

2 | EMPIRICAL STUDY OF MUMBAI METROPOLITAN REGION (MMR)

2.1 | INTRODUCTION TO MMR

Mumbai Metropolitan Region (abbreviated to MMR and previously also as Greater Bombay Metropolitan Area), is a metropolitan area consisting of Mumbai (Bombay) and its satellite towns, in the northern Konkan division, of the Maharashtra state in western India.

4080
P/Km²
Density

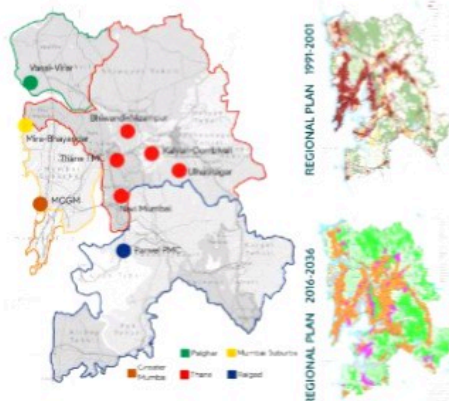
2.28
Cr
Population

4254
Sq.Km
Area

MUNICIPAL COUNCILS
Alibag | Ambarnath | Karjat | Khopoli | Kurla | Badliapur | Marhekar | Pen | Uran

MUNICIPAL CORPORATIONS
Greater Mumbai | Mira (Bhayandar) | Thane | Kalyan Dombivli | Bhivandi-Nizampur | Ulhasnagar | Navi Mumbai | Vasai-Virar | Panvel

2.2 | SPATIAL EXTENT & TRANSFORMATION



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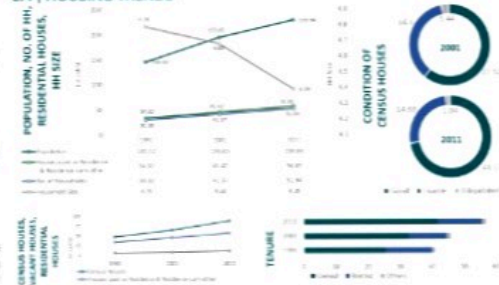
2.3 | DEMOGRAPHIC TRENDS

POPULATION OF MMR & CAGR FOR MUNICIPAL CORPORATIONS OF MMR



As expected, the major contributor to the population of MMR is Greater Mumbai. It accounts for about 54.56% of the total MMR Population according to Census 2011. The population CAGR indicates the growth or saturation phase through the trends in the graph.

2.4 | HOUSING TRENDS



The population and number of households has been increasing constantly from 1991-2011. Even though the number of residential houses are at par with the increase in number of households, housing shortage persists due to unaffordability. A large share of census houses are residential houses. The number of vacant houses has increased slightly over the decades. Share of census houses termed as good has increased from 27% to 48% & dilapidated houses have remained approximately same between 11.5%. The share of rented houses initially decreased by 10% between 1991-2001 and remained stagnant in the next decade.

Source: MMRCA Web Portal, Census 2011, First Regional Plan for Mumbai Metropolitan Region, CTS 2008, Presentation for MMRC 2018

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2.5 | ECONOMIC TRENDS

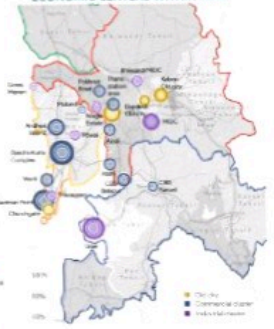
MMR is home to both commercial and industrial centers. Most of the economic centers within MMR are located near to the transport nodes.

Most of these centers fall within the Greater Mumbai City region, such as Churchgate, Bandra Kurla Complex, Andheri, etc. Other than these, Thane, Kalyan and Dombivli are important economic and employment centers.

Retail is the sector contributing the most to generation of employment in MMR. It employs almost half of the population of the region.



ECONOMIC CENTERS WITHIN MMR



While the share of work force participation & share of resident workers has remained same, the population has increased and hence, the actual number of people employed has increased.

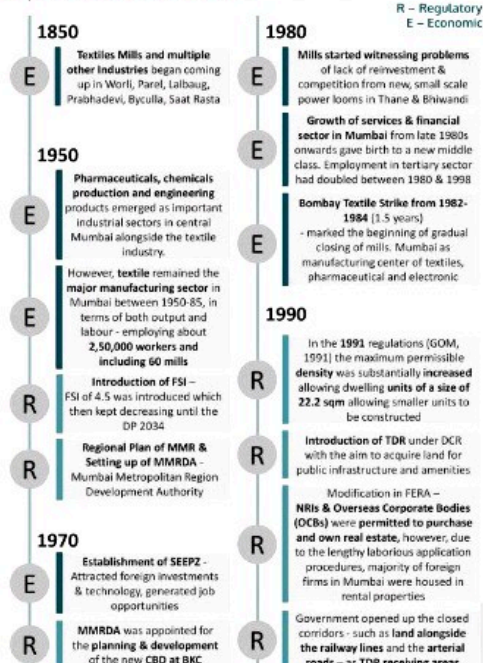
2.6 | TRANSPORT TRENDS

More than 50% of the trips conducted daily in MMR are walking trips, followed by more than 25% of train trips. These two modes, however, have the lowest and highest average trip lengths at 1.4km and 23.8km respectively.



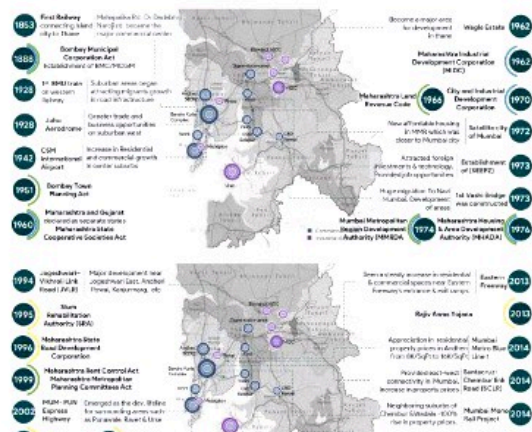
3 | HISTORICAL TRENDS AND TRIGGERS OF MUMBAI METROPOLITAN REGION (MMR)

3.1 | TIMELINE OF DEVELOPMENT



R - Regulatory
E - Economic

Initially when the city was an upcoming textile market, most of the mill workers used to live within walking distance of the city. Housing stock until this point in time consisted of chawls, informal habitation, private rental, accommodation, etc. Navi Mumbai was set up to ease the congestion. However, the growth organically happened in the western and peripheral western suburbs, nearer to the railway stations. In the early 1980s the upper classes had begun to reside in the western half of the H ward as it hugged the western seaboard of Mumbai and had the better of the city's two railway systems. D ward was also largely filled up by the rich and powerful, for similar reasons. The region of Central Mumbai was redeveloped post the closure of the industries and mills due to which there was an influx of middle-class professionals and business elites - living side by side with slum dwellers or previous textile owners. Lower income groups had to move out to suburbs to avoid high land and property rates. This in turn burdened the public infrastructure - especially transport.



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Source: Compiled by Author from Personal Interviews, Institutional Archives and Secondary Reports, Knight Frank, Centrum Research

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3.2 | PRICE TRENDS



The housing prices within MMR in the past 3-4 decades have been extremely dynamic. Being a city with an extreme importance on the national and global scale, coupled with such high real estate prices ensured that any change in the economy or regulations impacting housing would disturb the market.

3.3 | INFERENCES

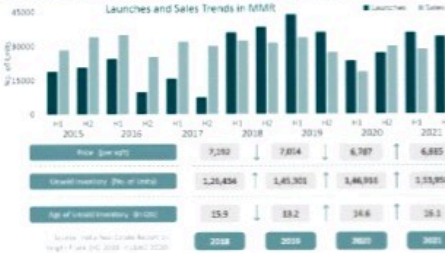
- The historical evidence suggests **four macro level instances** in the past three decades when the prices have drastically fluctuated throughout the country, but evidently so in Mumbai. These instances include:
1991 - 1996 | Liberalization, Foreign Investment in Real Estate
2008 | Economic Depression
2016 - 2017 | Maha RERA, Demonetization, GST
2019 - 2020 | Covid-19 Pandemic
- The geographical constraints of the city in terms of a peninsula and **linear growth pattern**, with the **CBD located at the southern tip** has been one of the most important factors in determining the direction of urbanization, real estate price trends, preferred locations within the city, etc.
- Another aspect that has played a very important role in directing the growth of housing are the **policy interventions**. They have impacted largely the areas where development can happen, unit typologies, land and property values by providing serviced land and opening up of redevelopment, cluster projects, townships, slum redevelopments, etc.

In the recent years, the triggers that have increased the prices involve major infrastructural and transport related developments and these aspects tend to fluctuate the prices within the smaller micro markets and corridors where the project takes place. In addition to reducing travel times for the population residing near these projects, the areas begin acting a node to attract more investment.

GENERAL MANAGER, NIRVANA REALTY
NIRVANA REALTY

4 | REAL ESTATE OVERVIEW

Being the financial capital, the city witnesses continuous commercial and economic activities, infrastructural development and rapid urbanisation in the city, as well as the peripheries. Owing to the higher standard of living and the changing price dynamics with the launch of many infrastructure projects, Mumbai has a very peculiar real estate market. Even though the prices are seemingly high, the demand falls to drop below a certain threshold. Instead, in some locations, demand has driven the prices very high, making it an unaffordable market.



Within MMR's real estate market, there exist different macro markets. The city region is split into eight well-defined macro markets: Central Suburbs, Western Suburbs, Navi Mumbai, Peripheral Central Suburbs, Peripheral Western Suburbs, South Central Mumbai & Thane, which are segregated based on geographical locations in context with the CBD of South Mumbai.

The market has remained more or less stagnant in the past four years. There was a drop in prices due to the pandemic and lockdown in 2020. There is increase in market prices since 2020 September except in Colaba, Ghatikopar & Kurla.

The market in the peripheries of the city do not seem to have been impacted as much due to the pandemic like the micro markets in the city.

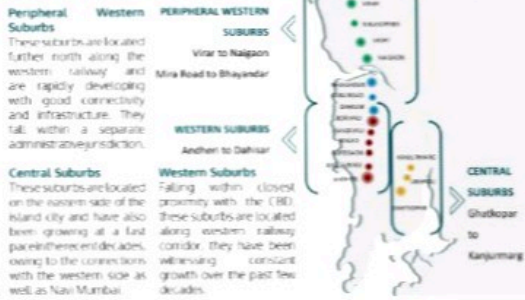
Within the micro market of South Mumbai and Western Suburbs, there is a huge gap in the price ranges of about 20,000 to 40,000 Rs/sqft.



5 | SELECTION OF MACRO MARKETS

The selection of macro markets is based on the identification of growth zones through the empirical study of MMR. Seeing the potential for redevelopment along the western suburban railway, the regions from Andheri to Dahisar have been selected. Further north, the peripheral western suburbs, the stretch from Mira Road to Vihar has been selected. The third region identified was Ghatikopar to Kanjurmarg which was initially surrounded by plots utilised for industries or rehabilitation schemes. Due to the initial lower FSI, it is apparent that there is still potential for development in the region.

The study area has been selected such as to cover the important suburbs of Mumbai falling within a close proximity of the CBD. Hence, the micro markets considered are:



Peripheral Western Suburbs	Western Suburbs	Central Suburbs
Mira Road, Bhayandar, Nargan, Vihar, Nala Sopara, Vihar	Dahisar, Borivali, Kandivali, Malad, Goregaon, Jogeshwari, Andheri	Ghatikopar, Vilehri, Kanjurmarg
VASAI VIRAR MUNICIPAL CORP. MIRA BHAYANDAR MUNICIPAL CORPORATION	GREATER MUMBAI MUNICIPAL CORPORATION	GREATER MUMBAI MUNICIPAL CORPORATION
ADMINISTRATIVE AUTHORITY	ADMINISTRATIVE AUTHORITY	ADMINISTRATIVE AUTHORITY
20 km CORRIDOR LENGTH	18 km CORRIDOR LENGTH	7 km CORRIDOR LENGTH
1-2 BHK PREDOMINANT TYPOLOGY SOLD IN PAST 5 YEARS	2-2.5 BHK PREDOMINANT TYPOLOGY SOLD IN PAST 5 YEARS	1-1.5 BHK PREDOMINANT TYPOLOGY SOLD IN PAST 5 YEARS

Source: India Real Estate Report by Knight Frank (2019, H1&Q2 2020)
Final Regional Plan for Mumbai Metropolitan Region, CTS 2008, Pre-announced in MMR 2019, Real Estate Web Portal (Major Brokers), Compiled by the Author

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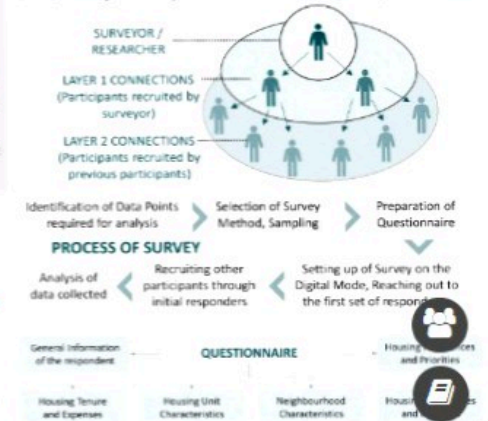
6 | SURVEY METHODOLOGY

Due to the prevailing covid restrictions which curtailed the preference of going door to door for random stratified sampling, an alternate methodology has been adopted. The methodology adopted for the survey is **snowballing method**.

In this particular method, known samples are identified and reached out for the survey, and then they reach out to their acquaintances to act as samples. The first set of respondents themselves recruit more samples based on their acquaintances and the predefined parameters of the survey.

Further, the questionnaires are made available in the **digital format & physical format** so as to assist in filling up of the surveys and making it more accessible to the respondents. The data analysis is also simplified due to this method.

The method adopted for collecting surveys has been explained below in a graphical format, consisting of the surveyor or researcher, the first and second layer of connections.



Macro Market Analysis: Mira Road to Virar (Peripheral Western Suburbs)

9 | MACRO MARKET ANALYSIS: GHATKOPAR TO KANJURMARG (CENTRAL SUBURBS)

9.1 | INTRODUCTION TO THE MACRO MARKET

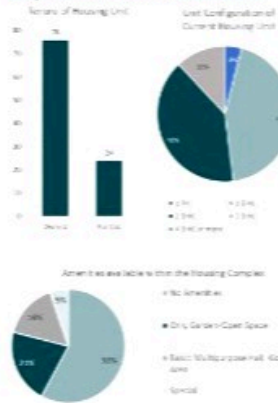
Located in the Central Eastern part of the city, this macro market (all known as the Central Suburbs). Due to its strategic location, it has good connectivity to industrial regions, new CBD of BKC, transport corridors, etc., supplemented by the Eastern Expressway, Santacruz-Chembur Link Road (SCLR), Jogeshwar-Vikhroli Link Road (VLR), Suburban Western Railway & Metro Line. However, all these developments have occurred within the past 2-3 decades itself. Initially, this region was located next to industrial lands, and the land ownership was also mostly government, so the FSI permitted was lower. Additionally, many of the rehabilitation sites were proposed here. However, with the introduction of these new infrastructural projects & increasing accessibility, the region has developed as a macro market with high potential.



9.2 | RESPONDENT PROFILE



9.3 | CURRENT HOUSING SCENARIO



TENURE OF HOUSING UNIT

Only 24 percent of the respondents believe in rented housing units, even with the prevailing high prices in the region.

AGE OF STRUCTURES

Majority of the structures lie between the age of 5 to 20 years. 70 percent of the structures above the age of 40 years have undergone renovation.

UNIT CONFIGURATION

As expected, the major typology of housing units are apartments at 88 percent. As for the unit configuration, 10% 1BHK and 70% 2BHK account for 45 percent of the respondents' current housing status.

AMENITIES AVAILABLE WITHIN THE HOUSING COMPLEX

Accounting for the amenities available within the complex, more than half of the respondents' houses had no amenities, and 20 percent had only open spaces or gardens.

PROBLEMS FACED IN THE CURRENT HOUSING UNIT

The problems faced in the current housing scenario include water logging, air pollution and noise pollution equally. However, in this macro market specifically, few respondents have also reported having pollution industries nearby.

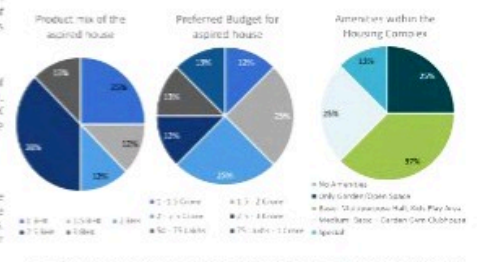
FINANCING OF HOUSING UNIT

84 percent of the respondents have opted for financial assistance from formal methods. The average monthly EMI spent by these households is Rs. 38,500 and amounts to 1% percent of their monthly household income, after removing outliers. As mentioned earlier, EMI depends on the purchase year and hence varies greatly.

9.4 | FUTURE HOUSING PREFERENCES

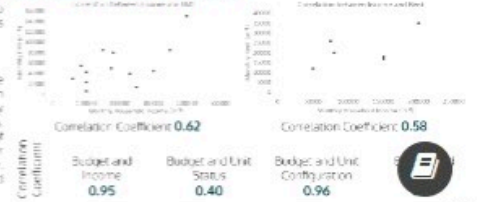
50 percent of the households are willing to invest/shift/relocate, of which 60 percent of the respondents are willing to upgrade within the city itself.

There are equal preferences for a gated community with good infrastructure, closer to economic centers, as well as individual apartments.



An enquiry of the prospective neighbourhood has been made by understanding the priorities preferred by the respondents. Proximity to public transport nodes, infrastructural services and hospitals are the most important priorities when purchasing a housing unit.

9.5 | CORRELATION STATISTICS



8 | MACRO MARKET ANALYSIS: MIRA ROAD TO VIRAR (PERIPHERAL WESTERN SUBURBS)

8.1 | INTRODUCTION TO THE MACRO MARKET

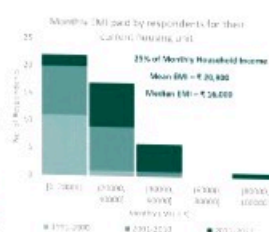
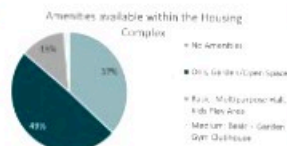
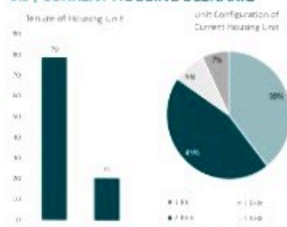
This region falls under the macro market of Peripheral Western Suburbs. And is located at the north of the MMR region. It is connected to the CBD & the city's southern through suburban railways. Even with a similar development timeline as western suburbs, it is comparatively less congested, and has seen slow development till the last few decades. The advantage of this macro market is the locational benefit of being placed along the same railway corridor and the presence of comparatively affordable housing options compared to suburbs closer to the city. Post the formation of Urban Local Bodies at Mira Bhayandar in 1993 and Vasai Virar in 2009, the development accelerated. It is an upcoming real estate macro market with potential for development both as employment centre & affordable housing market.



8.2 | RESPONDENT PROFILE



8.3 | CURRENT HOUSING SCENARIO



TENURE OF HOUSING UNIT

Only 21 percent of the respondents live in rented housing units.

AGE OF STRUCTURES

Majority of the structures are between the age of 10 to 25 years. 80 percent of the structures above the age of 30 years have undergone renovation.

UNIT CONFIGURATION

As expected, the major unit typology of housing unit is of apartments at 80 percent. Majority of the product mix is 2 BHK & 1 BHK.

AMENITIES AVAILABLE WITHIN THE HOUSING COMPLEX

According to the amenities available within the complex, half of the respondents' houses had only garden or open spaces, and 37 percent had no amenities at all.

PROBLEMS FACED IN THE CURRENT HOUSING UNIT

The problems faced in the current housing scenario mostly include water logging and noise pollution. However, 40 percent of the respondents have reported facing no problems.

FINANCING OF HOUSING UNIT

50 percent of the respondents have opted for financial assistance from formal methods. The average monthly EMI spent by these households is ₹. 20,900 and amounts to 25 percent of their monthly household income. As mentioned earlier as well, EMI depends on the year of house purchase, which has noted to be varying greatly and hence the EMI have been lower.

8.4 | FUTURE HOUSING PREFERENCES

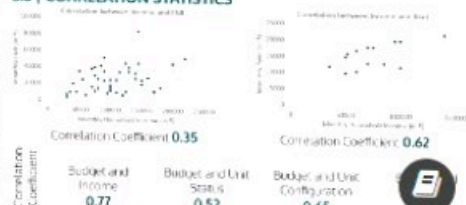
56 percent of the households are willing to invest/shift/renovate, of which 67 percent of the respondents are willing to upgrade within the city itself. Less than 10 percent of the households are willing to shift within same the macro or MMR market.

A gated community closer to economic centre is preferred mostly, which indicates higher demand for areas surrounding economic nodes.



An enquiry of the prospective next household has been made by understanding the priorities preferred by the respondents. Proximity to public transport nodes, hospitals and distance to work are the most important priorities when purchasing a housing unit.

8.5 | CORRELATION STATISTICS



7 | MACRO MARKET ANALYSIS: ANDHERI TO DAHISAR (WESTERN SUBURBS)

7.1 | INTRODUCTION TO THE MACRO MARKET

The corridor from Andheri to Dahisar falls within the macro market of the Western Suburbs of Mumbai. This region is known to have one of the best connectivity & proximity to the city as well as the CBD. Other than this, the vicinity & availability of other services, facilities & amenities are also favourable for residing. This was the first region to develop as a result of decongestion within the Island city & is home to ample commercial activities. There are ample residential projects that have developed within this macro market in the last few years. Primary residents of this region are middle income households. Even considering social amenities, there are multiple options for shopping & ample parks.



BORIVALI	19,000
KANDIVALI	16,500
MALAD	16,500
GOREGAON	19,500
JOGESHWARI	18,000
ANDHERI	25,000



7.2 | RESPONDENT PROFILE



7.3 | CURRENT HOUSING SCENARIO



TENURE OF HOUSING UNIT

Only 17 percent of the respondents live in rented housing units, even with the prevailing high prices in the region.

AGE OF STRUCTURES

Majority of the structures lie between the age of 5 to 30 years. 54 percent of the structures above the age of 30 years have undergone renovation.

UNIT CONFIGURATION

As expected, the major typology of housing unit is apartments at 91 percent. More than half the product mix is 2 BHK followed by 1 BHK at 37 percent.

AMENITIES AVAILABLE WITHIN THE HOUSING COMPLEX

Accounting for the amenities available within the complex, half the respondents' houses had only garden or open spaces, and 37 percent had no amenities at all.

PROBLEMS FACED IN THE CURRENT HOUSING UNIT

The problems faced in the current housing scenario majorly include noise pollution and water logging. However, half of the respondents have reported facing no problems.

FINANCING OF HOUSING UNIT

The average monthly EMI spent by these households is Rs. 50,000 and amounts to 26 percent of their monthly household income. The median EMI for the respondents in this macro market amounts to 40,000. However, EMI depends on the year of house purchase, which has been noted to vary greatly and hence the EMI have been lower.

Source: Knight Frank Real Estate Web Portal, CREDAI-MH-CRE MA TRM-MHAR Housing Typology Report 2021, Primary Survey by Author

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7.4 | FUTURE HOUSING PREFERENCES

43 percent of the households are willing to invest/shift/relocate. Of these, 85 percent of the respondents are willing to upgrade within the city itself, and more than half of these respondents are looking for a housing upgrade within the same micro market.

A gated community close to the economic centre is the most preferred option, which indicates higher demand for areas surrounding economic nodes.



An enquiry of the prospective neighbourhood has been made by understanding the priorities preferred by the respondents. Proximity to public transport nodes, hospitals, marketplaces and distance to work are the most important considerations when purchasing a housing unit.

7.5 | CORRELATION STATISTICS



10 | RECOMMENDATIONS TO MACRO MARKETS

Survey captured series of preferences from the respondents & their preferred locations. This data can be interpreted to the demand factors existing in the current market.

Overall, many respondents have expressed their preference to shift within the same macro market. Hence, summarised below is the current preference of the respondents as compared to the scenario existing in the market as studied through market research.

In most cases, the supply is aligned with the demand visible within the macro market. However, there is a gap in each of the macro markets regarding the quality of the supply. The quantity of demand and supply of affordable housing units, which can not provide to move towards more affordable markets.

Generally, units located in close proximity to public transport nodes & in the presence of good social infrastructure and amenities are preferred.

MACRO MARKET 2: MIRA ROAD TO VIRAR	
DEMAND	SUPPLY
2 BHK, 2.5 BHK, 3 BHK	2 BHK, 2.5 BHK, 3 BHK, 3.5 BHK
Unit Configuration	
0.5 Cr - 1.5 Cr	0.5 Cr - 1.5 Cr
Preferred Budget	Average Unit Price
1.2 parking space for 2 and 1 parking space for 4 wheeler	Larger project sites may accommodate more parking
Parking Spaces	
Garden, Gym, Multipurpose Hall, Kids' Play Area	Low cost amenities are mostly available
Amenities	
Supply is aligned with the demand. The market is more towards the affordable segment. More demand towards public transport nodes due to added travel time.	

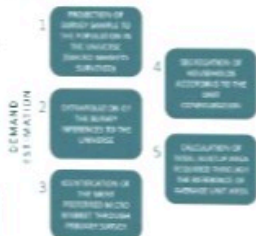
MACRO MARKET 1: ANDHERI TO DAHISAR	
DEMAND	SUPPLY
2 BHK, 2.5 BHK, 3 BHK	2 BHK & 2.5 BHK
Unit Configuration	
1 Cr - 2.5 Cr	1.8 Cr
Preferred Budget	Average 2.2.5 BHK Unit Price
1 parking space for 2 and 1 wheeler each	Extra parking required in some areas for 4 wheeler parking slots
Parking Spaces	
Garden, Gym, Multipurpose Hall, Kids' Play Area	Similar to supply, other amenities available in few projects
Amenities	
Moreover, supply is aligned with the demand. However, the unit prices vary greatly within the macro market itself. In some regions the market might not provide units within the given budget.	

MACRO MARKET 3: GHATKOPAR TO KANURIMARG	
DEMAND	SUPPLY
1 BHK, 1.5 BHK, 2 BHK, 2.5 BHK, 3 BHK	2 BHK, 2.5 BHK, 3 BHK, 3.5 BHK
Unit Configuration	
0.5 Cr - 1.5 Cr	1.7 Cr
Preferred Budget	Average Unit Price
1.2 parking space for 2 and 1 parking space for 4 wheeler	Extra parking space may be possible only in large scale projects
Parking Spaces	
Garden, Gym, Multipurpose Hall, Kids' Play Area	Extra amenities available in upcoming projects
Amenities	
This market has the presence of both luxury and non-luxury projects. Due to the changing nature of this market, trade off between quality and price may be needed.	

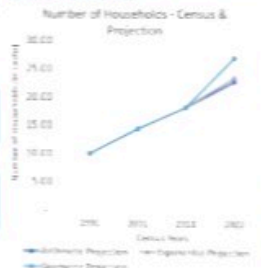
11 | DEMAND-SUPPLY ASSESSMENT

11.1 | DEMAND ESTIMATION

The first step in the Demand Supply Assessment is to understand the demand in the preferred macro market. This demand is understood in terms of built-up area required to be comparable with the supply available.



STEP 1: PROJECTION OF SURVEY SAMPLE TO THE POPULATION IN THE UNIVERSE (MACRO MARKET SURVEYED)



Source: Google Earth, Analyzed, Interred and Compiled by Author, Using personal knowledge

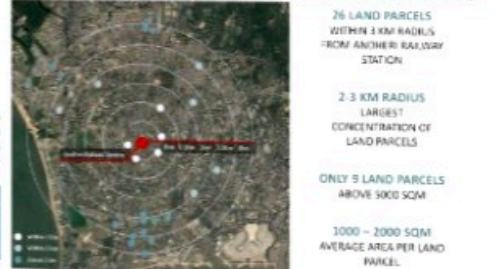
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11.2 | SUPPLY ASSESSMENT

The next step is to understand the supply available in the same macro market. The supply is also categorized in terms of buildable area. Only greenfield sites have been considered for this analysis, due to the complexity of identifying redevelopment sites.



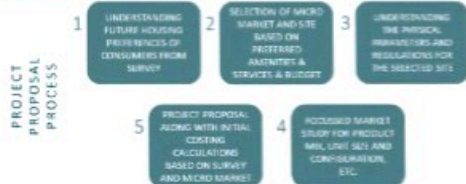
STEP 1: IDENTIFICATION OF VACANT LAND PARCELS IN THE SELECTED MACRO MARKET



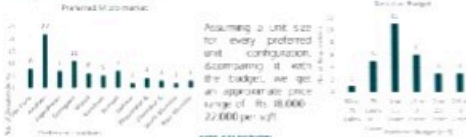
MODEL CALCULATION FOR A LAND PARCEL				
LAND PARCEL	AREA (SQM)	AVG. UNIT PRICE (RSQ)	TOTAL BUILT-UP AREA (SQM)	TOTAL BUILT-UP AREA (SQM)
1	10,000	1000	10,000	10,000
2	10,000	1000	10,000	10,000
3	10,000	1000	10,000	10,000
4	10,000	1000	10,000	10,000
5	10,000	1000	10,000	10,000
6	10,000	1000	10,000	10,000
7	10,000	1000	10,000	10,000
8	10,000	1000	10,000	10,000
9	10,000	1000	10,000	10,000
10	10,000	1000	10,000	10,000
11	10,000	1000	10,000	10,000
12	10,000	1000	10,000	10,000
13	10,000	1000	10,000	10,000
14	10,000	1000	10,000	10,000
15	10,000	1000	10,000	10,000
16	10,000	1000	10,000	10,000
17	10,000	1000	10,000	10,000
18	10,000	1000	10,000	10,000
19	10,000	1000	10,000	10,000
20	10,000	1000	10,000	10,000
21	10,000	1000	10,000	10,000
22	10,000	1000	10,000	10,000
23	10,000	1000	10,000	10,000
24	10,000	1000	10,000	10,000
25	10,000	1000	10,000	10,000
26	10,000	1000	10,000	10,000

12 | PROPOSAL OF MODEL PROJECT IN PREFERRED MICRO MARKET

12.1 | PROCESS OF PROPOSING MODEL PROJECT



12.2 | SITE SELECTION

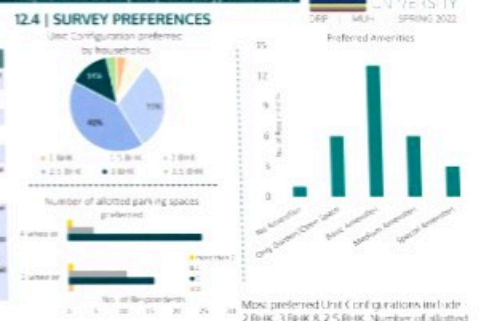


12.3 | SITE PARAMETERS

The site selection was conducted through the preferences derived from the primary survey.

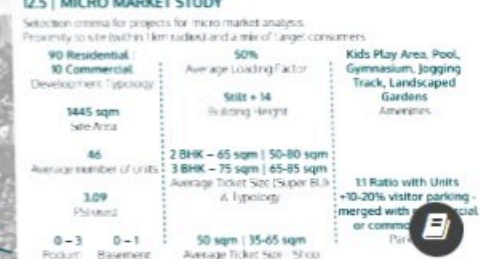


12.4 | SURVEY PREFERENCES



Preferred Views - 32% Skyline, 48% Garden/Open Space, 20% Water body.

12.5 | MICRO MARKET STUDY



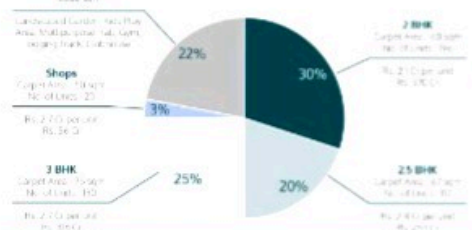
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12.6 | PROJECT PROPOSAL



PROJECT PROPOSAL BASED ON SURVEY PREFERENCES & MICRO MARKET STUDY

Parking - Amenities
1550 sqm



PROJECT OUTFLOW		PROJECT INFLOW	
TITLE	AMOUNT	TITLE	AMOUNT
Land Cost	19,890 sqm x ₹ 1,29,670 = ₹ 2,57,08,11,200	Refund from Sale of Units	(Minimum price assumed - minimum gain possible)
Premium FSI	14,130 sqm x ₹ 5,368 = ₹ 75,80,40,000	2 BHK	₹ 2.3 Cr per unit x 190 units = ₹ 4,37 Cr
Construction Cost	52,272 sqm x ₹ 23,090 (ASSUMED) = ₹ 1,20,72,50,000	2.5 BHK	₹ 2.4 Cr per unit x 117 units = ₹ 2,81 Cr
Approvals and Other Costs	(Assumed at 3% of total cost) ₹ 22,23,80,400	3 BHK	₹ 2.7 Cr per unit x 130 units = ₹ 3,51 Cr
TOTAL OUTFLOW	₹ 4,65,79,50,600 (1457 Cr)	Commercial Units	₹ 2.7 Cr per unit x 23 units = ₹ 62 Cr
		TOTAL INFLOW	765 Cr
		TOTAL INFLOW - TOTAL OUTFLOW	- 556 Cr

Through these initial calculations, it seems that the project would be feasible with a profit of 556 Cr to the developer or promoter. However, a detailed calculation is required to understand the actual costs, which considers the project's duration, upfront investment, construction linked payment schedule, interest rates for borrowed capital, etc.

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13 | CONCLUSION

13.1 | CONTRIBUTION TO THE RESEARCH PROJECT

Theoretically, the insight into the historical and current trends of MMR's real estate market has provided an understanding of how the market has responded to the various triggers and shifts in the economic, demographic, industrial, etc., phases of the city and country.

The market study conducted to enable the comparison between the demand and supply in the macro and micro markets gives a set of additional information while also acting as a base for the comparison. The various recommendations proposed as a part of this research study provide an insight into the importance of such an empirical study, as they give a glimpse of the multitude of inferences that can be drawn from such research.

From a research point of view, this study adds to the available database on MMR by linking the same with historical data collected from various sources.

13.2 | RESEARCH CONCLUSION

The historical timeline of MMR with reference to various triggers has been constantly linked with the housing and real estate characteristics. Of these, transportation and the economy have had an unparalleled impact on real estate and continue to do so.

Growth directions and the status of development in different regions across MMR have helped identify the real estate macro markets, for which a detailed analysis was carried out.

A sample calculation of demand and supply within a micro market along with identification of land parcels, and proposal of a model project within Andheri, led to the conclusion that only about 149 percent of demand is being catered to by the available greenfield sites.

13.3 | DIRECTION FOR FUTURE RESEARCH

Research that addresses similar research gap keeping in mind the limitations of this research in terms of survey sampling, access to primary data, etc.

Similar to residential real estate, similar analysis can be carried out for other asset classes and their interlinkages can provide a better insight to the real estate market.

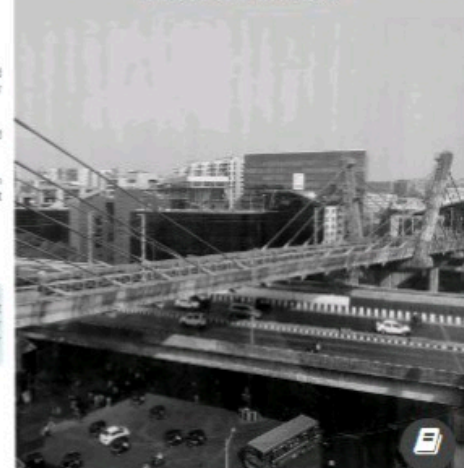
Statistical approach to linking the household data to their current and preferred housing scenario can also be adopted.

Source: Calculated, Analyzed, inferred and Compiled by the Author
Using the provided datasets

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The demand within these seemingly saturated micro markets continues to persist, benefitting both the developers and investors. The trends within newer projects in these micro markets is to provide more and better amenities within a smaller price range, along with more open spaces in locations that are closer to public transport nodes.

As seen in Andheri, the availability of greenfield sites is minimal, instead, there is scope for redevelopment projects. An attempt to meet this demand is seen with the revised FSI norms and a push for redevelopment projects. The transport and infrastructural services also continue to be bettered to assist the residents.



Conclusion of the Directed Research Project