Assessing Real Estate Market Dynamics in Hangzhou: A Principal Component Analysis of Bubble Indicators and Policy Implications

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Abstract. Real estate is the leading industry in our national economy and has a degree of correlation with other industries; its healthy and stable development is of great significance to economic development, the adjustment of industrial structure, and the improvement of people's living standards. But after2004 the Chinese real estate market appeared to be overheating; prices rose too fast, rigid market demand-supply shortage and the invalid supply excess frequent contradictions, the local government became heavily dependent on land finance, the vacancy rate remained stubbornly real estate development overheating problems emerged in endless, causing the attention of the society and the government. The collapse of the real estate bubble will cause a fatal blow to the development of our country's economy. Research on the real estate bubble will help us adjust the overall economic operation better. In order to accurately grasp the possibility of the existence of the bubble in Hangzhou City, we need to establish the corresponding indicators. This article is divided into four parts. The first part describes the real estate bubble concept and method of measurement. The second part mainly analyzes the real estate bubble generation mechanism of five indicators. Then, a bubble generation mechanism analysis was conducted; the third part was selected from 2001 to 2015, and the Hangzhou bubble appraised five indicators. Then, a comprehensive analysis of the real estate in Hangzhou City by using the method of principal component analysis; the fourth part is this article from the land, finance and government management on the future direction of development of the real estate market of Hangzhou proposed.

Keywords: Real estate; Hangzhou; bubble indicators.

1. Introduction

Analysis of the existence, formation mechanism and prevention countermeasures of economic foam: economic foam will stimulate economic growth to a certain extent in the process of formation and expansion, but the accumulation of various production resources in the field of foam assets will cause resource waste and restrict the development of the real economy. If the foam bursts, personal wealth will decrease, and corporate assets will depreciate. The decrease in wealth leads to a decrease in consumer demand, resulting in a decrease in total demand and hindering economic growth. The depreciation of enterprise assets leads to the inability of enterprises to repay bank loans, increases non-performing bank debts, worsens bank asset structure, and even triggers financial crises. Banks will reduce credit to reduce risks, which will increase the difficulty of corporate financing, leading to a decrease in corporate investment and affecting economic growth. Under the conditions of an open economy, a sharp drop in domestic asset prices can lead to capital outflows and currency depreciation, exacerbate financial difficulties for enterprises and instability of the financial system, and, to a greater extent, suppress economic growth.

2. Literature Review

The study of real estate bubbles has gained substantial academic interest, particularly in the context of the Chinese market. Pan's research utilizes advanced econometric tests, namely SADF and GSADF, to discern the presence of housing bubbles in Chinese super first-tier cities between 2005 and 2016, yielding a comprehensive temporal analysis of bubble durations and their correlation with regional economic policies [1]. Wang provides a comparative view by examining the similarities and

discrepancies in bubble dynamics between China and Japan, underscoring the interplay between macroeconomic policies and market psychology. Key studies illuminate the systematic factors influencing the creation and collapse of real estate bubbles, noting similarities and differences in regulatory and financial aspects [2]. Salim and colleagues delve into the roots of China's real estate challenges, advocating for pre-emptive measures to lessen future threats by proactive policymaking and market oversight [3]. Li and associates offer a bibliometric analysis spanning two decades, shedding light on the theoretical and methodological progress in understanding real estate bubbles and pinpointing current research trends, including explosive bubbles and financialization, and the varying academic focuses between the U.S. and China [4].

Zhu and team examine the 'Land Finance' system's impact on China's economy, emphasizing the pivotal role of land transfer and fiscal mechanisms alongside the subtle influences of economic and political structures [5]. Jacob and Nair review the history of housing regulations in China, suggesting how the political economy has shaped contemporary speculative practices [6]. Miao and Wang discuss how real estate bubbles can influence corporate innovation by both alleviating financial constraints for R&D and diverting resources from industrial investments to speculative activities, thereby hindering innovation [7]. Empirical analysis by Hui et al. sheds light on the periodic effects of explosive bubbles in cities like Guangzhou and Shenzhen, with their study providing valuable insights for policy strategies that can counteract bubble dynamics [8]. Fung, Jeng, and Liu document the evolution of real estate from a state-run sector to a market-driven one in China, highlighting the substantial increase in housing costs and its implications for economic growth and housing affordability [9]. Zhi and co-researchers use the LPPLS model to conduct a bubble diagnostic across various Chinese cities, suggesting that specific policy applications could curb the dangers of speculative real estate activities [10].

In summary, these bodies of work indicate that real estate bubbles are not solitary events but are intertwined with the broader financial system, the trajectory of innovation, and the socio-economic network of urban areas. This interconnectedness implies that policies designed to mitigate the risks of real estate bubbles must be multidimensional, tackling the market forces within the real estate sector and considering the broader economic and social impacts. To thoroughly comprehend the intricacies of real estate bubbles, it's essential to acknowledge their direct and indirect effects on the economy. These effects range from housing affordability and consumption patterns to corporate resource allocation, impacting innovation and global competitiveness. The referenced literature provides a holistic view of these dynamics, equipping policymakers with the knowledge to design comprehensive strategies that balance growth with stability.

3. Analysis

First basic information: According to preliminary calculations, from January to June 2023, Hangzhou received 5323.3 million tourists and generated tourism revenue of 91.5 billion yuan, with a year-on-year increase of 64.5 per cent and 65.3percent, respectively, compared to the same period last year. The tourism market steadily improved and recovered in the first half of the year, gradually returning to pre-pandemic levels. Second industry statistical analysis: The first tourism and accommodation industry are steadily improving. From January to June, the average occupancy rate of star-rated hotel rooms in the city was 63.24 per cent, an increase of 74.69 per cent year-on-year. The second travel agency continues to recover. From January to June, 903 travel agencies in Hangzhou organized 280.84 million domestic tourists to travel, an increase of 389.64 per cent in the same period; they Received 239.78 million tourists, a year-on-year increase of 414.06 per cent. Third new characteristics of tourism consumption: The first micro vacation tourism has gradually become a mode of travel choice for tourists. In the second quarter, tourists using weekends, Dragon Boat Festival, May Day and other small and long holidays or other fragmented time to travel nearby become a popular choice among tourists, especially for special forces tourism, which becomes a sampling method for college students. I wish the media and community marketing had also played a

certain role in this trend. The activities related to. The second Asian Games have become highlights. Since May, various parts of the city have been providing innovative brand services around the theme of 'National Fitness Welcoming the Asian Games'. The first Hangzhou Women's Half Marathon in 2023 will be held along the core scenic area of West Lake, and the 'Charm Hangzhou' 2023 China Biaozhou International Horse Open will be held at the Tonglu Equestrian Center, diving passenger consumption in transportation, catering, accommodation, and other areas outside T Third cultural leisure activities are rich and colorful. The 2023 Hangzhou Outdoor Leisure Tourism Festival on both sides of the Three Rivers will kick off the 2023 Hangzhou Culture and Tourism Consumption Festival; The "2023Cultural and Tourism Market-hangzhou Wonderful Night" even integrates Song Yunfeng and Asian Games, injecting a shot of strength into the city's economy; Music and cultural activities have become a bright spot in the tourism market in the second quarter, with the Oxygen Art Festival and West Lake Music Festival held successively, attracting many music enthusiasts to participate enthusiastically. In addition to music performances, the festival also sets up exhibition areas and interactive experience areas for a heatwave, food, camping, health care, China-Chic, integrating music, sports, food, painting and other forms and carries to launch a new conscionable and people friendly.

Building upon the established understanding of the intricate relationship between real estate bubbles and economic vitality, the analytical part of this article focuses on Hangzhou's unique position in this dynamic. Hangzhou, celebrated for its historical and cultural heritage, has experienced a significant influx of tourism, which has rebounded robustly post-pandemic, as noted by the impressive tourism revenue of 91.5 billion yuan in the first half of 2023. Hangzhou's hotel industry is experiencing significant growth, as evidenced by the busy activity in the hotel and tourism industry, signaling a rebound for the economy as a whole and for China as a whole. This recovery may increase demand for real estate in the long term, but it may also bring the risk of higher real estate prices. In addition to real estate, the economic renaissance is reflected in a variety of industries, with tourism leading the way, and further driving ancillary industries such as catering, transportation and entertainment to expand their real estate footprint, thereby driving up demand and boosting economic demand. In addition, Hangzhou's multiple extra-economic events, such as the prestige of hosting the Asian Games, boosted the local economy, attracted investment, and sparked speculation, further fueling continued long-term demand for real estate despite this rapid economic growth. It is inconsistent with actual economic progress. In terms of cultural industry, many cultural industry activities in Hangzhou have attracted much attention in recent years, especially the famous West Lake Music Festival, which has also enhanced the charm of the city, attracted surrounding tourists, and increased the spending of local enterprises that rely on strategic real estate locations. . Linked to the real estate industry, this activity is thought to have the potential to exacerbate soaring rental prices and thereby promote further urban development, potentially inflating the real estate market beyond its true value.

However, Hangzhou's development process also faces potential traps and threats. Booming tourism risks over-commercializing urban spaces, resenting travelers and ultimately leading to gentrification. This emphasis on real estate for commercial and tourist purposes may obscure the need for affordable housing, boost home values, and further exacerbate the affordability issues faced by urban residents.

Additionally, analysts must consider the impact of global economic factors. Hangzhou's reliance on tourism and international investment makes it vulnerable to external disruptions such as exchange rate fluctuations, international disputes or global financial instability, factors that have affected various industries in recent years and can trigger rapid capital withdrawals and impact real estate prices. However, the rising trend of "micro-holidays" brings opportunities and challenges to long-term economic planning due to its unstable demand. Therefore, Hangzhou's development policy should be prudent and wise, requiring comprehensive consideration by a wider range of players, and striving to strike a balance between the booming tourism industry and the stable and actual growth needs of the real estate market. Policy responses may include strategic urban planning, support for

public housing initiatives and the development of measures to curb speculative investment, taking into account the actual needs of users while promoting genuine home ownership.

Through a historical analysis of China's foreign trade in the treaty port era, it can be seen that the introduction of the Administrative Committee played a key role in the transformation of China's trade methods and the increase in trade volume and welfare. Comprehensive cooperation in all aspects not only improves trade efficiency, but also significantly diversifies the types of products entering China. This era marked a period of substantial growth in the variety of imported goods, exceedingly even the growth rates seen in subsequent centuries in more developed countries such as the United States, a feat that has yet to be achieved in any country. The findings suggest that growing product diversity and trade volumes are not unique to wealthy economies and, taken together, may be more important for the economic development of less wealthy countries. In addition, the development of port cities, especially the development of Hong Kong as an important entrepot, will not only help expand China's trade in scope but also in substance and enhance the influence of China's economy in the world. These ports became conduits for a wider range of goods, helping to form more diverse and robust trade networks. These historical insights provide a valuable perspective on current international trade research, not just in terms of real estate, but highlight the role of institutional reforms and strategic trade centers in promoting trade expansion and development, regardless of a country's level of development, economic status, and development trends. importance of economic diversity.

Finally, considerations for Hangzhou must go beyond the economy and consider the overall current situation, including the socioeconomic impact of its real estate dynamics. The city's cultural identity, residents' quality of life and urban environment are crucial to its overall economic vitality, so the participation of all parties reflects the city's development trends. The challenge for policymakers is to forge an inclusive and sustainable development path that truly reflects core economic fundamentals, and to think from the perspective of the participants, to avoid a potential housing market collapse that would adversely affect the city's economic momentum and social well-being.

4. Conclusion

To conclude, the core challenge for Hangzhou is to capitalize on its growing economy, fostered by its appeal as a travel and cultural hub, while carefully steering clear of the unpredictability inherent in the real estate sector. The city's progression is intimately connected to the property market, which is susceptible to overvaluation amid rapid expansion. Policies must be comprehensive, taking into account not only the immediate financial repercussions but also the wider social consequences of urban development. This calls for a focus on the controlled growth of real estate with a vision for enduring stability and inclusivity, ensuring that the progress in property values harmonizes with the overall well-being of the community. As Hangzhou charts its developmental course, the methods employed may well serve as a model for other urban areas facing similar growth trajectories. Sustainable urban planning and proactive, evidence-based policies are critical to staving off economic overheating. Hangzhou's dedication to aligning its development with societal welfare aims for a flourishing future that distributes advantages fairly among all community members, promoting a robust and equitable economic landscape.

Reflecting on the broader picture, economic stability is crucial globally. An economic downturn has the potential to disrupt lives, underscoring the need for regulatory measures to maintain market equilibrium. A stable economy is the bedrock of societal contentment, allowing for both national prosperity and individual happiness. It's imperative, then, that we savor the present's beauty while laying the groundwork for a secure and more promising tomorrow.

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