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HOUSING DEVELOPMENT IN ASIAN TRANSITIONAL COUNTRIES :  
A COMPARATIVE STUDY IN  
JAPAN, TAIWAN(ROC), KORREA(SOUTH), SINGAPORE, AND HONG KONG

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ABSTRACT

In the Asian area, there are five countries with a remarkable growth in economic and social development during the last two decades. The outstanding cases are Japan with the "Asian four small dragons" -- Taiwan, Korea, Singapore, and Hong Kong. Is housing development also a "success story" in these five countries? What lessons of housing development can we get from these five countries? In what ways a comparative study of housing development in these five countries meaningful? This paper attempts to answer these questions by the analysis of housing context, housing operation, and comparative study in these five Asian countries.

INTRODUCTION

The success or failure of housing development can be measured by many different dimensions. Some dimensions of housing development, such as the physical conditions, are more easy to judge. Some dimensions of housing development, such as the housing operation system, however, are difficult to evaluate.

At least two lessons can be provided by studying these five countries. The first, for instance, is what lessons can Taiwan get from the experiences of Japan, Korea, Singapore, and Hong Kong? The other is the lessons for those outside of these five countries, particular for developing countries.

Since there are many important similar characteristics among these five countries, such as the same traditional Confucian culture, the high population density and urbanization, and high economic growth, these countries should have a similar housing approach. The other side of the argument, however, is that many important different characteristics exist among them, such as differences in scale (Singapore, Hong Kong vs. Japan, Taiwan, Korea), different

kinds of political pressure in territory (Japan, Singapore vs. Taiwan, Korea, Hong Kong), different types of budget constraint in defense allocation (Taiwan, Korea vs. Japan, Singapore, Hong Kong). Considering these differences, these countries cannot have a similar housing approach. The most common notion in Taiwan's housing development is how we can learn from housing development in Singapore, Japan, or others. In this kind of argument, at least three levels of issues should be clear. First, what kind of characteristics are the key factors for the considerations of housing development. Second, what are the elements of housing development that can be transferred. Third, what the conflicts between the transfer elements and local elements of housing development can be compromised.

Asian transitional (or newly industrial) country is a basic characterizes these five countries as the study group for housing development. Defining transitional country is as the ambiguous as defining developing country. A transitional country is only a concept about the high economic growth and middle stage of national development (ref.3). The purpose of this classification is that two basic study types of traditional housing development -- developed and developing countries are not appropriate for this kind of national housing development. Probably we need to establish another type of housing development study for the discussion of these transitional countries. Furthermore, beyond the strategies of site-and-services and upgrading in the developing countries, what kind of strategies can be suggested to the transitional countries. Eventually, many developing countries will enter this transitional stage.

In summary, this study attempts to answer the following four questions:

1. In what dimensions of housing development are success or failure in these five countries?

2. What lessons can be learned by these five countries from each other and what lessons can other countries, especially developing countries, learn from these five countries?

3. What is the process and level of housing development transformation for a country, and how can the transformation be adapted to the localization of housing development?

4. How can the housing development types be established in transitional countries? Moreover, how can we provide recommendations for Taiwan's housing development?

### NATIONAL CONTEXT

To study national housing development, the first step is the national context study which can be divided into the following five dimensions: natural environment, political environment, economic environment, socio-cultural environment, and regional environment.<sup>2</sup> In summary the study of national context, the following factors have particular importance for the study of housing development in these five countries: high population density and lack of resources in the natural environment; capitalism and stability in the political environment; high and stable growth in the economic environment; income redistribution with saving and education emphasized in the socio-cultural environment; and high urbanization with small regional disparity in the regional environment.

### HOUSING CONTEXT

Housing context in these five countries is characterized by four main dimensions: housing stock, housing conditions, housing occupancy, and housing efforts. Although the data of housing context come from various resources, the recent data of housing censuses of these countries will be the basic source.<sup>3</sup> In summary, the current housing situations in these five countries are good, as no serious problems of housing shortage, squatter settlements, small dwelling size, lack of facilities, and crowding etc. exist, although they all face the problem of very high density. Particularly, compared with developing countries, the housing situations of these five countries are quite different. By comparing housing contexts of these five countries, we may summarize that Japan and Singapore both have a good housing situation; Taiwan also has a good housing situation except for a high vacancy rate; Hong Kong has the problem of relatively

poor conditions in housing occupancy (such as, low proportion of owner occupants, too many persons per dwelling, small floor area per person etc.); and Korea has some relatively poor conditions in housing stock, physical housing conditions and housing efforts (such as, low ratio of dwellings to households, small dwelling size, lack of some dwelling facilities, high housing expenditure and housing value etc.). From the viewpoint of progress made in the housing situation, these five countries have dramatically improved their housing conditions after the war. In spite of different approaches to housing development in these five countries (see next section), they all have made improvements in their housing situations.

### HOUSING OPERATION SYSTEM

Housing operation system can be discussed by the following four dimensions: housing policy, housing institution, housing finance, and housing program.

#### Housing Policy

Housing policy refers to the range of activities that public and private sectors jointly undertake to provide housing services for society. Since the responsibility of housing services and housing conditions in every society different (ref.8), there are different degrees of public/private involvement in housing. From the results of public/private housing stock, we can find that housing policy in Singapore and Hong Kong emphasize public involvement; Japan and Korea emphasize both public and private involvement; and Taiwan emphasizes private involvement. Meanwhile, from the proportion of total government expenditure on housing, it is clear that public involvement in housing in Singapore and Hong Kong is more direct and subsidiary than that of Japan and Korea.

Usually housing policy is given low priority in national development policies in many countries, since housing is an expensive investment involving large capital outlays. However, this is not true, particularly in Singapore and Hong Kong. In these five countries, housing is not only a service for social welfare but also a tool for economic development. Therefore, there is a higher priority in these countries than that of developing countries in general.

There are multipolicies of national housing policy which exist in these five countries. For instance, the policy of "new towns" used to decentralize urban

population is particularly emphasized in Singapore, Hong Kong, and Japan. Japan and Singapore also concentrate on the policy of urban renewal. Land policy is especially important in Korea. Real estate management policy is really concerned in Taiwan. Housing industrialization is another policy considered in Japan. We can see that some different multipolicies of housing are emphasized in these countries.

There are two important objectives for housing policy -- housing supply and housing distribution (ref.6). In these five countries, the supply objective of housing policy is emphasized, however, there is less emphasis on the distribution objective. For example, public housing is too expensive for low income families in Taiwan and Korea; there are loose eligible regulations for the qualification of public housing in Singapore, Taiwan, and Korea; there is a lack of housing for handicapped and elderly. In addition, large-scale, high-density, overcrowded and concentrated public housing environment causes many socio-cultural problems in these five countries. Therefore, how to emphasize the distribution objective (spatial, scale, target groups, and equity etc.) should be the future housing policy in these countries. In the supply objective, two dimensions -- quantity and quality are provided for direction. In these five countries, quantity issue is almost fulfilled except in Korea, therefore, the quality issue of private and public housing environment should be the future housing policy.

It is not easy to identify and compare housing policy in these countries for two reasons. First, there is a lack of agreement for levels and context of housing policy (ref.4). Second, there is a lack of official statements and publication on housing policy. Policy level, however, is still the most important which should be carefully discussed, formulated, and examined. Since the government always plays the dominant role in the aspect of housing policy, there is a lack of detail of policy and documentation for the private sector's involvement in these countries except Japan. This probably has less impact on Singapore and Hong Kong, but it is critical in the case of Taiwan.

#### Housing Institution

Housing institutions have been reorganized in the 1960s and 70s in all these countries except Japan. In the early stage, housing institutions included: Taiwan Public Housing Committee (1955-73), Korea Housing Administration (1941-62), Singapore Improvement Trust (1927-60), and Hong Kong Resettlement Department, Housing Authority (1954-73).

At present, housing institutions are established by three types of organization: public, semi-public (non-profit or public support), and private sectors in these countries. In Japan, Korea, and Hong Kong, all three types of housing institutions exist. In Japan, public sector includes local government (Ministry of Construction) and other ministries (Welfare, Labor, and Finance), semi-public sector includes Japan Housing Corporation (JHC: 1955) and Housing Loan Corporation (HLC: 1950). In Korea, public sector is local Construction Bureau (Ministry of Construction) and semi-public sector is Korea National Housing Corporation (KNHC: 1962). In Hong Kong, public sector is Hong Kong National Housing Authority and semi-public sector is Hong Kong Housing Society (1951). In Taiwan, only public and private two sectors provide housing which local Public Housing Department (Ministry of Interior) regards as the public housing institution. In Singapore, only semi-public and private sectors provide housing which Housing Development Board (HDB: 1960) regards as the entity of semi-public institution.

We may recognize how importance each institution is by the proportion of completed housing units during the last two or three decades. From table 1 we can see that the public sector plays an important role in Hong Kong, Korea, and Japan; the semi-public sector is important in Singapore, Japan, and Korea; and except Singapore, the private sector still plays the major role for the housing supply in these countries, particularly in Taiwan.

Table 1: Housing Supply in Public/Semi-Public/Private Sectors

COUNTRY	PERIOD	PUBLIC SECTOR			SEMI-PUBLIC SECTOR			PRIVATE SECTOR (%)
		Units	Units	%	Units	Units	%	
JAPAN	'45-'75	L.Gov.	2,036,000	8	JHC	181,000	4	64
		Others	2,200,000	8	HLC	2,51,000	16	
TAIWAN	'54-'81	L.PHD	183,193	5				90
		Others	--	5				
KOREA	'62-'81	L.Gov.	524,049	20	KNHC	222,451	9	71
SINGAPORE	'60-'80			--	HDB	372,158	70	30
HONG KONG	'-79				HKHA	395,080	42	55

\*Estimated.

From the relationship of housing institutions and residents' income level, there are different housing supply systems in these countries. In Japan, local government provides only rental housing to low-income families, JHC provides housing for rent or sale to middle-income families, HLC provides loan to individual or corporations for rental or sale housing. Taiwan Public Housing Department and Korea Local Construction Bureau and KNHC provide housing for sale only. Other public housing in Korea, Taiwan, and Japan is provided to government officials and military families. Singapore HDB and Hong Kong

National Housing Authority provide housing for rent or sale to low and middle income families. We find that these five countries all have public housing programs for low-income families. In Singapore, Japan, and Hong Kong, the governments also provide housing to middle-income families.

To sum up, the housing institutional systems are different among these five countries. Generally, they may be divided into five different housing supply models. Japan is a model of multi-public and semi-public with private sectors; Korea is a model of single public and semi-public with private sectors; Hong Kong is a model of single public with private sectors; Singapore is a model of single strong semi-public with minor private sectors; and Taiwan is a model of private dominated with minor public sectors. In general, we can conclude that the housing insitutional systems in Singapore and Hong Kong are centralized and have powerful authority; Japan and Korea have decentralized authority, and Taiwan lacks strong authority.

#### Housing Finance

Since housing is not only a merit and durable good but also expensive, housing finance plays an important role in the housing operation system. Housing finance has been defined by the United Nations as money provided by any source other than the residents or builders of dwelling for construction funds loaned to builders and mortgage funds loaned to individual families by private or public banks and by a wide variety of other types of financial institutions (ref.12).

There are many kinds of public and private financial institutions in these five countries which are involved in the housing sector. The important housing financial institutions are the Housing Loan Corporation and Banking Accounts of Banks in Japan, Taiwan Land Bank, Korea Housing Bank, Singapore Housing Development Board and Central Provident Fund Board, Hong Kong National Housing Authority and Building and Loan Agent, Ltd., etc.. Among these five countries, only Taiwan lacks a professional housing financial institution. This reflects that little attention is paid to housing finance in the formal sector in Taiwan. Hence housing finance shifts to the informal sector like housing presale for developers and collective saving of a group of friends or relatives for homebuyers in Taiwan.

The common sources of housing funds in these countries are: grants and loans from central or local governments, bonds and other borrowings, insurance companies, pension funds, public and private bands, saving and loan associations and private savings. There

are some differneces, however, in the main sources of housing funds in these countries, which include government loans and funds in Singapore and Hong Kong; housing bonds and private funds in Korea; public and private banks in Japan; private investment companies, insurance companies and informal collective savings in Taiwan.

Propensity to save is an important factor for housing finance in terms of the sources of homebuyers or housing loan lenders. Because of a tradition of thrift in these five countries, there are high saving rates. For example, the saving rate in Taiwan is 25% of family income ('81); in Japan is 22% ('80); in Korea is 19% ('80). To compare many other developing and developed countries, the saving rates are around 5-10% only. One of the important reasons for the high saving rate in these Asian countries is to accumulate funds to purchase a house. This is part of the reason for the active housing development in these five countries.

From the table 2 we can see how conditions of mortgage loan in terms of amount, period, and interest rate differ among these countries. Generally, the conditions of mortgage loans in Taiwan and Korea are worse than in Singapore, Japan, and Hong Kong, both in the aspect of public and private housing (short term, smaller amount and higher interest rate of mortgage loan). Furthermore, there are not many different conditions of mortgage loan between public and private housing in Taiwan and Korea. As for the conditions of construction loans, simialrly a worse situation exist in Taiwan and Korea than in the other three countries. In the past few years, housing construction loans in Taiwan were even prohibited by the government policy from the formal financial institutions.

Table 2: Conditions of Mortgage Loan

Country	Sector	Amount (of value)	Period (years)	Interest Rates (%)
Japan <sup>1</sup>	Public	55-80.	20-25	5.5-6.75
	Private	80	20-25	9.5-11.5
Taiwan <sup>2</sup>	Public	20-30 30-40	15 7	9 10-14
	Private	50	7	10-14
Korea <sup>3</sup>	Public	50	20	11-13
	Private	70 (within)	3-20	14
Singapore <sup>4</sup>	Public	80	5-20	6.25
	Private	80-90	10-25	9.5-10.5
Hong Kong <sup>5</sup>	Public	90	15	7.5-9
	Private	—	—	—

Sources: 1. G. McGuire, International Housing Policies, 1981, p.226.

2. The figures are estimated by the author (base on 1983's data).

3. The Korea Housing Bank, 1982.

4. Korea Research Institute for Human Settlements, Housing Data Book, 1981.

5. Hong Kong Government Information Services, Hong Kong 1980, 1980.

In summary, the government plays an important role, particularly in Singapore and Hong Kong, in housing finance in these countries except Taiwan. It is remarkable that the fundamental base of sufficient funds of housing finance in these five countries is due to the stable political and high economic growth environments with low inflation and high saving rate. These features in these five Asian countries are very different from that of developing countries.

### Housing Program

A housing program is a plan for the implementation of housing policy. In general, after housing policy and priorities have been set, the housing authority designs a housing program which breaks down into specific targets, such as the number of housing units to be constructed within a given time. The targets are justified on the basis of expected housing needs and demands among target groups and spatial allocation by the public and private sectors. There is a gap between targets and performance, however, which should be realized. For example, in the case of Taiwan, the 1976-81 Six-Year Public Housing Program only completed 30-70% of target in quantity.

There are two basic types of housing programs: comprehensive and selective (ref.8). Comprehensive housing program is the kind that considers the public and private as a whole housing sector rather than specific targeted groups. Japan and Korea are of this type (other cases like Germany, Scandinavia etc.). Selective housing program is the kind that is targeted toward special groups rather than applied to the housing sector as whole, typical case like Taiwan (other cases like United States, Switzerland etc.). Singapore and Hong Kong may also be put into the category of selective ones, however, public housing in these two countries is dominant in the whole housing sector which covers a wide range of target groups, they may also be regarded as the comprehensive type. Although this categorization of two types housing programs is not completely adequate, it provides the basis of the government concerns.

There are some characteristics of housing program in these five countries. Target, finance, and land are three main components of housing programs which are emphasized in these countries. Since housing is not only used as a service for social welfare but also a tool for economic development, the housing program is under the national economic development plan particularly in Taiwan and Korea. Except in the case of Hong Kong, housing programs have been designed as five-year plan in these Asian countries. Meanwhile, housing programs

emphasize not only the quantity of target but also the quality of living standards, especially in the cases of Japan and Singapore.

Tables 3 - 7 show the results of housing programs in these five countries. From the implementation point of view, Singapore has the best credit in terms of the percentage of housing program completed. Taiwan is farthest away from the target after the end of housing program period.

**Table 3: Japan Five-Year Housing Construction Program**

Phase	Target Sector	Public	%	Private	%	Total
1st 5-year Plan (1966-70)	Plan (A)	2,700,000	40	4,000,000	60	6,700,000
	Completed (B)	2,565,000	38	4,174,000	62	6,739,000
	B / A (%)	95		104.4		100.6
2nd 5-year Plan (1973-75)	Plan (A)	3,838,000	40	5,738,000	60	9,576,000
	Completed (B)	3,077,000	37	5,276,000	63	8,353,000
	B / A (%)	80.2		91.9		87.2
3rd 5-year Plan (1976-80)		3,500,000	41	5,100,000	59	8,600,000

Source: Japan Housing Bureau, Ministry of Construction.

**Table 4: Korea Five-Year Housing Construction Program**

Phase	Target Sector	Public	%	Private	%	Total
1st 5-year Plan (1962-66)	Plan (A)	40,300	8	435,100	92	475,400
	Completed (B)	39,900	12	286,000	88	325,900
	B / A (%)	99.9		65.7		68.6
2nd 5-year Plan (1967-71)	Plan (A)	30,000	6	470,000	94	500,000
	Completed (B)	69,700	13	470,700	87	540,400
	B / A (%)	232.3		100.2		108.1
3rd 5-year Plan (1972-76)	Plan (A)	250,300	30	582,600	70	832,900
	Completed (B)	228,800	30	531,800	70	760,700
	B / A (%)	91.5		91.3		91.3
4th 5-year Plan (1977-81)	Plan (A)	512,000	38	818,000	62	1,330,000
	Completed (B)	500,000	41	716,000	59	1,216,000
	B / A (%)	97.6		87.5		91.4
5th 5-year Plan (1982-86)		570,000	39	890,000	61	1,460,000

Source: Korea Research Institute for Human Settlements, Housing Data Book, 1980.

**Table 5: Taiwan Public Housing Program**

6-year Plan (1976-81)	Plan (A)	106,931				
	Completed (B)	31,293	Undercompleted (C)	41,329		
	B / A (%)	29	C / A (%)	39		
4-year Plan (1982-85)	Plan	Public	%	Private	%	Total
	Initial	100,000	42	140,000	58	240,000
	Modified	69,600-100,000	46-52	80,900-93,500	54-48	150,500-193,500

Source: Taiwan Public Housing Department, Ministry of Interior.

**Table 6: Singapore HDB Five-Year Public Housing Program**

Phase	Plan (A)	Completed (B)	B/A (%)	HDB Population (%)
1st (1961-65)	50,000	52,748	106	23 (9% in 1960)
2nd (1966-70)	60,000	66,212	110	35
3rd (1971-75)	100,000	113,819	114	50
4th (1976-80)	125,000	137,670	110	69
5th (1981-85)	155,000			85 (estimated)

Source: Singapore Housing and Development Board, HDB Annual Report 1980/81 1981.

**Table 7: Hong Kong Ten-Year Public Housing Program**

1973-83 first comprehensive public housing program. The objective was to provide improved housing and sufficient dwelling units for 1.8 million people. <sup>1</sup>
1977-86 Home Ownership Scheme try to provide 42,000 flats, to low-to-middle income families. <sup>2</sup>

Sources: 1. S. Yeh & A. Lequien, *Housing Asia's Millions*, 1979, p.18.  
2. Hong Kong Government Information Services, *Hong Kong 1980*, 1980, p.93.

**Summary**

Through the discussion of housing policy, institution, finance, and program, we can see that different approaches of housing operation exist among these five countries. Singapore and Hong Kong obviously have a more public direct-involved orientation; Japan and Korea have a private and public shared-involved orientation; and Taiwan has a more private involved orientation. It is clear that no one universal/appropriate model of the housing operation can fit all these five Asian transitional countries.

From the experience of the housing operation study in these five countries, we may find how to raise the priority of housing sector in policy; how to develop a strong and overall coordinated housing authority in institution; how to get sufficient funds from public and private in finance; and how to formulate and appreciate the strategies of implementation in program. There are the key issues of housing operation. The crucial point is that these considerations should be adapted to their own systems/environments from the central to the local levels.

From the progress of housing operations, in terms of institution and program, Japan, Singapore, and Korea have established stable housing operation system from the early of 1960's, Hong Kong in the early 1970's, and Taiwan in the middle of seventies. Nevertheless, the stable and continuous progress of housing operation during the last one or two decades is the most important factor for the remarkable housing development in these five countries.

As for the future directions of housing operation, Japan and Singapore seem already to have adapted their housing operation system to their own societies. Hong Kong might change its housing operation system, if the political system changes after returning to the mainland China in 1997. Korea could modify its housing operation system because services do not differ at local government and KNHC, and because of the regressive housing conditions. Taiwan just started a new housing direction which from the unpopular public housing program shifts to incentives for the private sector involved in the public

housing program. The results of this are not clear yet.

**COMPARATIVE ANALYSIS**

Studying the national context, the housing context and the housing operation in these five Asian transitional countries, we understand the similar macro-national backgrounds and the different micro-housing operations among them. Nevertheless, housing conditions in these five countries are in good shape when compared with the "basic-needs" conditions in developing countries. This section will discuss an internal overall comparison using the following four dimensions: housing issues, housing transformation, housing localization and housing evaluation.

**Housing Issues**

Major housing problems and directions in the national level are identified below to clarify the housing issues in these five transitional countries. In Japan, a rising standard of living has brought higher expectations for what constitutes acceptable housing. According to 1978 housing survey, 40% of all of households were dissatisfied with their present housing, primarily because of the small size of units and their age. A high proportion of housing lacks fire proofing in high density neighborhoods and serious fire hazards exist. According to the 1978 housing census, over 80% of housing are wooden building and about 70% are non-fireproofed. The most serious housing problem is in the urban area. Urban housing problems exist not only of high density with poor quality but also too expensive. Therefore, the shift to long distance commuting become the other impact of the urban housing problems. The main direction of third five-year (1976-80) housing program is emphasized on housing quality which the minimum and ordinary housing standards are intended to achieve.

In Taiwan, there are several major housing problems: unfairness of housing transactions (such as presale system); insufficiency of government housing institutions (including housing authority, financial system etc.); overstocking of vacant housing both in private and public; dissatisfaction of public housing for low-income families (such as too expensive); and low quality of neighborhood environment (such as illegal addition, lack of open space) (ref.2). There are two main directions for the government housing policy in the future. One is the incentive program for the private sector involvement into

public housing; the other is to establish the real estate management system in the housing market.

Housing conditions in Korea have regressed in terms of rates of housing supply and homeownership during the last decade. The overall physical housing conditions in terms of dwelling size and facilities or dwelling shared and density are relatively poor among these five countries. Public housing programs cannot meet the needs of low-income families in terms of quantity, quality, and price. The most serious problem is land speculation causing high housing prices in the market. Therefore, it is a difficult task for the Korean government to solve these housing issues of improving housing quality and increasing housing quantity.

Housing is the most successful in Singapore. The government plays an active role to take care of their people. The main housing problem might be the social impact on high-rise, high-density living environment. This is seriously concerned by the government already. The other problem is the shortage of labor and materials which have to be imported from the abroad. The government's direction is continuing the current public housing policy in order that the almost all people in Singapore can live in public housing.

Hong Kong and Singapore have a similar housing background and approach, they both face the problem of high-rise, high-density housing environment. In Hong Kong, however, two unique housing problems include relative poor housing conditions due to the dramatic increase in number of refugees from mainland China and Vietnam as well as very low rate of homeownership due to the uncertainty of political future after 1997. At present, it is a problematic period for the direction of public and private housing development.

In summary, there are similar national backgrounds and better housing conditions when compared with that of developing countries, however, the housing issues among these five countries are quite different. The only common issue is of high density of housing environment with very expensive land cost. These different issues, such as high proportion of housing dissatisfaction in Japan; unfairness of housing market transaction in Taiwan; shortage of housing stock in Korea; shortage of labor and materials in Singapore; and low rate of homeownership in Hong Kong, exist, partly because of the differences of national constraints as well as the differences of public and private housing sectors' resources, priorities, and approaches.

## Housing Transformation

It is very common that experiences in housing policy and approaches or strategies are transferred among countries. For example, sites-and-services or upgrading of housing development strategies are widely recommended to developing countries by international agencies; housing standards or regulations of developing countries always borrow from that of developed countries; some specific strategies, such as rent control, housing allowances, secondary housing market, and so on, are used or to be considered in many countries.

There are many levels of housing transformation. Some levels relate to technical processes, such as the processes of policy and program formulation, planning and design criteria, building technology and construction methods, management and maintenance skills etc., which may be transferred more easily. Most levels, however, relate to social-political processes, such as institutional systems, public and private supply systems, financial system, consumers behavior etc., which may not be transferred so easily. Even at the level of technical process, many housing transformations still involve some degree of social-political adaption. This is probably the reason why the difficulty of housing transformation exists, which is quite different from the "high-tech" transformation. For example, housing industrialization in Taiwan (from material standardization to housing prefabrication) has been tried for hardly more than ten years, but it is still unpopular.

If these external effects are examined carefully, we may find that housing transformation is usually introduced from the government to private sector. This means that housing transformation is commonly a "top-down" process. Public housing programs are a good example which shows the success of housing transformation (large amount, popular and cheap public housing) in Singapore and Hong Kong, and failure of that (small amount, vacant and expensive public housing) in Taiwan. This is the basic reason why success and failure occurs in the public and private domain in housing in the different countries. Since housing development is dominated by the private sector in Taiwan, housing transformation is more difficult.

Since the public-private relationship in housing development is important, consensus of housing transformation provides an important

base. Particularly, for these resources-lacking countries, there is no room for the diversity of housing transformation, which is quite different from that of countries with abundant resources. Consensus formation is not only for efficient efforts in housing transformation, but also for the priority decision in housing policy. Japan probably is the best example which makes a great efforts to provide this kind of channel (formal or informal) in order for housing transformation to success (such as Japan's housing industrialization) (ref.11). Taiwan and Korea, however, do not pay much attention on these effort. This may also explain the reason why housing transformation is not successful in these two countries. The more consensus making the country the better chance of achieving housing transformation.

Through the experiences of housing transformation in these five countries, the following considerations may be considered:

- (1) To identify the national and local housing issues and goals.
- (2) To realize the public and private housing domains, operation systems, and resources.
- (3) To recognize the levels, processes, and impacts of housing transformation.
- (4) To provide formal and informal channels for the consensus making of housing transformation.
- (5) To obtain the political support continuously.

Since housing transformation plays an important role in housing development, it should be further explored in this area. In other words, housing development is way to have successful transformation among countries. Especially, as there is a close relationship among housing officials in these five countries due to the similar housing background and geographical location, housing transformation is frequently raised among them. It is no doubt of difficult task, but it is worthy to develop some kinds of housing transformation guidelines for these five countries and other developing countries as well.

#### Housing Localization

There are two kinds of sources for the approaches of housing development. One is from the external efforts which have been discussed in the previous -- housing transformation, the other is the internal considerations -- housing localization. There are some examples of housing localization, which include secondary housing market in the United States; saving schemes in Germany and Austria; a central provident fund in

Singapore; presale system in Taiwan and Korea; cooperative construction in Taiwan, etc.. Housing localization means that those housing mechanism or strategies come from inside the nation itself, however, it is not necessarily unique only to one country.

Generally, housing development needs large-scale and various sources of local participation which include involvement (such as private developer, mortgage lender, designer, constructor, broker, home-buyer, and local government official, etc.) and capital investment (such as public funds, bank and institutions' savings and loans, developer, constructor, and consumer's investment, etc.). Housing provision is how the government structures incentives for private/local sector rather than the government itself acting as a monopoly supplier of good and services<sup>6</sup>. This implies that housing development should be the interest of the private/local sector, whatever from the approaches of housing transformation or localization. In other words, the stable condition of housing development is the results of local adaption. It, however, does not mean that housing localization is the only way to achieve the local adaption.

By examining the process of housing localization, we may find that it is usually created from the private/local sector, then, public/national is involved. This implies that housing localization is commonly a "bottom-up" process. "Presale system", "cooperative construction", and "cooperative finance" in Taiwan are examples which show the popular strategies from local/private sector to the national/public sector (ref.2).

Different issues are faced for housing transformation and localization separately. The former faced the issue of local adaption; the latter is the issue of institutionalization. Usually, housing localization starts with informal agreement which lacks legal protection. Taking the example of Taiwan's presale system, because of lack of a formal financial system support, private developers ask homebuyers to pay their money before houses finished. There is little protection for the investment of homebuyers when developers accept payment and vanish. It is an unfair risk for homebuyers, since they do not undertake the business. Therefore, institutionalization (i.e. rules of game have a legal base) become the important task for the housing localization.

Through the understanding of housing localization in these five countries, the following considerations may be considered:

- (1) To recognize and clarify the conditions of housing localization.



- (2) To find out the reasons, problems, and advantages of housing localization.
- (3) To institutionalize the process and legal base of housing localization.
- (4) To obtain the government concerns and intervention (if necessary) in housing localization.

Since housing localization may be a easy and better way to adapt local housing development, this bottom-up approach should be further emphasized, especially for the public sector which always first consider housing transformation. Housing localization is also a basic reason why the differences of housing development exist among countries. There is a lot of potential for the approach of housing localization, particularly as it has not been explored systematically yet.

### Housing Evaluation

Housing evaluation, particularly the progressive performance during the last decade will be considered here. In order to evaluate the successes and failures of housing performance in these five countries, the following four dimensions are provide: political/effectiveness, economic/efficiency, socio-cultural/equity, and physical/quality. The purpose of housing evaluation here is to have an overall picture of housing performance in these countries. According to the previous discussion in the housing condition and housing operation, we are able to evaluate each dimension of housing performance below.

In the political dimension, the main concern is the effectiveness of housing performance. The following four factors may be used as the criteria for the political evaluation: housing stock, homeownership, public housing investment, and squatter settlements/sub-standard housing. From the progressive viewpoint, Singapore and Japan have a good performance in each factor, particularly Singapore has a distinguished performance in the public housing investment. Except for low proportion of homeownership and some squatter settlements, the reputation of housing performance in Hong Kong is good. Taiwan has good performance in housing stock and homeownership, although it has a bad performance in public housing investment. Korea has a regressive performance in housing stock and hownership, but it is better off in public housing investment.

In the economic dimension, the main concern is the efficiency of housing performance. The factors of housing production, housing delivery, housing finance, and housing costs are provided as the criteria for the economic evaluation. Singapore has the best performance in every factor. Hong Kong and Japan also have a good performance

except for rather a high vacancy rate. Korea has problem in housing costs in terms of high housing cost inflation and land speculation. Except the similar problem of housing costs like Korea, the housing delivery system of Taiwan is inefficient because of the high vacancy rate.

In the socio-cultural dimension, the main concern is the equity of housing performance. The factors of housing affordability, low-income housing, locational choice, and cultural characteristics are the criteria for socio-cultural evaluation. There is little segregation in general, in terms of income and ethnic groups, in all five countries, the performance of locational choice is especially good. Since Singapore and Hong Kong concentrate on public housing investment, they have performed very well in housing affordability and low-income housing. Japan has good performance in maintenance of cultural characteristics. It is very difficult task for the dilemma of modernization in other countries. Taiwan and Korea have done little to solve the problem of housing affordability during the last decade.

In the physical dimension, the main concern is the physical quality. Living space, living facilities, neighborhood environment, and physical appearance are the criteria for physical evaluation. Again, Singapore and Japan have the best performance in these factors. Hong Kong and Korea are better off in living space and facilities, but not in neighborhood environment and physical appearance. Taiwan has good performance in living space and facilities, however, the neighborhood environment and physical appearance are worse off due to the lack of open space and an overwhelming and illegal addition of iron bars on windows or balconies.

Since evaluation involves some degree of subjective opinion, everyone may have some different judgements in each dimension of housing performance. If the progressive housing performance better and worse off can be ranged from the scale of +2, +1, through 0, to -1, -2, we may summarize housing evaluation in these five countries to the following table 8.

### CONCLUSION

There are two levels of housing development lessons that can be learned from these five countries' study. One is the lesson these five countries can learn from each other, the other is the lesson outside countries can learn from these five countries.

From the internal point of view,

**Table 8: Housing Evaluation in Japan, Taiwan, Korea, Singapore, and Hong Kong**

Worse Off | Better Off  
-2 -1 0 +1 +2  
The Same (During Last Decade)

\* Scale of housing performance:

CRITERIA	JAPAN	TAIWAN	KOREA	SINGAPORE	HONG KONG
<b>A. Political Dimension -- Effectiveness</b>					
A.1 Housing Stock	+2	+2	-1	+2	+2
A.2 Homeownership	0	+2	-1	+2	0
A.3 Public Housing Investment	+1	-1	+1	+2	+2
A.4 Squatter Settlements / Sub-standard Housing	+1	+1	+1	+2	0
<b>Total</b>	<b>+4</b>	<b>+4</b>	<b>0</b>	<b>+8</b>	<b>+4</b>
<b>B. Economic Dimension -- Efficiency</b>					
B.1 Housing Production	+2	+1	+1	+2	+2
B.2 Housing Delivery	0	-1	+1	+2	0
B.3 Housing Finance	+2	0	0	+2	+2
B.4 Housing Costs	0	0	-2	+1	+1
<b>Total</b>	<b>+4</b>	<b>0</b>	<b>0</b>	<b>+7</b>	<b>+5</b>
<b>C. Socio-cultural Dimension -- Equity</b>					
C.1 Housing Affordability	0	0	0	+2	+2
C.2 Low-income Housing	+1	+1	+1	+2	+2
C.3 Locational Choice	+2	+2	+2	+2	+2
C.4 Cultural Characteristics	+1	-1	-1	0	-1
<b>Total</b>	<b>+4</b>	<b>+2</b>	<b>+2</b>	<b>+6</b>	<b>+5</b>
<b>D. Physical Dimension -- Quality</b>					
D.1 Living Space	+1	+2	+1	+2	+1
D.2 Living Facilities	+2	+2	+1	+2	+1
D.3 Neighborhood Environment	+1	-1	0	+2	0
D.4 Physical Appearance	+1	-1	0	+2	0
<b>Total</b>	<b>+5</b>	<b>+2</b>	<b>+2</b>	<b>+8</b>	<b>+2</b>

Taiwan can learn the following from the other four nations:

- (1) Japan's experience of close working relationships between government agencies and private housing development entities is a very good lesson for Taiwan, since it is a particularly important factor for Taiwan's housing development which has not worked out well yet.
- (2) The way of Japan's Housing Loan Cooperation which indirectly involves public housing development may provide a lesson to Taiwan's public housing development.
- (3) The experiences of Singapore and Hong Kong public housing development may not be suitable for Taiwan's housing development because of different national constraints, housing priority and resources, and the power of housing authority and private sector effects.
- (4) Japan and Korea five-year comprehensive housing programs which consider public and private sectors as a whole is an important concept to Taiwan's housing authority, since Taiwan's housing authority does not pay attention to the private sector at all.

(5) Housing financial systems in Japan, Korea, Singapore, and Hong Kong may have some lessons for Taiwan in terms of formal professional institution, sources of housing funds, conditions of mortgage loan etc., this is weak point of Taiwan's housing development.

(6) The efforts of cultural maintenance in housing in Japan may also give lesson to Taiwan which needs to pay more attentions in this area.

(7) The most important lesson for Taiwan is that the government needs to pay more attention to housing localization, and not consider housing transformation first.

As for countries outside of these five countries, the following lessons may be considered:

(1) Achieving stable and continuous housing policies and programs was the initial base for successful housing development in these five countries.

(2) Getting the higher priority and investment as well as public and private sectors' supports in housing development in these five countries is a lesson for other countries.

(3) Establishing and implementing five-year housing programs which connect with national economic and social development policies was a strategy for housing development in these five countries.

(4) Maintaining close relationships between public and private housing sectors in Japan is also an important lesson for other countries.

(5) The process of incremental approach in terms of the improvement of quality and quantity of housing in Japan and Singapore is meaningful lesson for other countries.

(6) Two main current directions of public policy in Taiwan -- the incentives public housing program for the private sector's improvement and the management of real estate development may be the future considerations for some other countries as well.

(7) Some traditional cultural characters, such as high saving propensity, high education investment from family in these five countries may be external lessons for other countries.

(8) From the different housing operation systems in these five countries, we note that different national conditions develop different housing approaches, no universal approach exist. In other words, housing localization or the bottom-up approach needs to be more fully appreciated.

The following remarks need to be addressed in the end of this paper:

(1) The relationship of national context and housing development is important. Since the discussion of housing development cannot be isolated from the political, institutional, economic, and

social dimensions in the countries.

(2) The high-density housing environment and the middle stage of socioeconomic development in these five countries must be recognized. Every lesson of housing development from these five countries should keep these pre-conditions in mind.

(3) The levels of housing transformation are important. There are many lessons we get from these five countries, however, some may be transferred more easily, some may be transferred more difficultly, some may not be transferred at all.

(4) The successful housing development models in some countries may not also mean success in the other. Some successful housing policies, approaches, or strategies in these five countries may not necessarily be transferred to the other countries.

(5) The criteria of overall (political, economic, socio-cultural, and physical) considerations and evaluations are necessary. It is impossible for housing development without considering non-housing factors.

Since few papers discuss housing development in these five countries, this initial comparative study needs to be further developed. The following four areas may be suggest for the future studies. First, through this study, there is no one transitional housing development pattern. Two groups, however, can be established from these five countries -- Japan, Taiwan, Korea versus Singapore, Hong Kong for the futher housing comprative studies. Second, two main directions of housing public ploicies in Taiwan have a potential for the further development. It is worthwhile to develop theories, models, policies, and strategies for these two directions of housing development. Third, the processes of housing transformation and localization are important for the policies of housing development. Since many countries also face the problems of transformation and localization, there is a potential for the further theoretical and practical studies. Fourth, an overall (political, economic, socio-cultural, and physical) view of national housing development needs to be developed further. Particularly the political and institutional viewpoints of housing development studies are critical.

#### NOTES

- ① Although Japan has already passed through the transitional stage, it has been included in this study to further understand the trend of housing development in the transitional countries.
- ② For detailed discussion of national

context, see original research paper, pp. 5 - 11.

- ③ For detailed discussion of housing context, see original research paper, pp. 12 - 29.
- ④ Since few housing units are constructed by the Hong Kong Housing Society (3% of total from 1951), we do not take these into account for semi-public sector. This situation is similar to Singapore's HUDC for middle-income families.
- ⑤ Singapore and Hong Kong may be the special cases due to city-states and public sector dominant in housing.

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\* This paper has been condensed from the original 64 pages research paper.

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