

From “Universal Growth” to “Divergence”: A Review of Driving Mechanisms of Urban Housing Price Fluctuations in China

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Abstract

Since the nationwide implementation of the urban housing system reform in 1998, China’s urban housing market has experienced three distinct evolutionary stages: nationwide universal synchronized housing expansion, regional rotational expansion, and hierarchical structural divergence. Centered on this unique temporal and spatial evolution track of China’s housing sector, this paper establishes a dual analytical framework encompassing long-term fundamental factors and short-term non-fundamental shocks. It systematically elaborates the mechanisms through which population agglomeration, differentiated land supply regimes, industrial structure, monetary credit, policy regulation and market expectations shape housing price fluctuations and cross-city divergence. Additionally, this study reviews the limitations of existing literature regarding causal identification, microscopic mechanism granularity, and general equilibrium modeling. Combining the emerging paradigm of real estate development and the dual trends of population inflection and demographic aging, this paper proposes future research agendas and policy implications, providing a solid theoretical basis for understanding China’s real estate market transformation and preventing potential systemic risks.

Key words

Universal housing price growth; Housing price divergence; Driving mechanism; Land finance; population mobility; Real estate regulation

1. Introduction

The 1998 urban housing system reform marked the full marketization of China’s real estate industry. Driven by rapid economic growth, accelerated urbanization

and substantial demographic dividends, housing prices across all city tiers rose steadily and synchronously, forming a strong interactive resonance between the real estate sector and the macroeconomy. As China’s eco-

economic development shifts toward high-quality growth, a series of structural changes—slower urbanization, restructured population mobility, tightening land supply constraints, and consistent implementation of the “housing is for living in, not for speculation” principle—have triggered fundamental shifts in housing market dynamics. Currently, housing prices in first-tier and core second-tier cities maintain strong resilience, while third- and fourth-tier cities as well as shrinking cities face persistent downward pressure, resulting in a highly unbalanced and differentiated spatial market pattern.

The transition of housing prices from nationwide synchronization to spatial heterogeneity has transformed the operational logic of the real estate market, and exerted profound impacts on household asset allocation, local fiscal sustainability and financial systemic stability. It also represents a fundamental transformation of market driving mechanisms, pricing rules and regulatory paradigms. In this context, systematically clarifying the spatio-temporal characteristics, underlying driving forces and research gaps of housing price evolution is of great theoretical significance and practical value.

The universal growth stage spanned from 1998 to approximately 2015, during which urban housing prices increased nationwide with minor regional disparities and synchronized market cycles, featuring universality, synchronization and sustained growth. After 2015, the market entered an in-depth divergence stage, characterized by substantial cross-city deviations in housing price levels, growth rates and market resilience. A bipolar structural pattern has emerged, where core urban agglomerations and population-inflow regions outperform peripheral areas and population-outflow regions. This study focuses on the driving mechanisms of housing price fluctuations and differentiation, covering commercial housing markets in prefecture-level and higher-tier cities, while excluding indemnificatory housing, rental housing and overseas real estate markets, as well as individual city case analyses.

This paper adopts a progressive analytical framework that integrates long-term fundamental determinants and short-term non-fundamental disturbances. It first characterizes the phased spatio-temporal evolution of housing prices, then interprets long-term driving forces from the perspectives of supply-demand balance, population dynamics, land allocation and industrial structure,

and explains short-term market disturbances stemming from monetary conditions, policy interventions and subjective expectations. On this basis, this study identifies the core limitations of existing research and prospects future research frontiers. By synthesizing prevailing literature on housing price growth and divergence, this paper constructs a unified analytical framework, highlights three major research deficiencies including endogenous bias, insufficient microscopic granularity and the absence of general equilibrium analysis, and proposes targeted future research directions based on the new real estate development model and population structural changes, so as to provide systematic references for market transformation understanding and policy formulation.

2. Spatio-Temporal Evolution and Phased Characteristics of Urban Housing Price Fluctuations in China

2.1 Historical Logic and Macroeconomic Stylized Facts of the Universal Growth Stage

The period from the 1998 housing reform to 2015 witnessed a nationwide housing price boom, which serves as a typical “stylized fact”—referring to broadly observed empirical regularities that any serious economic model should be able to replicate. Rapid economic expansion, large-scale urbanization, rural-to-urban population migration, shrinking household size and the concentrated release of improvement-oriented housing demand jointly created a nationwide housing demand surge. Coupled with improved financial accessibility and relatively inelastic housing supply, housing prices across all city tiers rose steadily with minor regional gaps and synchronized market cycles. Existing studies generally confirm that urbanization, economic growth and demographic dividends jointly account for the universal housing price appreciation, forming a positive feedback loop between the real estate market and macroeconomic development[1,2].

2.2 Spatial Performance and Structural Transformation of the Divergence Stage

China's housing market has undergone profound structural divergence since 2015, dominated by stock surplus, demand stratification and fundamental-based pricing. Significant hierarchical spatial disparities have emerged across urban markets. First-tier and core second-tier cities maintain robust housing price resilience due to sustained population inflows, solid industrial foundations and high-quality public service endowments. In contrast, third- and fourth-tier cities and shrinking cities face pronounced housing price downward pressure, driven by population outflow, industrial weakness and overdrawn housing demand. Spatially, housing markets remain robust in core urban agglomerations but weaken in peripheral and non-aggregated areas. Multi-dimensional divergence in housing prices, transaction volumes, land markets and market expectations has become the new normal of China's real estate sector.

3. Fundamental Driving Mechanisms of Housing Price Fluctuation and Differentiation (Long-Term Logic)

3.1 Reconstruction of Supply-Demand Relationship and Spatial Agglomeration of Population Mobility

Demographic trends are the fundamental long-term determinants of housing demand. During the general growth phase, widespread urbanisation led to population inflows in all cities, thereby triggering a broad expansion in housing demand. However, during the differentiation phase, the population increasingly concentrated in core cities. In the mature stage of urbanisation, population migration has shifted from rural-to-urban flows to selective migration between cities. First-tier cities continue to attract young professionals and highly skilled workers, leading to strong demand for housing in both the lower and upper price segments [1]. In contrast, third- and fourth-tier cities are facing ongoing out-migration and

an ageing population, leading to a decline in demand for housing [2]. Combined with an oversupply of building land in recent years, this significant imbalance between supply and demand has created a solid foundation for the differing trends in property prices across the various cities.

3.2 Regional Heterogeneity of Land System Constraints and Local Fiscal Preferences

Structural land supply mismatch serves as the core supply-side driver of urban housing market differentiation. Under the state-owned construction land quota system and land finance institutional arrangement, urban land supply presents a distinct bipolar structure. Core first- and second-tier cities impose strict restrictions on residential land quotas, resulting in tight land supply [3]. Land scarcity persistently pushes up land prices and real estate development costs. In comparison, most third- and fourth-tier cities are endowed with abundant construction land quotas, and local governments persistently conduct large-scale land transfers, eventually leading to excessive land supply [4].

Heterogeneous fiscal structures across cities further exacerbate supply-demand imbalance. Core cities boast sophisticated industrial systems and diversified tax sources, resulting in low fiscal reliance on land transfer revenue. Their land transfer decisions prioritize urban functional development rather than fiscal revenue maximization. Conversely, most third- and fourth-tier cities suffer from fragile industrial foundations and insufficient independent tax revenues, with fiscal balance highly dependent on land transfer proceeds, thus exhibiting heavy land finance reliance [5].

Conventional linear theory suggests that cities with heavier land finance dependence have stronger incentives to constrain land supply and bid up land prices to maximize fiscal proceeds, forming a transmission chain of "high land reliance $\rightarrow$ higher land prices $\rightarrow$ higher housing prices" [5]. Nevertheless, real market outcomes contradict this theoretical inference. Third- and fourth-tier cities with stronger land finance dependence exhibit far lower housing prices than core cities, indicating that simple attribution based merely on land finance disparities is overly simplistic.

In fact, the impact of land finance on housing prices is not a unidirectional supply-driven effect, but a comprehensive outcome of institutional constraints, local government behaviors and market demand conditions. Spatial heterogeneity in population scale and housing demand corrects the bias of linear theoretical assumptions and ultimately shapes the pattern of housing price divergence.

Core cities continuously attract population via superior industrial foundations, employment opportunities and public service resources. Robust and sustainable housing demand fully absorbs scarce land supply, supporting local governments' land pricing strategies and driving steady increases in land and housing prices [3,4]. In contrast, most third- and fourth-tier cities face inadequate industrial support and persistent population outflow, leading to shrinking housing demand. Despite local governments' incentive to raise land prices for higher fiscal revenue, sluggish market demand cannot sustain high land pricing, leaving land premiums lacking solid market fundamentals.

To alleviate fiscal pressure and stabilize land revenue, local governments in third- and fourth-tier cities adopt a low-price and high-volume land transfer strategy to secure short-term fiscal gains [5]. Such practices further aggravate land oversupply and commercial housing inventory accumulation, forming a vicious cycle of population outflow, sluggish housing demand, low-price land conveyance, high inventory and sustained housing price downward pressure. In summary, the superposition of institutional land quota constraints, heterogeneous local fiscal preferences and divergent population demand fundamentals widens the housing price gap between core and peripheral cities, constituting the fundamental institutional and market mechanism underlying China's urban housing price differentiation.

3.3 Industrial Structure Upgrading and Urban Fundamental Differentiation

Industrial endowments and public service quality determine the long-term intrinsic value of urban housing. Core cities concentrate high-value-added industries including advanced manufacturing, technological innovation, finance and digital economy [6]. Higher resident income, stronger purchasing power and continuous tal-

ent inflows provide solid fundamental support for local housing markets, while high-quality educational and medical resources generate substantial housing value premiums [7]. By contrast, most third- and fourth-tier cities are dominated by traditional industries, featured by low income levels, sluggish economic growth and insufficient public services, lacking sustainable value support for local housing markets. Such disparities in urban economic fundamentals constitute the underlying economic logic of housing price stratification.

4. Short-Term Disturbance Mechanisms of Housing Price Fluctuation and Differentiation (Sub-Fundamental Factors)

4.1 Asymmetric Shocks of Monetary Policy Transmission and Financial Credit

The asymmetric transmission of monetary and credit policies is the core financial driver behind the shift in China's house prices from widespread increases to structural market divergence [8]. As a capital-intensive sector, the property market is extremely sensitive to market liquidity and credit conditions. Monetary policy exerts spatially heterogeneous effects on housing markets across different tiers of cities, and the intensity of its transmission varies across different market cycles [9, 10].

During phases of generalised price rises, overall monetary easing generates nationwide liquidity spillover effects, with credit resources permeating all cities and driving synchronised increases in house prices, resulting in limited price differentials between cities. In contrast, during phases of differentiation, the asymmetric effects of monetary policy become pronounced. A loose or restrictive monetary policy has a completely different impact on cities at different levels, which further exacerbates the spatial differentiation in property prices.

During periods of monetary easing, property prices in central cities are more sensitive to low interest rates and increased liquidity, with the result that their growth far exceeds that in third- and fourth-tier cities [9,10]. This asymmetric effect can be attributed to two mech-

anisms at the micro level: regional differences in credit availability and the heterogeneity of households' asset and debt positions. Commercial banks are, by their very nature, risk-averse and favour liquid assets. Housing assets in major core cities sell more easily, hold their value steadily and carry low disposal risks. Because of these advantages, local residents can more easily pass bank credit reviews, get higher loan amounts and enjoy more favorable interest rates[8]. In contrast, houses in third- and fourth-tier cities have poor liquidity and unstable value, which comes with higher credit risks. For this reason, banks tend to adopt relatively conservative lending strategies. This situation makes it hard for the benefits of monetary easing policies to fully reach less developed cities.

If researchers look at household asset allocation, residents in core cities generally own high-value housing resources. When monetary policy becomes looser, families can revitalize their existing assets through mortgage loans and refinancing. This forms a positive cycle: housing values rise, residents expand credit leverage, and new housing demand is released[8,9]. This process effectively stimulates residents' willingness to upgrade housing or invest in real estate, thereby driving up local housing prices. On the contrary, houses in third- and fourth-tier cities have limited room for appreciation and cannot serve as high-quality collateral for credit financing. This weakens the transmission effect of monetary policies and reduces the actual impact of macroeconomic policy stimulus. At the same time, loose credit conditions allow real estate developers in low-tier cities to increase housing supply. However, local market demand is insufficient to absorb new inventory, which eventually leads to excess housing stock and an imbalanced supply-demand structure.

Monetary tightening will cool down the entire real estate market, but its impact varies significantly across different regions. Tighter credit, higher interest rates and stricter financing thresholds restrict both housing purchase demand and real estate development supply. Core cities have active capital flows and flexible market responses, so their housing prices and transaction volumes tend to fluctuate more sharply under policy adjustments[10]. Meanwhile, third- and fourth-tier cities have sluggish market demand and inactive transactions, so tightening policies only produce a very limited impact

on their local property markets.

The uneven distribution of financial resources and differentiated credit policies further widen the gap in housing prices across cities. High-quality financial resources are highly concentrated in core cities, and banks prefer to grant loans to high-quality real estate projects in mature urban markets[8,9]. In comparison, third- and fourth-tier cities face insufficient financial support and strict credit constraints. In addition, differences in mortgage interest rates, down payment standards and development loan quotas have formed obvious financial stratification among cities. Core cities maintain stable market resilience with favorable credit conditions, while low-tier cities lack sufficient momentum for market recovery. This long-term difference has finally formed a clear hierarchical pattern of housing prices nationwide.

4.2 Spatial Spillover and Crowding-out Effects of Administrative Regulation Policies

Targeted administrative regulation and its cross-regional spillover effects are important factors that reshape real estate market trends and aggravate structural divergence in housing prices[11]. China's real estate regulation has always followed the principle of adjusting policies based on local market conditions. Different cities adopt regulatory measures with varying strength and implementation progress, resulting in unsynchronized market cycles and cross-regional capital flows. The resulting policy spillover and crowding-out effects keep reinforcing the stratified development of housing prices.

Core cities have introduced strict regulatory tools, including purchase restrictions, loan limits, price controls and resale restrictions, to curb market overheating and speculative housing trading[11]. These tight policies reduce the profit space for speculative capital. As a result, profit-driven capital flows to surrounding areas and third- and fourth-tier cities, where regulation is looser and housing prices are relatively low. This short-term capital inflow pushes up local housing prices and creates obvious crowding-out effects, which further widens the development gap between regional real estate markets[12].

On the contrary, most third- and fourth-tier cities adopt loose regulatory policies, such as relaxing

purchase limits, issuing housing subsidies and cutting transaction costs, to stabilize their property markets[12]. However, the actual effect of these stimulus policies depends on the city’s economic foundation and population status. For cities with continuous population outflow and weak industrial support, policy effectiveness will gradually weaken over time. These measures can only provide short-term market support and cannot reverse the long-term downward market trend and regional divergence. The inconsistent regulatory intensity across cities ultimately leads to mismatched market cycles and further intensifies housing price stratification.

Shantytown renovation compensation policies are a key external factor affecting housing price changes in third- and fourth-tier cities. The large-scale implementation of this policy between 2015 and 2018 created a significant policy shock for the real estate industry. It not only pushed up short-term housing prices in low-tier cities, but also temporarily eased market polarization, which greatly changed the original trend of universal housing price growth turning into structural differentiation.

The policy provides residents with direct cash compensation, which quickly releases huge potential housing demand and improves residents’ purchasing power. This effectively revitalizes the sluggish property markets of third- and fourth-tier cities and drives short-term housing price growth. In the short run, the policy makes up for the inherent disadvantages of underdeveloped cities, narrows inter-city housing price gaps and slows down market polarization. Nevertheless, shantytown renovation monetary compensation is only a phased external stimulus rather than a fundamental driving force for market growth. After the policy dividends faded, the real estate markets of third- and fourth-tier cities returned to the basic development logic dominated by population and industrial conditions, continuing the downward trend and further expanding regional housing price differences. Incorporating this phased policy impact can make up for the deficiencies of traditional regulatory research and improve the theoretical framework for analyzing policy-driven housing price divergence.

4.3 Speculative Expectations and Social Cognition Differentiation: A Behavioral

Finance Perspective

Market expectations play a vital role in amplifying housing price fluctuations[13]. In the stage of overall market growth, unified optimistic market sentiment will trigger nationwide group buying and speculative upsurges. When the market enters a differentiated development stage, public expectations show obvious spatial stratification. In core cities, residents generally hold optimistic expectations and form a positive “buy on dips” cycle, which easily exacerbates market overheating. In contrast, third- and fourth-tier cities are dominated by pessimistic market sentiment. Most market participants choose to wait and see, forming a negative market feedback loop[13,14]. Such divergent expectations lead to localized market overheating in core cities and market downturns in low-tier cities, further widening the regional housing price gap.

5. Limitations of Existing Empirical Research

Current empirical studies on housing price differentiation still have three obvious limitations. First, there are obvious deficiencies in causal identification and endogeneity control. Most existing studies only focus on correlation analysis and fail to effectively solve the endogeneity bias caused by the two-way causal relationship between housing prices and policy regulation. Meanwhile, there is no unified standard for instrumental variable selection in existing research, which reduces the robustness of causal inference and the credibility of research conclusions[15].

Second, existing research lacks in-depth analysis of spatial heterogeneity. Most studies adopt macro urban panel data without supporting micro-level data such as land parcels, community features and household behavioral data. Therefore, they cannot effectively analyze intra-city differences and micro transmission mechanisms, which greatly limits the practical explanatory power of relevant research[14].

Third, few studies construct a unified spatial general equilibrium model. Most existing literature only conducts partial equilibrium analysis and fails to integrate labor mobility, land allocation, cross-regional capital flows and housing supply and demand changes into a

unified analytical framework. This makes it impossible to systematically explain the synergistic impact of multiple factors on real estate market differentiation[15].

6. Conclusion

The transition of China's urban housing market from universal growth to structural divergence is jointly determined by long-term fundamental factors and amplified by short-term non-fundamental disturbances. The nationwide synchronous housing price boom is driven by cross-city supply-demand resonance stemming from demographic, economic and urbanization dividends. In contrast, post-2015 market divergence originates from the spatial mismatch of population, land, industry and capital, marking the market's transition from incremental expansion to stock quality upgrading.

The coexistence of commercial and indemnificatory housing systems is reshaping housing price formation mechanisms. The large-scale supply of indemnificatory rental housing and shared-equity housing restructures the overall real estate market architecture. Future research should explore the impacts of indemnificatory housing supply on commercial housing price anchoring, expectation guidance and supply-demand restructuring, so as to clarify the interactive logic of the dual-track housing system.

Negative population growth and accelerating demographic aging have fundamentally transformed housing demand fundamentals. It is essential to investigate the long-term impacts of population decline, household miniaturization and elderly housing demand on hierarchical urban housing prices, and reveal the evolutionary rules of shrinking demand and housing value revaluation.

This paper proposes four targeted policy recommendations. First, optimize land factor allocation, increase residential land supply in core cities, and curb disorderly land conveyance in third- and fourth-tier cities. Second, improve differentiated and coordinated regulation to mitigate policy-induced spatial spillover effects. Third, promote industrial upgrading and equalization of public services in non-core cities to consolidate market fundamentals and guard against real estate financial risks. Fourth, accelerate the development of indemnificatory housing to improve the dual-track housing

supply system, alleviate excessive market differentiation and relieve residential housing pressure.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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