

Analysing_housing_prices_in_metropolitan_are as_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.

1.1 Overview:

The Times of India (2012) report indicates that housing prices in India witnessed the steepest rise in the world in the last 10 years since 2001. “House prices in India have increased by 284% in real terms, after allowing for inflation — equivalent to an average annual rise of 14%. The

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upward movement could be due, significantly, to, rapid urbanisation, increase in population, migration from rural areas as a result of unsatisfactory performance in agriculture and expectation for better livelihood, in terms of greater earning possibilities in urban areas. Only couple of cities registered price decline in the last quarter of 2011. Hence, this paper focuses upon residential property prices in metropolitan cities in India, more specifically, on the study of fifteen metropolitan cities located at different parts of the country consisting Delhi, Mumbai,

Bengaluru, Kolkata, Chennai, Jaipur, Lucknow, Hyderabad, Pune, Surat, Ahmedabad, Patna, Faridabad, Kochi and Bhopal. Due to their locations, the cities are having regional characteristics. Against this background, the basic question that arises is whether these fifteen metropolitan cities act as a single market or they work separately as segmented independent metropolitan housing markets within the country. In other words, does the Law of One Price (LOOP) hold true in the housing market of the fifteen metropolitan cities of India? Although a number of studies have been conducted for some countries to determine the convergence of house prices in the respective regions⁴, to the best of our knowledge, no such study has been conducted for India.

1.2 Purpose:

The standard price behaviour of a good or its close substitute reveals the same price movements and they generally vary within a price range, when they are sold at markets located at different places (Shepherd, 1997; Lipczynski et al., 2005). 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 house 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 pose 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.

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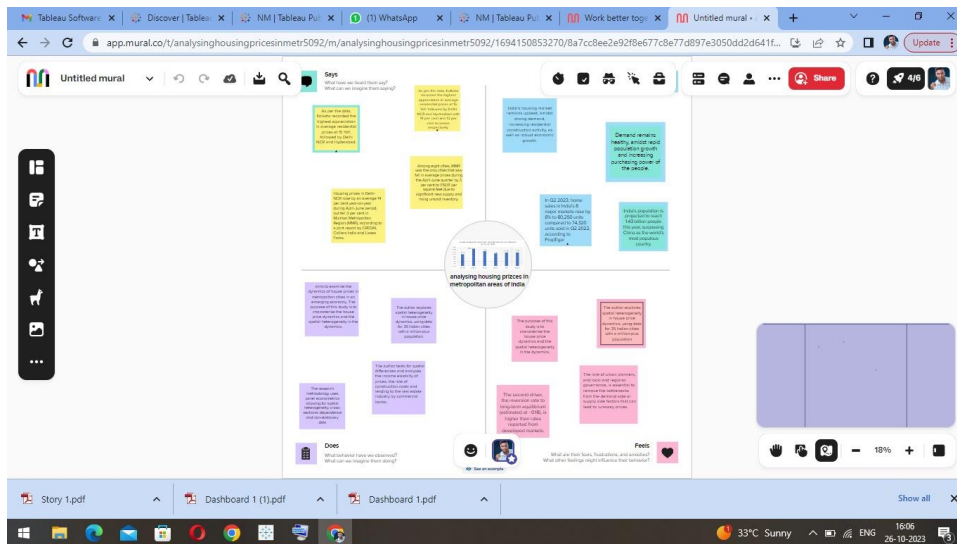
2).Problem Definition & Design Thinking:

2.1 Empathy Map

*An Empathy Map consists of four quadrants. The four quadrants reflect four key traits, which the user demonstrated/possessed during the observation/research stage. The four quadrants refer to what the user: Said, Did, Thought, and Felt.

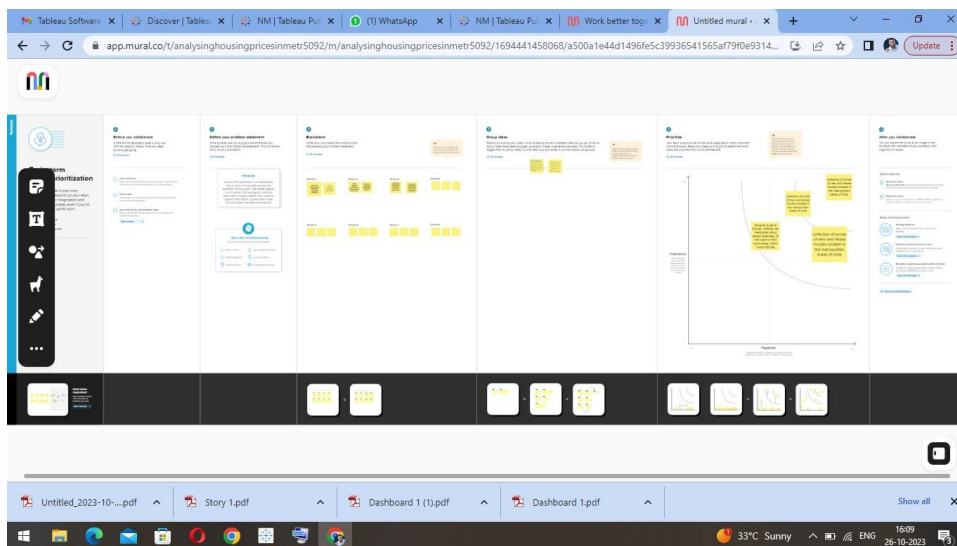
Examble:

* For example, you likely smile and take the trouble to remember people's names: that's empathy in action. Giving people your full attention in meetings, being curious about their lives and interests, and offering constructive feedback are all empathic behaviors, too.

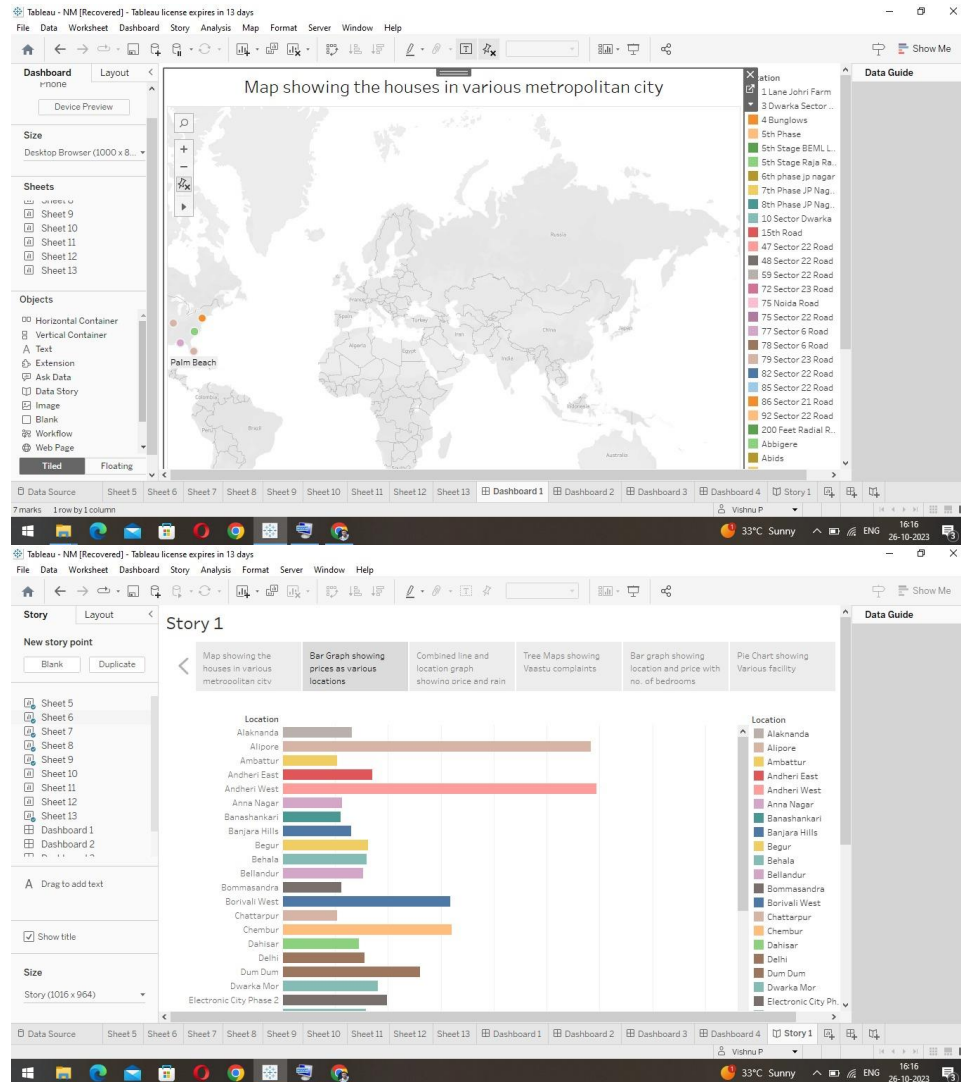


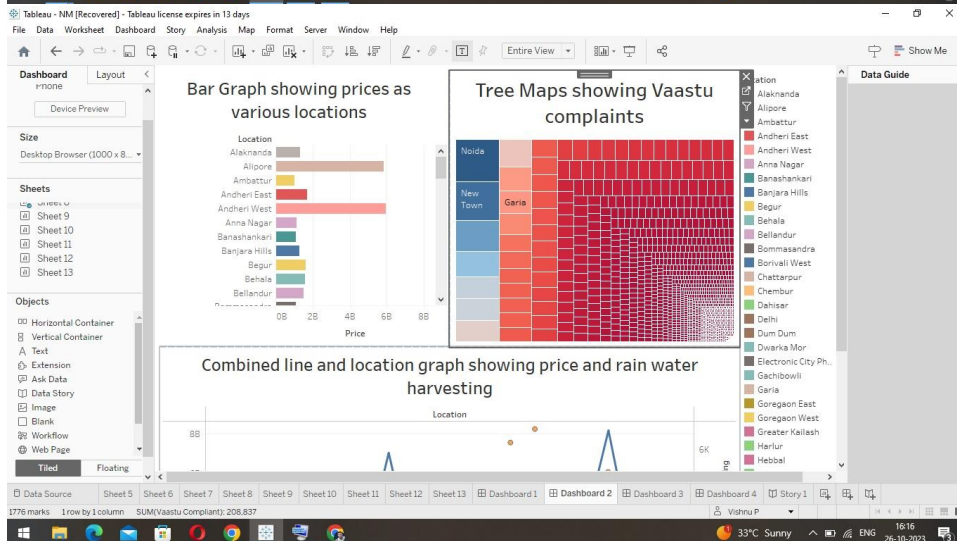
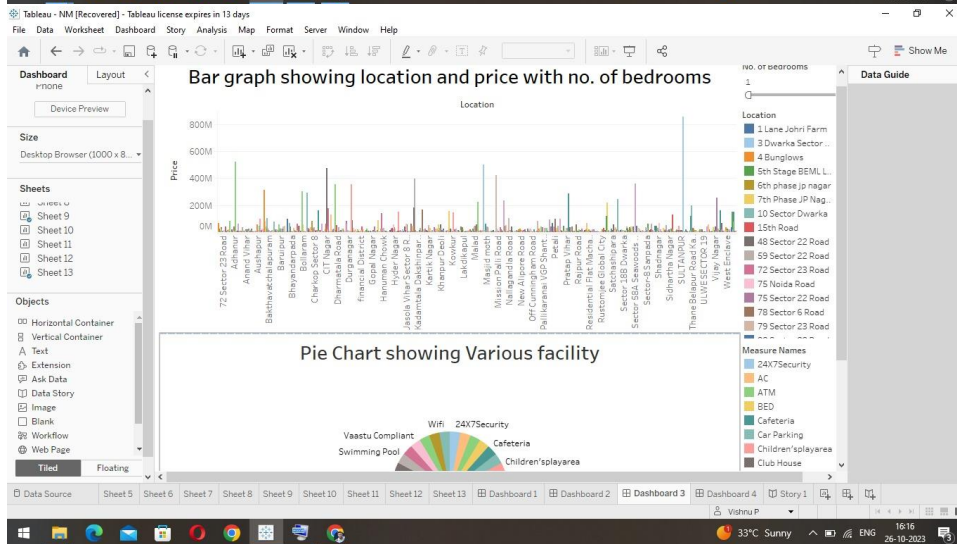
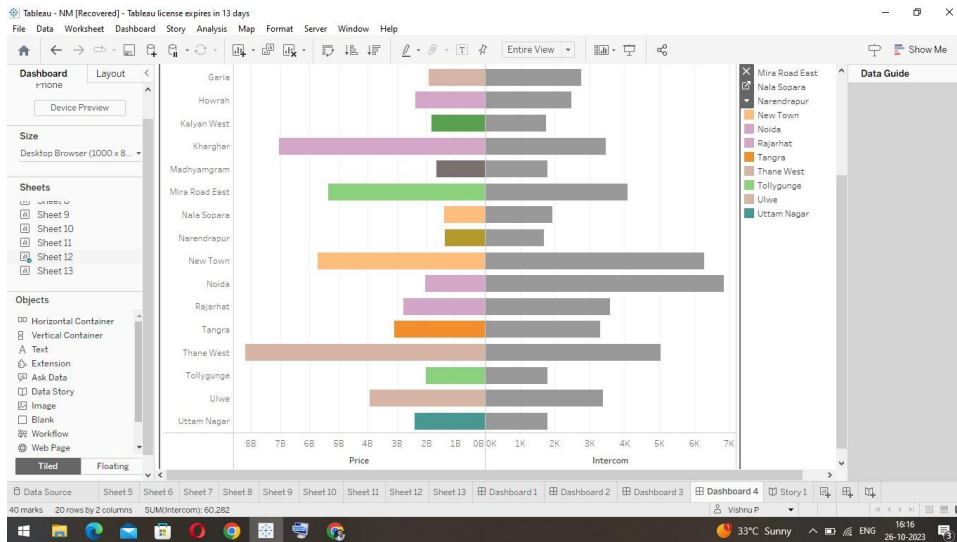
2.2 Ideation & Brainstorming Map:

* Ideation is often closely related to the practice of brainstorming, a specific technique that is utilized to generate new ideas. A principal difference between ideation and brainstorming is that ideation is commonly more thought of as being an individual pursuit, while brainstorming is almost always a group activity.



3)RESULT:





4)ADVANTAGES & DISADVANTAGES:

- The result of the Im, Pesaran and Shin panel unit root test is presented in Table 1. The consistently high probabilities of the relative house prices indicate that the series is consistently non-stationary and therefore diverges indefinitely in the long-run. The lack of convergence of the relative house prices simply implies that separate metropolitan cities in India function as separate housing markets in their respective localities. In other words, the Law of One Price (LOOP) does not hold in Indian housing market case

5)APPLICATIONS:

- 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 rely 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. Therefore, our study employs data from 2007Q1-2011Q4 giving a total of 20 quarters.
- The movement of the residential house price index reflects the behaviour and type of the market prevailing in the country. The average real house price index is plotted in Figure 1. The average real house price index shows the trend of the house prices for the 2007Q1 to 2011Q4 time period for all 15 metropolitan cities. In summary, the average house price trend is increasing throughout the considered time period with exception in 2010Q1, 2011Q1 and 2011Q3 where there are noticeable declines. The relative price movement for each of the metropolitan cities for the time period has been depicted in Figure 2

6)CONCLUSION:

This paper analyzes whether the Law of One Price (LOOP) holds in the housing market of fifteen metropolitan areas in India, namely Delhi, Mumbai, Bengaluru, Kolkata, Chennai, Jaipur, Lucknow, Hyderabad, Pune, Surat, Ahmedabad, Patna, Faridabad, Kochi and Bhopal. We test the existence of LOOP using the Im, Pesaran and Shin (2003) panel unit root test based on quarterly data on residential property prices covering the period of 2007Q1 to 2011Q4 of the Indian housing market. 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. Therefore, house prices in one location in India cannot impose a competitive constraint on house prices in other location, and as such a home owner can freely set the price of his house.

7)FUTURE SCOPE:

- The paper examines the long-run behavior of house prices by addressing the issue of price convergence or divergence across fifteen metropolitan cities in India. Using available city-level quarterly data covering the period 2007-2011 and applying the Im, Pesaran and Shin (2003) panel unit root test, it is found that relative price levels among various metropolitan cities in India do not converge. This implies that the Law of One Price does not hold in the Indian housing market, hence the different metropolitan house markets operate independent to one another