Opportunities and Risks of Capturing Land Values Under Hong Kong's Leasehold System

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Abstract

Hong Kong's land-leasing system empowers the government to exercise two important land policy measures—regulating land supply and capturing development windfalls. This paper focuses on the evaluation of the effectiveness of this leasehold system especially in the areas of capturing development gains for financing urban infrastructure. The portion of development profits captured by the government was measured through an analysis of the official lease-negotiation cases. An average of 39 percent of the increased land value occurring between 1970 and 1991 was captured through leasing public land. These captured benefits plus other land related revenues accounted for 79 percent of the average annual infrastructure investment for the same period. Despite the success in capturing development windfalls, scholars and policymakers have engaged in a series of debates over the implications of this land-leasing method on property prices. The dual role of the government in regulating land use and negotiating land premiums may have created an institutional setting that has generated imperfect competition in the real estate market and encouraged property speculation. By undertaking an institutional analysis, the authors establish a causal relationship between the land-value-capture experience and high land and property prices in Hong Kong. The institutionally oriented explanation of high housing costs—which many analysts have neglected—would have important implications on policy recommendations for capturing development windfalls by leasing public land in Hong Kong and elsewhere.

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Concepts of Capturing Land Value by Leasing Public Land

Capturing land-value gains from a development project has been a pressing issue for many policymakers (Donald and Misczynski, 1978). It is because the ability of a government to recoup a portion of the land-value increments could determine its financial strength in investing in public infrastructure and other social services. For example, in the United States, property taxes account for as much as 30 percent of the total revenue, or 75% of total tax revenues, for local governments. Despite their importance, property taxes are very unpopular (Doelebe, 1991). Many communities have established constitutional rules to prevent their local governments from raising property taxes. Good examples include the enactment of Proposition 13 in California and Proposition 2 ½ in Massachusetts (Susskind and Serio, 1983; Kemp, 1980). As scholars are searching for other alternatives, the possibility of capturing land value by leasing public land remains much understudied.

In principle, under a public leasehold system, a government who is the landowner should have no problem of retaining the financial gains generated by future increases in land value. There are, however, only a few empirical studies on this assertion (Hong, 1995; Yeh, 1994; Farvacque and McAuslan, 1992). More important, there is no discussion on what effects this land-value-capture method may have on real estate development and property prices. The purpose of this paper is to discuss these issues using Hong Kong's leasehold system as a case. In the process of examining the selected case, an important contribution was made to the current debates on the causes of high housing prices in Hong Kong and also advocated for an institutional approach to studying the development of land and property markets.

There is a belief that Hong Kong's experience has no relevancy to countries where land tenures are organized under freehold systems. Quite the contrary, lessons learned from Hong Kong could be very valuable for officials in many parts of the world. For example, in the United States (U. S.), a large portion of the undeveloped land is still publicly owned (Fischel, 1985, pp. 11-13). Besides, with the ending of the Cold War, the U. S. government is closing down many military bases. Some bases are occupying public land that has very high development potential. Officials are considering whether they should sell the land or lease it after the land is vacated. In addition, some Eastern European countries and the People's Republic of China are experimenting with public leasehold systems. A thorough study on Hong Kong's land-leasing experience will provide useful lessons for future land-policy making in these countries.

What we want to demonstrate here is that there are both opportunities and risks of using land leasing to recoup land-value increments. As we will show in the first argument of the paper, the Hong Kong government seems to be able to retain a large portion of increased land values by leasing public land slowly. In the second argument, we want to identify the risks of this land-value-capture technique. By applying an institutional

approach, we examine impacts of land-value capture by leasing public land on Hong Kong's housing and land prices. This approach focuses on analyzing how involved players invent, revise, and enforce formal and informal rules that guide investment decisions in the land and property markets. In short, capturing land value by leasing public land slowly has created an institutional setting that leads to the development of oligopolies in the real estate sector. This market structure allows a few firms to manipulate housing supply and encourages property speculation. This development, which has been overlooked by many analysts, explains why land and property prices in Hong Kong are so high. At the end, we explore methods that the government can use to lower high land and housing costs and suggest ways for other countries to avoid similar problems.

Hong Kong's Real Property Market

Hong Kong is located on the south coast of the People's Republic of China (PRC). The total "developable" land area of Hong Kong is about 1,070 km^2. With a population of 6.7 million people, Hong Kong is one of the most densely populated cities in the world. Because of the high density and a fast economic growth in the 1980s and the early 1990s, land and property prices have increased rapidly. In Table 1, two indexes present the magnitude of increases in property prices between 1984 and 1995.

Table 1. Property Prices Index: 1984-1995

Year	Jone Lane Wotton Index at January	Growth Rates	Rating & Valuation Dept. Index	Growth Rates
1984	100.0		43	
1985	97.8	-2%	48	12%
1986	127.8	31%	53	10%
1987	130.1	2%	65	23%
1988	154.8	19%	79	22%
1989	200.7	30%	100	27%
1990	196.8	-2%	111	11%
1991	237.5	21%	153	38%
1992	365.5	54%	215	41%
1993	468.8	28%	240	12%
1994	708.7	51%		
1995	801.0	13%		

Source: Lai, Lawrence Wai-Chung. 1997. Town Planning in Hong Kong: A Critical Review. Hong Kong: City University of Hong Kong Press, p. 68.

According to estimates done by Jone Lane Wotton (an international real estate consulting firm), property prices increased by 700 percent from 1984 to 1995. Even with more conservative estimates produced by the Rating and Valuation Department of the Hong Kong government, the increase from 1984 to 1993 was about 200 percent.

In comparison with other countries, properties in Hong Kong were about 9 to 13 times more expensive than houses in the U. S. metropolitan areas. As illustrated in Table 2, a property located in Hong Kong Island were worth, on average, US$1,153 per square foot in 1997. A similar property in the metropolitan areas of the U.S. would cost only US$90 per square foot. Although property prices are much higher in Hong Kong than in the U.S., houses in the U.S. are about three times larger than housing units in Hong Kong. The average household size in Hong Kong is 3.3, which is about 1 person more than the average household sizes found in the U.S. and United Kingdom. Taking the living area per household into account to compare the housing standards, it becomes more obvious that Hong Kong people are paying a much higher costs than the Americans for houses that are of lower quality.

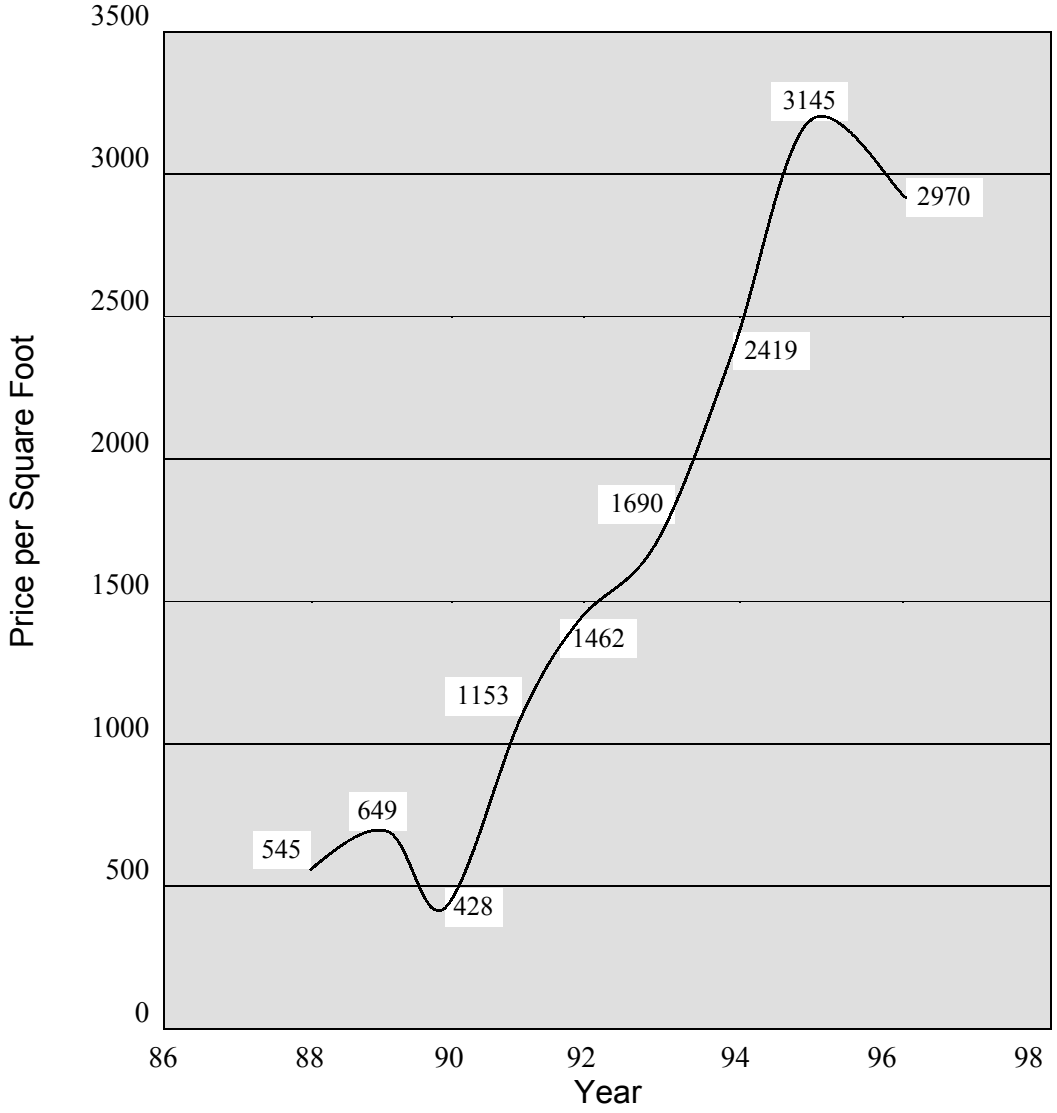
Table 2. Property Prices Comparison Between U.S., U. K., and Hong Kong

Country	Average Size (1) (in sq. ft.)	Average Price (2) (U.S.$ per sq. ft.)	Persons per Household
United States--Metropolitan areas	1,700	90	2.3
United Kingdom	903	222	2.4
Hong Kong			3.3
Hong Kong Island	500	1,153	
East Kowloon	500	822	
New Territories	500	881	

Sources:
(1) Kim Eng Securities. 1998. "Creating Value from Housing: Public Policy and Private Profit." Consultancy report. Hong Kong: Kim Eng Securities.
(2) Compiled by author using actual selling prices of properties sold between August 11 and September 10, 1997. Data for U.S. and U.K. are 1966 figures and from Kim Eng Securities.

In terms of land prices, between 1988 and 1996, the government leased 190 land sites to private developers, totaling 12.9 million square feet. Figure 1 illustrates the annual average leasing prices for land between 1988 and 1996. Prices for per square foot of land leased increased from HK$545 (US$70) in 1988 to HK$2,970 (US$383) in 1996—a 445-percent increase within a 9-year period.

Figure 1. Average Price for Per Square Foot of Land Leased—1988-1996



All these data indicate that there has been a very strong upward-moving pressure on both land and property prices in Hong Kong. Among all issues related to these rapidly increasing land values, this paper deals with one factor: The connection between the government's way of capturing land values and the development of the land and real estate markets in Hong Kong. One unique feature of the government's approach to recouping land values is through land contracting.

Capturing Land-Value Increments

Hong Kong government has a strong constitutional mandate to regulate its land use and land related revenues. Hidden under the label as being a market-oriented economy, the Hong Kong government in fact intervenes actively into the land and housing markets. It owns all land and approximately 50 percent of the housing stock in the city. Hong Kong has one of the largest public-housing programs in the world. Approximately three million people, or 50 percent of the population, are living in housing units that are either rented or sold to them by the government.

Land leasing is the most powerful tool used to intervene the land and housing markets. Instead of selling land permanently to private individuals, the government leases multiple land rights to developers. In land leases, the government specifies the amount and type of development rights that it grants to private developers and the period that they can enjoy the granted rights. At present, most leases have a 50-year term. The government possesses the right to own, and private developers lease from the government the right to develop, use, transfer, inherit, and benefit from land.

The government also has the right to collect revenues from all land development. There are three categories of land related revenues:

1. Lease revenues: The government will collect money from lessees at the initial land auctions, through lease modifications, contract renewals, and as annual land rent. (All these arrangements will be discussed in detail later.)
2. Rates: Owner occupied properties will have to pay rates based on the "ratable" value. For individuals who have purchase agreements with the original lease holder will pay their rates. The ratable value is equivalent to the annual market rental value.

   "Rates" is a term in the Commonwealth countries' used to determine the amount of property tax due every year. The revenue collection mechanism is to levy a "rate" on owner-occupied properties. The amount of levy is based on the estimated "rateable" value of involved properties. The rateable value is an estimated annual rent that property owners might reasonably expect if they let their property in the open market. The government sets the level of rate annually, depending on its financial needs. In 1998, the government set the rate at 5 percent of the rateable value of properties. It was 11.5 percent in the 1970s.
3. Property tax: Instead of paying a rate, owners of commercial real estates pay a property tax on income earned from their buildings. Currently, the standard rate of the property tax is set at 15 percent.[i]

Land leasing, above all, has the most significant role in recouping a portion of the land-value increments from private land and property holders. There are four occasions during the leasing process that the government can capture the profit from increased land values:

I. Signing the lease after the public auction;

II. Modifying the lease conditions;

III. Renewing the land contracts; and

IV. Collecting the annual land rent.

Value-Capture Technique I: Signing the Lease and Paying the Premium

First, the government asks developers to pay one lump sum of money—the land premium—when it first leases land to them. The most commonly used method of leasing land in Hong Kong is the public auction. When the government plans to lease a parcel of land to private developers, it will first prepare a "Conditions of Sale." In the Conditions of Sale, the government specifies the location and the plot size of the leased land and the other attached restrictions on the use, height, and design of the building. It also states the minimum price and the method of paying the premium for leasing the land. The government will then send the Conditions of Sale to all interested land developers. Based on the provisions stated in the Conditions, private developers calculate the leasing price and bid for the land rights in the public auctions.

In these auctions, competition among bidders determines the premium paid to the government for leasing the land. Normally, the government requires the bidder who gets the lease to pay 10 percent of the premium as a down payment at the closing of the auction. The lessee must then pay the remaining balance in one lump sum within 30 days. Money collected from the initial land auctions is a major source of government revenues (Hong, 1998). By leasing land gradually, the government has been able to share with private developers the financial gains generated by the rapidly increasing land values for the past 40 years.

Value-Capture Technique II: Modifying Lease Conditions

Second, in addition to capturing land value at the public auctions, the government also asks developers to pay more money when they modify their leases. When lessees want to improve or redevelop their properties, they may need to remove certain restrictions imposed on the development of the leased land. These land-use restrictions are specified as lease conditions in the land contracts. For altering these conditions, lessees have to apply to the Lands Department for lease modifications.[ii] If the government approves the applications, it will demand an additional premium from lessees for modifying their contracts. The modification premium is based upon the potential increases in land values after the development restrictions are lifted. The rationale for demanding more money is that when leaseholders revise the development restrictions, they are requesting additional development rights from the government; therefore, they must pay for the newly acquired land rights.

Value-Capture Technique III: Renewing the Lease Contract

Third, the government can capture the increases in land values during lease renewals. There are distinctions between the nonrenewable and the renewable leases. The major distinction is that whereas the nonrenewable leases contain no provision of renewal when they expire, the renewable leases provide such an option.

When the nonrenewable leases expire, lessees must apply to the government for extending their land rights. This procedure is called the regrant of nonrenewable leases. Up to 20 years before their leases expire, the lessees can apply for an early regrant. The option for an early regrant is to avoid the negligence of maintaining the buildings when leases are approaching their expiration date. No one will spend money on preserving their properties if there are uncertainties on extending the land leases.

If the government does not require the land for public purposes, it will issue a new contract called the Conditions of Regrant to the lessee. In the Conditions of Regrant, the government imposes new conditions, including the updated building covenants, requirements for public infrastructure, and the additional premium for regranting the land rights to the lessees. The premium for lease regrant represents the full market value of the land either at the date of expiration or the date of application for the extension.

Procedures involved in the renewal of the renewable leases are different. In the renewable leases, the government has granted the right to lessees to renew their leases for another 50 years with no additional premium or fee at the beginning of these leases. When these contracts are up for renewal, lessees will only have to pay a new level of rent equivalent to 3 percent of the rental value of their properties.

Value-Capture Technique IV: Collecting the Annual Land Rent.

Finally, the government also collects an annual land rent from lessees. The government does not, however, relies heavily on this mechanism to capture land values. In the past, the level of rent had no direct relationship with the values of land or properties. It was a symbolic payment that characterized the landlord-tenant relationships between the government and lessees. Once the amount of rent was established, it remained the same for the term of the leases regardless of any subsequent huge increases in land and property values. The government changed this system in 1997. Like the old system, the government collects from lessees an annual rent that is equal to 3 percent of the estimated rental value of their properties, but it can now adjust the level of rent whenever it reassesses the rental value of properties.

Opportunities: Land-Value-Capture Experiences

Among all studies on public leasehold systems, there were only two that examined the fiscal implications of land contracting. Yeh (1994, p. 9) and the World Bank's analysts (1993) investigated the importance of lease revenues collected from land leasing as a percentage of the total government budget in Hong Kong. Yeh argues that total lease revenues accounted for 8.6 percent of the total government budget between 1974 and 1990. The percentage for individual years range from 0.3 to 35.6 percent. Based on these figures, he then asserts that lease revenues were an important source of public funds for the Hong Kong government in selected years. Yet, this source of revenue was very unstable (Yeh, 1994, p. 20).

The World Bank's analysts (1993, p. 83) reviewed the same set of numbers for Hong Kong. They argue that the experience of this city-state does not show that lease revenues

generated under a leasehold system are significant. They then caution policy makers in other countries, specifically the People's Republic of China (PRC), against setting a high hope of raising substantial public funds through land contracting.

Both Yeh and the World Bank's analyses cannot reflect adequately the effectiveness of the states' ability to recoup the increased land values. Their measurement was based on the percentage of lease revenues in the total government budget, not on the percentage of the land-value increments captured by the government. As the land value increment fluctuates every year, it is possible that a high percentage of the captured land value-increments contributes to a small percentage of the total budget. On the other hand, a small percentage of captured land-value increments may contribute a high percentage of the total budget. For example, if land values in Hong Kong have increased, say, by HK$1 billion in a particular year, capturing 1 percent of this increase is HK$10 million. If the size of the government annual budget is small, the lease revenues collected will appear to be an important source of government revenues. Conversely, the Hong Kong government may capture a large portion of the increased land values, but the amount of money as a percentage of total revenues may still be insignificant because of two reasons. First, the government budget is large relative to the captured values. Second, land prices have increased moderately; hence, the large portion of the land values captured amounts only to a small sum of money. In both cases, the percentage of lease revenues in the total government budget will be small even though the state has retained a large portion of land-value increments. Analysts, therefore, cannot settle the question of whether land leasing can help officials to capture land values by looking just at the percentage of lease revenues in the total government budget.

Methodology of Evaluating the Land-Value-Capture Techniques

Owing to the inadequacy of the existing method, two criteria were used to measure the effects of the land value capture techniques:[iii]

(1) the portion of land-value increments captured by the government through leasing land (PLVC), and,

(2) the proportion of the "public infrastructure investment" financed by the captured values (PPI).

The PLVC of a land site is a ratio between the total lease revenues collected from leasing the land and the estimated increases in its land value between 1970 to 1991. The equation for calculating the $PLVC_i$ is:

$$PLVC_i = \frac{P\text{-}ini_i + \sum_{t=1}^{n} P\text{-}mod_i^t + \sum_{t=1}^{n} R_i^t}{\sum_{t=1}^{n} LV_i^t}$$

where

$PLVC_i$ = percentage of land-value capture for land parcel i

$P\text{-}Ini_i$ = the initial premium collected from the public auction for land parcel i

$P\text{-}Mod_i^t$ = total modification premiums for land parcel i for year t

R_i^t = total annual rent for land parcel i for year t

LV_i^t = estimated increases in land value of land parcel i for year t

For the PPI, it is the average annual infrastructure investment financed by the lease revenues between 1970 and 1991. The reason for calculating the PPI is to determine if the government is capable of reinvesting the captured values in infrastructure development. Only in this way can a public agency secure a continuous inflow of land revenues by financing additional infrastructure to support the ongoing urban growth and stimulate further increases in land and property values.

Based on these criteria, this research used 92 randomly selected land parcels leased in the 1970s in Hong Kong. From these case studies, firstly the total amount of lease revenues that the government collected from the selected land leases from 1970 to 1991 was calculated. Then the increased land values for the corresponding land sites for the same period of time was estimated. With these two pieces of information for each land lease, the PLVC was calculated.

Evaluation Criterion I: Portion of Land-Value Capture

The estimated portion of land-value capture for the 92 cases are illustrated in Appendix I. The estimated figures range from 5 to 111 percent. On average, the government captured 39 percent of the land-value increments from selected land contracts occurring between 1970 and 1991.

Ideally, to determine the relative significance of this percentage, we must compare this outcome with experiences of land-value capture in other cities where land ownership is also organized under a public leasehold system. Yet, to conduct a comparative study is beyond the scope of this paper. There is also no existing study that uses the same method to estimate the portion of land values captured in other cities. Despite the lack of

comparable cases, no government, as far as we know, has ever claimed that it can capture more than 50 percent of the increased land values. The percentage of land-value capture in Hong Kong, thus, seems to be large.

To analyze the data at a less aggregate level, we examined the estimated portion of land-value capture for land sites located in different districts and for various land uses and summarize the results in Table 3. By arranging the percentages by district and land use, we are not trying to draw conclusions on what the portions of land-value capture will be for these categories. Instead, we want to analyze further how the estimated figures for these different categories deviate from the overall mean. This, in turn, shows how instrumental the estimated overall percentage of land-value capture is.

Table 3. Percentages of Land-Value Capture for Selected Land Sites

	Residential			Offices									
District	A	B	C	A	B	C	Retails	Hotel	Industrial & Godown	Supermarket	Bus Terminal	District**	Average
Commercial Districts:													
In Hong Kong Island													
Shueng Wan	48.0			47.6	60.8	58.0		50.8*				54.8	
Central								36.2*			55.7*	45.9	
Wai Chai				6.6*								6.6	34.2
In Kowloon													
Tsim Sha Tsui				11.7			39.7	61.1*				29.6	
Residential Districts:													
In Hong Kong Island													
Western	7.9*											7.9	
North Point	29.5	31.1	21.7*		30.0*				16.1*	41.8*		29.2	
Causeway Bay	20.3									30.8*		22.4	
Abredeen										20.5*		20.5	
In Kowloon													
Yau Ma Tei	49.0	78.9										61.8	
Mong Kok	57.3											57.3	42.6
Hung Hom			90.1*									90.1	
Ho Man Tin	32.6*											32.6	
In New Kowloon													
Kowloon Tong	42.2	39.9										41.0	
Shek Kip Mei		44.5*	72.9									63.4	
Industrial Districts:													
In New Kowloon													
Kwun Tong	12.9	11.6*							13.9			12.7	13.3
Cheung Sha Wan									13.9			13.9	
Land uses**	35.4	57.7	64.4	30.8	50.6	58.9	(39.7)	49.9	13.8	31.0	(55.7)	39.1	
Average		53			47								

Note: * There is only one observation for the corresponding district and land use in the sample.
** Figures in the Land Use row and District column are not the weighted average of the numbers presented in the table.
A blank cell indicates that there is no observation for the corresponding district and land use in the sample.

Source: The author calculated these percentages using data gathered from 92 land sites selected from all contracts issued in Hong Kong between 1970 and 1991 (Appendix I).

Between 1970 and 1991, the government captured approximately 35 percent of the increases in land values for selected land sites leased for the development of Class A residential buildings—the smallest type of dwelling in Hong Kong.[iv] For land sites used for Class B residential properties, the government retained 58 percent of the land-value

increments. For Class C property, the percentage was 64 percent. One reason why the percentage for small-sized flats is smaller than other types of property is that the government dominates the small-sized housing market. Not only does the government provide a heavy rental subsidy to public housing tenants, it also builds and sells small housing units to low- to middle-income groups at below market values. Facing the competition from the government, developers normally will pay less for land site designed for small-housing-unit development. This, in turn, explains why the government captured a smaller portion of land-value increments from land sites used for small flats than from land for large properties. On average, the percentage of land-value capture for residential land sites was 52 percent. It was about 12 percent points larger than the overall average of 39 percent.

The percentages of land-value capture for Class A, B, and C office buildings were 31, 51, and 59 percent, respectively. Again, the classification of office buildings is based on the average size of the floor area of the property. Office buildings that have an average size of 354, 84, and 47m^2 are classified as Class A, B, and C properties, accordingly. In other words, the percentage of land-value capture for the smaller office buildings was larger than bigger commercial properties. This is mainly because small firms dominate the Hong Kong economy. Hence, demand for small offices has been growing faster than the demand for large offices. Due to the excess demand, developers are willing to pay a high premium to lease commercial sites zoned for small-sized-office development in the public auctions. This, in turn, allows the government to capture a high percentage of land-value increments. The average percentage for land used for office buildings was 47 percent, which was reasonably close to the overall average.

For industrial land sites, the percentages were small. They were about 14 percent for industrial land sites located either in Kwun Tong and Cheung Sha Wan. The small percentages were mainly due to the government's intention to stimulate industrial growth. To do that, the government leased land to industrialists at a low premium and that, in turn, led to a slower increase in industrial land prices. It is, thus, not surprising to see that the percentages of land-value capture were relatively smaller from industrial land sites than land parcels for other types of land use.

In terms of the different districts, the average percentage of land-value capture in the commercial areas, such as Sheung Wan, Central, Wai Chai, and Tsim Sha Tsui, was about 34 percent. For the residential districts, the average percentage was 43 percent. Some districts, such as Yau Ma Tei, Mong Kok, and Shek Kip Mei, had approximately 60 percent of the surplus land value captured by the government. We excluded Hung Hom because there is only one observation for this district in our sample. Among these residential districts, the closer a district was to a commercial center, the higher the percentages.

In summary, the percentages of land-value capture for various types of land in different 0locations are reasonably close to the overall average of 39 percent. For residential land, the value-capture rates were 35, 58, and 64 percent for different use classes. For commercial land, the rates were 31, 51, 59 percent for different classes. And the percentage for industrial land was 14 – the lowest among all land uses.

Evaluation Criterion II: The Role of Land Revenues in Infrastructure Investment

Payments received from leasing public land only accounts for a portion of the total land revenues. As mentioned earlier, Hong Kong's land-related revenues include the total money generated from the property tax, rate, rent, and land premiums. Lease revenues are not a substitute for the property tax and rate in Hong Kong. And leasing public land provides additional ways for the government to capture the land-value increments. This indicates that collecting money from lessees through land contracting is not necessarily incompatible with the imposition of property taxes and other instruments. It is not always true that the government must use either one or the others.

In Table 4, we show that between 1970 and 1991, the average annual amount of the property tax and rate collected accounted for 31 percent of the average annual land revenues. The lease revenues, which are composed of land rent and premiums received from the initial auctions, lease modifications, and renewals, accounted for the remaining 69 percent.[v] In other words, if we add the money collected from the rate and property tax to the revenues generated by leasing public land, the estimated portion of land-value captured would be larger than 39 percent in Hong Kong. To measure the "significance' of this captured value, we calculated the percentage of annual infrastructure investment financed by this money.

Table 4. Land and Lease Revenues In Hong Kong, 1970-1991
(Million of 1991 U.S. Dollars)

Type of Land Revenues	Average Annual Amount	Total Land Revenues	Total Local Government Revenues	Total Local Government Expenditures	Total Infrastructure Expenditures
Property tax	130	9.1	1.8	2.0	7.2
Rates	307	21.5	4.3	4.7	17.1
Lease Revenue	990	69.4	14.0	15.1	55.2
Total	1,427.0	100.0	20.1	21.7	79.6

Sources: Annual Report of the Director of Accounting Services and the Accounts of Hong Kong. 1970-1991

For infrastructure investment, we included spending on highways, land, parks and other recreational activities, parking facilities, utilities, water and sewage, housing, and environmental protection. The reason for including these government investments is because increases in land values are partly due to government investments on these public works. The government, therefore, has legitimacy in recouping a portion of the land-value increments generated by these investments.

In Table 4, we show that the average annual land revenues generated from the property tax and rate were, on average, 24 percent of the infrastructure investment in Hong Kong annually. The funds raised annually by leasing public land covered an average of 55 percent of the public-work expenditures. Combining these two main categories of land revenues, they financed about 79 percent of the average annual infrastructure investment between 1970 and 1991.

To compare the data for Hong Kong with those for other cities, we calculated the percentage of land revenues in infrastructure investment for Singapore and seven cities in the U. S., namely, Washington, DC, New York City, Chicago, San Francisco, Philadelphia, and Los Angeles. These cities were selected because they all had an average annual government budget amounted to more than US$2 billion between 1970 and 1991. Besides, all these cities (except New York City and Washington, DC) spent, on average, from US$1 to 4 billion annually on infrastructure. (All monetary values are in constant 1991 U.S. dollars, unless otherwise indicated.)

For the U.S. cities, due to data limitations, land related revenues include only property taxes and funds collected from special assessments. Lease revenues are an insignificant source of funds for these cities because very few local governments in the U. S. use land leasing to allocate public land. For Singapore, we obtained figures for both property taxes and income from land sales. Because the Singapore government does not lease all public land, we do not have data to separate lease revenues from the total land revenues. We, therefore, treat the total amount as land revenues here. To calculate the infrastructure investment for the selected cities, we employed the same definition as for Hong Kong.[vi]

Table 5 shows the results of our comparisons. For Singapore, Chicago, San Francisco, and Philadelphia that had a similar amount of annual infrastructure investment to Hong Kong between 1970 and 1991, their differences in the percentages of land revenues in public-works expenditures were dramatic. Only Singapore could support about 62 percent of its annual expenditures on public works. For Chicago, San Francisco, and Philadelphia, the percentages were only 43, 37, and 21 percent, respectively.

Of the other U.S. cities, New York City had the largest percentage, which was 59 percent. Yet, New York City is not a good comparison with Hong Kong because its infrastructure investment was US$10.9 billion, which was about ten times larger than Hong Kong (US$ 1.8 billion). Los Angeles spent, on average, about US$3.9 billion on infrastructure annually. It had the smallest percentage of land revenues in total infrastructure investment, which was about 16 percent.

The percentage of land revenues in total government budget in Hong Kong was also larger than selected cities. Between 1970 and 1991, land revenues in Hong Kong accounted for 20 percent of the total government budget. Chicago had a similar percentage. For the other cities, the percentages ranged from 19 percent (for New York City and Singapore) to only 11 percent (for Philadelphia). For the average total expenditures, the percentages for Hong Kong and Singapore were 22 and 24 percent, respectively. Among selected cities, New York City, Chicago, and San Francisco could

finance close to an average of 20 percent of their total annual local expenditures by land revenues.

Table 5. The Importance of Land Revenues in Government Revenues, Total Expenditures, and Infrastructure Expenditures For Selected Cities

(Million of 1991 U.S. Dollars)

City	Years	Average Annual Total Land Revenue	Average Annual Total Local Government Revenue	Average Annual Total Local Government Expenditures	Average Annual Total Local Infrastructure Expenditures	Average Annual Land Revenues as a Percentage of Average Annual		
						Total Local Government Revenues	Total Local Government Expenditures	Total Local Infrastructure Expenditures
Hong Kong	1970-1991	1,4270	7,091.6	6,565.6	1,793.4	20.1	21.7	79.6
Singapore	1972-1991	994.7	5,329.0	4,095.8	1,615.6	18.7	24.3	61.6
New York City, New York	1970-1991	6,436.1	34,518.5	33,341.6	10,902.4	18.6	19.3	59.0
Washington, D.C.	1970-1991	512.4	3,658.8	3,862.6	8,93.7	14.0	13.3	57.3
Chicago, Illinois	1970-1991	657.6	3,295.2	3,239.4	1,524.3	20.0	20.3	43.1
San Francisco, California	1970-1991	443.8	2,464.6	2,310.1	1,201.1	18.0	19.2	36.9
Philadelphia, Pennsylvania	1970-1991	337.0	3,121.7	3,178.4	1,621.8	10.8	10.6	20.8
Los Angeles, California	1970-1991	611.9	4,893.1	4,562.2	3,939.5	12.5	13.4	15.5

Sources:

All this information, though scattered, indicates that land revenues in Hong Kong play an important role in financing total government expenditures, in general, and infrastructure investment, in particular. Specifically, given the statistics of other major cities, the percentage of land revenues in public infrastructure investment in Hong Kong appears to be large. The captured land values played an important role (about 55 percent of the average investment costs annually) in financing public works between 1970 and 1991.

Effectiveness of Value-Capture Techniques

All these data and analyses show that the Hong Kong government captured, on average, 39 percent of the land-value increments occurring between 1970 and 1991 from land leased in the 1970s. More importantly, these captured values, on average, paid about 55 percent of the annual infrastructure investment in Hong Kong. Combined with the money collected from the property tax and rate, the Hong Kong government was capable of funding 80 percent of its annual public-works expenditures by land revenues.

Based on these results, the land-contracting method that the government uses to raise public funds seems to be effective. This conclusion is consistent with the past fiscal experiences of Hong Kong. The government did not borrow any money from the World Bank or other international aid agencies. Major infrastructure projects have been financed either by government land revenues or internally generated funds. Nevertheless, many critics, such as Loh (1997) and Pang and Wheaton (1994), argue that the government's "success" in generating public funds is at the expense of the population's ability to find affordable housing in Hong Kong. They accuse the government of limiting the supply of land deliberately so as to collect high land premiums from public auctions. Government's approach to capturing land-value increments was actually an important factor for explaining high and speculated real estate prices.

The Risk: Causing High Land and Property Prices

Debates over the causes of high land and property prices in Hong Kong are controversial. The controversy stemmed from disagreements among involved parties on defining the problem. Because each party frames the issue differently, there is no consensus on what brings about the high land and property prices and how the government should solve problems associated with high housing costs.

From the developers' point of view, it is the government's restriction on land supply that leads to the high land and property prices. Peng and Wheaton (1994) developed a formal econometric model to test the relationship between land-supply restriction and high property prices. They argue that the gradual leasing of land rights creates an anticipation of future shortage of housing supply in the market. This expectation drives up current demand for housing and, in turn, pushes property prices up.

A later study, however, disputes their argument. Tse (1998) challenges Peng and Wheaton's finding by arguing that there is no causal relationship between land supply and housing prices. His conclusion is based on his review of data from 1978 to 1995 using the Granger-Causality statistical method. Tse asserts that developers do not develop their land immediately. Instead, they build up their own land banks and wait for an increase in housing demand before they develop their land sites. Because property construction will normally take two to three years to complete in Hong Kong, housing supply will lag behind its demand. When the existing housing stock cannot meet the demand, property prices soar. Tse, however, thinks that the investment decision of developers and the land-supply policy of the government will not cause any inefficiency in the markets. He rationalizes their behaviors based on the neoclassical economic assumption that profit maximization is always consistent with the efficient allocation of resources.

Another study conducted by the Hong Kong Polytechnic University (HKPU) for the Consumer Council revealed that several large developers dominate the property markets in Hong Kong. Analysts of the HKPU (1996, p. 2) found that between 1991 and 1994, 70 percent of the total new private housing units was supplied by seven developers. Fifty-five percent came from just four developers, and one of them built 25 percent of all

new flats. Due to the lack of competition in the housing markets, developers can control the supply of housing and create artificial shortage. An anticipation of housing shortage, in turn, fuels property speculation.

Although each study identifies one key element for explaining the high land and property prices in Hong Kong, their explanations are at best partially complete. A comprehensive explication must examine the development of existing institutions that shape involved parties' decisions in investing in land and real estates. Institutions, as we define here, are a set of formal and informal rules in a society that shape people's behaviors. All above-mentioned analysts examine only one aspect of a complex set of institutional rules, but are unable to explain the origins and connections of these rules.

In addition, there is an apparent contradiction in the way that these scholars describe the government's involvement in the land and real estate markets. On the one hand, Pang and Wheaton (1994) portray the government as a rent-seeker who maximizes land revenues without considering implications of its actions on property prices. Tse (1998), on the other hand, argues that the government is a benevolent ruler who tries to allocate public land efficiently.

It will be inadequate just to ask if the government or developers should be responsible for high property prices. It is also unrealistic to assume that there will be effective or short-term alternatives to resolve the issues of high land prices. High land prices are outcomes emerged from actions and reactions of many parties involved in land and real estate investments through a long period of time. To find a solution, we must untangle these complex interrelationships among different industries and institutions. It is impossible to solve the problems just by, say, changing the government's land-supply policy. An alternative approach is to trace the historical development of existing institutions. This will allow us to understand why involved parties made certain decisions in the past and how we can design new rules (or revise the old ones) so as to eliminate negative impacts of past decisions. What follows is our attempt to undertake such an analysis.

The Government's Land-Supply Policy

Hong Kong government has an eminent authority to determine the terms of a land-leasing contract. This authoritative power can be easily argued as an equivalence of a power to control land supply. As a result, the gradual pace of leasing public land to developers has been accused as a major cause of driving high housing prices.

Contrary to this argument, this research found that the avoidance of "transaction costs" associated with different land-value-capture techniques is the major reason for limiting land supply. These transaction costs include the costs of: (1) maintaining the integrity of the government in leasing public land, (2) delineating and assigning the right to benefit from land, (3) bargaining for an agreement, and (4) enforcing and administering contractual agreements.

There is no sufficient evidence to show that the government has deliberately established a high-land-price policy. Rather, earlier research found that the transaction costs of

capturing land value at the initial auctions are the lowest among the four mechanisms (Hong, 1998). This condition guides the government to rely on the initial auctions to capture land values. Yet, this value-capture technique works effectively only when the disposition of land is gradual.

Between 1970 and 1995, the government collected most of its lease revenues from lessees at the initial auctions and much less money through lease modifications and renewals. The reason was that capturing land value during lease renewals involved high transaction costs. In 1970s, there were disputes between the government and lessees over the delineation of right to retain land benefits at the time when leases expired. One the one hand, the government thought that it had the right to ask lessees to pay a new land rent that was equal to the full market value of the land. Lessees, on the other hand, believed that they had already purchased the right to renew their contracts when they first established their renewable leases with the government. Hence, they should not pay such a high land rent for renewing their leases. Lessees organized public protests against the government's lease-renewal policy. After a series of pubic confrontations, the government finally had to compromise. After this incident, because of the high transaction costs involved in renewing land leases, the government does not rely on this mechanism to capture land values.

For lease modifications, high negotiation costs involved in the transfer of land rights from lessees (or tenants) to developers deter investors from initiating redevelopment projects. When high transaction costs undermine the incentive for redeveloping land, lessees and developers do not modify their land contracts. Without any lease modification, the government loses the opportunity to capture land values through lease modifications. As for the annual land rents, as we mentioned before, the government chose not to rely on this mechanism to recoup land values; thus, the amount collected from land rent was insignificant in comparison with the initial land premiums.

Owing to the transaction costs of capturing land values after the land is leased, the government must capture the increased land values when land contracts are first established. To do that, it must dispose land rights to private developers slowly. If the government had leased all land rapidly at the time when their values were low, it would have had great difficulties in capturing the land-value increments in the subsequent years.

This research provides different scenarios on Pang and Wheaton's (1994) hypothesis that the government knows perfectly that the restriction on land supply will drive up property prices. Higher property prices would, in turn, allow the government to collect higher premiums at the public auctions. This research argues that government decision is based on the intention to minimize the transaction costs of capturing land values, and the government may not have the full knowledge of how its action could affect property prices. In many occasions, the government has defended its land-supply policy by arguing that auctioning public land openly is the most transparent and efficient way to allocate land rights. Land contracts are granted to the highest bidder in the auction with very low negotiation costs. As Furubotn and Richter (1997, p. 3) argue, the acquisition of unlimited knowledge about future development could be too expensive and time consuming or simply impossible. Simon (1957) also uses the term "bounded rationality"

to characterize the fact that decision-makers are not omniscient and have great difficulties in processing information.

It is, nevertheless, appropriate to say that high property prices come as an unexpected, indirect consequence of government land-supply policy. Undeniably, leasing land gradually by the government has created an institutional environment that allows big developers to dominate the land and housing markets. This development encourages property speculation and, in turn, leads to high property prices.

Oligopolies in Property Markets

By leasing land rights gradually so as to minimize the transaction costs of capturing land value, the government establishes rules that favor large developers. Collecting windfall gains at the beginning of land leases means that developers must have the up-front capital to pay for high land premiums. Under this system, only the financially strong developers can compete for land at the public auctions. Developers must pay the full premium within 30 days after they win the bid at the public auction. With the land premium for a single land site amounted to multi-billion Hong Kong Dollars, investors must either have the financial backing from banks or a large amount of cash in hand to engage in land acquisition. Small developers normally do not have these financial advantages over their large competitors. Thus, larger developers usually dominate the public land auctions. When only a few developers obtain continuously new land leases from the government, they begin to gain a control over the supply of housing units.

To minimize the pressure that its land-supply policy has on housing prices, the government has been publicizing every year its land-sale programs and projecting the number of new housing units available for a 5-year interval. With a better knowledge of the future supply of land and dwellings, the government hopes to eliminate homebuyers' anticipation of a housing shortage in the future. Despite all these actions, developers are still the ones who determine if the total production of housing units will meet the government's projection. They can acquire land at the public auctions and then delay land development. Under a market condition where demand for housing is strong, a "sit-and-wait" strategy is very effective for maximizing returns. Delaying land development reduces the supply of housing units and increase property prices. High property prices give developers lucrative returns and strengthen their financial position. With a strong financial position, large developers continue to out-bid small- and medium-sized firms at the public auctions. Gradually, several oligopolies emerged in the land and real estate markets.

The government has tried to establish rules to require lessees to develop their land in a timely manner. In land contracts, there is always a contractual agreement between the government and lessees that developers must complete their development projects within a specific time. If a lessee needs more time, s/he must apply to the government for a lease modification. Depending on the time of the extension, the government will charge the lessee an addition land premium for deferring the completion date.

The government, however, has not been able to impose a heavy charge on lessees that can discourage them from delaying their projects. The following schedule shows what percentages of land value that the government charges for extending the time for land development:

	Percentage of land value
Period of extension	as modification premium
1st year	2 %
2nd year	4 %
3rd year	8 %
4th year	14 %
5th year	22 %
6th year	32 %

In the early 1990s, for example, when property prices grew between 13 to 54 percent annually (See Table 1), developers who held on to their land were, no doubt, willing to pay the additional premium to the government for subsequent higher returns.

Although Tse (1998) and researchers of HKPU (1994) were able to identify the problem of imperfect competition in the land and property markets, they did not explain thoroughly the cause of this market-structure development. As we argued, the emergence of oligopolies has a lot to do with the government's decision to capture the land-value increments at the initial auctions to avoid high transaction costs.

Housing Speculation

Land and housing speculation is a major force driving up the land prices. Hong Kong's land and housing markets have a unique prominence in the economy. Staley (1994, p. 27) estimates that:

> Hong Kong's property and construction industries represent 45 % of the capitalization in the Hong Kong stock market, significantly higher than in Singapore (13%), Malaysia (8%), Japan (under 2%), and the United Kingdom (under 10%). Moreover, over 60% of Hong Kong's Investment expenditures is in the form of property and about 30% of all bank lending is to the property and construction industries.

When the government, large developers, and banks developed a high financial stake in the land and real estate markets, any dramatic drops in property prices would be devastating for the whole economy. Between 1980 and 1995, an average of 29 percent of the gross domestic product in Hong Kong was generated from land and property development and other related financial services. In the past 26 years (1970-1996), land revenues, including land premiums, annual rent, rates, and property tax, accounted for, on average, 33 percentage of the total annual government budget. With such a high dependency on land and property investments, people begin to believe that the real estate sector is too important to fail in Hong Kong. If there are any unfavorable factors that

could cause housing prices to drop, the government will employ all political and economic means to prevent prices from falling.

Magnitude of Speculation

As the economic future of Hong Kong ties closely with land and real estate investments, property speculation becomes serious. One way to measure the seriousness of housing speculation is the "speculation gap." The amount of speculation in the market can be estimated by the difference between the value of property transactions and the value of mortgages registered. Most genuine end users purchasing property require a mortgage. Speculators, however, purchase property by obtaining a temporary purchasing-agreement and later sell the purchasing-agreement to other buyers at a higher price. The speculators only need to come up with a 10-percent deposit for the purchasing-agreement without an approved bank mortgage. Most of these cases are short-term speculating because they can hold the purchasing-agreement for only one year unless a bank mortgage is approved.

The "speculation gap" is an useful estimate of the magnitude of the speculation value. The total value of property sold records the total amount of housing transaction regardless of whether properties are purchased for speculative purpose or domestic use. The total value of mortgage loans represents the value of properties sold to users who have applied for mortgage loans from private banks. Figure 2 show the speculation gap in Hong Kong from 1990 to 1997. The gap amounted to about HK$80 billion (US$10.3 billion) in 1997. In other words, buyers of real properties totaling HK$80 billion in value did not apply for a mortgage in 1997. Such investments are likely to have a motivation of speculation.

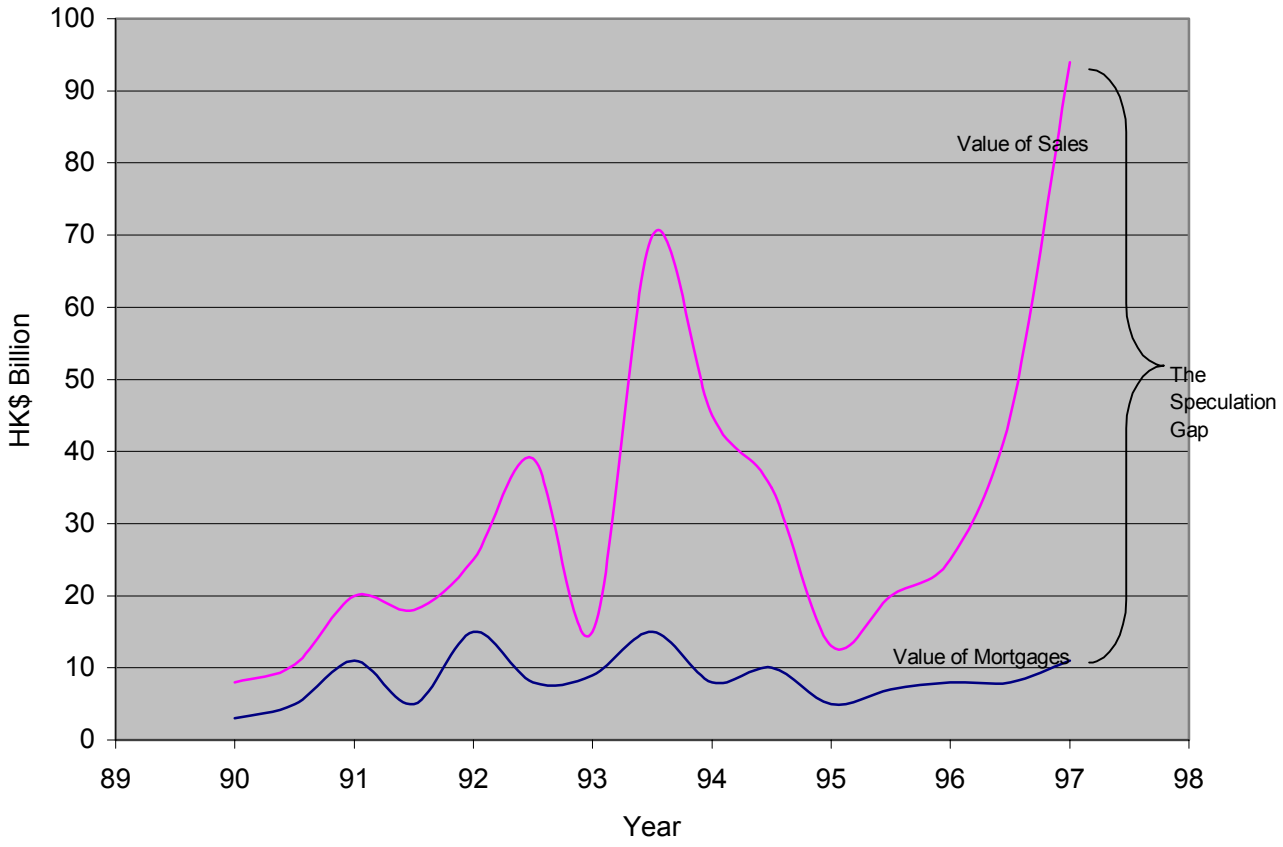
Monetary and Tax Policies

Property speculation is partly encouraged by the obscure financial rewards and partly by the government's inaction to establish any capital gains taxes. As illustrated in Table 1, from 1984 to 1995, general property prices increased about 700 percent. Increases in housing costs along with the rapid economic growth led to high inflation rates during this period. In other countries, governments would raise interest rate to "cool" down their economies. Yet, because of the peg in exchange rate between the Hong Kong and U.S. Dollars (HK$8 = US$1), the government could not adjust domestic interest rates to regulate the economy. With low interest rates, moderately high inflation, and huge increases in property prices, real estate investments became very attractive. In 1996, long queues of potential buyers and speculators waiting outside new housing-development sites to purchase properties were very common. At one point, buyers were willing to pay HK$1 million (US$129,032) just to purchase the first right to select a unit in one housing project.

Despite the huge "unearned" income generated from property speculation, the government was (and still is) unwilling to institute any form of capital gains tax. Without any tax on profit earned from speculating real estates, capital poured into the sector. The public also joined the action by investing their lifetime saving in their properties. When prices kept moving up, Hong Kong people rushed to buy properties hoping to own their

homes before housing became unaffordable to them. All these pushed the demand for housing further up, and property prices skyrocketed.

Figure 2: Speculation Gap



Source: Loh, Christine. 1997. "Property Market Failure: Land Premiums and Other Frustrations." Policy Position Paper on Land Policy, Citizens Party, 8 May, 1997.

Re-examining the Institutional Arrangements

The belief that housing prices would never fall was finally shattered when the Asian currency crises spread to Hong Kong in October 1997. Speculators launched an attack on Hong Kong Dollars. To defend the peg, the government raised the overnight inter-bank lending rate by 300 percent. This sent a shock wave to the stock and property markets. As banks tightened their liquidity, people began to have problem in financing their purchases of properties. Demand for housing took a sharp dip, and property prices plummeted. From October 1997 to June 1998, housing prices, in general, decreased by about 50 percent.

Because investments are highly concentrated in the real estate sector, the dramatic fall in asset values hampers the economic activities in other sectors of the economy. First, consumers cut their expenditures after seeing the value of their assets have decreased by almost 50 percent. Not only do they suffer a great loss in property values, but their investments in the stock market also encounter difficulties. With the slowing down of property demand and the continuous drop in housing prices, many real estate companies have turned their profits into losses. Lower corporate earnings lead to a reduction in stock prices. The Hang Sang Index dropped from 16,745 points in October 15, 1997 to 7661 points in September 15, 1998 (a 50-percent drop in eleven months).

Relying solely on the initial public auctions to capture land values has created a dependency of the whole economy on the real estate sector. The government must intervene into the markets to prevent further fall of property prices even though on one is sure whether its interventions are sensible both economically and politically. Under the pressure of some large developers, the government stops releasing new land, hoping that it would stabilize property prices. It also expands its Home Purchase Loan Scheme and Home Starter Loan Scheme to grant free-interest loans to qualified individuals to purchase flats in the private housing market. By limiting land supply and boosting up demand, the government hopes to revitalize the property markets. At this point, it is too early to assess the effectiveness of these measures. Based on our judgement, these proposals may at best have some short-term effects, but a long-term remedy would require major institutional changes. As a conclusion, we propose ways that the government could do to initiate such institutional changes.

New Institutional Arrangements for Land-Value Capture in Hong Kong

This essay examines the experience of land-value capture under the Hong Kong leasehold system. According to our estimates, the government was able to recoup approximately 39 percent of the increased land values occurring between 1970 and 1991 by leasing public land. The captured values along with revenues collected from the property tax and rate financed, on average, 79 percent of the annual infrastructure investment during the same period. Although this experience shows that the government is capable of retaining a significant share of the land-value increments though land contracting, the practice has been criticized for causing the high housing costs in Hong Kong.

We analyzed this issue from an institutional perspective and concluded that high housing costs are an outcome of an ongoing, complex process of institutional designs and changes. Institutions emerged from this process determine who has the right to define rules that guide investment decisions and how these rules can be revised and enforced. Put differently, the explanation for high property prices in Hong Kong is far more complicated than just putting the blame on the government or powerful developers.

Problems of the Current Arrangements

In sum, an initial set of rules was established that unintentionally favors large developers at the public auctions. The reason for the emergence of these institutional arrangements

is that the government needs to capture land values by demanding lessees to pay high land premiums at the initial auctions. It is because the subsequent capture of land values by modifying and renewing leases involves high transaction costs. The avoidance of these transaction costs, however, forces the government to release land slowly. Gradual disposition of land, in turn, leads to high land prices. Because land prices are high, acquiring land at the public auctions will require a large up-front capital. This financial requirement becomes a barrier for small- and medium-firms to enter the land market. As large developers dominate the public auctions, they gain the ability to bargain with the government over the timing of land development. They sometimes delay their development projects in an anticipation of higher future returns. When developers defer the construction and supply of housing units, property prices soar. Rapidly increasing prices create an incentive for property speculation. Speculation in the real estate markets, in turn, pushes property prices further up.

When the macroeconomic conditions are good, continuous increases in housing prices reinforce this process of institutional development. There is no incentive for changes because all parties, including the government, developers, property owners, and speculators, benefit from the existing institutional arrangements for land and real estate investments. As more capital investments go into land and properties, the real estate sector gains its predominance in the economy. One drawback of this development is that it reduces the flexibility of the economy to deal with any adverse changes in the internal and external markets. The fact that Hong Kong is facing an unprecedented economic hardship triggered by the Asian crises is illustrative of this assertion.

Land Policy Implications

This analysis has important policy implications for both Hong Kong and elsewhere. For Hong Kong, studying the institutional development of the real estate sector helps us to understand better the connections among factors that cause high land prices. To find a remedy for the problem, we cannot focus on one single factor—such as the government's land-supply policy or the oligopolies in the land and real estate markets. For example, any proposal to reduce the market power of big developers by asking the government to demand low land premiums from lessees will never work unless the government finds ways to reduce its dependency on capturing land values at the initial public auctions. Neither will an increase in government land "sales" ensure a reduction in property prices unless there are incentives to induce lessees to develop land into housing units in a timely manner. As for all institutional changes, if one party bears disproportionally higher costs than the other parties, the initiative is bound to fail because the disadvantageous group will resist the changes. Hence, any proposed changes of the incentive system of real estate investments must consider both the rights and duties of all involved parties. There are three possible ways to change how the public and private sectors conduct their real-estate-investment and value-capture practices in Hong Kong.

<u>Proposal I: Reconstitute Fair Market Competition</u>

First, the government must not rely solely on capturing land values at the initial auctions. As we stated earlier, property taxes and the collection of lease payments are not mutually

exhausted. In fact, one advantage of public leasehold systems is that lease payments are additional sources of land revenues. They are not substitutes for property taxes, exaction, and other instruments that governments normally use to recoup the land-value increments under freehold systems. The important thing is that the government needs to know how to balance the usage of these land-value-capture mechanisms without imposing excessive tax burdens on land and real estate developers.

For instance, the Hong Kong government can try to recoup land values by collecting a higher annual rent from lessees. Instead of asking lessees to pay a land rent that is equal to 3 percent of the estimated rental value of their properties, it may increase the percentage to, say, 5 percent. Because of the increase in annual rent, developers who bid for land at the public auctions would incorporate this additional cost into their calculations of the land premium that they will offer at the auctions. A higher land rent will lower the initial premium. In essence, by raising the land rent, the government is deferring the collection of a portion of the land premium to the future. The merit of this method is the lowering of the initial capital requirement for engaging in land acquirement and development. For the government, any loss in the initial land premium, in principle, will be compensated by an increase in the money collected from the annual land rent. The only financial risk that the government needs to bear is the future fluctuations in interest rates. Yet, this is a technical, but not an insurmountable, problem. Similarly, if developers do their calculations carefully, the increase in annual land rent should not impose a higher development cost on them. So long as the government states explicitly in the land contracts the method of calculating and collecting the annual rent, the new system also should not create high negotiation and enforcement costs.

Alternatively, the government can allow developers to pay their land premiums in installments. Because developers will not need to pay their land premiums in full, small firms who do not have the up-front capital could also compete with large developers at the public auctions. The government used this method to attract land investment in the 1970s, but it abolished the scheme in the early 1980s due to the high default rate in making the payments by lessees.[vii] Thus, there should be a built-in mechanism to check and ensure that lessees who get land at the public auctions have a sustainable financial plan for their development projects. Land should not be granted to developers who make hasty investment decisions just because the government lowers of the initial capital requirement for land investment.

Increasing land rent and reinstating the installment method could help small- and medium-sized firms to compete with large developers at the public auctions. More important, with a careful long-term fiscal planning, the government will not suffer from any serious loss of revenues by implementing these alternative ways of recouping land values.

Proposal II: Penalize Idle Land Development

Second, the government should impose a heavy fine on the extension of development time. In addition, it should specify in the land leases the time limit for developers to deliver the finished units to end-users. With these restrictions included in the land leases,

developers must consider carefully the future housing demand when they bid for the land at the public auctions. At present, if their forecasts of property demand are incorrect, they can just postpone their projects until they see a rise in housing demand again. The future rises in property prices will be able to cover more than the modification premiums that they pay to the government. Yet, as we discussed earlier, the potential negative impacts of their actions on housing supply and prices and the whole economy could be devastating.

To be fair, the government should state the restrictions explicitly in the land contracts before it leases the land to developers. Potential lessees must have the chance to examine these conditions before they bid for the land. Developers must understand that the premium paid for leasing the land excludes the freedom of developing and transferring their land rights and properties to other parties at their desired time. They can offer a low bid (or even do not compete) for the land at the public auctions if the lease conditions are too restrictive and can increase the risk of their investment. The "market"—the bidding atmosphere at the auctions—will then tell the government when to relax these restrictions. Although these development constraints will reduce the initial land premiums, they will allow officials to regain the control over the supply of housing units.

Proposal III: Establish Capital Gains Tax

Third, and finally, the government may establish a capital gains tax on windfalls generated from property speculation. Currently, there is no such a tax in Hong Kong. Both the buyer and the seller of a real estate transaction will only have to pay a stamp duty (similar to a title or registration fee) to the government. To establish a capital gain tax, the government may levy, say, a 50-percent tax on all financial gains materialized at the time of sale. To discourage the rampant, short-term speculation, officials can set a higher rate (more than 50 percent) for all property resale occurring within one year from the date of the initial purchase. Such a heavy tax on capital gains may deter some investors from engaging in property speculation.

Although levying a capital gains tax to allow the community at large to share the financial benefits of development windfalls appears to be legitimate, other countries have experienced great difficulties in collecting this tax (Lam and Tsui, 1998). First, transacting parties may underreport the sale amount so as to invade the capital gains tax. The government, therefore, must have a good record of property values and updates this information regularly. Second, the collection of a capital gains tax is technically difficult. In principle, the tax should only be levied on the “unearned land rent” because imposing a tax on values generated by the building and other land improvements could impede developers’ incentive to invest in real estates. Yet, separating the unearned land rent from the total market value of the property could be technically difficult. Hence, collecting a capital gains tax could incur high enforcement and administrative costs on the bureaucracy. The government and analysts need to do a careful research on assessing the pros and cons of establishing a capital gains tax before implementing this idea.

Political Commitments for Better Institutional Structures

The possibility of implementing these changes would rely on one essential factor: The government must have the political will and persuasive power to convince big developers to accept and adapt to these new rules. Because the existing institutional settings have developed for many years, the power of big developers to influence land and housing supply is firmly established. If they refuse to comply with the new rules, the chance of altering the existing institutional arrangements will be very slim. Whether the Hong Kong government can sway these big developers to support changes is a complex issue that is currently beyond the scope of this paper. The issue, however, is politically important that the government should never overlook when it pushes for any institutional reforms.

Implications for Other Countries

For countries where officials are experimenting with public leasehold systems, these lessons from Hong Kong are instrumental. What we propose here is not a theory of institutional design for leasing public land. Rather, we suggest an analytical framework, derived from the Hong Kong case, for helping policymakers to ask better questions about the complex institutional relationships that could occur under public leasehold systems. In the process of designing their land-contracting systems, policy makers may ask the following questions:

1. Based on the unique institutional settings of their own country, what are the transaction costs involved in capturing land values under their public leasehold system?

2. How will the minimization of these transaction costs alter the existing institutional arrangements and the incentive structure for land and real estate investments?

3. Can benefits of minimizing the transaction costs of capturing land values outweigh the current and/or future costs of developing the economy, in general, and the land and property markets, in particular?

If, indeed, officials find themselves facing conditions similar to Hong Kong, they may not focus on minimizing the transaction costs of recouping land values by limiting land supply. Instead, they should remain flexible in employing other complementary mechanisms to retake land values, such as the collection of land rent or a capital gains tax. The difficulty of this exercise is that reducing the transaction costs of land-value capture associated with one mechanism could increase transaction costs for the others. Because information and our cognitive capability are limited, analysts and policy makers would not be able to foresee all problems and adverse effects. What we need to do is to improve our understanding about how institutions for allocating land values develop and what implications of the development will have on the overall economy. Our study of Hong Kong adds to the knowledge which, we believe, needs to be enriched by many further research.

Notes

[i] Although a property tax of 15 percent may seem high comparing to the tax rates in most cities in the United States, the tax is not levied on the capital value of the property. Assume that an annual rental income of a property is about 5 percent of its capital value, a tax rate of 15 percent on the rental value will be equivalent to 0.75 percent of the capital value of the building.

[ii] If the proposed construction meets the minimum requirements of the conditions specified in the land contract, the lessee does not need to modify the lease conditions. Instead, the lessee has to submit a building plan to the Buildings Department. If the design of the plan does not violate any regulations stated in the Building Ordinances, the Buildings Department will issue a permit to the lessee that will allow s/he to proceed with the construction.

[iii] Readers who are interested in knowing the arguments for these criteria can refer to a more detailed discussion in Hong (1997).

[iv] The classification of residential property is based on the saleable floor area as follows (Commissioner of Rating and Valuation, 1992, ANNEX F):

Class A—saleable area not exceeding 39.9 m^2
Class B—saleable area of 40 m^2 to 69.9 m^2
Class C—saleable area of 70 m^2 to 99.9 m^2
Class D—saleable area of 100 m^2 to 159.9 m^2
Class E—saleable area of at least 160.0 m^2

[v] This percentage, however, may underestimate the significance of lease revenues in total land revenues. According to the 1984 Sino-British Joint Declaration, starting from 1985, the PRC government is keeping half of the revenues generated from land leasing for future infrastructure investment. The retained revenues were not included in the data that I gathered from government publications.

[vi] We are not trying to determine whether Hong Kong can finance a higher percentage of public works than in selected cities. This would require a careful comparison between Hong Kong and these cities, which is not easy for three reasons. First, the most common problem is the lack of relevant data. Information about government revenues and expenditures at the city level is usually not available. If these data are available, they are mostly from different sources. This, in turn, creates the problem of consistency in comparing these data.

[vii] Before 1981, the government gave lessees the option to pay their premiums in annual installments. The deferred-payment method was started in 1969. At that time, the installment-payment system was only for non-industrial land. The major purpose of this scheme was to encourage investment in the property market that was very sluggish during that period. Initially, the government only applied the scheme to valuable land sites in the Central Business District where the amount of land premiums was HK$10 million or more at that time (Hong Kong Annual Yearbook,

1970). Subsequently, the government extended the installment-payment methods to all leasing of residential, commercial, and industrial land. It offered leaseholders the option to pay their premiums in ten equal installments with an interest fee of 5 percent per annum. All the installment-payment methods were generally successful in stimulating land and real estate investments. With the low interest charged to leaseholders, the government subsidized land development by providing low-cost financing. The payment methods were deemed necessary in 1969, because the banking crisis made the financing of land development difficult and excessively expensive to obtain. After the Hong Kong economy recovered from the banking crisis, the government continued to offer the option to leaseholders. These payment methods then became major features of the government land-leasing policy until 1981. In that year, the government abolished the deferred-payment method because of the increasing number of defaults in paying the installments by lessees.

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