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**ON THE FLUCTUATION OF LAND PRICES  
IN POSTWAR JAPAN**

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**I Introduction**

After the war Japan has experienced frequent land price inflations since the beginning of the 1960s, which saw the first peak of land price hike. Since then, issues on land prices and policy have actively been debated, but such discussion has not reached real solution up to now. This is because no effective land policy has been established after all. This also shows how difficult land problem in Japan is. To find out the way to solve land problem, it is necessary to clarify how and why the rises in land prices have occurred. First of all, in this paper, we would like to start to divide the process of land price movements into five periods and then finding the characteristics of each period.

Postwar land prices have moved in close connections with the changes of speed of economic growth, trend of urbanization and regional development, fluctuations in financial market, etc. Then, postwar period can roughly be divided as follows, concerning the land price movements :

- |                        |                      |
|------------------------|----------------------|
| Period I : 1945~1955   | (Showa 20s)          |
| Period II : 1955~1966  | (Showa 30s)          |
| Period III : 1966~1975 | (Showa 40s)          |
| Period IV : 1975~1983  | (Showa 50~58)        |
| Period V : 1983~1993   | (Showa 58~Heisei 5?) |

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This division of periods has been introduced with the durations of cycles, measured from trough to trough, mainly with reference to annual rates of change in "Urban Land Price Indices in Six Major Cities" by Japan Real Estate Institute, as shown in Figure 1, and also in consideration of characteristics in respective periods. Such analysis shows that each cycle is formed in about ten years and this roughly corresponds to the fact that Japanese economy has faced turning points every ten years or so.

The fluctuation process of land prices after 1955 both in rising phase and stabilizing phase of

Figure 1 The Annual Rates of Change in Land Prices by Use in Six Big Cities

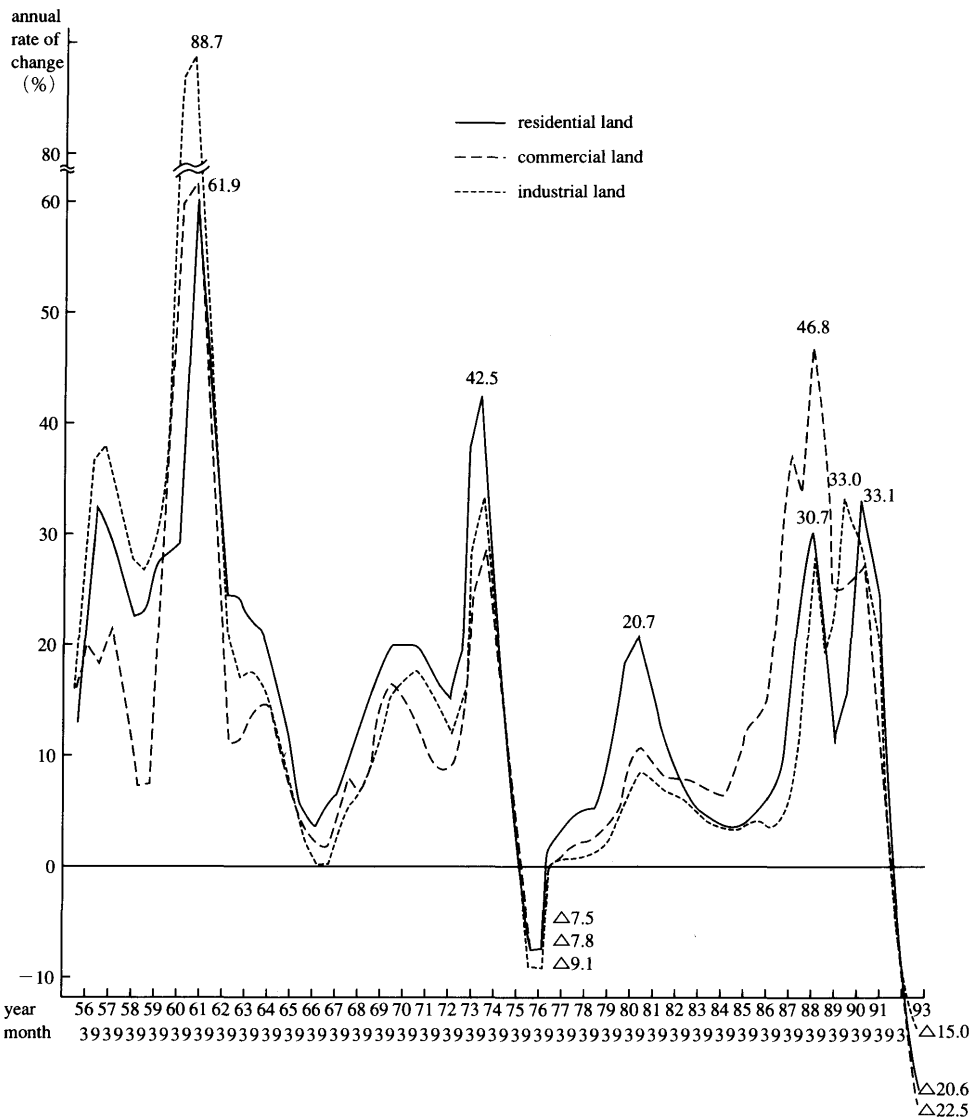


Table 1

	duration from trough to peak	duration with annual rate beyond 20%	ratio of rise	duration from peak to trough	ratio of rise	full duration	ratio of rise
1955~66	year 8.0	year 6.5	7.77	year 3.5	1.41	year 11.5	10.98
1966~75	7.5	1.0	3.02	2.0	0.95	9.5	2.88
1975~83	5.0	0	1.35	3.0	1.18	8.0	1.59
1983~93	7.0	4.5	3.46	3.0?		10.0?	

Source: "Urban Land Price Indices in Six Major Cities (average of uses)", Japan Real Estate Institute.

each cycle period is shown in Table 1. The duration of rising phase from trough to peak is five to eight years and about seven years on the average, while that of stabilizing phase from peak to trough two to three years. It is observed from this Table that the rising phase duers more than twice the stabilizing phase and the skyrocketting rises in land price occur in the last several years of the rising phase, except Period IV.

## II The Movements of Land Prices until Mid 1980s

Now, let us look at the characteristics of land price fluctuations in respective periods.<sup>1)</sup>

### *Period I (1945~1955)*

Period I (Showa 20s) was the time of postwar economic recovery. In this period the rates of rise in wholesale and retail prices exceeded those in land prices, reflecting postwar shortage of goods in spite of severe shortage of houses. So inflation of general commodity prices was a more important issue than land prices.

### *Period II (1955~1966)*

In the beginning of Period II (Showa 30s), however, the rise in land prices stepped into a new stage where land prices rose more rapidly than commodity prices, and thus land price issues came to be a matter of great concern. Japanese economy restored its prewar level and it became a catch-phrase by economists that "it is no more postwar" in Showa 30s. The age of full-scale industrial development arrived and heavy industries started to rapidly grow. While this industrial development realized about ten percent annual rate of real economic growth and led Japanese economy to the high growth line, such industrialization developed in the Pacific coast area including Tokyo, Osaka and

1) On the fluctuations of land prices until 1980, see Sakiyama (1979) and after 1980, see Noguchi (1989) and National Land Agency (1987~1992).

Nagoya. As a result, rapid centralization of employment and population to existing metropolitan areas progressed.

This trend first brought about the increase in demand for industrial land in large cities and their suburbs and then for residential and commercial land because of urban concentration. As a result, the astonishing rates of rapid rises as high as 88.7 per cent in prices of industrial land in six major cities and as high as 61.9 per cent in prices of residential land were recorded in 1961 when the "National Income Doubling Plan" was formulated, as shown in Figure 1.

Conversion of agricultural land into industrial and other uses advanced along with such jump of land prices and then sprawl occurred in the peripheries of large cities. Land price fluctuations in this period, however, almost corresponded to business fluctuation. So the annual rate of rise in land prices fell under 10 per cent due to recessions in 1962 and 1965 to show settlement of land price inflation.

#### *Period III (1965~1975)*

After business recovered in 1966, land prices started to again rise, following business. In major cities land prices rose by the rate over 10 per cent every year since 1967 and reached a peak in 1973 when the annual rate of rise exceeded 40 per cent.

The main characteristic of land price movement in this period was that the rate of increase in land prices in residential areas exceeded that in industrial and commercial areas. Accordingly, land prices in residential areas boosted other land prices. This can be explained by the following facts. The concentration of population into large cities still continued at a high rate, though not so much as in Period II, and households increased in number owing to the tendency to live in a nuclear family unit. On the other hand, demand for owner-occupied houses greatly increased since an increasing number of people wanted to possess their own homes of better quality in accordance with the growth in the level of income and the ascending social status. Many of people who had moved large cities such as Tokyo and Osaka at first had to live in private-rented wooden apartments or row houses of small space. However, heightening of income and social status and increase in family size intensified demand for houses of larger space and higher quality.

Since not only detached houses but also new apartment houses constructed by the Public Housing Corporation and the like came to locate far away in suburbs, suburbanization rapidly progressed and sprawls also expanded further. In order to suppress such sprawls, the new "City Planning Act" was enacted in 1968, by which local governments were given stronger powers of land use control to preserve open spaces in urban area by distinguishing Urbanization Promotion Areas from Urbanization Control Areas. Since Urbanization Promotion Areas was widely designated in the process of enforcement of this law, disputes arose concerning appraisal of the property tax base of agricultural land within Urbanization Promotion Areas, that is, appropriateness of the appraisal on the same basis of residential land.

In the midst of this process, the steep rise in residential land prices in the suburbs also pushed up other land prices in the whole areas of large cities.

On the other hand, regional development greatly progressed and was in booms in this period. After the first National Comprehensive Development Plan was established and the Act for the

Development of New Industrial Cities enacted as a part of the plan in 1962, under this law the fifteen New Industrial Cities were being designated and their construction was initiated. This policy aimed to promote regional development with growth pole strategy and was realizing its effect in 1965~1974 (Showa 40s). Succeedingly, the New National Comprehensive Development Plan was established in 1969, which proposed as a development strategy large-scale development projects such as the nationwide superexpress railway and expressway networks and Honshu-Shikoku bridges and put regional development on the track on a full scale. As a result, rise of land prices became remarkable in local cities as well as in major cities. In addition, easy money policy after so-called dollar crisis in 1971 caused excessive liquidity and not only land-related enterprises but also enterprises of various types of business got involved in speculative land transaction aiming at capital gain. Thus, rise in land prices in 1973 recorded the second peak next to that in the middle of 1960s.

In order to cope with such situation, the National Land Use Planning Act was enacted in 1974 with the intention of suppressing speculative land transaction. In addition, drastic recession due to the first oil crisis led to termination of land speculation and rising land price. Thus, the rate of rise in land prices dropped down below zero for the first time in 1975.<sup>2)</sup>

#### *Period IV (1975~1983)*

After the inflationary period of early 1970s came to an end, land prices were relatively stable until the middle of 1980s, compared with previous periods. This was mainly caused by lowering of growth rates of business and housing investment which had caused high economic growth. In addition, it should be noted that increase in urban population and households became slower and migration of population also drastically decreased. As shown in Figure 2, net immigration to the Tokyo metropolitan area was still in positive numbers but that to Osaka and Nagoya areas turned to negative until mid 1970s.

While residential land prices rose by more than 10 per cent for 1979~80, this would be because small-scale residential development became prevailing due to increase in demand for condominiums in major cities. After that, land prices again moved stably. Then new changes took place since 1983.

### **III Characteristics of Recent Land Price Inflation**

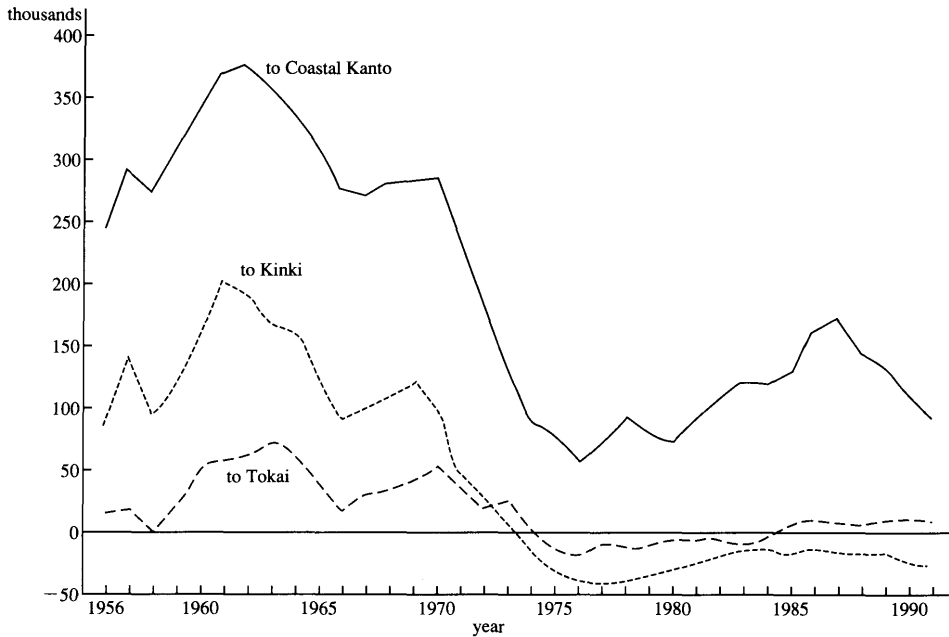
The sharp rise in land prices started in the middle of 1980s in a pattern different from that in the past. At first, land prices rose in the commercial district of central Tokyo in 1983 and then skyrocketed, almost quadrupling by the beginning of 1987. This land price hike extended to the residential area in the suburbs of Tokyo from 1986 to 1987 and further spread to the commercial districts in central Osaka from 1987 to 1988 and in Nagoya and other major cities from 1989 to 1990. Finally, the price hike extended to other areas including residential areas in these cities, as shown in Figure 3. However, land prices turned to fall in 1991 after the peak of 1990 with the effects of various policy measures.

Let us look at the characteristics of the process of such land price inflation. The first charac-

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2) On urbanization, regional development and land prices, see Yamada (1984).

Figure 2 Net-immigration to Metropolitan Regions



Source : Annual Report on the Internal Migration in Japan.

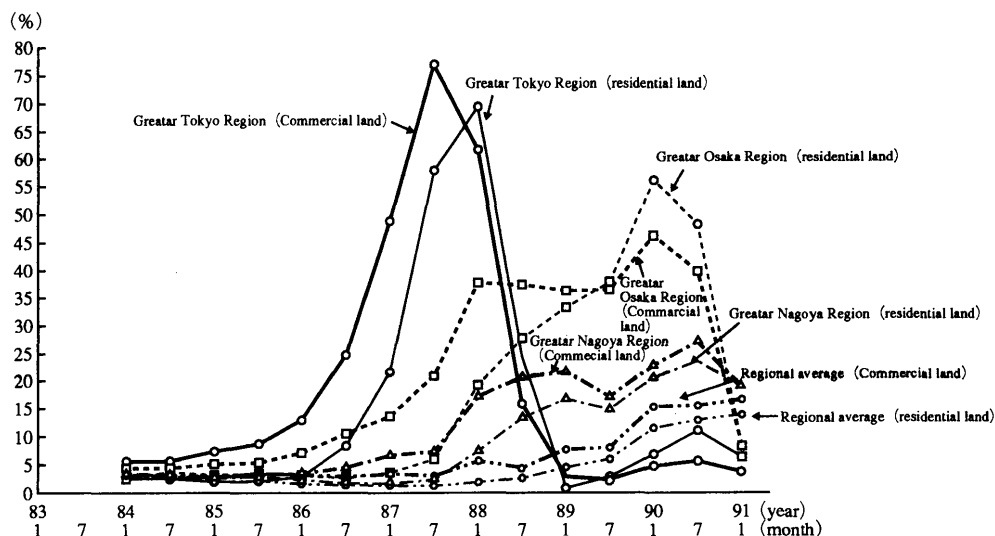
teristic is that the rise in land price was the severest in the central business district of Tokyo and extended from the center to the periphery. So in whole Japan land prices rose earlier and more remarkably in the large agglomeration.

The second characteristic is that land prices in commercial lands rose higher than in residential and industrial land. This means that commercial land led the rise in land prices, but this was a quite different pattern from previous ones. The official valuation of land by National Land Agency shows that land prices in Tokyo Metropolis became 3.4 times in commercial areas and 2.8 times in residential areas for only five years from 1983.

How did such rise in land prices in Tokyo occur? Generally, two main factors have been pointed out. The first is that demand for office spaces at the center of Tokyo was steadily growing since the beginning of 1980s and then the shortage of office space became acute, promoting construction of office buildings. Such imbalance between supply and demand of land boosted land prices in central Tokyo. The second is that excessive liquidity in financial market by easy money policy with low rate of interest generated speculative demand for land.

Views on the cause of this land price inflation differ, depending on which of these two factors attach to importance, and the measures against the issue are naturally different. One view em-

Figure 3 Spread from the Greater Tokyo Region to the Greater Osaka, Nagoya Region and Local Region  
(annual rates of change)



Source: "Land Price Publication", "Prefectural Land Value Survey", and "White Paper on National Land Utilization" by the National Land Agency.

phasizes importance of actual demand for office space.<sup>3)</sup> And the other view lays importance on the financial factor and emphasizes the "bubble" character of the rise.<sup>4)</sup> So we will hereunder analyse these factors more in detail.

The increase in demand for office space in central Tokyo was caused firstly by the establishment of branch offices by foreign companies, especially security firms, since deregulation in financial market came into effect and Tokyo was expected to grow an international finance center.

Secondly, there was development of information processing activities in big central cities. Especially in Tokyo, various kinds of information necessary for business activities are provided in large quantities and through various media of communication. To collect such information, therefore, enterprises increasingly opened new offices in central Tokyo or moved head offices to Tokyo. In addition, office space required per employee was increasing due to the growth of information processing activities and the introduction of office automation equipments.

On the other hand, the shortage of office supply became keen as shown in the extremely low vacancy rates of offices in Tokyo (see Table 2). Actual floor-area ratio (total floor space of buildings/total area of private land) in the wards of Tokyo is about 94 per cent as of early 1985. This implies that there are considerable possibilities to increase supply of office space by redevelop-

3) See Mera (1992).

4) See Noguchi (1990) and the Bank of Japan (1990).

ment such as construction of high-rise buildings. New projects, such as Okawabata Redevelopment and Osaki Station Eastside Redevelopment were already progressing and other big projects including various waterfront development in the bay area of Tokyo were under consideration. So in the long run, supply and demand of office space was expected to balance by the progress of such projects.

It is also necessary to add that demand for housing, especially condominiums was increasing near the center and subcenters of Tokyo. Such increase in housing demand in the central Tokyo was based on the increasing demand for better accessibility to working place because journey to work has become too long for many commuters and then the tendency of suburbanization has almost stopped.

Next, we will look into the impact of easy money policy. In the first half of 1980s, the current balance surplus of international payment was increasing. So the Plaza Accord of September 1985 brought about the sharp appreciation of the yen. In an effort to curb it and the following anxious recession, the Bank of Japan adopted "easy money" policy, lowering the discount rate to a historic level. This caused so-called excessive liquidity phenomenon, under which surplus money flowed into stock market on the one hand and into real estate market on the other.

Then financial institutions were encouraged to increase land-related lendings and real estate companies tried to take advantage of low rates of interest. From Table 4 showing the rates of increase in new loans by banks from 1985 to 1987, it can be understood that increase rates of loans to real estate business for this period exceeded those to all industries in almost all quarters and especially remarkable increase were seen from January to September of 1987. According to the Corporate

Table 2 Vacancy Rate of Office in Tokyo (by year) (%)

1982	0.8
1983	0.7
1984	0.4
1985	0.2
1986	0.2
1987	0.3
1988	0.3
1989	0.2
1990	0.2

Table 3 Vacancy Rate of Building Space in Tokyo, 1987 (by floor space) (%)

	central 3 wards	Tokyo-to
~ 500 m <sup>2</sup>	1.16	1.61
500~ 1,000	1.10	0.74
1,000~ 3,000	0.73	1.15
3,000~ 5,000	0.04	0.36
5,000~10,000	0.12	0
10,000~20,000	0.05	0
20,000~50,000	0.11	0.10
50,000~	0.05	0.13
total	0.10	0.30



Table 4 Ratio of Increase of New Loans for Investment to the Previous Year (Bank Account)

		All Businesses	Real Estate Business (%)
1985	Jan.~Mar.	16.3	29.7
	Apr.~Jun.	9.5	28.2
	Jul.~Sep.	14.7	34.4
	Oct.~Dec.	54.2	60.3
1986	Jan.~Mar.	2.7	32.9
	Apr.~Jun.	36.6	60.2
	Jul.~Sep.	42.4	41.5
	Oct.~Dec.	19.6	46.7
1987	Jan.~Mar.	54.4	71.1
	Apr.~Jun.	45.8	63.8
	Jul.~Sep.	64.2	87.5
	Oct.~Dec.	12.7	24.5

Business Statistics Quarterly, the amount of land owned by corporations considerably increased and many corporations in various business seems to have acquired substantial land in this period. While it is not easy to see how much share land acquisition for the purpose of speculation had among such acquisition, it can be considered that easy money stimulated land speculation and considerable quantity of speculative land acquisition was made.

As shown in the above, both of rise in demand for office space and for housing in central Tokyo and increase in speculative demand for land by surplus money arising from easy money policy can be pointed out as the most important factors of the recent rise of land prices. However, one of these two factors is usually emphasized in the current debate on land price inflation. How should we understand the relationship between these two factors.

Would the land price hike as in the second half of 1980s occur even in case of tight money policy? To this question, answers of almost all respondents should be negative. This is because the rise in land price rise for 1987~1989 was too sharp if it had not been speculation caused by excessive liquidity. It should be also noted that in the past history of land price movement land prices jumped only after speculative demand had fully been activated in the easy money market.

Then, can the recent land price hike be explained solely with speculative demand on the contrary? A matter to be noticed concerning this point is the imbalance between supply and demand of office space in Tokyo. As shown in Table 3, the fact that vacancy rates of office building with large floor space are particularly low in 1987 shows that supply of this type of office buildings was especially short of increased demand for such offices. It also should be added that the demand for new office buildings with high quality such as so-called intelligent buildings was growing.

The second important point is that, while the rises in land price in Period V on commercial areas in central Tokyo extended to residential areas in Tokyo and other major cities, the rates of rises were larger in the areas with higher land prices. Such characteristic is quite different from the fact that the rise in land price for 1972~1974 influenced by excessive liquidity was nationwide and the rates of increase in peripheral areas with lower land price were higher than those in central areas of

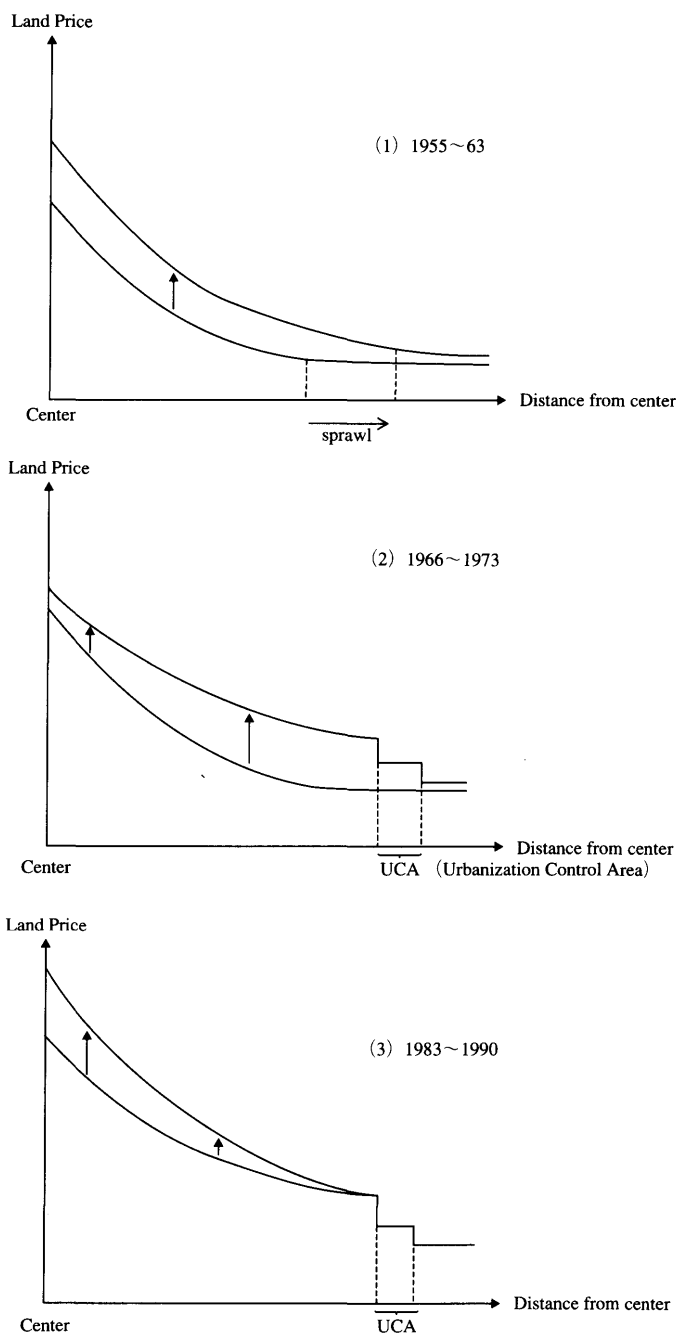


Figure 4 Shifts of Land Price Curves (Gradients)

major cities.

So it can be concluded that the recent rise in land price started with the actual demand for office building and housing in central Tokyo and then soared with the appearance of speculative demand for land. In other words, actual demand set fire to price rise and speculative demand made the fire rage and spread.

The rising phase of land prices in Period V lasted for seven years from 1983. Then after reaching its peak in 1990, the cycle of land price fluctuation entered in the stabilizing phase. Actually, land prices are now falling with effects of government policies for their stabilization, such as the establishment a surveillance system, regulation of land-related lending, tight money policy by the Bank of Japan, revisions of land tax law including the introduction of land value tax, and so on. So-called "bubbles" can be thought to be disappearing and 1993 is expected to be the year of trough ending the latest cycle.

#### IV Shifts of Land Price Curves

As explained above, the characteristics of land price fluctuations are quite different by period. In this section, we will graphically describe the changes in land prices by examining the shifts of land price gradients.

In order to briefly show land price structure of urban area, it is convenient to illustrate land price curves or land price gradients, that is, the relation of changing land prices with distance from center of city. In Japanese cities, land price generally decreases as the location becomes farther away from the center.

In Figure 4-(1) showing the shift of land price curves during Period II (1955~1966), gradients of both curves have little change. In other words, it seems that the old land price curve parallel shifted upward. As a result, the boundary of urban area moved outward and sprawls occurred around peripheral areas.

In case of Period III (1966~1975), the rate of rise in land prices in suburban periphery were higher than those in centers, and the old land price curve shifted upward with flatter gradient as shown in Figure 4-(2).

While land price fluctuation in Period III began in peripheries and spread to central areas, recent rise in land prices were reverse. As shown in Figure 4-(3), the rises in land price began in central areas and spread to peripheries and the rates of increase in land prices were greater in central areas with higher prices than in peripheries.<sup>5)</sup>

#### V Factors causing the Rise in Land Prices

It is often said that Japan has the legal system of land use and ownership, which make it possible to treat land as a means for speculation on its asset value since it provides the opportunity of obtaining appreciation in asset value. In fact, the continuing rise in land prices since the 1950s en-

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5) See Kashiwadani and Nakano (1987) for quantitative analysis of the land price curves.

couraged people to own land as an asset. Putting aside this legal aspect of land ownership, we can point out several economic factors causing the rise in land prices from the above study.

It is no doubt that the increase in productivity of land as a result of economic growth is one of the most important factors of the rising trend of land prices.

Another important factor behind long-run rising trend of urban land prices is the continuing concentration of people and firms to Tokyo region, which almost always made the land market of Tokyo tight. Especially, after the reconcentration to Tokyo in the 1980s, which is called 'rejuvenation of Tokyo' by Mera (1989), started, the movement of concentration seems to have played a very important role. As shown in the extreme low vacancy rates of offices, which were below 0.5% after 1984, the shortage of office space in central Tokyo was very acute and boosted the land prices of commercial land of Tokyo. Then the rise in land prices spread to other uses and to other major cities.

The short-run fluctuations of land prices can mainly be explained by the situation of financial market, which is reflected in the rate of interest. As already mentioned, we had three inflationary land price hikes in the last several years of rising phases. In every case, we had the loose money market supported by the easy lending policy with the extremely low rate of interest. This situation in the rising phase of land price can be thought to have caused large scale of land speculation.

There are some other factors influencing on the comparative advantage of the location. The most important one is the investment of social overhead capital, such as railway, expressway and road network (inter-urban trunk lines as well as intra-urban transport system). In the whole process of economic growth after the war, massive investment of it has been done and it actually brought about the increase in land prices as a natural result in many areas. Another location-related factor is the supply-demand condition of land of specific use. For example, in case of Period III, the demand for residential land in the suburb of large metropolitan areas increased, but the conversion of agricultural land to residential use was slow. In case of Period V, the demand for land of office use increased so significantly that the shortage of office space became serious, and brought about the boom of office building. This in turn triggered the rise in land price in central Tokyo.

There should be added one institutional factor which can be thought to have supported the rising trend of land prices, that is, land tax system. The light tax burden on land holdings has been pointed out to be a cause of the increase in value of land as an asset. The current structure of tax on inheritance is also thought to have close relation to the land price problem, since the inheritance tax assessment for land would be about half of its market price though inherited stocks and bonds are subject to tax on the basis of their full market prices. The third problem of land taxation is the capital gains tax on the sale of land, which is quite complicated and considered to be far from satisfactory from the view point of fairness, neutrality and simplicity. The fourth problem is the special treatment of taxes on agricultural land. Though, in principle, agricultural land within Urbanization Promotion Area should be treated as residential land for property tax, the tax on most of agricultural land within UPA is calculated based on the assessment of agricultural land, whose burden is almost negligible. Therefore, land tax reform became a hot issue in the end of 1980s. Though the new land value tax was introduced in 1991, the debate for better land tax system is still going on.<sup>6)</sup>

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6) See Ishi (1991) on the view for land value tax and Mera (1992) on the view against it.

In this paper we have tried to shed light on the factors causing the rise in land prices, analysing the process of fluctuations of land prices in a descriptive way.

The next task of our study is to analyse quantitatively by using econometric methods considering these factors which can explain the fluctuations of land prices, and then to examine policies to cope with the land problem.

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