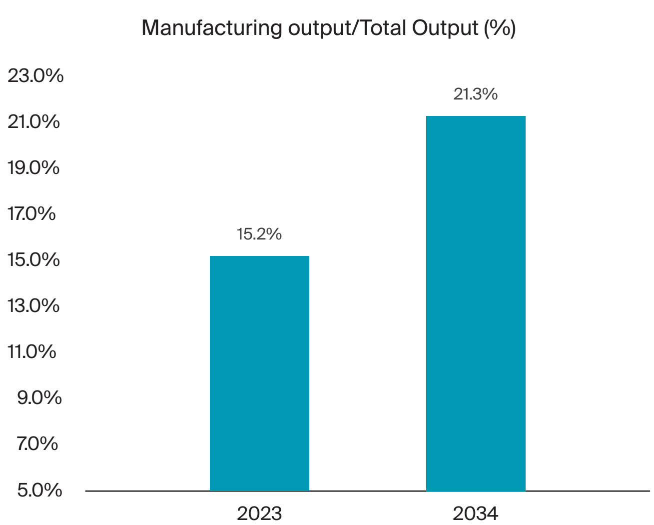
EXPORT OF INDIA'S MANUFACTURED GOODS SURGE POST PLI IMPLEMENTATION



Source: CMIE, Knight Frank Research

Assuming the policy measures support, the manufacturing sector in India is well positioned to expand sustainably over the next decade. The share of output generated from the sector can potentially expand to 21.3% of the GDP.

CONTRIBUTION OF INDIA'S MANUFACTURING SECTOR TO ECONOMIC OUTPUT



Source: GoI, Knight Frank Research

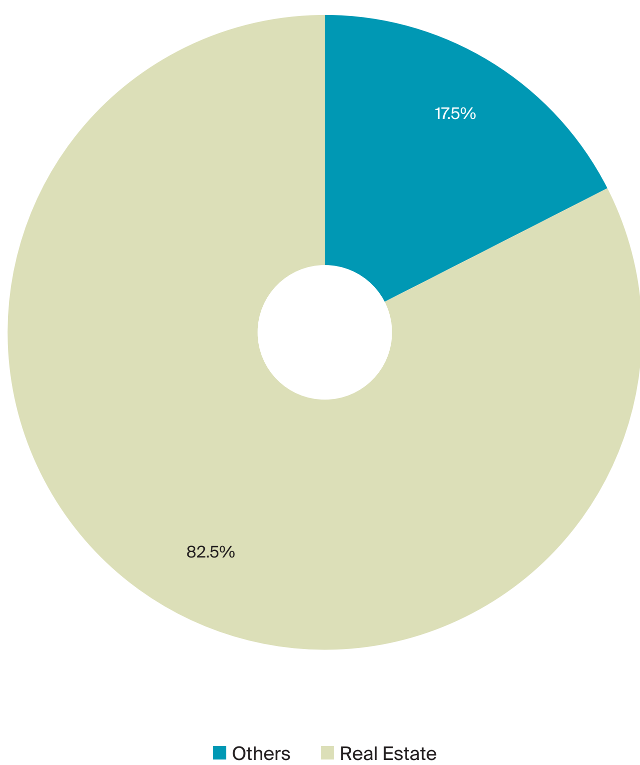
The aforementioned demographic and economic transitions are poised to be pivotal drivers of India's economy, inevitably influencing the demand for real estate in the country. Real estate, being a derived demand, is intricately linked to the overall economic prosperity. As the economy expands and flourishes, the demand for real estate follows suit.

In the subsequent section, we delve into the growth prospects of the real estate sector, closely aligned with the trajectory of the economy.

India Real Estate: Between now and 2034

Supported by a growing economy, the real estate sector in India has transitioned significantly. India's real estate sector has forward and backward linkages with approximately 250 ancillary industries, and it is one of the highest employment generators after the agriculture sector, accounting for 18% of the total employment. In terms of output, the market size of India's real estate sector is currently estimated at USD 482 bn contributing 7.3% to the total economic output[5]. By 2034, India's real estate sector is expected to expand to USD 1.5 tn contributing 10.5% to the total economic output. Factors such as growing residential demand, increase in need for contemporary office space, expanding hospitality, retail sector etc to cater to the growing consumption needs of the growing population with increased income levels, are adding an impetus to real estate sector in India. Furthermore, expanding e-commerce is catalysing the demand for warehousing and storage facilities in India providing a thrust to the industry. Additionally, in recent years, the growing use of telecommunication services has necessitated the need for data centres or data storage facilities in India. From a government policy perspective, various initiatives such as focus on affordable housing, smart city measures, tax deductions on housing loans etc have enabled investment opportunities in the real estate sector in India.

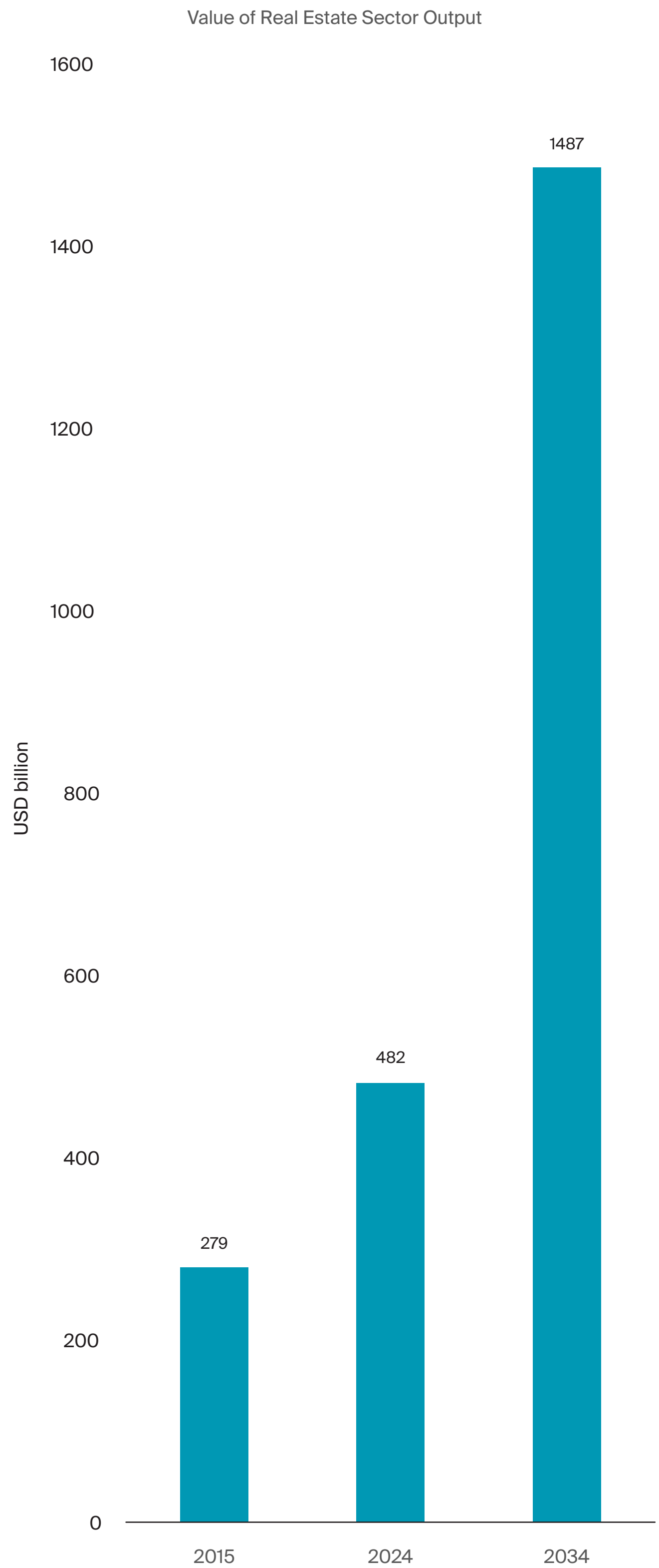
REAL ESTATE SECTOR CONTRIBUTES 18% TO THE TOTAL EMPLOYMENT IN INDIA



Source: GoI, Knight Frank Research

[5]As of 2023, Knight Frank estimates

VALUE OF OUTPUT GENERATED FROM THE REAL ESTATE SECTOR

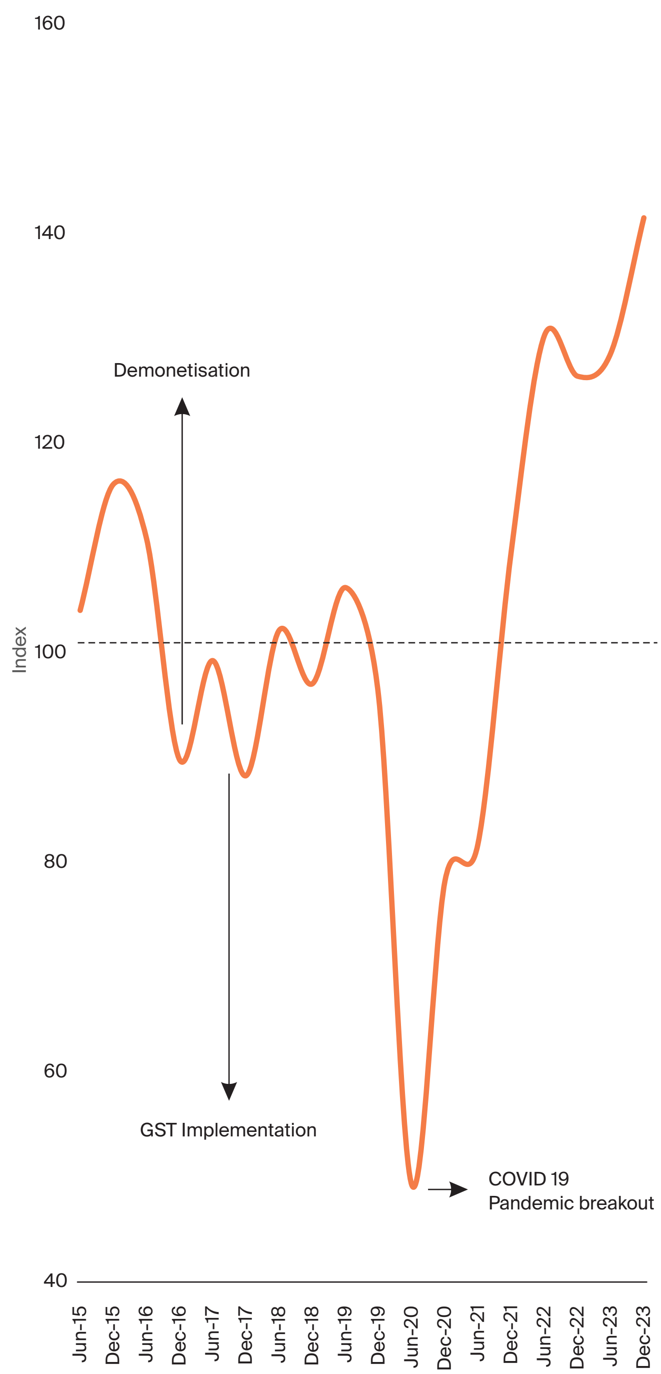


Source: GoI, Knight Frank Research

Residential Real Estate

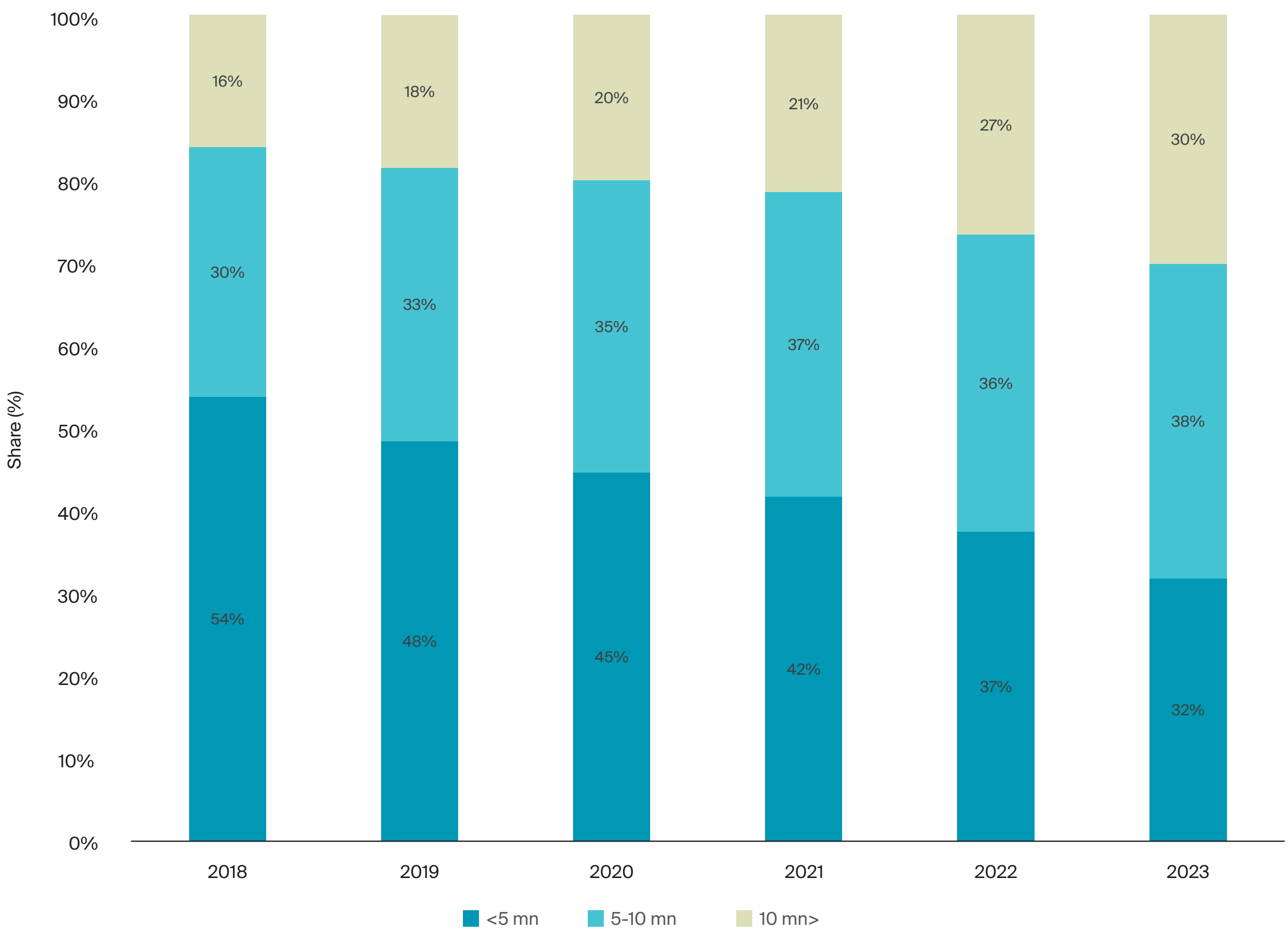
India's residential market has undergone significant changes over the last few decades. From the early 2000s, the residential market has experienced periods of growth and decline owing to various factors such as the global and domestic economic conditions, government policies, with the most recent being the COVID-19 pandemic. Global events such as the 2008-09 GFC along with structural shifts in India's domestic economy due to demonetization, implementation of GST and RERA, and the NBFC crisis, besides the onset of the COVID-19 pandemic in 2020, were some of the key events which dampened the growth of the housing market in India. Policy interventions like RERA strengthened India's real estate sector, making it more transparent and consumer centric. Currently, buoyed by stronger economic momentum, wealth creation and consumer's aspiration towards home purchase, the residential real estate sector in India is experiencing an upcycle.

TRENDS IN INDIA'S RESIDENTIAL MARKET



Source: Knight Frank Research.
Note:
1. Residential sales across top 8 cities in India.
2. Index = Average of half yearly residential sales between 2015-2019.

Growing demand for luxury housing: Thus far, India has been largely categorised as a low-middle income country. Therefore, the housing demand for most of the last two decades was concentrated in the affordable (under INR 5 mn) and mid-segment housing (between INR 5-10 mn). However, in the last few years, there has been a considerable shift in the ticket size of the housing demand, with growing income levels primarily driven by generation of high salaried jobs emerging from the IT/ITeS, BFSI and other service sectors, While the mid-segment housing market continues to dominate the demand, there has been a growing demand for luxury housing (above INR 10 mn). In 2018, across the top 8 cities in India luxury housing comprised 16% of the total sales. In 2023, the share of this segment significantly increased to 34%, a substantial growth from 16% in 2018[6]. Going forward, factors such as the growing economy, salary growth from the high paying services sector and growth in the numbers of HNIs and UHNIs, will continue to raise demand for luxury housing in India.



Source: Knight Frank Research.
Note: Residential sales across top 8 cities in India, 2023. Data is till June 2023.

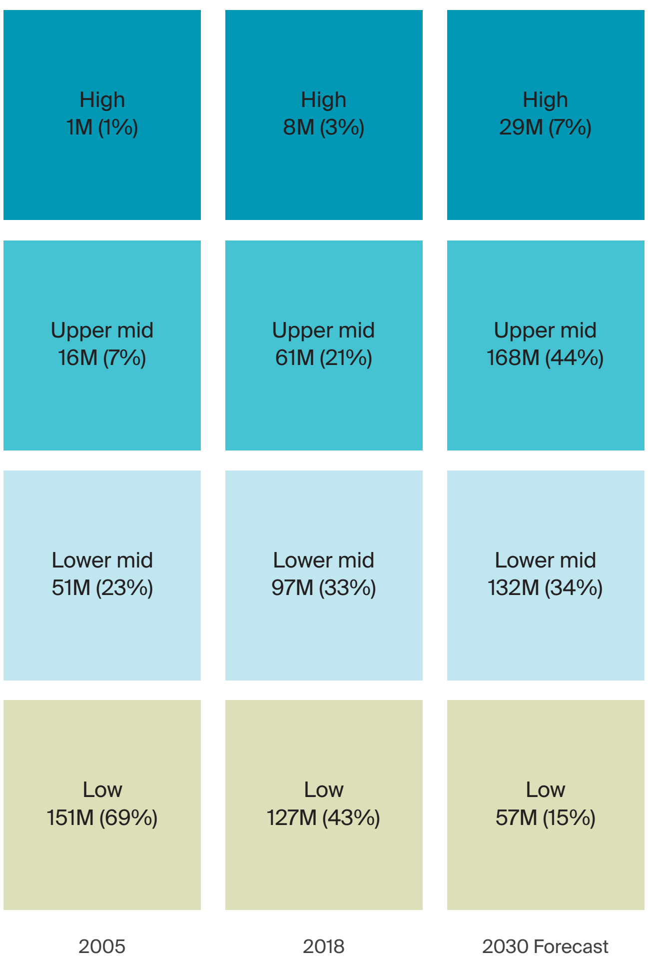
[6]India Real Estate Report, H2 2023, Jan 2024, Knight Frank

Estimating Residential Demand for 2034

India's population is expected to surge to 1.55 bn by 2034 with an estimated 42.5% of the population residing in urban centres. Additionally, there is a scope for the existing rural and small towns to transform into mini-urban towns. The burgeoning urban population will generate the demand for housing in India, especially in the cities. As per our estimates, to accommodate the urban population, urban cities in India will require an addition of 78 mn housing units by between 2024-34.

The changing income profiles and the demand for housing will emerge across all the segments. By 2034, a significant share of the population will be concentrated in the lower middle and the upper middle-income categories. Thus, the housing demand will be concentrated in the affordable segment and will gradually inch towards mid segment. Additionally, the share of HNIs and UHNIs households in India which will likely increase from the existing 3% to 9% by 2034 will generate a significant demand for luxury housing in India[7]. In terms of market value, the estimated residential demand has a potential to generate an additional output equivalent of USD 906 bn in in the next ten years.

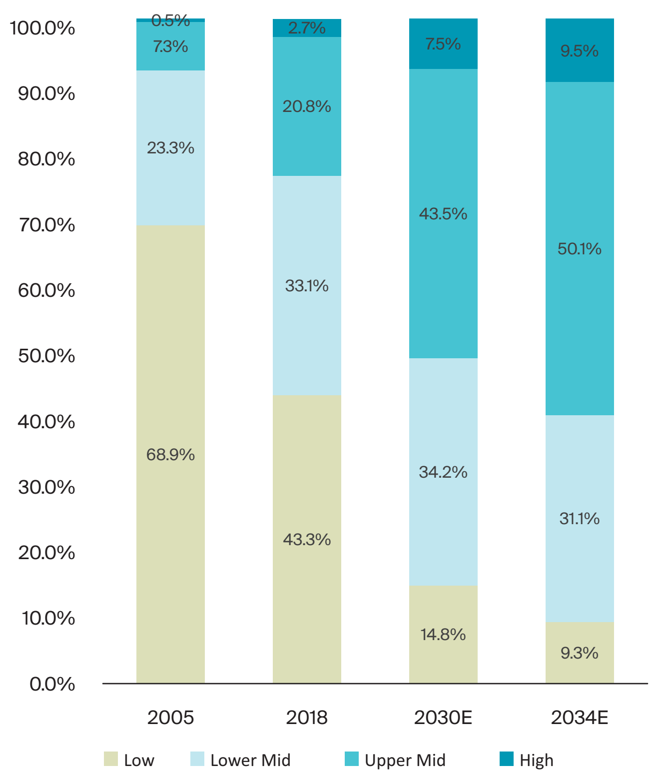
HOUSEHOLD INCOME EVOLUTION IN INDIA



Source: World Economic Forum

[7]Low Income: <$4,000, Lower-Mid: $4000-8500, Upper-Mid: $8,500-40,000, High Income:>$40,000 basis income per household per year in real terms
Source: World Economic Forum

SHARE OF HOUSEHOLDS ACROSS DIFFERENT INCOME GROUPS



Source: World Economic Forum, Knight Frank Research

78 *mn*

housing requirement between 2024 - 34

Source: Knight Frank Research

Commercial Real Estate (CRE)

In recent years, India's commercial real estate market has grown stronger with increasing global occupier interest and the rise of small and medium real estate land developers,, attracting institutional investments. Over the last few years, government initiatives such as the establishment of special economic zones (SEZs), software technology parks (STP), and export-oriented units (EOU) have significantly supported India's CRE.

POLICY SUPPORT TO COMMERCIAL REAL ESTATE IN INDIA:

Startup India Action Plan, 2016

Atal Innovation Mission, 2016

Startup India Seed Fund Scheme, 2021

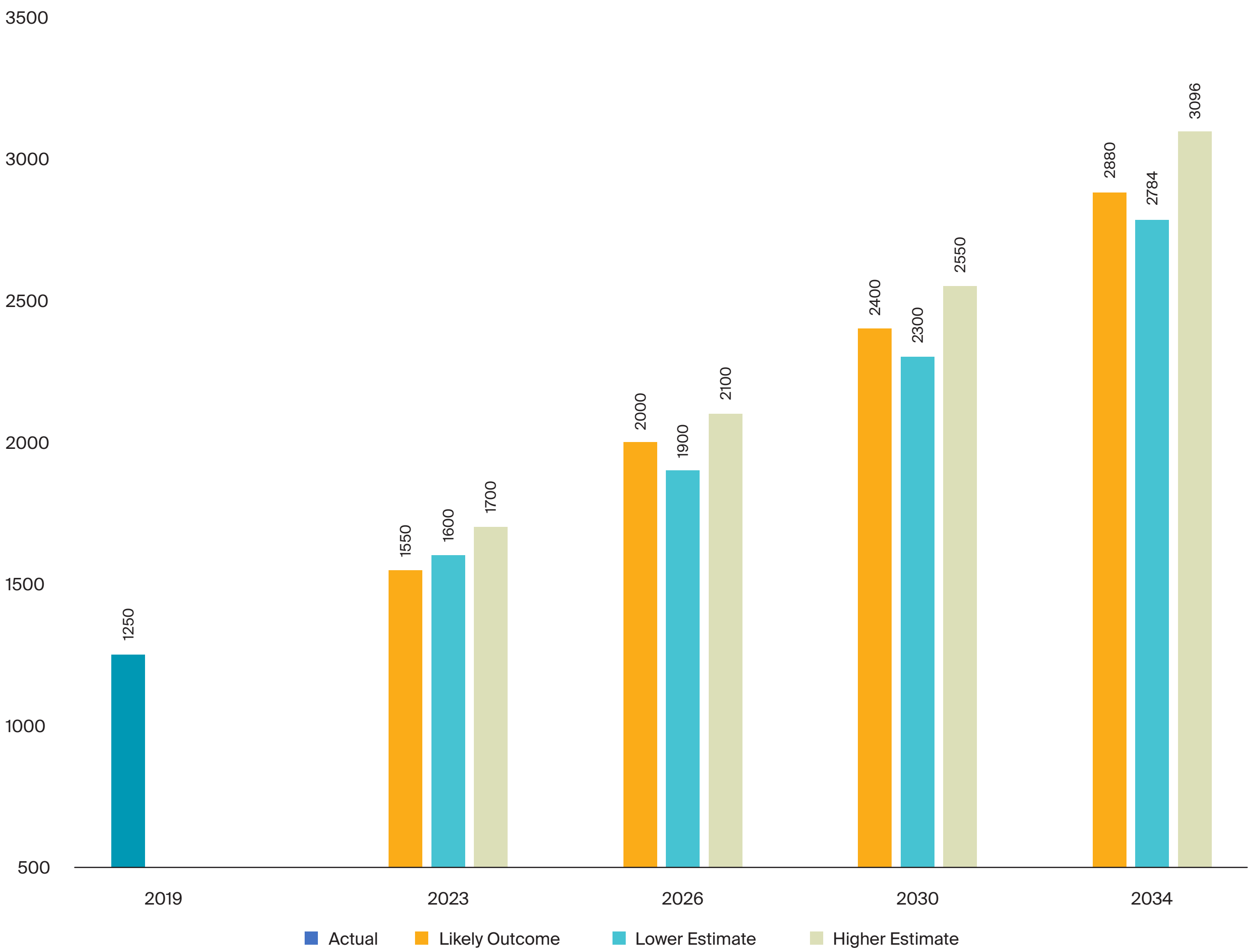
BHASHINI, 2022

Source: Government of India

Currently, the CRE and primarily the office sector globally is under stress due to the adoption and continuation of remote work post COVID-19 pandemic, dimming the office leasing activities. However, the CRE market in India continues to outperform. In 2023, the top 8 cities in India registered office transaction volume of 60 mn sq ft[8]. Growth in the IT/BPM sectors, influx of global capability centres (GCCs), revival of India facing businesses, rise in flexible and co-working spaces are the key factors enabling transactions in India's office market. While the tech sector driven by the growth in artificial intelligence, data science etc will drive the demand for office space, the GCCs will potentially drive the office market in the next decade. By 2030, there will be an estimated 2400 GCCs across India as India emerges as global technology and services hub[9]. Assuming a similar pace of growth, the number of GCCs in India may scale up to 2880 by 2034.

[8]India Real Estate – H2 2024, Knight Frank, 2024
[9]Future of GCCs in India – a vision 2030 report, 2023

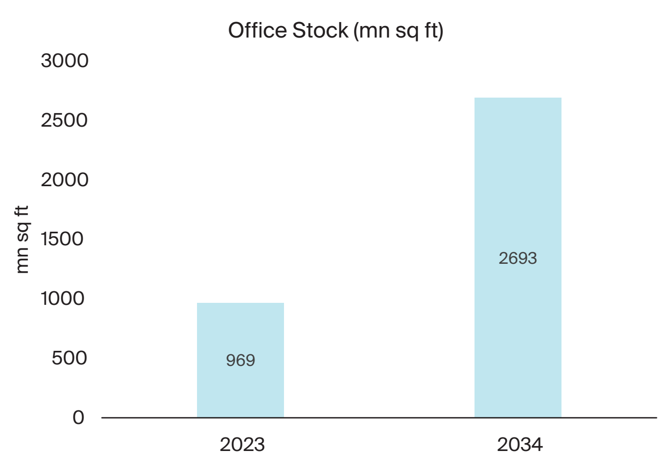
TOTAL NUMBER OF GCCs IN INDIA



Source: EY, Knight Frank Research

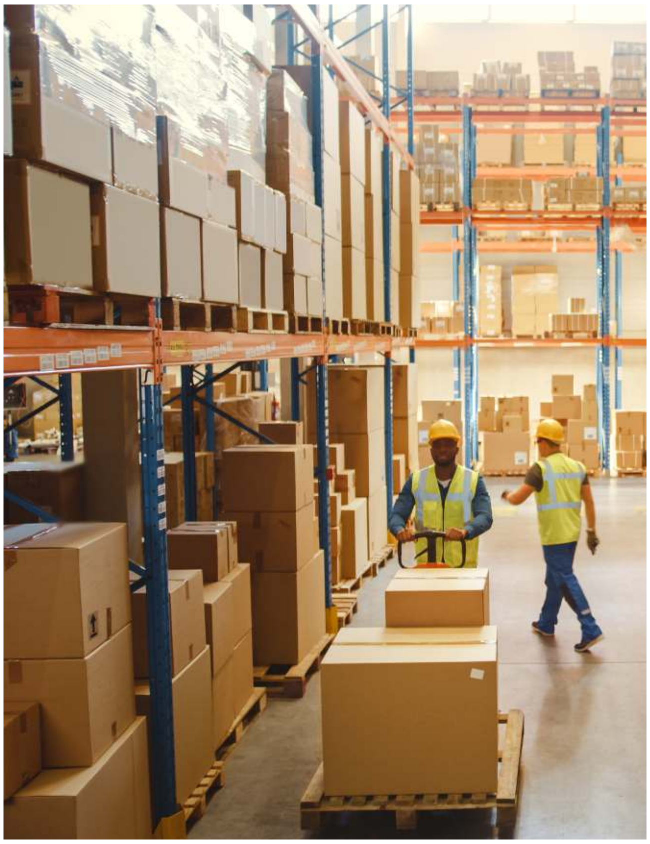
Supported by the aforementioned growth indicators, the stock of office real estate in India has significantly grown in the last few years. In 2008, the top 8 cities in India cumulatively accounted for 278 mn sq ft office stock; which has now increased to 900+ mn sq ft. The expansion of office stock is not limited to Tier 1 cities alone. In the last few years, Tier 2 and 3 cities in India have also witnessed a rapidly rising demand and supply for office real estate in India. Factors such as business expansion, low costs, infrastructure development, rise of IT and the service industry, and availability of talent are some of key drivers of growth in office stock in Tier 2 & 3 cities. These factors along with increase an in formal workforce in India will generate the demand for adequate volume of office space in India. To accommodate the burgeoning economic activity and formal employment, an estimated 2.7 bn sq ft of office space will be cumulatively required by 2034, i.e. an additional requirement of 1.7 bn sq ft in the next decade. As the sector scales up, the potential revenue generation from India's office real estate is estimated to be USD 125 bn in 2034.

OFFICE STOCK IN INDIA



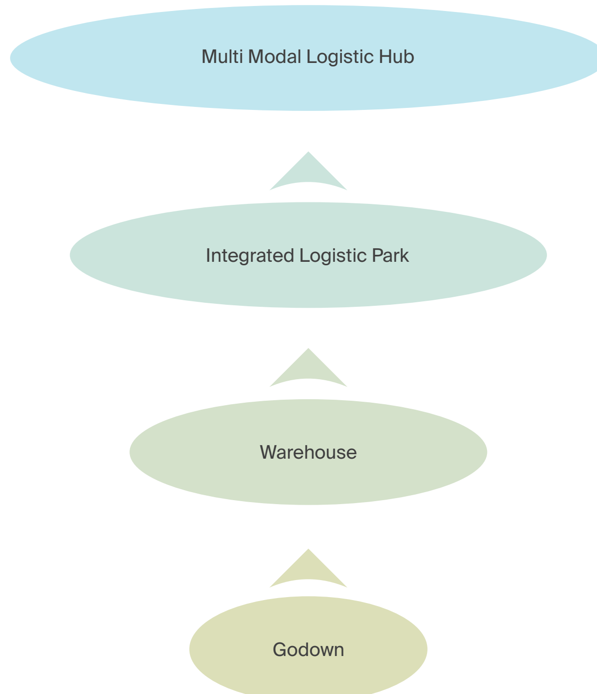
Source: Knight Frank Research

Growth Prospects in India Warehousing

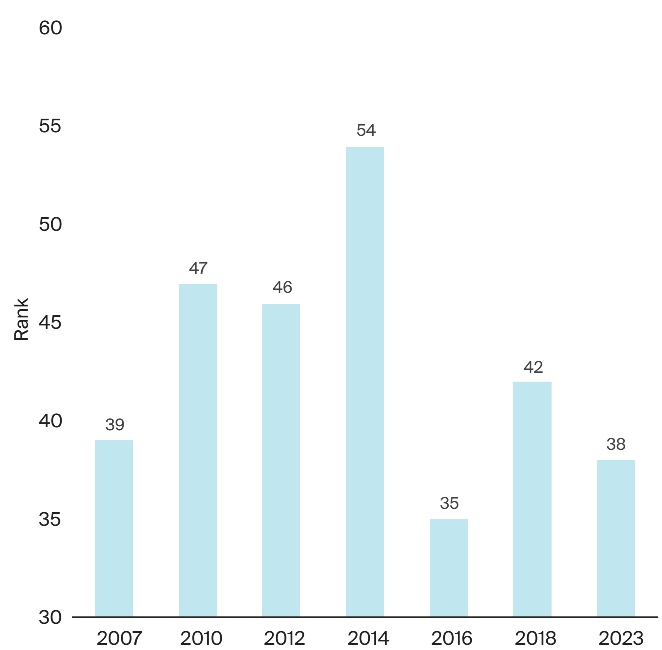


The warehousing sector in India has witnessed a tremendous shift from being dominated by unorganized players to gaining global investments. The sector has witnessed growth emerging from India's growing domestic consumption, booming organized retail, government policies and regulatory measures, besides the strengthening supply chain triggered by the COVID-19 pandemic. Augmented foreign trade, FDI allowance in the manufacturing and retail sector, globalization and changing tax systems are some of the other key factors leading to a transformation in India's warehousing sector. Furthermore, integration of the Indian economy with the global economy and government initiatives and policies to promote manufacturing in India have elevated the logistics and warehousing industry in India. Central government initiatives such as the Warehousing (Development and Regulation) Act, 2007, development of Free Trade and Warehousing Zones (FTWZ), (Foreign Trade Policy, 2004-09), establishment of Multi Modal Logistics Parks, National Logistics Policy (NLP) 2022, etc have provided an impetus to the warehousing market in India. Structural economic changes such as the implementation of GST in 2017 also accelerated the formalisation of the warehousing sector in India which is now an attractive sector for institutional investors.

EVOLUTION OF WAREHOUSING SECTOR IN INDIA



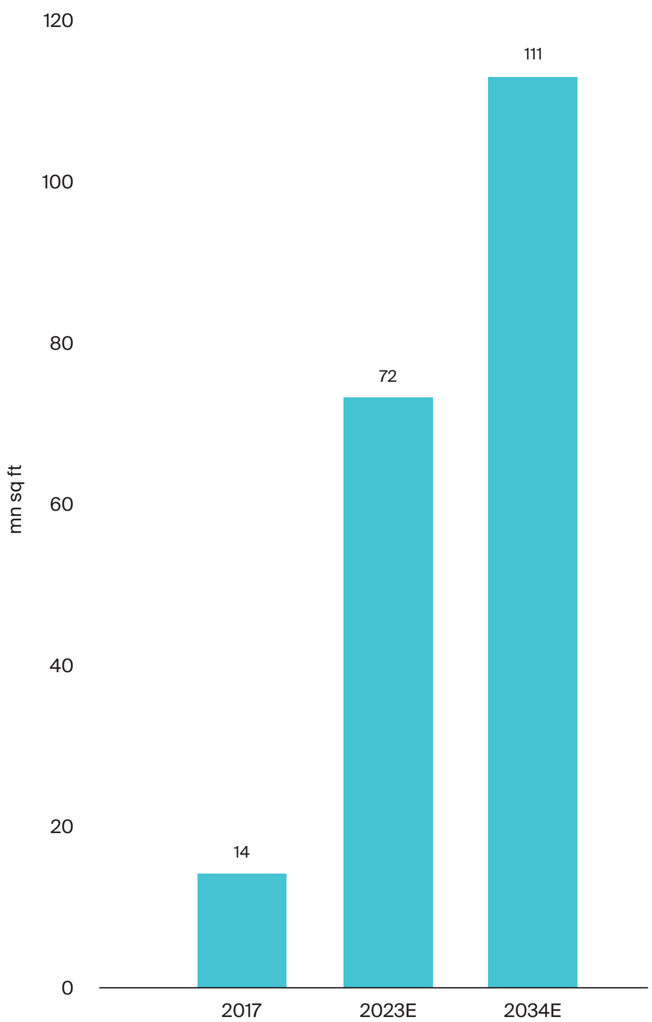
INDIA'S RANK IN GLOBAL LOGISTICS PERFORMANCE INDEX



Source: Knight Frank Research

The warehousing market in India has long been considered an attractive investment opportunity, given the growing needs of a massive consumption market and the aggressive economic growth targets of the government. In the next decade, an emphasis to boost domestic manufacturing will drive the manufacturing and logistics market in India. Apart from key manufacturing, sectors like organized retail, cold storages, automotives, pharmaceuticals and life sciences – sectors which have evolved radically, will further provide an impetus to the warehousing sector in India. With the consumption wave going beyond Tier 1 cities, Tier 2 & 3 cities will also witness a massive warehousing demand in India. Spurred by the high degree of correlation between the economic growth and increase in income levels, India's warehousing market is likely to witness a potential annual demand of 111 mn sq ft by 2034 a significant expansion from current annual leasing volume of ~65 mn sq ft and the sector has a capacity to generate a revenue of USD 8.9 bn during the next decade.

VOLUME OF WAREHOUSING TRANSACTIONS IN INDIA

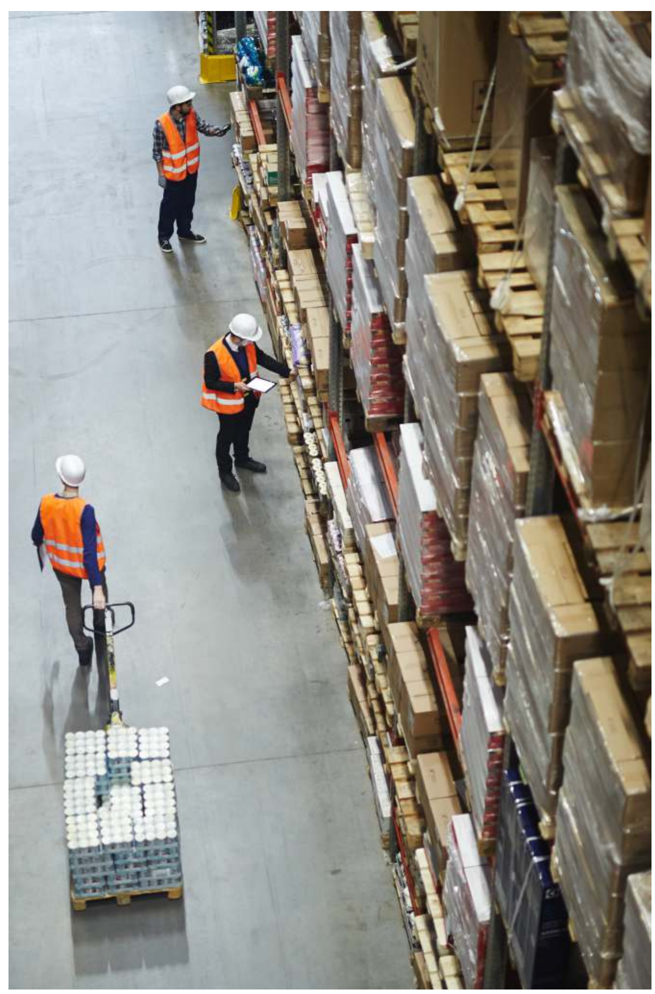


Source: Knight Frank Research

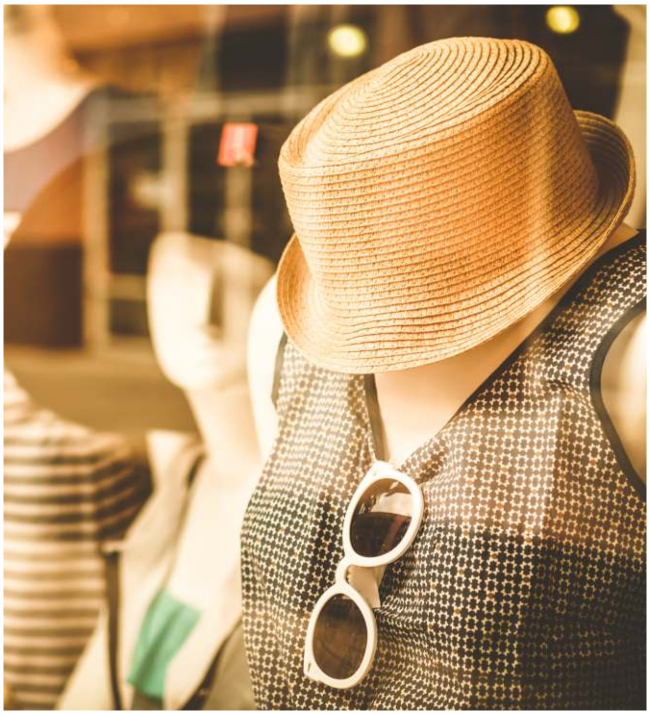
[10]Refer to the section on manufacturing

Manufacturing boost to drive industrial development:

India is currently emerging as a global manufacturing hub supported by the diversification of manufacturing dependency on China in addition to the push being undertaken by the policy makers to scale up the sector[10]. If these policy initiatives establish India as an attractive investment destination, the output generation from the manufacturing sector has the potential to expand from 15% of the GDP currently to 21.3% of the GDP by 2034. This quantum of growth would require development and expansion of industrial infrastructure in the economy where the land is a pre-requisite. Currently, under the National Industrial Corridor Development (NIDC) the Government of India is developing 11 industrial corridors across the country in a phased manner. As of 2021, 5 lakh hectares of land in India have been under usage for industrial purpose which comprises of 3,989 special economic zones, Industrial parks and estates and more. However, in the next 10 years to support the manufacturing activities in India, as estimated 20 lakh hectares of land, i.e. an addition of 15 lakh hectares will be needed to be allocated for industrial purposes, The exponential growth in required industrial land has the capacity to generate a revenue equivalent to USD 28 bn by 2034.



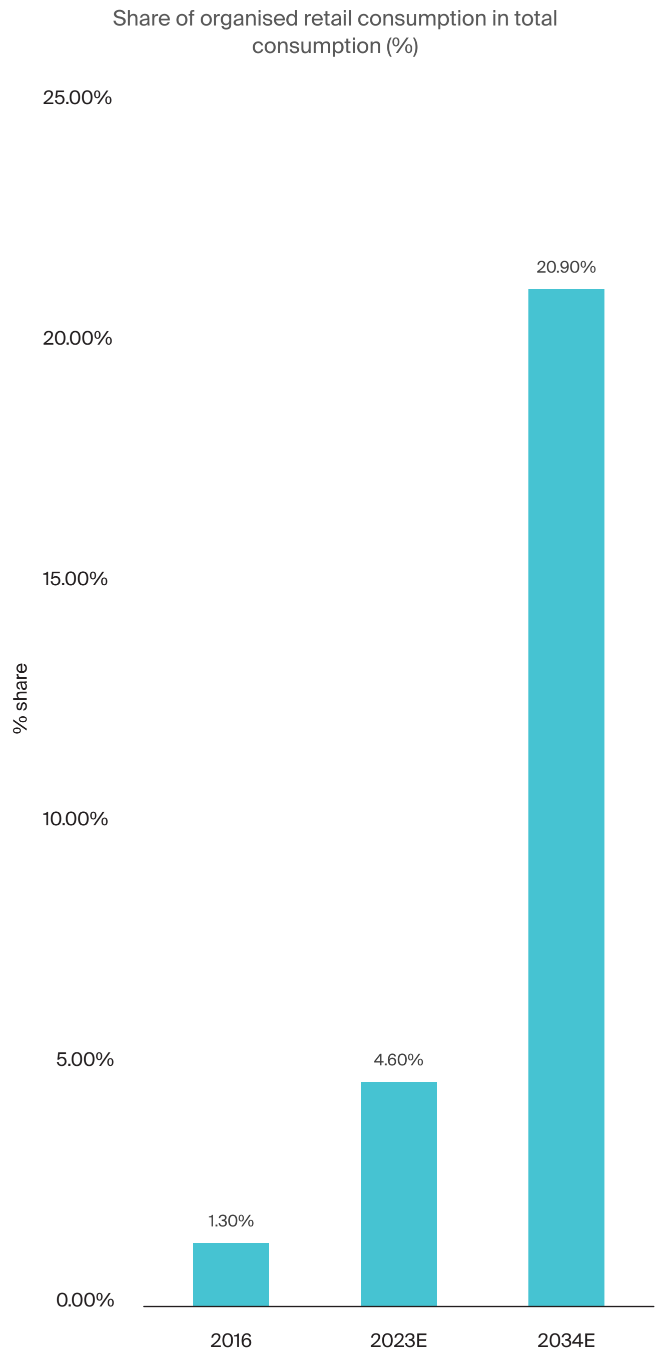
Retail: Rise in incomes and growing share of organised retail to support retail real estate in India



The domestic consumption market in India is likely to rise significantly in the coming decade supported by rising income levels and increase in spending capacity especially amongst the burgeoning young aspirational population. As estimated in the earlier sections, nearly 81% of India's population will be above the low-income category, widening the consumption base of the country. This will drive the demand for all kinds of consumer goods, specifically retail, especially organised retail consumption as the economy inches towards formalisations. As of 2023, organized retail consumption is estimated to be at 4.6% of the total private consumption of individuals[11]. This is significantly low in comparison to the developed markets such as the US, where retail consumption comprises 40% of the total private consumption of individuals. However, with growing income levels and the increasing propensity of households in India to consume, by 2034, when the size of the Indian economy is estimated to be USD 10.3 trn, the share of retail consumption is estimated to be 21% of the total private consumption. This quantum of consumption boost will support the entry and expansion of retailers in India and provide an impetus to the retail real estate both for the shopping malls and for the high streets.

[11]Think India Think Retail 2023, Knight Frank, 2023

SHARE OF ORGANISED RETAIL IN TOTAL PRIVATE CONSUMPTION OF HOUSEHOLDS



Source: Knight Frank Research

Overview of Investment Trends in India Real Estate

Nifty Realty Index: Leading the Pack in FY 2024 and Paving the Way for Future Growth

The Nifty Realty Index was established to function as a standard for evaluating India's real estate sector performance, covering primarily companies involved in constructing residential and commercial properties. Introduced on August 30, 2007, with a base date of December 29, 2006, this index was designed to track and document the price changes observed in the ten largest real estate companies listed on the National Stock Exchange of India (NSE).

PORTFOLIO CHARACTERISTICS

Methodology	Periodic Capped Free Float
No. of Constituents	10
Launch Date	30th August 2007
Base Date	29th December 2006
Base Value	1000
Calculation Frequency	Real-Time
Index Rebalancing	Semi Annually

Source: NSE

The introduction of the Nifty Realty Index marked a significant milestone for the Indian real estate industry. It provided investors with increased transparency and simplified monitoring of the sector's performance, thus elevating the importance of real estate stocks in the investment arena.

Comprising a diverse selection of 10 large and mid-cap real estate companies listed on the National Stock Exchange of India (NSE), the Nifty Realty Index serves as a key market indicator for the sector. The allocation of weight to each constituent within the Index is determined by its market capitalization. Regular rebalancing takes place every quarter to ensure the Index accurately reflects the progress of India's top 10 real estate firms.

TOP CONSTITUENTS BY WEIGHTAGE

Company's Name	Market Cap (INR bn)	Type	Weight (%)
DLF Ltd.	2,347	Large Cap	29.27
Macrotech Developers Ltd.	1,165	Large Cap	15.46
Godrej Properties Ltd.	664	Large Cap	13.29
Phoenix Mills Ltd.	509	Large Cap	13.11
Oberoi Realty Ltd.	547	Large Cap	8.71
Prestige Estates Projects Ltd.	508	Large Cap	8.32
Brigade Enterprises Ltd.	221	Large Cap	5.92
Sobha Ltd.	146	Mid Cap	2.65
Mahindra Lifespace Developers Ltd.	96	Mid Cap	2.21
Sunteck Realty Ltd.	62	Mid Cap	1.07
Total	**6,266**		**100**

Source: NSE. Data as on 1st April 2024

NIFTY REALTY PERFORMANCE

Source: NSE. Data till 1st April 2024

NIFTY REALTY CALENDAR YEAR RETURNS

Source: NSE. Data as on 1st April 2024

NIFTY REALTY – BEST PERFORMING INDEX IN FY24

Index Returns (%)	3M	1Y	3Y	5Y
Nifty 50	2.92	30.08	16.31	15.28
Nifty Auto	15.11	76.26	30.74	22.18
Nifty Bank	-2.42	17.02	13.02	9.68
Nifty Financial Services	-2.26	17.41	11.01	11.55
Nifty FMCG	-4.82	19.08	17.73	14.17
Nifty IT	-1.45	23.91	12.67	19.8
Nifty Media	-24.71	5.97	5.82	-5.59
Nifty Metal	3.56	50.78	29.69	24.06
Nifty Pharma	13.11	59.32	16.56	16.16
Nifty Private Bank	-5.31	15.09	10.48	6.82
Nifty PSU Bank	22.65	89.96	49.76	16.76
Nifty Realty	15.04	133.4	39.62	27.85
Nifty Financial Services	0.81	32.89	14.69	13.39
Nifty Consumer Durables	3.91	35.19	15.31	16.39
Nifty Oil & Gas	20.85	61.27	24.8	19.08
Nifty Healthcare Index	13.58	59.32	18.92	18.67

Source: NSE Data as on 31st March 2024
Returns for the period upto one year are absolute returns.
Returns for period greater than one year are CAGR returns.

The inaugural year of the Nifty Realty Index witnessed an impressive surge of 73% in growth. However, after reaching its peak at 1,878 on January 14, 2008, the Index faced a downturn attributed to the severe impact of the global financial crisis on housing demand. The aftereffects of the collapsed US housing bubble resonated across real estate markets worldwide, compounded by escalating interest rates and economic slowdown, dampening investor sentiment.

Despite these challenges, the Nifty Realty Index has achieved positive annual returns on 8 occasions since its inception in 2007. Notably, even amidst the pandemic in 2020, the Realty Index surprised investors with a 5% growth through the year. This unexpected growth was supported by government stimulus measures that bolstered the economy and stimulated real estate demand. Lower interest rates made homeownership more accessible, fueling demand, particularly in the budget and mid-segment housing sectors, resulting in price increases.

Currently, on a Year-to-Date (YTD) basis, the Index demonstrates a favorable growth of 22%, driven by robust real estate demand. When compared to the top 15 indices over the last 5 years, the Nifty Realty Index has recorded the highest CAGR growth of 27%. Furthermore, compared to the previous year, the index has performed exceptionally well, surpassing all major indexes. With a growth of 133.4% in the past year, Nifty Realty has emerged as the best-performing index for FY 2024.

Nifty Realty in the next 10-years

In FY 2024, the Nifty Realty Index has distinguished itself as a standout performer, delivering impressive returns. Looking at the next 10 years, the Nifty Realty Index is positioned for significant growth, driven by a convergence of compelling factors.

Rising Housing Demand: India's swift urbanization trajectory is set to propel the urban population to a projected 660 mn by 2034. As urban centers burgeon, there will be an unprecedented demand for housing. The real estate sector is strategically positioned to cater to this escalating need.

Increased Office Demand: Besides housing, the office sector has also shown improving absorptions. As businesses expand, the strong demand will translate into higher occupancy rates in office buildings, retail spaces, and warehouses. This will lead to higher rental income for property owners, which can boost stock prices in the real estate index.

Government Boost: The proactive stance of the Indian government in supporting the real estate industry through initiatives such as tax incentives for homebuyers and subsidies for affordable housing is expected to stimulate further demand and investor confidence.

Given these favorable conditions, the Nifty Realty Index is poised to embark on a compelling growth trajectory over the next decade.

India Real Estate Investment Trust (REITs) REITs Unveiled: Reshaping Real Estate Investments

The Securities and Exchange Board of India (SEBI) first introduced draft regulations for Real Estate Investment Trusts (REITs) in 2007. After significant revisions, the official Real Estate Investment Trusts Regulations were enacted in India on September 26, 2014. The first REIT, Embassy Office Parks, was listed on the exchange in April 2019. Subsequently, Mindspace Business Parks REIT was listed in August 2020, followed by Brookfield India Real Estate REIT in early 2021, and Nexus Select Trust REIT in 2023.

THE PERFORMANCE OF INDIAN REITS SINCE INCEPTION

Company	Sector	Issue date	Issue price	YoY*	Price change since listing*	Annual Distribution yield
Embassy Office Parks REIT	Office	5th Apr 19	300	16.8%	22.2%	5.8%
Mindspace Business Parks REIT	Office	7th Aug 20	275	7.5%	25.3%	5.8%
Brookfield India Real Estate Trust	Office	19th Feb 21	275	-6.8%	-5.5%	7.8%
Nexus Select Trust	Retail	19th May 23	100	NA	28.8%	NA

*Data as on 1st April 2024

REITs have emerged as a significant catalyst in revitalizing India's real estate industry. Their introduction has injected crucial liquidity into the market, attracting investments from both local and international sources. This influx of capital has played a pivotal role in driving progress and fostering advancement within the real estate sector.

INDIAN REITS PORTFOLIO

Office REIT Portfolio (mn sq ft)	Mumbai	Hyderabad	Pune	Chennai	NCR	Kolkata	Bengaluru	Chandigarh
Embassy Office Parks REIT	2	-	6.4	-	3.9	-	23.5	-
Mindspace Business Parks REIT	12.5	14.1	5.4	1.1	-	-	-	-
Brookfield India REIT	4.3	-	-	-	13.4	3.1	-	-
Nexus Select Trust*	-	-	1	0.2	-	-	-	0.2

Note: Under construction portfolio not considered
*Only includes office REIT portfolio

NEXUS SELECT TRUST RETAIL REIT PORTFOLIO (MN SQ FT)

Amritsar	0.5	Mangalore	0.7
Chandigarh	1.3	Hyderabad	0.8
Delhi	0.5	Ahmedabad	0.9
Udaipur	0.4	Indore	0.6
Bengaluru	1.2	Mumbai	1
Mysuru	0.3	Pune	0.4
Chennai	0.6	Bhubaneswar	0.4

Source: Company Filings

Indian REITs collectively hold a portfolio spanning 100.7 mn sq ft, with 91.1 mn sq ft allocated to office assets and 9.6 mn sq ft to retail assets. Furthermore, ongoing construction within the REITs sector amounts to approximately 21.2 mn sq ft, slated for completion within the next few years.

GLOBAL RECOGNITION: INDIAN REITS MAKING THEIR MARK

REITs Portfolio (mn sq ft)	USA	UK	Singapore	China	India
GDP (USD bn)*	25,938	3,582	418	19,993	3,515
First REIT Launch Year	1960	2007	2002	2001	2019
No of REITs	225	48	42	29	4
REITs Market Cap (USD bn)	1,268.1	78	77	13	10
Market Cap/GDP	4.9%	2.2%	18.4%	0.1%	0.3%

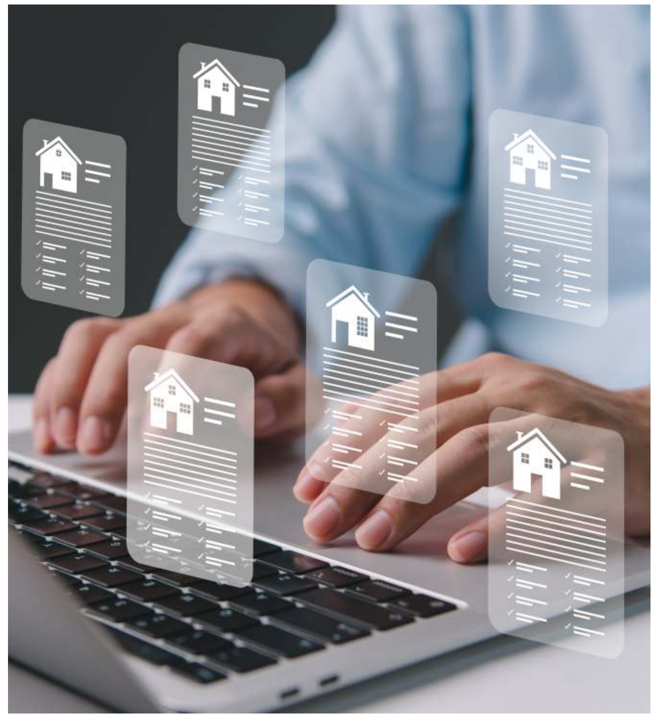
*Source: Knight Frank Research, IMF, NAREIT, LSE

The USA has long maintained its leading position as the earliest and most established market for REITs, boasting the highest number of REITs globally. However, between 2000 and 2010, numerous other countries began exploring the realm of REITs. India introduced its inaugural REIT in 2019, achieving this milestone nearly 59 years after the USA's first REIT listing. Despite India's relatively late entry into this segment, the Indian REIT market has swiftly made its mark on the global stage, with a total market capitalization of USD 10 bn, signaling steady improvement and growth.

INDIA'S REIT JOURNEY TOWARDS 2034

TYPES OF REITS LISTED GLOBALLY

1) Industrial	5) Diversified
2) Office	6) Hotel REIT
3) Retail	I) Lodging/Resorts
i) Shopping Centres	7) Health Care
ii) Regional Malls	8) Self Storage
iii) Free Standing	9) Timber
4) Residential	10) Infrastructure
i) Apartments	11) Data Centres
ii) Manufactured Homes	12) Gaming
iii) Single Family Homes	13) Specialty



NUMBER OF DIFFERENT TYPES OF REITS LISTED IN COUNTRIES

Number of Types of REITs	USA	UK	Singapore	India
No. of REIT segments	13	11	4	2

Over the past 5 years, India has welcomed the introduction of four REITs, focusing on both the office and retail sectors. Despite these advancements, the market capitalization to GDP ratio for Indian REITs remains modest at 0.3%, indicating significant growth potential in the REIT sector.

A notable opportunity lies within the office sector itself, which currently represents only 10.9% of the total available office space in the top eight cities. This underscores substantial room for expansion in this sector, especially as Indian real estate companies explore growth avenues driven by the improving economy and increasing demand for office spaces.

Also, the launch of India's first retail REIT comes at an opportune time to unlock latent value in real estate, particularly with the retail industry undergoing a revival. Developers and investors are increasingly focusing on building, managing, and acquiring profitable retail assets.

Growth indicators are also evident in India's industrial sector, with players beginning to consolidate portfolios and explore the potential of warehousing REITs. Grade A warehousing facilities, favored for their advanced technology and enhanced efficiency, are gaining popularity among occupiers, further driving demand.

Hotel REITs have the potential to transform the Indian hospitality industry, attracting increased investment into this capital-intensive sector. Embassy REIT currently holds the sole hotel asset portfolio, and the introduction of a dedicated hotel REIT seems imminent in the next couple of years.

Additionally, the demand for data centers and educational technology is fueling the possibility of developers exploring the REIT option in these sectors. The evolving framework for REITs aims to enhance transparency, thereby bolstering investor confidence.

With initial successful REITs setting a positive precedent, it is likely that REITs will expand into diverse sectors such as industrial and logistics in the medium term. Inspired by global markets, developers may also consider venturing into REITs for alternative asset classes like data centers, hospitality, healthcare, education, and more in the longer term.

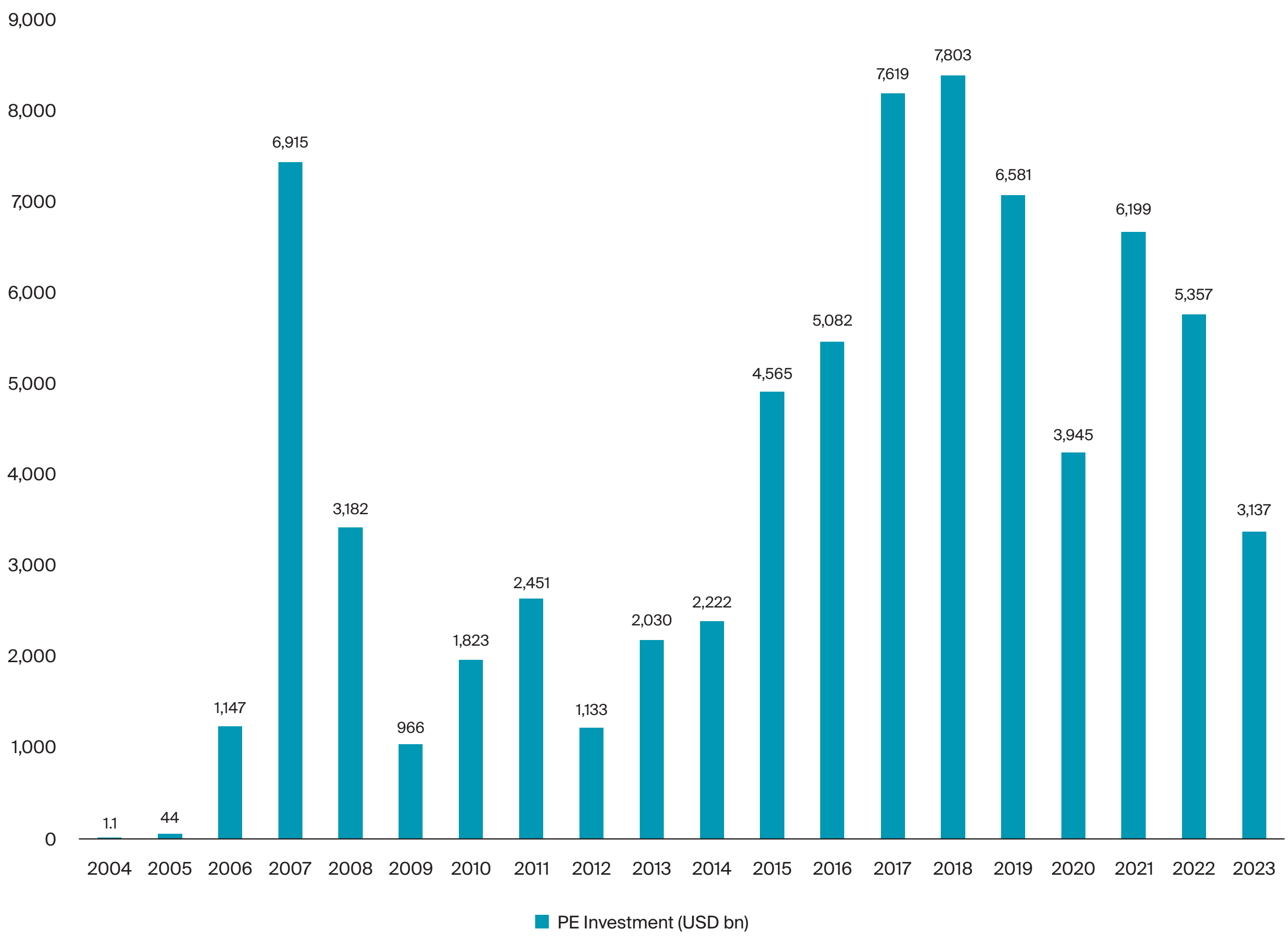
Furthermore, the introduction of Small and Medium REITs (SM REITs) is expected to be a boon for the Indian REIT market. By allowing investment in real estate assets with a minimum value of INR 50 crore (compared to INR 500 cr previously), SM REITs open the doors for smaller developers and regional properties. This broader range of investable assets should attract more investors, both domestic and foreign, due to the lower entry point (minimum investment of INR 10 lakh) compared to the high investment requirement for a large REIT (minimum investment of INR 25 lakh). This increased participation is likely to improve the overall liquidity and transparency of the REIT market in India, boosting its long-term outlook.

Private Equity in Indian Real Estate

Over the past two decades, private equity (PE) investments in the Indian real estate sector have demonstrated consistent and gradual growth. Particularly noteworthy is the sector's robust expansion over the last decade, with an average annual PE investment of USD 5.0 bn between 2013 and 2023, compared to the average annual PE investment of USD 1.9 bn observed between 2004 and 2012.

India's sustained economic advancement, rising demand for real estate, favorable government policies such as the relaxation of foreign direct investment (FDI) policies, and a strengthening supply side have all contributed to bolstering PE investments in the sector.

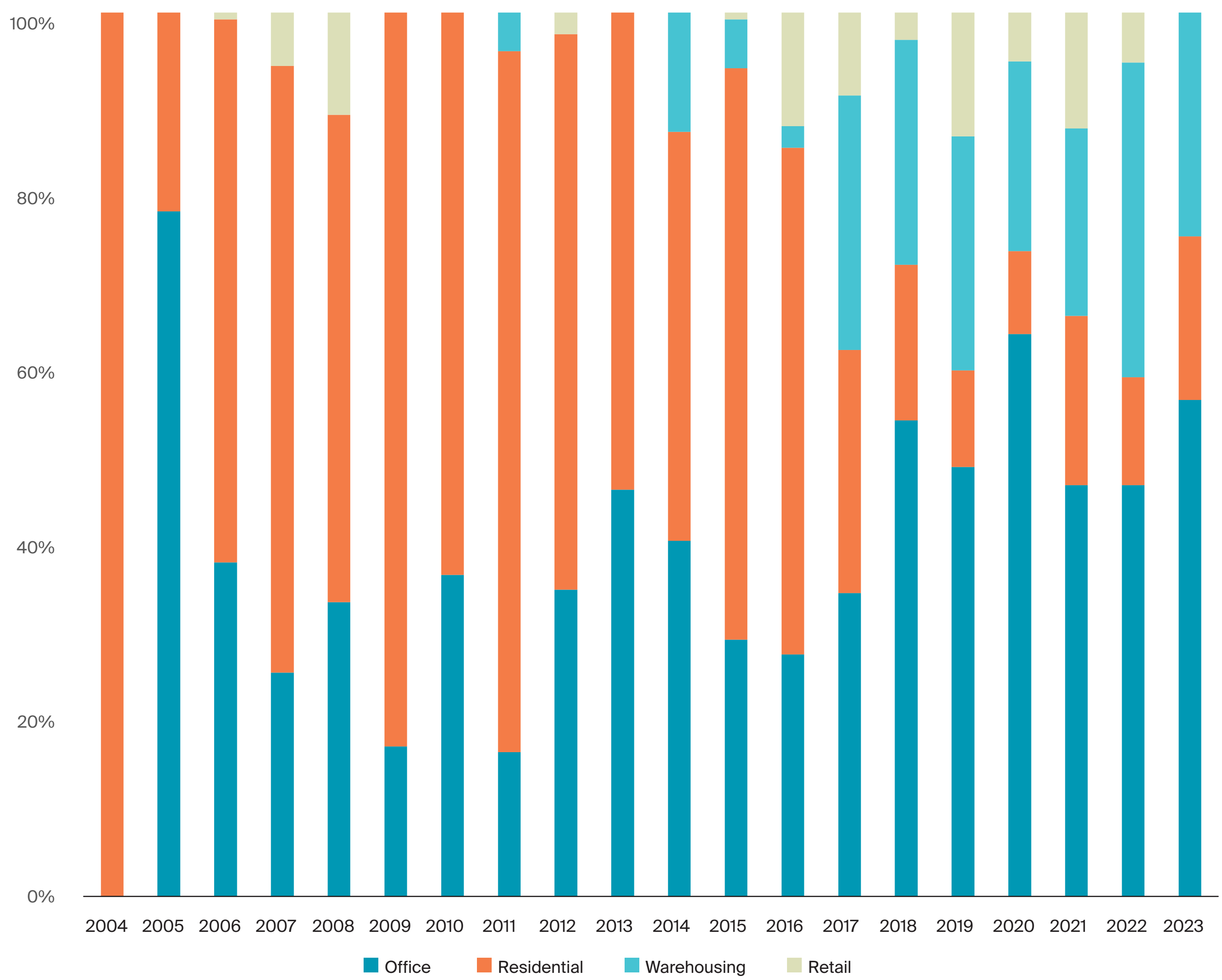
INVESTMENT EVOLUTION: PRIVATE EQUITY'S JOURNEY IN THE INDIAN REAL ESTATE LANDSCAPE



Source: Knight Frank Research, Venture Intelligence

In 2023, private equity (PE) investments in the Indian real estate sector experienced a YoY decline of 44%, totaling USD 3.1 bn. Global geopolitical uncertainties and high interest rates worldwide contributed to investor caution, leading to limited market engagement. Despite these challenges, the impact was relatively moderate, with some significant transactions observed in the office and warehousing sectors. Investors strategically positioned themselves across various sectors, with the office industry securing the highest share of investments.

PRIVATE EQUITY ACROSS REAL ESTATE SEGMENTS



Source: Knight Frank Research, Venture Intelligence

From 2004 to 2016, private equity (PE) investments in the Indian real estate sector were predominantly focused on the residential segment. During this period, the residential space attracted a total investment of USD 19.8 bn, which was more than twice the USD 9.8 bn directed towards the office sector. However, there has been a consistent decline in the proportion of PE investments in residential real estate following the global economic downturn.

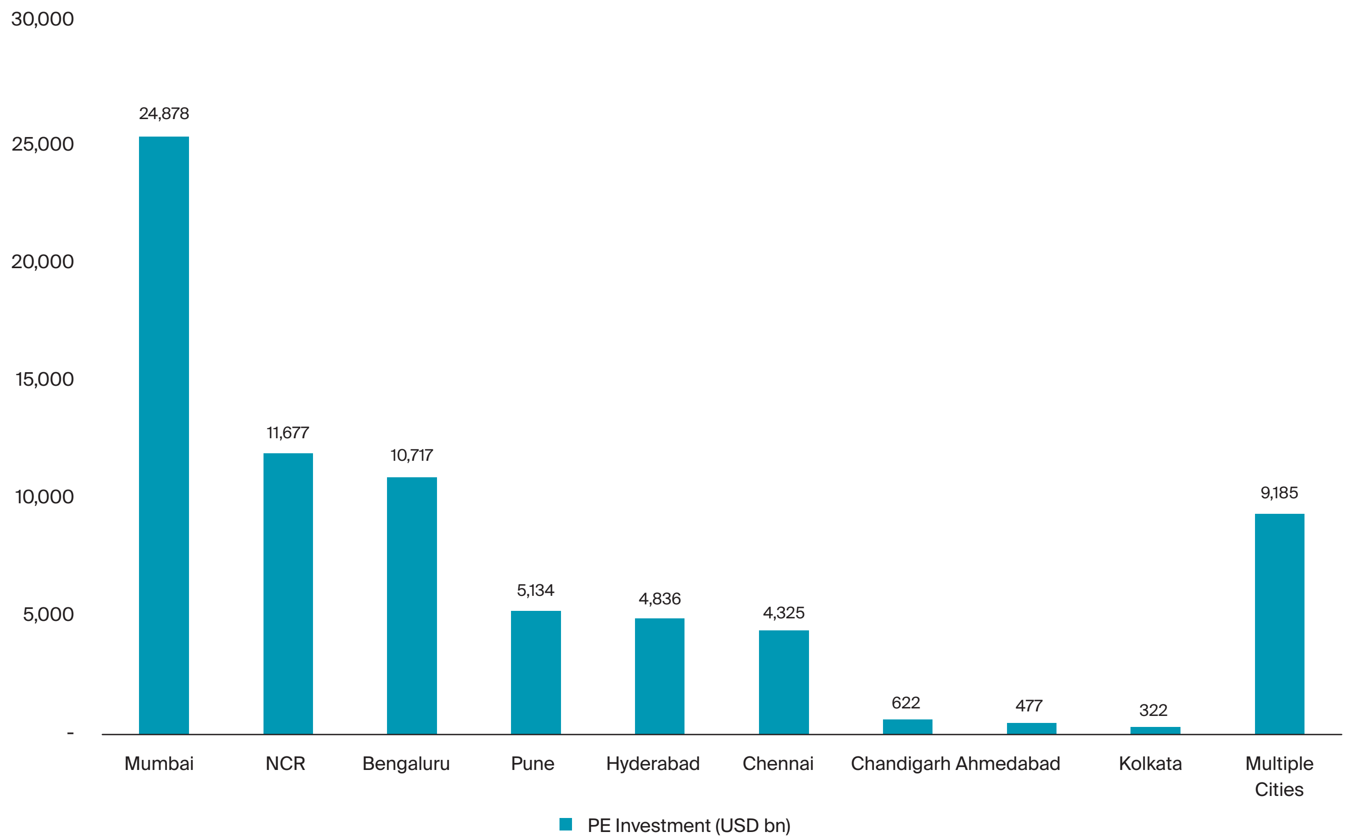
In 2017, a notable shift in investor focus emerged, diverting attention away from residential investments towards office spaces, industrial/warehousing facilities, and retail real estate projects. This shift was prompted by challenges faced in residential ventures. Between 2017 and 2023, the office sector attracted a total of USD 19.7 bn in PE investments. The growing prominence of the office sector can be attributed to relaxed regulations aimed at promoting Real Estate Investment Trusts (REITs), as well as the dominant presence of global corporate delivery centers, which have captured the attention of PE investors.

Furthermore, the post-pandemic period witnessed a significant surge in PE investments within India's warehousing sector. The average share of PE investments in the warehousing sector post-pandemic stood at 27%, consistently holding the second position as the second beneficiary of investments after the office sector. The expansion of e-commerce, the evolution of omni-channel retailing, and the critical role of last-mile delivery have elevated the importance of the warehousing industry in India's growth narrative.

Mapping Private Equity Investments across Cities

Driven by strong demand for both office and residential spaces, Mumbai has emerged as the leading recipient of investments since 2004, amassing a total of USD 24.9 bn. Following closely behind, the National Capital Region (NCR) secured the second position with a cumulative investment of USD 11.7 bn. The top five positions were further solidified with the inclusion of three key IT hubs and emerging IT centers. Bengaluru, Pune, and Hyderabad collectively attracted USD 20 bn in PE investments, primarily fueled by the high demand for IT-centric spaces within these urban centers.

PE INVESTMENTS ACROSS CITIES



Source: Knight Frank Research, Venture Intelligence

In 2023, India experienced a decline in investment activity, largely influenced by subdued investor sentiment stemming from high interest rates and geopolitical uncertainties prevalent in emerging markets. This cautious behavior from investors was particularly noteworthy given the challenging economic environment.

However, despite these challenges, India observed growth trends emerging within the real estate sector. There is a growing interest in alternative asset classes beyond traditional office and retail spaces. Emphasis on sustainability and technology-driven solutions is reshaping the sector, garnering increased interest from investors in the Asia-Pacific (APAC) region. These evolving trends reflect a shift in priorities and preferences within the real estate investment landscape, signaling opportunities for innovation and growth in the sector.

PE Investment Outlook 2034

India's increasing appeal as a global investment destination is evident through a series of measures aimed at fostering a favorable economic environment. These initiatives promote transparency, accountability, and streamlined market entry across various sectors, enhancing India's attractiveness and ability to attract capital.

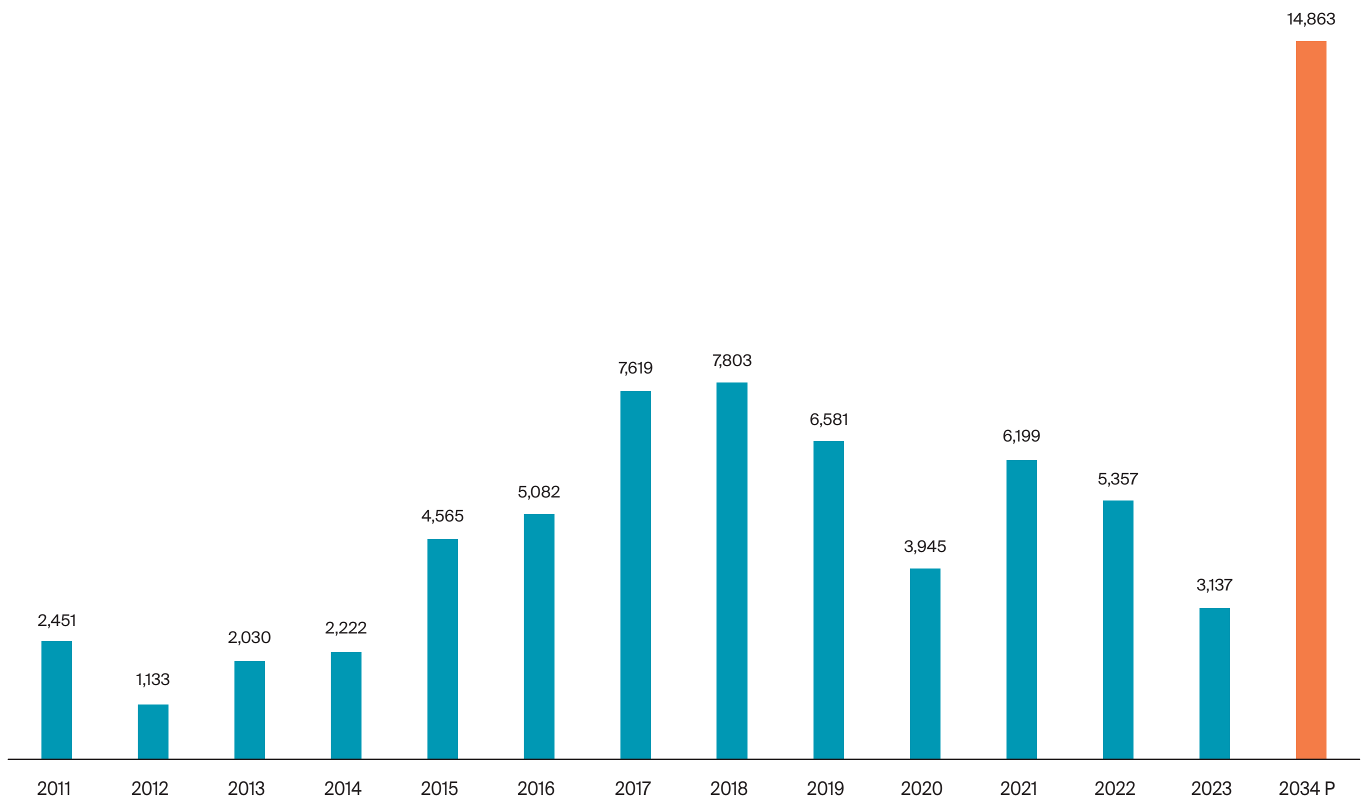
As India solidifies its reputation as an attractive investment destination, the flow of private equity into the real estate sector is expected to rise. Historically, private equity investments in Indian real estate have constituted around 0.15% of the country's Gross Domestic Product (GDP). With India's GDP projected to reach USD 11.3 tn by 2034, the surge in private equity investments in the real estate sector is estimated to reach USD 14.9 bn by 2034, representing a Compound Annual Growth Rate (CAGR) of 17% between 2023 to 2034.

Emerging sectors such as data centers, healthcare, hospitality, co-living, and co-working spaces present promising avenues for private equity investors, driving the growth narrative in India for the coming years.

Moreover, the Government of India's robust focus on infrastructure development, including smart cities, creates a favorable outlook. Simultaneously, policy reforms aimed at improving the ease of doing business, such as streamlined approvals, digitalization, and liberalization of foreign direct investment (FDI) policies, contribute to a conducive investment climate. Furthermore, regulations governing private equity and venture capital, coupled with proactive governmental initiatives, attract foreign capital into the country.

Additionally, many firms are diversifying their investments into the rural economy, including agribusiness, rural infrastructure, and microfinance, catalyzing market expansion. This growth potential of Indian businesses attracts a spectrum of private equity entities seeking substantial returns.

JOURNEY TO 2034: INDIAN REAL ESTATE PE INVESTMENTS PROJECTED TO REACH USD 14.9 BILLION



Source: Knight Frank Research

Key Recommendations

In the imminent future, India's economy is expected to grow at a rapid pace driven by factors such as demographic advantage, rising disposable incomes, government reforms and policy initiatives. The structural shift in the Indian economy will provide a major push to the growth of all sectors including real estate. However, for long-term growth it is imperative that the country as well as the real estate sector aim for sustainable growth. Below are some of the key recommendations:

1. Capitalize on manpower

India's real estate sector is poised for significant growth in the upcoming years to meet the expanding needs of the economy. To achieve optimal growth, the real estate industry requires a well-equipped workforce dedicated to enhancing both sectoral and economic efficiency. The anticipated expansion of the sector in the forthcoming years will necessitate a proficient workforce that can contribute effectively to its growth as well as to the overall economy.

India benefits from a demographic advantage, with 63% of its population falling within the working-age category. This demographic dividend offers abundant human capital resources. When adequately trained and skilled, this human capital can substantially enhance the sector's productivity. However, despite this demographic advantage, there exists a shortage of skilled employees in the real estate sector. Currently, India's real estate sector employs approximately 18% of the country's total workforce, comprising around 70 million employees. By 2030, with the economy expected to reach USD 7 trillion, the construction sector—encompassing both real estate and infrastructure development—is projected to contribute USD 1 trillion to this output. To accommodate this substantial growth, employment in the construction sector is estimated to increase to 100 million[12]. However, the sector predominantly relies on minimally skilled or semi-skilled workers, constituting 83% of the workforce. Nevertheless, the sector's evolving technological landscape and the imperative to enhance productivity are expected to heighten the demand for skilled labor in real estate. While there is an abundance of human capital, the lack of requisite skills impedes the workforce from securing employment and making a optimum contribution to productivity, thus limiting the sector's output potential.

Therefore, addressing this skill gap is imperative. This can be achieved through:

a) **Strengthening of training modules in institutes as per industry requirements:** Over the last few years, the construction industry has witnessed technological advancement. The industry has been integrating with innovative technologies such as Information and Communications Technology (ICTs), Internet of Things (IoTs), etc along with being a multi-disciplinary knowledge sharing platform. The education curriculum and training modules in India need to be updated accordingly and aligned with industry requirements. As per industry discussion, a significant portion of graduates and trained candidates entering the construction industry are ill-equipped to meet industry requirements and work with modern-day concepts. Therefore, to achieve optimum employability, the education curriculum needs to be updated and integrated with industry requirements. This can be done through extensive engagement with the private employment sector.

b) **Collaboration between academic institutions and private employers:** Student engagement with private sector employers through their academic institutions increases their exposure to real-world work environment. Regular engagements such as interning, participation in conferences, authoring research papers and building case studies, equips students with real skills required to be employable.

c) **Encourage coursework and certification with professional bodies:** Upskilling post-employment could be one of the key strategies to enable the employees to enhance their capabilities and develop additional skills. Incentives by the private sector employers to encourage their employees to pursue additional certifications, course works and training from reputed professional bodies will not just boost the quality of employees in the organization, but also increase the quality of work and productivity. To achieve this, the private sector would require collaboration with reputed academic institutions and other professional bodies.

2. Urban housing requirement

Rapid urbanization has exacerbated India's housing deficit, particularly affecting affordable housing options for lower-income groups. This shortfall stems from a complex interplay of demand and supply side issues. Escalating property prices and borrowing expenses pose formidable barriers to homeownership, especially for individuals from economically weaker sections (EWS) and Lower Income groups (LIGs). While initiatives like the Prime Minister's Affordable Housing Scheme (PMAY) have been implemented to cater to this segment, a more comprehensive policy approach is warranted.Simultaneously, exorbitant land prices make it economically unfeasible for developers to embark on affordable housing ventures.

In recent years, demand side measures such as stamp duty reductions during the COVID-19 pandemic in states such as – Maharashtra, Karnataka, West Bengal etc significantly boosted home sales. Similarly, supply measures such as 50% reduction in construction premium for developers in Maharashtra significantly enhanced residential supply in the state. Long term implementation of such measures will play a crucial role in catering to the real estate needs of the country, which currently faces housing shortage and has vast sectoral linkages.

Additionally, some of the key long-term measures that can address the demand and supply challenges for the affordable housing segment could be:

[12]Skilled employment in construction sector in India, Knight Frank, 2023

a) **Rationalizing of stamp duties:** The GST regime taxes affordable housing at 1% in comparison to 5% for a non-affordable housing project. This has been a significant enabler for home purchase in the affordable housing category. However, to cater to the burgeoning housing requirement similar concessional rates need to be implemented in the stamp duty rates by the state government as well. Currently, states like Karnataka, Rajasthan[13] etc. provide concessional stamp duty rates for low-cost housing or affordable housing. Such measures need to be adopted by other states as well.

EXAMPLE: STAMP DUTY AND REGISTRATION COST IN KARNATAKA

Property Value	Stamp Duty	Registration Charges
Above Rs 45 lakhs	5%	1% of the property value
Rs 21 - 45 lakhs	3%	
Less than 20 lakhs	2%	

Source: Government of Karnataka

b) **Provision of interest rate subsidies:** Interest rate subsidies such as CLSS under the PMAY – U scheme has enabled home ownership for the low-income groups. However, the tenure of such schemes has been short, as seen in the duration of CLSS for EWS/LIG category which ended in March 2022. However, during the period of high interest rate hikes, the home affordability[14] of the low-income groups decreases in comparison to the mid and high-income groups *(Source: Knight Frank)*. Hence, to enable home purchase through borrowings, a long-term provision of interest rate subsidies for EWS and LIG housing will play a prominent role in enabling home purchases.

c) **Tapping into unused PSU lands:** A significant challenge in the affordable housing sector is the high cost of land in urban centres which in turn increase the construction costs thus making the construction of affordable housing projects economically unviable. A potential solution lies in repurposing vacant and non-core lands owned by various Public Sector Undertakings (PSUs), such as railways and defence etc for affordable housing projects through public-private partnerships.

3. Focus on expansion of sustainable and green buildings

During the 2021 United Nations Climate Change Conference or COP26 held at Glasgow, the Indian government pledged to achieve net-zero carbon emissions by 2070. This would mean, the policy makers in India would actively implement a framework to countervail carbon emissions. To achieve such an ambitious target, it is required that all sectors in India collectively contribute to reducing their carbon emissions. The real estate sector, which is poised to grow rapidly and is one of the key drivers of the economy, accounts for 40% of all the emissions in globally[15]. According to the World Economic Forum, 40% of global energy and 40% of all the raw materials are used by the real estate sector. To collectively achieve the government's net zero target, a reduction of the carbon footprint by the real estate sector will play a prominent role. The industry is currently at the early stage of adopting sustainable practices through strategies such as adoption of India Green Building Council (IGBC) norms, which aim to achieve net-zero carbon buildings by 2050.

Currently, the central and the state government in India has provide incentives to the certified buildings in the form of additional free FAR/FSI, tax benefits to the developers, low interest loans, fast track approvals etc. For a long term and sustainable impact, it is imperative that all the states provide similar incentives to encourage developers to align their development activities with the country's net zero targets.

[13]In Rajasthan stamp duty rate for low-income housing is 1% of the consideration value.
[14]Affordability rate = EMI/Income
[15]Climate risks in the real estate sector, UNEP, March 2023

GOVERNMENT INCENTIVES TO IGBC RATED GREEN BUILDING PROJECTS

State	Ministry	Additional Free FAR		
		Silver	Gold	Platinum
Punjab	Department of local government (Town planning)		5.00%	5.00%
	Department of housing and development, Govt of Punjab	5.00%	7.50%	10.00%
Rajasthan	Urban Development Department	7.50%	10.00%	15.00%
West Bengal	Kolkata Municipal Corporation		10.00%	10.00%
	New Kolkata Development Authority		10.00%	10.00%
Uttar Pradesh	Housing and Urban Planning Department		10.00%	10.00%
	Greater Noida Industrial Development Authority		5.00%	5.00%
Himachal Pradesh	Town & Country Planning Department		10.00%	10.00%
Jharkhand	Urban Development and Housing Development	3.00%	5.00%	7.00%
Haryana	Town & Country Planning Department	9.00%	12.00%	15.00%
Maharashtra	Urban Development Department	3.00%	5.00%	7.00%
	Pune Municipal Corporation (PMC)	3.00%	5.00%	7.00%
	Pune Metropolitan Region Development Authority (PMRDA)	3.00%	5.00%	7.00%

Source: IGBC

However, despite the progress so far, the progress of the built environment to achieve its net zero targets is relatively laggard. This is primarily due to bottlenecks such as challenges in procuring required raw materials, design implementation, limited availability of finance etc. Initiatives which can increase and incentivise the production of low carbon construction materials such as bamboo, recycled concrete, rice husk ash concrete etc. would be supportive for the developers.

In terms of financing, the lending institutions can provide easy and long tenor construction finance, home loans, home improvement loans etc. at subsidised lending rates will significantly accelerate the uptake of green buildings. Financial instruments such as green bonds, green securitizations etc. can be efficiently used to inject liquidity for development of green and sustainable buildings in India. As the challenges are addressed there will likely be more investments by the institutional investors as well in energy efficient and green buildings in India. To align with the industry goal of net zero carbon emissions, it will be an opportunity for the real estate developers to scale up their energy efficient strategies

4. Adoption of technology

Technological advancements have played a significant role in the transformation of the real estate sector in the last few years. With the adoption of technology, processes such as property search, transactions, registrations etc. have become quicker and more organized. The emergence of PropTech (property technology) in recent years has played a pivotal role in streamlining property search and transactions. Advanced technologies such as Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), Building Information Modelling (BIM) etc. have revolutionized conventional real estate practices. Technologies such as 3D printing are already being used in construction of various structures in India such as – bus shelters (Godrej & Boyce, Mumbai), Boundary Walls (TNCA), Twin living quarters (Defence) etc.(Source: tvatsa). However, the adoption of such technology is still at an infancy stage in India. To expand the usage of such technologies at a rapid and large scale, it would be required to the awareness and adequate training is provided to use such technologies efficiently.

With the expansion of the global Information Technology sector, the evolution of innovative technologies is imminent. Currently, the global IT industry is estimated to be at USD 9 tn and at a CAGR of 8.2%, estimated to expand to USD 20 tn by 2034. Thus, innovative technologies along with growing internet penetration in India, will provide an impetus for the real estate industry to reach its growth targets efficiently.

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Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society, through advisory and consultative processes.

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