

CATEGORY: Data Analytics with Tableau

PROJECT TITLE: Analysing Housing Prices in Metropolitan Areas of India

INTRODUCTION:

1. Overview: A brief description about your project
2. Purpose: The use of this project. What can be achieved using this.

Problem Definition & Design Thinking

When it comes to analysing housing prices in metropolitan areas of India, one approach could be to gather data on different factors that influence housing prices, such as location, size, amenities, and market trends. We can then use statistical analysis or machine learning techniques to identify patterns and make predictions.

HOUSING PRICES IN METROPOLITAN AREAS

House Price Determination:

Two houses in two different locations are believed to be sold within the same market, if house prices in one location impose a competitive constraint on house prices in the other location (Motta, 2004; Carlton and Perloff, 2005). For example, whether a home owner is free to set the price of his in, say, Kolkata without any difficulty that may occur from the house going to be sold in Delhi or in Mumbai or in any other city in the country. Here, two

different situations may arise. In the first situation, the home owner in Kolkata may face problem in setting a competitive price of his house. In the second situation, he may not face the same and can freely set the price of his house. If situation one arises, then it will imply that residential house market in Kolkata is an integrated part of the single house market prevailing in the country and there exists less scope of price fluctuation in the long run. Therefore, LOOP holds when the housing market is single and not segmented, and their absolute prices should converge. It means that relative prices of the houses should be mean reverting or stationary. If the second situation arises and the home owner can freely set the price of his house, then it will imply that Kolkata and other cities are having the residential housing market of their own and the house price in one part of the country is not going to any threat to the house prices to be set in other parts of the country and there exists a possibility of price divergence in the longer run.

Housing Finance for the Poor:

Housing finance for the poor households is thus tied up with public housing programmes in the three cities. The poor households have little choice in exercising their options regarding the housing environment they wish to live in. And since the public housing efforts constitute no more than 20 percent of the accretions to the housing stock, it is apparent that the poor household's

demand for housing finance remains largely unfulfilled. The poor households employed in public sector enterprises, particularly Banking sector, are relatively better placed to obtain House Building Advance. (of the total estimated HBA to employees in Ahmedabad, the Banking sector accounts for 85 percent of advances). The employees in other organizations appear to have a limited access to housing finance, except from the Provident Funds.

MAJOR DIFFICULTIES IN ANALYSING HOUSING PRICES IN INDIA:

There are four key factors that impact real estate prices, availability, and investment potential. Changing demographics can impact home prices due to the age, income, and regional preferences of buyers. Many real estate analysts are forecasting U.S. house prices to fall because mortgage interest rates have risen so much.

The report cited the “225 bps repo rate hike and consequent increase in home loan rates along with higher residential prices” as reasons behind the decline in the EMI-to-income ratio. “2022 also marks the first year since 2011 for affordability decline in year-on-year terms. **What are the four factors that influence value?**

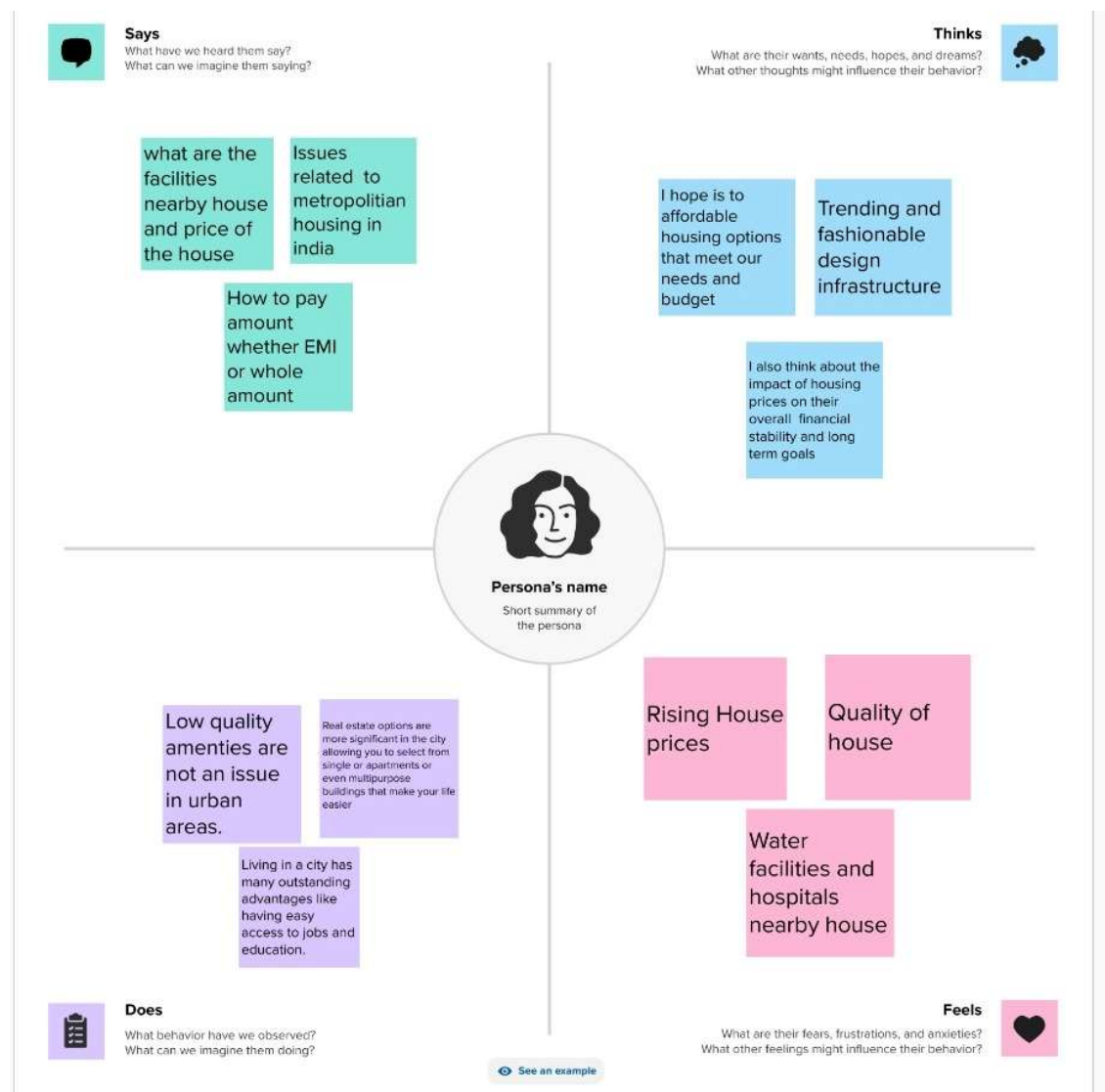
There are four forces that influence real property values.

- Social Forces.
- Economic Forces.
- Physical and Environmental
- Governmental Forces.

Lack of affordable housing, reduced land entitlements and accelerated housing for the privileged are behind the crisis. As India becomes the world's most populated country with 1.4 billion people, housing, particularly for low-income urban households, remains a long standing challenge.

Problem Definition & Design Thinking:

EMPATHY MAP:





Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

🕒 10 minutes to prepare

🕒 1 hour to collaborate

👤 2-8 people recommended

🗨️ Share template feedback



Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

 10 minutes

A

Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B

Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

C

Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#) 

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⌚ 5 minutes

PROBLEM

How might we [your problem statement]?



Key rules of brainstorming

To run an smooth and productive session



Stay in topic.



Encourage wild ideas.



Defer judgment.



Listen to others.



Go for volume.



If possible, be visual.

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕒 10 minutes

TIP
You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

JENIFER SANTHIYA.J.A

Comparing Prices between different cities housing prices

Gathering data factors and using statistical analysis or machine learning techniques can help identify patterns and make predictions.

SIVA BHARATHI.R

When analyzing housing prices, it is important to consider factors like location, size, and age of the property.

Predictions about housing prices can be made using machine learning models.

Use statistical analysis techniques to identify patterns and correlations.

KALAISELVI.G

To analyze housing prices, it is important to consider factors like location, size, and age of the property.

Machine learning models can be used to predict housing prices.

It is important to consider factors like location, size, and age of the property when analyzing housing prices.

VIJIL.M

The housing market is a good example of how supply and demand works within an industry.

When the demand for housing is high but supply is low, home prices often rise.

When there is a high demand for housing, prices often rise.

KAVITHA.

people analyzing housing prices in metropolitan areas of India want to make informed decisions about buying or selling a home.

Valuable farmland being used for building a housing purposes.

Poor public transport means more people resort to private cars and traffic congestion.

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Analyse factors like location, size, amenities and market trends

Comparing Prices between different cities housing prices

when analyzing housing prices in metropolitan areas of India is the proximity to amenities such as schools, hospitals, and shopping centers.

Now a days home loan, EMI is a systematic way of buying houses in metropolitan areas are paid every month.

To establish government policies and initiatives at providing affordable prices for houses

The housing market is a good example of how supply and demand works within an industry.

4

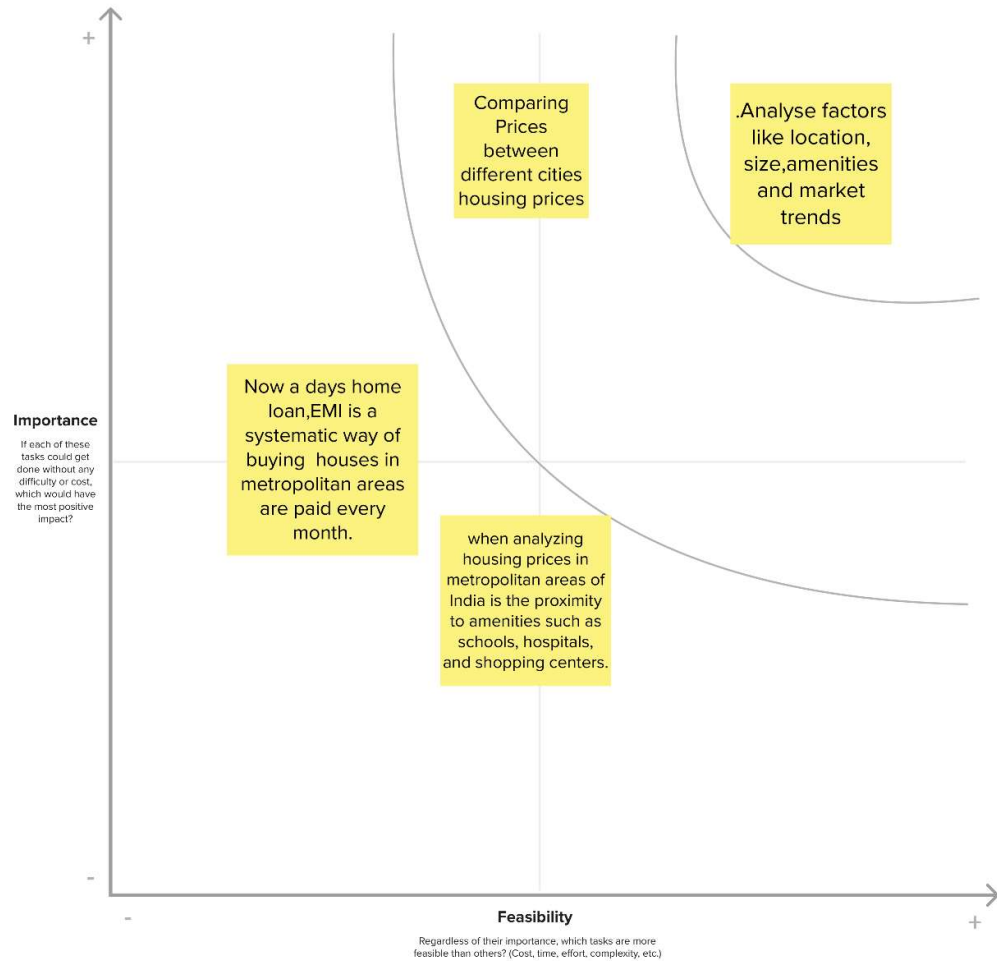
Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕒 20 minutes

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the H key on the keyboard.





After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

Quick add-ons

A

Share the mural

Share a **view link** to the mural with stakeholders to keep them in the loop about the outcomes of the session.

B

Export the mural

Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

Keep moving forward



Strategy blueprint

Define the components of a new idea or strategy.

[Open the template →](#)



Customer experience journey map

Understand customer needs, motivations, and obstacles for an experience.

[Open the template →](#)



Strengths, weaknesses, opportunities & threats

Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.

[Open the template →](#)



[Share template feedback](#)

EXPLAIN HOUSING PRICE PREDICTION:

House price prediction can help the developer determine the selling price of a house and can help the customer to arrange the right time to purchase a house. There are three factors that influence the price of a house which include physical conditions, concept and location. The clear definition of the product is required to compare the products sold at different locations (Burger and Van Rensburg, 2008; Gupta and Das, 2008; Das et al., 2010). Hence, the paper concentrates on the price of residential properties which has been taken from the National Housing Bank (NHB) in the form of index. Unlike the South African house prices that have been captured for various categories of houses (Burger and Van Rensburg, 2008; Das et al., 2010), this study relies on simple house price index created only for the residential houses. The NHB pilot study was conducted primarily in five large cities (Delhi, Mumbai, Kolkata, Bengaluru and Bhopal) covering various regions of India. Later, it has been extended to ten more cities (Ahmedabad, Faridabad, Chennai, Kochi, Hyderabad, Jaipur, Patna, Lucknow, Pune and Surat) for larger representation of the residential housing market. Currently the NHB RESIDEX is constructed with 2007 as the base year. In the NHB, the index had earlier been calculated biannually, i.e. from January to June and July to December till 2009. From 2010 onwards, the index has been calculated on quarterly basis. In this study, the data from January – June 2007 to July – December 2009 has been interpolated to quarterly data for all 15 cities.

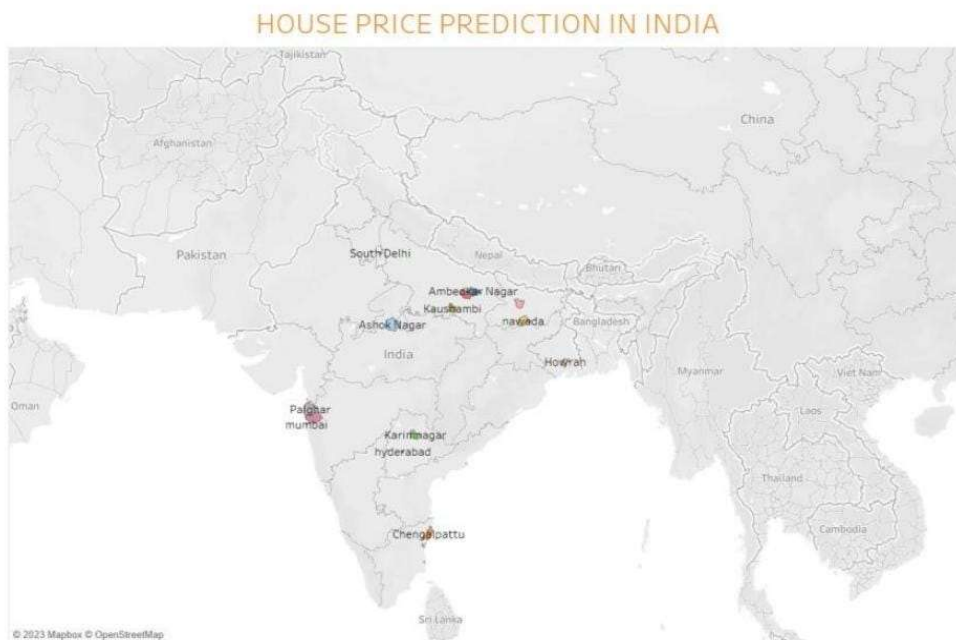
STRUCTURE OF HOUSING PRICES IN INDIA:

Kolkata recorded the highest appreciation in average residential prices

at 15 YoY, followed by Delhi NCR and Hyderabad with 14 per cent and 13 per cent increase, respectively.

Among eight cities, MMR was the only cities that saw fall in average prices during the April-June quarter by 3 per cent to ₹19,111 per square feet due to significant new supply and rising unsold inventory.

"The housing market has maintained its prudence and discipline primarily due to a high number of new launches over the last year, and momentum is continuous. Some metropolitan areas are given below in the map:



RESULT:

- In Q2 2023, Kolkata saw the highest housing price surge annually among the top eight Indian cities at 15%.
- The upcoming festive season will help in further boosting the sales and sustain the momentum through the start of 2024.
- Delhi NCR's unsold inventory decreased by 7% when compared to the same period in the last fiscal.

Kolkata saw the highest housing price surge among the top eight Indian cities at 15% when compared to the same period last financial year, continuing a

seven-quarter upward trend. This rise is due to increased demand, driven by government incentives like a 2% stamp duty reduction and a 10% lower circle rate extension until September 2023.

In the same quarter, Delhi NCR followed closely with a 14% Y-o-Y increase. Notably, Golf Course Road and Dwarka Expressway witnessed remarkable price rises at 46% and 40% respectively. Golf Course Road's prices outpacing Delhi's in Q2 2023 can be attributed to improved connectivity and proximity to Gurugram's commercial hubs, spurring higher demand for homes.

CITY	AVERAGE PRICE Q2 2023 (₹/SQ FT)	QOQ CHANGE	Y-O-Y CHANGE
Ahmedabad	6,507	3%	10%
Bengaluru	8,688	-1%	10%
Chennai	7,653	3%	6%
Delhi NCR	8,652	3%	14%
Hyderabad	10,530	1%	13%
Kolkata	7,315	1%	15%
MMR	19,111	-1%	-3%
Pune	8,540	2%	11%

Advantages and Disadvantages of housing price prediction:

Living in metro city: The advantages include access to better schools, more job opportunities, and more entertainment options. The disadvantages include higher cost of living, more crime, and greater pollution levels. Ultimately, the decision of whether to live in a big city depends on your own personal preferences and needs.

Advantages of living in a metro city:

1. There's always something to do. Whether you're into nightlife, culture, or just exploring new neighbourhoods, there's always something to keep you entertained in a metro city.
2. You have more job opportunities. With more businesses and industries

concentrated in one area, it's easier to find a job that matches your skillset in a metro city.

3. You can be anonymous. If you want to start over or just don't want people to know your business, it's easy to blend into the crowd in a big city.

Disadvantages of living in a metro city:

1. It's expensive. The cost of living is high in most cities, which can make
2. it difficult to make ends meet if you don't have a high-paying job.
2. The pace of life is fast. If you like a slow-paced lifestyle, you might find that the constant hustle and bustle of a big city wears you

Advantages and Disadvantages of Living in metro City:

There are several advantages and disadvantages of living in a big city. On the one hand, a big city offers a greater variety of entertainment and educational opportunities. There are also more job opportunities available in a big city. On the other hand, a big city can be very expensive to live in and it can be more difficult to meet people and make friends. The cost of living in a big city can be very high. Housing costs are often much higher than in smaller towns or suburbs. The cost of food and other essentials can also be higher.

Transportation costs can also be quite high, especially if you need to use public transportation to get around. Big cities can also be very crowded and noisy. If you don't like being around large numbers of people, a big city may not be the best place for you to live. Traffic can also be a problem in big cities. It can sometimes be difficult to get around, especially during rush hour. Despite the disadvantages, many people enjoy living in big cities

because of the opportunities they offer. If you think you would like to live in a big city, it's important to do your research before making the move.

Talk to people who live there and find out as much as you can about the pros and cons of living in a big city. Weighing the pros and cons of city living can be tricky, but ultimately, it's up to each individual to decide what's best for them. If you're looking for a fast-paced lifestyle with plenty of entertainment and nightlife options, then a big city is probably a good fit for you. On the other hand, if you prefer a slower pace and easier access to nature, then you might prefer living in a smaller town or suburb. Consider your needs and wants carefully before making a decision – there's no wrong answer, as long as you're happy with your choice.

Advantages and Disadvantages of Living in Metro City :

City living certainly has its perks. From the abundance of job opportunities to the never-ending stream of things to do, it's easy to see why so many people are drawn to cities. But as with anything, there are also some downsides to living in a big city. From the high cost of living to the fast-paced lifestyle, it's important to weigh both the pros and cons before making a decision. In this blog post, we will explore the advantages and disadvantages of living in a big city. By the end, you should have a better idea of whether or not city living is right for you.

Big city life – The hustle and bustle of big city life can be both exhilarating and exhausting. on one hand, there's always something new to do and see. on the other hand, the crowds and the noise can be overwhelming. if you're considering a move to a big city, it's important to weigh the pros and cons carefully.

pros:

- **diversity:** in a big city, you'll find people from all walks of life. this can be a great opportunity to learn about new cultures and expand your horizons.
- **convenience:** big cities offer a wide range of services and amenities, from public transportation to world-class restaurants. you'll never be far from what you need.
- **entertainment options:** from concerts and shows to museums and galleries, there's always something to do in a big city. you'll never find yourself bored or without options for entertainment.
-
- **cost of living:** everything from rent to groceries is more expensive in a big city than in smaller towns or suburbs.
- **congestion:** with more people comes more traffic. getting around can be a challenge, especially during rush hour.
- **noise level:** constant honking horns and sirens can be jarring and make it difficult to get a good night's sleep.

The good and the bad

Living in a metro city has its pros and cons. On one hand, you have access to more job opportunities and a greater variety of entertainment and dining options. On the other hand, you also have to deal with higher living costs and more competition for jobs and housing.

If you're considering a move to a big city, it's important to weigh the good and the bad before making your decision. Here are some things to keep in mind:

Pros:

1. More job opportunities: In a big city, there are simply more job opportunities available. This is especially helpful if you're looking for a specific type of job or want to change careers.

2. Greater variety of entertainment and dining options: There's no shortage of things to do in a big city. Whether you're into live music, theater, museums, or fine dining, you'll find it all in abundance in urban areas.

3. More public transportation options: If you don't own a car or simply

prefer not to use one, then living in a big city is ideal. Public transportation options abound in large cities, so getting around is easy and convenient.

Advertisement

Cons:

1. Higher living costs: Big cities are notoriously expensive places to live. From rent and utilities to groceries and entertainment, everything seems to cost more in an urban setting.

2. More competition for jobs and housing: With so many people vying for limited jobs and housing units, the competition

Pros and cons of living in a big city

There are pros and cons of living in a big city. The advantages include having more job opportunities, better public transportation, and more entertainment options. The disadvantages include higher costs of living, more crime, and more pollution.

Conclusion:

Advantages and disadvantages of living in a big city Big cities are usually lively, exciting places to live. It can be great to be surrounded by so much energy and opportunity. However, there can also be some drawbacks to city living. The cost of living is often high, and the pace of life can be hectic. There is also a greater chance of crime in big cities. But on the whole, many people believe that the advantages outweigh the disadvantages of living in a metro cities.

FUTURE SCOPE:

In 2021, the size of the Indian property market was \$200 billion. The projected growth by 2030 for the sector is \$1 trillion. What is more, by 2025, the real estate sector is expected to contribute 13 percent of the country's total GDP.

In this episode of Smart Money, *CNBC-TV18*'s Sonia Shenoy spoke to Ravi Kewalramani, a real estate broker whose company RK Mumbai Relators has over 35 years of experience in the industry and someone who has taken the internet by storm with his entertaining, informative and aspirational videos on real estate. Kewalramani has over a million subscribers on the internet and his ear to the ground.

Kewalramani says that India's real estate future shines brightly due to the burgeoning population and escalating consumption rates. Notably, certain regions within Mumbai, specifically along the central line encompassing Kanjur Marg, Vikhroli, and Bhandup, offer affordability that still persists.

APPENDIX :

SOURCE CODE:



index1.html



index.html

