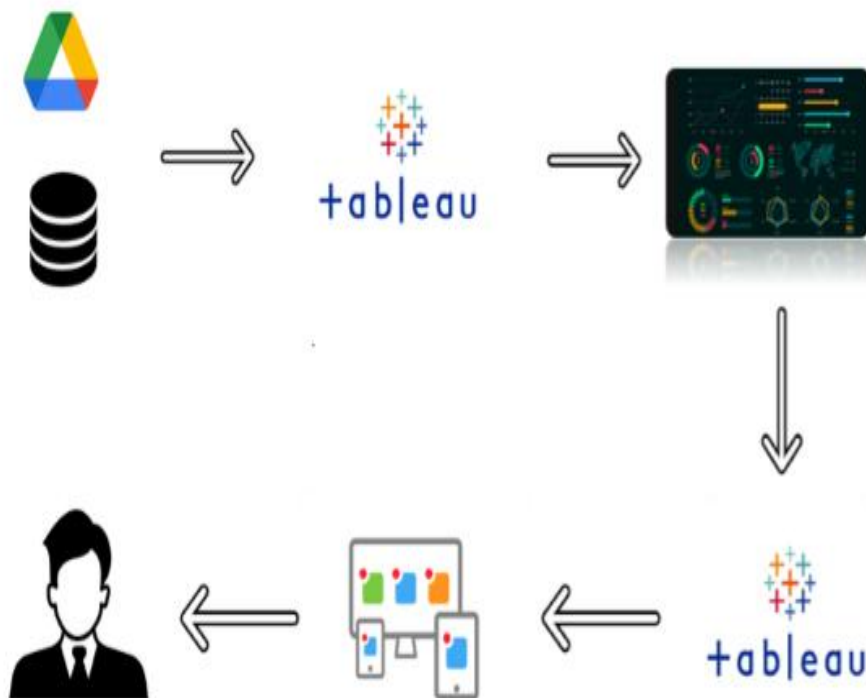


# ANALYSING HOUSING PRICES IN METROPOLITAN AREA OF INDIA

## 1. INTRODUCTION

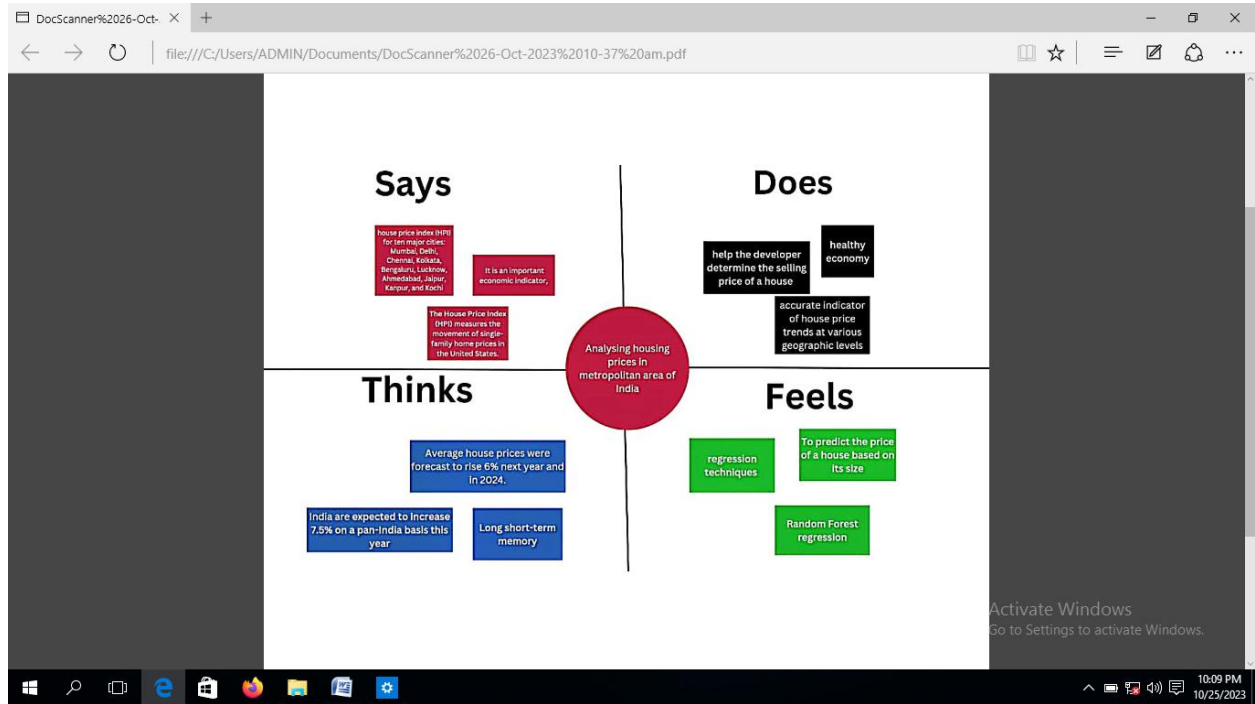
Since the inception of the theory and idea of development, the common feature that emerged in different point of time is the developmental gap that emerged in different parts of the world and also among various parts of a country in a particular time period. This disparity in development, like many other indicators, has also been reflected in India. Traditional development theories believed that agriculture, industrialisation, urbanisation, are significant ingredients of growth, and, ultimately important prerequisites for achieving development. Within the economy itself, the status of growth of a state can be judged through its performance in agricultural and industrial production, performance of service sector and urbanisation, and their impact through their contribution in income and employment generation at the national level. Thus, house price behaviour may also reflect some short of developmental status of the households of a country. Keeping in view the above fact of rapid urbanisation and regional disparities, it is not unexpected that it may lead to some sort of differences in regional house prices, where housing and real estate are considered as major sources of physical and financial asset. This also leads to the differences in the dynamics of house price determination. It simply means that there might be shift of house prices in cities from average, in the country, depending upon its economic status. For instance, average house prices in the poorer provinces might be lower than the national average. Similarly, for richer states, the urban house prices, on average might be higher than the national average.

## Technical Architecture :



## Problem Definition & Design Thinking

Empathy map Screenshot:

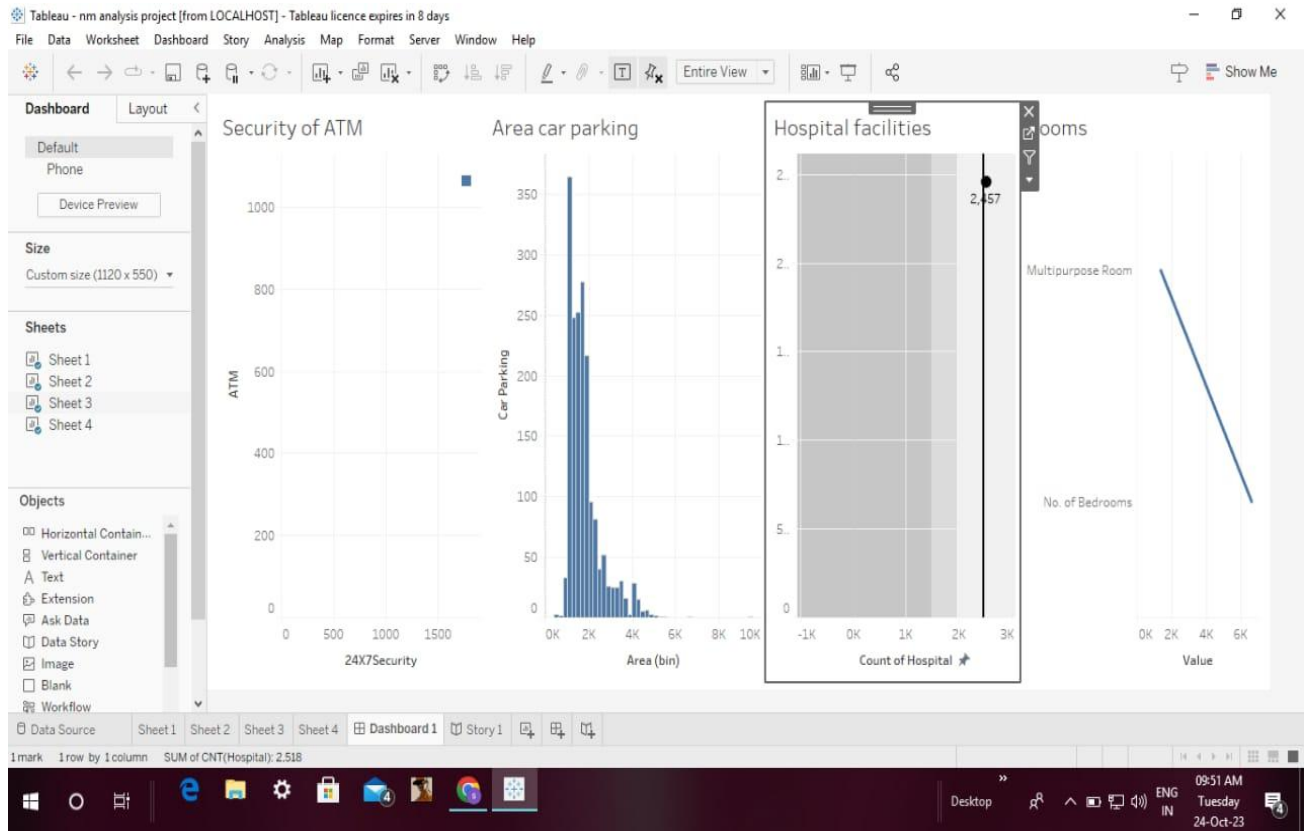


## 2.RESULT

### 2.1 DASHBOARD

Link: <https://public.tableau.com/app/profile/lathika.g7280/viz/nmanalysisproject1/Dashboard1>

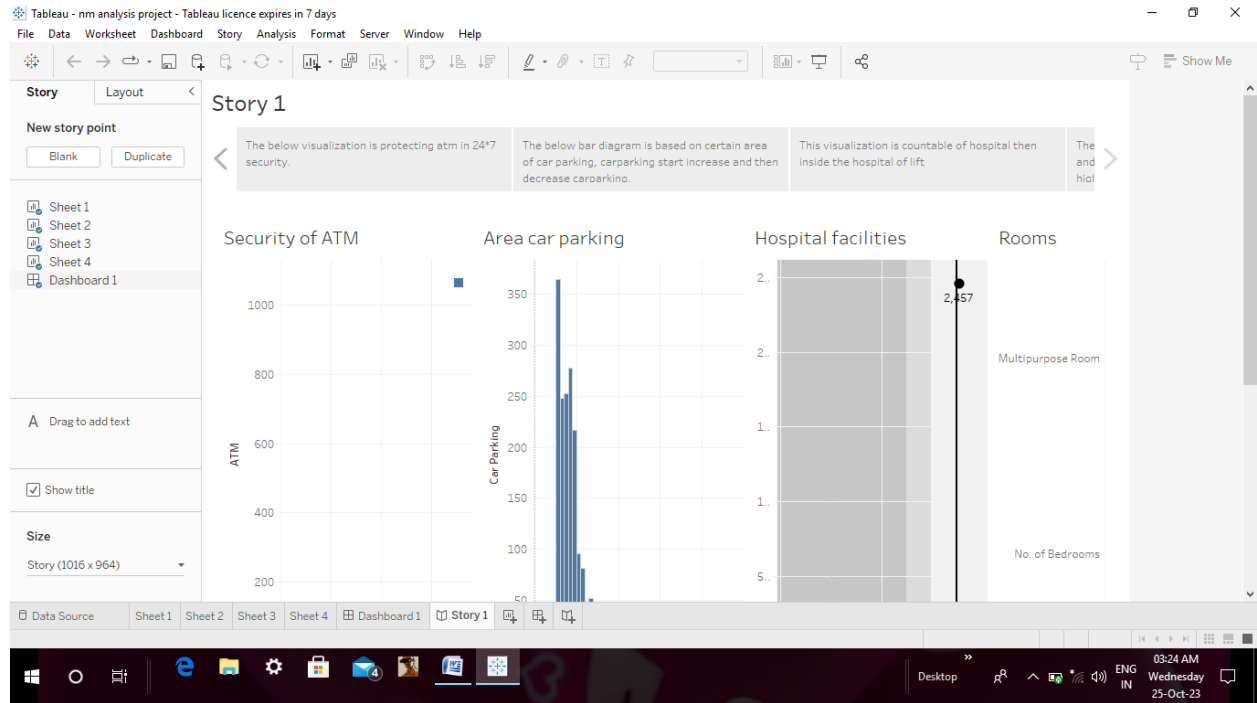
Tableau Public Screenshot for Dashboard:



## 2.2 STORY

Link: <https://public.tableau.com/app/profile/lathika.g7280/viz/nmanalysisproject1/story1>

Tableau public screenshot for story:



## Advantages of Living in the City

Major metro areas are popular among millennials for a reason. Many of them have their heart set on city living after graduation, and it's not hard to see why. When you're ready to enter adulthood headfirst, here are a few advantages to living in a big city:

### 1. Entertainment Options :

You never have a shortage of things to see and do when you move to a major metro area. Regardless of your preferences, you'll find places that appeal to your interests, filled with like-minded people who share them. Whether you're into loud clubs or quiet bookstores, you'll find both in abundance.



While suburban and rural areas have their own social and cultural amenities, they aren't on the same scale you'll come across in the city. You're also far more likely to see your favorite musical artists in major metros, as they have less incentive to visit small towns. If you're looking for entertainment and cultural enrichment, cities are often ideal.

Furthermore, larger cities hold more communities and clubs that can help you connect with fellow residents. If you're trying to make friends, it's only a matter of narrowing down your interests and getting involved in activities full of other passionate people. In a small town, it's far



more unlikely you'll be able to connect with friends who share a love for niche hobbies and events.

## **2. Career Opportunities :**

One of the biggest reasons graduates move to cities is career advancement. You'll find more opportunities in the city, and a greater variety of opportunities as well. Whatever you studied, you're likely to find a position where your education is relevant. In 2023, cities in the Sunbelt region such as Nashville and Austin have the fastest-growing job markets.

Established urban centers like LA and NYC are still viable, but other cities are becoming more attractive for young entrepreneurs. Job growth in the biggest cities has been slower than usual because the COVID-19 pandemic hit them the hardest. However, there still remains a combination of educational, economic and environmental factors that make big cities the best places to find new employment.

Furthermore, living in a big city is the only way for some people to advance their careers. For example, technology-oriented roles are packed into urban centers like San Francisco, New York and Seattle. Major business and financial centers tend to set up shop here, too. These career paths require young professionals to relocate to cities where more job positions can be found.

## **3. Public Transportation :**

The costs of owning a car can add up quickly. You have to account for car payments, insurance, registration fees and other expenses. When you work an entry-level position at a company early in your career, you can't always justify that kind of investment. Even if you find a reasonable used car, one major repair can throw off your saving goals for the month.



Fortunately, you have a range of options for public transportation when you live in a major metro area. The subway provides a relatively fast, convenient way to get from place to place, avoiding traffic. Plus, you might be able to focus on a book rather than keeping your eyes on the road as long as the noise isn't too distracting.

Of course, not every American city is well-equipped for public transportation. If you're wondering whether your favorite hotspot has a reliable system, check out its rankings. If buses and subways are well-organized and frequently used, then it's a safe bet to ditch your car before you move.

## **Disadvantages of Living in the City**

While metro areas have their appeal, you'll find the issue isn't as one-sided as some might think. Urban living is great, with entertainment options, career opportunities and public transportation, but just like everything else, it has its downsides. Between traffic, crowding and higher expenses, life in a big city might just not be for you. What should you know before you start packing your things to move.

### **1. Higher Cost of Living :**

The cost of living is higher in the city than in suburban or rural areas. While there may be more job opportunities in the city, the cost of rent, food and entertainment will eliminate much of your monthly earnings. It's typically cheaper to live in the suburbs rather than a downtown apartment. However, renting vs buying is a huge decision to make. If you're spending more income on housing year-to-year, then you might have to put off any plans for property while living in the big city.

As a general rule, the biggest cities have the highest costs of living in the United States, like Los Angeles, New York City, Miami, Denver and others. This also means you're more likely to be sharing life with a roommate in order to pay a reasonable rent. It's increasingly difficult to find an affordable apartment in the biggest cities. If you're looking to live alone, then you may want to seriously rethink moving to the city.

More than this, you have other life expenses you need to consider when making the move to a major metro area. Dining, groceries and entertainment are usually more expensive in the city, and you might find yourself spending more than you'd like for a night out. While you have more options — an attractive advantage of city living — these options come at a price that some people would rather not pay.

### **2. Less Personal Space :**

If you value having lots of personal space, cities might not seem so appealing. The close quarters of subway cars and sidewalks aren't for everyone, and it's a significant change from life in a small town. When you weigh your options, consider whether you can handle walking among massive crowds of people or living in a small studio apartment.





You might not feel that way at all, and this “disadvantage” wouldn’t even occur to you if it weren’t on this list. On the other hand, the thought of people crowding you whenever you step out your front door could make you uncomfortable. If this is the case, you should reconsider making the move to a city. You might be happier in a quiet environment, where loud neighbors are less of a potential nuisance.

### **3. Large Population :**

The large population of major metro areas can create other unforeseen challenges in your daily life. You’ll find it far more difficult to find a parking space if you drive, and once you arrive at your destination, you’re still not in the clear. You might have to push through a crowd, wait longer for a table at restaurants or linger in a line.

Traffic is another important consideration. Country living often means empty roads and direct routes to the grocery store. While living in a big city, you’ll either be taking public transportation or careening down a highway in rush hour to pick up a few necessities. More people can mean more excitement, but this level of energy can be exhausting when you’re on the road.

It’s worth noting that populations in large urban areas saw a substantial decrease during the pandemic, but this decline has slowed or reversed in most cases. Big cities are still packed with people and will continue to grow. Something which shouldn’t challenge you in a small town could extend into an hour-long ordeal. As we’ve stated, big city living is convenient in many ways and inconvenient in others.

#### **4. Fast-Paced Environment :**

Living life on the fast track can be thrilling. But it's also more likely to lead to burnout. Culture depends on the city's regional character, of course, but for the most part, city dwellers have a lot more on their plate. Detroit and Cleveland are the most stressed out cities in the US, and the gloomy yet fast-paced environment has a lot to do with it.

Consider whether you feel up to longer work hours, longer bus rides and an urge to hustle just to stay ahead. In a small town, it's less common to compete for jobs with late-night expectations, and commutes are often a 10-minute drive. There's nothing wrong with being sensitive to stress, and the magic of living in a big city will be lost on you if you end up frazzled by your day-to-day life.

#### **Conclusion**

Based on the criterion of price convergence, house prices in the 15 metropolitan cities do not converge to the LOOP. This implies that the housing markets in the different areas operate as segmented independent local markets.

#### **References**

Allen, F. and Carlotta, E. (2011), "What Should Central Banks Do About Real Estate Prices?".

Australian Bureau of Statistics (2005), "Information Paper: Renovating the Established House Price

Index (Cat. No. 6417.0), November.

Australian Bureau of Statistics (2006), "Information Paper: An Introduction to Socio-Economic Indexes for Areas (SEIFA)", Cat. No. 2039.0.

Australian Bureau of Statistics (2009) "House Price Indexes: Concepts, Sources and Methods", Cat.

No. 6464.0, Chapter 6, Australia.

Bailey, M.J., Muth, R. and Nourse, H.O. (1963), "A regression method for real estate price index construction," Journal of the American Statistical Association, Volume 58, Number 304, pp 933–942, December.

Bernanke, B.S., Gertler, M., and Gilchrist, S. (1999), "The Financial Accelerator in a Quantitative

Business Cycle Framework”, Handbook of Macroeconomics, Volume 1, Part C, pp1341-1393.

Broadbent, B. (2014), “Monetary policy, asset prices and distribution”, Speech, Society of Business

Economists Annual Conference, London, October.

Can, A. and I. Megbolugbe (1997), “Spatial Dependence and House Price Index Construction,” Journal of Real Estate Finance and Economics, 14, 203-222.

Case, K.E. and Shiller, R.J. (1987), “Prices of Single Family Homes since 1970: New Indexes for

Four Cities”, NBER Working Paper No. 2393.

Case, K.E. and Shiller, R.J. (2004), “Is there a Bubble In The Housing Market?”, Cowles Foundation

Paper No. 1089.

Cleveland, R.B., Cleveland, W.S., McRae, J.E. and Terpenning I. (1990), “STL: A Seasonal-Trend

Decomposition Procedure Based on Loess”, Journal of Official Statistics, Volume 6, No. 1, pp 3-73.

Dachis, B. (2012). The Effect of Land Transfer Taxes on Housing Transactions.

Duranton, G., Ghani, E., Goswami, A.G. and Kerr, W. (2014), “The misallocation of land and other

factors of production in India”, November.

Eurostat (2013), “Handbook on Residential Property Prices Indices (RPPIs)”.

Feldstein, M.S. (2007), “Housing, Housing Finance, and Monetary Policy”, NBER Working Paper

No. 13471.

Fonseca, I. and Guimaraes, R. (2006) “Confidential Property Index: Methodological Procedure”, October.

Forsyth, F.G and Fowler, R. F. (1981), “The Theory and Practice of Chain Price Index Numbers”.

Gandhi, R. (2014), “Real estate and housing- a sensitive sector or Samvridhhi sector?”, Speech, Mumbai, August.

Government of U.K. (2014), “About the House Price Index”, Land Registry, July.

Goodman, A.C. and Thibodeau, T.G. (1995), “Age related Heteroskedasticity in Hedonic House Price

Equations”, Journal of Housing Research, Volume 6, pp 25-42.

Hilbers, A., Hoffmaister, A.W., Banerji, A. and Shi, A. (2008), “House Price Developments in Europe: A Comparison”, IMF Working Paper 08/211.

Ingves, S. (2007), “Housing and Monetary Policy: A View from an Inflation-Targeting Central Bank”, Federal Reserve Bank of Kansas City Publication.

Kain, J.F. and Quigley, J.M. (1970), “Measuring the Value of Housing Quality”, Journal of American

Statistical Association, Volume 65, Issue 330, pp 532-548, June.

Kiyotaki, N. and Moore, J. (1997), “Credit Cycles”, Journal of Political Economy, Volume 105, No.

2, April.

Lloyds Banking Group, “Halifax House Price Index- September 2014”.

McCarthy, J. and Peach, R.W. (2004), “Are Home Prices the Next Bubble?”, Economic Policy Review, Volume 10, No. 3, December.

IIMB-WP NO. 477

33

Miller, N. and Skalarz, M (2008), “Irrational Despair in the Housing Market”, Manuscript, Volume 7,

August.

National Housing Bank (2007), “NHB RESIDEX: Tracking the prices of residential properties in India”.

National Housing Bank (2013), “NHB RESIDEX- Status, Challenges and Way Forward”, December.

Office for National Statistics (2012), “Developments in the United Kingdom’s House Price Index”.

Poterba, J.M (1984), “Tax Subsidies to Owner-occupied Housing: An Asset Market Approach”

Quarterly Journal of Economics, Volume 99, No. 4, November.

Quigley, J.M. (1995), “A Simple Hybrid Model for Estimating Real Estate Price Indexes”, Journal of

Housing Economics, Volume 4, pp 1-12.

Reserve Bank of India (2014), “Pilot Housing Start-Up Index, Trend in New construction of residential housing during 2009-2011 in 27 cities across India”, February.

Reinhart, C.M. and Rogoff, K.S. (2009), “The Aftermath of Financial Crises”, NBER Working Paper

No. 14656, January.

Shiller, R. J. (1996), ‘Measuring Asset Values for Cash Settlement in Derivative Markets: Hedonic

Repeated Measures Indices and Perpetual Futures”, Cowles Foundation Paper No.856

Shiller, R.J. (2007), “Understanding Recent Trends in House Prices and Home Ownership”, September.

Shiller, R.J. (2014), “Why is housing finance still stuck in such a primitive stage?”, Cowles Foundation Discussion Paper No. 1934, January.

Shiller, R.J. (2014), “Speculative Asset Prices”, Cowles Foundation Discussion Paper No. 1936, February.

Silver, M. (2012), “Why House Price Indexes Differ: Measurement and Analysis”, IMF Working

Paper, May.

Singh, C. (2013), “Housing market in India: A Comparison with the US and Spain”, IIM B Working

paper.

Sommervoll, D.E. (2006), “Counterintuitive response to tax incentives? “, Statistics Norway Research

Department, Discussion Papers No. 492, January.

Taylor, J.B. (2008), “The Financial Crisis and the Policy Responses: An Empirical Analysis of What

Went Wrong”, Stanford University Research Paper.

Warnock, V.C. and Warnock, F.E. (2007), “Markets and Housing Finance”, NBER Working Paper

No. 13081, May.