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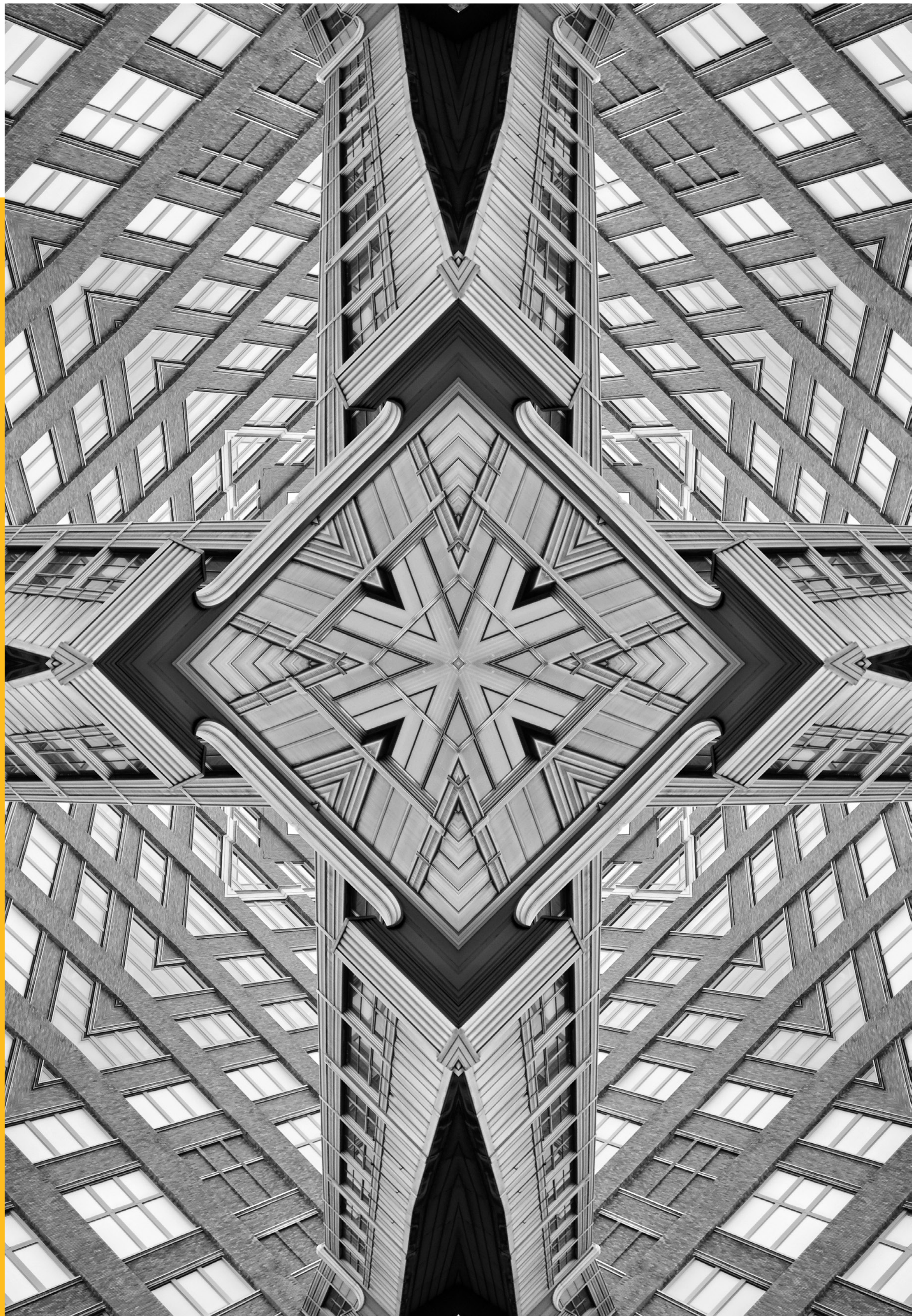

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The Pathway to Affordable Housing in Urban India: A Case Study of Mumbai

Abhay Pethe, Rashmi Sharma, and Dhaval Desai

Abstract

The affordable housing challenge plagues cities across India. Although city administrations have framed various strategies to tackle the issue, weak implementation, flawed policies, and an inherent lack of capacity to find long-term solutions have allowed slums to proliferate as an alternative. This paper examines the affordable housing issue in Greater Mumbai. Since affordability is not absolute but relative to the development stage and income distribution level, this paper presents a city-specific operational definition of affordable housing for Mumbai. It also proposes policy reforms, including shifting the planning focus from municipal limits to the larger metropolitan expanse.

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Introduction

Rapid urbanisation has led to an unprecedented increase in the demand for affordable housing. However, the shortage of affordable housing has affected millions around the world, particularly those with low and moderate incomes, and led to slum proliferation and ghettoisation, and gentrification. Housing is different from other commodities of human need. The meaning of 'affordable' also differs when used for housing than for other objects.[1] A house is affordable if the financial outflow towards rentals or monthly loan instalments is limited to 30 percent to 40 percent of the household income, or the cost of the house is up to five times the household's gross annual salary.[2,3] Affordability can be categorised into purchase, loan repayment, and maintenance affordability,[a,4] including other tangibles and intangibles, such as access to essential services, travel time/distance to work, per capita consumption of space (inside and outside the house), and density levels. As such, the following threshold parameters are intrinsic to affordable housing planning: [5]

i. Affordability threshold (30-40 percent of household income)

ii. Standardisation threshold (access to essential services, floor space, and reasonable commuting time to work)

iii. Income thresholds (80 percent of median income).

The High-Level Task Force on Affordable Housing for All, set up in 2008 by the erstwhile Ministry of Housing and Urban Poverty Alleviation, presented housing specifications for different income groups.[6] However, the first universal definition of "affordable housing" without classifying income groups was coined in 2012 by the Task Force on Promoting Affordable Housing: units (either single or part of a building complex) with a carpet area of not more than 60 sq mt (646 sq ft) and priced within five times the annual household income.[7] In 2013, the Affordable Housing in Partnership[8] scheme recommended different housing sizes for the economically-weaker sections (EWS) and lower-income group (LIG)

a Affordability of a house is determined by its purchase price, the ability to repay loans sought for its purchase, and the ability to maintain it. All three aspects are intrinsic to determining the affordability of a house for a buyer.

beneficiaries.[b] In 2017, the Technical Group on Urban Housing Shortage[9] suggested mechanisms for creating a national database on urban housing shortage. It proposed a countrywide evaluation of the existing data-related issues and methodologies adopted by various states to estimate housing shortages and projections, distribution of housing shortage across expenditure groups and tenure categories, and identification of the macro issues in determining urban housing shortages and their implications. It aimed to formulate a national mechanism to strengthen the system of collating housing statistics and developing a national database. The Rajiv Awas Yojana (2011)[10] and the Pradhan Mantri Awas Yojana – Urban (2015; PMAY)[11] also contained certain specifications. For example, the PMAY's Housing for All (Urban) scheme Guidelines[12] devised an implementation methodology under four redevelopment verticals, giving different options to the beneficiaries, state governments and urban local bodies (ULB) for in situ slum redevelopment: affordable housing through credit-linked subsidy, affordable housing in partnership, and subsidy for beneficiary-led individual house construction. While the guidelines suggest the minimum size of the house in conformity with the National Building Code (NBC) standards, it empowers the states to decide on an optimum minimum size if the available land area for construction restricts adherence to the NBC standards. It only determines a house size of 30 sq mt for an EWS beneficiary with an annual household income of up to INR 300,000, and 60 sq mt for LIG beneficiaries with an annual household income between INR 300,000 and INR 600,000 under the interest subvention subsidy.

Given the relativeness and varied data constraints among countries, affordability will have different meanings in rich and poor countries. Still, many cities have experienced the affordable housing challenge and implemented 'appropriate' measures at some stage of their development. For example, the New York City Housing Authority in the US offers programmes with different eligibility and application requirements for low- and moderate-income citizens needing affordable housing, considering the variance in their income thresholds.[13] However, it forewarns applicants

b People with an annual household income of less than INR 300,000 are categorised as EWS, while LIG encompasses people with an annual income of between INR 300,000 and INR 600,000.

Introduction

that meeting the eligibility criteria for the application does not guarantee the allotment of a house either on rent or ownership, indicating that the demand-supply gap exists even in rich and influential global cities. Similarly, Hong Kong,[14] London (UK),[15] and Shanghai (China)[16] have differing approaches to rental or ownership public housing policies and schemes for their low-income residents.

Importantly, resource availability, implementation apparatus, and capacity determine the success of housing policies, laws, and regulations. At the same time, slums have proved an optimal alternative for those left out of the formal housing market in an environment where the implementation mechanism is weak, the magnitude of the problem is beyond the resolution apparatus capacity, or the issue stems from short-sighted policies.

Affordability is not absolute but relative to the city development and income distribution stage. Every country, state, and city have their own unique geography and characteristics, and, as a result, there is no 'one size fits all' solution to the affordable housing issue. Therefore, international and intra-national comparisons of affordability based on any 'universal' definition of affordable housing are futile. Given the unique socioeconomic, political, and geographical factors, the definition of affordable housing must be customised for each market, culture, and belief system. Devising a locally acceptable definition needs the creation of robust datasets that reveal the existing gaps and highlight the required fillers.

This paper analyses Mumbai's affordable housing issue. It examines the ill-designed and weakly-enforced policies that increased the city's shortage of physical and effective land for affordable housing. It also offers a Mumbai-specific working definition of affordable housing considering the city's general development stage and its distinctive socioeconomic, political, and geographical factors, and proposes adopting a metropolitan approach to resolve the affordable housing problem.

Defining Affordable Housing in Mumbai

With 42 percent of its 12.44 million people living in slums, Mumbai contributes to nearly half of Maharashtra's total slum population of 11.8 million, the highest in India. As of 2022, the Mumbai Metropolitan Region (MMR)[c] and Greater Mumbai have an unsold housing stock of 291,266[17] and 157,834 houses,[18] respectively. Mumbai's excess housing supply mainly consists of spacious two- and three-bedroom apartments. New houses in the city are affordable to upper-income groups or are built and delivered for free under the state's Slum Rehabilitation Scheme.

Slums constitute 48 percent of the city's housing stock. Another 17 percent comprises slum-like habitation, namely *chawls*,[d] and free Slum Rehabilitation Authority (SRA) tenements. The available affordable housing stock is negligible and highly contested.[19] As of 2023, the monthly median income in Mumbai is INR 36,000, wherein a household can afford a house of up to INR 4.5 million (assuming there are two employed adults per household).[20] However, even in 2018, a 363 sq ft tenement sold by the Maharashtra Housing and Area Development Authority (MHADA)[e] at the centrally-located Lower Parel was priced at INR 14.2 million, beyond the affordability threshold even at the current median income level.[21] As per the definition and specifications of affordable housing coined by the different task forces, only a household income of at least INR 2.36 million would be suitable to buy this unit (which is less than half the size stipulated by the 2012 task force's definition). As such, if left to market play, the population stuck between the demand and supply gap of affordable housing in Mumbai will not make it to a formal dwelling in the near future.

The shortage of formal affordable housing in Mumbai has widened the gap between the available housing price and affordability vis-à-vis the city's median income. Currently, the SRA projects in Mumbai deliver free

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c The MMR consists of Greater Mumbai (Island City and Suburban Mumbai), and the districts of Thane, Palghar, and Raigad. Greater Mumbai (commonly referred to as Mumbai)—spanning from Colaba in the south to Dahisar in the north, Versova in the west and Mulund in the East—is governed by the Municipal Corporation of Greater Mumbai. Thane, Navi Mumbai, Mira-Bhayander, Kalyan-Dombivli, and Panvel are its satellite cities.

d Chawls are multi-storeyed buildings having rows of small houses overlooking a common veranda, and with toilets at each end. They provided an ideal low-cost accommodation to the millions who came to work in Mumbai's once-booming textile mills.

e A government agency that aims to provide affordable houses at less than the prevailing market prices (ostensibly in an affordable manner).

tenements measuring 300 sq ft to all eligible slumdwellers. At current per capita floor space (i.e., 4.5 sq mt[22] or 48 sq ft), a five-person household in Mumbai[23] will require a minimum tenement measuring 250 sq ft. Therefore, MHADA must consider building a one-bedroom apartment measuring 400 sq ft—larger than the SRA's free tenements, but not large enough to appeal to the elite—for lower-middle and middle-income households. By not targeting the lowest income level, a 400 sq ft tenement will serve the affordable housing segment for now. However, affordable housing is also related to *fair* housing, but this is a relative concept. Therefore, a realistic view of the contingent constraints and acceptability is also necessary.

Mumbai ranks amongst the most expensive real estate markets globally.[24] Even though various task forces consider an outgoing of 30 percent to 40 percent of monthly household income while determining affordable housing parameters, the authors propose this be reduced to 20 percent to 30 percent as an adaptation for Mumbai, a figure that can be finetuned based on information about credit availability, subsidies, the kind of loans that may be availed,[f] and mortgage facilities. Such information read together helps determine real purchasing power and arrive at an equilibrium by analysing the buyer's affordability and the price of a house.

Cities regarded as having the best work-life balance generally have a commuting time of less than an hour.[25] Commuting to the workplace takes between 30 minutes to 60 minutes in top global cities, such as New York,[26] London,[27] Shanghai,[28] and Sydney.[29] But given Mumbai's existing road traffic congestion and the enormous pressure on public transport, commute times range around 90 minutes. An ideal travel time of less than an hour to and from the central business district (CBD) in Mumbai is currently impractical due to high land costs in and around the CBD, requiring free public land allotment for affordable/public housing at considerable social and economic costs. Using prime CBD land to build houses for the poor instead of commercial properties (that can potentially

f For instance, assessing the income and savings of the lowest 30 percentile will help determine the monthly loan repayment instalments they can afford and determine the loan amount they can get.

raise substantial revenue) is an inefficient use of land. It will also mean discounted taxes and charges, an additional loss to the exchequer.

Income levels in Mumbai are higher vis-à-vis other metropolitan cities in India, but the high cost of living offsets this advantage, which means purchasing power—and not income—defines the standard of living. It is necessary to prevent the underlying cost of low-income housing (such as the costs of material and construction, duties, and registration fees and taxes) from increasing more than a specified level annually, primarily because of the high asymmetric income distribution. As such, no universal definition can address Mumbai's affordable housing needs. The first step towards arriving at a definition must be to collate the city's income database. Census and National Sample Survey Office data on housing, material possessions, and income will be useful in finetuning the city-level definition. The concept of affordability and its definition must be dynamic, and consider the poverty, development, economy, and inequality levels. In Mumbai, for instance, the evolving economy and increased incomes were factors that pushed the government to increase the size of the free SRA tenements from 180 sq ft to 300 sq ft in 2020,[30] although the previous government had considered increasing this to 500 sq ft in 2019.[31]

To define affordable housing and design appropriate policies, it is also important to understand the various complexities that determine a house's affordability. The definition must also consider issues such as the correct beneficiary identification, the state's policy implementation capacity and its ability to cater to the demand, and the excess demand in other housing market segments. Therefore, in a complex place like Mumbai—with its high realty prices, state capacity (or lack thereof), difficulty in preparing a list of beneficiaries,[g] cumbersome bureaucratic and documentation processes and protocols, income and wealth inequalities, and excess demands in various segments of the housing market (except the very top)—it will be nearly impossible to provide affordable housing at the required scale.

g Bogus documents, including ration cards and photo passes issued by the city and suburban Collectors to slum households eligible for rehabilitation, zero tenure right, illegal tenancy of slum dwellings and political meddling have made preparing accurate beneficiary lists a difficult exercise. Often, such erroneous lists have resulted in the allotment of free SRA tenements to illegal beneficiaries.

Defining Affordable Housing in Mumbai

The only feasible way to deal with this issue is to go beyond the municipal boundaries (city limits) and devise a governance system for the entire metropolitan region to find a solution, especially ownership affordability.

A practical approach could target income levels above the lowest rungs but below the well-off as beneficiaries. Such an approach may militate against moral norms but will be realistic given the state's implementation capacity. The lowest income percentile should not be overlooked since the duress they will likely face will make these houses susceptible to elite capture. Upgrading the existing slums, if done well, will benefit them more. Notably, creating alternatives such as shelters with civilised liveability, and bath and toilet facilities for the homeless should remain significant priorities even when sizeable affordable housing is made available.

Therefore, instead of following '*antyodaya*' (uplifting the poorest of the poor) by allocating free houses to uplift the lower-most strata within the sums, the administration needs to redevelop better-off slum pockets where residents can afford to purchase (or at least pay the construction cost) and maintain the tenement. If the middle-class population does not have decent housing, keeping them from buying these houses instead of the intended beneficiaries is challenging. Planners must consider this when designing the houses. They can be designed as safe but with the bare minimum amenities to dissuade the well-off from purchasing these houses. This approach will reduce construction costs, contributing to affordability. For Mumbai, this would mean affordable houses are formal and less vulnerable shelters than slums in terms of habitat safety and construction, and with tenure security. When the households in these dwellings consider upgrading to a bigger floor space, they may move to the upper stratum of the formal housing segment, with better floor space, amenities, construction standards, or market price. Such a "ladder of aspirations" approach can functionally fulfil the housing needs of a large population.[32]

In Mumbai, however, the ladder of aspirations is reversed. Houses that are affordable to high-income groups are mostly vacant or unsold. Many high-income households are forced to settle in houses meant for the lower-income groups. High-income households usurp the affordable housing stock, creating downward pressure and forcing the low-income groups to settle for even smaller formal or informal houses.[33]

Defining Affordable Housing in Mumbai

Considering such realities, the definition of affordable housing should be adaptable to Mumbai's complex housing scenario. Building on the idea proposed by the McKinsey Global Institute in a 2014 report,[34] the authors offer the working definition of affordable housing for Mumbai as: A basic tenement measuring 400 sq. ft. with in-house access to water and sanitation, costing no more than 30 percent of the household income as an EMI [equal monthly instalments] or rental, located at a travel distance of not more than 90 minutes from the place of employment.

> "To define affordable housing and design appropriate policies, it is important to understand the various complexities that determine a house's affordability. The definition must also consider issues such as the correct beneficiary identification, the state's policy implementation capacity and its ability to cater to the demand, and the excess demand in other housing market segments."

Policy Paralysis and Mumbai's Housing Scenario

The MMR comprises of nine municipal corporations, nine municipal councils, and numerous villages in Raigad and Thane districts.[35] Although it covers only one-tenth of the MMR's geography, Greater Mumbai is its most prominent area, contributing over half of its GDP,[36] housing 51 percent of its population, and providing employment to 61.5 percent of its working population.[37]

The Mumbai Metropolitan Region Development Authority (MMRDA) and Municipal Corporation of Greater Mumbai (MCGM)[h] are the planning authorities for the MMR and Greater Mumbai, respectively. The respective municipal corporation, municipal council, or village panchayat provide the local public services within their jurisdictions.[38] Greater Mumbai comprises the Island City and Suburban Mumbai, with an area-to-population ratio of 15:85 and 25:75, respectively.[i,39] While the Island City has witnessed negative population growth over the last few decades, Suburban Mumbai continues to grow at a decelerated pace.[40]

The large slum population, driven by high land prices and the absence of affordable housing, highlights Mumbai's developable land shortage. The 2011 Census recorded 42 percent of Mumbai's population as living in slums, covering barely 9 percent of the city's land.[41] On the other hand, the SRA noted that 48.35 percent lived in slums spread over 24 percent of the habitable land.[42] The disequilibrium between stock (wealth) and flow (incomes) would prevent 94 percent homeowners across Mumbai and across all income groups and socioeconomic classes from buying houses if all were to buy a house,[43] while 80 percent of the households could not even afford a single-room dwelling because of the high prices.[44] The current mortgage system, restrictive regulatory policies, and poor planning adopted intermittently by the city authorities have added to the existing shortage of developable land and floor space, increasing

h Also known as the Brihanmumbai Municipal Corporation, or the BMC.

i Calculated by the authors from MCGM's Preparatory Studies for Development Plan 2014-2034, Part II: Assessment of Existing Situation.

land prices (supply-side impact) and further making low-cost/affordable housing unattainable (demand-side impact).[45]

Regulatory policies have created faulty incentives for private developers and government agencies such as MHADA, contributing significantly to the current high land and floor prices.[46] Indeed, the shortage of affordable housing and the proliferation of slums are symptomatic of the dysfunctional policies, regulations, and laws.

- **Bombay Rents, Hotel and Lodging House Rates Control Act Rent Control Act, 1947; and Maharashtra Rent Control Act, 1999**

In 1947, the Bombay Rents, Hotel and Lodging House Rates Control Act (RCA) introduced the "standard rent", which capped the rent of privately-owned properties at the September 1940 level.[47] While the tenancy created under RCA is inheritable, the property owner is solely responsible for building maintenance. RCA had a no-eviction clause if the tenant paid the rent regularly. It had two direct outcomes. First, nearly three-fourths of the landlords, exclusively dependent on rent income, lost interest in their property's upkeep without resources and returns.[48] Second, it led to the deterioration of the rent-controlled buildings to slum-like conditions, removed the affordable small-format housing stock from the market, and contributed to slum proliferation by hindering new rental housing stock supply.

Meanwhile, the rest of the city had to pay high rents due to increased demand and ever-increasing property prices.[49] Consequently, Mumbai witnessed the creation of a protected and unprotected housing market segmentation in addition to the formal and informal segmentation. The formal protected segment (tenements under rent control) and the informal slums serve 64.82 percent and 27.88 percent of the Island City population, respectively.[50] Dependent on the demand-supply forces, the formal unprotected segment (houses in gated residential complexes built by private developers in the open market), caters to barely 7.3 percent of the population. Conflicting norms for all three segments have led to irrational rents and property prices.[51] The formal unprotected segment rent is at least 1,000 times higher than in a comparable formal protected tenement in the same neighbourhood.[52] On the other hand, rents in the slums are at least 20 times higher than in a comparable formal protected tenement in the same neighbourhood.[53] Rentals in many slum clusters in Mumbai are similar to formal houses in other Indian metropolitan cities.[54] The formal unprotected segment has the highest prices, followed by the formally protected segment (priced at nearly two-thirds of the formal unprotected tenements, also known as *pagdi*/key[j] money), with the lowest for slums.[55] In addition to housing-market distortion, infirmity, poor maintenance, and frequent structural quick fixes also imperilled these buildings. Their condition has not improved despite the establishment of the Mumbai Buildings Repair and Reconstruction Board (MBRRB) in 1971.[56] The MBRRB's objective is to conduct structural repairs and reconstruction of such old and dilapidated tenanted buildings in South Mumbai under the RCA of 1947 for a nominal repair cess.[57] All buildings under the purview of MBRRB's maintenance are called 'cessed buildings'.

The Maharashtra Rent Control Act (1999), which brought minor changes to the rental housing market, is considered an "unfinished agenda".[58] The Act facilitated rent deregulation, but instead of letting the market forces drive the rental market, set a fixed "standard rent" calculated on the land value and cost of construction, disincentivising investments in creating new rental housing stock. Therefore, redevelopment of these 'cessed buildings' is the only way to increase Mumbai's effective space, as most of the city's land is already developed. Conservative floor space index (FSI) policies in the pre-liberalisation period (before 1991) failed, while the post-liberalisation redevelopment policies, especially the rent control reforms and SRA, were also unsuccessful in serving the city's long-term planning goals, failing to address the city's affordable housing shortage.

Since 1997, FSI has been used to cross-subsidise private builders who redevelop cessed buildings in lieu of additional floor space as an Incentive FSI for sale in the open market. Up to 70 percent Incentive FSI (over and above the existing FSI) is allowed to redevelop these buildings[59]

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j Pagdi/key money is the informal amount exchanged between an existing tenant and the party willing to buy tenancy rights. The tenant gets two-thirds of this amount, and one-third goes to the landlord. The RCA legalised the pagdi system only in 1999, but it had been exercised since 1947.

without any linkage to the block’s servicing capacity. Even where successful redevelopment is helping the beneficiaries, the apparent consequences to the city are increased density and pressure on existing infrastructure and services without creating affordable housing stock for rental or purchase. As such, the arrest of rental housing expansion, which could have offered an affordable housing solution, can be considered as the primary reason for slum proliferation and the soaring prices for formal houses in Mumbai.

- **Urban Land (Ceiling and Regulation) Act, 1976**

Although land is a state subject,[k] the Urban Land (Ceiling and Regulation) Act (ULCRA), 1976,[60] a Central legislation, imposed a ceiling on urban landholdings to curb speculation and land redistribution. ULCRA was applied to 64 urban agglomerations with a population of over 200,000 as per the 1971 Census.[61] It limited landholdings in Mumbai, categorised as ‘A’, to 500 sq mt. The state government acquired excess land at negligible compensation for public utilities, and LIG/EWS housing.

ULCRA indemnified government officials from any action against anything done in ‘good faith’. Exempting government/institutions, it placed unclear protection in cases where land acquisition would cause the owner undue hardship. It also exempted vacant land proposed for LIG/EWS housing. Developments requiring land above the ceiling limit were delayed indefinitely,[62] effectively removing such land blocks from the market.

ULCRA failed because of multiple exemptions, the absence of acquired lands utilisation guidelines, evasion-facilitating loopholes, slow implementation, and poor preparation to counter the resistance it generated. It inherently breached the ‘goodness of law’ and could not create the right incentives to attain the desired outcome.[63] ULCRA impacted formal land transactions, arresting formal housing projects. Out of the 17,000 acres of land declared surplus, barely 262 acres were acquired till 2007. ULCRA thus became a prime reason for the decline in Mumbai’s housing supply stock and rise in land prices.[64,65]

k State subjects are items that a state legislature has the power to regulate. The State List under Schedule Seven of the Indian constitution currently includes 61 items.

Although ULCRA was repealed in December 1998, several states continued to enforce it due to vested interests, nexuses, and bureaucratic command.[66] Its repeal was expected to release 25,000 acres of land in Mumbai and the satellite towns of Navi Mumbai and Thane,[67] and slash property prices by 40 percent over the next five years.[68] Maharashtra abolished ULCRA in 2007, but only to access funds under the central government's Jawaharlal Nehru National Urban Renewal Mission, which made ULCRA's revocation mandatory. However, the land released subsequently was too meagre to impact Mumbai's property prices.[69] Instead of restricting speculation and promoting equitable land distribution, ULCRA escalated property prices and created an oligopoly in real estate. Taxing the excess vacant land would have been more effective.[70]

- **Cotton Textile Mills Land and Development Control Regulation 58**

Mumbai's first cotton textile mill was established in 1854.[71] By 1975, 52 mills employed 250,000 workers.[72] Poor and unsafe working conditions and obsolete machinery led to these mills being termed "industrial slum"[73] and "graveyards of machinery".[74] In the 1980s, the centrally-located mills began to decay as Mumbai underwent deindustrialisation. While this phenomenon has historically been part of a city's natural course of evolution,[75] the prime location of the mills was unusual. As a result, the owners could either invest in their mills and transform them into internationally competitive plants, or declare them unprofitable, shutting them to capitalise on the underlying 600 acres of land.[76]

The Maharashtra government appointed several study groups to investigate the consequential mill lockdowns and closures. While a study group chaired by architect Charles Correa recommended the creation of a Golden Triangle of eight mills,[77] the committee headed by economist Omkar Goswami suggested monetising the land to effectively cover debts and labour dues. However, the government could not implement either recommendation due to ULCRA and other state-level controls.[78] The situation worsened as ULCRA deterred the disclosure of surplus land by the mill owners.[79]

Policy Paralysis and Mumbai's Housing Scenario

In 1985, the government considered the one-third formula for mill land recycling.[80] In 1991, the mills were brought under the Development Control Rules (DCR) for the first time through DCR 58,[81] allowing a land-use change upon the owners' acceptance of the one-third formula. The formula permitted owners to sell one-third of the land in the open market and divide the remaining acres equally for public housing and open spaces. The FSI was increased from 0.5 for industrial use, to 1.33 for residential/ commercial use. While mill owners retained one-third of their land, they had the development rights equivalent to two-thirds of the total land (FSI rights on the owners' share and transferable development rights, or TDR,[i] for one-third of land surrendered to MCGM). The one-third formula exempted the sale or redevelopment of up to 15 percent of mill land. However, this land division was amended in 2001 following resistance from mill owners. Accordingly, only the mills' existing open area was divisible, and the covered area remained with the owners. When legally contested, a 2006 Supreme Court ruling favoured the mill owners,[82] leaving only a negligible area for affordable housing and open spaces.

The mass closure of mills pushed the mill workers and their families into informal employment and housing.[83] Despite the one-third formula, the entire mill area was sold in the open market in some cases (such as Phoenix Mills[84]), paving the way for luxurious real estate projects on the centrally-located mill lands.[85] A 2019 study ranked Central Mumbai's Tardeo, Worli, and Mahalakshmi, once the city's mill hubs, as India's most expensive residential markets.[86] The government could have implemented the one-third formula in 1985 and prevented the lopsided use of the mill lands if it had prioritised planning and implemented development plans (DP) on time.[87] For instance, while planning for the second DP (due in 1981) started in 1977, it was only implemented in 1993.[88]

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i TDR is the excess FSI generated on a plot where planning constraints rule out its in-situ use. While it was previously only utilised in the northern suburbs, it became more widely acceptable in the Island City through a 2017 policy reversal.

- **The Restrictive and Lucrative 'Floor Space Index' Concept**

FSI determines the construction size permitted on a given plot by dividing the total constructed floor space by the area of the plot. A city needs more floor space to accommodate the increasing population, and keep land and house prices in check.[89] However, in Mumbai, regulatory FSI policies have restricted the incremental built-up space available and triggered a rise in property prices.[90]

The 1991 DP capped FSI to a ratio of 1.33 on the pretext of decongesting the Island City. Oddly, this is against the global practice backed by sound economic principles and the market preference of providing maximum FSI in a CBD, which will fall as the distance from this area increases. The 2012 Existing Land-Use Report[91] acknowledges a decline in the Island City population because of the FSI limitation. However, policy tweaks permitted higher FSI of up to two through TDR and Premium FSI utilisation (primarily used for premium housing) bought from the MCGM upon paying a premium. The other means of increasing the floor space is Fungible FSI.[m]

Although the function-driven FSI has faced criticism, this has not restrained the MCGM from using it as a financial tool. Its effect on an individual project individual project may be negligible, but when 92 percent of the population needs rehabilitation or redevelopment, it is a cumulative trouble spot. FSI was capped in the Island City for 27 years on the pretext of decongesting the area, but the redevelopment of housing, as required by nine-tenth of the population, should have been the focus. The floor space shortage increased the demand for the MCGM's revenue-generating add-on FSI tools but lowered its redevelopment responsibilities by attracting developers with Incentive and Premium FSIs on highly contested land. The resulting high bid for land and space widened the gap between the income and wealth of the Island City's low and middle-income inhabitants, who retained or sold their rights at a premium. Some households moved out due to high maintenance costs. As such, the FSI regime caused unintentional gentrification.

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m Fungible FSI allows the developers to buy up to 35 percent of the Admissible floor area ratio to be exercised on the same plot over and above the Permissible FSI at 60 percent of the ready reckoner rate, a minimum rate of location-wise property transactions fixed by the government (also called 'circle rate'), for residential use.

Worldwide, population densities generally fall with increased FSIs.[92] However, higher FSI creates larger built-up space, but not in an organic way. Densities fall as economic progress occurs over time and people can afford larger spaces. Since this trend is voluntary, the corresponding FSI could be higher. Therefore, considering the population's financial well-being, the FSI of 5-25 prevalent in many large global cities[93] must be understood contextually.[94] At the same time, vertical growth in a city with a dense population living on a limited landmass is the only way to create more floor space.[95]

Mumbai's third DP, scheduled for release in 2012 but sanctioned on 25 April 2018,[96] linked the permissible FSI with the width of the road that the structure faces. FSI now varies from 1.33 to 3, effectively ranging from 1.8 to 4 using Fungible FSI. In 2017, for the first time in 25 years, the MCGM allowed builders to use TDR in the Island City.[97] These changes have meant: first, that the higher FSI led to a repopulation of the Island City, contradicting the policy adopted in 1991 for its decongestion; and second, the higher FSI and road-width linkage and TDR increases the scope for redevelopment in the Island City, leading to increased density[98] without any binding commitment to creating allied infrastructure.

As a planning tool, FSI makes granular spatial coordination inevitable for sustainability, considering service capacity, infrastructure, and connectivity. Fixing FSI without studying granular spatial coordinates is an invitation to unsustainable neighbourhoods unless there is a commensurate provision of additional roads, infrastructure, and the like, as vertical growth of the built area with higher FSI frees the footprint for amenities. Finally, unless used in conjunction with market forces, FSI is not a reliable planning tool. From this perspective, FSI is more of an outcome than an investment.

- **Slum Rehabilitation Policy**

In 1995, the Maharashtra government established the SRA to "rehabilitate" slums dwellers and make Mumbai "slum-free". This policy validated all slums that existed before 1 January 1995 (later extended to 1 January 2000)[99] and promised free 180 sq ft (increased to 225 sq ft in the same year) serviced formal house in-situ to 40 lakh slumdwellers.[100] Since its establishment, the SRA has constructed only 100,000 houses for the city's 1.6 million slum households.[101] Furthermore, of the proposed construction of 520,645 houses, only 275,942 have received permission.[102] At this rate, it will take 30 years to rehabilitate all slum households.[103]

This 'innovative' solution to making Mumbai slum-free through flawed rehabilitation[104] has incentivised slum proliferation.[105] Incentive FSI, in situ, up to a maximum FSI of four for SRA projects, created 'vertical slums' across Mumbai, putting undue pressure on civic infrastructure and services, which have not seen any proportionate expansion or improvement. Additionally, the policy triggered disruptions in the housing market. For instance, the imbalance between the income levels and wealth of the slumdwellers may lead to some reselling their free SRA tenements and resettle in a new slum in the vicinity, increasing 'slumification'. While the law bars the selling of these tenements for 10 years after possession, many still opt to do so illegally to pay off debts and increase their liquid money flow. These tenements may be sold at less than the prevailing market price since any price for an otherwise "free good" is a windfall gain. Therefore, the very premise of the SRA is flawed, and it has been riddled with elite capture, corruption, litigation, and crime.

Viewing Mumbai's Affordable Housing Situation Through a Metropolitan Lens

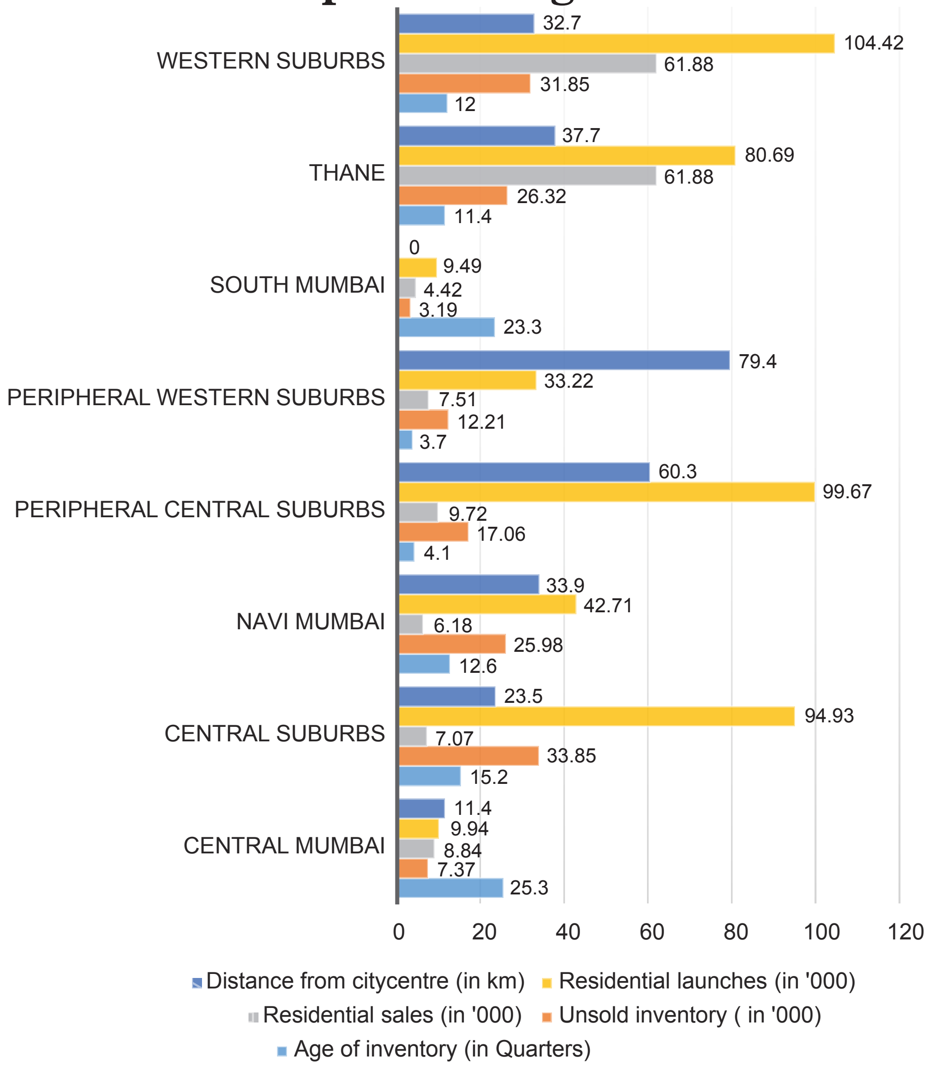
Multiple affordable housing schemes have failed to take off in Mumbai due to the unavailability of affordable land.[106] Land prices decline in areas further away from the CBD. It is, therefore, essential to include the neighbouring municipalities/councils/villages within the metropolitan bounds, where the land prices are still compliant, to discern the spatial dynamics and create an affordable housing stock. Understanding the interconnectedness and interlinkages between various metropolitan zones will help address the core urban issues appropriately.

Sitting on an inventory as old as five years, South Mumbai and Central Mumbai have the minimum new launches and the minimum stock of unsold houses (see Figure 1). Minimum new development and the least number of unsold housing stock explain the highest housing real estate prices in the Island City. Further north, suburban Mumbai and the peripheral municipalities have seen 96 percent of all new projects between January and June 2022. The highest unsold inventory lies in the peripheral suburbs, although this is the second-best market in the MMR.[107] The high property prices and the developers' price-holding power explain the high unsold inventory in suburban Mumbai; however, in the peripheral municipalities[n] in the MMR, the primary factor is that it is not 'Greater Mumbai'.

Over 47,466 housing units were launched in the first half of 2022 in the MMR, at a weighted average price of INR 7,163 per sq ft.[108] Most of these new launches offer small-format houses, with over 70 percent of the sales being in the areas outside Greater Mumbai.[109] Given such a demand-supply imbalance, a linking infrastructure between other regions of the MMR and Greater Mumbai is needed. Moreover, since policies such as PMAY, which incentivise small-format houses possible only outside Greater Mumbai where land is available, such infrastructure links between Mumbai and other MMR regions are an opportunity waiting to be grabbed. Therefore, the investment in housing and allied infrastructure should be at a metropolitan scale and projects completed in an accelerated mode.

n South and Central Mumbai (Island City) and the Eastern and Western Suburbs comprise the jurisdictional boundary of the MCGM. The peripheral suburbs constitute the municipal corporations and councils in the MMR.

Figure 1: Residential housing units in the Mumbai Metropolitan Region



Source: Knight Frank, 2022[110]

Viewing Mumbai's Affordable Housing Situation Through a Metropolitan Lens

Since 2014, the Maharashtra government has invested INR 25 trillion in transport infrastructure projects, with 246 km of metro lines and 68 km of roads under construction in the MMR.[111] This investment will be fruitful only if seamless connectivity with Greater Mumbai encourages liveability outside the centre in carefully selected land parcels with low residential and infrastructure/commercial project costs. Such housing infrastructure will need a sound incentive structure, including subsidised land, services, and tax concessions for the commercial development of areas around the forthcoming transport nodes. This will reduce travel time to about 30-45 minutes to the multiple CBDs currently under development or upgrade across the city. To prevent the further densification of the city, the Incentive FSI availed by developers in lieu of the rehabilitation of slums and cessed buildings can be exercised on serviced land beyond but connected to the city boundary within the MMR.[112] The spill-over effects will eventually reflect in all sectors and pave the way for sustainable development.[113]

However, city planners have failed at taking a holistic view, as highlighted by the MMRDA's 2016-2036 Regional Plan (RP).[114] The RP estimates that the number of households will increase from 5,194,614 in 2011 to 7,771,268 in 2036, and acknowledges that an additional 2,726,532 dwelling units will be needed by 2036. At the same time, it warns that the actual need could be for 5,018,585 dwelling units given the necessary replacement of the current stock. Recognising the lack of affordable housing as the "single largest issue" facing the MMR, it proposes a policy framework with institutional arrangements.

It suggests some "suitable" modifications to the RCA to encourage renting by freeing legal renting from impediments using taxation and utility charges as tools. It proposes "heavily" taxing vacant properties to unlock frozen housing stock, arrest speculation, and link free housing to the needy and not the structure. The RP also suggests defining affordable housing for LIG/EWS by cost-effective specifications and not by unit size. However, it also proposes rationalising free dwelling units across housing typologies and income groups under the SRA, an inherently flawed idea, across MMR. The RP also suggests a study to identify the strengths and weaknesses of the multiplicity of actors to align their purpose and objective for affordable housing, and proposes setting up a new Rental Housing Agency to manage the rental housing stock created through various schemes for EWS and LIG segments, and separate provisions for employee housing.

Considering Affordable Housing in Development Plans: Recommendations

The dire shortage of affordable housing in Mumbai is a result of unrealistic policies, flawed planning, and the introduction of schemes without assessing the state's capacity to implement. Consequently, ensuring the availability of affordable housing is no longer possible within the confines of Greater Mumbai's municipal geography. The city has also failed to deliver adequate rental housing stock for its middle-income households. The state government must, therefore, adopt an MMR-wide blueprint with the required governance structure to facilitate metropolitan-level affordable housing. It can do so by/through:

- **Achieving price parity:** The announcements of any development projects usually lead to increased land prices even before the actual development occurs, leading to a dual movement of property prices. For instance, the land prices of the receiving area will rise, while declining in Mumbai, even if slightly. Such gradual price movements are inevitable to bring about MMR-wide property price parity. But how much of a rise in land prices is acceptable to provide enough gains to landowners without affecting the plan's feasibility?

- **Managing conflicting interests with revenue rewards:** The MMRDA and all other local bodies in the MMR must prepare a comprehensive plan to enable holistic metropolitan growth. To be sure, aspects of metropolitisation will encounter political, institutional, governance, budgetary, and socioeconomic challenges. For instance, as a parastatal authority, the MMRDA will find it challenging to bring the local municipalities, especially the MCGM, to the table for discussions on a comprehensive plan. In the MCGM's case, this will likely be due to two reasons: first, as India's richest municipality and contributing substantially to the metropolitan region, the MCGM will likely not be keen to accept a weaker position; and second, since the MCGM has already seen its revenue margins shrink following the abolition of the octroi tax,[115] it will likely not be keen to incur further losses if new real estate developments were to move to other parts of the city. Linking some revenue handles for revenue sharing by the development-receiving municipality and providing state compensation to the other municipal bodies could alleviate some of these concerns. But such linkages will also require a detailed analysis of the financial health of each local body, an accurate estimation of the projected gains accruing to them and their respective bargaining threshold to ensure equitable and inclusive MMR-wide development.

Land and construction costs are the two biggest factors determining the market price of an affordable house. Therefore, the government must subsidise the land cost to serve the affordability criteria as a redistributive or a welfare measure for the lower percentile of the income distribution, no matter where the units are located.

- **Government-led infrastructure push:** An MMR-wide focus must also contend with certain risks, such as a change in political leadership (and thus, priorities), a mismatch between expectations and reality, and inadequate incentives for households, developers or even municipalities. Due to such factors, projects may be abandoned midway or remain unoccupied after completion. Given these risks, the government must build a channel of uninterrupted funding to ensure the project's completion. The execution of such a plan may become more challenging and discourage investments when the state and local governments belong to different political parties and have varying interests and intentions. Even amid such contradictions, the state must take the lead and invest in infrastructure, creating serviced neighbourhoods and connecting them to Greater Mumbai. The government must also focus on spurring private investments into the newly developed areas across the MMR.

  A portion of the windfall land-value-capture (LVC) gains from the newly laid infrastructure, especially connectivity between multiple municipalities and Greater Mumbai, must be earmarked for affordable housing. Most planned and new metro rail projects across the MMR have included various LVC tools to augment their farebox revenues from ticket sales by monetising land value escalations in the metro rail influence zone.[116] The Maharashtra government could similarly set aside part of the LVC gains for affordable housing development.

- **Managing aspirations:** Attracting people to settle in the newly developed areas will require state support for a balanced movement of all income groups to facilitate secure job opportunities for the lower income groups and cheap labour for other income classes. Unlocking serviced public land may help build momentum by incentivising buyers and sellers to invest in new projects at new locations, using advanced, cost-effective construction technologies for time-bound delivery.[117]

- **Managing conflicting interests:** A rational development criterion must be laid for shortlisting municipalities/municipal councils/villages, ensuring balanced organic growth with maximum transparency and minimum political interference. A multistakeholder appellate committee to manage the governance of the newly developed areas and ensure accountability to tackle conflicting interests or overlapping powers can mitigate differences. This could be a transitory arrangement till a well-connected metropolitan governance structure is in place.

> "The dire shortage of affordable housing in Mumbai is a result of unrealistic policies, flawed planning, and the introduction of schemes without assessing the state capacity to implement."

Conclusion

Despite the herculean effort required, rethinking and reworking city planning to scale it up to the metropolitan level could be a sustainable solution to the affordable housing issue. The MMR needs a comprehensive vision that goes beyond the current plan period with transformational dynamism at its core to halt the ongoing unsustainable chaos in the housing market.[118,119,120] At the same time, the government will have to seriously consider ways to incentivise the creation of adequate rental housing. The MMRDA's RP ambiguously suggests the establishment of a Rental Housing Agency as an 'institutional arrangement', without explaining its governance structure and specific mandate. Such vague ideas, when made in a long-term planning document, reveal the government's lack of seriousness in resolving the issue and its tendency to delay a response. Slums will remain Mumbai's bane if the shortage of affordable housing is not addressed through a holistic metropolitan framework that encompasses and leverages the complementarities of ownership affordable houses and rental stock as two sides of the same coin.

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