Land Policy Problems in East Asia

-Toward New Choices-

A Comparative Study of Japan, Korea and Taiwan

Edited by Bruce Koppel
D. Young Kim

EAST WEST CENTER AND KOREA RESEARCH INSTITUTE FOR HUMAN SETTLEMENTS
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In the 1980s, land policy issues became central concerns in Japan, Korea, and Taiwan as high land prices and concerns about speculation, idle land, land use, and housing affordability all drew attention. However, it was not the first time that land issues were central concerns in the three economies. Four decades earlier, issues of agrarian land reform were the major concern. As Japan, Korea, and Taiwan look to the future, it is clear that land problems and land policies are going to be important issues.

Indeed, if these issues are not adequately addressed, there could be serious implications for the sustainability of economic development as well as for the maintenance of social stability.

The study reported in this volume grew out of two recognitions. The first was the need to reassess land policy experiences and to generate new choices for the future. While Japan, Korea, and Taiwan have their own histories, politics, and policy arrangements, it is important to recognize that they also share some important commonalities in these same areas. The second is the growing interest throughout Southeast and South Asia in the development experience of East Asia. Both of these reasons indicate both the need for and the relevance of a comprehensive assessment of land problems and land policy issues in Japan, Korea, and Taiwan.

The study reported in this volume is a joint effort of the East-West Center and the Korea Research Institute for Human Settlements. Cooperating also were the Land Economics Institute of National Chengchi University in Taiwan as well as Taiwan's National Science Council and Tokyo University in Japan.
We are confident that this study will be of significant interest to many—both within the three economies—as well as among others interested in land problems and in the replicability of the East-Asian experience. We are pleased to have cooperated in this effort.

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INTRODUCTION AND SUMMARY
Land policy problems have been, are now, and are likely to remain key issues in the industrialization, urbanization, and socio-political development of Japan, Korea, and Taiwan. Whether one considers the agrarian reforms more than four decades ago, the problems of high urban land prices today, or the implications of more open economies for land ownership and use in the future, there is little doubt that land problems—on their own and in relation to other processes and issues—have constituted and will undoubtedly continue to constitute a persistent challenge for effective policy, credible administration, and germane politics in Japan, Korea, and Taiwan.

The history, the present, and the future are not matters for understanding and resolution by these three societies alone, however. Throughout Asia, and beyond, the development experiences of Japan, Korea, and Taiwan stand as models for emulation. Land policies have been a major part of the experience—subject to assessment, comparison, characterization, and in some cases, reproduction. This is not surprising. In the agrarian transition and urbanization processes that are correlates of industrialization and socio-political development, access to land and the role of the state in limiting and regulating property rights—including terms of ownership, restrictions on land use, and regulations on disposition through sale, leasing, or inheritance—are critical issues. These issues have direct implications for the directions and consequences of fundamental processes of socioeconomic and political change. For
example, the agrarian reforms in Japan, Korea, and Taiwan—designed to fuse farmland ownership and management and to restrict conversion of agricultural lands to non-agricultural uses—are widely seen as the principal reasons for subsequent successful industrialization and economic development.

An important problem arises, however. Is the usual characterization of the land policy experience in Japan, Korea, and Taiwan accurate either as a description or comprehensive as an explanation? The issues of accuracy and comprehensiveness are crucial not only for describing and understanding the nature of economic transformation processes in the three economies, but are also crucial because of the broader generalizations that have been drawn from East Asian experience about the roles of land problems and policies in economic development. For example, in the Philippines, several sides in periodic debates on agrarian reform have drawn on assessments of East Asian experience to support their opposing positions and prescriptions. Others have acknowledged that the land policy experience in Japan, Korea, and Taiwan was important for those economies, but also idiosyncratic. For example, in Malaysia and Thailand, policy orientations of “Look East” have concluded that while many facets of the East Asian development experience are worthy of imitation or adaptation, many elements of the East Asian land policy experience are unique to East Asian circumstances and do not have wider applicability.

But which elements are unique: those associated with the sources of economic growth (e.g., agrarian reform) or those pertaining to the consequences of a variety of land policies (e.g., rigidities in land markets, land speculation, fragmentation of urban land policy, the re-separation of ownership and management on agricultural land)? And to what degree can the policies on land be distinguished from the experiences associated with other problems and policy choices in the process of economic transformation? For instance, as problems of speculation, idle land, farmland loss, and housing affordability emerge throughout Southeast Asia, suspicion is growing that the “idiosyncrasy” position may be problematic, that there is a more universal underlying process. All this is not surprising. The experiences in East Asia are diverse and there are clearly idiosyncratic elements in those experiences, but over time interpretations of the experience
have become highly stylized—discounting the differences among the three countries and oversimplifying the relationships between agrarian transformation and processes of urbanization and industrialization.

This stylized understanding is proving problematic not only for those outside Japan, Korea, and Taiwan seeking to discern what generalizations should they draw. Stylized understanding has become a problem for political debate within Japan, Korea, and Taiwan—both about the broader meanings of their land policy experiences for their development trajectories, and about what choices there are to define land problems and development land policies for the future. Indeed, complicating understanding of the complex issues associated with land problems and policies in Japan, Korea, and Taiwan is the power of a conventional wisdom that has developed about these problems and policies—particularly in literature from outside the three economies—a conventional wisdom that has become so compelling as to make new inquiries appear superfluous. Improving understanding of what has happened and why in the evolution and management of land problems as well as helping to inform the growing public debate within the three economies and beyond about what should happen in the future require challenging conventional wisdom.

**Conventional Wisdom**

There are five major precepts in the conventional wisdom about land policy and economic development in Japan, Korea, and Taiwan.

1. Agrarian reform is frequently characterized as fundamentally an externally imposed policy event—principally executed by American interests, both official and unofficial. This reform as an externally-imposed event overcame rigid domestic opposition to restructuring access to agricultural land and in so doing, established the foundation for subsequent economic growth and democratic institution-building.

2. The successful completion of agrarian reform helped to directly finance processes of industrial transformation, in large part by enabling agricultural landlords to invest in industrial enterprises. At the same time, former tenants became productive owner-oper-
ators whose own savings and increasing demand for industrial and consumer goods also helped to finance and shape industrial transformation

3. The successful completion of agrarian reform also helped to ensure a pattern of economic development characterized by significant degrees of equity in income distribution—between urban and rural areas as well as across different production sectors and occupational classes.

4. A viable small-farm agriculture and associated rural social systems remain to this day, in part as legacies of the agrarian reform (which prevents the re-emergence of tenancy and absentee landlordism) and in part as consequences of the strong political influence of agricultural interests. Political influence from agriculture has been especially effective in maintaining subsidies for rice production, preventing competition from imported agricultural commodities, and limiting the taxation of agricultural lands and income.

5. Contemporary urban land problems—most notably high prices, idle land, and unaffordable housing—are the results of urban and industrial transformations which increase the competition for available land and of government policies that systematically regulate and intervene in urban land markets. Additional contributing factors are the rigidities associated with the earlier agrarian reform, especially the severe restrictions on land use conversion away from agriculture.

The picture offered by conventional wisdom is one of a decisive externally-imposed event (agrarian reform) that becomes a principal cause of subsequent patterns of agrarian transformation and economic development. Conventional wisdom about urban land problems is that for the most part, urban land problems are the inevitable correlates of urban and industrial development, but made worse by the political economy of urban land policies and the rigidities in land markets caused by the agrarian reform.
The Project

The project which generated the papers in this book was organized to reassess the evolution and contemporary status of land policy problems in Japan, Korea, and Taiwan, and on the basis of the understanding generated, to consider broad options for addressing land policy issues in the future for Japan, Korea, and Taiwan. The research was organized around five principal questions.

1. What were the social origins of agrarian reform? Raising this question was crucial for reassessing the conventional wisdom that agrarian reform was an externally imposed event. This matter requires explanation not simply for the sake of historical accuracy, but arguably to clarify understanding of the roots of the contemporary political economies of land policy in the three countries.

2. What were the consequences of agrarian reform for patterns of urbanization and industrialization? While we recognized that this subject has been the focus of considerable attention, we also believed that too much of this work has focused on characterizations rather than analyses of the consequences of the reforms in the immediate years after the reforms and that not enough work has examined the longer-term effects of the reforms—on agriculture or on the societies-at-large.

3. What were the consequences of urbanization and industrialization for the (re)definition of land problems and policies? While it is obvious that increasing urbanization and industrialization would draw increasing attention to land issues associated with those processes, we do not believe this point has been well-integrated with assessments of the changing political economies of land policy.

4. What are the major dimensions of contemporary land problems and policies? Our intention was that the discussion on this question would be formulated in the context of the answers to the pre-

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1. Principal funding for the project came from the Korea Research Institute for Human Settlements, the National Science Council of Taiwan, and the East-West Center.
ceeding three questions. Here we believe that while there is considerable debate within the three societies about land issues, analyses of these debates have not always been clearly placed in an appropriate historical context. Placement in an appropriate historical context has the virtue of evoking continuities and discontinuities in policy debates—not simply in terms of the technical content of policies, but also in terms of the constituencies and politics which yield the policies.

5. In what directions are land problems and policies moving and what are the principal policy choices? Our intention was to consider the evolution of land problems in the future with ample sensitivity to the paths these problems have taken to the present. In considering future choices, our intent was not to develop specific technical solutions to problems, but rather to lay out directions and criteria for choices that could be translated into specific technical strategies.

Research and discussions to address these questions was undertaken over a two-year period by 30 scholars and land policy-makers from Japan, Korea, Taiwan, and the United States. Most of the research papers they produced are in this volume. The purpose of this chapter is to summarize thematically the insights and conclusions contained in the papers and raised in the discussions.

The Social Origins of Agrarian Reform

The principal conclusion of our research on the social origins of agrarian reform in Japan, Korea, and Taiwan is that land reform was primarily a domestic process that raised certain issues, resolved through agrarian reform some of those issues while leaving other issues unresolved, and which generated new issues which are subjects for continuing resolution. The processes of agrarian reform ranged from (a) what can be called mainstream political discourse within available institutional forums (principally civil and military bureaucracies), to (b) various types of peasant movements and agitation

2. Meetings were held in Honolulu, Taipei, and Kakegawa, Japan.
(including unions, strikes, land takeovers, and anti-colonial movements) focused on getting land issues into political discourse, (c) to a variety of paramilitary activities from both the left and the right that had the objectives of circumventing or replacing conventional political discourse. The domestic sources of agrarian reform included landlords (both cultivating and absentee), tenants, sub-tenants, anti-colonialists, anti-militarists, rural credit and marketing interests, and the “state.” Among the key processes surrounding the emergence of agrarian reform, in addition to the social and political activities directly focused on reform, were war, decolonization, foreign occupation, and demographic change.

The emphasis on process is significant for at least two reasons. It draws attention to agrarian reform as a series of events and underlying dynamics (rather than as a single independent event) and it points to the fundamentally domestic (rather than foreign) character of these activities. This does not say that the postwar reforms managed directly or indirectly by American occupation forces were insignificant or inconclusive, but it does indicate that the significance and substance of those “imposed” steps must be defined and measured in terms of the ongoing processes in which they intervened. For example, in South Korea, American forces actually reversed land takeovers and reforms conducted in the wake of decolonization by (non-communist) Korean political forces. In Japan, the bulk of the reform had been completed in 1943, before the end of the war. In Taiwan, the single event was actually a series of events which began with tenure reform and eventually concluded with a “land to the tiller” program.

As will be seen later, the emphasis on the importance of historical domestic processes also provides an important context for assessing the consequences of agrarian reform. Indeed, the question of continuities and discontinuities in the socioeconomic and political processes that constituted much of the prewar “demand” for reform extend past the adoption of formal agrarian reform laws to the consequences of these reform laws for farmland ownership and utilization under changing conditions.

Table 1 summarizes the principal issues which were raised, resolved, left unresolved, or were newly generated. In considering Table 1, it is important to keep in mind the diverse interests that were...
Table 1. Social Origins of Agrarian Reform: Issues Raised and Their Status

<table>
<thead>
<tr>
<th>Issues</th>
<th>Raised</th>
<th>Resolved</th>
<th>Unresolved</th>
<th>New</th>
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<tbody>
<tr>
<td>Landlordism and Social Justice</td>
<td>×</td>
<td>×</td>
<td>Comprehensive social justice criteria</td>
<td>Issues of equity, representation, and democratization</td>
</tr>
<tr>
<td>Economic Security and Poverty</td>
<td>×</td>
<td>×</td>
<td>Intergenerational security</td>
<td>Access of working and middle classes to housing</td>
</tr>
<tr>
<td>Nationalism and Anti-Colonialism</td>
<td>×</td>
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<td></td>
<td>Nationalism and globalization</td>
</tr>
<tr>
<td>Vitality of Agriculture</td>
<td>×</td>
<td></td>
<td>The role of agriculture in the national economy</td>
<td>The future of agriculture</td>
</tr>
<tr>
<td>Concept of Property</td>
<td>×</td>
<td></td>
<td>State prerogative versus private rights</td>
<td>Environmental issues</td>
</tr>
<tr>
<td>Value of Land</td>
<td>×</td>
<td></td>
<td>Commodity, way-of-life, political resource</td>
<td>Speculation</td>
</tr>
<tr>
<td>Role of the State</td>
<td>×</td>
<td></td>
<td>The lines between public and private interest</td>
<td>Democratization of land policy</td>
</tr>
<tr>
<td>Balanced Development</td>
<td>×</td>
<td></td>
<td>The role of agriculture in the national economy</td>
<td>Issues of land market rigidity, the importance of urban land problems</td>
</tr>
</tbody>
</table>
principal parties to the prewar processes associated with agitation over land reform. These different interests were engaged in processes focused broadly on issues of nationalism, social justice, economic security, and agricultural and agrarian vitality. Table 1 suggests what happened to these four issues in the course of the processes associated with the origin and adoption of agrarian reform.

For example, the issues of landlordism and social justice were equated and were addressed in the sense that landlordism was curtailed and both rural radicalism and feudalism were suppressed. Landlordism, defined as the separation of ownership and management, was dissolved through the fusing of ownership and management, but almost immediately rigidities in land distribution and use surfaced. Social justice, defined as the fusion of ownership and cultivation rights, was also achieved. In the short term, the vitality of agriculture and agrarian life were undoubtedly strengthened. However, assuming that reducing landlordism was equivalent to solving problems of social justice sidestepped the broader meanings of the demands for social justice, meanings which would emerge as the voices of other non-agrarian interests (e.g., industrial labor, urban middle classes) acquired power. For this reason, it is more accurate to say that the issue of social justice was raised by the demand for agrarian reform more than it was resolved by agrarian reform. Instead, the dimensions of the social justice issue continued to evolve, in some ways perversely influenced by the later consequences of agrarian reform.

The issues of the concept of property and the value of land have fared in similar ways. For example, in the case of the concept of property, the notions of individual ownership and proprietorship implicit in the specific demands for restructuring property relations on agricultural land were achieved by mobilizing a potentially problematic assumption: that the state's protection of their property rights can include restrictions on land use, land user, and land transfer. These appeals to state restrictions as the principal mode of protecting the gains of the reforms were present before the reforms and remained present and unresolved after the reform. Here, however, it is important to note that the paths of the three-countries were not entirely similar on this broad point. In the cases of Japan and Taiwan, the reforms were "completed," that is, issues of land transfer were established in
statutory law. By contrast, in the case of Korea, that step could never be achieved and the issue of transfer was “protected” by administra­
tive rather than legal measures. This difference is reflected in the characteristics of agricultural land politics well after the reforms.

In the case of the value of land, the issues of land as a commodity versus land as a cultural and historical embodiment versus land as a political resource were not categorically resolved at all. This reflects ambiguities that were present among those who demanded reform in the decades before the final reforms, and this also reflects discontinu­
ties in the relationships between those who actually benefited from the reforms and those who agitated for the reforms. By extension, the reform processes were effective in raising issues about the role of the state on matters of social justice, economic security, nationalism, and agrarian vitality, but the processes did not resolve the issue of how far the state’s role should actually go in pursuit of these or other pertinent concerns. Balanced development was another important issue raised by processes associated with agrarian reform, but the processes did not resolve either what balanced development meant, nor how it should be achieved. Instead, as later sections will discuss, issues of balanced and unbalanced development acquired new forms in the context of changing urban-rural relationships. Concerns about rigidi­
ty in land markets and the implications for capital and housing mar­
kets, the future of agriculture in an increasingly internationalized economy, and the overriding importance of urban (rather than farm) land problems, moved to the forefront of policy debates.

Despite the existence of issues which have not been resolved or which have been raised and are still subject to resolution, there are important continuities and discontinuities which flow from the pro­
cesses associated with the social origins of agrarian reform. Concerns about justice, security, nationalism, and the vitality of rural life remain central issues, but their contents have been fundamentally altered, reflecting fundamental changes in the composition of the three economies. In effect, in some cases, these issues were resolved in the late 1940s and early 1950s by agrarian reform in the way the issues existed at that time. However, as times changed, earlier resolutions—about issues and about processes to address those issues— required renegotiation among both some of the same interests
who participated in the earlier resolution as well as among many interests who were not participants at that earlier time. In the course of such renegotiations—and to the varied degrees that such renegotiations occurred—there were not always assurances available that new agreements would need to reflect continuity with earlier agreements or intentions. Accumulation of inconsistent agreements was just as likely as continuity with older agreements or, by the 1990s, outright reversal of previous resolutions.

The Consequences of Agrarian Reform

The consequences of agrarian reform for subsequent patterns of industrialization are a well-documented topic and indeed, as noted at the outset, are now part of the conventional wisdom about the development experience in East Asia. The research completed here, however, paints a more complex and subtle picture. There is no question that in the decades since the reforms, the linkages between agriculture and industry, and between urbanization and rural life, are far more pervasive than they were before the reforms. However, the conventional wisdom's picture of direct causality between the agrarian reforms and subsequent economic development requires modification. There are four major points of modification.

1. The Reforms as Decisive Policies

First, agrarian reform did become a decisive social and political policy in all three economies. It is important to emphasize "social and political" because while post-reform economic development patterns were certainly significant, they were less the direct results of agrarian reform as such, and far more the consequences of other distinct economic processes—ranging from foreign aid and a series of favorable trading and security arrangements with the United States to the reconstruction of the state's economic power both domestically and internationally and the rehabilitation of prewar concentrations of financial and industrial capital. While these processes sometimes intersected with agrarian reform processes, they were not the direct result of the postwar agrarian reforms. As the case of Japan best illustrates, there were certainly significant relationships between processes
of agrarian transformation and the construction of commercial, industrial, and state power, but all these processes and relationships had been underway at least since the Meiji restoration in the 19th century.

The social and political consequences of the postwar reforms, however, were attributable and decisive. The reforms engineered a restructuring of rural society with ramifications for social structure and social mobility extending beyond the agricultural economy. By the early 1960s in Japan and the early 1970s in Korea and Taiwan, rural-urban labor migration did not consist primarily of unskilled individuals from poor farmer households, but rather educated individuals from increasingly affluent farm families. This shift in labor force characteristics was a key component of the technological ladder and competitive upgrading that was characterizing the industrialization processes of the three economies.

There were also important political consequences. The beneficiaries of agrarian reform, especially in Japan and Taiwan, became important cornerstones of the governing political alliances. This would have important implications not only for the projection of agricultural interests in national policy arenas. The reforms also assured that patterns of agrarian development would be supportive of and compatible with wider patterns of conservative political evolution. In Japan, the reforms completed the destruction of fundamental feudal and militaristic power structures in rural areas. In Korea and Taiwan, the vestiges of Japanese colonialism on agricultural landholdings were dismantled. The genius of the reforms was that they could combine relatively radical intent-restructuring rural power relations-with relatively conservative outcomes-the hegemony of a conservative political agenda.

The reforms preempted what were viewed in both the domestic and regional political economies at the time as more radical approaches to agrarian reconstruction, most notably the revolutionary courses undertaken in China and North Korea. The formal and most well-known reforms, implemented during the period 1946-1954 in the three economies, while directed at some of the issues listed in Table 1, were ultimately based on a different set of goals: strengthening economic and political security in rural areas not so much as keys to social justice but rather as keys to national (re)construction, economic rehabili-
tation and growth, and the suppression of radicalism. Arguably, the significance of external forces on the reforms was not that the reforms took place, but that (1) several reforms which had already occurred were consolidated and (2) the principles guiding consolidation were consistent with prevailing postwar concerns about economic reconstruction, domestic security, and regional political competition.

2. Agriculture-Industry Linkages

As concluded in much of the literature, there were important linkages from the outcomes of the reforms to capital and labor markets in the wider economy. However, these linkages were rarely as direct as conventionally portrayed nor is the order of causality always as described. These differences from the conventional interpretation are closely related to several key discontinuities and continuities which can be associated with the reforms and their consequences.

To understand this point, it is first essential to consider the roles of the extraordinary circumstances which facilitated the consolidation of agrarian reform processes. These circumstances included war, processes of decolonization which had the effect of removing a foreign landlord class and making substantial land available without the need for purchase, occupation by external military and political forces, hyperinflation, and domestic landlord classes already significantly weakened by previous events and processes. However, it is also important to recognize that these exceptional circumstances did not cause reform or predetermine the consequences which followed. The crucial point here is the term "consolidation."

Exceptional circumstances made it possible to take the momentum developed through indigenous processes that extended back several decades and to essentially selectively consolidate and freeze that momentum. Freezing the momentum meant, as noted above, that the reforms would be fundamentally reformist rather than radical. This was crucial because it meant that the reforms would converge with other established political and economic interests in an era characterized by strong commitments to anti-communism. It also meant that more radical elements who had played critical roles in the reform process up to that point would not be the principal beneficiaries of the political empowerment the reform conferred. Instead, political power
was conferred on more moderate and even conservative elements—in terms both of those farmers who directly benefited from reform as well as those bureaucratic and political interests which benefited from the roles the state acquired to manage and protect the reforms. This latter point would have crucial implications for the emergence later of the politics and policies to manage urban land problems.

The important point to remember is that in retrospect, exceptional circumstances meant that the postwar agrarian reforms were not the first reforms (e.g., there were major reforms in Japan in 1943 and in Korea in 1945-6), but in a fundamental political sense, they were the last. The agrarian reforms established the fundamental terms of reference for relations between agriculture and the rest of the political economy and later, the fundamental terms for relationships between the state and land problems more generally. In some cases (e.g., Japan and Taiwan) the terms of the relationship between agriculture and the wider economy were established comprehensively, a point that helps explain important continuities in subsequent agricultural land policy developments. In other cases (e.g., Korea), the terms of agriculture’s relationship with the broader society were only partially established and never completed, also helping to explain subsequent discontinuities in agricultural land policy developments. In all three cases, establishing the terms of reference for intersectoral relationships was the most decisive aspect of the reforms for both the immediate and longer-run consequences of the reforms.

It is also essential to consider that the nature of capital linkages from (former) landlords to business and industry depended significantly on pre-existing conditions. These conditions included the political capital and economic interests of landlords, the status (in terms of networks and alliances, economic assets, and political accessibility) of pre-existing business and industrial elites, the conditions of postwar financial systems and in particular the limited availability of many financial instruments, and the directions of government-led industrial rehabilitation strategies, including strategies in Korea and Taiwan for disposition of sequestered properties and assets.

Much of the conventional interpretation implies that business and industrial elites emerged from the reforms, a consequence in part of the movement of existing landlords and their capital into business and
industrial investments. What this interpretation ignores, however, is that in all three cases, well-established business and industrial families were already in place. Where landlords followed the path portrayed in the conventional interpretation, they frequently did so before the final reforms. While there clearly was facilitation of capital flow from agriculture to industry, the steps in the flow frequently were not directly from landlord to industrial investment. Hyperinflation, political chaos, and deep discounting of land bonds made the bonds of little value individually even at the time they were issued—especially in Japan and Korea. However, when accumulated and traded (in a process that mimicked a securities market), they could be used eventually to acquire significant amounts of sequestered properties and assets that government was auctioning or that other industrialists were selling.

3. Building a Viable Agriculture

Major tenets of the reforms, both in the processes the led up to the final reforms as well as in the conventional characterizations of the results of the reforms, have been to maintain viable agriculture and to promote rural welfare. From the early 1950s, however, the relationship between the reforms and the vitality of agriculture and rural life has been a complex issue. Agricultural productivity and incomes increased relatively soon after the reforms were completed in Japan and Taiwan, but increases in productivity and income for Korean farmers did not begin effectively until a decade after the reforms. What this variation reflects is the pre-existence of important agricultural infrastructure in Japan's case, a strong commitment to provide agricultural support services in the case of Taiwan, and the incompleteness of reform in Korea, a point which left the agricultural sector unattended until the 1960s.

By the 1970s, several other issues began to emerge which related to fundamental changes in the structure of agriculture. As the national economies developed and urban-industrial employment opportunities expanded, the incidence of part-time farming grew and increasingly (in part because of the reforms) households owning farmland maintained some commitment to agriculture not as farmers but as owners of an appreciating asset—agricultural land that might someday be eli-
gible for conversion to non-agricultural land—an even more valuable asset. This did not happen in the same manner or at the same pace across all three cases. For example, in Japan, the close association between agricultural interests and the power structure of the governing Liberal Democratic Party (and in Taiwan between agricultural interests and the governing Koumintang Party) made agricultural interests much stronger than they were in Korea. One difference was that considerable public investments to improve rural infrastructure and bring industry to rural areas occurred faster in Japan and Taiwan than it did in Korea. This meant that the option of part-time farming was more readily available in Japan and Taiwan since alternative employment and income opportunities were often in the same areas as the farm. In Korea, the weaknesses of rural industrialization made part-time farming a more recent development. However, as a corollary, in Korea the average age of farmers has increased at a faster rate than in Japan or Taiwan.

These patterns were strongly supported by subsidy and tax policies which maintained farmer incomes without relation to agricultural competitiveness. In this context, the maintenance of fundamental restrictions on leasing did not simply prevent the recurrence of landlordism. It also inhibited strategies of cooperation and land-pooling needed to avail of scale economies in production investments. This inhibition was further supported by the rising value of all land. By the late 1980s, another dimension of rigidity became increasingly obvious. Questions about who is a farmer—questions required by restrictions on agricultural land transfer under the reforms—were growing in importance as problems of farmer succession threatened the future of agriculture. If the sons of farmers did not want to farm, and surveys routinely indicated that over 80% did not, how were those who did want to farm going to acquire access to land in the absence of both leasing and purchase options?

This is not to say that the reforms have undermined the vitality of agriculture. Agriculture as it was before the reforms had already shown itself to be politically and socially unsustainable. The reforms offered a new trajectory for agriculture based on the model of the independent owner-cultivator. The reforms also institutionalized agriculture’s claim for uniqueness—as a productive activity and as a way
of life. The claim of uniqueness was crucial for maintaining agriculture’s special treatment. What the reforms were unable to do, however, was to insulate agriculture from wider economic, political, social, and cultural transformations that affected both agriculture as an economic activity and rural culture as ways of life. What these wider transformations meant for agriculture—in part because of the mediating role of the reforms—was not simply to challenge agriculture’s uniqueness but to turn the association between the claim of uniqueness and preserving the viability of the independent owner-cultivator on its head. What protected farmers in the mid-1950s from forms of exploitative power originating outside agriculture presented rigidities four decades later. These rigidities constrained agriculture’s abilities to competitively adapt to its changing environment. Today, the future of agriculture is not simply a technical or economic issue. Once again, it is an issue about structure. The issue was not “caused” by the reforms, but the reforms have had a substantial influence in shaping the specific forms the issue has assumed.

4. The Reforms as a “Model” for Urban Land Policy

Agrarian reform had another class of impacts that extend beyond agriculture. These impacts are associated with patterns of urbanization and national land use. Over time, agrarian reform became associated in public debate with patterns of urban concentration and land use, patterns which were clearly exacerbated by rigidities in land use conversion characteristic of agrarian reform. Beyond that, a comparable and arguably derivative superstructure of land use regulation based on zoning restrictions, preferential taxation treatment, and exclusion permits spread beyond agriculture to land use management generally. In effect, the entire land policy system in each economy became characterized by an orientation that reproduced the rigidities associated with agricultural land policy to other forms of land use and at the same time expanded the opportunities for selective and sub rosa circumvention of these rigidities. This point is illustrated by the adaptation in all three cases of forms of zoning around agricultural promotion areas (essentially agrarian reform lands), urban promotion areas (for urban and industrial development), and urban control areas (for limiting urban densities and forms of industrial location).
There is an additional impact, one that focuses on the processes for managing land policies. The politics of agrarian reform once the reforms were in place was essentially bureaucratic—both within government and within major political alliances, Japanese voters have never had the opportunity to vote on elements of the existing land reform package. And while there have been changes in the package over the years, the vast majority of those changes were administrative rather than legislative outcomes. The same was true in Taiwan and Korea. As urban land policies emerged, they quickly displayed the same basic political characteristics. Where the key agency for agricultural land policies was the Ministry of Agriculture, the key agency for urban land policies became the Ministry of Construction. The agrarian reform experience did not “cause” the trajectory of policy-making for urban and industrial lands. Arguably, agricultural and urban land policy systems both reflected deeper characteristics of state-economy relations and the implications of such relations for the politics of resource allocation. Nevertheless, the fact was that agricultural land policies were developed first, and in terms of both their content and the processes in place for managing the policies, they did establish a model.

While agrarian reform emanated from an agenda of social goals associated with improving social justice and reducing economic insecurity, the consequences of agrarian reform for the construction and management of land policy generally moved land policy (including agricultural land policy) away from any direct connection with those earlier goals. Urban land policies were oriented to issues of capital accumulation—industrial development, real estate development, and financial growth. It is only in very recent years that social issues—notably housing inaffordability and deterioration of the urban environment—have become important. However, the basic strategies employed to address these goals owed a clear debt to agrarian reform. Land policies increasingly reflected patterns of economic development characterized by both the differentiation and concentration of economic interests, all seeking to use the state as a guarantor of their interests. Differentiation supported a proliferation of policy types to match the “technical” needs of diverse interests while concentration increased the responsiveness of certain policy arenas to powerful industrial, banking, and urban real estate interests.
Urbanization, Industrialization and The Changing Nature of Land Policy Problems

In the four decades since agrarian reform was promulgated, the economies of Japan, Korea, and Taiwan underwent what can only be called momentous transformations. These transformations—including urbanization, industrialization, major participation in the international economy, and demographic and social transitions which have significantly altered the age distribution of population and the composition of the labor force, and have created very strong middle classes—need not be documented here. The issue requiring attention is what the implications of these changes have been for the characteristics of land policy problems.

In the 1950s, if one talked about land problems and land policy, one was talking about agricultural land. By the 1980s, popular perceptions of land problems had clearly shifted to urban land and, in many cases, it was no longer agricultural land that was seen as a problem but rather agricultural land reform. How and why did this change occur? The answer is fairly obvious: linkages from agriculture to the broader economy and processes of social change firmly embedded agricultural land in broader macroeconomic, social, and political dynamics. These linkages had important consequences, in turn, for the status of both agricultural and urban lands. At the same time that the distinctiveness of agriculture was receding, the scale and importance of urbanization and industrialization processes were increasing.

Processes of incorporation into the wider political economy have been associated with significant differentiation of interests within agriculture. The most important indicators of this differentiation in all three economies are:

1. the decline of full-time farming and the growth of part-time farming by households whose principal occupations are outside agriculture;
2. slowly increasing differentiation within agriculture between a still-dominant rice sector and a growing specialty crop sector;
3. the emergence of various forms of contracting, leasing, and (extra-legal) quasi-renting to keep lands in agriculture (and protected from considerably higher taxes) as well as to facilitate informal patterns of land consolidation;
4. patterns of demographic change which are associated with an increase in the average age of farm operators as successors from within the immediate family became increasingly rare (currently averaging under 20%);
5. patterns of industrial and commercial decentralization and urban-rural linkages in settlement patterns which increasingly have blurred the traditional urban-rural lines (even within rural areas); and
6. the rise of very powerful agricultural power groups (principally cooperatives), closely linked historically to the growing power of the state in the economy as well as to the political processes which historically and currently support the state's strong role in the agricultural economy.

At the same time, issues of urban and industrial land increasingly replaced agricultural land as the centerpieces of any public agenda on land policy problems. This reflected major patterns of demographic, economic, and social change as the demands for urban and industrial land grew. Initially, issues of urban and industrial land arose as distinct categories (as compared to agricultural land). However, in time, the differences shifted from distinct categories to competing categories as the demands of urbanization, industrialization, and participation in the international economy increasingly depicted protected agricultural lands as impediments to economic development.

Not surprisingly, these changes in sectoral relationships were accompanied by changes in land policies. The political economy of land policy became increasingly complex, a complexity characterized by the rigidification (and some would say the fossilization) of certain interests (e.g., rigid adherents to "original" agrarian reform restrictions on land conversion) along with increasing complexity and fragmentation of land policy management. Increasingly, land policies—especially for urban land—assumed several important characteristics.

1. It became increasingly difficult to locate leadership in land policy development and implementation. The goals of specific land interests (agricultural, industrial, and financial) were often indistinguishable from the orientations of specific administrative authorities with formal responsibilities for policy leadership. This
made corruption increasingly likely and policy accountability increasingly difficult.

2. There was an accumulation of often inconsistent policies—both between land policies and among land policies and other policies such as tax, trade, monetary, labor, industrial, and housing policies. These inconsistencies reflected the particularistic nature of land policy-making and the interests many quarters had in insulating land policies from the concerns and attention of other policy-making arenas.

3. With the growing differentiation of economic and political interests in society, there was a commensurate differentiation of administrative agencies and jurisdictions for applying policies. This was especially true of land policies, where the organization of policy management became increasingly fragmented, both horizontally (e.g., in Korea and Taiwan) and vertically (e.g., in Japan). The basic infrastructure for urban land policies—authoritative records of land transactions, agreed and commonly applied procedures for land appraisal, and consistently defined standards for zoning and exemption—all became ideals at best and casualties at worst as policies and policy management arrangements increasingly reflected and responded to differentiated interests.

Urban land policies have shared a commitment to land use planning strategies but they have also reflected a growing tension between two potentially different types of orientations. On the one side have been the prerogatives of economic development generally and industrialization specifically. These prerogatives have justified a range of zoning, tax, and public investment policies which have the state passively regulating but generally not directly intervening in land markets. On another side are increasing concerns about the quality of the urban environment, the socioeconomic consequences of land speculation, and the declining affordability of urban housing. These concerns have evoked calls for more active state regulation and intervention in land markets on the assumption in part that land policies can solve these problems.
Dimensions of Contemporary Land Problems

Transformations in sectoral characteristics and relationships have been associated with the emergence of a new agenda of land problems. Several issues associated with perceived land problems, as well as the policy apparatus and strategy that have evolved to address these problems, have become common features of this new agenda.

1. Speculation

Speculation in land is seen by different parties as a special evil, a consequence of bad economic policies, a "natural" phenomenon, and a problem the existence of which is disputed altogether. In the first two cases, arguments have developed around the need for policy interventions or reform. In the latter two cases, arguments have focused on the need to reduce policy regulation. For example, for those who see speculation as problematic, their concerns are rooted in issues ranging from objections to windfall passive income to distortions in resource and investment allocation to violations of canons of social justice. Concerns about speculation have led to demands for policies that would prevent speculation through various forms of price control, would limit speculative behavior through restrictions on asset portfolios (e.g., the holding of idle land), or would attempt to recapture the excess profits from speculation through aggressive capital gains taxes on land. Speculation seen as the consequence of bad economic policies has led to calls for removal of inappropriate interventions in land transactions and financial markets.

2. Price Instability

Until very recently, concerns about land prices focused on the impacts of high land prices on the costs of housing and on corporate portfolio strategies (through the misallocation of investment). This is a complex matter because it was also driven by widespread beliefs that land prices would never fall. Concerns about high prices and their consequences are still present, especially for those concerned about housing and infrastructure investment. However, those concerns have not been joined by concerns over the drop in land prices during the last two years, especially in Japan. Because land prices are
closely related to the performance of capital markets, and because for those who do own property, land values are often their primary source of wealth, falls in land prices have had serious consequences. The coexistence of concerns about high land prices and falling land price movements has generated concerns about land price instability.

3. Equity

The combination of price instability, high prices, idle land, and land speculation created conditions conducive to unequal asset concentration and distribution. There would be winners and there would be losers. The inequality itself was not seen as the problem, but rather (a) the perception that the inequality was extreme and growing, and (b) the belief that problems of inaffordable housing and inadequate infrastructure were the consequence. This issue has been especially problematic in Korea, where there is evidence of a growing concentration of gains from land appreciation. Data on this point are less readily available in Japan and Taiwan, but there are comparable public concerns there as well. From this perspective as well, rigidities in agricultural land markets which constrain conversion of agricultural land to non-agricultural uses are seen as exacerbating the equity problem to the benefit of farmer-owners, but at the cost of access to a better quality of life for urban labor and even middle classes. All this can be viewed as a recasting of the social justice issue first raised by advocates of agrarian reform, a recasting which relocates the issue firmly in an urban context.

4. Re-separation of ownership and management on agricultural land

As noted in the discussion around Table 1, one way in which the demands for agrarian reform and the actual agrarian reform that occurred converged was on the objective of overcoming landlordism, i.e., the separation of farmland ownership and farmland management. By the 1980s, however, it was increasingly apparent that ownership and management of agricultural land were re-separating as an increasing number of farm households depended principally on non-agricultural employment for their income. This time, the separation was not associated with the re-emergence of landlords, but rather with the
development of modes of contracting, leasing, and renting which had the same consequences for functional separation. For those devoted in particular to the importance of the agrarian reforms, for example as cornerstones of democratic evolution, the re-separation was viewed with distress. For others, the re-separation was a desired adaptation to changing opportunity costs of land and labor and one that should be further promoted. For yet others, the re-separation raised serious questions about the legitimacy of agriculture's unique position, especially if maintenance of this position was seen as having little to do with averting the evils of landlordism and more to do with maintaining control over an appreciating asset. The last two views have increasingly been associated with a call in all three economies for a second land reform to undo what are viewed as inappropriate utilization rigidities and tax exemptions attached to agricultural land.

5. Economic inefficiency

Land policies came under increasing critique as the cause of fundamental inefficiencies in overall resource allocation. Restrictions, for example, on conversion of agricultural land to other uses were increasingly seen in many quarters as encouraging inefficient land utilization and causing artificially high land costs in urban areas. The inefficiency critique was strongly associated with a growing preference for more market-oriented strategies and, in general, was associated with a rejection of much of the land policy planning philosophy that underlay the proliferation of complex zoning and land use restriction policies. Concerns about economic efficiency also reflected the weakening of the insularity of land policies from other facets of national economic management, especially macroeconomic policy. In Korea, for example, concerns about economic efficiency were closely related to concerns about repression of the country's capital markets. In Japan and Taiwan, concerns about resource allocation in land were a cause for concern among those considering how to respond to challenges of making the economies more open.

6. Land use and land users

Concerns have grown about how land is being used and who has control over what kinds of land. Three versions of this concern have been raised.
a. Idle land

The holding of idle (i.e., undeveloped) land is being increasingly viewed as a form of speculation and since the mid-1980s, there have been increasing calls for aggressive tax policies and even portfolio policies to force sale of these lands under specified circumstances. For example, the Korean government has recently required that chaebol's abandon ownership of idle lands. That position has wide support, but the government has also required that all owners of idle land either develop the land or face substantial tax penalties. This latter position has caused deep concerns among middle class owners of residential lots who believe they cannot yet afford to build a house.

b. Open space

While the concerns about idle land were focused on speculative use (or non-use) of land, others were concerned about patterns of land use that created undesirable environments. One common outcome of these concerns was the call for zoning restrictions to create strategic open spaces (e.g., Greenbelts). Versions of the greenbelt strategy were applied in all three countries, but the results have been mixed. While these policies have created "open" areas, they have also been opposed by many farmers who feel that once their land is designated as falling within a greenbelt, their land values will suffer while those whose lands do not fall within a greenbelt designation can expect continuing land appreciation and they can entertain the possibility of land conversion.

c. Farmland/Farmer preservation

Given the high costs of maintaining what in some cases appears to be a declining agriculture, some were inclined to argue for waiving the high subsidies and letting agriculture decline. In reaction to this, others raised concerns about the need to ensure not simply that farmland was preserved, but more importantly that farmers (as compared to weekend gardeners) were using the land. The policy problem for this group is that while they could be supported on one side by adherents to the original agrarian reforms as well as by emerging "green" movements, they were faced by a severe shortage of individuals actually interested in full-time farming and unclear conceptualization about what kinds of unsubsidized agriculture can actually survive.

This issue is pressing in Japan, where the sustainability of the rice subsidy is at increasing risk given the demands of international trade
and the recession's impact on labor and the middle class. The issue is pressing in Korea, where the increasing average age of farmers—now exceeding 60 years—and the low interests in successor farming raise serious questions about the sustainability of the existing farm structure. And the issue is pressing in Taiwan, where the earlier high levels of parity between agricultural and non-agricultural incomes has weakened and the demands for improving equity within the non-agricultural sector raise serious questions about the real costs of maintaining the existing privileges to agricultural land. All these concerns can be seen as a reformulation of the issue of unbalanced development, an issue that several decades earlier was an argument for agrarian reform and stimulation of the agricultural economy.

7. What is the value of land?

Another issue raised by agrarian reform, but subject to continuing discussion, has been how to understand the meaning of the value of land. In policy and public debates, advocates could always be found for visions of land as a commodity subject to considerations of "best use," but there were also always strong advocates of visions which saw the value of land as a repository of culture and history—embedding the value of land in debates about the value of ways of life (especially agriculture). Closely related to the question of what is the value of land is the question who determines the value? Here too there were fundamentally different visions, ranging from advocates of the market to those who saw the state as the principal agent for determining the value of land.

Today this issue remains important, especially for those concerned about the future of agriculture. For some, the future lies with less ambiguous commodification of agricultural land so that the land will be put to the best agricultural uses. For others, the argument goes the other way. Agricultural land can and should be better used, but the problem is not the special treatment given to agricultural land, but rather that because agricultural land has become too much like other land, it is very difficult for those who want to enter farming to do so.

The issue is not restricted to agriculture, however. As already noted, growing concerns about the quality of the urban environment and con-
cerns about the issue of speculation are both raising questions about the line between private property rights and state stewardship over property utilization. Strategies and proposals in Korea (the public use concept) and Taiwan (the land value increment tax), for example, to capture gains in land values not attributable to direct investments by landowners reflect the fact that the state has never relinquished the claim to interpret how property should be valued and used. Arguably what the state has done—perhaps more so in Japan and Korea than in Taiwan—is to permit "other" interests to make those interpretations on behalf of the state. It is precisely the perception that this has happened which makes the issue of valuing land a fundamentally political issue rather than a more narrowly technical issue.

8. Fragmentation of policies and policy-management

The problem of fragmentation, as noted earlier, has increased in visibility as public criticisms of politics and the bureaucracy have increased, especially since the mid-1980s. Responsibility for land policies has become difficult to assign as a maze of agencies and authorities have become involved. Closely related to this problem is the difficulty—especially in Japan—of identifying "national" land policies as complex and competing subdivisions of policy responsibility have evolved, each with supporting political constituencies. Wider processes of political change encouraged skepticism about these arrangements and the policy fragmentation they supported, but patterns of policy management continued to fragment. It is important to add that fragmentation occurred not only within government, but perhaps more importantly patterns of public responsibility for land policy fragmented between different levels and agencies of government and a range of private interests who were often supposed to be regulated by these policies.

One indicator of the fragmentation has been the difficulty interested parties have had in determining the causes and consequences of specific land acquisition decisions. Concerns that fragmentation disguised extensive corruption in land policy management has already had effects in Korea and Taiwan where recent edicts are requiring wider disclosures of land dealings by senior government officials. In the face of the fragmentation, there are two strands of proposals. One is to centralize
policy management, the other is to further decentralize it. The argument for the first course is intuitive. The argument against it is that it places too much power in one place. The argument for the second course is to bring decision-making closer to the people. The argument against that is that it encourages too much variation from one place to another. And among those associated with maintaining the agrarian reforms, either course would be unacceptable if it had the effect of diluting agriculture's interests.

9. Lack of information

Despite often strong feelings about virtually all of the problems noted above, there remains a lack of accessible, credible, and comparable information to even resolve the incidence of these problems. For example, basic price data were and are highly problematic. Other types of data—for example about ownership, land use, and the incidence of taxation and capital gains—have generally been unavailable. Problems with information are partially technical, but they have been and remain primarily the products of the fragmentation noted earlier.

Social Goals

From these problems and the growing debates about them, five social goals for land policies had emerged by the late 1980s, goals which were not necessarily consistent.

1. Strengthen the quality of urbanization and industrialization processes. The quality of urbanization refers to issues ranging from housing to the environment. The quality of industrialization refers to maintaining processes of competitive adaptation on the international plane.

2. Improve economic efficiency. The reference here is principally to overall macroeconomic efficiency, but implicitly this is a critique of restrictions on conversion of agricultural lands and the complex superstructure of urban zoning regulations.

3. Revive or preserve the rural economy. This issue focuses in particular on the status of agriculture, farmers, and the rural communities.

4. Address deteriorating equity in asset ownership. This issue has become a major concern, especially in urban areas, where per-
ceptions are growing rapidly that ownership of land as well as the gains from price changes on land are concentrating in a small minority of owners.

5. **Complete the process of integrating the national economy.** Sometimes discussed in the context of improving macroeconomic efficiency, but also seen as a goal on its own, the interests here are in overcoming patterns of segmentation and rigidification which are interfering with a range of investment and resource allocation choices.

**Toward New Choices**

In the 1990s, there is little doubt that new choices are needed. Contemporary land problems are not being adequately addressed by the range of policy instruments currently being applied. There is significant empirical evidence based on analyses of land price movements, land utilization and conversion rates, and other data that many of the policies which have been applied have not been successful in achieving their objectives. There is other empirical evidence which suggests that some of the land problems (e.g., the high prices of urban land) are the results of land and other policies as much as they are the consequences of economic and demographic forces. These points are beginning to lead to a critique not simply of specific policies, but rather of the broad strategy of planning and regulation that has been adopted.

Indeed, in many ways, the evolution of land policies since agrarian reform in all three economies should be seen as a constant effort to compensate for or adapt to the inadequacies of previous policies more than as a simple series of responses to changing land problems. As noted earlier, very often policy evolution has been characterized by supplementation (of policies, but often accompanied by a duplication of administrative responsibilities) rather than substitution. This process has led—especially in Japan—to an extremely diffuse policy milieu in which it is not clear who governs. In other cases, such as Korea since the 1970s, policy evolution has been characterized by significant discontinuities in direction, discontinuities which can be
seen as the joint products of adaptation to changing perceptions of problems and the ascendance of different agendas among competing interests within the land policy process.

What are the possibilities for new choices? The answers to this question are political, technical, and contextual. The possibilities for new choices are political in terms of the processes which would be employed to yield, make, and monitor choices. It is technical in terms of the specific policies and policy management strategies that would constitute the choices. The answer is also contextual, i.e., the possibilities for new choices must be understood in the context of specific political economies of land issues. Here, for example, it is important to keep in mind that urban problems are much more the fulcrum of discussions on land policy issues in Japan and Korea than is the case in Taiwan. Such differences will have pivotal impacts on the types of choices that are likely to emerge—in both political and technical terms.

Themes

In considering the political, technical, and contextual dimensions of new choices, three themes appear to be most crucial.

1. Reassessing land policy as a decisive instrument of social policy

It was concluded earlier that agrarian reform was a decisive social policy in all three economies. Is the attribute of decisiveness still an appropriate expectation or even possibility for land policy? There remain strong interests who see the basic orientation of land policy as constituting a decisive instrument of social policy, doing in the 1990s, for example, for urban working and middle class families what agrarian reform did for agricultural tenants in the 1950s—enhancing their economic security, strengthening their social mobility, and ensuring their political power. From this perspective, land policy acquires legitimacy as the political embodiment of a fundamental social interest in the disposition of land.

At the same time, there are other strong interests who argue that land policies have become the privileged exercise of various bureaucracies and their societal associates, whose interests are in fact narrow and self-serving. From this perspective, land issues would be better
defined and resolved principally by open market processes and forms of political competition outside the bureaucracy. The argument is made that it is these open competitive processes which are the legitimate embodiments of both social preference and economic efficiency.

2. Redefining the lines between public and private interest in who holds land, how land is used, and who benefits

In the 1990s, the debate on land policy will bring together three issues which have been present for a long time but which have not been explicitly linked since agrarian reform:

a. What is the value of land? This question is not simply a technical inquiry, but rather one that underlies the rationale for government regulation of land use, debates on tax policy, and concerns about speculation.

b. What is the public interest in land? At the time of agrarian reform, the public interest in land reflected the public interest in social stability and economic growth in a manner that concluded that agricultural land, in particular, had unique qualities. In the 1990s, the matter of uniqueness has become considerably more contentious.

c. What are the limits on private property rights over land? The increasing critique of bureaucratic politics and corruption, the debates on speculative gains from land sales, and the rise of environmental issues do not simply raise questions about the public interest in how land is used, but also raise issues about the scope of private interests in how land is used.

Actors instrumental in implementing agrarian reform in all three countries concluded in the late 1940s and early 1950s that i) land had—in addition to economic value—significant sociocultural and political value; ii) that the public interest in agricultural land was inextricably tied to the public interest in suppressing both radical and reactionary elements and thereby building foundations for stable democratic evolution; and iii) that private property rights on agricultural land were limited by and hence could be preempted by public interests in maintaining both the continuity of land use (especially in agricultural areas) as well as the rights of land owners (relative, e.g., to the rights of land users).
In Japan, processes for answering the three questions were institutionalized by the 1960s, in effect, through the growth and consolidation of agriculture’s political power. In Taiwan and Korea, the three questions were brought together in similar ways—through notions of the public interest in the changing value of land. This synthesis came latest to Korea where arguably, the third question has never been fully resolved since the incompleteness of the agrarian reform legislation left ambiguities about the rights of agricultural land owners.

In the 1990s, efforts to find and try new choices are being significantly influenced by a growing debate on how to integrate the three questions once again—this time in the context of both urban and agricultural land issues. Not surprisingly, there are competing ideas about the priorities among the three questions as well as advocates of different priorities within the questions. However, there are four issues which will cross the questions and force the emergence of new positions and coalitions.

a. What is the future of agriculture?

This is an absolutely fundamental issue. While it is not likely to be systematically raised and resolved, it is clearly weaving through all three questions. The issue arises now not only from domestic forces, but also as a result of the pressures for greater openness that are being placed on all three economies. These pressures for greater openness include a direct assault on the structure of subsidies for key agricultural commodities—most notably rice—and on the patterns of bureaucratic regulation of which land policy is one part. Positions on the future of agriculture range from beliefs in the possibilities of creating an internationally competitive agriculture—essentially through combinations of scale economies (achieved through relaxing restrictions on sale and leasing of agricultural land) and high-value commodity diversification—to commitments to maintain viable agricultural communities and small farm agriculture through continuation of the existing agrarian-reform based owner-cultivator strategies (especially in Japan and Taiwan).

b. What will be the roles of environmental issues?

Environmental issues will play an increasingly important role in interpreting the three questions. Environmental issues will not be
new, reflecting as they do several decades of periodic debate about pollution, waste disposal, open space, the goals of land use planning, the limits of corporate accountability, the scope of state responsibility, and ultimately, the requirements of growth. One reason, however, that the salience of environmental issues is increasing is that cross-sectoral consequences of environmental choices have become much clearer. Industrial wastes contaminate land and water-based food systems. Inappropriate cultivation practices have aesthetic as well as ecological (e.g., flooding) consequences that reach beyond rural areas. Increasingly, there are calls for using land policies (e.g., through more detailed land use restrictions including environmentally-based permit systems and tax systems) as leverage to influence environmental choices (and consequences) associated with land use.

c. What is the future role of the state in the economy?

Again, a fundamental cross-cutting issue, state-economy relationships have become a topic of critique, especially from external sources, but also from domestic interests who are concerned about the social consequences of excessive concentrations of private wealth (which would tend to draw the state in) and about the scope of political corruption (which would tend to support arguments to reduce the state's role). This dynamic and the tensions it contains constitutes a basic context for discussing issues of public and private interest in land and processes designed to negotiate or otherwise identify the appropriate relationships between these interests.

d. What are the directions of political evolution and democratization?

Trajectories of political evolution will have a decisive impact on how the three questions are raised and answered by determining who will raise and answer the questions; how and where the questions will be raised; and how and to whom they will be accountable. Patterns of democratization in Korea and Taiwan, for example, are already having discernible impacts on land policies by increasing the transparency of some ownership and land transaction data. Patterns of political reorganization in Japan (e.g., the restructuring of the electoral system) will potentially have dramatic impacts on the abilities of urban interests—including middle and working classes—to influence the policy
agenda. Beyond these developments lie the broader question of the relationships between bureaucratic and legislative initiatives in policy formation as well as the balance between central, intermediate, and local political and bureaucratic authorities in policy development and management.

3. Restoring public confidence in government's capabilities to address land issues with fairness, honesty, and competence

Revelations of political corruption in all three economies have focused strongly on the mismanagement of land policies for personal benefit. Along with the wider perceptions of linkages between land problems, land policies, and the increasing difficulties of access to capital and housing, it is not extreme to say that the legitimacy of the governments on land policy matters—especially outside of agriculture—has been significantly undermined by perceptions of inefficacy and corruption. This has occurred, in turn, in a context of increasing skepticism about the integrity of existing political processes. This means that there are and will be important pressures to develop choices which will restore confidence that land policies are not being misused or misdirected and that the politics which are associated with the evolution and management of land policies will not be a cover for the misuse and misdirection of those policies. Three principles are being identified as key elements of more acceptable land policy regimes.

a. Simplification

Complexity—in terms of the policies and in terms of the political and administrative processes associated with the development and management of the policies—is viewed in many quarters as the curtain behind which corruption flourishes. The call for simplification is not necessarily a call for unification of diverse policies or for increased rigidity in standards to eliminate discretionary judgments, but it is clearly a call for reversing a trend of policy accumulation and administrative fragmentation. The practical effects of this accumulation and fragmentation is to assign high priority to abilities to navigate the bureaucracy. As noted above, broader patterns of democratization are increasingly seeing the complexity of land policies as an
attempt to insulate land policy determinations from public knowledge and accountability

b. Consistency.
There are wide perceptions that much of what actually happens in land policy arenas—especially those characterized by zoning and other forms of restrictive planning—consists of exceptions to established policies and principles. Once again, the view has grown that lack of consistency in the policies and how they are interpreted and applied provides excessive room not only for corruption, but for uneven standards. This matter has become more important as land issues become enmeshed in complex central-local relations and overlapping administrative jurisdictions—each with their own criteria for interpreting and managing policies, and often each with distinctive information bases (e.g., about the value of land) to support and monitor their decisions.

c. Transparency.
In all three economies, demands are growing for land policy processes which are considerably more subject to accountability—in some cases politically and in some cases through more open access to information about land problems and land policy performance. Transparency implies that the criteria and processes applied in land policy decisions are clear to all who would want to know and that the outcomes of policy decisions and practices are broadly accessible. This means, for example, that the identity of the parties to a land transaction would be public knowledge, as would the prices at which the transactions occurred.

Policy Arenas

These three major themes—simplification, consistency, and transparency—are being played out in five different groups of policy arenas. Within each of these arenas, issues will arise and be considered that will have both direct and indirect impacts on land problems and policies affecting those problems.

1. The principal arenas for addressing land policy issues traditionally have been those dealing explicitly with urban land and farm
land concerns. However, as the economic transformation proceeded, and with it, a differentiation of politics, policies, and associated administrative mechanisms, land policy arenas lost their near exclusiveness as the places for addressing land issues.

2. Arenas that assumed greater prominence for land issues beginning in the 1970s were those focused on support for urbanization and industrialization. These included arenas covering a variety of public investment, regional development, and industrial location strategies. It is important to note here that these non-land arenas also became the places where many issues associated with agricultural land were also addressed, especially in Korea.

3. In the 1980s, land issues also became an important element in policy arenas focusing on macroeconomic performance and efficiency. Of special importance here have been policies concerned with capital market development, monetary growth, and exchange rate stability.

4. In the late 1980s, land issues also began to become issues addressed within policy arenas focused on international economic relations in general, and in particular, in reaction to increasing external pressures to make the economies more open.

5. In the 1990s, it is apparent that land issues are going to also be addressed in policy arenas concerned with matters of governance and political process.

The Choices

With this background, what are the principal policy choices being considered?

1. Tax policies. There are arguments both for simplification and for further elaboration. The initial focus is on taxes on property, capital gains, and inheritance, and reconsideration of bases for exemptions and waivers. As before, there are many who would like to use tax instruments as the mechanism to influence who holds land, why they hold it, and what they do with it. For example, capital gains taxes are seen as a principal means for recapturing windfall profits from speculative landholding. As before also, there is awareness that any tax policies directed at land are
very sensitive to appraisal systems. Consistent, simplified, and accessible appraisal remains an issue in the three economies. More fundamental reassessment is focusing on removing the distinctions between land as a taxable asset and any other assets.

2. Portfolio restrictions. Sometimes managed through tax instruments and sometimes more directly, there is support for a strategy that defines socially unacceptable portfolios. In Korea, for example, this type of strategy was recently implemented to limit chaebol holdings of idle land. In general, idle land is seen as a principal target for portfolio regulation, particularly where the land is part of an investment package. Portfolio is directed at concerns about who the holder of land is, how long the land is held, and how the land is used. Portfolio restrictions are also a vehicle for addressing the specific question of agricultural land. If holding agricultural land is restricted to farmers, that is an example of portfolio restriction.

3. Redefining the limits of ownership. As noted several times, this is a continuing fundamental issue in land policy: what are the limits of private property prerogatives? In the three economies, a middle to high position has generally been maintained in the aggregate between strong state prerogative and strong private prerogative—with Korea probably representing the strongest state prerogative position through the public concept in land. The case of agricultural land and the complex of zoning restrictions that the economies have adopted to regulate land use all represent evidence of significant state presence. At the same time, a wide range of exemptions and inconsistencies in policy administration indicate that the interests of strong private prerogative (with state support) are also well established. Nevertheless, issues ranging from the future of agriculture and problems of environment to issues of access to housing and problems of economic inequity generate support for a thorough reconsideration of the rights and limits of land ownership.

4. Macroeconomic rectification. The 1980s saw the rise of serious internal critiques in the three economies of the macroeconomic effects of excessive state intervention. This is not likely to lead to serious calls for a termination of all state involvement, but it is
leading to calls for the reduction of several key examples of state intervention. These include critiques of financial repression (especially in Korea), levels of agricultural subsidization (especially in Japan), and reforms of trade policy. In this context, there is support for significant reduction of the many transaction restrictions that characterize land markets. It should be pointed out that this does not represent a rejection of the state’s role, e.g., through prescriptive planning. However, it does represent a reaction against a state role that functions principally through restrictions, permits, exemptions, and other essentially negative instruments. Discussions of macroeconomic rectification are also demonstrating that many of the problems associated with inept land policies (e.g., speculation, high prices, cyclical prices) are more directly the results of macroeconomic conditions and policies. The implication is that these problems should not and cannot be effectively addressed through land policies, but rather through reforms that reduce the macroeconomic distortions.

5. Governance. Several governance issues have potentially significant impacts on the content and management of land policies. The debate on centralization and decentralization is a key example. Centralization is seen as one solution to the problem of diffuse and fragmented policy administration. This has to be balanced, however, against some trends to de-concentrate the heavy accumulations of power in the political center. Coordination strategies are proposed as a less radical step (in the sense that the existing holders of power remain as players in the system) although in many cases the correlate of coordination is the placement of another layer of administration and politics onto the land policy process. Codification is yet another “in-place” option. It leaves administration fragmented but seeks to limit the impacts of this, especially the phenomenon of inconsistent interpretation of policies, by unifying policies and administrative guidelines across different agencies and levels of government.

6. A second land reform. By the mid-1980s, the idea of a second land reform was attracting serious support in all three economies. The purpose of a second reform would not be to further protect agricultural land, however, but rather to suspend many of the
restrictions initiated by agrarian reform on land conversion, land renting, and land ownership. The implication of discussions of a second land reform is the recognition that any fundamental reconsideration of urban land policy regimes that leaves the restrictions directly and indirectly linked to agrarian reform in pace may be doomed to failure.

7. Housing. One of the biggest problems that is becoming a driving force for reconsidering land policies is housing. Housing has become expensive and inaccessible for many members of the urban working and middle classes. The question here is whether this is a problem that should be addressed through regulations on land use and sales or whether the issues of affordable housing should be addressed directly.

8. Develop and strengthen the real estate industry. There is a growing recognition that the problems of inconsistency, diffuse responsibility, and excessive complexity seen in the existing land policy systems are mirrored by land market institutions and practices in the private sector that defeat the emergence of a competitive and open market. Resolving many of the problems on the public policy side will help, but there is no assurance that needed institutions and practices will arise on the private side. There are therefore calls for systems of open and credible appraisal; title recording, search, and insurance (including open access to transaction information); and professionalization of agents and brokers. This option appears more likely in Japan and Korea than it does in Taiwan, again reflecting the greater prominence of urban land issues in public debates in Japan and Korea.

Conclusions

This summary has emphasized common themes in the land policy experience of the three economies. However, it is important to recognize that there are significant variations among the three economies. There are important political, economic, and cultural differences, for example, which have and will undoubtedly continue to significantly influence the course and tenor of policy evolution. Nevertheless, as
the three economies look to the future, there are some common issues they will have to confront as they consider land policy choices.

Looking to the future, what is most apparent is that the most significant choices for and affecting land policy will not be based directly on land policy concerns but rather will be focused on broader matters of political change and economic development. What these other concerns are and how choices about them are articulated and addressed will have significant implications for the definition and resolution of land problems as well as the identification of priorities among land policies. This is not to say that matters of specific tax rates, appraisal rules, construction regulations, zoning tactics, and other technical matters are unimportant. They are important and they will remain the mainstream of much land policy debate. Several of the papers in this volume have important suggestions to make along these lines—from strategies for improving the information base of land policy to strategies for reorganizing the administration of land policy to suggestions for more explicit attention to relationships between macroeconomic, tax, and land policies, to evidence of continuing debates about the appropriate scope of state prerogatives in land markets and the limits on private property ownership prerogatives. These are all worthwhile and it is fair to emphasize also that they are representative of important points of view within the land policy debates of the three economies.

However, beyond these concerns about where specific land policies go next are several fundamental issues which transcend mainstream land policy debates. These issues have the potential to have very significant implications for the form and content of future debates about land policy. It is appropriate to conclude by pondering the implications of four of these transcendent issues.

1. What is the future of agriculture?

In one sense, this question might better be rephrased as: what is the future of agrarian reform? The papers strongly demonstrate that agrarian reform, in its origins as well as in its consequences, is a process, not a single event. In all three economies, the policy debate remains strongly influenced, indeed the parameters of the debate in
many ways are still set by, the politics of agrarian reform and what has and has not been settled by those politics.

Why? There are many reasons, but one that is especially important is that agrarian reform in all three cases purports to lay out the terms of the relationships between agriculture and the rest of the economy as a defining element of national reconstruction. It purports to do this through what in effect was a social contract negotiated between different interests and the state to define not only intersectoral relationships, but a basis for essentially peaceful economic and political reconstruction. However, four decades of rapid economic and social transformation have arguably undermined the sectoral distinctions which were the heart of the contract. This, in turn, has made the contract increasingly obsolete in economic terms, and in so doing, has altered the political significance of the formulation.

Arguably agrarian reform today has little to do with protecting the viability or distinctiveness of agriculture and much more to do with protecting the political economy of a particular land market structure and the financial, construction, and trade interests associated with it. And here it must be remembered that a broader land policy system has evolved to a large measure organized in the same way. What this says is that when one asks the question in Japan, Korea, and Taiwan—what is the future of agriculture?—one is really raising the question: what is the future of intersectoral relationships between agriculture and the rest of the economy? How that question is answered has an enormous impact on the political economy of all three cases—including the political economy of land problems and land policy.

This is not to suggest an expectation of a clearly formed debate on the future of agriculture, or for that matter, even a partially formed one. What it does suggest, however, is that decisions will be made in areas outside land policy that will be addressing the issue of the future of agriculture. Those answers, however partial and inconsistent, will nevertheless have a potentially decisive impact on the sustainability of existing broad directions in how land problems are defined and how policy priorities are ranked. For example, anticipating the discussion below on globalization, all three economies are under increasing international pressure to make their domestic economies more
open and to remove or reduce the nontariff barriers that reside in the structure of domestic markets. The symbolic issue for this, especially in Japan and Korea, has been rice. US-Japan trade relations, to give an example, would not be significantly transformed by an open market for rice in Japan, but then all sides understand the rice issue is symbolic for broader issues about different forms of domestic economic organization. As is well-known, the politics of domestic rice subsidies are intimately connected to a range of land policy issues—including land use regulations, and a variety of land tax concerns.

Under the terms of the agrarian reforms, discussions about the future of agriculture are discussions about the future of agriculture’s uniqueness. The uniqueness of agriculture is in a fundamental sense the bedrock on which the agrarian reforms rest. To the extent, however, that agriculture loses its claim to uniqueness, the existing infrastructure of land policy loses much of its current political and technical foundations. Some argue that the failure to fully recognize this shifts precisely the real ill of the existing systems. The economic transformations in Japan, Korea, and Taiwan essentially commodify agriculture in a manner that makes its continued claim of distinctiveness artificial. Politically, however, central elements of the national political systems—particularly in Japan and Taiwan—have depended significantly on power arrangements constructed through and from the agrarian reform. As can be seen in the recent political reforms in Japan, once this assumption of distinctiveness—and the political prerogatives it mandates—is weakened, there is a strong potential for redefining the distribution of political power in directions which could prove very problematic for agriculture as it currently exists.

2. The future of bureaucratic policy prerogatives

All three economies are undergoing processes of political evolution which appear to point in directions of greater democratization, although on uneven terms, under conditions that are highly contextual, and without complete certainty of success. Nevertheless, these changes—from the organization and financing of political parties to the relative roles of central and local governments to the bal-
ances between executive and legislative powers to governance and accountability of the bureaucracy—will be crucial for the processes which will make and implement land policy choices. For example, the bureaucratization of land policy was historically part of a wider process of placing most policy development and management within the bureaucracies, under party influence, but leaving formal legislative institutions relatively weak in terms of broad supervisory responsibilities. However, with evidence of movement towards more democratization—especially in Korea and Taiwan—it is inevitable that technocratically formed policies will be viewed with increasingly open suspicion. The diffuseness of land policies will be a prime target for such skepticism, especially given the close connections between land manipulations, political corruption, and problems in political financing.

It is obvious that patterns of political change will have implications for processes of policy formation and management. Those implications are not necessarily likely to be uniform, however, as different processes will be more entrenched than others. Land policies, like other policies, will be subject to these influences and possibly to some of the exceptions from the influences as well. However, to the extent that political evolution is in directions away from bureaucratization of policy and towards democratization of policy processes, the implications for land policy as it is currently constructed could be severe for some purposes (e.g., the feasibility of national planning) but could be very supportive for other types of policies (e.g., local zoning).

3. Environmentalism and urban management

If agrarian reform was driven broadly by the goals of social justice and economic security in agriculture, the goals of a comparably decisive policy strategy in the 1990s will be driven by the necessities of environmental stewardship and economic sustainability. Interestingly, however, these issues are likely to appear in their most compelling way in the 1990s in Japan, Korea, and Taiwan not in relation to natural environments (as they did in Japan in the 1960s), but rather in relation to urban environments. Concerns about the quality and safety of air and water will be and in fact already are being augmented by seri-
ous concerns about the availability and quality of open space, the aesthetics of building design, the accessibility of services, the viability of neighborhoods, the efficiencies of settlement patterns and energy systems, etc.

Such issues have direct and close linkages with traditional land use planning concerns. However, two important differences are emerging. As environmental concerns become driving rather than driven factors, criteria and externalities will flow from rather than to environmental issues. Land issues will certainly continue to be important, but environmentally driven urban planning, for example, will pay as much attention to optimal patterns of housing, transportation, and waste management as it now does to land use regulations. Perhaps of greater significance is where in the political and administrative system the center of gravity will be as issues shift to an environmental emphasis.

For three decades, in all three cases, the ministries of construction have been the central players in land policy. This may need to change. Environmentalism may shift the policy center-of-gravity in land policy away from construction, urban planning, and negative regulation to human settlements management, regional development planning, and normative regulation. However, this also means that environmentalism has significant potential to generate new types of political conflict between demands for the further democratization of land policy and new (and old) advocates for the prerogatives of environmental rationality.

4. Globalization: the end of policy autonomy?

Most of the discussions to date on land policy have assumed that the various policy choices are fundamentally domestic, that the forces impelling choice as well as the forces determining the consequences of choice are fundamentally domestic. That assumption may be increasingly obsolete. Forces of globalization—affecting the three economies in economic, social, and political terms—may radically challenge the assumption of domestic policy autonomy for what have been viewed till now as fundamentally domestic policy issues. Globalization—through trade, communications, travel, and technolog-
ical interdependence—is introducing transnational economic, political, and cultural forces into the three economies and while this is happening at different rates and with uneven impact across the three economies, there is no question that it is happening. Globalization has the potential to significantly alter the range of choices and the priorities that can be attached to those choices for a number of key policy areas. Globalization can also have significant impacts in the coalitions that will be crucial for policy outcomes. Existing domestic debates can be altered. They also can be rigidified, as the rice issue discussed earlier illustrates.

Processes of globalization have the potential to significantly impact land problems and land policies—directly through pressures to further commodify land and indirectly through alterations in fundamental economic development strategies and the political support for those strategies. As the structural impediments initiative (SII) discussions between the US and Japan revealed, calls for the transformation of domestic economic organization to standards more compatible with the requirements of international trade and economic relations will not "simply" introduce or remove certain procedures and regulations. Such transformations can alter the power structure that provides leadership in an economy. While the SII negotiations are unlikely to stimulate such revolutionary changes, processes of globalization may have a greater potential to bring about at least some of the more fundamental changes. In these contexts, it is not reasonable to expect that land problems and land policies can be defined in the future exactly as they have been in the past.
PART 1.

JAPAN
REFLECTIONS ON LAND REFORM IN JAPAN

Yoshiaki Nishida

Introduction

More than 40 years have passed since the completion of land reform in Japan. There were many arguments about the nature of this reform both while it was underway and in its immediate aftermath. The primary focus of these debates was on whether or not the reforms had succeeded in abolishing landlordistic ownership of land. Of course at present no one can deny that the reforms did in fact do away with that form of land ownership and that the reforms were responsible for the expansion of owner-cultivator land holding, which became the prototype of agricultural land ownership in the postwar era.

The problems associated with agricultural land today are quite different from those of the land reform period. The price of agricultural land, especially land located in the suburbs of major urban centers, has undergone a tremendous increase. This has made it impossible for farmers to buy enough land to expand the scale of their farms. Renting is also difficult, in that the rental agreements themselves tend to spoil the maintenance of stable cultivation rights.

Given the current situation, some scholars have argued that we are now facing the consequences of the "original sin" of Japan's land

reform policies. I cannot agree with this interpretation, however, for a number of reasons. In the analysis which follows I will describe the historical process of land reform in Japan, and offer some ideas about the problems associated with contemporary land policy.

An Evaluation of the Owner-Cultivator Scheme: the Core of Land Reform in Japan

The main pillars of land reform in Japan were as follows:
1. the reduction of rent and the conversion of rent in-kind to money rent;
2. the creation of owner-cultivators; and
3. the democratization of the agricultural land committees.

Almost all the scholars who were anxious to pursue the democratization of rural communities have written strongly-negative evaluations of the policies designed to create owner-cultivators. For example, the Köza school's Hirano Yoshitano asserted in 1946 that "the government's owner cultivator schemes have always helped landlords to sell their land, which is what has happened in the land reform as well." Hirano continues:

Owner-cultivators had been a pool of loyal soldiers in the past, and the state again intends to establish owner cultivators for use as supporters of government officials. The establishment of owner cultivators does nothing to bring about the democratization of the rural community, or the development of independent farmers. Nor does it result in the growth of the farm economy, or improvements in agricultural productivity.

Kurihara Hyakuju was another critic of land reform. He stated (also in 1946) that "the creation of owner-cultivators by compensation results in the fixing of capital as unproductive funds used to buy land,

3. The Köza school emphasizes the semi-feudalistic nature of the rural community.
instead of as funds for investment in productivity. As a result, it is quite impossible for farmers to expand their operations or for them to increase their productivity.” Kurihara clearly denied the significance of the land reform’s owner-cultivator scheme.

Ouchi Tsutomo, one of the spokesmen of the anti-Kôza school, acknowledged the progressive nature of reform plans to reduce rent and to convert rent in-kind to money rent, but stressed the retrogressive qualities of the plans to create small-scale owner cultivators. He notes that “this scheme attaches small-scale farmers even more to small plots of land, and makes them reactionary. In that sense, this plan has more faults than merits.”

Otani Shozô focused his arguments on the nature of the owner-cultivator land ownership created by the land reforms. On the one hand, he spoke highly of the reform because of the drastic changes it made in the landlord system, and the possibilities it opened up for the democratization of the farming community, both areas in which the postwar approach differed from what had been attempted before. Nevertheless, on the other hand he was severely critical of the land reform precisely for its emphasis on the owner-cultivation scheme. “The democratic revolution in the Japanese rural community,” stated Otani, “will take place only when farmers are freed from the fascinations of land ownership, and from the illusions of owner-cultivationism.”

Furushima Toshio stressed the superiority of cultivating landlords (not large ones) in farming after the land reform, and also identified a number of problems with the owner cultivation scheme. “Most of the farmers who became newly established owner-cultivators as a result of the scheme,” wrote Furushima in 1956, “lost the political con-

6. The anti-Kôza school stresses the pre-capitalistic nature of the rural community in Japan.
sciousness that had surfaced for a moment after the war, and returned to a state of indifference."

As the discussion demonstrates, there are a number of different arguments among scholars on the nature of the land reform’s owner-cultivation scheme. That is, some scholars regard it as almost the same thing as prewar attempts to establish owner-cultivators, while others recognize the essential differences between the pre- and postwar policies. Nevertheless, and despite these differences, scholars are united in their description of the land reform’s approach to the establishment of owner cultivators as reactionary, retrogressive, and conservative. They further conclude that since the policy had those characteristics, the farmers who became owner-cultivators under it would be reactionary, retrogressive, and conservative as well.

I have a number of doubts about that argument. First, the scholars discussed above seem to have overlooked the close relationship between the three pillars of the land reform (listed above). While it is important to bear in mind the importance of rapid postwar inflation in the creation of many owner-cultivators in a relatively short time and at low cost, there can be no doubt that this was possible only because rents were fixed at low levels. Agricultural land committees, in which tenants made up half of the representatives, played an important role in the prevention of landlord opposition to the drastic steps involved in the land reform. It is the presence of these three elements in the land reform that makes it so different from any of the prewar owner-cultivation schemes.

The second point I would like to raise has to do with whether the land reform ought to be classified as reactionary, retrogressive, and conservative because it led to the creation of a large number of small-scale land owners. It is certainly true that the land reform created many such small-scale owners, but we need to take a closer look at the nature of that land ownership after the reform before jumping to any conclusions about what the land owners were like.

Thus, in the analysis that follows I will discuss the historical nature of the owner cultivation policy in relation to improvements in the

conditions of tenant farmers, with emphasis on the problem of rent reduction. Second, I will examine the characteristics of owner-cultivator-type land ownership associated with the land reform.

The Historical Nature of the Prewar Owner-Cultivator Scheme

The first owner-cultivator plan that involved state subsidies was put into effect in 1926 with the establishment of the Regulations on Aid for the Establishment and Maintenance of Owner-Cultivators. This plan was proposed by the Ministry of Agriculture in reaction to the rapidly increasing number of tenancy disputes and the growing social issue of tenancy itself.

Funding for this policy came from the Postal Life Insurance Reserve Fund, and reached farmers as loans and interest-rate subsidies. The state provided a 1.3 percent subsidy on loans with a 4.8 percent interest rate, so that the recipients of the loans paid only 3.5 percent. However, the program faced a serious problem in how it established the prices that farmers would have to pay for the land they purchased, since the purchase price and standard land prices were based on already very high rent levels.

The base price of the land was calculated by subtracting from the rent the cost of land and regional taxes, and dividing the remainder by 6.227 percent. This latter figure is the ratio of a borrower's annual loan payments to the purchase price of the land, based on a 24 year loan at 3.5 percent annual interest. The cash value of the rent was determined to be "the actual rent in an average year" converted using the "local rice price averaged over the previous five years." In reality what this meant for the borrower was that very high rent levels were maintained. This is evident in a Ministry of Agriculture statement about the program, which explained that "tenant farmers can obtain land ownership by paying the same amount in loan redemption costs as they had paid in the past to the landlords for rent." ¹⁰ In other

words, the regulations did nothing to change the existing system of rents in kind at very high rates, and are based on an approval of that system.

Table 1. Pre-Land Reform Owner-Cultivator Establishment and Maintenance Projects

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Area (chô)</th>
<th>Established</th>
<th>Maintained</th>
<th>Total Area (chô)</th>
<th>Established</th>
<th>Maintained</th>
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<tbody>
<tr>
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<td>3,452</td>
<td>3,389</td>
<td>62</td>
<td>10,558</td>
<td>10,320</td>
<td>238</td>
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<td>1927</td>
<td>4,310</td>
<td>4,246</td>
<td>65</td>
<td>11,904</td>
<td>11,645</td>
<td>259</td>
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<tr>
<td>1928</td>
<td>6,310</td>
<td>6,037</td>
<td>93</td>
<td>16,184</td>
<td>15,864</td>
<td>363</td>
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<tr>
<td>1929</td>
<td>6,758</td>
<td>6,698</td>
<td>60</td>
<td>16,611</td>
<td>16,394</td>
<td>217</td>
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<tr>
<td>1930</td>
<td>7,933</td>
<td>7,827</td>
<td>106</td>
<td>18,230</td>
<td>17,882</td>
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<td>7,675</td>
<td>1,830</td>
<td>20,059</td>
<td>16,255</td>
<td>3,704</td>
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<td>10,799</td>
<td>7,937</td>
<td>2,862</td>
<td>23,460</td>
<td>15,864</td>
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<td>18,683</td>
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<td>14,287</td>
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<td>18,701</td>
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<td>1940</td>
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<td>421</td>
<td>15,138</td>
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<td>1941</td>
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<td>13,443</td>
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<td>15,444</td>
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<td>1944</td>
<td>39,274</td>
<td>38,273</td>
<td>1,001</td>
<td>79,624</td>
<td>77,867</td>
<td>1,757</td>
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<td>1945</td>
<td>63,344</td>
<td>62,900</td>
<td>443</td>
<td>155,122</td>
<td>154,555</td>
<td>567</td>
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<td>241,131</td>
<td>240,995</td>
<td>136</td>
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<td>TOTAL</td>
<td>382,165</td>
<td>366,601</td>
<td>15,564</td>
<td>795,796</td>
<td>760,371</td>
<td>35,425</td>
</tr>
</tbody>
</table>


As shown in Table 1, only a relatively small number of farmers were able to make use of the owner-cultivator policy; primarily because of the high cost of redeeming the loans. Those payments
were high because they were based on the high rents in kind paid by tenants, and reflect the fact that the new policy did nothing to alter the landlord-tenant relationship. During the severe depression that began in 1930, more than a third of the farmers who received loans were unable to make their redemption payments. They lobbied the government in an attempt to get interest rates reduced, to obtain deferrals on their loan payments, or to receive exemptions from taxes. In short, it is clear that the first owner-cultivator scheme was not at all in the best interests of the tenant farmer.

The second owner-cultivation scheme got under way in October 1937, just after the outbreak of war between Japan and China. The purpose of this new policy was both to increase agricultural productivity and to help stabilize rural communities. Some improvements were made at this point, such as provisions for funding assistance for land reclamation, a reduction in the interest rate on loans to 3.2 percent, and an increase in the loan limit per household from 4,000 to 6,000 yen. Nevertheless, almost nothing was done about the crucial issue of the way the purchase price of the land was calculated. As before, rent was defined as the “actual rent in an average year,” and converted using the average rice price over the previous five years. The result was that the basic premise of the second scheme was essentially the same as that of the first, in that both presuppose the existence of high rents in kind. And as Table 1 suggests, the second set of owner-cultivator policies (which ran from 1937 to 1942) were no more successful than the earlier version.

Farmers’ Movements and the Owner-Cultivator Scheme

It was quite natural that the Japan Farmers’ Union (the first nationwide farmer’s union, established in 1922) criticized the state’s owner-cultivation policies on the grounds that they only helped landlords sell their land at high prices. In 1927, the Union decided not to buy land through the state’s program. The All-Japan Farmers’ Union (which

succeeded the Japan Farmers’ Union) took a similar critical stance at its 1929 annual meeting, stating: “Even at 3.5 percent, a purchase of land worth from 400 to 600 yen per tan ends up being the same as paying from 1.2 to 1.3 koku of rice in rent for the next 35 years.”

It was clear to the Farmers’ Union that the scheme did not favor the tenant farmer. However, I must point out that there were a number of cases in which the owner-cultivation plan was used to settle a tenant dispute, including examples in which local branches of the All-Japan Farmers’ Union went against the leadership’s orders and actively sought to establish owner cultivators by making use of the state’s program.

According to a Ministry of Agriculture’s survey entitled “Examples of Tenancy Disputes Settled Through the Establishment of Owner-Cultivators” (1934 and 1937), negotiations between tenants and landlords often ran into trouble over the price of the land to be purchased. The survey reported one case in which “the landlord demanded 400 yen per tan and the tenant insisted on 370 yen” (Saitama prefecture, 1926), and another in which “the landlord wanted to negotiate about the land sale with the tenants, but no agreement was reached on the price of the land” (Niigata prefecture, 1926). We can find many such cases in the survey. On the whole, it appears that in most instances the land price was decided according to the state’s standard method, and in some cases landlords were able to force their tenants to leave the farmer’s union.

In areas like Niigata prefecture, however, where there were frequent large-scale tenancy disputes, there are signs that the promotion of the owner-cultivation policies went hand in hand with the development of tenancy disputes, and the fall of land prices. One 1928 report on the situation in Niigata noted that “as a result of dispute that lasted many years, the landlords wanted to sell their land even at a low price... In response to this situation, the tenants have applied for loans continuously since the start of the government’s assistance program in 1926.” Another report that same year described a situation in which

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13. There are approximately 1,000 square meters in a tan of land. There are ten tan to a chó, which is the equivalent of a hectare. 1 koku is equal to 150 kg. The reference to a 35 year loan appears in the original.
"As land prices have fallen in the last few years, tenants have been increasingly anxious to have their hopes realized. The landlords, meanwhile, in the face of increasingly serious tenancy disputes, are also indicating their willingness to sell their land in an attempt to ward off those disputes." These cases and others like them suggest that the collapse of land prices brought about by tenancy disputes helped promote the creation of owner-cultivators through the state’s scheme.

Another interesting example comes from a case in which a local Japan Farmers’ Union branch negotiated with landlords to get them to sell their land, making use of funding from the owner-cultivator scheme. As the Japan Farmers’ Union was opposed to the policy, the local branch kept its actions secret from the union’s headquarters. The community where this took place was the town of Yachimata, Chiba Prefecture, which is not far from metropolitan Tokyo. The town itself originated as the result of some post-1868 land redevelopment, and experienced a rapid expansion in small-scale agricultural production after the First World War. Indeed, its proximity to the Tokyo market was an important factor in the growth of the town’s commercial farming.

The fact that the land was reclaimed meant that rents were relatively low, and that tenancy rights were fairly strong. In 1924, 90.9 percent of the farm land in the community was rented, and there were seven landlords with holdings of more than 50 cho. A 1923 tenancy dispute over proposed rent increases by the Itô family, one of the large landlords, led to the formation of a local Japan Farmers’ Union. The Itô family had asked its tenants to pay six yen a tan in rent instead of the old level of four yen, and eventually settled for a one yen increase. In order to avoid any further disputes, the head of the Itô family decided to sell the land in 1926 to the Iinuma family, a landlord in a neighboring community. The local Japan Farmers’ Union was opposed to the sale and eventually asked the Itô family to sell the land to the tenants instead. After a series of complications, the dispute was settled in 1931 under the following conditions: 1) By 1934, all the land would

Table 2. Examples of Disputes Involving Direct Requests for the Purchase of Land

<table>
<thead>
<tr>
<th>Location</th>
<th>Tenants</th>
<th>Land Involved</th>
<th>Cause of Dispute</th>
<th>Year of Resolution</th>
<th>Landlords</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Upland Fields</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kochi-ken, Nishikata village</td>
<td>80</td>
<td>upland 9.7 chô, paddy 1.7 chô</td>
<td>sale to another owner</td>
<td>1927</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(long-term) upland 140 chô</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hokkaidô, Satô farm</td>
<td>21</td>
<td>paddy 5 tan, upland 380 chô</td>
<td>sale to another owner</td>
<td>prior to 1928</td>
<td>1</td>
</tr>
<tr>
<td>Hokkaidô, Kawasaki farm</td>
<td>12</td>
<td>upland 97.2 chô</td>
<td>sale to another owner</td>
<td>1928</td>
<td>1</td>
</tr>
<tr>
<td>Hokkaidô, Mutsubishi</td>
<td>47</td>
<td>forest 234 chô, upland 70 chô</td>
<td>sale to another owner</td>
<td>1928</td>
<td>1</td>
</tr>
<tr>
<td>Sappinai farm</td>
<td></td>
<td></td>
<td>exploitation by managers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hokkaidô, Hirobe farm</td>
<td>30</td>
<td>upland, etc., 150 chô</td>
<td>sale to another owner</td>
<td>prior to 1928</td>
<td>1</td>
</tr>
<tr>
<td>Hokkaidô, Ito farm</td>
<td>33</td>
<td>upland 282.6 chô</td>
<td>sale to another owner</td>
<td>1929</td>
<td>1</td>
</tr>
<tr>
<td>Kanagawa-ken, Yoshihama village reclaimed land</td>
<td>13</td>
<td>mulberry field, 3.7 chô</td>
<td>auction of family assets</td>
<td>1930</td>
<td>1</td>
</tr>
<tr>
<td>B. Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Niigata-ken, Washimaki village reclaimed land</td>
<td>26</td>
<td>paddy, 12.5 chô</td>
<td>sale to another owner</td>
<td>prior to 1925</td>
<td>1</td>
</tr>
<tr>
<td>Tokushima-ken, Kawauchi village</td>
<td>153</td>
<td>paddy 106.8 chô</td>
<td>requested sale</td>
<td>1926</td>
<td>4</td>
</tr>
<tr>
<td>Tokushima-ken, Matsushige village</td>
<td>120</td>
<td>paddy 108 chô</td>
<td>requested sale</td>
<td>1926-27</td>
<td>2</td>
</tr>
<tr>
<td>Tokushima-ken, Tokushima city</td>
<td>45</td>
<td>paddy 20 chô, upland 4.6 chô</td>
<td>requested sale</td>
<td>1926</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(long-term) paddy 14.8 chô, upland 3.8 chô, forest 78.2 chô</td>
<td>requested sale</td>
<td>1926</td>
<td>3</td>
</tr>
<tr>
<td>Hiroshima-ken, Shimotakoyama village</td>
<td>17</td>
<td>paddy 4.8 chô</td>
<td></td>
<td>1926</td>
<td>1</td>
</tr>
<tr>
<td>Yamagata-ken, Tôei village</td>
<td>14</td>
<td>paddy 4.8 chô</td>
<td>sale to another owner</td>
<td>1930</td>
<td>NA</td>
</tr>
<tr>
<td>Hiroshima-ken, village reclaimed land</td>
<td>10</td>
<td>paddy 5.6 chô, upland 0.8 chô</td>
<td>requested sale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiroshima-ken, Saigô village reclaimed land</td>
<td>36</td>
<td>paddy 23.8 chô, upland 23.2 chô</td>
<td>sale to another owner</td>
<td>1930</td>
<td>1</td>
</tr>
<tr>
<td>Yamaguchi-ken, Fukugawa chô reclaimed land</td>
<td>26</td>
<td>paddy 6.6 chô</td>
<td>sale to another owner</td>
<td>1933</td>
<td>1</td>
</tr>
</tbody>
</table>

be sold to the tenants at a price of 50 yen per tan; Owner-cultivation funding would be used for the purchase; 2) until the sale took place, rents would be reduced to three yen per tan; and, 3) the 15,000 yen in unpaid rent accumulated as of 1931 would be completely forgiven.

The settlement is clearly very favorable to the tenants. At a purchase price of 50 yen per tan, a borrower would have to pay only 2.5 yen a year in loan repayments, which was less than they would have been paying in rent, even at the reduced three yen levels. Nor does the Yachimata case appear to have been an exception. As Table 2 helps illustrate, there were a number of cases in which tenants made positive demands on landlords to sell their land. In many instances, these cases occurred when tenured tenanted land or reclaimed land was involved, since rents were kept comparatively low and the rights of cultivation on those lands were generally strong. In short, it is important to stress that even under the prewar owner cultivation program, the policy favored tenants if rents were low, and thus the purchase price for the land was low.

**Wartime Policies to Establish Owner-Cultivators**

The start of the war with China in 1937 meant that both the goals of the state’s land policies and the policies themselves underwent a number of changes. The 1938 Farm Lands Adjustment Law (Nōchi chōsei ho), for instance, stated at the outset that its primary goal was to maintain or improve agricultural production. The following year, regulations were established that prohibited rent increases and reduced existing rents that were too high. In 1941, a series of regulations on land pricing and use attempted to control the price of farm land, and to prevent the movement of that land out of agricultural production. While these production-oriented policies may have imposed some limits on the land rights of landlords, they did nothing to substantially reform the nature of the tenant-landlord relationship.

The actual limitations on land ownership by landlords were put into effect through the 1941 dual rice price system and the 1942 Food Control Act. As shown in Table 3, setting rice prices higher for producers than for landlords meant that the amount tenants paid in rent underwent a gradual decline after 1941. In the midst of the postwar food crisis, rents fell to only 13.6 percent in March 1946.
Rents paid in kind were eventually converted to money rents under orders from the Ministry of Agriculture. A 1940 Ministry directive told tenants to "ship their rent to government warehouses as directly as possible," which made it feasible for tenants to bypass landlords, while a revision to the order two years later made it imperative. In other words, tenants sent the rice to the government that they would otherwise (and previously) have given to landlords as rent, and the government made cash payments to those landlords. The amount the state paid them was based on government-set rice prices that were lower for landlords than they were for producers.
These circumstances reflect a basic shift in the character of the owner-cultivator policies. From what had been a scheme to help keep a lid on tenancy disputes, owner cultivation policies during the war were increasingly oriented towards the expansion of food production. This process was itself closely connected with the movement to create so-called "Imperial rural communities," and the fostering of productive farm households. The third stage in the owner-cultivation program began in 1943, and was different from what had come before in several ways. First, the new policy included provisions to urge landlords who lived in villages to become full-time cultivators. Second, the old methods for setting the purchase price of land were eliminated in favor of prices established under the state's price control regulations. Third and finally, control over the loans for the owner-cultivator establishment program was transferred to the Development Bank and to the Agriculture and Industry Bank.

The second point is especially important, since in effect it meant that purchase prices were set much lower than landlords would have been able to get under the old system. This went hand in hand with the development of what was in effect low rent payments in cash, and the replacement of what had been high rents paid in kind. The rapid expansion of participation in the owner-cultivation establishment program from 1943 on reflects these changes (Table 1). It is important to note as well that the ultimate foundations of the land reform—low cash rents and the establishment of owner-cultivators through low purchase prices for land—were both features of the war time environment.

The Development During Wartime of the Movement for the Establishment of Owner-Cultivators

One of the results of the change in the nature of the state's owner-cultivator establishment program was that in some cases tenants began to use the policy to their own advantage, and took aggressive steps to buy farm land from landlords. That is what happened in the village of Koshin (Niigata prefecture, Nishikanbara county), where tenants made a series of attempts in 1944 and 1945 to buy land from local landlords with money borrowed from the state's owner-cultiva-
Land Reform in Japan

tor program. While we need not discuss this case in any detail, there are a few points that I think are worth noting.

The first is that under wartime controls, the nature of the landlord-tenant relationship was shifted in favor of the tenants. Koshin had long been characterized by fairly well established tenancy rights and low rents, but it wasn't until the state's wartime policies got under way that tenants were able to think about actually buying land. Those lower rents and their transformation into cash payments made it possible for them to participate in the owner-cultivation program.

Second, the movement to establish the owner cultivators was under strong prefectural leadership, leadership which stressed the importance of creating owner-cultivators as a production-boosting measure. The argument that by selling their land they would aid the war effort was one that both the tenants and the prefectural officials were able to use against the landlords. It was also an argument that was almost completely the opposite of the anti-war policies advocated by the various leftist farmer's unions. This particular movement seems thoroughly removed from the ones that had come before it.

Third, although the movement developed as one in which both tenants and landlords were cooperating in the pursuit of national policy, the main issue for both sides was still the price of the land. And while there were elements in the movement that clearly represent a break with most of the other farmers movements, it is also possible to look at it from the point of view of a struggle between landlords and tenants over who would get the better settlement. In that sense, it was the farmer's of Koshin who came out ahead, and who ought to be thought of as having led the way for the types of reforms that would come under the land reform.

15. Yoshiaki Nishida and Yasno Kubo, 1991 (ed.), The Diary of Koichi Nishiyama, Tokyo: Tokyo University Press, pp. 997-1014. This case is not a mere exception. In Nishikanbara county alone there were 13 such cases in 1943 and 9 in 1944.
The Result of the Land Reform

Japanese land reform officially began with the passage in October 1946 of the Owner Farmer Establishment Special Measures Law and the Revised Agricultural Adjustment Law. The first of the two measures included the following provisions.

1. Resident landlords are limited on average to one chô of tenanted land (four chô in Hokkaido). All other tenanted land will be compulsorily purchased by the government.
2. Purchase prices for the land will be 40 times the rent on paddy land, 48 times the rent on upland. Rents are based on the rice prices paid to landlords in 1945.
3. Owner-cultivated land will be limited to three chô on average (12 chô in Hokkaido).

The Revised Agricultural Adjustment Law, meanwhile, had the following features.

1. Rents on the remaining tenanted land will be monetized, and will be kept at low rates through state controls.
2. Strict limitations will be placed on a landlord’s ability to dissolve or refuse to renew tenancy contracts.
3. The membership of the local Agricultural Land Committee, which will be responsible for the execution of the land reform, will consist of three landlord representatives, two owner-cultivators, and five tenants.

The actual land reform itself got under way in March 1947, and was completed in a very short time. By October 1948, more than 90 percent of the land purchases from landlords had been completed, and by December of that year more than 90 percent of the sales to former tenants were finished. As of April 1950 more than 1.90 million chô of land had been sold to tenants, which meant that where there had been 2.36 million chô of rented land before the reform (or 45.9 percent of all farm land) there was only 0.51 million chô left (or 9.9 percent of farm land). Since the rent on the remaining tenanted land was almost negligible (see Table 3) and rights of cultivation were much stronger than they had been, by the
end of the reforms tenanted land had almost the same characteristics as land that was cultivated by its owner.\textsuperscript{15}

If we look at the process through which the laws relating to the land reform were drafted and put into effect, it is evident that they were a major link in the American military's occupation policies, and that they represent a sharp break with Japan's prewar and wartime land policies. However, researchers have made it clear that when we look at the way in which the reforms actually worked, the land reform was in many ways a synthesis of the prewar land policies that had developed amidst the farmers' and landlords' movements. And, as this analysis has helped demonstrate, the changes in the owner-cultivator establishment policies and in the response of farmers to them, as well as the development of a tenant-led movement to establish owner-cultivators, makes clear the direction that land reform was moving in the villages.

That direction, or tendency, was towards sharp limits on the landlord's property rights (or their denial altogether) and the establishment of property rights for the cultivator. In concrete terms this was reflected in at least two ways. One was the switch from high-rents in-kind, which had been the most obvious symbol of landlord property rights, to low cash rents. The other was the creation of limits on the functions of arbitrary and selfish property rights, and the strengthening of the tenant's cultivation rights. All in all, this led to a reduction in the costs of tenancy. Still, it is also clear that despite these trends, the prewar and wartime land policies did not develop into a land reform, and ended up merely showing the way. In this sense, it can be said that the land reform bears epochal significance for its completion of the synthesis.

Having said that, how do we connect this up with my earlier criticism of the various negative interpretations of the owner-cultivator policies offered by other analysts? The first thing that must be recognized is that the owner-cultivator establishment policies that were at the core of the land reform did in fact seek to assure the position of the cultivator through the provision of land rights to that cultivator,

but what was the nature of that right to the land? As Watanabe Yozo has suggested, "the property rights formed the foundation of both the rights of cultivation and farm management." More concretely, it involved the strengthening of cultivation rights which severely limited landlords’ ability to break or refuse to renew contracts, and property rights that came with low property values, themselves linked to controlled, monetized low rent levels. That is, these property rights were completely different from the way in which the old legal system protected the landlord’s right to the land, in that they are strongly limited and thus much weaker. In addition, the rights apply to something that has a low value as an asset. In my personal opinion, this type of property right is in accord with the demands raised by the prewar farmers’ movements for significant reductions in rent and the establishment of cultivation rights, and might well be called a Farmer’s property right.

The second point is this. It does seem as though in the process beginning at the end of the land reform and continuing through the period of rapid economic growth to the present that the rights of ownership that resulted from the land reform have become something like "commodity rights," or rights to farm land as a form of holding assets. Is this the result of an original sin in the land reform’s plans for the establishment of owner-cultivators?

The rapid increase in the value of farm land is linked in part to the elimination of most controls on rent and on land prices, but far more important is the fact that from the start the prices of farm land moved the same way as prices for urban land. That the characteristics of the present day farm land prices, namely that they are subject to influence by the prices of land in the cities rather than by the income from farming, were fixed in the period immediately after the end of the land reform seems to me to indicate where the original source of the present land problems lie (see Table 4). It is clear that the present phenomena of the commodification of farm land, its commercialization, stems from the prices for farm land that are well beyond what the profits from farming suggest they should be, in effect "development prices" that have come to symbolize the "Reconstruction of the Country."

17. Watanabe, p. 104.
Table 4. Postwar Farmland and Wholesale Price Indices

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy Wholesale Price Index</td>
<td>1.0</td>
<td>1.5</td>
<td>2.2</td>
<td>2.9</td>
<td>3.8</td>
<td>4.3</td>
<td>5.0</td>
<td>5.9</td>
<td>6.9</td>
<td>8.6</td>
<td>10.7</td>
<td>12.7</td>
<td>15.1</td>
<td>18.4</td>
<td>22.3</td>
</tr>
<tr>
<td>Upland Wholesale Price Index</td>
<td>1.0</td>
<td>1.5</td>
<td>2.3</td>
<td>2.9</td>
<td>3.8</td>
<td>4.3</td>
<td>4.8</td>
<td>5.7</td>
<td>6.8</td>
<td>8.4</td>
<td>10.5</td>
<td>12.2</td>
<td>14.3</td>
<td>17.1</td>
<td>20.4</td>
</tr>
<tr>
<td>Urban Land Wholesale Price Index</td>
<td>1.0</td>
<td>1.6</td>
<td>3.0</td>
<td>4.4</td>
<td>5.7</td>
<td>6.3</td>
<td>6.7</td>
<td>8.0</td>
<td>9.2</td>
<td>10.7</td>
<td>12.7</td>
<td>15.8</td>
<td>20.4</td>
<td>26.5</td>
<td>32.1</td>
</tr>
<tr>
<td>Wholesale Price Index</td>
<td>1.0</td>
<td>2.7</td>
<td>3.6</td>
<td>7.0</td>
<td>8.1</td>
<td>8.9</td>
<td>9.4</td>
<td>10.8</td>
<td>13.8</td>
<td>14.6</td>
<td>14.6</td>
<td>14.4</td>
<td>14.5</td>
<td>14.7</td>
<td>15.2</td>
</tr>
</tbody>
</table>

Even if the land reform had not put plans in effect to establish owner-cultivators, and had just put controls on rents and strengthened cultivation rights, in the midst of the unregulated development policies common in Japan there would still have been no way to avoid the commodification of those cultivation rights. Moreover, it goes without saying that the tendency of farmers to become asset holders has formed the basis for their conservatism. However, the land reform did not turn farmers into conservatives. It was the increase in land and other prices during the rapid growth after the reforms that supplied the conditions necessary for that to happen.

Some Proposals on Land Policy Problems

As illustrated above, there was a long historical process behind the land reform in Japan. In order to preserve the results of the land
reform, the government enacted the Agricultural Land Law in 1952. This law severely restricted the transfer of rights to farm land and the transfer of farm land to non-agricultural use, and it also strongly protected tenancy rights. There were provisions which both sharply restricted the dissolution of tenancy contracts and controlled rents carefully.

Nevertheless, in my opinion there were two serious defects in the Agricultural Land Law. Although the law included provisions to divide agricultural and non-agricultural land, it was enacted without having a nationwide land use plan. As long as there were no divisions between farming areas and urban areas, it was inevitable that farm land would be transferred arbitrarily to non-agricultural use as economic growth and the reconstruction of industry led to the expansion of Japan’s cities. This happened despite provisions in the law that required permission from governors or from the Minister of Agriculture and Forestry when land was to be transferred out of agricultural use.

Second, and closely related to the first problem, although there were guidelines to regulate rent there were no such provisions to regulate the price of agricultural land. Under high speed economic growth the price of land in urban areas shot up tremendously, which meant that farm land located near cities also became more expensive. As farm land prices rose, it became almost impossible for farmers to expand the size of their farms through purchases of additional land. It goes without saying that there were some farmers who sold off the land they owned near urban areas and used the proceeds to buy a slightly bigger farm in a more remote part of the country. But in doing so they themselves helped fuel the spiraling cost of farm land in their new locations.

The government has taken some steps in an attempt to address these problems. In 1968, the New City Planning Law was enacted, and the following year saw the passage of the Adjustment of Agricultural Development Areas Law. These two pieces of legislation were aimed at making a clear distinction between land for urban use and that for farming. In addition, the government revised the Agricultural Land Law in 1970, and enacted the Encouragement of Agricultural Land Use Law in 1980. These two measures were designed to encourage
farmers to expand the size of their farms by leasing farm land, since it had become impossible for them to actually buy it.

In spite of these steps, attempts to draw a line between farm land and urban land were not fruitful, and the phenomenon of sprawl continues across Japan. There has been some increase in the leasing of farm land, so in that sense we may say that the government's measures have met with some success. But from the point of view of the farmers who sought to expand through leasing rather than buying land, unlike the situation before 1970 they are now faced with a combination of high rents and weak cultivation rights. Since most of the lessors are small-scale part-time farmers, there has not been a return to the prewar landlord system. Nevertheless, I would like to stress that we have returned to a situation in which the power relationship involving farm land is characterized by high rents and weak cultivation rights.

Land is quite different from other commodities in that it cannot be produced freely. At best it is a commodity with a very public nature. Thus, the first thing that must be done is to make strict distinctions between agricultural and urban land (which itself must be divided into housing, commercial, and industrial sectors) under an effective, nationwide land-use plan. Although I regret that it may be too late to accomplish this in Japan, this should have first priority in thinking about land policy. The second thing that ought to be done is to consider regulating land prices (which have not been controlled since the enactment of the Agricultural Land Law) in connection with the right of use. As far as farm land goes, areas of agricultural use must be strictly determined, and the transfer of that land to non-agricultural use prohibited.

Once that is done, the price of the land must be compulsorily reduced to a level in accordance with the profits from farming. These measures will restrict the right of land ownership, which has become abnormally strong, and will stabilize cultivation rights. Under those conditions farm land will be more mobile, and farm households that wish to do so will be able to expand the scale of their operations.

Japan's land reform sought to restrict the right of land ownership and to strengthen the right of cultivation. We must therefore reflect on the postwar land reform especially now as we face our contemporary land policy problems.
AGRICULTURAL LAND REFORM AND THE JAPANESE FARM LAND MARKET

Kiyohiko G. Nishimura and Shinya Sasaki

Introduction

The phenomenal success of the Japanese economy, followed by the significant rise of the Korean and Taiwanese economies, has sometimes been associated with the agricultural land reforms implemented in these three countries and the subsequent record of industrialization. The land reform eradicated the so-called "pre-modern," "feudalistic" structure of the rural community. The emergence of owner-cultivators in the rural area yielded the political stability necessary for a smooth transition from a rural to industrialized economy. These farmers were the source of the labor force in the course of rapid economic growth, and the rural economy was the major domestic source of demand for products the manufacturing sector produced.

However, the performance of Japanese agriculture itself has been disappointing compared with the success of the other parts of the economy, especially manufacturing. The average productivity of agricultural producers remains low by international standards, and heavy subsidies to rice production have become the financial burden of the central government. In contrast, the price of farmland has risen substantially, which is often characterized as the principal impediment to efficient use of Japanese farmland.

The purpose of this paper is to show that the agricultural land reform and subsequent transaction regulations have been the major factors making Japanese farmland-use inefficient. We argue that although the agricultural land reform substantially improved the stan-
standard of living in rural areas after the Second World War, regulations on farmland aimed at preserving the result of the reform were excessive, and prevented transactions necessary for efficient land usage. The apparent inefficiency has persisted even in the recent period during which the government began to deregulate the farmland market. This points to the inadequacies of the deregulation and the strong inertia in the farmland market.

The plan of this paper is as follows. In section two, a brief history of the Japanese farmland reform and subsequent regulations are presented and its effect on efficiency in land usage is informally discussed. In section three, a formal test of efficient farmland usage is proposed and discussed, which is closely related to the “weak-form test of market efficiency” in financial markets. Section four explains the data used in this paper in detail, and shows that the data used in this paper are reasonable representations of the Japanese farmland market. Section five presents the formal test of efficient usage, and section six concludes the paper with remarks on Korean and Taiwanese farmland markets.

The Agricultural Land Reform and Subsequent Regulations on Farmland

Pre-War Period

Before the war, many Japanese farmlands were sharecropped. For example, in 1941, 43% of all paddy fields were sharecropped, while 38% of other fields were sharecropped. Owner-cultivators were only 28% of all farmers in Japan. Although many farmlands were cultivated by tenant farmers, the holdings by their landlords were, in many cases, small-sized. More than 70% of the landlords owned less than three hectares of farmland, while large-scale landlords owing more than 50 hectares were rare in 1939 (Kawagoe, 1991).

There was virtually no restriction on farmland transactions before 1938 when the Farmland Adjustment Law was enacted to regulate use of agricultural lands for other purposes than farming in order to increase food production at the time. Farmland rents were freely set
until 1939 when the Rent Control Order was instituted. Similarly, farmland prices were determined in the market, and only after 1941 did the government intervene in the land ownership market by instituting the Farmland Price Control Order.

Transactions of farmlands were active in those days. These landlords bought and sold their lands quite frequently. In one estimate, 2% of the total farmlands were transacted each year.

**After-War Period I: Land Reform**

The agricultural land reform after the Second World War was carried out as a means of "democratization" of rural communities. The farmland reform that began in 1946 aimed to counter large-scale land holding by absentee landlords at that time, and to improve economic conditions of impoverished sharecroppers in rural Japan in order to restore political stability. After the reform, the sharecropped paddy fields dwindled to just 14% of all paddy fields in 1949, and the share of owner-cultivators increased to 55% of all farmers.

The core of the agricultural land reform was summarized in the Agricultural Land Law of 1952. It was based on the so-called "owner-cultivator principle." In order to prevent land holding by absentee landlords, three types of regulations on the transactions of farmland were incorporated into this law.

First, the transfer of ownership of farmland must be reported to the local agricultural committee and must be approved by the governor of the prefecture. The purpose of this regulation was to prevent the concentration of landholdings through market exchange. Thus, market participants were virtually restricted to owner-cultivators. Second, the use of farmland for purposes other than farming must also be reported to the committee and approved by the governor. This also reduced the possibility of the resurgence of absentee landlords through disguised transactions, and encouraged farmers to take a long-term view on their farming. Third, there was a direct cap on the holding of farmland (3 hectares in Honshu, Sikoku and Kyushu and 12 hectares in

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1. See, for example, the case of the wealthy Ohara family in Nakamura (1979).
Hokkaido). This upper limit was low enough to discourage attempts to accumulate landholdings.

Table 1. Transaction of Farmlands: Selected Years

<table>
<thead>
<tr>
<th>Year</th>
<th>1956</th>
<th>1966</th>
<th>1976</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Farmlands</td>
<td>6,012</td>
<td>5,995</td>
<td>5,536</td>
<td>5,358</td>
</tr>
<tr>
<td>Transacted Farmlands</td>
<td>43.6</td>
<td>74.6</td>
<td>47.3</td>
<td>35.2</td>
</tr>
<tr>
<td>Transacted/Total(%)</td>
<td>0.72</td>
<td>1.25</td>
<td>0.85</td>
<td>0.66</td>
</tr>
<tr>
<td>Number of Transactions</td>
<td>353,216</td>
<td>369,720</td>
<td>213,106</td>
<td>158,509</td>
</tr>
</tbody>
</table>


However, it should be noted that no restriction was imposed on transactions between owner-cultivators, and there was no regulation on transaction prices in the Agricultural Land Law. In fact, the law did not prevent free market transactions between owner-cultivators. Table 1 depicts market transactions of farmland after 1956. There were a substantial number of transactions, although the ratio of the transacted area to the total farmland was between 0.7% and 1.2% compared with 2% before the war.

In contrast to the ownership market for farmland where there was no price regulation, the Agricultural Land Law tightly regulated farmland rents. Before 1939, when the Rent Control Order was issued, there was no regulation on farm rents and sharecropping was widespread as noted before. In this sharecropping, farmland rents were paid in kind and often set at very high levels. Thus, farmland rent control was considered to be necessary to prevent landowners from setting high farm rents by using their superior bargaining power. Consequently, the rental price of farmland was tightly controlled by the Agricultural Land Law until 1970. In addition to the tight rent control, tenancy rights were strongly protected. It was almost impossible for landlords to evict tenants.

One additional element of the land reform is that it has had the effect of freezing the status quo. The land reform gave farmland to actual cultivators, but it did not consolidate landholding so as to take
advantage of economies of scale. Thus, post-reform landholding is not only small-scale but also extremely complicated. Many farmers have their pieces of farmland scattered over the village. This became a substantial impediment in farmland transactions in later years.

After-War Period II: Gradual De-regulation

After 1960, when the era of high economic growth began, the regulations on farmland transactions weakened in various ways. For example, in the 1962 amendment of the Agricultural Land Law, the cap on farmland holdings was lifted for a certain class of farmers, and in the 1970 amendment the cap was completely abolished. From 1975, certain transactions of farmland were exempt from the Agricultural Land Law regulation. The 1980 amendment relegated the right of approval to local agricultural committees.

<table>
<thead>
<tr>
<th>Table 2. Size of Farmlands: Selected Years</th>
<th>Unit = 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>1856</td>
</tr>
<tr>
<td>Number of Farmlands Total</td>
<td>5,806</td>
</tr>
<tr>
<td>Smaller than 1.5 ha</td>
<td>5,221</td>
</tr>
<tr>
<td>(%)</td>
<td>89.92</td>
</tr>
<tr>
<td>Larger than 3 ha</td>
<td>29</td>
</tr>
<tr>
<td>(%)</td>
<td>0.50</td>
</tr>
</tbody>
</table>


Along with this gradual deregulation, the number of owner-cultivators having holdings larger than three hectares was steadily, though very slowly, increasing. Table 2 shows that the number of these large-scale farmers more than quadrupled between 1955 and 1986, and that this change especially accelerated after 1965. However, this table shows that these large-scale farmers are still a small minority.

The government deregulated not only the ownership market of farmland but also the rental market. In 1970, the farm rent control was in principle abolished, although the control partially remained for existing
rent contracts until 1980. However, the low farmland rents have been considered as a part of the de facto right of tenants, and the abolition of farmland rent control did not drastically increase farmland rents to induce less productive owner-cultivators to rent their lands to more productive ones (though they increased substantially).

Small Size, Low Productivity and Under-developed Rental Market

What does this brief history imply for efficient utilization of Japanese farmland? It should be noted that efficient usage is achieved only if the most productive farmers use farmland. Although the agricultural land reform succeeded in bringing substantial improvements in the living standard of impoverished rural tenant farmers, it has often been argued that the rigid control on farmland rents and various regulations on ownership transactions designed to preserve the results of the land reform distorted land use in post-war Japanese agriculture.

First, because of the owner-cultivator principle, the farmland rental market was prevented from developing. Moreover, because of the remnants of the tight rent controls and heavy protection of tenants, the existing rental market was not active. This was the case even in the 1980s, almost thirty years after the reform. The 1985 Census of Agriculture showed that the share of leased-in land in the total farming area was only 7.5%, which is substantially lower than the 20-50% in Western Europe and North America (Hayami, 1988). This seems to imply that productive farmers were unable to rent farmland from less productive farmers, and that they had to buy farmland outright in order to increase their production capacity.

Second, tight transaction regulations introduced after the reform were likely to become impediments in transactions, although they did not completely block market transactions as exemplified by the 0.7 to 1.2% ratio of transacted farmland to the total farmland. Although deregulation reduced various impediments to farmland market transactions, the fact that the (relatively) large-scale farmers having more than three hectares were only a tiny minority is often pointed out as indicating that the impediments to transactions were and still are high.
Table 3. Production Cost of Rice: Selected Years

(Below 0.3 ha = 100)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 0.3</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>0.3-0.5</td>
<td>96</td>
<td>106</td>
<td>95</td>
<td>93</td>
<td>94</td>
</tr>
<tr>
<td>1.0-1.5</td>
<td>89</td>
<td>96</td>
<td>78</td>
<td>70</td>
<td>71</td>
</tr>
<tr>
<td>2.0-3.0</td>
<td>79</td>
<td>92</td>
<td>67</td>
<td>57</td>
<td>63</td>
</tr>
<tr>
<td>Above 3.0</td>
<td>75</td>
<td>87</td>
<td>69</td>
<td>51</td>
<td>54</td>
</tr>
<tr>
<td>Labor Cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 0.3</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>0.3-0.5</td>
<td>93</td>
<td>106</td>
<td>98</td>
<td>92</td>
<td>95</td>
</tr>
<tr>
<td>1.0-1.5</td>
<td>83</td>
<td>91</td>
<td>79</td>
<td>66</td>
<td>67</td>
</tr>
<tr>
<td>2.0-3.0</td>
<td>66</td>
<td>83</td>
<td>63</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>Above 3.0</td>
<td>60</td>
<td>78</td>
<td>68</td>
<td>42</td>
<td>46</td>
</tr>
<tr>
<td>Machinery and power cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.3-0.5</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1.0-1.5</td>
<td>87</td>
<td>135</td>
<td>104</td>
<td>103</td>
<td>96</td>
</tr>
<tr>
<td>2.0-1.5</td>
<td>92</td>
<td>146</td>
<td>89</td>
<td>81</td>
<td>86</td>
</tr>
<tr>
<td>2.0-3.0</td>
<td>89</td>
<td>137</td>
<td>72</td>
<td>64</td>
<td>77</td>
</tr>
<tr>
<td>Above 3.0</td>
<td>89</td>
<td>121</td>
<td>69</td>
<td>55</td>
<td>63</td>
</tr>
</tbody>
</table>

The above discussion suggests that utilization of Japanese farmland was not efficient in the post-war period, in the sense that land might be used by more productive farmers to increase the output in the economy. Moreover, post-war (especially after 1970) farming was characterized by the existence of economies of scale. Table 3 shows a comparison of rice production costs by farm size. Total costs showed substantial declines on the medium- and large-scale farms after 1970, when “medium-scale machinery” such as power tillers, sprayers, transplanters, and riding tractors were widely utilized. However, because of the underdeveloped rental market and transaction regulations in the ownership market, it is often argued (Kawagoe, 1991) that most farms
remained very small, and were unable to exploit economies of scale through farm mechanization.

In this paper, we examine this informal hypothesis that the agricultural land reform and subsequent regulations resulted in inefficient utilization of farmland. In the next section, we derive a necessary condition in which efficient usage of farmland is achieved by transactions of farmland, which can be tested using available data.

No-Arbitrage Condition: A Necessary Condition of Efficient Usage

As explained in the previous section, a distinctive feature of the Japanese farmland market after the agricultural land reform is that i) the ownership market is relatively active, and there is no regulation on farmland prices, while ii) the rental market of farmland is small and inactive, and farmland rents are more tightly controlled. Farmers have to own farmland in order to produce rice ("owner-cultivator principle"). Thus, in the subsequent analysis, we assume that there is no rental market of farmland but that farmers are free to trade their land.

Under the above conditions, we derive in this section the fundamental relationship between efficient usage of farmland and its rate of return, which will be used in the subsequent section to test the actual efficiency (or inefficiency) of Japanese farmland use. To make our argument as simple as possible, let us assume that farmland is used only for producing rice, and it is the only factor of production in rice production. (The extension to multi-factor models is straightforward and does not change the main result, but notations become cumbersome.) In the following, rice is chosen as the numeraire, and all prices are real prices in terms of rice.

Consider an economy with farmland. There are many potential farmers in the country; some can produce more rice from the farmland than others. Suppose that there are two types of farmers, A and B. Farmer A is assumed to be more productive than Farmer B. Farmer A can produce $R^A_t$ rice in period $t$ which is available for sale at the beginning of the next period. We call $R^A$ as the imputed rent accrued to the farmland owned by Farmer A. Similarly, $R^B$ is the imputed rent of Farmer B's farmland. By definition we have $R^A > R^B$. 
For simplicity, suppose that there is no uncertainty in the future. The price of the farmland (in terms of rice) at the beginning of period \( t \) is \( q_t \). Suppose that Farmer A has one unit of money (in terms of rice). On the one hand, if the farmer buys the farmland, he gets \( (1/q) \) unit of the land. If he produces rice, and sells the land in the next period, he obtains \( (R_{t+1}^A+q_{t+1})/q_t \) at the beginning of the next period. On the other hand, if he invests this money in the financial market, he obtains the interest payment \( r_{t+1} \). (The rate of interest is determined in period \( t \) to be paid at the beginning of the next period \( t+1 \).)

It is evident that if there is no impediment for the farmer to buy farmland, the farmer buys the farmland so long as the return from the farmland exceeds the rate of interest on financial asset, that is,

\[
(1) \quad \frac{(R_{t+1}^A+q_{t+1})}{q_t} - 1 > r_{t+1}
\]

This increases the price \( q_t \) of the farmland in period \( t \), and the farmland is transferred from less productive to more productive farmers. This process continues until the most efficient farmers get the farmland and the price of farmland is high enough to make both sides of the above expression the same, so that no farmer has an incentive to buy more land.

Consequently, if farmland is owned by the most productive farmers so that the present rice production of the country as a whole is maximized, then (1) holds with equality such that

\[
(2) \quad r_{t+1} = \frac{(R_{t+1}^A+q_{t+1}-q_t)}{q_t}
\]

Thus, this condition is the necessary condition for efficient farmland use in this economy.

Let \( R_{t+1} \) be the average imputed rent of farmland, which can be computed from aggregate rice production data. If the farmland is used efficiently, we have \( R_{t+1} = R_{t+1}^A \), so that we obtain

\[
(3) \quad r_{t+1} = \frac{(R_{t+1}+q_{t+1}-q_t)}{q_t}
\]

Thus, efficient land use in this economy implies that the rate of return based on the average imputed rent of farmland must be equal to the rate of return of the alternative use of funds (here, the rate of interest in the financial market). This relation (3) is often called a no-arbitrage condition, which shows there is no exploited arbitrage opportunity between financial assets and farmland.
Let us consider what is implied if the no-arbitrage condition is not satisfied. The violation of the no-arbitrage condition means (except for the very rare case described below) that there is an impediment for productive farmers to buy farmland so that (3) is not satisfied. Impediment here means that Farmer A cannot buy farmland he wants by simply increasing his price offer. Therefore, the observed price of farmland is lower than the price implied by the no-arbitrage condition. However, since Farmer A cannot buy less productive Farmer B’s land, Farmer B still produces rice, which decreases the observed average imputed rent $R_i$.

Depending on the relative magnitude of the two effects, both positive and negative excess returns on farmland are possible. This argument implies that if the no-arbitrage condition is not satisfied, then farmland is not efficiently utilized, except for the extremely rare case in which farmland is already owned by productive farmers (Farmer A’s) so that transaction of farmland is not needed. Except for this rare case, there will be a way to improve efficiency of farmland utilization in this economy.

The real world is full of uncertainty, in which both the imputed rent and the future price are not known in advance. The market rate of interest also may not be certain. Therefore, the no-arbitrage condition (3) does not necessarily hold true ex post even if efficient utilization is achieved. However, the no-arbitrage condition must hold ex ante when land usage is efficient. Thus, the necessary condition of efficient utilization under uncertainty is

$$E_x [r_{it} - [(R_{it} + q_{it} - q_i)/q_i]] = 0$$

where $E_x$ is the expectation of $x$ conditional on all information available at the beginning of period $t$.

In this paper, we examine whether the no-arbitrage condition under uncertainty (4) is satisfied in the Japanese farmland market. Since the expected rate of return is not observable, we cannot directly test whether (4) holds in the Japanese economy. However, (4) has an important restriction on the observed ex post excess return. Note that by definition of $E_x$, the ex post difference between the rate of return of farmlands and the rate of interest can be decomposed into the expected excess rate of return and the forecast error $u_{it}$.
(5) \( \frac{(R_t+i_q+q_t-i_t)}{q_t-r_{t+1}} = E_t[(R_{t+1}+q_{t+1}-q_t)/q_{t-1}]+u_{t+1} \)

By the definition of the forecast error, \( u_{t+1} \) must be uncorrelated with information available at the beginning of period \( t \). Specifically, \( u_{t+1} \) must be uncorrelated with the past history of the forecast error. Thus, the necessary condition of efficient land usage which can easily be tested is that \( u_{t+1} \) is serially uncorrelated.

This test is devised in a different context in corporate finance, and is called the test of “weak-form of market efficiency.” Since efficient usage of funds is assumed in corporate finance, “market efficiency” here is defined as the informational efficiency in which the financial market incorporates all available information into price, so that there is no unexploited arbitrage opportunity for individual assets. In this sense, this concept of informational inefficiency presupposes that there is no structural impediment nor irrationality. This is different from the concept of efficient utilization of land considered here (though it is closely related).

It should also be noted that the relevant rate of return in the test of efficient land utilization must be based on the average imputed rent over all farmers, not the marginal rent. This difference is irrelevant again in the financial market, since the return is by definition the same for all investors.

### Data About Farmland Prices

The data source for farmland prices is the Survey on Farmland Prices Rents conducted by the Japan Real Estate Institute. There are two distinctive features to this data set. First, these price data are based on actual transaction prices. Second, farmland prices reported in this survey are prices of farmlands strictly for farming.

The Survey on Farmland Prices and Farm Rents was initiated in 1913 by Nihon Kangyo Bank. After the establishment of the Japan Real Estate Institute in 1959, the Institute conducted the survey. In the early days, when Nihon Kangyo Ginko conducted the survey, data collection was more rudimentary than the one described below, but the procedure was qualitatively the same.
Each year the Institute sends questionnaires to city, town, and village offices, agricultural committees, and in some cases farmers in all prefectures. They are selected on the basis that they have first-hand knowledge about local market conditions. For example, in the 1989 survey, 1,706 municipalities were surveyed. Among them, 1,337 municipalities responded (78% response rate). The rate of response has been stable over the years.

In this survey, two kinds of farmlands are considered: paddy fields (ta) and upland fields (hatake). They are classified in three broad categories: excellent, good, and poor. Local officials and farmers are asked to report the price of land per ten ares in each category. They are also asked to report prices of the fields that are strictly for farming, not those which may be used for purposes other than farming in the near future.

Local officials and farmers are asked in this survey to report the normal transaction price\(^3\) of these farmlands in their locality in March of the year. The normal transaction price is the price that “both buyers and sellers consider appropriate.” Thus, for example, purchase prices determined by the government under the Agricultural Land Law were excluded. Because all transaction prices are in principle reported to local agricultural committees, there is good reason to assume that those respondents have considerable knowledge about the transaction prices of farmlands in their locality.

The institute publishes the simple arithmetic average of farmland prices for all prefectures except Tokyo, Kanagawa, and Osaka, although the Institute published the average for all prefectures until 1968.\(^4\) In the averaging procedure, the institute carefully excludes all prices of farmlands that may be converted to residential, commercial, or industrial lands in the foreseeable future. However, in Tokyo, Kanagawa, and Osaka, increasingly many parts of farmland were considered to be convertible to residential, commercial, or industrial lands in the foreseeable future, and consequently the area considered farmland dwindled. This is why the Institute excluded Tokyo,

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3. The term the Institute uses is “Reasonable Free-Transaction Price.”
4. However, it should be noted here that those reported prices are not the weighted average of all farmlands of their locality but the simple average of the transaction prices which are considered by the respondents as normal prices.
Kanagawa and Osaka altogether in its publication after 1969. In addition to the prefectural averages, the Institute also publishes the nation-wide and ten regional averages.\(^5\)

The Institute publishes the nominal average price of paddy fields, and that of upland fields. The series go back to 1913 in the case of paddy field prices. We selected paddy fields (\textit{ta}) of the “good” category as our subject of investigation because they constitute a major part of the Japanese farmland.

**1. Pre-war market farm rents.**

Beginning in 1921, the survey of farmland rents was included in the Survey on Farmland Prices. Local officials and farmers are asked to survey market farmland rents of each of three categories (described in the farmland price section) of paddy fields and upland fields in their locality in March of the year, and to report actual farmland rents. The rest of the procedure is the same as farmland prices.

In the pre-war period, farm rents were paid in kind in many cases, and the Survey reported the amount of rice paid as rents. We multiplied this quantity with the rice price in Tokyo to get cash rent data. The rice price series are taken from various issues of \textit{News Almanac}, published by Jiji Shinpo Sha. In addition, we extended the data to 1917 when the data about the call rate (see below) was first available in the analysis reported in the next section, assuming that the actual rent in-kind in these years was the same as in 1921. This assumption is justified since the rent in-kind had been very stable around 1921, and most fluctuations were due to fluctuations in the rice price.

These market farmland rents are relevant average farmland rents for the period before the Second World War, since there was no regulations on farm rents until 1939. However, because of persistent rent

\(^5\) However, the coverage of the nation-wide and regional averages is different between before 1968 and after 1969. Before 1968, the nation-wide and regional averages included Tokyo, Kanagawa, and Osaka, but after 1969 these three prefectures were excluded from the averages. In addition, Okinawa Prefecture was included in the pre-war period, but excluded in the post-war period until 1983. Since the effect of these breaks is small (due to the procedure to excludefarmlands that might be used for other purposes), we ignore them in the following analysis.
controls in the farmland rental market after the land reform, this farmland rent data, even though they represented actual farmland rents paid by tenants, may not represent true market rents. They were a mixture of regulated rents and black-market rents.

2. Post-reform Imputed Farmland Rents.

In order to circumvent the rent control issue, we imputed farmland rent data for the period after the land reform from the Survey of the Production Cost of Rice, published annually by the Ministry of Agriculture and Fishery. In this production cost survey, approximately 2,900 farmers are surveyed annually. This survey is quite detailed, including revenues and major cost items per 10 ares. Data is available for the nationwide and ten regional averages of "selling farmers" (farmers producing more than 600 kg of rice) and prefectural averages of all farmers (farmers producing more than 60 kg of rice). The latter include a sizable number of part-time farmers, whose major source of income is not farming. We use the nationwide and regional averages of selling farmers. However, qualitative results do not change if we use the constructed all-farmer base data, which is the average of the all-farmer-base prefectural data.

From this survey, we construct the average imputed rent from the following formula:

\[
\text{imputed rent} = \text{revenue} - \text{material cost} \times \text{imputed wages} - \text{actual and imputed rental price of capital stock}
\]

Here imputed wages are hourly agricultural wage time work hours, which are estimated in the survey. Actual and imputed rental price of capital stock is equal to actual rent of capital stock paid and the interest payment.  

6. This method of imputing farmland rents is widely used in the literature. However, this method is criticized by Kuroda (1988) on the grounds that this method may overestimate imputed wages of family labor, since their estimated wage rate is (as in the Survey) typically based on the wage rate for non-agricultural employment and/or agricultural temporary-hired worker, which may be substantially higher than the true opportunity cost of farm labor. The effect of this overestimation issue will be discussed in the subsequent footnotes.
3. Interest Rate

The analysis in the previous section showed that the relevant rate of interest is the market rate of interest. We adopt the yearly average of the call rate of the Tokyo call market as the interest rate. It is often argued that the call rate is relatively close to the market rate of interest compared with other rate data available for the entire period we study, such as the rate of interest on discounted bonds. However, the result reported in the subsequent analysis is not sensitive to our particular choice of the call rate as the interest rate.7

The pre-war call rate data is taken from the table of the rate of interest in the Tokyo Call market in various issues of the Economic Almanac published by Toyo Keizai. The data are available from 1917. The post-reform call rate data are taken from various issues of the Economic Statistics Annual published by the Bank of Japan.

Test of Efficiency in Farmland Use

Movement of Farmland Prices and Farmland rents

The movement of the nation-wide average price of farmland (paddy fields of “good” category) is summarized in Table 4, and the rate of change in the real farmland price in the pre-war period (1917-1939) and the post-reform period (1950-1990) is depicted in Figures 1 and 2. We choose 1917 as the starting year of the pre-war period, because of the availability of the interest rate data. The closing year, 1939, is the year when the government began to control farmland rents. The starting year of the post-reform period, 1950, is chosen partly because the turmoil that followed the reform had subsided somewhat by that time and partly because reliable rice production cost data became available.

Here we constructed the real price of the paddy field by dividing the nominal price of the paddy field by the nation-wide wholesale price

7. We tried the rate of interest rate on discounted bonds and got qualitatively the same result.
Table 4. Nationwide Average of Farmland Prices: Selected Years

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</tr>
</thead>
<tbody>
<tr>
<td>Nominal Price (Unit = 1000 yen per 10 are)</td>
<td>0.43</td>
<td>0.54</td>
<td>0.52</td>
<td>20.82</td>
<td>327.7</td>
<td>928.5</td>
<td>117.3</td>
<td></td>
</tr>
<tr>
<td>Wholesale Price Index (average over 1934-1936 period = 1)</td>
<td>1.25</td>
<td>1.11</td>
<td>1.33</td>
<td>256.8</td>
<td>352.1</td>
<td>399.9</td>
<td>826.2</td>
<td>745.4</td>
</tr>
<tr>
<td>Real Price (1970 = 1)</td>
<td>0.42</td>
<td>0.59</td>
<td>0.48</td>
<td>0.10</td>
<td>0.65</td>
<td>1.0</td>
<td>1.37</td>
<td>1.92</td>
</tr>
</tbody>
</table>

Although not shown in this paper, the movement of the regional and prefectural averages basically follow the same pattern as the nation-wide average. Table 4 shows that the farmland price declined from 1928 to 1938. This decline is one manifestation of the plight of rural communities at that time. When the land reform began in 1946, the real farmland price plummeted, and the real price in 1950 was just 1/6 of that in 1928. In contrast, the real price increased sharply after the land reform. The real price in 1990 is almost nineteen times as high as that in 1948.

The movement of the rate of change in the nation-wide real average farmland price shown in Figures 1 (Pre-war) and 2 (Post-reform) reveals that there is no difference between pre-war and post-reform periods. The real-price movement in the pre-war period is somewhat more volatile than that in the post-reform period. The real price movement during the period immediately after the land reform shows remarkable persistence, and strongly suggests that no arbitrage condition might not hold after the land reform.

8. We use the pre-war-year-base wholesale price index (the average between 1934-1936 = 100) published by the Bank of Japan.
9. Data, tables and figures about regional and prefectural averages are available from the authors upon request.
Figure 1. Rate of real Price Change (Pre-War; Nationwide Average)

Figure 2. Rate of Real Price Change (Post-Reform; Nationwide Average)
Figure 3.  
Real Rent (Pre-War; 1970=1)

Figure 4.  
Real Rent (Post-Reform; 1970=1)
Table 5. Nationwide Average of Farmland Rent: Selected Years

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<tbody>
<tr>
<td>Nominal Rent (unit = 1000 yen per 10 are)</td>
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<tr>
<td></td>
<td>0.04</td>
<td>0.03</td>
<td>0.03</td>
<td>4.17</td>
<td>12.1</td>
<td>23.0</td>
<td>22.4</td>
<td>19.3</td>
</tr>
<tr>
<td>Wholesale Price Index (average over 1934-1936 period = 1)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>1.25</td>
<td>1.11</td>
<td>1.33</td>
<td>256.8</td>
<td>352.1</td>
<td>399.9</td>
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<td>745.4</td>
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<tr>
<td>Real Rent (1970 = 1)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>0.52</td>
<td>0.50</td>
<td>0.45</td>
<td>0.29</td>
<td>0.60</td>
<td>1.0</td>
<td>0.47</td>
<td>0.45</td>
</tr>
</tbody>
</table>

The movement of the national average of market farm rents and imputed rents is shown in Table 5, and its rate of change is depicted in Figures 3 (pre-war) and 4 (post-reform). It is remarkable that the real rent has not changed much during this century, although real income grew rapidly and the real price of farmland also showed a substantial increase. These figures clearly show the very powerful effects of farmland rent control after the reform. It is also important to know that the real imputed rent declined after 1970. This is due to the glut of rice production during this period. The movement of real rent is not very much different between the two periods, although the pre-war real rent might be described as more volatile than that of the post-reform period.

**Price-Rent Ratio**

One important difference between the two periods is the movement of the price-rent ratio (which corresponds to the PER, i.e., price-earning ratio in the stock market). Figures 5 and 6 reveal that the price-rent ratio was stable between 10 and 20 in the pre-war period, while it was very low around 1950, somewhat stable between 10 and 20 until the late 1970s, and then showed a phenomenal ascent to the 80 mark during the 1980s. This movement is quite similar to that of the urban land, although the subsequent decline started earlier in the farmland than in the urban land. Since this paper is mostly concerned with farmland, we do not pursue the issue here. The interested reader may be referred to the paper by Takeuchi and others in this volume.
Figure 5. Price-Rent Ratio (Pre-War)

Figure 6. Price-Rent Ratio (Post-Reform)
Table 6. Efficiency of Farmland Use in Different Periods

<table>
<thead>
<tr>
<th>Period</th>
<th>(a) (t-stat.)</th>
<th>(b) (t-stat.)</th>
<th>Adjusted (R^2)</th>
<th>No. of obs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Agricultural Land Reform: 1917-1938</td>
<td>0.034 (0.212)</td>
<td>0.307 (1.556)</td>
<td>0.063</td>
<td>22</td>
</tr>
<tr>
<td>After Agricultural Land Reform: 1950-1989</td>
<td>0.005 (0.067)</td>
<td>0.826 (11.781)</td>
<td>0.779</td>
<td>40</td>
</tr>
<tr>
<td>Immediately after the reform: 1950-1969</td>
<td>0.006 (0.067)</td>
<td>0.831 (8.302)</td>
<td>0.781</td>
<td>20</td>
</tr>
<tr>
<td>Recent period: 1970-1989</td>
<td>0.007 (0.060)</td>
<td>0.737 (4.306)</td>
<td>0.507</td>
<td>20</td>
</tr>
</tbody>
</table>

\(R_t = \text{rate of return on farmland} = (\text{capital gain} + \text{income gain})/\text{price}\)
\(n = \text{nominal interest rate (call rate)}\)
\(ER_t = R_t - n = \text{excess return on farmland}\)
Regression equation: \(ER_{t+1} = a + bER_t + u_t\)

Test of Efficient Land Use

We performed the test of determining whether a no-arbitrage condition holds in the nation-wide average of the paddy fields in two periods: the pre-war period (1917-1939) and the post-reform period (1950-1989). The latter period is also divided into two sub-periods: the period immediately after the land reform (1950-1969), and the recent period (1970-1989).

It should be noted that the choice of the end year of the land-reform period, 1970, is somewhat arbitrary. However, 1970 may be a good choice, because it divides the post-war period almost evenly. The regression analysis is reported in Table 6.

Table 6 confirms the observation of inefficient use of farmland in the post-reform period. It is evident from this table that we have a strong positive serial correlation of the excess rate of return on farmland in this period. The t value of the coefficient \(b\) is large, implying it is significantly different from zero, and the magnitude of the positive correlation \(b\) is large. In fact, this coefficient implies that 1% increase in the
real price this year leads to 0.8% increase in the next year. In contrast, the coefficient b of the pre-war period shows little persistence (small t-statistics), which is not inconsistent with active transaction and efficient market, given the landlord system at the time.

The analysis of the ten regional averages of the excess return on farmland, which is not reported here, shows a remarkable similarity of the regional averages to the nation-wide average. The b coefficient of the pre-war regression is small and insignificant in all regions. In contrast, the regression in the post-reform period shows a positive, large, and significant b coefficient except for Hokkaido (northern-most part of Japan) and Shikoku (southern part of Japan).

**Conclusion**

In this paper, we have examined the efficiency of the Japanese farmland use. Although the land reform succeeded in improving the living standard of rural communities and bringing political stability, the overall assessment of the data indicate that regulations after the reform were too excessive and prevented the active transactions necessary for efficient use of farmland.

The movement of land prices and (imputed) farmland rents in Japan is remarkably similar to that of Korea. Korean farmland prices seem to show persistence, implying inefficient land usage. However, the movement of farmland prices in Taiwan exhibits less persistence. It is not clear what lies behind the similarities and differences among the three countries. Comparative study on this subject is an important subject for future research.
REFERENCES


THE EVOLUTION OF JAPAN'S LAND POLICIES IN THE EAST-ASIAN CONTEXT

Akira Takahashi

Introduction

Japan emerged as a modern state in the mid-19th century and proceeded along a path of economic growth to reach a high level of industrialization within a hundred years. In the process of economic transformation, Japan experienced bitter confrontation with agrarian land issues during the earlier half of the 20th century. This happened in order to reshape the socioeconomic structure in directions better-suited to the requirements of industrialism. A key component of this restructuring was the completion of a land reform program, a program that was comparatively successful in terms of the broader Asian experience. While final implementation of the land reform program was carried out during the period of occupation by allied forces after World War II, the major momentum of the reform was derived from internal forces. These internal forces reflected the fact that it was absolutely necessary for Japan to reorganize her land relations on an appropriate basis for industrialization.

Land reform, together with labor reforms and dissolution of the Zaibatsu economic organizations, paved the way for Japan's economic expansion in the mid-20th century. Bettering the living level in the rural sector was an important component of mobilizing society, was a necessary step to enlarge the domestic market for growing industries, and ultimately laid a solid foundation for political stability for nearly five decades. However, measures to protect land ownership by small farmers, who were once efficient enough to stimulate the rise of productivity both inside and outside agriculture, now inhibit the continued structural reformation of agriculture.
The rapid transition of Japan from an agrarian to an industrial society caused the abrupt enhancement of urban land issues, especially after the accelerated economic growth in the 1960s. Concentrations of population and industrial production resulted in the contrasting processes of speedy urbanization and excessive rural depopulation. As the domestic transportation network improved throughout the archipelago, land price hikes in urban centers diffused to all corners of the country. The increase in land values was accelerated by a speculative inflow of resources to land from most sectors of the national economy. This helped to swell the overall economic outlook, but it also hindered substantive economic growth (because of the diversion of investment) and it had negative implications for the working class (e.g., through impacts on housing prices). Though there were varied attempts by different administrations to regulate land prices, such efforts were hardly effective. One reason undoubtedly was the lack of a decisive political will to curb the arbitrary dimensions of private land ownership. In this sense, one could say that the ostensible success of a market economy in Japan seems to be undermining the very foundation of the society. In this regard, Japan is behind her East Asian neighbors like Korea and Taiwan where the public aspects of land ownership are given stronger recognition. The property rights provision in the constitution of Japan (Article 29) is not necessarily clear either in prescribing or precluding the public nature of land. This is important, because land problems in contemporary Japan are exact reflections of failures by market mechanisms.

The national government as well as some local autonomous bodies have initiated various steps to attempt to curtail the negative effects of land price hikes. For example, the Land Price Tax was introduced to regulate large-scale landholdings by big corporations. Municipal ordinances were proclaimed by a city in Shizuoka Prefecture to control urban sprawl and to distribute gains from the sale of agricultural land. Yet these attempts have not been effective enough to convert the general trends of history.

The collapse of the so-called bubble economy in 1992 ignited serious recessional trends in Japan. Constantly rising land prices showed a decline for the first time in many years. As a result, various sectors
of Japan’s economy which have been speculating in land now face substantial difficulties. This is an appropriate time for the Japanese to reconsider their current situation in terms of land issues and to look for new land policies. Japan’s East Asian neighbors are now rapidly moving forward in economic transformation, and they are also struggling with similar sorts of land problems. This paper will review the nature and changes of land issues in Japan, giving special attention to the relevance of Japan’s experience for East Asia.

Agricultural Land Problems and Land Legislation in Pre-War Japan

The Meiji Restoration in 1868 established the basic features of land relations for modern Japan. The sale of land was legalized, cadastral surveys and issuance of land titles were carried out to identify land properties and land owners, and the Land Tax Reform was implemented in 1873. The sale of land gradually increased, and the concentration of land ownership grew. The proportion of tenanted land to total cultivated land was 22.9% in 1873, but by the end of the 19th century, the proportion reached 46%. After the 1880s, direct management of most farms by landlords ceased due to increases in farm wages, higher returns from tenant land, and the low level of the land tax. Tenancy became popular, particularly in the most productive parts of agricultural regions. Out of all rural households, less than a third cultivated their own land while 28% were pure tenant farmers. Tenants paid one-half of their yield to the landlord as rent in kind. They also bore responsibility for production costs. The landlords had no positive role in production and simply collected a share of products as rent.

The farming households suffered from low income. Poverty in rural areas enhanced the supply of cheap labor for the growing manufacturing sector of Japan. Landlordism and industrialism practically went side by side at this stage of economic growth. However, such conditions in rural areas helped to intensify agrarian unrest in the country, and at the same time it fostered Japan’s expansionism toward Asian neighbors externally.
After World War I, tenancy disputes increased conspicuously and the peasantry movement was strengthened. The depression accelerated these trends. The Japan Peasants' Union was organized in 1922. Within four years, between 1923 and 1927, the number of tenant unions increased from 1,630 to 4,582, and the number of members grew from 164,000 to 365,000. There were 85 tenancy disputes recorded in 1917, but the number rapidly rose to 2,053 in 1922, 3,419 in 1931, and to 6,824 in 1935. All over the countryside, tenants requested improvement of tenancy conditions such as lowering of rents and increasing security of access to tenanted land. The impoverishment of farmers became so critical during the depression, tenant groups increasingly confronted landlords with militant action. The success of revolution in Russia, the upheaval associated with the labor movement in cities, and the growing solidarity among tenant farmers of the nation helped these trends of increasing militancy. In fact, one of the motivations of young military officers who led several coups in the early 1930s was their criticism of deteriorating rural conditions. The army's reliance on rural areas as a source for strong young men was being undermined by conditions of impoverishment which left many rural men physically weak.

To cope with rural unrest, the government established the Tenancy System Investigation Committee in 1920, and conducted nation-wide surveys on the actual situation of landlord-tenant relations in detail. Legislative steps were taken to lay the ground for improvements in the land systems. Two major strategies were considered. One strategy was strengthening cultivator's rights in order to countervail the overwhelming power of landowner's rights. The other way was support for small owner farmers. A key aspect of this strategy was conversion of tenants into owner farmers. Though the government failed to enact the Tenancy Law due to strong opposition by the landed interests in the Diet, the Agricultural Association Law (1922), the Central Bank for Industrial Cooperative Law (1923), and the Tenancy Arbitration Law (1924) were legislated, and the Rule for Assistance of Owner Farmer Establishment was promulgated in 1926.

From 1925, the government facilitated purchasing of tenanted land by tenant farmers by offering low interest funds. The agricultural associations used their power to mediate and arbitrate disputes
between landlords and tenants. Protection of farm management by small farmers was also promoted by legislation such as the Livestock Insurance Law of 1929. The Rice Control Law (1932) made it possible for the government to intervene in the marketing of rice as a way to sustain floor prices.

Post-War Agricultural Land Reform

Japan is known as a country which had a successful land reform program after World War II. The land reform paved the way for the rapid economic growth of Japan, which started in the mid-50s. It is true that the Japan’s land reform was implemented under the pressure of the occupying forces of the United States, but it is also true that reform of land relations was an indispensable step for Japan at the time.

From an historical perspective, both the United States and Japan had enough reasons to choose land reform as a key to Japan’s pacification and reconstruction. First, the United States was mainly concerned with the democratization and demilitarization of Japan. Second, for many in Japan, the land reform was recognized as necessary to counter the upheavals of radical social movements in rural areas, to meet demands to raise agricultural productivity to counter the serious postwar food shortage, and to transform socio-economic conditions in accordance with new stages of economic development.

The third point needs some explanation. At an earlier stage of economic development, when Japan’s economy was principally dependent on light industries and agricultural products, poverty in rural areas was the foundation of the economy as it provided cheap food and cheap labor for a growing industry. For example, export of silk could be competitive in the world market because of low production costs. The wealth of landlords was enough to generate new industrial enterprises in the locality. However, when Japan’s economy reached the level of advanced industry, it required a more qualified labor force with higher educational attainment, more systematic financial institutions based on national participation, and enlargement of the domestic market. As a result, from the viewpoint of the industrial sector, a
departure from the alliance with landed rural interests was indispensable.

Since the framework and the process of the land reform programs of Japan in the 1940s are well-known, only a brief outline is given here. The Amended Agricultural Land Adjustment Law and the Owner Farmers Establishment Special Measure Law were enacted in 1946. The former was to improve tenants’ conditions and to control conversion of land holding rights, and the latter contained regulations over the establishment of owner farmers. The government purchased all the land of absentee landowners and all the land of owners who resided in a village that surpassed one hectare (four hectares in Hokkaido). These lands were then sold to tenant farmers according to plans determined by the local agricultural land committee. The standard price was set at 40 times the government-controlled lease price for paddy-field and 48 times the government-controlled lease price for upland fields. Payment to the landowners was made in government bonds with 3.65% interest redeemable in 22 years. The transfer of land rights and conversion of land use away from agriculture were forbidden. The maximum size farm or owner farmers was set at three hectares (12 hectares in Hokkaido).

Within two years from promulgation in March of 1947, the land reform program was accomplished. 1,757,000 hectares of land were purchased by the government from 1,760,000 owners and distributed to 4,748,000 farmers. Furthermore, an additional 193,000 hectares, which became national property when owners paid their property taxes through transferring land, were also distributed. Redemption of bonds by the government was completed by 1952 as most beneficiaries were able to pay in cash because of inflation.

Japan’s land relations were completely changed. The proportion of tenanted land fell from 46.3% in 1947 to 10.8% in 1950, and that of tenant farmers also fell from 16.6% to 5.0% during the same period. There were several causes for this success. First, the historical background of the program was favorable for implementation as it was the time of change for Japanese, and the occupation forces were behind the scene. Second, the role of the local implementing agency, namely the agricultural land committee at the village level, was very crucial. The committee was formed of locally elected members (three
landowners, two owner farmers, and five tenant farmers) who knew the actual situation of land relations in the village. The support staff of the committee were also competent as many of the Japanese repatriated from abroad joined the secretariats of the committee. Third, farm lands had been well-documented since the Meiji Land Taxation Reform, so that each piece of land was easily identified and processed.

Another point that cannot be overlooked is the changes of land relations during World War II. In order to secure food and to maintain productivity with a limited supply of labor and input materials, the Japanese government had implemented de facto land reform measures through protection of cultivators’ rights and curtailment of landlords’ privileges. The burden of rent was substantially lowered and landlords were no longer collecting rent directly from farmers.

The major point, therefore, is that the land reform program after World War II was not new and exotic for Japan, but rather represented a final big push to harmonize land relations in agriculture with the progress of the national economy.

Economic Expansion and the Emergence of New Land Issues

The rapid economic growth of modern Japan started by the mid-1950s. In the course of this growth, Japan experienced a drastic shift of population both sector-wise and region-wise as people moved from agriculture to industry and services and from rural regions to cities. Employment in the primary sector (agriculture) decreased from 45.2% (1950) to 18.0% (1970) and 8.2% (1985). The exodus from rural areas resulted in extreme concentrations of population in urban areas. Nearly one-third of all Japanese moved during the 1950s alone. It is estimated that 56% of the total population was crammed into small areas which constituted some 2% of total land by the end of the 1960s. In 1990, the shares of the population of metropolitan districts (area of 50 km radius) of Tokyo, Osaka and Nagoya were 23.5%, 12.9% and 6.8%, totaling 43.2%.

Such a high level of population mobility was caused by various factors such as regional disparities in income levels, expansion of labor
demands in industrial and service sectors, the rise of educational standards in prefectures, the development of communication and transportation networks, and so on. At the same time, agriculture productivity grew, a result of improved infrastructure, mechanization of farming, and technological innovations which followed the land reform programs.

Mechanization in particular was promoted by the growing shortage of farm labor brought forth by high rates of rural-urban migration. Labor was stripped from rural communities in several ways. The younger generation migrated to urban areas when they completed intermediate level education. Middle-aged farmers became seasonal migrant workers and earned cash from casual unskilled jobs in the city, particularly in winter and other slack seasons. Housewives too were recruited by industrial establishments or supermarkets, often commuting daily by service buses.

Problems of excessive depopulation of rural communities in remote parts of Japan appeared as a serious social issue in the 1970s. To a certain extent, depopulation often resulted in the collapse of these communities, an outcome with serious implications for the autonomy of local municipalities. Many hamlets in mountainous areas and small islands were deserted. Rural-urban migration by whole families gradually replaced out-migration by individuals.

By the mid-1970s, the heavy inflow of population to the metropolitan districts started to decline. Annual rates of social mobility in most prefectures declined to levels of 0.5~1.0%. In 1976, the population which moved away from three metropolitan districts to prefectures was larger than the flow coming in from prefectures. However, the young generation was still moving to the big cities. The decreasing differences in regional income along with deteriorating living conditions in the metropolitan districts seem to be the principal reasons behind these trends of decentralization. In 1960, average levels of income of 31 prefectures were less than one-half of the Tokyo income, while by 1975 the number of such prefectures dropped to three.

This contrast of excessive depopulation and excessive concentration has been enhanced even after the 1970s. Naturally the land problems were intensified in urban regions, especially in the metropolitan dis-
tricts. Throughout periods of rapid economic growth, Japan experienced steep rises in land prices due to mounting demands and lack of proper administrative steps. Consequently, land prices were the leading factor in inflation. City dwellers suffered from the burden of increasing rents and more expensive house loans.

The situation in 1972 and 1973 was extraordinary, with the annual rise of average land prices reaching 31% in 1972 and 32% in 1973. This period is often called the years of “land turbulence.” Such a situation was brought forth by several factors including expansion of the money supply as a result of accumulation of gains in international balance of payments in the 1960s and increasingly excessive liquidity in the earlier part of the 1970s. The public investment boom induced by Premier Tanaka’s Japanese Archipelago Reorganization Plan also accelerated turbulence in land prices. Though land prices were affected by the recessional trends following the first oil crisis, rising land prices fundamentally continued.

Little needs to be said about the tremendously expensive price of land in business centers of big cities of Japan. However, less well-known is that steep rises in land prices were also observed in suburban areas. For example, in the case of a village near Hachioji City, 40 kilometers west of central Tokyo, 1,000 square meters of upland fields were evaluated as ¥110,000 ($305) in the late 1950s. The value rose to ¥200,000 in 1960, ¥1,500,000 in 1965 and ¥39,000,000 in 1978. Land prices increased 355 times within 20 years.

The fact that the rate of increase in land prices significantly exceeded interest rates from savings induced speculation on land by both corporations and individuals. In these years not only realtors but almost all big and small corporations such as trade firms and manufacturers started real estate businesses. Speculators bought large tracts of land utilizing funds borrowed in the money market, while most city dwellers had to utilize their bank savings. For others, the loss of relative value of their savings undermined their dreams to have their own houses.

Now a new phrase, “the myth of land,” was forged. The price of land never falls! Those people and corporations with enough resources continued to invest in land. Owners of land, agricultural or urban, never thought of selling as they had easy access to bank credit
even when they needed cash. In the mid-1980s, when Japan enjoyed a huge trade balance and the *yen*'s value appreciated, Japan's economy became turbulent a second time. Land and securities became the major arenas for speculation.

**Failure of Policy Measures**

Thus land prices have been rising constantly. Japan was once regarded as a fairly egalitarian society, but the disparity of assets among the nation grew and the social distortions became very conspicuous. Working class people are increasingly irritated and desperate. Nevertheless the government was not able to take efficient measures to cope with the rising land prices and their consequences.

In the agricultural sector, as mentioned above, the land reform of the 1940s certainly contributed to solving agrarian issues, to raising agricultural productivity, and to expanding domestic markets. But the government did not take positive and efficient steps to readjust land relations to meet the transformation of rural conditions as the national economy expanded. The farmers acquired strong political power during four decades of Liberal Democrat Party rule. Consequently, the government declined to enact any effective controls for the proper use of land resources. As a result, government was also failing to encourage the development of a healthy and efficient agriculture in the context of a changing international environment nor to fill mounting demands for industrial and residential land. Rather the government tended to implement agricultural policies guided by compromise with farmer groups. This meant using huge doses of subsidies and protection barriers until very recent years. The farmers’ and the government’s basic postures have been to maintain the achievements of the land reform.

In these circumstances, it became very difficult for enterprising farmers to expand the size of their farms and to realize any significant economies of scale. This was because of the high level of land prices and the stringent land regulations designed to protect lessors even though it is no longer realistic to worry about the revival of landlordism.
Small farmers who are not serious about farming keep their holdings for capital gains in the future. Particularly in the suburbs of big cities, farmers insist on maintaining possession of tiny fields though they do not spend time on the farms, and farm income is almost marginal for family livelihood. They sometimes sell part of their holdings in piecemeal fashion only to construct apartments and parking lots for rent. As long as land remains in agricultural use, there has been a generous exemption from real estate taxes. In 1982, when regulations started which permitted agricultural land in urbanized areas to be taxed at the same level as residential land, the government prepared an escape clause allowing owners of agricultural land exemption from the tax if they claimed that they would continue farming for at least ten more years. Out of 43,000 hectares of farm land in urbanized areas of three big cities, 28,000 hectares were granted such a privilege. Many farmers in this category converted their land use from paddy or vegetables to chestnut orchards because it is convenient to disguise these as agriculture even though the income from the orchard is minimal.

What seems to be necessary for Japan now is another phase of agricultural land reform to vitalize her agriculture. As for urban land, industrial and commercial sectors have also found it very difficult to obtain sites for expansion of their activities. Supported by the development of communication and transportation networks, many firms relocated their functions, sometimes their headquarters, to prefectures other than metropolitan districts. Both land prices and difficulties in securing labor were crucial factors contributing to the dispersion of industrial activities of Japan, though concentration in metropolitan areas still continues. The transfer of production sites abroad after the mid-1980s was partly because of difficulties in securing sites within Japan.

Recently, in the 1990s, the steep rise of urban land price stagnated, and in March of 1992, the National Land Agency released information that the officially announced land price dropped after 17 years of continuous upward movement. From January 1 of 1991 to the same date of 1992, the average price of residential and commercial land dropped 5.6% and 4.0%, respectively. The decrease of residential land prices was 9.1% in the Tokyo metropolitan region, 22.9% in
Osaka, and 5.2% in Nagoya, while other local regions showed an increase of 2.3%. Though the land price started to decline, the level of the land price is still very high, and is prohibitive for most people.

However, it is remarkable to see the myth of land broken. Japan's land issues will now face a new era. But we cannot help to say that this new trend was brought forth by the collapse of the bubble economy, not by efficient implementation of land policies (even if the government is gradually becoming keen about land issues). The fall of land prices continues all over the country, and it is accelerating recessional trends in the Japanese economy. Many components of the business sector are suffering from the current situation, although some groups—such as the banks—were successful in pressing the government to help them recover their losses in land transaction. Nevertheless, this fall in land prices seems to be an appropriate opportunity for Japan to start substantial efforts to restructure new concepts in land relations.

<table>
<thead>
<tr>
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<td>2.3</td>
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</table>

Source: The National Land Agency

Concluding Remarks

The land reform programs in the 1940s were ultimately a domestic process for Japan to adjust land relations to meet the changes of economic conditions resulting from development of industries—although this was accelerated by external pressures from the occupation forces. The land reform was the most important factor among the post-war reforms in Japan in opening the path to rapid economic growth and in eliminating social unrest.

The land reform, of course, left a series of problems for further development of Japan's agriculture including fragmentation of land-
holding and difficulties in land mobility. But the reform was imperative for Japan's national development. In some countries in Southeast Asia we find criticism of land reform in the agricultural sector, claiming that Japan's experience demonstrates that the benefits of scale economies will be lost if estate farming is dissolved. However, we have to remember that the merits of scale are realized only when owners become enterprising, and that the more urgent task is to recover peace and order in the nation and to stimulate the vitality of people in the rural sector.

The inheritance tax system played a highly important role in the redistributive framework of the society. The egalitarian nature of Japan was brought forth to a considerable extent by these measures. The recent tendency of widening stratification resulting from hikes in land value has to be removed not only by land tax systems such as the land price tax introduced in the 1990s, but also through proper implementation of existing inheritance tax measures.

Japan's land ownership has been well protected in a legal framework. Public use concepts of land have been rather limited in Japan in comparison to Western nations as well as some Asian neighbors, especially Korea. It will be necessary for Japan to initiate a review and debate on the appropriate nature of property rights and land ownership for the nation. The principles associated with the postwar land reform have to be reexamined in light of the current conditions of the economy—particularly regarding the non-agricultural use of farmland obtained by farmers through the land reform program.
Introduction

Sky-rocketing land prices in Japan contrast with the recent slow growth of Japan's economy. This unusual price hike began in Tokyo business districts in 1986 and expanded throughout Japan. Land price problems thus became a political as well as social issue since it became extremely difficult for ordinary city residents to find affordable housing. Although land prices decreased in 1991 and are still in a downward cycle, the absolute levels still remain high. Consequently, the drop in land prices after 1991 is not enough to solve the land price problem. To prevent a repetition of sky-rocketing land prices again, appropriate land policies must be devised and implemented.

Pressed by the recent sky-rocketing land prices, the National Land Agency began to re-examine land policies including measures to halt land price hikes. In December 1989, the Basic Land Act was enacted with the basic ideas of: priority of public welfare in the land use,

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1. We wish to express our thanks to those who provided every convenience for data collection and providing information, especially, the Planning and Coordination Bureau of the Environment Agency who approved using the “Environmental Information System of the Greater Tokyo.” The Land Bureau and the Planning and Coordination Bureau of the National Land Agency offered data relating to land price, land survey, and materials relating to land policy. Information relating to the city planning system was provided by the City Bureau of the Ministry of Construction.
appropriate use and planned use, control of speculative transactions, and appropriate cost sharing based on increased values. In January 1991, aiming at the effective promotion of comprehensive land policy based on such basic ideas, the Outline of Promoting Comprehensive Land Policies was instituted by the Cabinet. In this outline, elimination of the "land myth," "realization of appropriate land price standards" and "securement of appropriate and rational land use" were proposed as the principal objectives of land policy.

The features of the Basic Land Act and the Outline of Promoting Comprehensive Land Policies reveal a necessity to prepare and expand land use plans as well as to reform the land taxation system. The goal of preparation and expansion of land use plans included "securement of the land use plan over a wide area," "securement of detailedness of city planning," "review of demarcation of zones" and

2. The UPA and UCA are designed to prevent a disordered urbanization of a city and aim at planned urbanization. The "UPA" is the area where an urban district has already been formed and the area where urbanization is preferentially and purposefully intended within approximately 10 years. The "UCA" is the area where urbanization should be suppressed. The "usage district" is the area where use of a building, capacity rate and the building-to-land rate, etc., are controlled by the Building Standard Acts. Residential lands include "type I residential-purpose area," "type II residential-purpose area" and "residential area." Commercial lands include "adjacent commercial area" and "commercial area." Industrial lands include "semi-industrial area," "industrial area" and "industrial-purpose area." Due to the amendment of the law in 1992, type I residential-purpose area is fractionalized to "type I low-height residential-purpose area" and "type II low-height residential-purpose area (establishment)," the type II residential-purpose area to "type I middle and high-rise residential-purpose area (establishment)" and "type II middle and high-rise residential-purpose area" and the residential area to "type I residential area (establishment)," "type II residential area" and "semi-residential area (establishment)." In addition, in the usage district, "special usage district" is established where the use of a building, etc. is controlled, a special purposes by local public utilities. In the "published land prices" from the National Land Agency, the use for residential lands is defined separately with the following standards. "Residential land" is the land supplied for a site of a building for residence in residential area and other city planning areas. "Prospective residential land" is the land included in a residential-purpose area and residential area inside the UPA where most lands are actually used as farmlands, pasture grounds, and forestry. This type is included in the area where residential land development has not yet been executed and urbanization is recognized to be rational from a social point of view. The "commercial land," "semi-industrial land" and "industrial land" are lands which are used in each usage district for respective usage. "Residential land in the UCA" is the land to be used as a site of a building for residence or commerce in the UCA.
designation of usage districts,” and “investigation of systems for a land use plan.” Taking these goals into account, in June 1992, the Ministry of Construction re-examined the city planning system and made partial amendments of the Town Planning and Zoning Act and the Building Standards Act. The themes of “making a master plan of a city in a more substantial form,” “reconsideration of usage district system,” and “promotion of district planning systems” are incorporated into these amendments.

The “reconsideration of the usage district system” attempts to articulate a detailed land use zoning system—thus making the system effective—and controlling land prices. Underlying this reconsideration is the fact that sky-rocketing land prices have spread from the city-center to the outskirts regardless of land usage. For instance, in a 1991 White Paper, the Economic Planning Agency analyzed the diffusion of sky-rocketing land prices in Greater Tokyo, especially how price increases spilled over from the business districts in three wards of the city-center to the other business districts of the city center and beyond there to residential districts in the southwestern part of the city and then residential areas in adjacent prefectures.

The Nomura Research Institute (1991) suggested that “this was caused by the association of non-restrictive usage district zoning system with the increasing land prices” and proposed detailed and restrictive land use districts. This proposal is largely in accordance with the amendments of the Town Planning and Zoning Act noted earlier. However, in considering the “demarcation of zones,” another theme of the land use control strategy in the Town Planning and Zoning Act, relationships with land prices were not examined. The interim report of the Planning System Meeting of the National City Planning Council states that development of the Urban Promotion Areas (UPA) needs to include the promotion of housing and the supply residential land. This report examined relationships between the city planning system and broader economic changes. However, one problem is that there has not been careful evaluation of how the Urban Control Areas (UCA) have been functioning. For example, in the amendments, it is stated that “it is possible to decide the district planning even in the UCA,” however, how the UCA should exactly be in the future is not mentioned.
In this study, the effect of the "demarcation of zones" on changes in land prices is evaluated and the nature of a land use system which can generate appropriate land prices is discussed. Usage districts do seriously affect changes of land prices, however, we avoid detailed examination of the usage district. Instead, our analysis is based on a rough classification of: commercial land, residential land, and prospective residential land in the Urban Promotion Areas; and residential land and farmland in the Urban Control Areas.

The demarcation of zones system has been in place since the enactment of the Town Planning and Zoning Act in 1968. Also, land use controls designating Agricultural Promotion Areas (APA) and farmland were set according to the "Law Relating to the Promotion of Agricultural Areas" enacted in 1969. Today, an evaluation of the long-term influence of the land use controls based on these two acts, including the demarcation of zones on changes of land prices, should be useful and fundamental materials for examining future land use planning systems. In the field of economics, land prices are the discounted present value of future land rent. Prices are thought to be determined by land productivity. Therefore, if land use controls directly affect land productivity, then land prices can be determined by land use. However, due to the flexible implementation of land use controls, farmland prices in the UCA are undoubtedly linked with residential land prices. In this study, the relationship between land use controls—including the demarcation of zones—and changes in land prices are examined. An economic model of a land market that explains the effects of land use controls is presented to make the land policy problems and choices clearer.

Development of Japanese Land Use Control System

In 1968 when the Town Planning and Zoning Act was enacted, systemization of land use was aimed for, particularly because of urbanization which accelerated with the high growth of the economy in the 1960s. This systemization appears in the "demarcation of zones" strategy. This system sought to make a sharp distinction between areas to be urbanized, including existing urban districts (the Urban Promotion Areas) and areas where the urbanization should be con-
trolled, including reserving farmlands (the Urban Control Areas). When the Town Planning and Zoning Act was enacted, the expectation was that the urbanization promotion areas would be urbanized within approximately ten years.

The "demarcation" system in this Town Planning and Zoning Act was based on the two-division type and the four-division type of the Residential Land Council (Ishida, 1981). In the latter case, the area was divided into four as follows: the "existing urban districts" which combine urban districts and adjacent areas which are gradually becoming urbanized; "Urban promotion areas" which are to be urbanized intentionally in the fixed term of the future; "Urban control areas" which have a possibility to be urbanized in the fixed term of the future, but are required to be controlled or adjusted for urbanization at present; and, "reserved areas" which should not be urbanized due to various conditions. Ishida (1981) said that it was a matter of regret that the concept of area division was reduced to the "demarcation of zones," although the four-division type reflected more accurately the land use research at that time.

The "demarcation of zones" was carried out based on a 1968 "Report concerning the measures to set the UPA and UCA and prepare the UPA." The report was developed by metropolitan and local areas. The "demarcation of zones" is a simple land use control. With this system, farmland within an urban promotion area is evaluated as residential land. Since farmland could be converted to residential land for sale at any time, many land owners must include their lands in the UPA. As a result, the UPA was expanded more than expected by the Ministry of Construction. For this reason, ten years after the enactment of the Town Planning and Zoning Act, a considerable number of areas remained as farmlands within the UPA.

However, the ratio of farmland occupying the UPA gradually decreased. In 1991, farmland comprised 9.6% in Greater Tokyo and 11.6% in the national average. Faced with sky-rocketing land prices, urbanization of farmlands within the UPA was considered to be one requirement for promoting housing supply. The deferral and exemption of property taxes and inheritance taxes for farmland within a UPA was abrogated so that such land would be treated the same as residential land. This had already been conditionally approved for
farmlands in the three largest cities. As a result, with the exception of farmlands (approximately 30%) designated as being within a reserved agricultural zone in the UPA, remaining farmlands will be converted to open spaces for facilities such as parking areas or to residential land in the near future.

On the other hand, the "Law Relating to the Promotion of Agricultural Areas" enacted in 1969 did not aim at land use control, but rather established the areas to be considered for agricultural promotion. However, this law has often played the role of land use control. An agricultural promotion area can be divided into farmlands and agricultural promotion lands. However, farmlands have had a strong control effect on residential land development because fundamental farmlands are preserved.

It must be recognized that in the city planning area, the UCA and APA overlap, and land usage in the UCA is practically determined in association with the Agricultural Promotion Law. Of course, as these are basically different zoning, there occur "districts not designated as the UPA" which are part of the UCA and not included in the APA. Generally, however, it is known that fractionalization of the APA has occurred.

The control by the "demarcation of zones" has a restrictive effect legally and even has penal provisions. However, it does not always feature strict control. Thus, the following points may be noted. First, a small change is possible for the area division of the land use control every five years when a review is performed (e.g., inclusion in the UPA is possible at that time). Second, even if the given land is agricultural promotion land, residential land development for a branch of a family farming is permitted. However, once the land is converted to residential land, the resale of it becomes possible, making strict control difficult. Third, when constructing public facilities such as schools, the designation of "farmland" can be canceled without a development permit, thereby inducing residential land development.

The step accelerating such movements was the notification entitled "Implementation of the Development Permit System in the UCA" from the Director of the Construction Economics of the Ministry of Construction in 1986. In this notification, it was stated that;
Understanding the change of recent economic and social situation and development condition of each city, and especially in local cities and surroundings, considering sufficiently regional residents who have their life and business in these areas, the delicate and flexible implementation corresponding to actual regional conditions and characteristics is necessary to be carried out.

This resulted in a greater easing of development controls in the UCA. Flexible implementation considerably promoted residential land development in the UCA.

**Data and Method of Analysis**

The data most frequently used to consider the relationship between land use control and changes of land prices are found in the "publication of land price" from the National Land Agency and its addendum "prefectural land price survey." The land price published on January 1 of every year is summarized by the metropolis, local areas, and usage (residential land, prospective residential land, commercial land, semi-industrial land, industrial land, residential land in the UCA). This is used to explain general trends of change in land prices and serves as the basic material for analysis of the effects of usage control on land prices. For purposes of analysis in this study, these published land prices are converted to "real land prices" according to the value of the consumer's price index listed by the metropolis and local areas.3

Published land prices lack data for farmland prices in the UCA. If the "flexible implementation" has no influence, the price of land that will be used as farmland in the future will be determined depending upon the productivity of farmland. Also, rates of change in these prices may be independent of the rate of change of surrounding resi-

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3. Analyzing the published land price with a time series is problematic. This is because the influence of inflation is included. Therefore, in this study, using the national consumer's price index (total index excluding an imputed house-rent), the nominal land price (every year's published land price) was converted to "real land price." The consumer's price index is based on the "consumer's price index annual report" issued by The Statistics Bureau of Management and Coordination Agency.
dential land prices. In light of this fact, it is important to evaluate the influence of land use controls, especially for farmlands in the UCA.

Farmlands are established using the Agricultural Promotion Law. Among APAs designated within this law, areas used for agricultural production are also these farmlands. Other areas include farming villages, which are called "white areas," where only residential land development is possible. Therefore, it is also important to compare the residential land price changes with those of farmland prices.

In this study, the analysis was performed using farmland prices of 1 May set by the metropolis and local areas, published annually by the Real Estate Institute of Japan. The rice field and plowed field prices were determined by classifying them into three levels: upper, middle, and lower middle. The investigation involved determining the price per ten acres for each type. When calculating the mean value for metropolis and local areas, the farmland price which is excessively high, due to the prospect of becoming residential land, is excluded.4

The above data represent a national average given by the metropolis and local areas and are not sufficient to analyze the relationship between land use control and changes of land prices comprehensively, including all other factors. For example, to examine if a difference between land prices in two adjacent areas is being affected by land use controls, an analysis using more detailed spatial information is required. Using a geographic information system (GIS) is one such measurement and this strategy was employed in this study. An investigation was performed for a 50 kilometer area of Tokyo where a 1 km² standard GIS grid system was used.

In this area, there exists the "environmental information system of the Tokyo metropolitan area" edited by the Environment Agency, and providing various data concerning social conditions in addition to grid data for city planning areas (UPA and UCA) and land usage districts. These data were used to examine factors controlling land prices and influencing land use control.

4. The farm price has been excessively high because of the prospect of residential land in Tokyo, Kanagawa, and Osaka since 1969. So, it was decided to exclude these areas for a national average and a price by area. This suggests clearly that farmland price relates to the change of residential land even in the UCA.
The combined usage classification is applied in this database. That is, "residential land" includes exclusive residential districts and residential district of the usage districts in city planning, while commercial land includes neighborhood commercial districts and commercial districts. Further more, "industrial land" includes semi-industrial areas, industrial areas, and exclusive industrial districts. A 1 km² standard grid scale yields an adequate number of samples for analysis, permitting the use of such groupings.

As the data of the published land prices occurs only once in the database, it does not permit temporal and spatial analysis over the long-term. Therefore, in this study, the distribution diagram of the published land prices shown in the "Collective of Tokyo Metropolitan Land Price Distribution" (edited by Tokyo Land Corporation) was processed into grid data. The publication years of issued land prices obtained are 1963, 1973, 1983, 1989, and 1992 (as of 1 January).

Using this data, land price changes in areas proximate to the city-center, UPA, UCA, and usage district (residential area, commercial area and industrial area) were surveyed to investigate the effect of the land use control. Next, the relation between land price and factors that may control it were analyzed.

Further, using "Detailed Land Use Information System of the Tokyo Metropolitan Area" (100 meter grid database), the influence of land use control on changes of land use were analyzed in detail, with special attention given to an evaluation of the influence of land use control on changes of land prices. This was done by adding land price data to this database. The purpose of this investigation is to show that a difference in productivity of land is caused by the demarcation of zones even when the natural characteristics of land remain the same. The areas investigated are the southern part of Kawagoe City (upland) and the south part of Koshigaya City (lowland) in Saitama Prefecture, which is in the suburbs of Greater Tokyo and features advanced urbanization.

5. The data of Tokyo Land Corporation, which was obtained by making an appraisal of the value as residential land for farmland in the UCA, is appropriate to evaluate the influence of changes of a residential land price on farmland price. The land prices shown here are the prices of residential land. For example, the price of a commercial area represents the price of a residential land in the commercial district.
Land Use Control and Changes of Land Prices

Effect of Land Use Control for "Demarcation of Zones"

In this section, observations related to changes in land prices are made in Japan largely for the period after 1972 when the publication of land prices was initiated. Figure 1 shows the rise of the land price after 1975 with the published land price corrected to show the real land price. Figure 1 exhibits the high land prices after the announcement of the Plan for Remodeling the Japanese Archipelago at the beginning of the 1970s; the fall in land prices due to the second oil shock in the latter half of 1970s; and finally, the most recent sky-rocketing of land prices with a peak in 1991.

Figure 1. Rates of Cumulative Rise in Real Land Prices

Source: "Land Price Publication," the National Land Agency. The index was calculated by involution of the average rate of variation in Land Price Publication for each year, with 1980 taken as 100.

6. Data for a prospective residential land in the UPA and residential land in the UCA is available only for the period from 1974 on.
In these data, the effect of land use controls using the "demarcation of zones" may also be observed. The growth of real land prices of prospective residential land in the UPAs and residential land in the UCAs is also shown in Figure 1. The real land price of the residential land in the UCA zones increases dramatically while the real prices of prospective residential land in the UPA zones corresponds with the increasing land prices of residential lands in UPA zones. The "demarcation of zones" seems to have affected the land price fluctuation.

The question here is whether a significant difference in residential land development between the UPA and UCA zones may be observed as a result of the "demarcation of zones." Table 1 shows the conditions in the whole country, the three greatest cities, and local areas characterizing conversion from farmlands inside and outside the UPA to residential lands. Table 1 indicates that residential land develop-

<table>
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<th>Zone</th>
<th>1986</th>
<th>1987</th>
<th>1988</th>
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<td>Nationwide</td>
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<td>4,036(51.8)</td>
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<td>2,945(61.8)</td>
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Source: Ministry of Agriculture, Forestry and Fisheries, Japan

ment in the country-wide UPA stops at approximately 50% and that a significant difference in residential land development resulting from the "demarcation of zones" is not observed. In the three greatest cities approximately 75% of residential land development is realized in the UPA, while in local areas, approximately 60% of the residential land development is carried out outside the UPA.
Figure 2.  Prefectural Population Change in UPA and UCA, 1985~1990

These findings suggest that in the three largest cities, the “demarcation of zones” is effective as a land use control, while in local areas, it is not. This is shown in Figure 2 with regard to the growth rate of the population. Using the data by metropolis and local areas, Figure 2 compares the rates of population change in the UPA and UCA for five years from 1985 to 1990.

As for the impacted areas of big cities, (including Saitama Prefecture, Kanagawa Prefecture, and Chiba Prefecture of the Tokyo region as well as Shiga Prefecture and Nara Prefecture of Osaka region), the growth rate of the population is obviously high in the UPA. However, in prefectures around these areas - such as Gunma Prefecture; Ibaraki Prefecture and Yamanashi Prefecture of Tokyo region; and Hyogo Prefecture and Mie Prefecture of Osaka region - the increase in the population in the UCA surpasses that in the UPA. In 30% of all districts, the increase in the population in the UCA surpasses that in the UPA.

Such residential land development in farmlands of the UCA may inevitably affect the farmland price. Here, the rate of change of land prices are compared for prospective residential lands in the UPA of the whole country, and farmland prices of agricultural promotion lands in the UCA. Residential land development is possible for the former even though it is farmland, while for the latter, residential land development is virtually impossible. The land price change of the latter can induce progress independent of the land price change of the former if the land use control functions completely.

Figure 3 compares the average variation rate of the land price to changes in the previous year in the whole country for 14 years from 1977 to 1990. From this figure, it can be seen that the real land price of prospective residential land in the UPA is related to the change in the real farmland price of farmlands in the UCA. Using a regression analysis, the decision coefficient was 0.767, showing a high correlation. This suggests that the change of farmland prices in the UCA where urbanization is not advanced is seriously influenced by changes in land prices for prospective residential land in the UPA.

This fact was further analyzed in detail for the metropolis and local areas as shown in Table 1, in which the rate of change of farmland prices in the UCA from 1985 to 1990 is expressed using the rate of
Figure 3. Changes in Average Variation Rates for Three Types of Land prices

The results of the above analysis suggest that the land use control and the "demarcation of zones" has had an effect on Japan's three greatest cities. However, to understand how land use control actually affects land price, it is necessary to analyze the relationship in greater detail, taking other factors into account. In this study, the land price standard and the effects of land use controls on changes of land prices are evaluated for Greater Tokyo (50 km area) where this land use control has been most active.

Figure 4 shows the land price distribution of Greater Tokyo and a time series using GIS as described earlier in section 1. The years surveyed for real land prices are 1963, 1973, 1983, 1989, and 1992. Starting from 1963, the effects of land use control before and after the change of a residential land price, and increase in the population in the UPA and UCA. As a result, the rate of change of farmland prices is related to the rate of change of residential land prices and the increase in the population in the UPA. This indicates that land use controls aiming at preserving farmlands have limitations.

Transition of Land Prices in Greater Tokyo: Effects of Land Use Control

The results of the above analysis suggest that the land use control and the "demarcation of zones" has had an effect on Japan's three greatest cities. However, to understand how land use control actually affects land price, it is necessary to analyze the relationship in greater detail, taking other factors into account. In this study, the land price standard and the effects of land use controls on changes of land prices are evaluated for Greater Tokyo (50 km area) where this land use control has been most active.

Figure 4 shows the land price distribution of Greater Tokyo and a time series using GIS as described earlier in section 1. The years surveyed for real land prices are 1963, 1973, 1983, 1989, and 1992. Starting from 1963, the effects of land use control before and after the
Figure 4. Transition in Real Land Prices for Residential Lands in UPA and UCA in the Greater Tokyo

(yen/m²)


UPA

TOTAL

UCA

Figure 5. Transition in Real Land Prices for Residential Lands in Different Usage Districts

(yen/m²)


Commercial Districts

Industrial Districts

Residential Districts
Figure 6-a. Transition of Real Land Prices Residential Lands in Different Distance Zones within UPA

Figure 6-b. Transition of Real Land Prices for Residential Lands in Different Distance Zones within UCA
enactment of the land use control in 1970 may be examined. Adding 1989 data allows us to see the trend of the fall of land prices from 1989 to 1992.

Figure 5 shows the transition of real land prices for all of Greater Tokyo from 1962 to 1992. The increase of the real land price of Greater Tokyo resulted from the increase of the real land price in the UPA. On the other hand, the rise of the real land price in the UCA is controlled, suggesting that the “demarcation of zones” functions to control the land price. Figure 5 shows the transition of real land prices for each usage district, indicating that the rise of land prices is particularly noticeable on commercial lands.

Next, real land price standards for each 10 km distance zone from 1962 to 1992 are compared (Figure 6). In this period, the effect of land use control may be seen. Figure 6 suggests that closer to the city-center, higher real land prices are observed at each point, and the increase of real land prices for each approximate 10 year interval is larger. When comparing the real land prices in the UPA and UCA, it can be seen that the rise of the land price in the UCA is suppressed.

Effects of Land Use Control

What is the effect of land use controls compared with other factors affecting land price? To determine this, factors influencing the land price are evaluated using a multivariate analysis. To distinguish land use division according to city planning procedures from actual land use conditions, “Detailed Land Use Information System” with 100 meter grid data is processed and added to the “Environmental Information System of Greater Tokyo” for analysis.

For this purpose, Quantification Method of the First Type was employed as an analysis method. This analysis method is similar to a multiple regression analysis in its structure, but has the advantage of including qualitative data. As explanatory variables, among factors relating to society, economy, traffic, social overhead capital, land use control and present conditions of the land use, the following are used: i) employees; ii) traffic volume; iii) condition of sewage service; iv) city planning area zoning; v) education; medical services, social welfare facilities; and vi) present conditions of land use (agricultural and
### Table 2. Analysis in Real Land Prices by Quantification Method of First Type

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>Freq.</th>
<th>Category Scores</th>
<th>Range</th>
<th>Multiple Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee (person/km²)</td>
<td>0</td>
<td>573</td>
<td>-0.136</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-2120</td>
<td>151</td>
<td>0.071</td>
<td>0.289</td>
<td>0.126</td>
</tr>
<tr>
<td></td>
<td>2121 and over</td>
<td>436</td>
<td></td>
<td>0.154</td>
<td></td>
</tr>
<tr>
<td>Traffic Volume (100car/km)</td>
<td>0-50</td>
<td>187</td>
<td>-0.191</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>51-138</td>
<td>264</td>
<td>-0.182</td>
<td>0.434</td>
<td>0.162</td>
</tr>
<tr>
<td></td>
<td>139-291</td>
<td>274</td>
<td>-0.080</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>292 and over</td>
<td>435</td>
<td></td>
<td>0.243</td>
<td></td>
</tr>
<tr>
<td>Sewage Service</td>
<td>not working</td>
<td>174</td>
<td>-0.388</td>
<td>0.456</td>
<td>0.142</td>
</tr>
<tr>
<td></td>
<td>working</td>
<td>986</td>
<td>0.068</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City Planning Area</td>
<td>UPA Residential Districts</td>
<td>925</td>
<td>0.064</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoning</td>
<td>UPA Commercial Districts</td>
<td>52</td>
<td>0.700</td>
<td>1.833</td>
<td>0.279</td>
</tr>
<tr>
<td></td>
<td>UPA Industrial Districts</td>
<td>131</td>
<td>-0.279</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UCA</td>
<td>52</td>
<td>-1.136</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>0-2</td>
<td>171</td>
<td>-0.762</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Services</td>
<td>3-4</td>
<td>146</td>
<td>-0.203</td>
<td>1.000</td>
<td>0.244</td>
</tr>
<tr>
<td>Social Welfare</td>
<td>5-9</td>
<td>274</td>
<td>0.093</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities</td>
<td>9 and over</td>
<td>569</td>
<td>0.236</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land use: Agricultural and</td>
<td>0-0.09</td>
<td>290</td>
<td>0.609</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest Lands (%)</td>
<td>0.09-9.92</td>
<td>290</td>
<td>0.290</td>
<td>0.571</td>
<td>0.356</td>
</tr>
<tr>
<td></td>
<td>9.92-35.70</td>
<td>289</td>
<td>-0.181</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>35.70 and over</td>
<td>291</td>
<td>-0.716</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land use: Residential Area (%)</td>
<td>0-20.57</td>
<td>290</td>
<td>-0.340</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.57-36.86</td>
<td>290</td>
<td>-0.048</td>
<td>1.325</td>
<td>0.198</td>
</tr>
<tr>
<td></td>
<td>36.86-54.18</td>
<td>290</td>
<td>0.091</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>54.18 and over</td>
<td>290</td>
<td>0.297</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land use: Commercial Area (%)</td>
<td>0-0.94</td>
<td>289</td>
<td>-0.302</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.94-3.83</td>
<td>290</td>
<td>-0.060</td>
<td>0.636</td>
<td>0.156</td>
</tr>
<tr>
<td></td>
<td>3.83-9.06</td>
<td>291</td>
<td>0.092</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9.06 and over</td>
<td>290</td>
<td>0.269</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Multiple Correlation (R = 0.810)
forest land, residential area, commercial area). After examining all factors in the database, it may be concluded that these factors have a great influence on the land price standard. While the distribution of the population is related to the land price, it is not included in the model because internal correlation with other factors is considerably high.

The results of this analysis are shown in Table 2. The coefficient of determination is 0.655. Through this model, it may be seen that the real land price depends greatly upon the present conditions of land use: “demarcation of zones” of the city planning and usage district. Using the partial correlation coefficient and category variable as standards, it can be seen that when the proportion of agricultural and forest land is high in terms of actual land use, the land price is lowered. The land price of areas which are designated as UCA is evidently low. In contrast, the land price is high for areas where the proportion of residential and commercial land is high in terms of actual land use. In addition, the existence of many educational and medical services and social welfare facilities increases land prices considerably. The convenience of traffic (volume of automobile traffic), conditions of infrastructure (conditions of sewage service), and employment opportunities (number of employees) also create high land prices. From the results of the above analysis of Greater Tokyo, we conclude that land use controls affect land productivity.

Effect of Land Use Control in Kawagoe and Koshigaya

However, we must caution that even if the rate of increase of land prices in greater Tokyo in the UCA is less than that in the UPA, the influence of land use controls cannot be confirmed. To show the effect of the land use control on the land price, it is necessary to compare those lands that have similar characteristics but are divided by the UPA and UCA due to the “demarcation of zones.”

Thus, taking the example of uplands in the south of Kawagoe City and the lowlands in the south of Koshigaya City in Saitama Prefecture, real land prices before (1974) and after (1984) the “demarcation of zones” are compared in Table 3. The uplands were a dry field zone while the lowlands were a rice field zone. The degree of homogeneity of both land characteristics is high. In the south part of
### Table 3-a. Effect of Land Use Zoning on Real Land Prices for Residential Land in 1974 and 1984 in Kawagoe City

<table>
<thead>
<tr>
<th>Land use</th>
<th>Total Land</th>
<th>Agricultural &amp; Forest</th>
<th>Residential Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>88,844 &lt;&lt;106,535</td>
<td>2650</td>
<td>82,863 &lt;&lt;96,205</td>
</tr>
<tr>
<td>Districts</td>
<td>29,902</td>
<td>40,103 +19.9</td>
<td>29,086</td>
</tr>
<tr>
<td>UPA Commercial</td>
<td>124,785 &lt;&lt;145,352</td>
<td>189</td>
<td>72,683 &lt; 86,149</td>
</tr>
<tr>
<td>Districts</td>
<td>43,093</td>
<td>31,368 +16.5</td>
<td>51,340</td>
</tr>
<tr>
<td>Industrial</td>
<td>73,023 &lt;&lt;83,945</td>
<td>503</td>
<td>78,282 &lt;&lt;87,593</td>
</tr>
<tr>
<td>Districts</td>
<td>22,151</td>
<td>35,833 +15.0</td>
<td>20,650</td>
</tr>
<tr>
<td>UCA</td>
<td>32,507 &gt;&gt;22,551</td>
<td>3449</td>
<td>32,830 &gt;&gt;25,720</td>
</tr>
<tr>
<td></td>
<td>17,246</td>
<td>27,759 -21.4</td>
<td>116,830</td>
</tr>
</tbody>
</table>

Upper row : Average real land prices of land use in 100m grid
Lower row : Standard deviation of land use in 100m grid
>> Significant level of 1 percent  > significant level of 5 percent
G.N. = Grid number
V.R. was calculated by involution of rate of variation with 1974's real land prices taken as 100

### Table 3-b. Effect of Land Use Zoning on Real Land Prices for Residential Land in 1974 and 1984 in Koshigaya City

<table>
<thead>
<tr>
<th>Land use</th>
<th>Total Land</th>
<th>Agricultural &amp; Forest</th>
<th>Residential Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>104,065 &lt;&lt;109,439</td>
<td>1938</td>
<td>90,416 &lt; 94,951</td>
</tr>
<tr>
<td>Districts</td>
<td>29,630</td>
<td>36,141 +5.2</td>
<td>24,975</td>
</tr>
<tr>
<td>UPA Commercial</td>
<td>120,734 &lt;&lt;140,366</td>
<td>134</td>
<td>120,737 &lt;&lt;142,976</td>
</tr>
<tr>
<td>Districts</td>
<td>15,463</td>
<td>24,766 +16.3</td>
<td>13,908</td>
</tr>
<tr>
<td>Industrial</td>
<td>109,479</td>
<td>109,398 222</td>
<td>114,021</td>
</tr>
<tr>
<td>Districts</td>
<td>16,107</td>
<td>39,705 -0.1</td>
<td>14,983</td>
</tr>
<tr>
<td>UCA</td>
<td>49,981 &gt;&gt;40,607</td>
<td>3449</td>
<td>43,483 &gt;&gt;37,772</td>
</tr>
<tr>
<td></td>
<td>18,070</td>
<td>34,060 -11.7</td>
<td>16,505</td>
</tr>
</tbody>
</table>

Upper row : Average real land prices of land use in 100m grid
Lower row : Standard deviation of land use in 100m grid
>> Significant level of 1 percent  > significant level of 5 percent
G.N. = Grid number
V.R. was calculated by involution of rate of variation with 1974's real land prices taken as 100
Kawagoe City, an increase of more than 15% is seen in the entire UPA while a decrease of more than 20% is seen in the UCA.

A similar analysis of farmlands and forestry suggests that there is basically no difference in estimation between farmlands and forestry, therefore it can be said that the effect of the "demarcation of zones" is significant. In the southern part of Koshigaya City, the "demarcation of zones" affects the rise and fall of the real land price, though this is more obvious in the southern part of Kawagoe City. Especially, the difference in the real land price of farmlands and forestry is noticeable between the UCA and a residential area of the UPA.

Two major reasons for the difference in land prices between Kawagoe and Koshigaya due to the "demarcation of zones" may be mentioned. First, the UCA is widely established in Kawagoe but is not in Koshigaya. In the environs of Kawagoe, the UPA is also established widely and a "re-demarcation of zones" was performed to include the UPA in the UCA provisionally. For this reason, it can be surmised that development activity cannot extend to the UCA.

Second, uplands are more favorable for residential land, causing an increase in the land price in the UPA of Kawagoe. The lowlands, which feature soft ground, are subject to more disasters and thus are inappropriate for residential land development. It should also be noted that when comparing uplands with lowlands, the former features low-density housing while the latter is high-density housing, making a difference in the residential environment (Tsukaguchi, 1990). The difference in the land price due to topography may be considered in relation to the differences in characteristics of natural conditions for such residential land development.

A Simple Model of The Japanese Land Market

The empirical analysis of the previous sections can be summarized in the following four points:

1. Land use controls using the "demarcation of zones" in the UPA and UCA affected land prices. However, since actual implementation is rather loose, residential land development was actually carried out in the UCA. On the national level, residential land
development of farmlands takes place in the UCA, where farmlands should be preserved and urbanization should be controlled, at the same rate as that in the UPA.

2. The implementation of land use controls is very different in the three largest cities and in local areas. In the three largest cities, residential land development takes place in the UPA while in local areas it is carried out in the area outside the UPA. Therefore, the actual implementation of land use control has been effective in the three largest cities while in local areas it had little effect in controlling development activities.

3. In the three largest metropolitan areas, where the land use control has been strictly enforced, land use control has had a significant influence on land prices. Specifically, even though the rise of land prices in the UPA of Greater Tokyo is significant, the rise of land price is apparently suppressed in the UCA.

4. In local areas, where the land use control has been “flexibly” implemented, there exists a close relationship in the land prices for farmlands and residential lands, although they differ in productivity. This happens regardless of the land use control. Even in the case of agricultural promotion farmlands in the UCA, for which residential land development is impossible in principle, a high correlation with the price of prospective residential land in the UPA is observed.

In addition to these four points, an additional characteristic of Japan’s recent land market may be pointed out. The land price is extraordinarily high when compared with the land rent (Nishimura, 1990). For instance, according to the estimation of Nishimura and Sasaki in their chapter in this volume, the ratio of the price to land rent of farmland in the country as a whole reaches 50 to 70 times while the ratio of price to land rent of residential land in the six greatest cities reaches 40 to 60 times. The ratio of the price to land rent of Japanese farmlands before the war was between 10 and 20 times while the high ratio of price to land rent in our recent land market is outstanding.

Taking the above-mentioned analysis for the entire country and Greater Tokyo into consideration, we present a simple model of the land market in which the Japanese land use controls and its actual
implementation are considered, in order to illuminate problems in current land policy.

First, as a reference point, the effect of "strict land use control" was analyzed in section 1. Strict land use control means land use control is expected to remain unchanged in the future. In section 1, strict land use control is discussed with respect to distortion of resource allocation in its production aspect and effect on the average land price.

For a long period of time, the Japanese Government was promoting effective use of land corresponding to the high-level of economic growth. The government thus resorted to "flexible implementation" of land use controls to reduce distortions. However, such flexible implementation of land use controls nurtured expectations that land use controls would be eased, raising further the average land price and making the land price remarkably high when compared to the land rent. This was clarified in section 2. Further, "flexible implementation" also enhances the correlation of land prices between farmlands and residential lands as well as residential lands and commercial lands.

"Strict Land Use Control" and Land Price

In order to simplify the discussion, a homogenous land market is assumed, that is, a land market for which the distance to Tokyo, traffic access, productivity as residential land, natural conditions, and productivity as farmland are all similar. Figure 7(a) shows the rental market for land. On the vertical axis X, the volume of existing lands is shown. For simplification, the quantity of the land is normalized to unity. From the left, a residential land rent curve is drawn while from the right, a farmland rent curve is drawn. When the quantity of residential land is small, it can be rented at high residential land rents. However, a higher availability of residential land implies a lower residential land rent due to competition among residential lands. Therefore, the residential land rent curve declines as residential land stock increases. The farmland rent curve also goes down as the farmland stock increases due to the competition among farmlands. Thus we obtain the farmland rent curve shown in Figure 7(a). If the conversion of farmlands is not controlled, equilibrium is achieved at point E.
Land Prices and City Planning

Figure 7-a. Equilibrium Rent Determination

Residential Land Rent

Farmland Rent

with part $x^*$ for residential lands and the remaining part $1-x^*$ for farmlands. At point E, the residential land rent is equilibrium to farmland rent with the equilibrium rent at $R^*$.

Next, for simplification, the interest rate is assumed to be constant, and unchanged ($r$). The transaction cost and uncertainty about the future land rent are assumed to be negligible. In this case, the land price equals the present discounted value of the future land rent. As the equilibrium rent is the same for farmland and residential land in
the rental market of land, the farmland price and residential land price are the same and equal $R^*/r$.

As mentioned above, when the land use controls do not exist, farmland prices and residential land prices take the same value. Next, let us assume that conversion control is applied to farmlands and farmlands are fixed to $1 - x$. Let us further suppose that this land use control is strict and unchanged in the future. As the supply of residential land is $x$, residential land rent is $R^i$, residential land price is $R^i/r$, the farmland rent is $R^a$ and the farmland price equals to $R^a/r$. Therefore, the average land price is $(xR^i + (1-x)R^a)/r$.

Next, let us consider the effect of strict land use controls on the land price. First, there is an isolation effect. When the conversion of farmlands is strictly controlled and the farmlands are fixed to $1 - x$, the shift of the residential land rent curve affects only residential lands and does not have any influence on farmlands. In Figure 7(b), suppose that the residential land rent curve is shifted upward. The residential land rent goes up from $R^i$ to $R^i*$, and the residential land price is raised from $R^i/r$ to $R^i*/r$. However, the farmland rent is still $R^a$ and the farmland price does not change at $R^a/r$. In the same manner, the shift of the farmland rent curve has no influence on the residential land. As such, the strict land use control has the effect of isolating lands with different use types.

Second, the land use control itself can raise or lower the average land price. However, strict farmland conversion control has a strong possibility of raising the average land price. The agricultural productivity of land does not change very much as the stock of farmlands changes, while the residential land rent is likely to decrease rapidly as the stock of residential lands increases. Figure 7(b) shows this case. The slope is steep for the residential land rent curve while the slope of the farmland rent curve is flat. In this case, the farmland conversion control makes the residential land rent $R^i*$ and the residential land price go up sharply. However, the farmland rent $R^a$ goes down only a little, resulting in a small decrease of the farmland price. Consequently, the average land price is increased.

There are various reasons why the government intervenes in the land market. First, there is political pressure from landowners about who can make profits through this intervention. However, if there is a
so-called market failure, then the government has an incentive to impose land use controls, independent of the political pressure from land owners. For instance, there might be social benefits which are not sufficiently evaluated in the market, such as the residential environment. Then, the optimum land use control is determined at the point where the marginal increase of these benefits is equal to the marginal increase of the cost, which comes from distortions of the resource allocation. The same type of analysis can be used to control the conversion from residential land to commercial land.

"Flexible Implementation" of Land Use Control and Expected Easing of Control

As shown in the previous paragraph, land use control has a cost that consists of distortion of resource allocation. In the case of the strict land use control shown in the previous paragraph, we have assumed that the use control is unchanged. When a change unexpected at the time of determining the land use control occurs, the cost due to the resource misallocation may be very large. Thus "flexible implementation," which is a feature of Japan's land use control, is actually a measure of adjustment making the distortion of the resource allocation as small as possible.

Suppose that in the model shown in Figure 7(a), 7(b), the "flexible implementation" will be carried out for farmland conversion in the next period and z of the farmland will be permitted for conversion with probability p. Suppose that the all farmland of 1 - x has a uniform possibility for conversion. For simplification, it is assumed that the conversion of farmlands will not be permitted after the next period. Furthermore, to simplify the analysis, it is assumed that the conversion area z is so small that the influence on residential land rent and farmland rent can be neglected.

First, as residential land rent does not change, there is no influence on residential land. Next, let us consider the landowner of farmlands. This landowner is assumed to be risk neutral and interested in maximizing expected profit. Let q be the farmland price in the present period. On the one hand, if this landowner sells the land in the present period and invests the proceeds in bonds, the gain of (1+r)q can be
obtained in the next period. On the other hand, suppose that he/she will sell the farmland in the next period. In the present period, he/she earns farmland rent of $R^*$. In the next period, there are three possibilities. The first is the case in which the farmland is not converted: the probability is $1 - p$ and the price of his/her farmland in the next period is $R^*/r$. The second is the case in which the conversion of the farmland takes place, but his/her farmland is excluded from the conversion. The probability is $p(1 - (z/(1 - x)))$ and the price of his/her farmland in the next period is again $R^*/r$. The last case is when the conversion of his/her farmland is permitted: the probability is $p(z/(1 - x))$ and the price of his/her farmland in the next period is a residential land price, being equal to $R^*/r$. Therefore, when the farmland is sold in the next period, the expected profit is.

$$R^* - (1 - p)R^*/r + p[z/(1 - x)]R^*/r + p(z/(1 - x))R^*/r$$

In order for the farmland market to be in equilibrium, this has to be equal to $(1 + r)q$ (no unexploited arbitrage opportunity). Thus, the farmland price of this farmland is

$$q = (R^*/r) + p[z/(1 - x)]. [(R^*/r) - (R^*/r)]$$

This is the farmland price when the "flexible implementation" is carried out.

As it is obvious in the farmland price equation (2), when probability $p$ is positive, that is, the possibility of farmland conversion is expected, the farmland price increases across the board. The larger the difference $R^* - R^*$ between the land rent, and farmland rent, and the smaller the interest rate $r$ is, the larger the increase is. When the expectation of flexible implementation is increased, the probability of conversion $p$ increases. If probability of conversion $p$ and scale $z$ increase, the farmland price increases substantially.

In the farmland price equation (2), farmland price $q$ is a function of $Rr/r$. Therefore, the farmland price is highly dependent on residential land price, regardless of the land use control. Under flexible implementation, the farmland price is closely correlated with the residential land price. The movement of farmlands in the UCA of local areas can be explained as a result of the flexible implementation, as shown above. In the case of the three largest cities, where the more strict
implementation is carried out, the land price of the UCA varies differently from that of the residential land price of the UPA.

Farmland price (2) also explains an extremely high ratio of land price to land rent. The farmland price includes not only the present discounted value of farmland rent, but also takes into account the possibilities of converting to residential land in the future. As the residential land rent is considerably higher than the farmland rent due to conversion control, the ratio of the price to land rent is quite high.

The above analysis mainly focuses on farmland. However, the same kind of flexible implementation may be also responsible for causing a rise of the land price of residential and commercial lands.

Conclusion

We have shown that “flexible implementation” has unintended effects of raising speculation about conversion and thus allowing a high correlation between land prices having different uses. This result suggests that the following subjects need to be re-examined.

1. Social benefits obtained by land controls and the social losses caused by the distortion of the resource allocation must be re-examined. Especially, it is important to re-examine whether the current land use controls serve to increase social welfare. For instance, most controls concerning farmlands are likely to raise the price of residential lands by preventing the conversion of farmlands. Moreover, since the social benefits of control due to the externalities of land services spread to a wide area, a wide scope is needed for land use planning. Specifically, the farmland use control and UPA use control should be integrated.

2. Most controls must be re-adjusted to changes in economic and social conditions of the society. However, arbitrary implementation in the name of re-adjustment must be checked. As shown in section 3, arbitrary “flexible implementation” causes expectations that controls will be eased and therefore creates a high possibility of causing an increase of overall land prices. Thus, transparency of the implementation must be established.
3. It should be noted that the actual implementation of land use controls is different between the three largest cities and local areas, and that the movement of land prices also differs. On the one hand, the “demarcation of zones” system of Town Planning and Zoning is effective in the three largest metropolitan areas, having a strong effect on land prices. On the other hand, it has no effect in local areas or rather enhances the correlation between the prices of farmlands and residential lands. When considering these facts, the land use controls devised for the three largest cities may not be effective in promoting rational land use and rational land price formation in local areas. We may need more decentralized approaches toward land use control.

4. Distrust of market mechanisms prevailing in the land market is the basis of the current argument for reconsideration of land use controls, which insist on detailed city planning. However, as shown in section 3, the fact that the land market forms a “distorted” land price is the result of the presence of the land use control and its “flexible implementation.” Consequently, if the current land use controls are strictly enforced by the government, the distortion of the land market may further increase. The reconsideration of controls from a viewpoint of increasing social welfare and removing the arbitrariness associated with “flexible implementation,” should be emphasized.

5. As for the reconsideration of the “demarcation of zones” system, it is important to examine the following points: 1) the comprehensiveness of land use planning; 2) the reconsideration of “flexible implementation” in the UCA and the elimination of arbitrariness in allowing conversion of any kind; and 3) the development of appropriate planning for local cities. As for the fractionalization of the UCA, examination from a viewpoint different from land price, such as preservation of the city environment, is required.
REFERENCES


J: in Japanese
J-E: in Japanese with English abstract