

Analysis of the Impact of Government Policies on Supply and Demand in China's Real Estate Markets in First-tier and Second-tier Cities

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Abstract: Due to changes in demographics, urbanization, and economic development, the Chinese real estate market has intrigued many analysts in the last three decades. To begin with, it is necessary to know more about the nature of this market since it plays an essential role in the country's economic development and in improving the standard of living of its population. The importance of the real estate industry cannot be overemphasized in the context of China, specifically in terms of the financial structure, urbanization, and social welfare. Hence, evaluating government policies in this regard is crucial to understand further, how and why they work or fail, along with the impact on the growth of cities. Thus, this paper aims to provide an overview and qualitative analysis of the Chinese real estate market's government policies between first- and second-tier cities, focusing on supply and demand. The actual policies include purchase restrictions, availability of land, and monetary policies, and the effects of actual policies are discussed for various tiers of cities. The study establishes that first-tier cities are highly priced and competitive due to high supply and demand, while second-tier cities are variably priced and could be oversupplied. These issues need more profound and local policy suggestions to understand specific heterogeneities of various Chinese urban property markets and strive for the mutual and relatively balanced growth of different city clusters.

Keywords: China real estate, government policies, supply-demand, first-tier cities, second-tier cities.

1. Introduction

China, as a country, has observed tremendous leaps in the progression of the real estate business, especially in the last two and half decades; with the change of social structure from pre-industrial type to post-industrial type, millions of people shifted from rural areas and villages to urban environment to attain better economic status and quality of life. The Chinese real estate business includes residential and commercial/ industrial real estate and construction companies, investment, property management, and financing. All businesses play a significant role in contributing to the GDP and the overall growth of the economy due to employment opportunities provided when the businesses are set, demand for raw materials and services, and contribution to urbanization. Other

factors, such as population migration due to rapid urbanization, render this sector significant, as there will always be a demand for shelter and infrastructure thereon. It is essential to understand this market considerably to define the standards and formulate state politics, which can direct economic development without generating social tension. The real estate sector contributes to many other industries, such as the construction, manufacturing, and financial sectors, impacting the national and international economies. Chinese authorities have been implementing institutions to regulate the real estate market to maintain a sustainable growth pace, prevent fluctuations in housing prices, including speculative ones, prevent adopting housing monopolies, and ensure the population's demand for housing. Real estate, being very central in the economy, largely contributes to the economy, but its growth brings about economic imbalance and social disparity. Hence, these measures are designed to weigh the accommodation of such economic contributions by real estate against achieving and sustaining stability and affordability in housing. The restrictive policies are those on the purchase of properties, provisions on land availability, and monetary policies, each of which targets specific problems in the market. These policies and their efficiency and results may have various levels of success in different regions or levels of urbanization of cities [1].

Therefore, this paper aims to examine the policies made by the Chinese government concerning the real estate market to determine the degree of supply and demand effectively in first-tier cities, including Beijing and Shanghai, and second-tier cities, including Chengdu and Wuhan, among others. It is widely agreed that first-tier cities have a high population, enhanced infrastructural facilities and services, and high turnover. Nevertheless, these cities have high rates of property prices and or limited availability of spaces for living. On the other hand, the second-tier cities in emerging markets may experience a problem of oversupply coupled with lower demand. Considering the variability in the sizes and the economic development levels of cities, it is possible to conclude that developing policies based on obtaining differentiated data is imperative. The measures that need to be analyzed include purchasing restrictions, land use policies and availability, and monetary measures that require elaborating concepts to solve different problems experienced by cities at various tiers.

For this reason, this paper will compare the effects of these policies on the first-tier and the second-tier cities. The research logistics will include a qualitative evaluation of supply and demand trends in the real estate market by the city's tier. Therefore, comparing the impact of government policies in first-tier and second-tier cities is expected to uncover significant differences regarding property market movements. Thus, this research offers place-specific policy implications more responsive to the heteroskedastic and distinctive nature of China's urban property markets. This analysis helps make various city clusters properly interdependent and have nearly equal further development, which contributes to the balanced growth of the economy and stability of the society in the future. Knowledge of these factors will aid in better conceptualizing the optimal strategies for regulating the real estate sector, thus fostering sustainable city growth and economic stability.

2. Overview

2.1. China's real estate market

China's real estate market has come from being relatively embryonic at the start of the reform and opening-up process in the late twentieth century to being one of the largest and most vibrant in the world today. Its advancement during the subsequent post-2000 years can be referred to as rather explosive, with the noticeable enhancement of property rates, large-scale urbanization, and high domestic and foreign investments [1].

During the late 20th century, Deng Xiaoping developed reform policies [2]. Before these reforms, people could hardly own their property; most people had houses provided by the government. Nevertheless, the formation of market relations and the privatization of the dwelling in the 1980s and

the 1990s stimulated the real estate sector [2]. During the latter part of the 20th century and into the new millennium, the property market flourished due to strong economic growth and a rising population residing in urban centers. Several policies encouraged urbanization and economic development, and the government facilitated this expansion. These measures fueled fast urbanization and the construction of houses and other retail businesses in many parts of the country [3]. In the face of rapid development, the government has formulated and implemented relevant policies and regulations, such as purchase restrictions and credit policies, to regulate the market while aggressively addressing challenges such as speculative bubbles and changes in real estate prices.

2.2. Classification of Cities

China's First-Tier Cities, according to the documents released by the State Council of China [4], including Beijing, Shanghai, Guangzhou, and Shenzhen, are characterized by developed economies, large populations, adequate infrastructure, and foreigners investing. The population growth has prompted the expansion of housing, which has led to a sharp rises in property prices, making these cities some of the most expensive globally [5]. A more significant share of domestic and foreign investment flows into first-tier cities since they are economically vital and have the most development possibilities. Therefore, property prices are much higher in first-tier towns than in other tiers of cities in China [6].

China's Second-Tier Cities mainly include Chengdu, Wuhan, Xi'an, and Hangzhou, which are among the developing growth poles with immense potential for growth in the future. Though they have emerged as new hotspots of investment and development, they have problems such as comparatively less economic activity and population growth than the first-tier players. Still, second-tier cities give cheaper accommodations and have been the focus of government initiatives to drive the development of the economy and urbanization [7]. Prominently, government-sponsored programs like the Belt and Road Initiative and policies on urbanization have also contributed to raising these cities' growth drivers by investing in infrastructure and properties [8].

3. First-Tier vs. Second-Tier City Policies

Over the years, the Chinese government has put in place different measures to rein in this market and control the formation of a bubble.

3.1. Purchase Limitations and Investment Controls

Measures taken to cap the number of houses anyone can acquire are intended to reduce cases of people investing in the property expecting the prices to rise. For instance, in Beijing and Shanghai, people can own one or two houses at most, while the numbers are even smaller for non-locals [9]. Second-tier cities like Chengdu and Wuhan are comparatively free to boost the demand and the market's expansion. Therefore, in first-tier cities, property prices are relatively high due to land scarcity and high demand fundamentals. In many countries, especially the developing ones, local chieftains lease the land to the highest bidder, subjecting it to excessive costs [10]. Second-tier cities ordinarily offer much more land-owning opportunities, and the government may provide affordable land rates and free tax, among other privileges, to developers; this increases development [11].

3.2. Monetary Policies and Housing Affordability

Fluctuations in interest rates and the changing mortality standards in home financing are core determinants of housing accessibility and investment. For instance, to prevent undesirable credit boiloovers, especially in first-tier cities, the government usually imposes high down payments and

credit conditions to rein in the market, possibly leading to a bubble [12]. On the other hand, monetary policies for second-tier cities are usually much more relaxed in stimulating purchases of homes and investments. For example, the policy of decreasing interest rates and down payments also helps make houses affordable for more people. Thus, their demand increases and supports the local economies [13]. Policies of the first-tier and second-tier cities also vary drastically. Many first-tier cities aim to develop new economies, promote intelligent city applications, and protect and improve public greenspace for a better living environment in cities. Second-tier cities are generally relatively young and possibly undergoing what could now be described as 'take-off.' In these cities, planning focuses typically on constructing physical frameworks and developing living and business areas meant for population increase and business attraction [14].

3.3. Disparities in Policy Implementation Across Urban Tiers

Policies established by the state are implemented differently in first-tier and second-tier cities due to varying economic status and levels of development. First-tier cities, which are often major economic hubs with high population density and superior infrastructure, face unique challenges such as high real estate costs and limited housing availability. These issues necessitate policies that restrict market access, enforce stringent credit regulations, and ration land availability [14]. Additionally, the higher cost of living and greater demand for services in first-tier cities can lead to more stringent implementation of policies to manage these pressures. Conversely, second-tier cities, as emerging growth centers, require policies that stimulate economic development and urbanization. These cities are often incentivized to expand their housing stock, generate employment, and attract investment to foster urban growth. The focus in these areas is typically on creating a conducive environment for business development and improving infrastructure to support population growth and economic diversification. The difference in policy implementation between these city tiers also stems from varying administrative capacities, resource availability, and local governance priorities, which influence how policies are adapted and enforced at the local level.

4. Effects of Government Policies on the Supply and Demand Dynamics in the Real Estate Market

4.1. Housing Supply

The government in first-tier cities controls the land supply and ownership to keep the housing market competitive and affordable. The policies involving the authorities' tight control over the availability of land and anti-speculative measures resulted in a relatively higher level of competitiveness and correspondingly higher property prices. The land use problem is related to the housing shortage due to high demand, especially in the cities, which causes high prices and the unavailability of affordable houses. On the other hand, second-tier cities are comparatively more liberal in terms of the availability of land and the provision of housing. Therefore, He and Song argue that new first-tier cities have maintained a consistent increase in land stock for residential construction, albeit over-supply exists [15]. This oversupply can result in the development what has become known as 'ghost towns,' whereby newly constructed properties such as apartments go unoccupied because not many people require them in the market.

The figures for supply between first-tier and second-tier cities also show significant differences. Due to the strict government rules and regulations and massive competition for the available land and property, the first-tier cities have a problem with limited availability of land. This limitation on the land increases the housing deficit and, consequently, the cost of properties [16]. Competition for land is high, meaning that developers are forced to pay more for parcels of land, and in turn, they pass the cost to the consumers in the form of costly houses. However, this increases the supply rate and

sometimes causes problems associated with oversupply, especially where the demand rate cannot keep up with the supply rate. For these reasons, the phenomenon of so-called 'ghost cities,' or new buildings, in particular housing, left empty, is most characteristic of these regions [17]. This weakens property prices and results in low efficiency in real estate markets.

4.2. Housing Demand

The first-tier cities can offer residents solutions to problems, including economic opportunities, good living standards, and demand for speculative investment. The availability of businesses, improved social amenities, and higher living standards mean that a large population is always attracted to such areas, hence the realization of the high demand for housing. Li et al. have also acknowledged that although house prices remain comparatively high, Migration to those cities is persistent and keeps pushing the housing market [16]. Speculative investments also tend to increase the demand by using the hope to gain quick returns through rising property prices. Second-tier cities' housing demands are driven by different factors such as Migration, the economic growth of the place, and policy changes. According to Torab, the economic development of the towns forces the demand for housing, although the progression rate is slow compared to that of the first-tier cities [18].

There is a high demand for property in Beijing and Shanghai; thus, the average price per square meter has moved north of 60,000RMB [15]. These cities are among the economic powerhouses, and many residents and investors are choosing to settle in these cities, hence the high costs of properties. Speculative investments and the performance of the city economy are also credited for enormous price variations. On the other hand, secondary cities such as Chengdu and Wuhan have comparatively lower property price index of about 15,000-20,000 per square meter. Nonetheless, prices are affected by several factors related to particular local conditions and the development projects undertaken [19]. Second-tier cities are cheaper than first-tier cities; hence, people who have never owned a home before, first-time homeowners, and people migrating from rural areas can afford to buy homes in second-tier cities at affordable prices

4.3. Supply-Demand Balance

The housing supply and demand situation differs from that of first-tier and second-tier cities because of the difference in policies and economic environments. The first-tier cities are characterized by tightly controlled new supply of land, high demand, and, therefore, high LPA and competition, which sometimes pose a problem with housing affordability. Kwoun et al. thus posits that while these structures of the market lead to issues such as a shortage of houses and price increases, the dynamic cycles of remaining unsold housing stocks and investment in housing make the situation worse with a period where the houses are scarce before being flooded by a period of increased house prices [17]. Zeng et al. point out that sending demands in towns without proper matches causes an imbalance in demand and supply, affecting the economy [20]. To avoid such imbalances, a constant check has to be made as to what exactly defines rational modern Amur environmental and, more generally, city-forming policies and resource distribution measures, including housing policy.

The demand trend in first-tier cities is stable in this area due to economic benefits, better living standards, and the effect of demonstrations. These cities always house many people who seek this as the likely place to find better opportunities in employment and lifestyles. Second, the appreciation of property value is still seen as a solid bet; thus, speculative demand remains high, contributing to even more competition for low-income housing [20]. Demand for housing is high in second-tier cities and changes according to the economy and policies of that region. Nevertheless, such big cities continually expand as they accommodate more citizens, yet their demand may vary depending on economic aspects and policy. For example, incentives, grants, and subsidies to home buyers and

infrastructure can sometimes increase the demand shortly, but these impulses may not be consistent in the long run [18].

5. Discussion

5.1. Effectiveness of Policies

To some extent, policies such as those used in first-tier cities are moderately successful in containing speculative demand. The restrictions on buying properties and the credit crunch have restrained the extent to which people can invest in more properties, thus cutting out on speculative savvies [21]. These measures have helped, to some extent, bring calm to housing prices and direct all speculations towards the stock market. However, these policies have also posed severe affordability problems in the country. Second-tier cities have also pursued policies to boost supplies and have done so. Due to laxity in the provision of land for property development, the government offers incentives to developers to maintain or increase the space coverage of mostly large properties [22]. Although the above measures provided affordable houses, they led to a supply glut problem. The oversupply of property affects the local economy negatively by crashing the value of properties, and the developers and investors who invest in such projects end up with loss-making ventures.

5.2. Unintended Consequences

Due to high property prices and acute housing shortages in the first-tier cities, the residents are struggling to afford homes. Moreover, many potential homeowners cannot afford homes today, increasing the demand for rental apartments and increasing rent. This position deepens the socio-economic inequality as only business people can purchase houses while those on the lower end are being charged high rents to pay for their houses. In addition, the scarcity of affordable homes can prohibit people from climbing the economic ladder and even their living standards [23]. In second-tier cities, in particular, numerous housing developments have made it difficult to let out houses. Developers and investors face costs, and unsold assets manifest at several levels. They influence industries supporting the construction business and directly reduce government revenues [24].

5.3. Policy Recommendations

The government should launch even more focused and targeted policies so that different tiers of cities would be managed appropriately. Housing policies for first-tier cities should aim to solve speculative demand issues and improve housing supply and accessibility.

In addition, it is crucial to promote sustainable urban development and good housing stock availability and distribution. The policies should encourage the construction of buildings combining commercial and residential use, affordable housing facilities, and appropriate use of land. This approach will assist in easing the socio-economic effects of high property prices, especially in the first-tier cities, and avoiding the formation of ghost cities in the second-tier cities.

5.4. Monitoring and Adjustment

Moreover, the government needs to establish effective monitoring methods and continuously adjust policies to avoid overheating the first-tier cities while at the same time avoiding oversupply in the second-tier cities. This helps detect anomalies that require policy interjection to ensure that more city tiers are maintained in a stable and sustainable real estate market.

6. Conclusion

The regulation of land supply and purchases in first-tier cities has effectively curbed speculation while producing severe affordability problems. The property prices and the availability of houses are beyond the reach of the ordinary citizen in the Middle Class, thereby contributing to the country's socio-economic disparities. On the other hand, second-tier cities have received higher housing supplies because of relatively flexible policies and incentives for development, but this has created an excess capacity and a new situation of uninhabited houses. There, the formulation and implementation of harmonized development strategies are crucial. There is a need to analyze the peculiarities of appropriate policy-making and the differences between various tiers of cities to facilitate more specific and relevant policies that address the current problems faced by the first-tier and second-tier cities, thus building a reasonable and sustainable housing structure. In addition, implementing policies requires monitoring and periodic tuning to avoid overheating in first-tier cities and oversupply in second-tier cities. Thus, future research should continue investigating these dynamics and studying the possible future consequences of today's policies. The different abilities of each city tier affect the formulation of policies within China to develop a more stable real estate market.

References

- [1] Wang, B. (2021). *The evolving real estate market structure in China*. In *Understanding China's real estate markets: Development, finance, and investment* (pp. 9-19). Cham: Springer International Publishing.
- [2] Brandt, L., & Rawski, T. G. (2020). *China's great boom as a historical process* (No. 13940). IZA Discussion Papers.
- [3] Liu, C., & Xiong, W. (2018). *China's real estate market*.
- [4] The State Council of the People's Republic of China, Nov 20, 2014, *China to apply new city classification standards*, https://english.www.gov.cn/policies/latest_releases/2014/11/25/content_281475015213546.htm
- [5] Tsai, I. C., & Chiang, S. H. (2019). *Exuberance and spillovers in housing markets: Evidence from first-and second-tier cities in China*. *Regional Science and Urban Economics*, 77, 75-86.
- [6] Wong, G. K., & Yu, L. (2003). *Consumers' perception of store image of joint venture shopping centres: first-tier versus second-tier cities in China*. *Journal of retailing and consumer services*, 10(2), 61-70.
- [7] Wang, S., & Taylor, S. *DETERMINANTS OF RENTAL GROWTH IN CHINA'S LOGISTICS REAL ESTATE MARKET*.
- [8] Shen, L., Zhang, Z., & Zhang, X. (2017). *Key factors affecting green procurement in real estate development: a China study*. *Journal of Cleaner Production*, 153, 372-383.
- [9] Cai, Z. (2022, March). *Factors affecting China's economic growth: land policy changes and real estate market development in China*. In *2022 7th International Conference on Financial Innovation and Economic Development (ICFIED 2022)* (pp. 195-198). Atlantis Press.
- [10] Fan, J., Zhou, L., Yu, X., & Zhang, Y. (2021). *Impact of land quota and land supply structure on China's housing prices: Quasi-natural experiment based on land quota policy adjustment*. *Land Use Policy*, 106, 105452.
- [11] Du, J., & Peiser, R. B. (2014). *Land supply, pricing and local governments' land hoarding in China*. *Regional Science and Urban Economics*, 48, 180-189.
- [12] Chin, L., & Li, X. (2021). *House prices and bank credit in China: analysis of first-and second-tier cities*. *International Journal of Housing Markets and Analysis*, 14(4), 779-795.
- [13] Wang, J., & Croucher, J. S. (2020). *Ripple Effects of House Prices of China's Three key Regions Including First Tier and Second Tier Main 29 Cities*. *The Chinese Economy*, 54(2), 92-106.
- [14] Zhang, H., Li, L., Hui, E. C. M., & Li, V. (2016). *Comparisons of the relations between housing prices and the macroeconomy in China's first-, second-and third-tier cities*. *Habitat International*, 57, 24-42.
- [15] He, W., & Song, B. (2021, November). *Research on the Impact of Land Supply Structure on House Prices—Taking the New First-Tier Cities as an Example*. In *International Symposium on Advancement of Construction Management and Real Estate* (pp. 675-683). Singapore: Springer Nature Singapore.
- [16] Li, Y., Qi, Y., Liu, L., Hou, Y., Fu, S., Yao, J., & Zhu, D. (2022). *Effect of increasing the rental housing supply on house prices: Evidence from China's large and medium-sized cities*. *Land Use Policy*, 123, 106420.
- [17] Kwoun, M. J., Lee, S. H., Kim, J. H., & Kim, J. J. (2013). *Dynamic cycles of unsold new housing stocks, investment in housing, and housing supply-demand*. *Mathematical and Computer Modelling*, 57(9-10), 2094-2105.

- [18] Torab, E. S. (2018). *A law or just a hypothesis? A critical review of supply and demand effect on the affordable residential markets in developing countries*. *Alexandria engineering journal*, 57(4), 4081-4090.
- [19] Shen, X., Huang, X., Li, H., Li, Y., & Zhao, X. (2018). *Exploring the relationship between urban land supply and housing stock: Evidence from 35 cities in China*. *Habitat International*, 77, 80-89.
- [20] Zeng, J., Cui, X., Chen, W., & Yao, X. (2023). *Impact of urban expansion on the supply-demand balance of ecosystem services: An analysis of prefecture-level cities in China*. *Environmental Impact Assessment Review*, 99, 107003.
- [21] Ryan-Collins, J. (2021). *Breaking the housing–finance cycle: Macroeconomic policy reforms for more affordable homes*. *Environment and Planning A: Economy and Space*, 53(3), 480-502.
- [22] Großmann, K., Arndt, T., Haase, A., Rink, D., & Steinführer, A. (2015). *The influence of housing oversupply on residential segregation: exploring the post-socialist city of Leipzig*. *Urban Geography*, 36(4), 550-577.
- [23] Been, V., Ellen, I. G., & O'Regan, K. (2019). *Supply skepticism: Housing supply and affordability*. *Housing Policy Debate*, 29(1), 25-40.
- [24] Soules, M. (2021). *Zombies and Ghosts*. *Places Journal*.