

# Analysis on the Housing Bubble in China's Major Cities

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## ABSTRACT

**In China, house prices have always been a hot topic. This paper will discuss the questions that whether or not are there housing bubbles in China's major cities from the perspective of comparing the fundamental value and market price of housing in these cities. The result shows that in major cities in Beijing, housing bubble does not exist.**

*Keywords: housing bubble, China, major cities*

## I. INTRODUCTION

According to a report in 2019 from Coldwell Banker Richard Ellis (CBRE), three Chinese cities, Shanghai, Shenzhen, and Beijing have ranked from fourth to sixth of the average housing property price around the world: Shanghai had an incredible average property price of \$905,834(USD); Shenzhen had an average property price of \$783,855(USD); Beijing had an average property price of \$763,498(USD). Another group of data of the average monthly salary of white-collar jobs in China is as follows. Beijing, Shenzhen, and Shanghai had the highest housing price in China, as well as the average monthly salary of white-collar jobs: Beijing has an average salary of ¥11,434(CNY) per month for white-collar jobs; Shanghai has an average salary of ¥10,811(CNY) per month for white-collar jobs; Shenzhen has an average salary of ¥10,276(CNY) per month for white-collar jobs. Converting the salary data from CNY per month to USD per year using exchange rate when the average housing property price report was published (1USD = 6.87430CNY), Beijing, Shanghai, and Shenzhen have an average monthly salary of \$19,959.56(USD), \$18,872.03(USD), and \$17,938.12(USD) per year [1]. A typical white-collar working in one of these cities will need to not use any of their salaries and work for about forty years in order to buy housing in these cities. It is obvious that the housing price in major Chinese cities is way too high both absolutely and relatively. This paper analyzes the condition of housing bubble in China's major cities from the necessity of living, education value and investment value

## II. ANALYSIS

By definition, housing bubble is an increase in housing prices fueled numerous spending, which usually starts with increase in demand caused by limited supply, until it collapses.[2] When economists

call something a bubble, it also implies that the market price of the good is beyond its fundamental value, in other words, real value. Some fundamental values for housing need discussing. First of all, housing can provide people a place to live. If not owning a place to live, people will need to pay rent to find a place to live. If owning a place to live already, additional housing will provide people with rent (if people do rent it). Secondly, in China, especially in big cities like Beijing and Shanghai, a housing with good location (near certain schools) will give children access to higher-quality education, which will lead to possibly a good career and high income for the children. Thirdly, houses can be a good investment: buying a house when the price is relatively low and selling it at a higher price. Based on these aspects of basic value, we will discuss whether the market price of houses in major cities in China is much higher than its basic value and whether there is a real estate bubble in China.

### A. The necessity of living

One of housing's fundamental values is to provide people a place to live in. Another way to have a house to live in is renting, so it is reasonable to estimate the real value of housing from the aspect of a place to live by comparing its price with renting price. In Beijing, according to the China Residential Housing Market Development Monthly Analytical Report, the median monthly rent in 2018 is ¥2,514(CNY), which is ¥30,168(CNY) per year. The median home price in Beijing in 2018 was about ¥4,020,000(CNY). Since China has a property right for 70 years, we can use the average annual rent multiply the 70 years of property ownership to get the price of renting a house for the same length in time as buying a house, which will be ¥2,111,760(CNY), just about half of the median home price in Beijing.[3] But there are also factors that we should consider as well. People who can afford a house are often richer than the ones who choose to rent, so they will buy housing in a better neighborhood or at a

better location. As in the same neighborhood, an 80m<sup>2</sup> apartment is on sale for ¥3,850,000(CNY), while an 81m<sup>2</sup> apartment in the exact same community has a rent of ¥6,100(CNY) per month, which is ¥73,200(CNY) per year and ¥5,124,000(CNY) for 70 years. It is not enough to look at only one piece of example. By calculating the rental price for 70 years in twenty different communities in Beijing and calculating the average, the twenty apartments have an average rental price for 70 years as ¥5,843,908.76(CNY), and the average housing price in those twenty communities with similar housing area is ¥4,970,843.16. In this way, it seems that Beijing's housing market doesn't have a bubble since its fundamental price exceeds its market price. But we need to think about whether the rental price is part of the housing bubble as well. The answer is no. Because, not like buying a house, the only purpose of renting a house is to have a place to live in it, thus owning a house can be seen as an asset, but renting a house is just consuming a product. When people are buying something, they will judge whether the product worth the money or not, if not, they probably won't buy it, and the sellers will have to adjust their price since otherwise, they will not be able to sell the product, as Adam Smith stated as the "invisible hand". Thus, the high rental price is not a bubble because it is set by people's needs.

#### *B. Education value*

The second aspect that we should consider is the education that housings with great location can bring to children. In major cities in China, government regulations are set that children go to primary schools based on the location of their family, so people live in communities that are near good schools can have their children attending those good primary schools, and which will bring the child with a better lifetime education as well as a successful career. Children went to a good middle school from its primary school and took the Senior High School Entrance Examination. According to the scoring data of Senior High School Entrance Examination of Xicheng District in Beijing from 2019, top 5 middle schools have an average school at about 530 points, which can allow the child to go to the top 10 high schools in the district, and about 30% of the students in top 5 middle schools scored 549 or about, allowing them to attend top 5 high schools in the district.[4][5] Xicheng district can be seen as the district with the best education resources in Beijing, and throughout China, so it means that attending these high schools will lead the child to a great university. According to the Average Score of the National University Entrance Examination of the year 2019, the top 5 high schools in Xicheng district had average scores from 654 points to 621 points.[6] In 2019, students with 621 points can attend the top 40 universities in China, which is really impressive

considering the huge population of China.[7] After graduating from college, students who went to the top 40 universities in China can get a minimum average starting salary of ¥8,051(CNY) per month, which is an annual salary of ¥96,612(CNY). However, having an apartment near a good primary school is not the only one factor that contributes to the high salary paid, there are also other factors, so we can't count the ¥96,621(CNY) annual salary all on the house. People who graduate from normal universities(top 150) in China can get an annual salary of ¥70,000(CNY) (about ¥5000(CNY)-¥6000(CNY) per month), the different the house made was just the about ¥20,000(CNY)-¥30,000(CNY) a year, and further into the society, the college that people had with their undergraduate degree won't matter that much anymore, so calculating by 40 years, the "benefit that the house brings" will only be about ¥211,199(CNY)(with an annual increase in salary of 5%).[8] Thus, the fundamental value of housing on the education side doesn't justify its market price since housings near good schools are extremely expensive but the real difference it made is not big at all.

#### *C. Investment value*

The third fundamental value of housing is its value as an investment. In nearly every country in the world, house price keeps increasing and it so does in China.

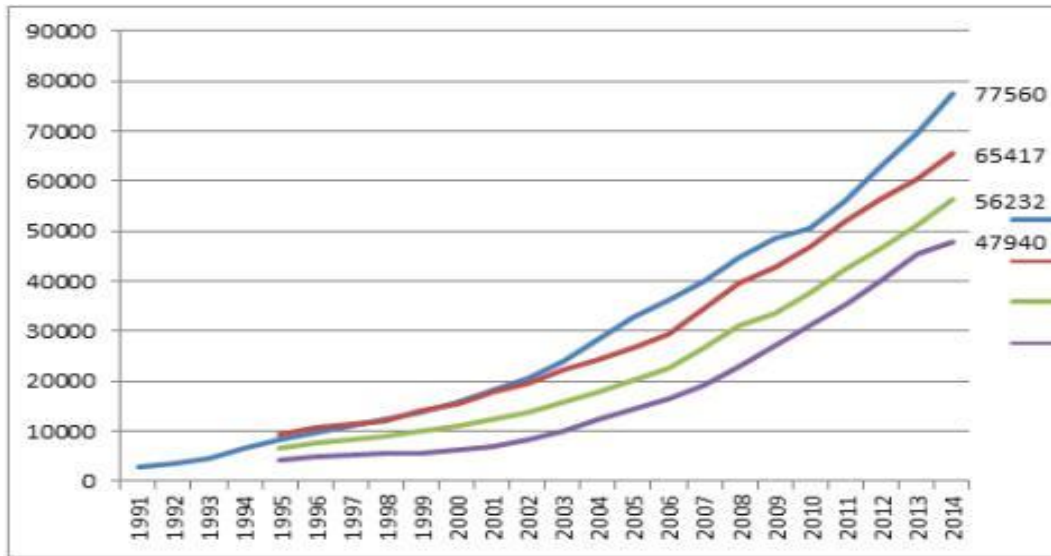


Fig. 1. House price in Beijing, Shanghai, Tianjin, and Chongqing.

As shown in the "Fig. 1" above, housing price in Beijing (77560CNY), Shanghai (65417CNY), Tianjin (56232CNY), and Chongqing (47940CNY) has increased tremendously since from 1995 to 2014 and is still in an upward trend. Housing can be seen as one of the most worthwhile investments from the late nineteenth century to the first two decades of the twenty-first century. Since if housing prices will decrease someday in the future, then it won't be a

worthy investment for people to invest in anymore, and thus the market price of housing will no longer be justified.

Nowadays, house price in Beijing have not grown as rapidly as it was before 2016, and has shown a small decrease from April 2019 to February 2020, but since March 2020 and rises again to the same level as it was in April 2019 till May 2020 (as shown in the "Fig. 2").



Fig. 2. House price in Beijing[9].

Even though this little fluctuation doesn't necessarily represent that there will be a decrease in housing price in the next few years, investors earn zero profit for the entire year which can be concluded as a bad investment since there is a projected inflation rate of 3.05% from 2019 to 2020 according to statistics.

Besides the fact that housing investors earned zero profit during the past year and it was actually earning negative profit because of the 3.05% inflation rate from 2019-2020, the investors are actually operating an even worse economic profit, because it lost the chance of investing this money into other fields such as stocks

and bonds.[10] In fact, China's stock market has been operating really well after the coronavirus and has reached a historic high in July. Thus, the housing market becomes a less attractive investment because (a) it is not rising as it was ten years ago, and (b) other investments are becoming more and more profitable. Therefore, the fundamental value of housing from an investment point of view decreases and doesn't justify its high market price.

### III. CONCLUSION

By comparing the fundamental values of housing to its market price from the perspective of value for living and renting, value for education purpose, and value for investing purpose, we get controversial conclusions that as a place to live, the fundamental value of housing seems to exceed its market price; As a tool of education, the market price seems to exceed its fundamental value; As an investment, it is not a profitable investment anymore, and thus lost its value for investment. The most fundamental purpose for owning a housing is to live there and thus make the fundamental value of living the most important from the three that we compared earlier. When people use the education value of housing, they can still live in the house or rent it to someone else, thus the educational value of housing is just a bonus to its fundamental value, and as stated earlier, there is a positive value from education perspective in housing, but just not as huge as the housing price. So, it is reasonable to conclude that housing in Beijing does not have a bubble since its fundamental value of living exceeds its market price, and there is an additional value of education to some housings. As for its investment value, it is the same with education value: it is just an additional value for housing and will decrease housing's price when it's not performing well, but won't affect housing's fundamental value. Thus, In major cities in China, at least in Beijing, housing bubble does not exist.

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