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## Housing policies in Hong Kong, China and the People's Republic of China

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## **ADB Working Paper Series**

### **Housing Policies in Hong Kong, China and the People's Republic of China**

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**Abstract**

This paper analyzes the housing markets and housing policies in Hong Kong, China and the People's Republic of China (PRC). Both markets face housing affordability problems due to limited land supply, for which the solutions vary considerably. Hong Kong, China has adopted a railway and property development model, which involves close collaboration between the government and property developers in compact urban areas, while leaving most greenbelts and surrounding islands underdeveloped. Although the PRC has pledged to maintain a minimum level of basic farmland to feed its large population, this target has often been compromised due to local governments' fiscal constraints and growth concerns.

The targets and outcomes of housing policies in both markets are in line with their social welfare systems. Hong Kong, China favors the elderly and the poor, thus housing policies tend to support the lower-income band. The PRC focuses on the young and the rich; hence, most regulative housing policies for the higher-income band have turned out to be unsuccessful. Hong Kong, China also aims to assist public housing tenants to become private homeowners, but its policies help provide housing subsidies, a less effective measure to access owner-occupied housing. On the contrary, the success of Housing Provident Fund in providing mortgage interest rate reduction, which is a more effective measure to access owner-occupied housing, accounts for the high homeownership rate in the PRC.

**JEL Classification:** H11, H72, P25, P26, R21, R28, R31, R38, R52



## Contents

1. Introduction .....	3
2. Housing Policies in Hong Kong, China .....	4
2.1 Housing Market .....	4
2.2 Major Housing Policies .....	8
2.3 Summary of Policy Instruments.....	16
3. Housing Policies in the People's Republic of China .....	19
3.1 Housing Market .....	19
3.2 Major Housing Policies .....	21
3.3 Summary of Policy Instruments.....	28
4. Conclusion .....	29
References.....	31

# 1. INTRODUCTION

This paper analyzes the housing markets and housing policies in Hong Kong, China and the People's Republic of China (PRC). It examines how economic and institutional differences influence housing market development, and how housing policies under various institutions and systems work. For both Hong Kong, China and the PRC, this paper reviews the historical developments of the housing market, illustrates housing policies that have been implemented, discusses the impacts of policy instruments on different income groups, evaluates major housing policies, and identifies the risks and challenges regarding housing that are facing policy makers today.

The two markets have some features in common, such as high dependencies on the property sector to maintain economic growth, densely populated urban areas with high proportions of high-rise buildings, deteriorating housing affordability over the last decade, cultural consensus on the relationship between marriage and homeownership, and increasing inequality in household incomes and housing assets.

However, economic and institutional differences between both areas are fundamental. Hong Kong, China has been ranked as the world's freest economy for 20 consecutive years, while the PRC still resorts to measures inherited from the planned economy. Hong Kong, China has been a free harbor for capital, whereas the PRC is only starting toward financial liberalization. Hong Kong, China has entered the post-industrialization stage, but the PRC is still upgrading its manufacturing sector. Finally, Hong Kong, China's social welfare system favors the elderly and the poor (i.e., lower costs of medical services and a higher minimum wage, with higher costs of education and lower tax rates for lower-income bands); the PRC's social policy focuses on the young and the rich (i.e., lower costs of primary education and labor, with higher costs of medical services and higher tax rates for lower-income bands).

Not only are the institutional and historical contexts diverse, but their housing markets are at different stages. Hong Kong, China has experienced a complete property cycle over the last 2 decades, but in the PRC, many buyers believe that housing prices will continue to increase. Hong Kong, China has had a housing shortage due to limited land supply, but, in the PRC, a housing oversupply due to accelerated urbanization is pushing up vacancy rates. Hong Kong, China has a well-established public rental housing (PRH) system to accommodate almost 30% of its total population; in the PRC, the role of the rental housing sector is marginal. Hong Kong, China has abandoned property and inheritance taxes, but the PRC still endeavors to promote both.

Limited land supply underpins housing problems in both Hong Kong, China and the PRC. Despite various measures and schemes to "cool down" housing prices, Hong Kong, China had a medium housing price–medium household income ratio of 11.8 in 2010, which rose to 14.9 in 2013 (Demographia 2015). Because two-thirds of its territory comprises hills, limited land supply is the key obstacle to its housing problems. Based on the railway and property development model, Hong Kong, China's planning strategy is to accommodate most of its residents within walking distance to railway stations, while leaving greenbelts and surrounding islands undeveloped or underdeveloped. Such a practice pushes up housing prices through high land prices and enhanced infrastructure, and is difficult to be reverted.

The PRC faces land shortage problems for other reasons. The PRC, needing to feed its 1.4 billion people, maintains that 1.8 billion mu<sup>1</sup> of agricultural land be reserved for cultivation. Local governments often ignore this policy, however, and the central government has little interest in enforcing it. Because the central government allocates fiscal resources, local officials have to compete for limited resources to support local development. Yet it is difficult to get transfer payments from the central government, so local officials prefer investments, such as selling urban land to property developers and converting rural land for urbanization, to raise funds to enhance local infrastructure. These practices are not under public pressure<sup>2</sup> and involve less legislative processes.

## **2. HOUSING POLICIES IN HONG KONG, CHINA**

### **2.1 Housing Market**

A disastrous 1953 fire in Shek Kip Mei, a shantytown of migrants from the PRC, made over 50,000 people homeless, prompting the government to begin providing public housing. Soon after, in the 1970s, the inadequacy and scarcity of housing also began drawing the government's attention. In 1972, 46% of the total population lived in squatter huts or temporary housing; it was found that nearly 50% of the population living in shared private flats and tenements needed rehousing.

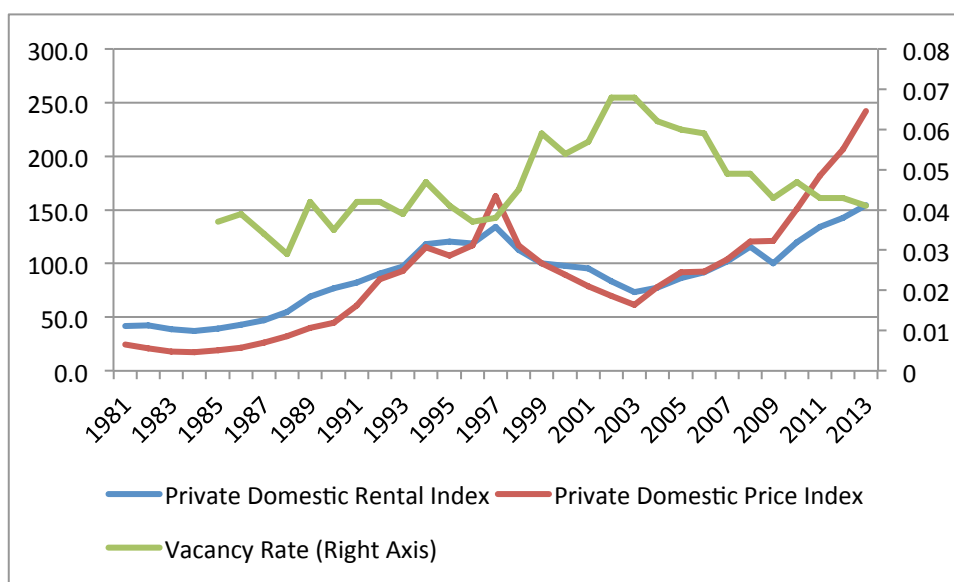
Toward decent living conditions, the government proposed that 180,000 units be built in 1975/76. As a consequence, local developers constructed many private flats in the late 1970s, accompanied by an increase in private housing prices in the mid-1980s (Figure 1). Private housing prices reached their first peak in 1997, which was 9.5 times the comparable price in 1984. Between 1969 and 1997, local gross domestic product (GDP) recorded double-digit growth, including 14% growth from 1969 to 1974, 16% growth from 1976 to 1981, and 11% growth from 1986 to 1994.<sup>3</sup> During this period, private domestic homeownership increased from 32% to 52%.

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<sup>1</sup> This is a unit of land measurement used in the PRC that varies with location but is usually equal to 666.5 square meters.

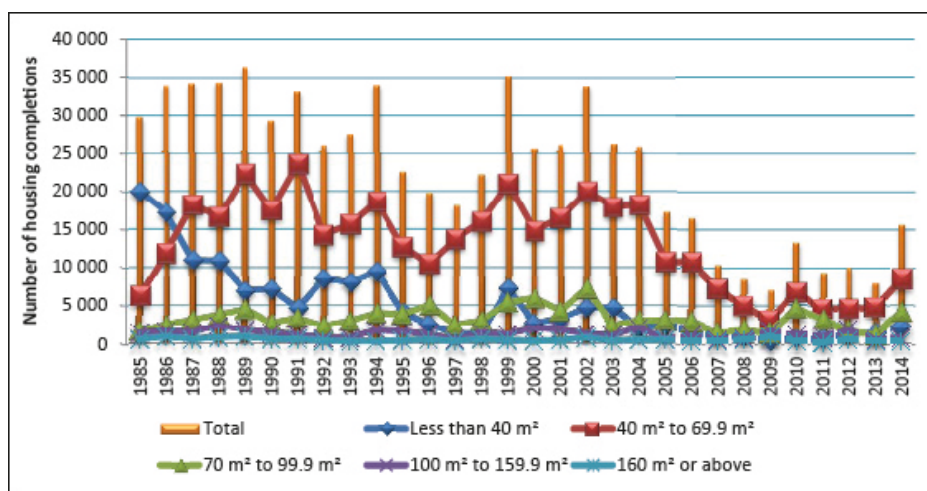
<sup>2</sup> There are reported cases of compulsory land requisitions and uncompensated urban resettlements.

<sup>3</sup> Except for 1975, 1982, and 1984.

**Figure 1: Private Domestic Price Indexes**

Sources: Rating and Valuation Department, <http://www.rvd.gov.hk/en/index.html?popup> and Census and Statistics Department, (<http://www.censtatd.gov.hk/home/index.jsp>).

The property boom was followed by a sharp decline of over 60% during 1997–2003 due to the 1997/98 Asian financial crisis and the government's oversupply of residential housing units. Market conditions changed so abruptly that both the government and property developers were slow to respond to the market collapse. Housing projects under construction were not immediately halted, and mortgage loans were not stopped. The oversupply of housing units accelerated the property bust, putting the government under great stress. With the government ceasing its housing supply schemes, the market then began to adjust itself through a salient drop in private housing completion (Figure 2).

**Figure 2: Private Domestic Housing Completions**

m² = square meter.

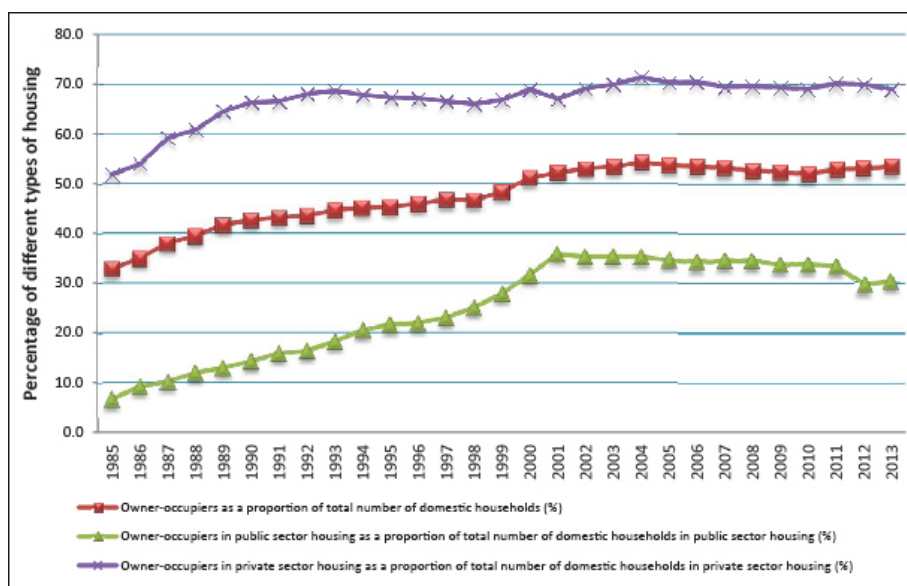
Source: Rating and Valuation Department, (<http://www.rvd.gov.hk/en/index.html?popup>)

In 2004, property prices began to stabilize. Admitting that the decline in housing prices and prolonged deflation were roots for fatigued local investment and consumption, the government redefined its role in the property market. The policy focus shifted to urban renewal and maintenance of old buildings from new housing provision. The government began 10 major infrastructure projects to boost economic growth and to increase employment opportunities in the construction and related sectors. In addition, it launched the Capital Investment Entrant Scheme, allowing nonlocal buyers to purchase housing in Hong Kong, China for qualifying permanent citizenship.

Revitalization of the local economy and rehabilitation of old buildings partly accounted for the 320% increase in private domestic prices from 2003 to 2013. This was also due to the government's strict control of land supply for new housing provision, which occurred thanks to strong protests for environmental concerns regarding using Greenland; filling in the sea; developing land in the New Territory; or building high-speed railways linking Hong Kong, China to the PRC, which would result in closer economic integration.<sup>4</sup>

By 2014, 68% of the population lived in private permanent housing, with a homeownership rate of 51%. Over 15% of owner-occupied housing was subsidized under different housing schemes, such as the Tenants Purchase Scheme (TPS), Home Ownership Scheme (HOS), Private Sector Participation Scheme, Middle Income Housing Scheme, Buy or Rent Option Scheme, and Mortgage Subsidy Scheme. Together with 30% residents in PRH, today over 45% of the population lives in various forms of government-supported housing (Figure 3).

**Figure 3: Types of Housing for Domestic Households**



Sources: Census and Statistics Department, Government of Hong Kong, China. General Household Survey. <http://www.censtatd.gov.hk/surveys/ghs/index.jsp> (accessed August 2015); Hong Kong Housing Authority, Government of Hong Kong, China. Housing in Figures. <https://www.housingauthority.gov.hk/en/common/pdf/about-us/publications-and-statistics/HIF.pdf> (accessed August 2015).

<sup>4</sup> Opposition parties prefer less connection with the PRC, either in economic or political relationships, to maintain Hong Kong, China's status as a special administrative region.

Table 1 provides detailed housing tenures among different age cohorts. The youngest cohort has a much lower ownership rate compared with other groups. To explain this vast difference, two factors are considered: education level and occupation structure.

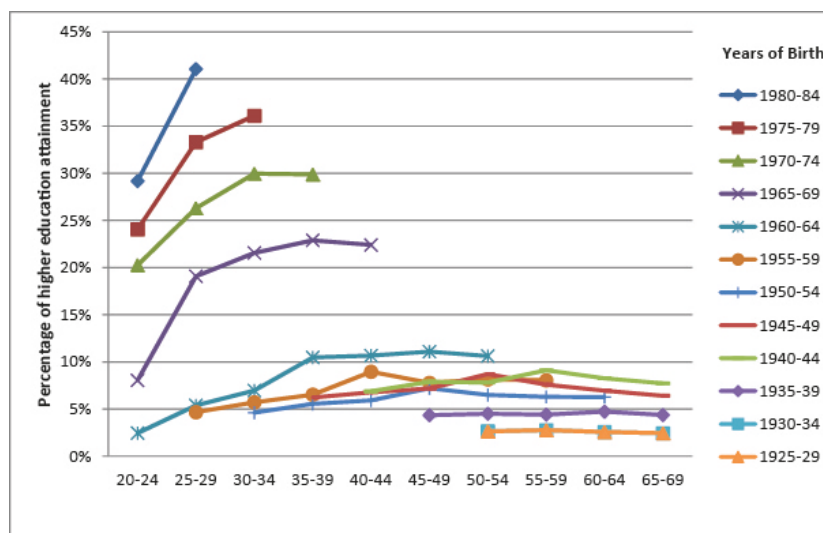
**Table 1: Percentage of Housing Tenure by Age Cohorts**

Year	Age	Owned	Rented	Age	Owned	Rented	Age	Owned	Rented
1981	15–19	21.4	78.1	20–24	21.7	77.7	25–29	24.9	74.2
1986	15–19	25.1	72.3	20–24	24.1	72.0	25–29	28.7	65.6
1991	15–19	30.6	64.2	20–24	29.6	64.6	25–29	34.3	56.5
1996	15–19	27.6	61.9	20–24	28.5	62.3	25–29	32.7	56.6
2001	15–19	28.5	51.9	20–24	29.1	53.3	25–29	33.8	49.2
2006	15–19	30.4	49.9	20–24	29.1	48.2	25–29	34.6	47.2
2011	15–19	15.3	76.8	20–24	13.3	78.1	25–29	13.8	77.9
1981	30–34	27.2	72.0	35–39	24.5	74.9	40–44	25.0	74.5
1986	30–34	30.3	63.7	35–39	31.2	64.3	40–44	28.7	68.3
1991	30–34	35.3	53.9	35–39	35.4	55.3	40–44	36.3	56.7
1996	30–34	35.2	51.2	35–39	34.8	51.8	40–44	34.0	54.2
2001	30–34	36.8	45.8	35–39	37.4	44.2	40–44	35.7	45.2
2006	30–34	38.5	45.8	35–39	38.5	45.3	40–44	39.0	43.4
2011	30–34	13.0	81.8	35–39	10.1	86.2	40–44	8.8	87.9
1981	45–49	24.5	74.9	50–54	25.0	74.4	55–59	27.2	72.1
1986	45–49	29.0	68.4	50–54	28.6	68.3	55–59	28.8	67.5
1991	45–49	34.3	60.4	50–54	34.6	60.3	55–59	33.4	60.8
1996	45–49	34.5	55.0	50–54	33.2	57.9	55–59	33.7	57.3
2001	45–49	35.2	47.1	50–54	35.8	47.9	55–59	33.8	50.8
2006	45–49	37.5	42.6	50–54	36.5	43.7	55–59	37.5	43.6
2011	45–49	7.9	89.0	50–54	7.1	89.8	55–59	8.1	88.6
1981	60–64	28.0	71.3	65–69	28.9	70.6	70–74	29.3	70.2
1986	60–64	30.4	66.1	65–69	31.4	65.0	70–74	31.8	65.3
1991	60–64	32.7	60.9	65–69	33.8	60.2	70–74	34.8	59.4
1996	60–64	33.2	57.7	65–69	31.7	59.0	70–74	32.8	58.6
2001	60–64	33.8	51.1	65–69	32.7	52.1	70–74	32.4	53.3
2006	60–64	34.7	47.0	65–69	34.4	48.2	70–74	34.5	48.7
2011	60–64	10.0	86.0	65–69	10.5	84.9	70–74	13.1	81.6

Source: Author's analysis of census microdata.

Regarding length of education, the younger generations have more higher education, which may delay their search for jobs (Figure 4).

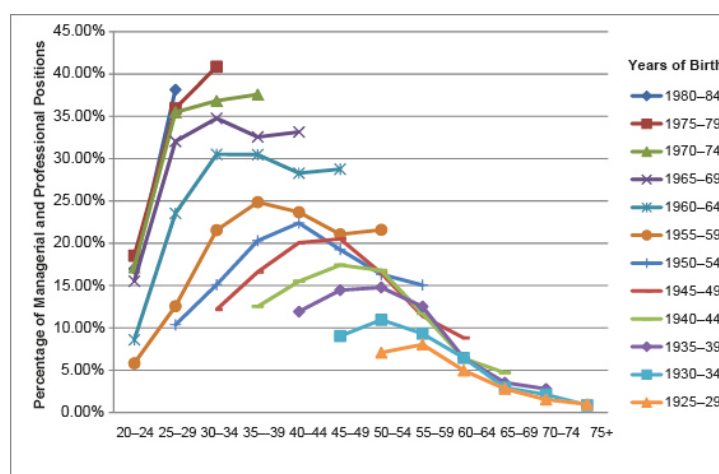
**Figure 4: Cohort Trajectory of Higher Education**



Source: Author's reanalysis of census microdata, reproduced from Li (2014a).

Generally, having higher education indicates better job prospects, as the younger generations have taken the lead in becoming managers, professionals, and associate professionals (Figure 5). However, managerial positions may also require more career shifts, thus leading to young people's preference to rent homes (Li 2014a).

**Figure 5: Cohort Trajectories of Managers, Professionals, and Associate Professionals**



Source: Author's reanalysis of census microdata, reproduced from Li (2014a).

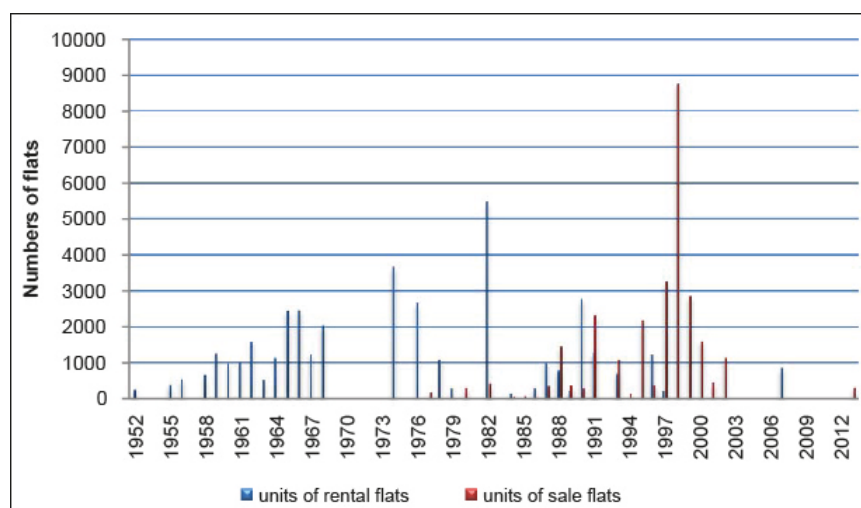
## 2.2 Major Housing Policies

The government is the sole land supplier and largest developer for both public and private sectors. Under the railway and property development model, the Hong Kong Housing Authority

coordinates housing projects with property developers and the Mass Transit Railway Company. Due to the constraints<sup>5</sup> on the amount of land available for sale prior to Hong Kong, China's return of sovereignty, the model successfully turns scarce developable land into hotels, offices, parks, shopping malls, convention halls, and apartments. The success of the model also has roots in encouraging and integrating the participation of, rather than crowding out, the private sector. It was remarkably successful for property market development until recently.<sup>6</sup>

The Hong Kong Housing Society, a nongovernment organization that serves the housing needs of the population, also plays an essential role in providing public rental and private ownership flats. From 1952–2013, it provided 39,697 rental flats and 28,373 for-sale flats to the market (Figure 6). Most rental flats were built during 1952–1982 as PRH units, while most for-sale flats were built along railway stations according to the railway and property development model in the 1990s. Other than housing supply, the Hong Kong Housing Society provides housing subsidies to tenants in PRH to increase homeownership demand.

**Figure 6: Numbers of Flats Provided by the Hong Kong Housing Society**



Source: Hong Kong Housing Society, <http://www.hkhs.com/eng/info/index.asp> (accessed August 2015).

The government has released a series of policy documents on housing, among which the Long Term Housing Strategy was the most comprehensive. The first strategy was released in 1987, marking the prelude of the government's systematic intervention in the housing market. It established a target of 960,000 new housing units to be built to satisfy all demand by 2001.

The strategy aimed at tackling major housing problems through a systematic and gradual approach, such as (i) the severely imbalanced supply and demand for public and private housing, (ii) increased wages that cannot catch up with the rise in housing prices, (iii) deteriorating housing affordability, (iv) young people who find it increasingly difficult to become homeowners, and (v) lack of suitable land in the medium to long term.

<sup>5</sup> The PRC had an agreement with the United Kingdom before Hong Kong, China's return of sovereignty in 1984 on the amount of land available for sale.

<sup>6</sup> Ten megaprojects, starting in 2007/08, stimulated much debate. The recent umbrella movement reflects public questioning on the relationship between property developers and the government.



However, before 1999/2000, the highest number of actual construction completion was only 53,256 for 1989/90 (Table 2). A series of subsidized housing schemes were further proposed in the next strategy in 1998 to increase housing supply for middle- and low-income families.

**Table 2: Hong Kong Housing Authority Housing Production**

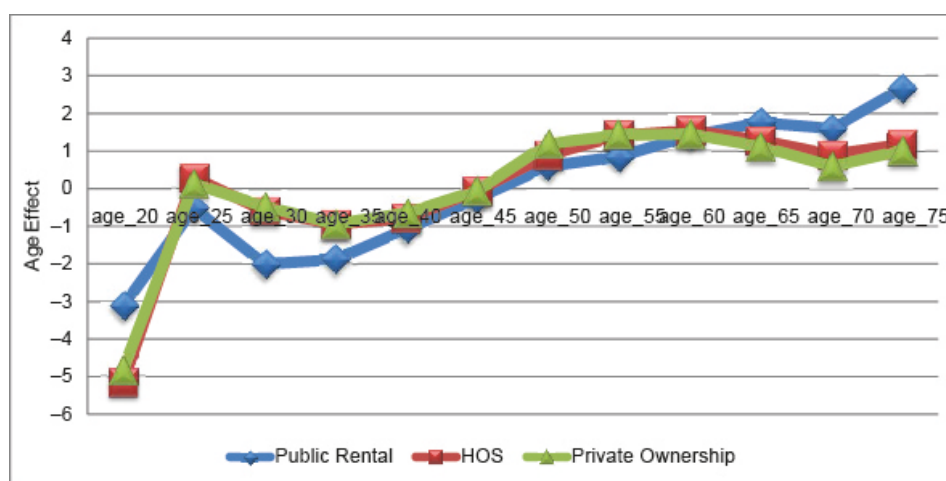
Year	Public Rental Housing	Interim Housing	Home Ownership Scheme or Private Sector	Total
			Participation Scheme	
1980/81	26,769		10,178	36,947
1981/82	31,346		4,399	35,745
1982/83	27,879		8,268	36,147
1983/84	28,564		10,117	38,681
1984/85	26,354		11,576	37,930
1985/86	29,386		18,590	47,976
1986/87	27,073		13,178	40,251
1987/88	19,991		5,380	25,371
1988/89	39,518		10,946	50,464
1989/90	33,910		19,346	53,256
1990/91	32,619		15,612	48,231
1991/92	21,190		13,698	34,888
1992/93	22,148		15,322	37,470
1993/94	19,848		24,743	44,591
1994/95	24,440		4,004	28,444
1995/96	14,559		19,328	33,887
1996/97	14,946		16,878	31,824
1997/98	17,917	144	12,040	30,101
1998/99	9,759	720	18,020	28,499
1999/00	31,806	120	16,558	48,484

Source: Hong Kong Housing Authority, <https://www.housingauthority.gov.hk/en/index.html> (accessed August 2015).

An age-period-cohort model, a model widely used in demographic studies (Yang and Land 2008), is applied to evaluate the impacts of the Long Term Housing Strategy on the population's housing career ladder.<sup>7</sup> In this paper, the model is introduced for risk analysis of households in mortgage financing through its cohort effect, and Long Term Housing Strategy objectives are examined through age and period effects. A major methodological challenge with this model, however, is the collinear regressors generated from the linear dependency among age, period, and cohort (Yang, Fu, Land, 2004). An intrinsic estimator model (Yang and Land 2008) is adopted to solve this problem.

Figure 7 presents the age effects on the accessibility to the three types of housing tenures, PRH, HOS, and private ownership. A common upward trend is observed for all three types of housing. The age group of 25–29 years has a higher rate of housing attainment compared with other age groups between 20 and 45 years, indicating that buying property is probably an issue of now-or-never for young people. Since most of the population does not have sufficient savings for down payments in their 20s, only those with wealthy parents can get on the housing ladder at this stage (Li 2014b).

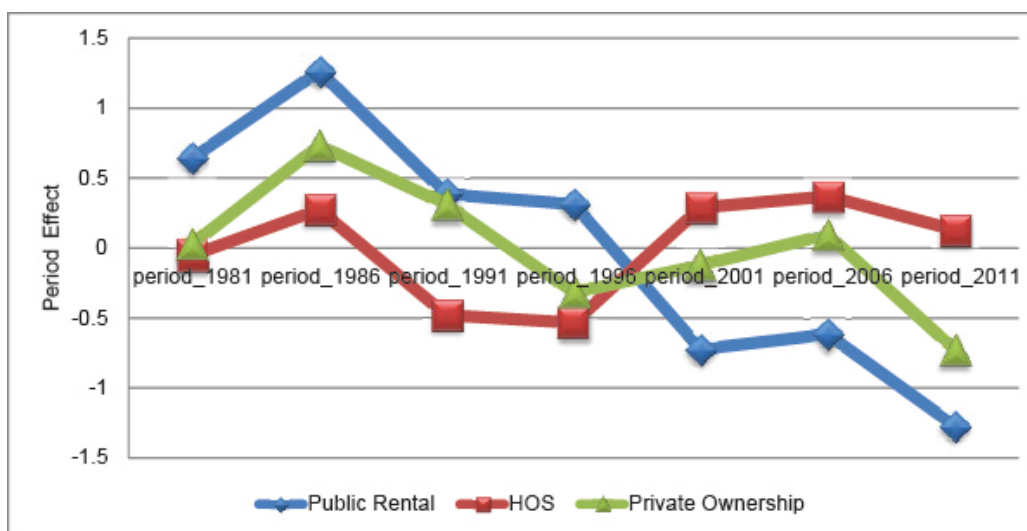
<sup>7</sup> The housing ladder in Hong Kong, China used to occur in three steps: PRH, private subsidized housing, and private home ownership. Recently, co-residence with parents has been on the rise among young people aged 18–35 years (Li 2014b).

**Figure 7: Age Effects on Housing Tenure Choices**

HOS = Home Ownership Scheme.

Source: Author's estimation of census microdata.

Compared with the age effect, the period effect plays a more salient role. In the 1987 strategy, an average of 70,000 units were proposed to be built yearly. In the 1998 strategy, the number increased to 85,000 units. In 1987, the private domestic price index was 47.0; 1998, it was 112.6. Figure 8 shows that it was easiest to attain homeownership and to access public housing during 1986–1990, more difficult during 1996–2000, and increasingly difficult afterwards.

**Figure 8: Period Effects on Housing Tenure Choices**

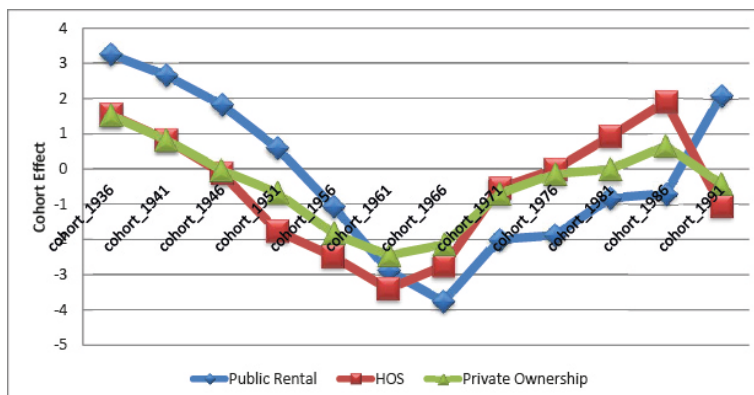
HOS = Home Ownership Scheme.

Source: Author's estimation of census microdata.

The Long Term Housing Strategy did not solve the supply–demand gap. It not only lagged behind the cyclical pattern of the property market but actually amplified market volatility. The 70,000-unit plan in 1987 may have been created too early, because housing prices had just started increasing. Moreover, the 85,000-unit plan in 1998 may have been created too late, as housing prices had already begun to fall. The transmission of policy effects in the housing market may have been longer than the government anticipated.

In summary, those born in 1961–1965 had the lowest exposure to financing difficulties or bankruptcy risks (Figure 9). This cohort was aged 25–29 years during 1980–1984, when property prices were lowest over the previous 3 decades. In contrast, it was most difficult for those born after 1980 to get on the housing ladder, and the Long Term Housing Strategy never properly addressed this problem.

**Figure 9: Cohort Effects on Housing Tenure Choices**



HOS = Home Ownership Scheme.

Source: Author's estimation of census microdata.

## 2.2.1 Public Rental Housing

Among different forms of housing subsidies, PRH contributed the largest proportion of sheltering less-wealthy families in Hong Kong, China. Based on a quota-and-points system for applicants on the waiting list, PRH was assigned to nonelderly applicants aged 18–57 years. The starting point was three for applicants aged 19 years, then one accrued three points for each year thereafter. Applicants with higher points had priority. The current eligible criterion is less than HK\$20,710 monthly income in total for a four-person household, with less than HK\$436,000 for a deposit.

Underpinning PRH was a conversion of the housing authority's HK\$5 billion in outstanding debts from government contributions, and interest-free land for a repayment period of 40 years after 1980. By the end of 2013, over 2.1 million people lived in PRH; however, it is difficult to monitor the better-off, so many ineligible families are still living in PRH. To tackle this problem, priority-purchase HOS flats and full-market rents have begun for these persons.

## 2.2.2 Home Ownership Scheme

Initiated in 1977, 42,000 HOS flats for sale were to be built by 1985/86, with an average size between 37 and 56 square meters. A parcel of 15-year installments with 7.5%–9.0% interest rates and a minimum 10% down payment was supported by leading banks for an HOS purchase. The initial income cap for eligible HOS households was HK\$3,500 per month. Before the HOS ceased in 2003, 220,000 flats were built and sold to low-income families. One merit of the HOS was to shorten the average waiting time of new PRH applicants by allowing PRH tenants to attain homeownership with 30%–40% discounts on the market value of a flat. One demerit of the HOS was its relatively low housing quality.

There were two forms for HOS application: a green form for public sector tenants, and a white form for private sector tenants. For both forms, applicants had to be aged 21 years or above, with at least two related persons in the family. For the white-form applicants, their household incomes could not exceed HK\$10,000 per month for a single-person household, and no family member could own any domestic property. For the green-form applicants, there was no limit on income levels if they chose to surrender their existing tenancies.

With its restart in 2012, an extension of the HOS secondary market was made available to white-form buyers, with a quota of 5,000 allocations. Subsidiary schemes to the HOS include the Private Sector Participation Scheme and the Flat-for-Sale Scheme, which are aimed at shortening the waiting list for the HOS, but the number of provisions is limited.

### 2.2.3 85,000 Plan

Upon his inauguration in 1997, Chief Executive Tung Chee-hwa pledged an increase of the homeownership rate from 52% to 70% in the next decade, and a decrease in average waiting time for PRH from 6.5 years to 3.0 years. The ambitious targets prompted the building of public and private flats starting from 1999/2000, known as the 85,000 Plan. The plan referred to the total number of 85,000 units of public rental and private ownership flats to be built yearly by the government and developers to fulfill the Chief Executive's goal.

Only in 2000/01 did the actual completion of new housing units reach the level of 85,000 (Table 3). The major issue with the plan was its timing, as many criticized proposing this plan in the aftermath of the Asian financial crisis, which accelerated the burst of housing bubbles and trapped many mortgage buyers into negative equity.<sup>8</sup> The plan had advantages, however, because the average waiting time for PRH applicants for housing declined from 6 to 3 years.

**Table 3: Key Performance Indicators for the 85,000 Plan**

<b>Key Performance Indicators</b>	<b>Target 1999/00</b>	<b>Target 2000/01</b>	<b>Target 2001/02</b>	<b>Target 2002/03</b>	<b>Target 2003/04</b>	<b>Target 2004/05</b>	<b>Target 2005/06</b>	<b>Target 2006/07</b>
<b>Number of new housing units</b>	58,000 (48,500)	90,000 (89,000)	40,000 (25,100)	36,100 (29,032)	23,800 (7,860)	21,000 (22,000)	20,000 (11,400)	7,200
<b>Average waiting time for public rental housing</b>	6 years for all, 3.5 years for elderly	5 years for all, 3 years for elderly	4 years for all, 3 years for the elderly	3.5 years for all, 2 years for elderly	3 years for all, 2 years for elderly	3 years for all, 2 years for elderly	3 years for all, 2 years for elderly	3 years for all, 2 years for elderly
<b>Number of flats offered for sale</b>	52,500	58,100	35,000					

Source: Hong Kong Housing Authority, <https://www.housingauthority.gov.hk/en/index.html> (accessed August 2015).

<sup>8</sup> The unintended effects largely caused Tung's early retirement in 2005.

### 2.2.4 Tenants Purchase Scheme

The TPS was started in 1998 and ended in 2006. It aimed to assist tenants in PRH to buy the flats in which they resided. Selected estates were proportionally offered to tenants for purchase.<sup>9</sup> Authorized occupants aged over 18 years in PRH were eligible, with no restriction on the purchaser's household size, income, or ownership. The TPS allows buyers to purchase their flats with 30%–45% discounts (Table 4). The discount rate was determined by the quality and location of the TPS buildings.

The scheme has assisted 150,000 PRH tenants in buying their flats, despite the limited supply and short implementation period.

**Table 4: Tenants' Purchase Scheme Flats**

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6A/6B
Discount rate	70%	55%	60%	55%	55%	60%/55%
No. of flats	26,900	27,100	27,500	26,414	25,728	25,766/23,290

Source: Hong Kong Housing Authority, <https://www.housingauthority.gov.hk/en/index.html> (accessed August 2015).

### 2.2.5 Home Purchase Loan Scheme

The Home Purchase Loan Scheme was intended to resettle current tenants in PRH who had higher incomes than the waiting-list limit. An option to rent or buy in the same estate was proposed to PRH applicants when their turn for allocation came up. For those choosing to buy, a 45% discount on the open market value was offered, with an interest-free loan of HK\$800,000 repayable over 13 years or HK\$600,000 repayable over 20 years. The average cost of buying the flat was 2.7 times the rental payment for the PRH tenants, and the monthly cost of purchase was 30% of median household income. Buildings for sale were within 30 years of age.

Many tenants found this scheme unattractive, because the cost of purchase was 3.5 times the rent paid without improvement in their housing conditions. The purchase of flats also meant extra costs of repair and maintenance for buyers compared with being tenants. In addition, the difficulty existed regarding agreements of sale for tenants living in the same flat. The scheme was, however, the cheapest for buyers compared with other forms of housing subsidies.

### 2.2.6 Sandwich Class Housing Scheme

This scheme aimed at helping middle-income households whose income levels (HK\$30,001–HK\$60,000 per month) made them ineligible for PRH or the HOS. Up to 25% of a property price or a total loan of HK\$550,000 was available for successful applicants, with mortgage interest rates equal to prime rates plus 1% or 2% for the first mortgage loan. Half of the land price and all construction costs were paid by the Hong Kong Housing Society. For a second mortgage loan, the Hong Kong Housing Authority initiated a 3-year interest subsidy scheme and a 5-year interest-free repayment holiday. These measures lowered the effective interest rate for repayment to prime rates of less than 2.12%.

Due to fiscal constraints of the Hong Kong Housing Authority, the scheme was transferred to the Hong Kong Mortgage Corporation in 2002. Over 5,700 families benefited from an average loan of HK\$475,000, but it was difficult to obtain mortgage financing after the Asian financial crisis.

<sup>9</sup> Except for housing for the elderly and small household blocks, flats for social welfare purposes, and flats with common entrances and communal facilities.

### 2.2.7 Home Starter Loan Scheme

The Home Starter Loan Scheme was designed for first-time homebuyers to purchase flats in the private sector. This scheme provided a low-interest loan (2.0%–3.5%) to qualified buyers (i.e., with incomes below HK\$70,000 per month) who had no property ownership in Hong Kong, China, and had not owned within last 5 years. Up to 30% of the property price or a total loan of HK\$600,000 (whichever was lower) was offered to first-time buyers who lacked the financial capability for a down payment. More than HK\$14.8 billion in loans were granted to over 33,000 families and single persons. Yet there was possible abuse of the loans to buy high-end housing, because only 20% of successful applicants actually used the loans to buy flats.

### 2.2.8 Reverse Mortgage Programme

In 2011, the Hong Kong Mortgage Corporation launched the Reverse Mortgage Programme to encourage banks to offer reverse mortgages to people aged 55 years and above. Table 5 details the conditions for different age groups on various payment terms.

**Table 5: Scale of Monthly Payout Amount**  
(per HK\$1 million of property value)

Entry Age	55 Years		60 Years		70 Years	
Payment Terms	One Borrower	Two Borrowers	One Borrower	Two Borrowers	One Borrower	Two Borrowers
<b>10-year</b>	HK\$3,200	HK\$2,800	HK\$3,700	HK\$3,300	HK\$5,100	HK\$4,600
<b>15-year</b>	HK\$2,400	HK\$2,150	HK\$2,800	HK\$2,500	HK\$3,800	HK\$3,500
<b>20-year</b>	HK\$2,050	HK\$1,800	HK\$2,400	HK\$2,100	HK\$3,300	HK\$3,000
<b>Life</b>	HK\$1,650	HK\$1,450	HK\$2,000	HK\$1,800	HK\$3,100	HK\$2,800

Source: Hong Kong Mortgage Corporation, <http://www.hkmc.com.hk/eng/> (accessed August 2015).

By 2014, the program only received 624 applications. Likely causes for the low participation rate include lack of awareness and knowledge for the scheme, and expectation that property prices would go up.

### 2.2.9 Spicy Measures

The so-called “spicy measures” were a series of restrictive measures that were jointly taken by the Legislative Council and the Hong Kong Monetary Authority to “cool down” the overheated property market in late 2010 (Table 6). Spicy measures had short-term impacts on decreasing transaction volumes, but were ineffective in cooling down property prices.

**Table 6: Details of Spicy Measures**

Measure	SSD	Enhanced SSD	BSD	Double AVD
<b>Full name</b>	Special Stamp Duty	Enhanced Special Stamp Duty	Buyer Stamp Duty	Double Ad Valorem Stamp Duty
<b>Start date</b>	November 2010	October 2012	October 2012	February 2013
<b>Details</b>	Charge 15% for reselling a property within 6 months, 10% for 6–12 months, 5% for 12–24 months	Charge 20% for reselling a property within 6 months, 15% for 6–12 months, 10% for 12–24 months	For buyers other than permanent residents, charge a flat rate of 15% for all residential properties	Double the rates of charge for all types of transactions, applicable to both residential and nonresidential properties
<b>Immediate effect</b>	Limited effect on reducing housing transactions	Purchases by companies and nonlocal individuals as a share of total transaction sharply dropped from 17% to 4% within 3 months of implementation		Limited effect on moderating housing prices

## 2.3 Summary of Policy Instruments

Table 7 provides a summary of the major housing policies that have been implemented in Hong Kong, China since the 1970s.

**Table 7: Matrix of Housing Policies in Hong Kong, China**

<b>Name</b>	<b>Reverse Mortgage Programme</b>	<b>Home Ownership Scheme</b>	<b>Tenants Purchase Scheme</b>	<b>Home Purchase Loan Scheme</b>	<b>Home Starter Loan Scheme</b>	<b>Sandwich Class Housing Scheme</b>	<b>Public Rental Housing</b>	<b>85,000 Plan</b>	<b>Spicy Measures</b>
<b>Period</b>	Since 2011	1977–2003, 2012–today	1998–2006	1988–2002	1998–2002	Since 1993	Since 1953	1997–2003	Since 2010
<b>Policy objective</b>	Help elderly homeowners improve their retirement lives	Remove better-off families in PRH to make room for those with more urgent housing needs, and provide families ownership opportunities other than from the private sector	Assist PRH tenants to buy the flats in which they reside at affordable prices	Encourage purchase of private sector flats, release and redevelop rental estates for more needy families	Assist first-time buyers with low and middle incomes to buy their own properties	Help middle-income buyers, who are ineligible for PRH or the HOS, to own homes in the private sector	Enable employed but low-income families to reside in decent housing	Increase homeowner-ship rate from 52% to 70% in the next decade, and reduce PRH waiting time from 6.5 years to 3.0 years	Cool down the overheated property market
<b>Policy target</b>	Residents with homeownership aged 55 years or above, usually upper-class elderly	Low-income households in PRH, nuclear families with low incomes and deposits in the private sector	PRH households first entering home ownership, the first step on the housing ladder	PRH tenants with incomes below HK\$30,000 per month	First-time homebuyers with incomes below HK\$70,000 per month	Middle-income households (i.e., HK\$30,001–HK\$60,000 per month)	Low income households	All households	Speculators, nonlocal buyers, high-income families



<b>Instrument and policy contents</b>	Reverse mortgage loans by Hong Kong Mortgage Corporation, fees charged from and risks insured by participating banks	Eligible tenants can buy an HOS flat with discount between 30%–40% below the estimated market value	Discounted prices covered by HKHA, 55%–70% of assessed market values	Operated by the HKHA, interest-free loan repayable for up to 20 years or nonrepayable monthly subsidy for 48 months	Administered by the HKHS as the government's agent, 2.0% interest for family incomes below HK\$30,000, 3.5% for family incomes HK\$30,000–HK\$70,000, about 6,000 loans per year	Initially administered by the HKHS, transferred to the Hong Kong Mortgage Corporation, half land price and all construction costs paid, flats sold at concessionary price below market prevailing price	A quota-and-point system to evaluate the edibility of PRH applicants, based on their ages and waiting times	A set of key performance indicators to measure and monitor the progress (e.g., number of new flats to be provided, average waiting time for PRH, number of ownership flats for sale, number of housing loans provided)	Implementation of special stamp duty and its enhanced buyers stamp duty, and ad valorem stamp duty; cancellation of Capital Investment Entrant Scheme
<b>Merits</b>	Flexible payment and redeem terms, no repayment during lifetime, unlock home equity into regular and consistent cash flows for elders	Completion of over 220,000 units of HOS flats between 1980–2004	Completion of over 150,000 flats, discounting 30%–45% for buyers	Cheapest way to access home ownership for households of moderate income	Over 33,000 families and individuals get an average of HK\$450,000 in loans	Over 5,700 families granted an average of HK\$475,000 in loans	By the end of 2013, over 2.1 million people lived in PRH	Average waiting time for PRH declined to 3 years for all and 2 years for the elderly	Short-term effects on bringing down property prices, prevention of nonlocal buyers and speculators
<b>Demerits</b>	Not applicable to low-income and nonhomeowners, participation rate surprisingly low, increased income polarization if more people joined the program	Exclusion for the income band immediately above its purchasing limit, shortage of high-class housing	Limited supply and relatively short implementation period, due to the fiscal difficulty of housing authority	Lack of motivation for PRH tenants, unaffordable to most prospective buyers, high threshold for agreement of sale	Possible abuse of loan to buy high-end housing, only 20% actually used the loan to buy flats, criticized for accelerating the property bust	Sharp drop in property prices since 1997 made it difficult to obtain mortgage financing for buyers	Difficult to monitor better-off and thus ineligible families still living in PRH, goals set under LTHS inflexible to market adjustment	Good intention, bad timing, coinciding with the Asian financial crisis, blamed for causing the collapse of the already vulnerable property market	Only have short-term impact on transaction volume, little effect on reducing escalating property prices

HKHA = Hong Kong Housing Authority, HKHS = Hong Kong Housing Society, HOS = Home Ownership Scheme, LTHS = Long Term Housing Strategy, PRH = public rental housing.

### 3. HOUSING POLICIES IN THE PEOPLE'S REPUBLIC OF CHINA

#### 3.1 Housing Market

Before the 1990s, the PRC maintained a welfare housing system to provide public housing for employees of state-owned enterprises (SOEs). Under this system, the average living space in urban areas increased from 4.5 square meters per person in 1949 to 6.7 square meters per person in 1978 (Gao 2010). This system, however, imposed heavy burdens on SOEs and, thus, lowered the efficiency of housing provision.

To cope with insufficient and inadequate housing, in the mid-1980s, the government initiated experimental housing sales in selected cities to gradually reform the welfare housing system. The market thus went through a transition from a welfare housing provision system to a dual-track system comprising welfare housing and subsidiary housing (1986–1995), followed by transition to a commodity housing system (1995–1998). Started in 1986, experimental housing sales in four pilot cities divided housing costs into three categories: the state, local enterprises, and individual tenants. After 15 years of trial and error, a commodity housing market was eventually established in 1998. Since then, the property market has developed rapidly, and the urbanization process has accelerated. By 2013, over 53% of the total population lived in urban areas, and the average living space in urban areas has increased to 30.1 square meters per person.<sup>10</sup> Homeownership rates have also increased to 88% for urban and 96% for rural residents, and total vacancy rates have reached 23%.<sup>11</sup>

Although the urbanization process has quickened, a number of economic and social problems have arisen. One is the lack of employment opportunities for new university graduates. Master and doctoral graduates find it even more difficult to find a job, due to the lack of high-end opportunities. Longer university stays usually indicate a lack of educated labor for second- or third-tier cities, but not for first-tier cities such as Beijing, Guangzhou, and Shanghai. The logic is that first-tier cities host a majority of top universities, thus a well-educated labor supply is in excess. For second- or third-tier cities, it is the opposite because these cities are less attractive in terms of wage and urban diversity to well-educated labor.

Another problem is vacant housing. Due to the One-Child Policy, most young people born in the 1980s and 1990s from urban areas do not have siblings. However, in rural areas, this policy was less seriously observed. The difference leads to imbalanced urban–rural growth and a distorted rental market. Since 2000, the post-1980s generation born under the One-Child Policy has entered into marriageable age. As intergenerational family wealth is passed down in terms of housing, urban couples may face a situation in which they will have more than one housing unit, thus leading to substantial vacant housing. However, for people born in rural areas who choose to work in urban areas, these existing housing stocks are unaffordable to purchase. Most of them choose to rent, as the price–rent ratio is higher than the price–income ratio.

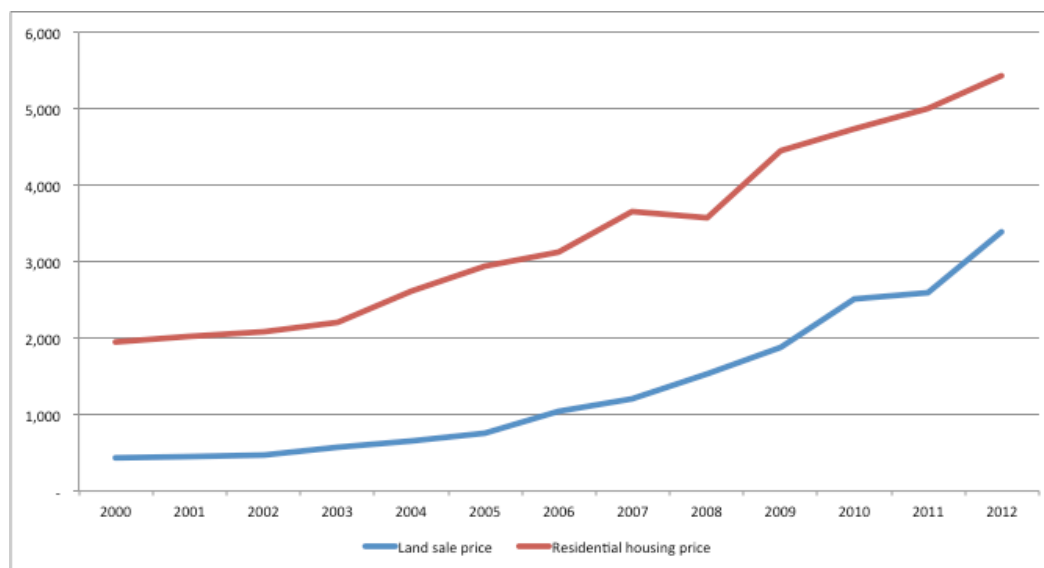
Collectively owned by the people, in practice, land-use rights and their transfer revenues were determined and collected by local governments. The separation of ownership and lease rights stimulated local governments to temporarily borrow more land from their people for more urgent use, such as enhancing local infrastructure and attracting foreign direct investment through low

<sup>10</sup> National Bureau of Statistics of China, <http://www.stats.gov.cn/english/statisticaldata>

<sup>11</sup> Southwestern University of Finance and Economics. China Household Finance Survey. <http://www.chfsdata.org/>

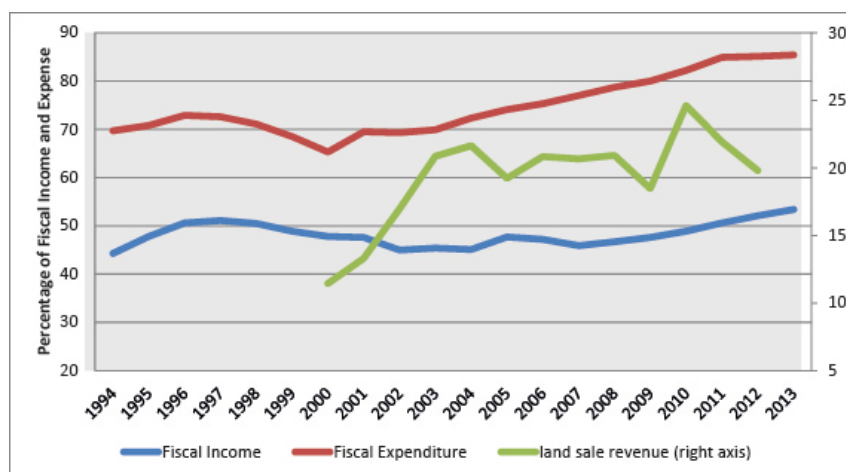
or zero land prices. Because higher economic growth enhanced their chances of political promotion (Li and Zhou 2005), local officials' best strategy was to collect more land-lease revenue for supporting GDP growth. Moreover, because the normal period of tenure of local officials was 5 years, the costs of current government decision makers were usually repaid by their successors. Thus, the more they borrowed, the less likely they were to repay the loans by themselves. It is not surprising that land sales and property prices increased saliently over the last decade (Figure 10).

**Figure 10: Land Sale Prices and Property Prices**  
(CNY per square meter)



Source: National Bureau of Statistics of China, <http://data.stats.gov.cn/>.

In 1994, the PRC embarked upon tax and fiscal reform to replace the previous discretionary fiscal contract system. Under the new fiscal allocation system, three-quarters of the variable product tax from the manufacturing sector was redistributed to the central government (Figure 11). To support economic growth, local governments had to seek extra sources of income. Land-lease revenue, hence, became an important channel to fill the gap between local fiscal income and expenditure. More recently, the fiscal stimulus package in 2009 strengthened the linkage between the property market and real economy, making local officials more reliant on land leases to support economic development (Deng, et al. 2011).

**Figure 11: Percent of Fiscal Income and Expense of Local Governments**

Source: National Bureau of Statistics of China, <http://data.stats.gov.cn/>.

### 3.2 Major Housing Policies

Initially, 80% of the population was to live in Economic and Comfortable Housing (ECH), 15% in Cheap Rental Housing (CRH), and the rest in private homes. However, the deflation pressure since 1998/99 had forced the government to give up this goal and to take supportive measures to foster commodity housing development (Table 8).

**Table 8: Supportive Measures to Foster Housing Market Development**

Start Date	Issuing Authority	Main Contents
July 1998	The State Council	Announce establishment of the commodity housing market
February 1999	People's Bank of China	Lower 1-year individual housing loan rate to 5.58%
September 1999	People's Bank of China	Lower 5-year Housing Provident Fund loan rate to 4.14%
October 1999	People's Bank of China	Extend payback period for individual housing loans to 30 years
October 1999	State Administration of Taxation	Exempt taxes charged on the Housing Provident Fund
September 2000	State Administration of Taxation	Reduce rent income tax to 3%

Source: Li and Chiang (2012).

In 2003, the State Council formally abandoned the plan of ECH as the main housing supply, and the market entered a period of rapid expansion. Average national housing prices increased by 147% from 2003 to 2012. Many regulative and restrictive policies were implemented during this period (Table 9), but most were unable to cool down the market due to principal-agent problems between the central and local governments (Gao 2010; Li, Chiang, Choy, 2011).

**Table 9: Regulative and Restrictive Measures to Mediate Housing Prices**

Start Date	Issuing Authority	Main Contents
June 2003	People's Bank of China	Increase minimum down payment ratio for homebuyers to 20%
March 2005	People's Bank of China	Increase minimum down payment ratio for homebuyers to 30%
May 2006	State Administration of Taxation	Charge business tax on secondary housing market transactions
July 2006	State Administration of Taxation	Charge valued-added tax on secondary housing market transactions
September 2006	State Administration of Foreign Exchange Ministry of Housing and Urban-Rural Development	Forbid foreign buyers from purchasing domestic commodity housing
March 2007– August 2008	People's Bank of China Ministry of Housing and Urban-Rural Development	Increase residential loan rates 6 times, deposit reserve ratio 13 times, Housing Provident Fund loan rates 6 times in a row
April 2010	The State Council	Restrict purchases, and restrict loans

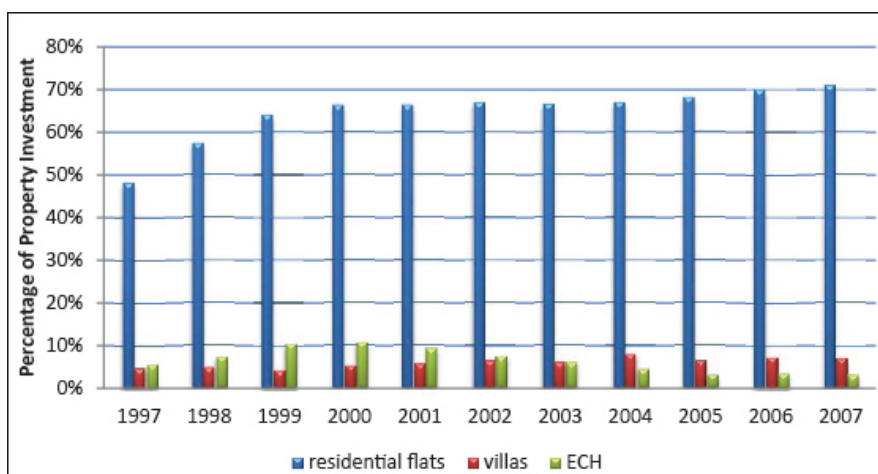
Source: Li and Chiang (2012).

Apart from economic and financial policies, a number of housing schemes and measures were implemented over the last 2 decades.

### 3.2.1 Economical and Comfortable Housing

ECH, known as *Jingji Shiyong Fang*, was introduced by the government through the Decision on the Deepening of Urban Housing System Reform in 1994, to middle- and low-income families at the full-cost or standard price, which was equal to the full-cost price plus a maximum of 3% profit margin (Li 2012). Local governments at provincial levels and below were given the ultimate autonomy to plan for ECH, identify low-income families qualified, and reserve land for ECH development. Local governments were required to cover the subsidiary costs and provide land resources. The price discount was not covered by the central government.

Concerning revenues, both local governments and property developers were not motivated to build ECH under this arrangement. ECH did not contribute to the fiscal incomes of local governments, and the profit margin of 3% was not attractive to property developers. ECH comprised 11% of total real estate investment in 2000, and declined to only 3% in 2007 (Figure 12). Most ECH were built under compromised contracts between local governments and property developers; once developers intended to bargain for some land, they were usually asked by local authorities to build ECH on the land.

**Figure 12: Proportion of Property Investment**

ECH = Economic and Comfortable Housing.

Source: Li (2012).

Local officials had other incentives to provide ECH. In Beijing, during 2006–2010, the municipal government built over 15 million square meters of ECH for local residents to accommodate those who were resettled for the 2008 Olympics (Li 2012).

Developers also considered ECH projects profitable if their networks with local officials were strong. In Nanjing, among 76 affordable housing projects carried out by 34 property developers from 2002 to 2010, 65 were undertaken by developers who had close relationships with local governments (You, Wu, Han 2011); 46 were projects by 18 government subsidiary property development companies; 14 projects were by 9 property development companies reformed from government departments; and 5 projects were by 4 property development companies affiliated with SOEs.

Because it was not a great success, ECH gradually disappeared from official documents after 2008.

### 3.2.2 Housing Provident Fund

There are generally two types of housing finance systems: a market-based institution integrated into the broader financial system, or a self-funded circuit institution separated from the rest of the financial system (Chen and Deng 2014). The Housing Provident Fund (HPF) belonged to the latter system, which was a compulsory savings scheme to provide self-funded housing credit for housing finance. As a bottom-up institutional innovation, the HPF was revised from the example of the Central Provident Fund in Singapore.

Employers and employees of the public sector and SOEs both contribute 5% of employees' monthly incomes to individual HPF accounts. Managed by a HPF center, the savings are kept for financing employees' future housing purchases.

Previous studies have documented a number of merits of the HPF, such as a steady stream of deposits (Zhang 2000) and a clear definition of roles and obligations for the government and developers (Yeung and Howes 2006). The transaction costs of maintaining personal relationships for favorable housing allocation were indeed lowered.

By 2012, there were over 100 million contributors to the HPF (Chen and Deng 2014). The latest HPF rate is 4.7% for loans for at least 5 years and 4.2% for loans less than 5 years. The maximum HPF loan period is 30 years, and the total loans amount to CNY1.04 million. However, self- and informally employed workers and those employed in the private sector are not covered by the system; thus, only about one-quarter of all urban workers have access to the HPF (Wei, et al. 2014).

### 3.2.3 Cheap Rental Housing

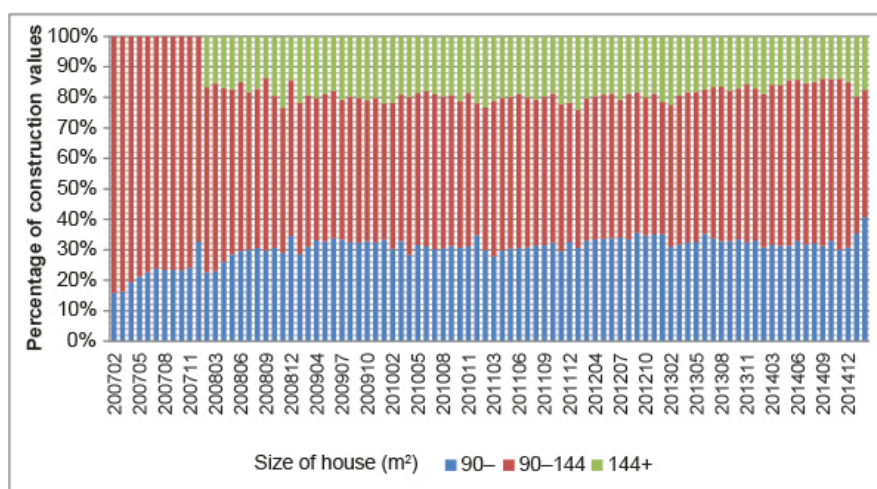
After a decade of reforms, CRH regained policy attention in the 11th Five-Year Plan. Over 11 million units of public housing were built during 2006–2010, and 36 million were scheduled for 2011–2015. The new eligibility criteria for CRH applicants were that monthly income be below CNY570, and the average living space be less than 7 square meters.

Because the income requirement is too low for most residents to qualify, the CRH has not been well developed. Besides, only urban citizens who have residence permits are eligible; new city residents are excluded from coverage. Lack of enforcement by the central government also contributed to reducing its effects (Wei, et al. 2014). The policy may have also facilitated governments to reuse old vacant housing and renovate shanty housing. In 2014, CRH was combined with other forms of low-rent housing into PRH.

### 3.2.4 70–90 Policy

The 70–90 Policy, or the Adequate Housing Development Scheme, refers to the policy regulation that at least 70% of newly built flats since 2006 must be under 90 square meters. It aims to reduce the average living space to lower increasing housing prices, but has failed almost from the beginning. The proportion of newly built flats under 90 square meters was below 35% of total value since its implementation: it was merely 22% for 2007, and did not surpass 33% for the following years (Figure 13).

**Figure 13: Proportions of Newly Built Flats by Total Value**



m<sup>2</sup> = square meter.

Source: National Bureau of Statistics of China, <http://data.stats.gov.cn/>.

Regarding this policy, property developers devised new forms of housing construction to meet the requirements of building flats under 90 square meters but selling flats above 90 square meters. One was to add partitioned walls between two smaller flats, each satisfying the 70–90 Policy, but both units were then sold to one buyer only. Then, the owner either pulled down the wall or constructed a new door on the wall to combine the two flats. Another way was selling two flats—one upstairs and one downstairs—to one buyer, who then built stairs to link the two flats together.<sup>12</sup>

### 3.2.5 Restrictive Purchases and Restrictive Loans

On 30 April 2010, the State Council issued the restrictive purchase (*xiangou*) policy to cool down the overheated property market. Restrictive purchases set purchase limits on the number of flats saleable to buyers. In 40 major cities, residents with local *hukou* (i.e., household registration) or special experts can buy up to two flats, nonlocal residents or foreigners can only buy one flat, and the interval for buying a second flat must be at least 2 years.

One intention of the restrictive purchase policy, similar to other housing policy initiatives in the PRC, was a statement beginning with “To prevent housing prices from increasing too fast...” Such focus conveyed two meanings: (i) it would be intolerable if the current speed of housing price increases continued, and (ii) it would be inappropriate if housing prices decreased from their current price levels. Indeed, the government was willing to see housing prices continue their upward trend, because the real estate sector was more important to the economy than reflected by its share of value added to total value added (Zhang, Han, Chan 2014).

A right-tailed augmented Dickey-Fuller test is adopted to explore the policy impacts of restrictive purchases. The test is arranged in a forward-recursive manner to identify the origin and collapse dates of a bubble (Phillips, Wu, Yu 2011). The model is based on the assumption that the housing price–rent ratio has a similar bubble pattern to the price–earnings ratio of stock markets, consistent with the irrational bubble definition by Case and Shiller (2003).

Figure 14 detects housing bubbles in eastern coastal cities. At the 99% confidence level, six out of 15 cities detected signs of bubbles in 2006/07, but was only so for Shenzhen in 2007/08, and, again, six cities in both 2008/09 and 2009/10. After the PRC implemented the restrictive purchase policy, none of the 15 cities had any signs of housing bubbles in 2010/11. However, eight cities had bubbles detected in 2011/12. Most cities have shown signs of bubbles since 2012.

<sup>12</sup> Thus, buyers also acted as construction workers and that may explain why 90% of newly built flats in the PRC today are still sold without any decoration (known as *Maopifang*).



**Figure 14: Housing Bubbles in Eastern Coastal Cities**

	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Beijing	×	×	×	○	×	×	○	×
Tianjin	×	×	×	○	×	×	○	×
Dalian	×	×	○	×	×	×	×	○
Shenyang	○	×	×	×	×	×	○	○
Jinan	×	×	×	×	×	○	○	○
Qingdao	×	×	○	×	×	○	○	○
Nanjing	○	×	×	○	×	○	○	○
Shanghai	×	×	×	○	×	○	○	○
Hangzhou	○	×	○	×	×	○	○	○
Ningbo	○	×	○	×	×	○	○	○
Fuzhou	○	×	×	×	×	×	○	○
Xiamen	×	×	×	×	×	○	○	○
Guangzhou	×	×	○	×	×	○	○	×
Shenzhen	○	○	○	○	×	×	○	×
Haikou	×	×	×	○	×	×	○	○

Note: O indicates the existence of a bubble for 3 months or longer, X indicates other situations.

Figure 15 summarizes bubble detections in central inland cities. At the 99% confidence level, most cities, except Hohhot, did not have signs of property bubbles in 2009/10. Yet restrictive purchases were implemented in all major cities. This led to unprecedented bubbles in most of the central inland cities since 2011/12.

**Figure 15: Housing Bubbles in Central Inland Cities**

	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Harbin	×	×	×	×	×	○	○	○
Changchun	×	×	×	×	×	×	×	×
Shijiazhuang	○	×	○	×	×	○	○	○
Taiyuan	×	×	×	×	×	×	○	○
Zhengzhou	×	×	○	×	×	×	○	○
Hefei	×	×	○	×	×	○	○	×
Wuhan	×	×	×	×	×	○	×	○
Nanchang	×	×	×	×	×	○	○	○
Changsha	×	×	×	×	×	○	○	×
Hohhot	○	×	×	○	○	×	○	×

Note: O indicates the existence of a bubble for 3 months or longer, X indicates other situations.

Similarly, most western inland cities did not have bubbles before 2010, yet restrictive purchases have depressed rigid housing demand and caused deterred bubbles since 2012 (Figure 16).

**Figure 16: Housing Bubbles in Western Inland Cities**

	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Xi'an	×	×	×	×	×	○	○	○
Lanzhou	×	×	×	×	×	○	○	×
Yinchuan	×	×	○	○	×	×	○	×
Xining	×	×	×	×	×	×	×	×
Urumqi	○	×	×	○	○	×	○	×
Chengdu	×	×	×	×	×	○	○	○
Chongqing	×	○	×	○	×	○	○	○
Kunming	×	×	×	×	×	×	×	○
Guiyang	×	×	○	×	×	×	○	×
Nanning	○	×	×	×	×	×	×	○

Note: O indicates the existence of a bubble for 3 months or longer, X indicates other situations.

The proposal of restrictive purchase seems timely. Before 2010, house prices in 35 major cities were not significantly higher than would be justified by underlying fundamentals, although there were some signs of overvaluation in the mass markets in Shanghai and Shenzhen and luxury segments in Beijing and Nanjing (Ahuja, et al. 2010). There were deteriorating affordability problems after 2009, because the price–rent ratios in Beijing, Hangzhou, Shanghai, and Shenzhen had surpassed 40 (Wu, Gyourko, Deng, 2012).

In line with the restrictive purchase policy, the People's Bank of China implemented the restrictive loan (*xiandai*) policy on the same date. For buying a first house under 90 square meters, the lowest down payment ratio is 20%. For buying a second house, the lowest down payment ratio is 50%. For buying a third house, banks can refuse to issue mortgage loans. Under other circumstances, the lowest down payment ratio is 30%.

Although the initial goal of restrictive purchase was to prevent housing prices from increasing too fast, it seems that restrictive purchases were unable to suppress rigid housing demand. Rebound of property prices in 70 major cities and bubble detections of most of the 35 cities since 2013 are probable side effects of this policy. However, it was more effective than the restrictive loan policy in cooling down the overheated property market (Li and Xu 2015).

### 3.2.6 Property Tax Experiment

Shanghai and Chongqing had continuous bubble detection since 2011, perhaps why a property tax experiment was initiated in both cities in January 2011. This experiment was aimed at changing the nation's homeownership-biased housing policy, reflected by the poor use of the HPF for low-income households. Property tax income was to be used to construct more CRH, and the property tax itself was intended for directing individual homeowners to sell more vacant housing to be circulated into the CRH sector. The annual charge was set to be equal to the house value  $\times (1 - \text{exemption rate}) \times 1.2\%$ , or house rent  $\times 12\%$ . For Shanghai, it was mainly charged for newly bought housing. For Chongqing, it was mainly charged for luxurious housing.

The experiment ended in December 2014. There was no timetable for the establishment of the property tax system. It is surprising that the property tax experiment seemed not to be welcomed by local officials, although it did increase local fiscal income. One possibility is that local governments were cautious about the distribution of the property tax collected. There is no

blueprint, and the 1994 fiscal and tax reform was a lesson for local governments intending to maximize their fiscal revenue. Another possibility is that, for second- and third-tier cities, there were no urgent needs for taxing the stock of housing, because the local governments still had land to sell. Perhaps above all, however, local officials were disinterested in setting up a national system for tracking real-estate ownership and sales transactions.

### 3.3 Summary of Policy Instruments

Table 10 provides a summary of the major housing policies and programs that have been implemented in the PRC over the last 2 decades.

**Table 10: Matrix of Housing Policies in the People's Republic of China**

Name	Housing Provident Fund	Economic and Comfortable Housing	Cheap Rental Housing	70–90 Policy	Restrictive Purchase	Property Tax Experiment
<b>Period</b>	Since 1991	Since 1995	1999–2014	Since 2006	Since 2010	Since 2011
<b>Policy objective</b>	Gather collective savings for funding housing finance shortage	Provide affordable and decent housing for middle- and low-income households	Help lowest low-income groups with a decent living	Build 70% of newly built flats below 90 square meters	Curb speculations and limit owners with more than two properties, to bring down vacancy rates, strengthen monitoring of housing bubbles, tackle the problems of 70–90 Policy	Curb speculation for luxurious housing, limit new home buyers, and speed up establishing a national system for real estate ownership and sales transactions
<b>Policy target</b>	Employees of public sector and SOEs	Moderate- and low-income families	Lowest low-income families	Middle-income households	Middle- and high-income households	Middle- and high-income households
<b>Instrument contents</b>	Employees and employers both contribute 5% of employees' monthly income to the fund account, accumulated for home purchase financing	Full-cost price or standard price, which was a full-cost price plus a maximum of 3% profit margin	Monthly income below CNY570 and average living space below 7 square meters	Require property developers to build 70% of new flats under 90 square meters; local land and construction bureau play the monitoring roles	Restricted purchases in 47 cities, nonlocal residents or foreigners can only buy one house, interval for buying a second house must be at least 2 years	With experiments in Shanghai and Chongqing, annual charge equals house value $\times (1 - \text{exemption rate}) \times 1.2\%$ , or house rent $\times 12\%$ , mainly for newly bought housing and luxurious housing
<b>Merits</b>	Housing subsidy in cash form, steady deposit, clear definition of obligation between	Stabilized housing prices in the transition from the welfare housing system to commodity housing system	Facilitated government reuse of old vacant housing and renovation of shanty	Proportion of newly built flats under 90 square meters by value	Positive effect in preventing housing prices from increasing too fast (the effect lasts for two	A convention of learning from trials and errors

Name	Housing Provident Fund	Economic and Comfortable Housing	Cheap Rental Housing	70–90 Policy	Restrictive Purchase	Property Tax Experiment
	governments and developers		housing	increased	years), facilitate monitoring ineligible affluent families from buying ECH	
<b>Demerits</b>	Self- and informally-employed workers and small private firms employees not covered	Heavy fiscal burden for local governments, eligibility of applicants often questioned	Only urban citizens who have residence are eligible, migrants excluded, lack of enforcement measures	Subdivided units and partitioned walls invalidate the effectiveness of policy, producing larger flats for buyers	Distort market mechanism, local governments reluctant to follow, may be too harsh to depress rigid demand	Local governments' strong disincentives reflected by a delayed establishment of national housing information system

ECH = Economic and Comfortable Housing, SOE = state-owned enterprise.

## 4. CONCLUSION

The PRC and Hong Kong, China function under different economic systems. The PRC is fundamentally socialist with more planned economy features, while Hong Kong, China is generally capitalist with more free-market features. Such “one nation, two systems” distinction tends to be obscured in their housing policies, as there are more social welfare elements in Hong Kong, China and more market-competitive elements in the PRC.

A comparison of the major housing policies implemented in the PRC and Hong Kong, China indicates that policies encouraging private and high-income housing (e.g., mortgage interest rate reduction) tend to be more effective than policies favoring public or low-income housing (e.g., housing subsidies) in meeting housing provision targets. Policies influencing market demand (e.g., restriction of purchase) tend to be more effective than policies influencing market supply (e.g., downgrading of living standards) in stabilizing housing prices.

The main policies in the PRC are mortgage interest rate reduction (e.g., the HPF), downgrading of the living standard (e.g., the 70–90 Policy), loan–value and debt–income regulations (i.e., restrictions on real estate loans), restrictions of new purchases in the owner-occupied market, as well as rent control in the rental market. The main policies in Hong Kong, China include housing subsidies, mortgage interest rate deduction, and property tax on housing purchases (i.e., “spicy measures”) in the owner-occupied market, as well as public housing in the rental market.

The review of housing policies shows that some have deviated from their expected outcomes. Empirical tests further reveal that certain policies may, in fact, enlarge property market fluctuations due to poor timing of implementation. Some lessons can be gleaned from reviewing these policies.

One lesson from Hong Kong, China relates to the 85,000 Plan, a plan with good intentions but bad timing. One suggestion for the government to respond more efficiently to market changes is to retain the land transaction application system, which was initiated in 1999 but cancelled in 2013. The land transaction application system required listing the pieces of land to be

developed publicly before they were sold by the government. Major developers applied for the land in which they were interested at negotiated prices with the government in advance. The measure stabilized the supply and demand of housing through decisions made by the market instead of the government. However, a major criticism was that it also encouraged collusion between the government and developers.

Another lesson from Hong Kong, China, which may shed light on the PRC's restrictive policies on buyers, was the ineffectiveness of the "spicy measures" on lowering housing prices. This was due to the asymmetric effects of increasing and decreasing transaction costs on economic efficiency, as raising transaction costs seemed less effective to cool down property prices than lowering transaction costs to boost property prices. Hence, it may be less effective for the PRC's restrictive purchase policies to correct the increasing trend of housing prices in the long term. Yet if the government merely intended to prevent housing prices from increasing too fast for a short term, restrictive purchase seems to have achieved this goal. Indeed, restrictive housing policies seem to be more effective under a system that is more traditionally planned than market-oriented.

While most housing programs in Hong Kong, China aim at assisting public housing tenants to become private homeowners, this goal is far from being achieved, mainly because these policies provide different forms of housing subsidies—a less effective method to stimulate owner-occupied housing (Yoshino, Helble, Aizawa 2015). Similarly, the ECH scheme has failed to increase the homeownership rates of low-income households in the PRC. On the contrary, the success of the HPF in providing mortgage interest rate reduction—a more effective measure to encourage homeownership attainment (Yoshino, Helble, Aizawa 2015)—mainly accounts for the high homeownership rate in the PRC.

There are no easy solutions to other housing problems in the PRC, such as the inequity of housing wealth and increasing housing unaffordability. Although valuable suggestions were proposed on property tax reform (Gao 2010), the delayed establishment of a national property tax system indicates the complex relationship between the central and local governments, which makes housing inequality more difficult to tackle. One suggestion is to increase the land supply through relocating rural residents to buildings on the urban–rural fringe. Rural residents still find it difficult to access education and medical resources, the former being more relevant to the younger generation and the latter critical to the elderly. Through a lump-sum compensation for rural people, local governments acquire collectively owned land in rural areas. This is different from the government's current strategy of urbanization, which focuses on resettling rural–urban migrants who are mainly middle-aged and work in a city. The long-term target is to enhance the education levels of young people from rural areas, and to provide better medical services for the elderly. Compensation, personal development, and health care expenses can be funded from various channels, such as the central government's transfer payments; repayments of fellowships and donations from graduates; a voluntary investment fund for urban development, like the hometown investment trust fund proposed for Japan (Yoshino and Taghizadeh-Hesary 2014); and a mandatory scheme for pension funds and health insurance such as the Mandatory Provident Fund in Hong Kong, China.

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\* The Asian Development Bank refers to China by the name People's Republic of China.

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