

UPGRADING - AN ALTERNATIVE APPROACH TOWARDS
HOUSING REFORM IN CHINA

by

Fang He

B. Arch

Harbin Architectural and Civil Engineering Institute

Harbin, China
January, 1982

Submitted in Partial Fulfillment
of the Requirements for the
Degree of

Master of Science in Architecture Studies

at

Massachusetts Institute of Technology

June, 1989

© Fang He 1989. All Rights Reserved.

The author hereby grants to M.I.T. permission to reproduce
and to distribute publicly copies of this thesis document in
whole or in part.

Signature of Author ..

.....
Fang He
Department of Architecture
May, 12 1989

Certified by

.....
Nabeel Hamdi
Lecturer of Architecture

Accepted by.....

.....
Julian Beinart
Chairman, Departmental
Committee for Graduate
Students
Rota

MASSACHUSETTS INSTITUTE
OF TECHNOLOGY

JUN 02 1989

LIBRARIES

**UPGRADING - AN ALTERNATIVE APPROACH TOWARDS HOUSING
REFORM IN CHINA**

by Fang He

Submitted to the Department of Architecture on May 12, 1989
in partial fulfillment of the requirements for the degree of
Master of Science in Architectural Studies.

ABSTRACT

The thesis is a study on urban housing upgrading in China. The main objective is to look at upgrading, which has been widely used in many developing countries, as an alternative approach to solving the existing urban housing problems in China. It is argued that these problems are caused by two main factors: first, the unequal distribution system, under which, public housing can hardly reach those who lack access. Since most of this disadvantaged population group resides in old city neighborhoods, an effective housing upgrading program for these areas will effectively solve the overall housing problems. Second, the undergoing housing commercialization reform does little to help the disadvantaged group, because most urban residents cannot afford expensive commodity housing units. Therefore, a new approach is needed to break through the conventional housing system. China can learn valuable lessons from the international experience on providing low-cost housing to the urban poor.

In the first part of the thesis, the basic housing background is introduced aiming at better understanding of what are the fundamental factors causing the housing problem; who suffer from these problems; and why upgrading is the crucial issue.

The second part is to review the international upgrading experience in many developing countries. The valuable experiences on dealing with issues, such as affordability, standard, self-help and effective management are what China lacks and should learn from the international paradigm.

In the third part, the main focus of the thesis, I will examine the feasibility of applying the upgrading strategy in China. Based on some detailed analysis, A self-help and low-cost upgrading program will be developed. The suggested strategies involve a series changes on housing policy, design attitude, financial arrangement, as well as institutions.

Thesis Supervisor: Nabeel Hamdi
Title: Lecturer, Department of Architecture.

ACKNOWLEDGEMENTS

I gratefully acknowledge the support and guidance of Professor Nabeel Hamdi, who has been helped me to organize many different ideas and concepts into a tangible form.

My thanks are also due to Ms. Susan Glenn, for her all efforts in helping me editing the thesis and correcting the English.

In addition, I am indebted to my parents for their support and understanding.

Also to You-xuan, my dear husband, without his encourage and support, the thesis would be difficult to finish.

CONTENTS

Page

Abstract	ii
Acknowledgment	iii
Table of Contents	iv
 Chapter 1 : Introduction.....	 1
 Chapter 2 : Urban Housing Development in China.....	 5
2.1. Institutional Context.....	5
2.2. Urban Housing Condition in China: 1949-78	10
2.3. Urban Housing Reform in China: 1979-87....	17
2.4. Key Problem Area: Urban Old District.....	26
 Chapter 3 : Review of International Upgrading Strategy....	 36
3.1. Origins and Objectives.....	37
3.2. Evaluation.....	47
 Chapter 4 : Upgrading in China: Comparison and Experience.....	 54
4.1. Comparison Between China and Other Countries.....	54
4.2. Previous Experience of Upgrading in China.....	61
 Chapter 5 : The Feasibility Study of New Strategy.....	 71
5.1. Strategy.....	71
5.2. A New Design Approach.....	77
5.3. Affordability Analysis.....	86
5.4. Community - A New Housing Institution....	93
 Chapter 6 : Conclusion	 96
Bibliography	100

CHAPTER ONE: INTRODUCTION

All over the world, to have sufficient housing for every urban resident has never been an easy task for many countries, particularly for poor developing countries. China, as a developing country with the large size of urban population and relative low economic strength, also faces similar urban housing problems. In this socialist country, which once believed that housing should be part of social welfare and should be responsible by the government, not only there are a large number of urban households without enough space to meet their basic needs, but also there is increasing disparity of housing distribution among different groups of urban population.

In spite of impressive expansion of state urban housing investment in last decade, which has raised the aggregate living condition in urban area by 70 percent, from 3.6 square meters per person in 1978 to 6.1 square meters per person in 1985, the magnitude of urban housing problems in terms of quantity and quality has improved very little; by 1985 there were still about 30% of urban households with housing problems. (Lin, Z., 1986, p.34) The main reason is that the limited housing resources did not go to the people who need the housing most. Instead, they went to enhance those who are already better off in their housing condition. In other words,

it is the existing housing distribution system that contributes the persisting urban housing problems in China.

Realizing the basic defects of welfare housing system, to bring market mechanism into housing sector becomes the main focus of recent housing reform efforts in China. Under the housing commercialization scheme, a small proportion of new housing units are allowed to sell to the individuals at market price, which could raise the share of private housing sector without disturbing the existing housing system. However, such commercialization approach has made limited impacts on the national housing situation, because the majority of urban residents simply cannot afford these commodity housing units. As a result, the housing commercialization scheme does little either to help those who are left out from existing housing distribution system.

To a large extent, both the unequal distribution, and low affordability could be viewed as two main obstacles for solving current Chinese housing problems. Therefore, a new approach is needed to break through the conventional housing system. In this regard, China should learn valuable lessons from the international experience on upgrading. The urban settlement upgrading has been widely used in many developing countries since 1970s, and it is considered as one important measure to deal with urban housing problems in developing countries. Here, low-cost, proper tenure, self-help and effective management become key factors for the success.

Facing the similar constraints, namely a neglected old urban sector and affordability, such low-cost and self-help upgrading process could be considered as an alternative strategy to be applied in urban China. In fact, the physical and institutional organization of existing old neighborhoods, the improving per capita income in urban sector, and more importantly, the changing housing policies, all make such attempt possible. It is based on integrating these positive elements together, that one can create such a new approach which will bring the promise to those who need the most.

In supporting for this new strategy, the arguments are made from three aspects. First, since the household with the worst housing problems are those live in the inner city - old urban area, a successful upgrading program implies a significant progress in solving national housing problems. Second, based on a self-help, low-cost and incremental approach, the new upgrading program could reduce the cost of housing construction, and increase possibility for most urban residents to buy their own housing units. Finally, by integrating a new design approach, a community based housing institution and rearrangement of financial resources, the new upgrading process can significantly facilitate the current urban housing reform in order to transform the existing welfare housing system into a market oriented one.

In terms of organization of the thesis, it is divided into three parts. In the first part, I will give an overview

of the urban housing situation in China, including the existing housing condition and housing provision system. The objective is to identify the main causes of the problems and let reader understand the necessity and urgency of the adoption of new upgrading approach, which, I believe, is critical for solving the current urban housing problem.

The second part of the thesis is to review the international upgrading experience, which has been widely used in many developing countries. What makes these experience valuable to China is that they deal with many similar housing problems, such as affordability, community development, and so on. The theory and practice of self-help upgrading process create an opportunity for poor people not only to improve their living condition, but also to gain experience in management, training, etc. Such positive aspects are what China are currently lacking and should learn from others.

In the third part, based on the analysis of the international upgrading experience, the causes of Chinese housing problems, and the current housing reform policies, an alternative upgrading approach will be developed, which involves a series of changes on the existing housing system, from basic attitude, policies and ways of implementation to design and financial solutions. By overcoming the major constraints, this self-help and low-cost upgrading program could provide an effective relief on the current urban housing problems.

CHAPTER TWO: HOUSING DEVELOPMENT IN CHINA

It is almost impossible to discuss urban housing problems in China without understanding its institutional context, which has developed since 1949. In this chapter, I will give a brief review of the urban housing situation in China, its policy, institution, and problems, in order to provide a basic understanding for further analysis. The Chinese urban housing system (1949-1979) consists of a rigid and centralized housing production system, which is monopolized by the state government; an unequal housing distribution institutional network; and a set of social welfare housing policies. Under such system, the urban housing condition had deteriorated between 1949 and 1979; the housing shortage and housing inequality are among the most serious social issues in urban China today. To respond to such a housing crisis and to look for long-term solution becomes one of main tasks for the different levels of the governments.

2.1. Institutional Context

The uniqueness of the Chinese urban housing system is reflected mainly by two aspects: China's long-standing welfare housing policy, and the centralized housing production and delivery system.

Housing Policy

The principle of the Chinese housing policy was derived

from Marxist definition on housing function, and from the experience of the Soviet housing program. In the early 1950's, the Soviet Union became the only source of reference for planning a new socialist China, the housing policy was just one of them. The basic rationale for a social welfare housing policy is that since housing is part of the basic human needs, it should be considered as a public good instead of private property. As a public good, the government should be responsible for providing equal and sufficient housing for all the people.

It was under such ideology that the Chinese government took various steps in the early "liberation days", to ensure a more equal and affordable housing service for all urban residents. Such steps include (1) eliminating the slums; (2) redistributing those housing units confiscated from large landlords and old government officials to the urban poor; (3) reducing rent in the housing market; and (4) nationalizing existing housing stock. Between 1950 - 1959, the rent of urban housing was reduced by 60 percent; by late 1970s, the average monthly rent was reduced to only 0.12 yuan per square meter, which is only one third of what it was in the 1950s. (Li T., 1985, p.61)¹ During the same period, about one third to more than one half of the private housing stock was

¹. There is a wide range of monthly rent among different cities, from 0.07 yuan in Shenyang to 0.28 yuan in Xian. In addition, the average rent for enterprise owned housing is even lower than that of city owned housing stock. (ibid. p.61)

nationalized. The maximum amount of housing space that could be owned privately was reduced to only 100 to 150 square meters. (Su X., 1987, p.6)

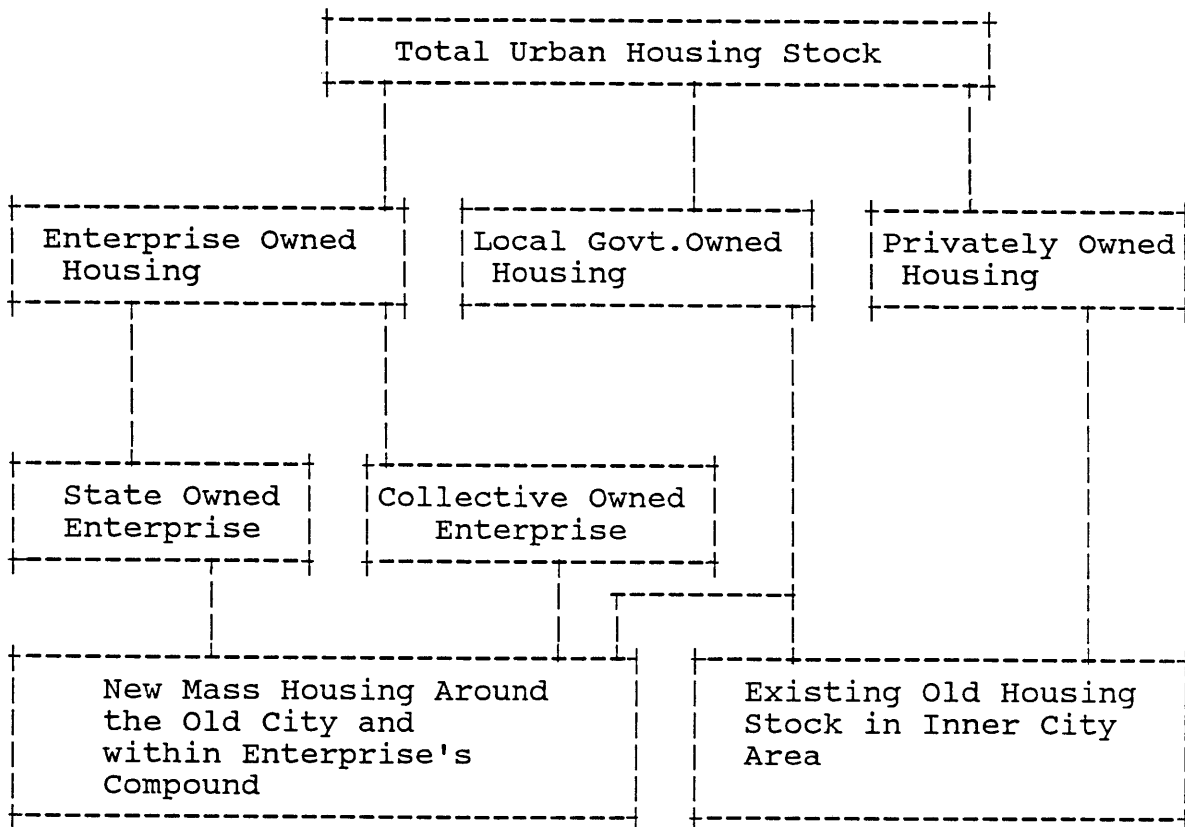
Since then, the low rent public housing became the accepted urban reality in China. Many people and cadres believed that the low rent and public ownership represented the major advantages of the socialist system. Under this policy, individual efforts of housing improvements were discouraged; people relied on the state to provide the housing for them.

The Housing Delivery System

Although, in theory, the government is responsible for construction and allocation of urban housing for all urban residents, only part of urban residents are covered by this urban housing delivery system. Figure-1 shows the distribution of existing housing stock among three different types of ownership; they are (1) enterprise owned (it can be further divided into collective owned and state owned enterprise); (2) local municipal government owned and (3) privately owned. For the past 30 years, the state housing investment almost exclusively went to the state owned enterprises. While the collective enterprises and even municipal government received

very little housing investment from the central government.² Table-1 gives a basic magnitude of such disparity in recent years. As we can see, a person from state owned enterprise could expect to share as much as 5 times of housing investment than his counterpart in collective owned enterprise.

FIGURE-1. HOUSING DISTRIBUTION IN URBAN CHINA



². Due to low rent policy, the city housing management bureau has to be subsidized by the state for the existing housing stock repairs and maintenance, but there is very little additional funding for new housing construction.

As a result of such unequal housing investment allocation, the share of enterprise owned housing (most of them are large state run factories and institutions) has increased from no existence in 1949 to almost 60% of total urban housing stock in 1980s. On the other hand, due to nationalization and hostile policy, private housing ownership dropped significantly, from 50 - 80% in early 1950's to only 17% in 1984; the share of municipal government owned housing was 24% in 1984. (Urban Housing Policy and Reform, 1985, p.361)

TABLE-1. SHARE OF URBAN HOUSING INVESTMENT BETWEEN ENTERPRISES WITH DIFFERENT OWNERSHIP

Type of Enterprise	1983	1984	1985
STATE OWNED ENTERPRISE			
Number of Employees (million)	87.7	86.4	89.9
Housing Investment (million Yuan)	16700.0	16890.0	24850.0
Average (Yuan per employee)	190.5	195.5	276.5
COLLECTIVE OWNED ENTERPRISE			
Number of Employees (million)	27.3	32.1	33.2
Housing Investment (million Yuan)	1100.0	1220.0	1690.0
Average (Yuan per employee)	40.2	38.0	50.9
RATIO (State vs. Collective)	4.7 :1	5.1 :1	5.4:1

Source: Zhongguo Tongji Nianjian, (China's Statistical Yearbook) 1984, 1985, and 1986.

In general, for those who work in small, collective owned or service sector enterprises, the chance of getting housing from their work units is very small. Instead, they have to rely on the City Housing Management Bureau to improve their living conditions. Given the large number of old housing units, low rent and a limited state budget, there is also very little the local government can do to meet the growing housing needs. Therefore, these people have been actually left out from the existing housing delivery system. This is one major factor causing Chinese housing problems.

2.2. Urban Housing Condition in China 1949-79

Low Housing Investment

Agreed by almost all Chinese planners is that the current serious urban housing shortage was directly caused by the lack of proper housing investment in the past 30 years. Table-2 gives an overview of changing housing construction between 1950-1978. As we can see, during these 30 years, the urban housing investment could be best characterized as insufficient and unstable. On average, between 1950-1978, the state urban housing investment was only 5.8 percent of total capital investment. This is very low from the international perspective; for example, the same ratio is 25.9 percent in U.S. (1953-73), 17.9 percent in Japan (1952-74), 18.5 percent

in Soviet Union (1951-75) and 16.4 percent in India (1963-71). (Lin Z., 1986, p.31)

TABLE-2. URBAN HOUSING INVESTMENT AND COMPLETED HOUSING FLOOR AREA IN CHINA: 1950 - 1978

Year	Housing Investment (100 Mil.Yuan)	% of Basic Construction	Completed Housing Floor Area (Mil. Sq. Meters)
1950-52	8.30	10.60	14.02
1953-57	53.79	9.10	94.54
1958-62	49.56	4.10	110.12
1963-65	29.09	6.90	42.71
1966-70	39.32	4.00	54.00
1971-75	100.74	5.70	125.73
1976-78	88.80	6.80	90.00
Total	396.60	5.80	531.72

Source: Lin Zhigun, "Housing Construction in China: A Briefing", City Planning Review, 1987, No.6. p.3.

Insufficient housing investment in the past 30 years made the government's commitment to housing provision impossible to fulfill. As we can see the total housing floor area built between 1950-78 is 532 million square meters. However, during the same period, the increased urban non-agricultural population alone was 70.94 million. (Ma L., 1987, p.388)³

³. The urban non-agricultural population refers to those residing in cities and designated towns with non-agricultural status, which had been used by the Chinese government as the definition of urban population between 1964 to 1982. Since 1982, the total urban population was replaced as the official definition

The distribution of the housing among newly increased urban residents was 7.35 square meters of floor area for every new resident, and only 3.63 square meters of living space per capita. In fact, if we consider other factors, such as the reduction of existing urban housing stock, which is quite substantial due to the poor quality of pre-1949 urban housing stock, increasing size of family, and unequal distribution housing units, such short fall would be even more obvious.

Urban Housing Shortage

As a result of these factors, it is not surprising to see a large scale urban housing shortage develop by the late 70's. By 1978, when the Cultural Revolution and ultra-leftist policies were officially ended, the number of households with housing problems had already reached to 9.38 million, which was over 50 percent of total urban households.(Table-3)⁴ The urban housing problem was characterized by both insufficient living space and poor deteriorated physical condition. Space

of urban population. For the purpose of this paper, I will use urban non-agricultural population in measuring urban housing conditions, because they are the only ones who are entitled to government subsidized housing. In fact, the recent 1985 national housing survey used the same definition.

⁴. Here, the figure does not include households in designated towns, which is also officially recognized as the urban sector. The reason is that most housing efforts in the past 30 years had been concentrated in cities, and the housing problem is much more serious in cities than in towns. In 1985, of the total 10.54 million households without sufficient living space, only 28.39 percent were from designated towns.(Feng Jun and Zhen Jierong, 1987, p.42)

TABLE-3. NUMBER OF HOUSEHOLDS WITH HOUSING PROBLEMS
IN CITIES OF CHINA: 1978 - 1985 (MILLION)

YEAR	TOTAL NUMBER H.H. IN CITY	H.H. WITH HOUSING PROBLEM	% H.H. WITH HOUSING PROBLEM	H.H. WITH INSUFFI HOUSG a	H.H. LIVIN OBSOLES HOUSG b
1978	18.29	9.38	51.3%	8.69	0.69
1979	20.40	8.20	40.2%	7.62	0.58
1980	21.60	8.51	39.4%	7.89	0.62
1981	22.33	8.33	37.3%	7.75	0.58
1982	22.36	8.14	36.4%	7.49	0.65
1983	25.14	8.02	31.9%	7.32	0.70
1984	26.50	7.71	29.1%	7.04	0.67
1985c	26.19	8.29	31.6%	7.54	0.75

Note: (a) The households without sufficient living space could be further divided into three categories: no housing households, crowded households and inconvenient households. According to SSB definition, no housing household refers to those who are still on the waiting list; crowded household means the per capital living space is below 4 square meters; and an inconvenient household refers to those with couples sharing a with adult children, or different sex children above 13 sharing one room.

(b) The households living in obsolete housing refers to housing with dangerous structure or with deteriorated conditions, which should be removed or reconstructed immediately.

(c) 1985's figures are from the National Housing Survey, in which number of households in obsolete housing is an estimation. The rest of the figures come from Ministry of Construction statistics.

Source: "The Status Quo and Future Urban Housing in China Analysis of First National Survey of Urban Building in 1985", 1988, p.13. The paper was from "the International Workshop on Urban Housing Problem" Shenzhen, China, Oct.7-10,1987, sponsored by MURCEP and IPA.

shortage is the major cause of current urban housing problem. For example in 1978, about 90 percent of urban households with housing difficulties had problems caused by the lack of even minimal space for their basic daily activities.

Such a serious urban housing shortage was not limited to any particular regions, instead, it was occurring in all cities across the country. In general, the urban housing shortage was much more serious in large cities than in small ones. For example in 1985, more than 40 percent of households in cities with more than one million people are without sufficient living space, compared to only 20 percent of those in cities less than 100 thousand. (Ibid., p.11) In addition, the per capita living space, another important measure of living conditions in china, also dropped significantly in the past 30 years, from 4.5 square meters in 1952 to only 3.6 square meters in 1978, a reduction of 20%. (Lin Z., 1986, p.34)

Poor Housing Quality

Another aspect of the existing housing problem is measured by the deteriorated housing quality. Since mid-50s, the government adopted a low rent policy; the rent of public housing stock was reduced by 50-70%. By the late 70s, the average monthly rent of urban housing was only 0.12 yuan per square meter, which is only one fifth of the maintenance, management, and repair cost (Cai D. and Liang P., 1987, p.16) As a result, the operational cost of existing housing stock

had to be subsidized by the state. Given limited and unstable state funding, the majority of urban housing stock was under-maintained. The urban housing quality, particularly the housing stock built prior to 1949, had deteriorated rapidly. It is estimated that as much as 50 percent of urban housing stock can be categorized as in a dilapidated situation -- needing immediate repairs or complete reconstruction.

(Ibid., p.20) In Beijing and Wuhan, less than 20 percent of urban housing stock met the national housing standard; about 7 to 8 percent are identified as dangerous structures, which should be torn down and rebuilt immediately.

TABLE-4. PHYSICAL CONDITIONS OF HOUSING IN BEIJING AND WUHAN

Physical Conditions	% of Total Stock	
	Wuhan (a)	Beijing (b)
Good	13.67%	16.40%
Fair	46.00%	19.70%
Dilapidated	30.21%	56.80%
Dangerous	8.77%	7.10%
temporary	1.01%	--

Note: The total housing stock refers to those directly managed by the municipal governments.

Source: (a) He Gongjian, "The Current Residential Housing Situation and Tentative Ideas for Resolving Problems" Jiangnan Luntan, No.6 (1980), p.14.

(b) Cai, Derong and Liang, Ping, "Rationalize the Consumption Pattern of Urban Residents", research Paper, Xiangtan University, 1987, pp.19-20.

The poor quality of urban housing stock was also reflected in the lack of basic sanitary facilities. This situation becomes known only after 1985's national survey. Table-5 illustrates the situation of basic housing facilities, such as running water, toilet, kitchen, etc. among urban households. As we can see, a large number of households have no private kitchen, running water tap and toilet. The gas and bath facilities are only enjoyed by a small minority. By 1985, only 24 percent of urban households were living in standardized self-contained units, which makes up about 26.04 percent of total urban housing stock. (Feng J. and Zhen J., 1987, p.43)⁵

TABLE-5. PERCENT OF URBAN HOUSEHOLDS IN SANITARY FACILITIES:
1985 (in %)

Types of Facilities	Private	Share	Public or None(a)
Kitchen	62.6	6.5	30.9
Toilet	24.2	9.9	65.9
Tap Water	57.4	15.8	26.8
Bath	6.2		
Gas	8.4		
Self-Contained Unit(b)	24.2		

Note: a. Public means that facility is shared by part of neighborhood community and mainly refers to tap water and toilet. For kitchen it means none.

⁵. According to Chinese definition, a self-contained unit includes bedroom, private kitchen, bathroom and tapped water.

- b. A self-contained unit refers to an apartment unit with kitchen, bath (toilet), tap water, and being occupied by only one household.

Source: Feng Jun and Zhen Jirong, "The Analysis and Projection of Urban Housing Situation", Real Estate Economy, 1987, No.3, p.42.

2.3. Urban Housing Reform: 1979 - 1987

Increasing Investment

Since 1978, with the economic reform and shifting political priority, the urban housing issue finally has become important on the national agenda, and a great deal of effort has been made by the Chinese government in order to alleviate the serious urban housing shortage. However, most of these efforts have been limited at increasing overall urban housing investment, instead of making more radical changes of current urban housing system, which, I believe, is the main factor causing today's urban housing problem.⁶ Since 1978, with realization of the seriousness of the housing shortage, the state government has significantly raised the state housing investment. Between 1979-1986, annual housing investment from the state basic capital construction has reached 138.3 million yuan, which is more than ten times that between 1950-1978. And

⁶. The sudden surge of urban housing investment is part of a short-term relief approach initiated by the Chinese government to deal with this rather long-term complicated problem, which also reflects the lack of understanding the nature of urban housing problems at that time.

the share of housing investment as part of total basic capital construction has risen from only 5.8 percent to over 20 percent in the 1980's.(Table-6)

In addition, housing investment from individual enterprises and even private individuals is also allowed and encouraged.⁷ In an decree adopted by State Council in September 1978, the enterprises are given more decision making power in terms of using certain enterprise internal funds, such as technology transformation fund, social welfare fund, etc. for housing construction. (Urban Housing Policy and Reform, 1985, p.55) As a result of current urban housing investment, a fairly large proportion comes from enterprise's internal funding. For example, in Beijing, of total 500 million yuan housing investment in 1982, 395 million yuan was from enterprise's own resources. (Zhang L., 1984, p.172) In Shijiazhuang among eight major industrial sectors, 73.6 percent of housing investment was from enterprises' internal funding (1979-82). (Shijiazhuang Urban Construction Development Company. 1984, p.178) The increasing importance of enterprise's role in urban housing construction also reflects the increasing share of collective enterprise's housing investment, and increasing housing investment from the

⁷. Private housing construction refers to those self-built housing activities, which mainly happens in small cities or designated towns. The policy toward self-built housing activities was relaxed much earlier than that of selling public housing to private individuals.

technology transformation fund.(see Table-6)

TABLE-6. URBAN HOUSING INVESTMENT IN CHINA: 1979-1986
(100 Million Yuan)

Year	total	From Basic Const	% of Basic Const	From Tech. Transf.	From Collect. Enterp.	From Private Individ.
1979	78.3	77.3	14.8	--	--	1.5
1980	127.3	111.7	20.0	8.4	3.3	4.0
1981	145.1	111.2	25.1	20.4	6.0	7.5
1982	187.7	141.1	25.4	28.8	9.2	8.6
1983	188.0	125.1	21.1	41.9	11.0	10.0
1984	195.9	135.8	18.3	34.3	12.2	13.6
1985	290.9	215.2	20.0	33.3	16.9	25.5
1986	291.1	189.4	16.3	53.5	18.8	29.4
1987	n.a.	181.2	13.5	n.a.	n.a.	n.a.
Total	1504.3	1288.0	19.4	220.6	77.4	100.1
1950 - 1978	369.2	369.2	5.8	--	--	--

Source : Lin Zhiqun, "Housing Construction in China: A Briefing", City Planning Review, 1987, No.6. p.3.

Overall, the increase of housing investment is quite impressive. Of the total housing investment between 1950-86, 77 percent of investment was made after 1979. If the rural housing investment in recent years is included, the annual national housing investment is over 7 percent of GDP, which is considered quite high even when compared to international

standards. (China's Statistic Year Book 1988, p.559).

In spite of these increasing housing investment which has raised the aggregate national urban living standard by 70 percent, from 3.6 square meters per person to 6.1 square meters per person in 1985, the number of households with insufficient living space has been decreased only moderately. In 1985, there were still 7.54 million urban households with insufficient living space (10.54 million, including designated towns). And there are about 21 percent of urban households with per capita living space still below 4 square meters. (Feng J. and Zhen J., 1987, p.42)

Housing Commercialization

It becomes clear to Chinese planners that more than just increasing government investment is needed to resolve the current urban housing problems in China. In fact, since the 1980's, there have been intensive housing reform discussions. During the debate, many Chinese planners have pointed out welfare housing system as a major cause behind the current housing problem. They argued that since the socialist economy is still characterized as commodity economy, the housing product should be treated as other consumer commodities instead of as welfare service. The urban residents' housing needs should be satisfied through commodity exchange instead of being allocated administratively. Therefore, the current low rent should be adjusted upwards to reflect the true

investment cost, and sale of housing to individuals, as well as private housing ownership should be allowed. (Wang Y., 1984, p.69)

One major assumption behind these housing commercialization proposals is to attract individual financial resources which could help to increase overall housing construction without overburdening the state financial capacity. However, while these proposals are appealing in their outcomes, the implementation of these ideas is not very easy. With the majority of the urban population living in public housing, to raise rent would mean a reduction of living standards for almost all urban households. On the other hand, if low wage system is adjusted along with the rising rent, a more complicated adjustment on the current wage system is required.

While rental reform is still in the conceptual stage, the experiment of sale of public housing units to individuals was underway. Between 1979-81, there were 112,300 square meters of housing or 1,783 apartment units sold to individuals, which is about 0.05 percent of the newly completed housing floor area during the same period. (Housing Operation and Management, 1986, p.51) Such experiments were well received by the state government, since from the sale of housing units, not only could the government recover a portion of the housing investment, but also, it has little impact on those who are living in rented public housing units.

In 1982, the State Council designated four cities: Changzhou, Shashi, Zhenzhou and Shiping, to formally carry out a pilot housing commercialization scheme. Under this scheme, a certain portion of new housing units, either built by local governments or by individual enterprises, are set aside for sale. The construction materials and infrastructure were given certain priority. Between 1982-83, 2,140 housing units were sold in these four cities, about 114,500 square meters. From a total 16.4 million yuan housing investment, about 5.47 million yuan was recovered. (Urban Housing Policy and Reform, 1985, p.105) As we can see, the experimental housing sales did not reflect the full investment cost. In fact, the individual who bought the unit, is only required to pay one-third of total investment cost. The other two-thirds of cost are subsidized by either state or responsible enterprises.

However, even with such a subsidy, the state could still get part of their housing investment back, which seems to be better than current welfare housing production with no return at all. In 1984, such housing commercialization schemes expanded to the whole country. That same year, about 110 cities and 200 counties participated in selling housing to individuals. (People's Daily, April 27, 1985) A year later, the number of cities and counties increased to 160 cities and 300 counties. (Su Xing, 1987. p.74) The total floor area sold has also increased rapidly in past few years. For example in 1984, there were 1.1 million square meters sold; in 1985, 2.5

million square meters of housing sold; by 1986, it reached to 4.8 million square meters of housing sold. (People's Daily, Oct. 7, 1987) In spite of rapid increase of sold housing floor area, the commodity housing is still only a fraction of total completed housing stock. For example, in 1986, commodity housing was only 3 percent of total completed housing floor area. (People's Daily, Oct. 7, 1987) As a result, the impact of commercialization on overall housing construction is still very limited.

The Cause of the Problems

The problems in recent housing development are basically two: unchanged distribution system; and the under-developed housing market. The reason is because that both the increase of housing investment and the experiment of housing sales were still operated within the existing work unit system. In other words, the existing housing distribution system is still playing important role in the current housing efforts. Since there is a great disparity among different work units to obtain state housing fund, the rapid increase in state housing investment does not necessarily go to the people who need it most. Instead, most of it is concentrated in larger state owned enterprises, whose housing situation is already better off than others.

Taking Beijing for example, due to large investment in

1980's, the per capita living space had increased from 4.55 square meters in 1978 to 6.67 square meters of 1985. (Shi H., 1984, p.104) However, such improvements was not evenly felt between different work units - particularly between those belong to the state government, and those of local government. For example, in 1983, each state government employee in Beijing received 1,880 yuan of housing investment, while each local level work unit employee received only 490 yuan. The average per capita living space for a state employee was 8.29 square meters; for a municipal level employee it was only 5.54 square meters; and for a district level employee, only 3.45 square meters. (Zhang L., 1984, p.75) Such increasing inequality is one major factor behind the persisting housing problems in Beijing. By 1985, there were still as many as 30.7 percent of households who were lacking sufficient living space, among which 1.7% had no housing at all; and 15.8% had per capita living space below 4 square meters. (Research and Investigation on Reforming Housing System of Beijing, 1987, pp.177-178)

However, the recent housing commercialization also did little to reduce such inequality. The existing urban housing system almost guarantees the failure of commodity housing approach. For example, given the current low rent system, no one would like to buy their housing units (even with heavy subsidy), if he is going to be assigned a low rent housing unit. As a result, the only people who bought housing units

are those who could not get housing from their enterprises or other allocation channels. In Shiping, among total buyers, 36.8 percent were less than thirty years old, and 50 percent were ordinary workers. (Li Z., 1984, p.25) At the bottom of the wage system, these young workers have relatively low incomes. In 1982, in Changzhou, about 56 percent of buyers had monthly incomes below 50 yuan per month. (Guo W. and Wang W., 1984, p.42) In Shiping, 74.9 percent of buyers had monthly income less than 35 yuan. (Li Z., 1984, p.24) The national average for that same year was 44 yuan per month. (China's Statistical Yearbook, 1988, p.493) As we can see, housing sales not only didn't solve the urban housing shortage problem, but also reinforced the disparity between two urban populations: those who enjoy the low rent housing by right and those who have to pay for the same housing units.

Even for those who would like to pay for their long awaited housing units, the current skyrocketing price of commodity housing has effectively prevented them from doing so. In 1987-88, the price of commodity housing has reached more than 2,000 yuan per square meter in Beijing, and 1,600 yuan in Shanghai, which puts the commodity housing out of reach of most urban residents. Low affordability is one of key reasons for the limited impacts of the ongoing housing commercialization scheme.

2.4. Key Problem Area - Urban Old Neighborhood

Through the analysis, we have seen that while unequal distribution system is a continuous cause of the housing problems in China, the housing commercialization approach brings forth a new obstacle - low affordability. The direct consequences of these two constraints is the prolonged the urban housing problems in China. Increasing evidence indicates that, to a large extent, the housing problems in terms of serious shortage and poor living conditions are concentrated in many old city neighborhoods. For those who are living in these old neighborhoods, not only their per capita living space is much lower than the average due to the high percentage of households with housing difficulties, but also they have to suffer much worse living conditions, such as deteriorated structures, poor facilities, and unhealthy environment, than those who living in the new housing districts. It becomes clear that to develop an effective upgrading program holds a key for the solution of current housing problems in China.

In order to provide some insights on this respect, I will use Beijing as an example to illustrate the distribution of housing spaces across different sectors of city population as well as different city locations. From such analysis, it is convinced that to improve the housing condition in old urban neighborhood could provide effective relief on the housing

problems in China.

Beijing, as a nation's capital, like other cities, has undergone a great deal of change in the past 40 years. Along with setting up a large number of factories and institutions, the population within the city proper has more than doubled in the past 30 years, from 2.8 million in 1953 to about 5.9 million in 1985. And its built area has also expanded by 3.34 times, from only 109 square kilometers in 1949 to over 370 square kilometers in 1983. (Yu X., 1986, p.9) Most of new development occurred at outskirts, only a small portion in the old inner city, where most old courtyard housing still remained.

Despite years effort made by the government to improve the housing, little impact has been made in terms of renovating old housing districts within the inner city of Beijing. On the other hand, since most of large government institutions, universities, and factories are located in suburbs of Beijing, with staff housing built within their compound, the living condition is much higher in the suburban districts than that of inner city. From Table-7, we can see there is high correlation between the old housing stock and the poor living conditions.⁸ In Beijing today, about 80% of the old housing stock (14 million square meters) is in four

⁸. In fact, for the same reason, such high concentration of households with housing problems in the old neighborhoods is quite common in Chinese cities.

old city districts - Dongcheng, Xicheng, Xuanwu and Chongwen. Of this 11.04 million square meters housing stock in the old city area, about 9 million square meters was built prior to 1949; and 300,000 square meters have been designated as dangerous structures. More than 40% of city's population (2.32 million or 660,000 households) live in these four districts; and 33.2% households have housing problems. (Yang, Y., 1984, p.134)

TABLE-7. COMPARATIVE LIVING CONDITIONS IN BEIJING: 1985

Items	City	Suburban	Total
No. Household (HH)	510	490	1000
No. Persons per HH	3.6	3.8	3.7
Living Space M ² /person	6.4	6.8	6.7
Useful Space M ² /person	7.5	8.9	8.2
Self-Add Space M ² /person	0.6	0.9	0.6
No. Rooms per Household	2.0	2.2	2.1
% HH with Housing Problem	33.2%	26.1%	30.7%
% HH without Housing	2.2%	1.0%	1.7%
% HH liv. Spac. cap <4 M ²	19.4%	14.0%	15.8%
% HH in pre-50s Housi	41.0%	6.7%	24.1%
% HH in One Story Hous	67.0%	41.5%	54.2%
% HH in Multi Story Hou	30.9%	56.9%	44.1%
% HH with Private Toilet	37.8%	63.6%	37.0%
% HH with Heating System	21.6%	53.6%	37.3%
% HH with Private Tap Water	36.6%	66.3%	51.2%
% HH with Private Kitchen	39.6%	72.5%	48.3%

Note: The figures are based on the sample survey of 1,000 household in Beijing, 1985.

Source: Research Institute of Beijing People's Government and Beijing Housing Reform Research Team, Beijing Housing System Reform: Investigation and Research, 1987, P.173-187.

The quality of living conditions in the old city is also poor. If we use the district's share of pre-1949 housing stock, and the number of private sanitary and cooking facilities as basic indicators to measure the living quality, the disparity between old city districts and new suburban districts are even greater. (Table-7)

The inner city was formed by traditional courtyard housing. The type originally developed to accommodate one family living activities and to create an environment reflecting a hierarchical family relationship as well as private out-door amenities. (figure-2)

Nowadays, for the majority of inner city household, the enjoyment of courtyard environment no longer exists. One courtyard is usually crowded by four or five families or even more. The lack of basic living space led to many low quality illegal shelters built in the courtyard with whatever materials they could get. As a result, the courtyard became narrow pathway; many rooms are blocked from the light; children have to play on the street; and some families even have to work or sleep in shifts. The living environment in some courtyard housing are almost like slums. (figure-3)

The inner city residents are basically those who have no access to the public housing. The correlation of old housing stock and poor living conditions is further illustrated through different ownership and different occupational status.

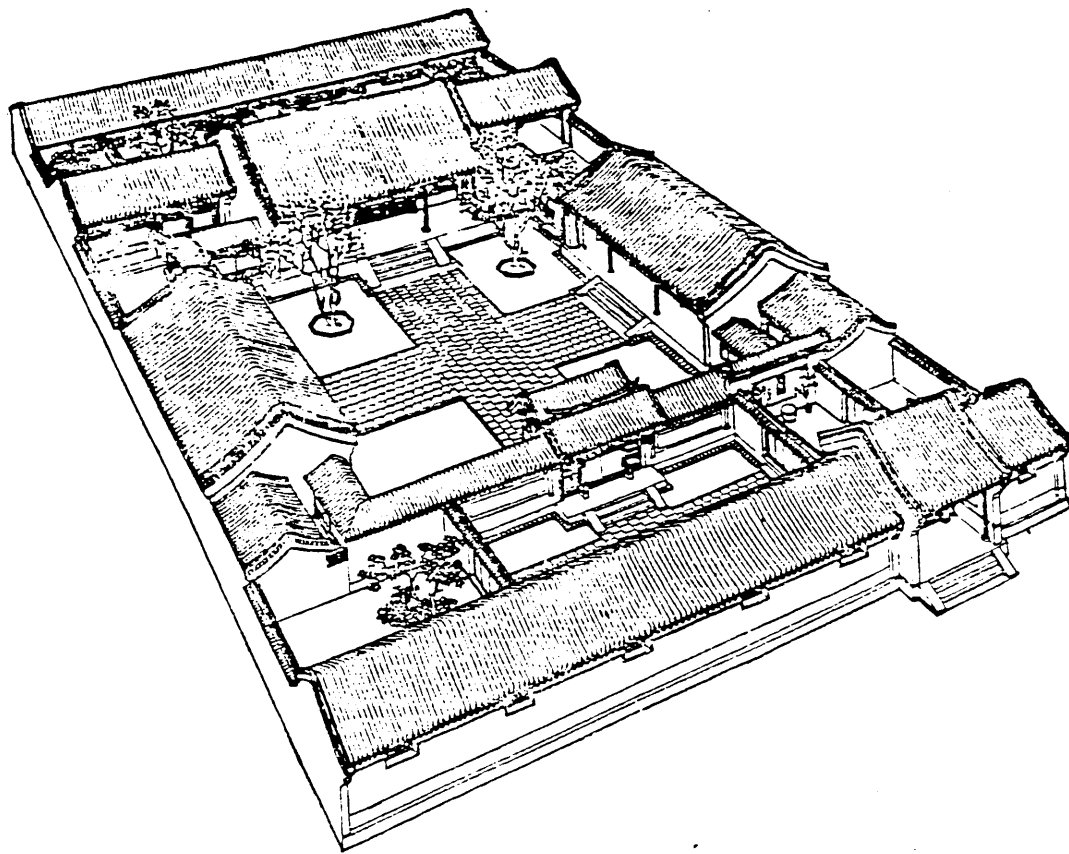
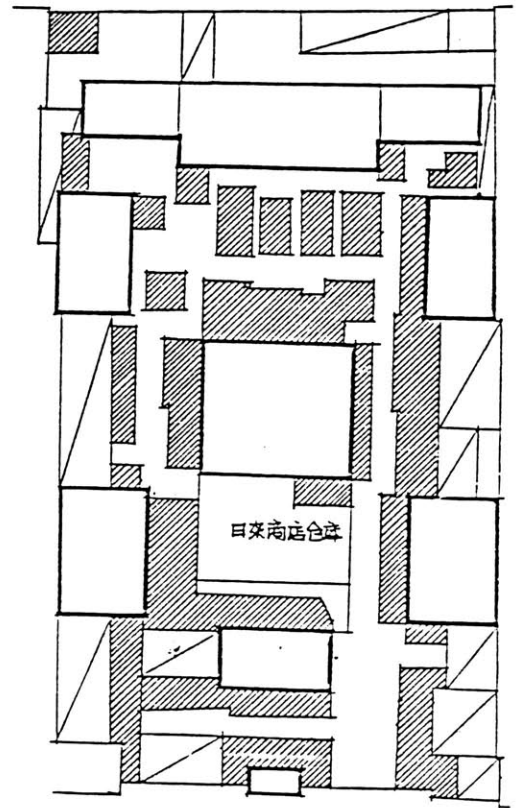


Fig.2. A Typical Courtyard House in Beijing

Source: Liu, D. *History of Architecture in Ancient China*,
1980, p.316



A View in the Courtyard



Floor Plan




-  Old Housing
-  New Housing
-  Illegal Structure

Fig.3. The Current Overcrowded Courtyard Housing

Source: Song, Xiaoguang, *A Research of Preservation and Renovation of Beijing Old City District*, 1988, p.37.

For example, about 60% of the households of elementary and high school teachers, nurses, as well as service workers are without sanitary and cooking facilities, compared to only 20% in other social groups (Table-8). For those living in public and private housing, the number living in pre-1949 houses, one-story houses, and houses without private toilet, kitchen and heating facilities is about three times higher than the number of those who live in state enterprises owned housing units. (Table-9)

TABLE-8. HOUSING CONDITION BY THE OWNERSHIP IN BEIJING: 1985

OWNED BY	% HH live in	% HH pre-50 houses	% HH 1-story houses	% HH no toilet	% HH no kitchen	% HH no heating
Private	15.0%		100.0%	77.7%	72.8%	93.9%
State Run Enterprise	27.4%	11.1%	11.1%	20.0%	18.5%	26.3%
City Run Enterprise	27.5%	9.6%	41.7%			
City Housing Bureau	26.6%	37.2%	77.5%	77.7%	72.8%	93.9%
Average		24.1%	54.2%	49.5%	44.3%	62.7%

Source: Research Institute of Beijing People's Government and Beijing Housing Reform Research Team, Beijing Housing System Reform: Investigation and Research, 1987, P.173-187.

TABLE-9. OCCUPATIONAL DIFFERENCE IN LIVING CONDITION: 1985

Employment	Per Cap. Living Space (M ²)	% HH with Housg Prob.	% HH Per Cap. Space > 8M ²	% HH with no Facilit	% HH live in pre-1949 House
Teachers	5.96	39.4%	18.2%	76.8%	39.4%
Nurses	5.28	40.0%	20.0%	58.7%	
Workers	5.98	39.2%	19.9%	64.6%	26.1%
Service Jobs	6.24	37.8%	28.9%	62.0%	27.3%
U. Professors	7.39	33.3%	55.6%	22.2%	11.1%
M. Doctors	7.48	16.0%	41.7%	26.5%	8.3%
Researchers	7.55	14.3%	35.7%	16.2%	7.1%
Cadres	7.08	n.a.	30.6%	n.a.	15.0%
Average	6.67	30.7%	26.6%	n.a.	24.1

Source: Research Institute of Beijing People's Government and Beijing Housing Reform Research Team, Beijing Housing System Reform: Investigation and Research, 1987, P.173-187.

All above facts indicate that the existing housing institutions have prevented the housing improvement to reach those who need it most. Since most of the households who have housing problems live in the old neighborhoods, it is therefore, very important to seek new ways to overcome the current institutional and financial barriers, in order to have genuine upgrading improvements in these old neighborhoods.

Summary

According to above analysis, I may conclude that the key point to solve the housing problem is to improve the living condition for the inner city neighborhood which accommodates a large number of households with housing problems. Since the situation happens not only in Beijing, but also in many other large cities, there is a high replicability. To properly provide adequate space or services through upgrading the old area can undoubtedly alleviate the government's burden to construct a large amount of new public housing. This is specially significant when the Chinese government begins to cut its budget for the housing construction and seeking the alternative resources for housing.

Without adequate fund from public sector, the encouragement of the private sector would be an unavoidable approach, even may not be the only one. This attitude has been proved in many developed and less developed countries both theoretically and practically. The experience of upgrading squatter and slums in some developing countries are very valuable for China to solve two basic problems: one is to overcome the existing system barrier and provide an opportunity for the disadvantaged group who has no access to public housing; another is to help search a way towards low-cost housing.

Before discussing how China should adopt the new

approach, a brief review of international low-income housing programs, especially settlement upgrading, will be addressed. The comparison between various international contexts will help to understand the similarities and differences of how the new programme was or will be designed and conducted. It will also be interesting to identify housing issues in various kinds of political, cultural, and economic background.

CHAPTER THREE: REVIEW OF THE INTERNATIONAL UPGRADING STRATEGY

Since the 1970's, two practical ideas for reducing urban housing problems in the developing world have emerged and have been widely adopted: Sites and Services and Settlement Upgrading. As of 1984, the projects that had adapted these two approaches were spread over 30 developing countries, and currently they are still being carried out in many countries.

Why are these ideas becoming so popular in the developing world with different types of governments? What benefit do they intend to bring to whom? What were the problems they were attempted to solve? What are the characteristics and components of these two strategies? To understand the concept and practice of this movement is useful to answer above questions and touch upon important aspects, such as the historic context, motivations, objectives, procedures as well as actual influences and problems. Since the culture context and political background of China differs greatly from those of the other developing countries, the introduction concerning context is especially necessary. An evaluation will also be made to identify the successful experiences worth learning and failures to be avoided.

3.1 Origins and Objectives

The historic context that produced an environment which adopted the strategies of sites and services and squatter upgrading were essentially following factors:

1. Housing Demand of Expanding Urban Population

Since the 1950's, the overwhelming growth of the third world urban population have risen steadily. It was rural migration that triggered this enormous expansion. A World Bank study has projected that the number of cities with populations over a million will increase from 90 in 1975 to about 300 by the year 2000. (Payne G., 1984, p.1) This growing population is predominantly poor, and the majority of people have no access to pre-built and officially approved dwellings. Thus the squatter settlement has become the only way for the urban poor to accommodate themselves while are trying to survive in the city.

2. The Failure of the Public Housing Programmes

The universal response of governments in developing countries to this rapid urban growth was to construct public housing estates on cheap peripheral land. While dwellings in these projects conformed to high standards of construction and service provision, they were far too expensive for the household intended and required such heavy subsidies that they were unable to meet more than a nominal proportion of total housing demand. According to calculations, even restricting

subsidies to the lowest half of the income distribution, it is still too high an expectation for the government to reach the poor. For instance, to provide a 30 square meter finished unit for every family below the median income, would use up 25-50% GNP in many countries, even if only applying such a program in the large urban areas, it would still require 10-20% of GNP, while currently most countries can spent only 3-6% of GNP for all forms of shelters. (Wheaton W., 1982, p.12)

3. The Expansion of Squatter Settlements

The inevitable outcome of this mismatch in demand and supply was the growth of squatter settlements and increased densities in existing low-income area. By 1970, squatter settlements accommodated 46% of the urban population in Mexico City, 60% in Ankara, 35% in Calcutta and as much as 90% in Addis Ababa. (Payne G., 1984 p.2) Furthermore, such areas were growing at a much faster rate than the formally planned parts of the city.

The squatter settlements became a urban problem not only because of land invasion, (while it may not be the critical issue on public land, but the squatting on private land caused conflicts among different group of the urban residents.) but also because of some other social problems, such as frequent epidemics resulting from the lack of the hygienic facilities and basic services, the low level of education, etc.

4. Revaluation Of Squatter Settlements

The effort to clear the slums and relocate the squatters

was largely unsuccessful. It only squandered scarce resources, and the poor simply moved to another part of the city. Some governments and academic groups started to rethink the attitudes toward the squatter settlements.

Although the government often viewed the housing problem from a rather highly political orientation, the wishes to shelter the urban poor with very limited financial resources led them to seek an alternative approach. They realized that a more appropriate course of action was to spread tight resources more widely, and provide serviced plots in which mutual self-help could be used to build individual houses. They began to face up to the existence of the squatters and supported the individual low-income settlement.

Meanwhile, a group of committed professionals set up the conceptual foundation to coalesce the spontaneous settling activities into an organized housing provision strategy. Observers such as Abrams, Turner, and Martin started to question the long-standing negative official view of slums by demonstrating how people actively strived to obtain their own housing without external assistance. Among these scholars, John. F.C. Turner is one of the best known pioneers in this field. It was his paper at a 1966 United Nations seminar on Uncontrolled Urban Settlements that was most influential in setting the governmental site-and-services housing programs. (Ibid.) He observed the international phenomenon of the slums and squatter settlements and revalued them as a part

of a human asset of self-sustaining behavior. As Colin Ward concluded in the preface of Turner's book Housing By People, Turner's principle about the low-income housing is basically three points: (Turner, J., 1977, p.XXXII)

First, "When dwellers control the major decisions and are free to make their own contribution to the design, construction, or management of their housing, both the process and the environment produced stimulate individual and social well-being."

Second, "the important thing about housing is that dwellers' satisfaction is not necessarily related to the imposition of standards."

Third, "deficiencies and imperfections in people's housing are infinitely more tolerable if they are their own responsibility than if it is somebody else's."

To clarify this theory and simplify it in terms of practical value, Turner was saying that people were the best judge of what they need. They are capable to improve their living environment all the time if they have sense that what they work on will eventually become their own property. The only external help should come from government guarantee of providing inexpensive land, security of tenure, and basic services.

The enormous growth of squatter settlements and poor people's active development of their own house, as well as the new philosophy towards low-income housing, are factors that

influenced international aid agencies, mainly the World Bank and other American and European lenders. The UN agencies and other aid agencies then initiated and reviewed the special studies on the contribution of the poor people for building themselves shelters, and affirmed positive effects of health improvement and legal security resulted from upgrading programmes.

In 1972, the World Bank granted its first loan to a sites and service project, and in 1974 extended its operations to upgrading with loans for projects in Calcutta, Manila, etc. Up to 1983, The World Bank has provided loans for 50 urban shelter projects in 36 countries in major developing areas through out the world. The World Bank alone financed 45% of the total costs of those shelter projects, of which, 33% was for sites and services, and 27% was for upgrading. An average of 25,000 households benefited per project between 1972-81. For the year 1981-82, that number had grown to 62,000. About 60% of all costs in shelter projects directly benefited the poverty group. (Williams D., 1984, p.178)

The most apparent objective for both sites and services and settlement upgrading projects is to reduce housing costs and stimulate the self-finance system. A UN seminar held in 1970 identified the objectives of settlement upgrading as "incorporating the initiative, organizational ability for work of the poor population in the urban community and achieving the greatest social benefit with the limited resources

available." More detailed objectives are as follows:

- "a) reducing health risks resulting from inadequate provision of clear water and sewerage:
- b) winning political support for increasingly active slum or squatter communities;
- c) extending control over officially unplanned areas;
- d) assisting households too poor even to afford a dwelling in a sites and services project, most of whom represent the lowest 10% of a city's population."(Payne G., 1984, p.2)

In order to achieve the above objectives in actual implementation, the upgrading projects typically need to deal with following aspects:

- 1). Building Institutional Capacity

The role of the public sector in upgrading projects has fundamental differences from that of conventional public housing programs. As a fully responsible deliverer of finished housing, the government performed as an organizer and planner of the building activities and as an assistance with financial, technical, and managerial aspects, such as the construction of the infrastructure, the arrangement of land acquisition and tenure recognition, the allocation of the limited funds, etc. In this sense it was important to define the appropriate responsibilities at central, city, and community levels in order to avoid over-centralized operations and to maintain flexibility and initiative at the lower lever. In addition, in some countries, new government agencies were

established towards more efficient implementation when there was weak management capacity in the existing government organization. Usually the agencies resisted any reduction in their budgets and required more conventional way in technical standards and skills which the upgrading projects could not afford. For instance, the Lusaka project in Zambia has established a new Housing Project Unit attached to the Lusaka City Council. The unit's staff and function were reabsorbed into the city council after the completion of the project. This approach has generally achieved better results than the one that uses existing institutions. (Cohen M., Learning By Doing, 1983)

2). Financial Resources and Cost-recovery

This includes confirming the resources of the project fund, setting up a cash flow channel, determining the type and form of mortgage, estimating the project cost, analyzing the cost recovery methods, subsidies range and cross-subsidies management.

First of all, although the upgrading projects were based on self-help, governments in the developing countries still needed some initial fund to begin the program, and pay for the administrative work. Moreover, the provision of services to the squatter settlements was designed to be constructed by the public sector at the project stage, and charged to the occupants later when the project finished. As it has been

mentioned, the governments rarely have enough funding to process the program, the international aid agencies become the only available resources they can turn to. The crucial point is that no money was released as a gift, thus, affordability and cost recovery become the substantial issues needed to be considered when the projects are designed by the government and were reviewed by the international aid agencies.

Since the target population is generally defined as those in absolutely or relative poverty, which is frequently 50-70% of the city income distribution, some people can not even pay for the basic improvements. The program has to design a financial package to assist people to start and to get the cost recovered. This package often includes lowering the interest rate of mortgages; lengthening the maturities; using graduated payments; increasing the equity base through various subsidies and cross-subsidies created from public land and land management strategy; reducing the cost of the house and services by lowering the standards; and, using the shadow price of the labor.

3). Land Acquisition and Security Of Tenure

The encouragement for poor occupants to invest in their own housing as well as the later maintenance must be accompanied by the guarantee that they obtain their land or legalize the tenure of the residence. For public land, there are usually not many problems in doing this. The question

remains how to establish a land taxation system in order to finance the provision of services; and how to manage the land while introducing different types of economic development factors to generate income and savings in personal or community accounts. For private land, there are some troubles in land acquisition. Examples of how to deal with these problems are: ignoring the tenure issue and providing infrastructure to the squatting areas without touching the ownership of the land as what happened in Indonesia; and, approaching a land sharing strategy, by which increased land value with service provisions, as a tradeoff to transfer some private land into public.

4). Encouraging People's Participation

One major principal of upgrading projects is the participation of the occupants. This concept, however, has advanced from the initial spontaneous definition of self-help. Many designed upgrading projects started at the point where the user themselves were not able to continue. The external agencies participate in the local programs to provide the services with limited funds. Besides, the process of squatter legalization and land taxation also require an organized and integrated residential cooperation with public sectors. Therefore, non-governmental organizations and various types of community groups emerged to play a role in management and implementation. They have had vast impact not only on the

construction of housing, but also on the provision of utility services, the capacity to pay back, and post-project maintenance. For instance, in El Salvador, the mutual-help construction eliminated the requirement for a 10% down payment which is often a barrier to participation of many poor household. (Bamberger M., 1982, p.105) Self-help or community organization also help in skill training and cost-recovery, these too were proved in the El Salvador project.

5). Stressing the Provision Of Infrastructure and Services

The provision of services is the important factor to stimulate people's investment in their housing and it is also the objective to diminish the most concerning slum problem: health risks. The basic provision of services includes supply of drinking water, drainage, sewage, road, electricity, garbage collection, etc.

The crucial issue of the services provision is how to define its standard according to the specific conditions of the project. In most third world countries, there are groups of well-trained engineers available to undertake the design and construction supervision of infrastructure networks. The engineers are responsible to adapt their design work to traditional approaches that provide appropriate, affordable, and easy to maintained services. Generally, guidance from foreign consultants is essential to keep good control of

lending fund. Furthermore, as it has been mentioned before, people's participation can be critical in reducing the cost of infrastructure.

3.2. Evaluation

The reason of launching sites and services and settlement upgrading projects was to house the proliferating urban poor by making the best use of the limited public resources and by encouraging the greatest potential ability of the individual settlers in both financial and housing construction terms. To evaluate the achievements or failures of the program is like most social subjects which can not come out a straight "yes" or "no" answer. It may be useful to start by asking questions again: How successful was the sites and services and squatter upgrading in reaching the goal of assisting the mass of poorer households throughout the developing world to obtain adequate housing? To what extent do they represent a token of a radical change in governmental attitudes to housing? What have been the universal problems of these strategies?

In the early 1970's, a collaborative program between the World Bank and the International Development Research Center of Canada evaluated several projects in different developing regions, and concluded that people succeed in building their houses over time, furthermore, they kept investing at a level higher than what their monthly incomes might suggest, this

especially happened in sites and services projects. For the squatter upgrading approach, the achievement reflected in different way.

Among these projects, the most notable is the Kampung Program in Jakarta. A neighborhood with severe sanitation problems was provided with infrastructure, primarily drainage and water supply under the direction of a programme developed by the Indonesian government. This project has successfully reached its low-cost goal by making an average cost of 38 U.S. dollars per household, contrasting sharply to the newly constructed housing units, then at a cost of several thousand U.S dollars. With extensive community participation, the Lusaka upgrading project in Zambia had also successfully achieved genuine infrastructure improvements in seven slum areas, which provided a basis for the follow-up assistance on upgrading individual housing structures. (Cohen M., Work Bank paper, 1983) In practice, squatter upgrading was considered to have more variety in the program design than sites and services, because sites and services were often operated with a project approach, focusing on a specific population group and specified area.

The sites and services and settlement upgrading approach on the whole represented a trend to solve the urban housing problems for the increasing poor population in developing countries which may not be well accepted by many countries as the best way to solve the housing problems. It is due to the

policy support of the U.N. and monetary assistance from the World Bank on this alternative approach that enabled these approach became widely accepted in most developing countries. However, as a new approach, there were many difficulties associated with the implementation.

For example, some governments started the program from a rather political concern which favors seeing a prominent, visible result, and they became quite disappointed later on, because the nature of sites and services and slum upgrading is one that takes a rather long, incremental developmental period. To risk carrying a debt for building just another version of 'slum' is not a politically acceptable idea. In addition, there were also some technical problems which emerged in the implementation process: (a) inadequate institutional capacity; (b) difficulties with land acquisition and land tenure; (c) poor cost recovery record; (d) shifting to the higher standard in the process; (e) poor project management; and (f) subsidies leakage to middle-income households.

In addressing the above problems, management and institutional capacity differs greatly from one country to another depending on the history of the political system and power of the existing institutions. Some countries had fewer problems than others, and some encountered great difficulties at the beginning and later, be able to deal with them

effectively with the improvement of their skills and adequate experience. Poor management usually cause problems in issues such as the procurement of construction services, the disbursement of resources, the allocation of serviced sites, the scheduling and supervision of activities, the settlement of the households, the maintenance, and mortgage collections, etc.

The most universal problem is probably the unsatisfactory cost recovery and difficulties in land acquisition, and this can actually be due to inefficient management. Two primary assumption of the World Bank lending project funds are that the projects had to be estimated in a standard low enough and the implementation had to be as efficient as it was planned. But unfortunately, this is often not the case. There was a tendency that the technicians and some administrators shift the standards of the services higher for various reasons, and inefficient management also cost more money than it was estimated. Moreover, the financial form of the program unexceptionably involved market regulations that even the poorest group had to follow, which meant that it was often too optimistic to expect people who can just barely make two ends meet each month to have savings to pay for any type of improvements or services for their housing. Thus cost recovery of upgrading projects became the most common problem. The Lusaka project has been considered successful in many other aspects, nevertheless, it failed in cost recovery with a high

default rate. Another substantial barrier for the upgrading projects has been the acquisition of land, mainly reflected on the difficulties of granting legal tenure for the illegal squatters. This problems has led to major delays in projects in all six World Bank assisted developing areas. (Cohen M., Learning By Doing, 1983)

Sites and services and settlement upgrading approach achieved evident success in providing access for the urban poor to obtain their low-cost shelters. They do, however, rely heavy on external assistance and it is almost impossible to avoid suffering under the consequent debt. Settlement upgrading projects have a better record in terms of reducing the project cost, (Shah K., 1984, p.201 & Tym R., 1984, p.219), but have a worse reputation for cost recovery due to the fact that the reality of preoccupation in land discourage the willingness to pay. Problems which took place in the projects have reduced the replicability on a larger scale. The main international lender realized that only assistance on certain individual projects could not achieve the broad goal of helping the poor establish an efficient self-financing and self-sustaining ability. Given such rapid population growth and the demand for shelter, the capacity of an individual program to adapt to the national-wide scale became the main concern of the World Bank when they were reviewing the project. A policies of encouraging the private sectors to participate in the housing delivery system in order to both

avoid the involvement of the public sector and encourage the provision of access for the employment along with the urban social-economic development thus has become the approach since 1980's. This approach include areas:

a) Training of personnel in developing countries

This will enable the shelter provision process to become more efficient and continuous, and improve the replicability, especially when private firms participate in the program, the qualified staff in the firm are better remunerated.

b) Housing financing institutions

The framework of the housing financing system to assist the poor should be established based on a private housing market in the country as a whole. The lending policy shifts from the direct project financing to the structural adjustment to assist national liquidity, and transfers the Bank's role from retailer to wholesaler. The housing sector is expected to benefit from the entire economic growth.

c) Urban Management and Productivity

In order to improve the productivity of the urban development, managing an efficient urban services network becomes vital. Upcoming projects in large metropolitan areas deal with these issues on a citywide level, seeking to identify the improvement required to increase urban management efficiency and thereby maintain and improve the productivity of economic activities. (Cohen M., Learning By doing, "task ahead", 1983)

d) Reinforcement of Community Participation

The lack of community involvement is manifested in problems with cost recovery, maintenance, tenure, etc. The emphasis needs to be put on helping communities and special-interest groups to form long-term urban development and housing associations, to have them actively involved in the planning, designing, financing process, and the land and housing market.

In summary, past experiences suggest that in order to reach the objective of providing shelter for the urban poor on a large scale, the attention needs to be from a different lever perspective, to encourage all kinds of sectors, from public to private, from central and local government to the community and neighborhood to participate in improving and developing their working and living environment.

CHAPTER FOUR : UPGRADING IN CHINA: Comparisons and Experience

4.1 Comparison Between China and Other Countries

As a developing country, China has many problems similar to those in other third world countries. The same phenomenon, however, are often caused by different factors. In order to learn or adopt successful experiences of others, a clear distinction of some important elements needs to be drawn between China and other developing countries, so that one can understand conceptually and practically what is suitable for China, and what needs to be rejected.

1. The Similarity between China and Other Countries

a) Shifting of the approach

Housing reform is taking place aimed at transferring the welfare housing system to a commercialized housing system. After suffering from the social and economical catastrophe in the Cultural Revolution, the current pragmatic government decided to shift the nation into an intensive economic development and reform track. The encouragement of the private role in development and introduction of market mechanism has been stressed more and more in the past years of the decade. Housing, the factors once absorbed huge amount of public investment is re-identified as a commodity with an exchange value on the market. Although the housing market have not been

able to succeed at the current stage, owing to the economic environment, the commercialized housing system has been surely set as the future direction of China's housing provision policy.

b). Lack of affordable Housing

The biggest barrier for people to buy a new unit in the market has been proved to be the same as in other developing countries - low affordability. The cost for a new unit is far beyond the reach of an ordinary household's income and life-time savings. Only a small percentage of private business owners can afford the price. Some experimental sales of new housing units in different parts of the nation have been heavily subsidized by the working units of the buyers.

c) Encouraging Self-help

Self-help is of essence in coping with the affordability issue in upgrading projects of the third world countries. In the past two years, some professionals and a few local governments have realized that instead of either totally relying on the public sector or on individual purchase of new housing, there is some alternative way providing access to dwellings. For instance, housing cooperatives of other countries has been introduced, and a few government agencies have started to help set up self-help organizations in urban districts, mainly performing as a housing reserve bank. Self-help program need to be largely explored in China from the perspective of finance, organization, technique, and

construction. There is a lot to learn from other countries in this field.

d). Upgrading Services Facility

In China, the cause of the housing shortage not only comes from inadequate space but also from the low level of utility services in the old neighborhoods. Those who live in this kind of neighborhood, which is a very large proportion in many cities, are eager to move into new dwellings since the government has not been very active in upgrading this area. However, most residents in the old neighborhood would rather to remain in their current house, if improvements on the infrastructure and more living space could be provided, because of better location for working and living.

A few cities have recognized the value of the existing housing stock and have been working on the renovation of the old neighborhood. There have been some achievements in upgrading housing quality and infrastructures. The survey and the practice has demonstrated that to upgrade infrastructure, sanitation, and other services in the existing neighborhood will be a very practical alternative in attempt to provide affordable housing.

2. Differences from other countries

Settlement upgrading will have some substantial differences in China from that in other countries in the following aspects:

a) Non-squatting and non-slum neighborhood upgrading

Unlike the slum or squatting settlement upgrading in most of the developing countries, the upgrading in China simply means the physical improvement of the housing and environmental condition for the existing neighborhood and at most, tenure transformation which in some cases may not even be necessary. Except for a few early industrial cities, such as Shanghai in which the prior revolution slum existed, In many cities there are no slums and squatter settlement basically for three reasons:

First, the long-standing government political policy has resisted the existence of the slum. It is "evil capitalism" that creates slums. The goal of the revolution was to eliminate the inequality in society.

Second, the control of the immigration to cities has been very efficient. This is part of the policy of deliberately persisting and dispiriting the economic status of Urban and rural sectors to sustain the need of rapid industrial development and food and other services supplies of the urban residents. The establishment of an urban residence registration system has been efficiently executed over 30 years. It was almost impossible for farmers to move into the city permanently without permission of the city government.

Third, most of the urban residents work as public employees. Public housing accommodate certain amount of the population. Those who could not get public housing would

rather stay in their more and more crowded old housing than to squat on public land, for the fear of becoming illegal. It was not uncommon, during certain period, that three generations lived in one room.

Upgrading in China has and will focus on how to renovate existing urban neighborhoods; how to improve the level of the utility services and how to manage the fund and collect the payment of the projects.

b) Excluding land from tenure

In slum or squatter upgrading, tenure legalization and land acquisition are two closely related issues, and often significantly effect the process of the projects. In China, with the current housing reform encouraging private home ownership, the Chinese people have more options to chose their tenure status than ever before; yet it is still has distinctive difference from other countries. In China, the land and housing are separately concerned. According to national law, land can never belong to any individual. But housing can be privately owned under the guarantee of tenant rights. The tenants living in existing housing can transfer their status from renters to owners after they buy the house, but they still do not own land. The purpose of this land policy is to seize the controlling power for land management in city-wide development. Relocation of the residents for a comprehensive large scale redevelopment will not be as complicated as with a private land system.

c) Contradiction of Existing Delivery System

In other developing countries housing program are often project oriented, and have a lot to do with political campaigns as well as the international aid agency's global policy. In concurrence with such a housing policy, there usually are special housing authorities from state level to local level to take care of project financing, management and organizations. In China, the executive authority for housing is the individual work unit. This system is still the main resources of the urban housing in today's reform. It greatly contradict with the nature of a marked controlled housing system. As a result, the bigger buyers are often the work units who are capable to buy the expensive commodity housing, and resell or rent to their employees with a heavy subsidies. The problems behind this kind purchase are: first, this delivery system never be able to homogeneously spread dwellings to every urban citizen. The limited capacity of the local work unit, especially those in the lower hierarchy, can hardly afford market price. Second, the national wealth still can not be prevented from transferring freely to certain group of people with work unit subsidies.

What should be emphasized is that not only is the delivery system unable to provide enough new units, it also has formed the main barrier for improvement of old urban neighborhood. Work unit tied financing and allocation conflicts with complicated existing ownership in the old

neighborhood. To redevelop the inner city area is not as simple as construction on the vacant farmland or on work unit owned land which mostly in the outskirts of city. How to relocate original residents often becomes a tiresome issue and takes a long time to negotiate. The most important matter is that the work unit can never get the number of units they expect so that the development cost for the unit they finally obtain usually are higher than the new area. This issue will be discussed further in the next section of this chapter.

d) Lacking of Formal Housing Financial Institutions

There are no formally established housing financing institutions in China, at least not the ones compatible to other countries, due to the Chinese government's method of allocating funds. Most of the budget goes to thousands of individual work units in different strata under the name of reproduction investment. The ironic fact is that, on one hand, work units play the role of a steady resource of housing, while on the other hand, they cannot guarantee to be adequate supplier, due to an unstable budget.

In other countries, even for low-income housing, the banks would play a major role in housing financial institutions, although they certainly do not perform not as strongly as in the regular housing market. In China, before reform, the bank absolutely had no position in housing; and when reform became in vogue, some cities try to introduce banks, but mostly, they still have to operate on work unit

credit. This kind of work unit-tied bank financing again tends to benefit the workers in big or productive enterprises, providing these units can always channel the subsidies to pay back no matter if their employees can afford or not. As it was mentioned earlier, years' reform has proved that this actually is varied type of subsidy - hidden subsidies to open subsidies. The government still cannot throw away the burden. it can be described in a Chinese saying: " Sheep's fur comes from sheep."

In the next section, some previous upgrading experiences in China are assessed in order to further explain the predominant attitudes of the Chinese government towards upgrading, and the problem and failure are demonstrated in a more concrete way.

4.2 Previous Experience of Upgrading in China

It need to be clarified that ignoring of improvement for urban old area does not mean there were absolutely no settlement upgrading in China at all. Any time, any place in the world, human never has stopped improving their living environment. There were no exceptions in China, both from public and private sectors. The difference is that the concept of upgrading was interpreted within the constrains of Chinese socialist housing policy, and practice were limited in a certain type and scale.

The policy of welfare housing suggests a basic principle that any legitimate activity related to urban housing is subject to public sector controlled project. Upgrading is also restricted by this policy. In the early years of the People's Republic of China, upgrading was largely carried out in slum elimination projects. Pre-revolution slums, for example in Beijing and Shanghai, were demolished and the government rebuilt new housing on the sites, providing with the infrastructure and various kinds of public facilities. Since then, with the believe that slums has basically diminished in China, upgrading of old urban area has been very sluggish. Except installing certain level of infrastructure, such as electricity, running water supply, upgrading of old districts rarely to be raised to a significant project level until recent years.

For instance, in Beijing, the renovation of dangerous structures in old neighborhood started from 1974. It was sparked by the accident in 1972 storm. In that disaster, about 400 rooms collapse in the old neighborhood, 3 people dead, 40 people injured. From 1972 - 1983, the collapsed rooms were 6084 (not include those in the big earthquake), 636 casualties. From 1974 to 1985, within more than ten years, the city government investment for upgrading was 80 million yuan. 100 thousand square meters of old housing were demolished, 400 thousand square meters housing was rebuilt, 50 thousand square meters supporting services was provided, more than 7000

household moved into new houses. Despite this achievement, there is still 14 million square meter old housing stock need to be upgraded, among which, 2 million square meters are classified as dangerous structures and urgent to be renovated. While with the pace of previous upgrading, which was 10 thousand square meters, 700 households annually, it will need more than 100 years to renovate only dangerous structures. Obviously, it is impossible to solve the problems in the conventional way. (Yan Z. and Li Z., 1985, p.121)

Since the concept of public commitment for upgrading is derived from long-standing national housing system, the case happened in Beijing is not unusual. Actually, many big cities with large old housing stock have had similar problems. In the past years some cities realized the severe situation in old urban area which obstructed the economic development of the cities, and determined to invoke a movement of urban renewal. In northeast industrial city Shengyang, with the comprehensive improvement for old city environment, such as infrastructure, road, land rearrangement, housing renovation has been largely conducted. In about 8 years from 1978 to 1986 the demolition area rose from 100 thousand square meters to 800 thousand square meters, the area of newly built housing rose from 600 thousand square meters in 1978 to 2.6 million square meters in 1986. New lodging was provided to 270 thousand households, about half of whom used to live in the old districts. Nevertheless, it still remain about 10 million square meters

of old housing even after such a great government effort. (China City Planning Review, "Comprehensive Urban Renewal of Old Urban District in Shengyang", 1988)

Some cities have had better achievements than the others according to geographic or economic nature of the city. However, the common problem of higher cost versus less benefit has made investors reluctant to go ahead. The main reasons for this sluggish redevelopment of old urban area are as follows:

* Mixture of the ownership. Being the main resources to finance housing, the work units rarely like to put effort in old area upgrading because of the existence of mixed properties. In Beijing, about 11% housing stock are private owned, and since most of which are concentrated in inner city old neighborhood, the proportion of private owned in this area is from 25% to 70% according to different neighborhoods. (Zhu Y., 1984, p.8) The rest are public properties either owned by local housing authority or by work units. This mixed ownership creates extreme difficulties for work units to redevelop these areas. First, it is hard to acquire a piece of land large enough to build enough units; second, a work unit neither has no responsibility using off its scarce resources to fiance the original residents who do not belong to this unit although the same site accommodate its employees, nor that it can evict the old inhabitants.

* Lack of resources in local level. The most

responsible public sector for upgrading thus is City Housing Authority. We have known from earlier chapter that the funds allocated to them are very limited, together with the rents it barely enough to cover the maintenances.

* Zoning. In some cities there are zoning to limit the height of the new constructions. For example, in Beijing, the inner city area is designated as traditional preservation area. Any high-rise residential construction is forbidden, and multiple story housing need special approval. This further reduce the incentive for either work unit or municipality to rebuild in this area since it is considered that only more than multi-story can come to the rescue of increasing density for accommodating more households.

In order to push forward upgrading of inner cities, some strategies have been adopted in many cities. Firstly, in theory, the financial resources of upgrading should unify the investment of interest work units. To attract variety of resources, mainly from enterprises is the prevailing way considered to be able to solve financial problems. Secondly, municipalities help manage the process of relocation, which usually include providing the land in suburb for relocating residents, providing temporary shelters, compensating residents in the moving period, organizing and persuading residents in moving actions.

The problems for joint work unit redevelopment have been proved to be that a) insufficient housing units were left for

the investors. The most concerned issue for interest work units is the proportion of residual units after the accommodation of original residents in a reconstructed area.¹⁰ Only is there a proportion of one third residual units that can be acceptable. (Zhu Y., 1984, p.10) While often this proportion is hard to obtain due to ever-increasing demand of original residents. For example, in 1979, a work unit planed to build two six story apartment buildings in an small site of a neighborhood in Beijing. When the first one was under construction, registered residents in the demolish area increased tremendously, average rising rate was one person per household. The relatives of the residents squashed in when they knew that new housing was coming. The second building was forced to stop construction because that work unit could not bared the increasing moving-in households. (Wei W., 1984, p.15). b) Much higher cost than new development area. The interest work units usually transfer total development costs of a project into the costs of total residual units. The residual units costs include relocation cost of original residents. Even when the redevelopments are for the commodity housing, the development companies still have to subsidize these original residents whom do not even need to pay the improvement in new housing. The subsidized part would be

¹⁰. Residual units are the units left to belong to the investors after accommodating the original residents in the reconstructed new housing.

compensated by increasing price of commodity housing units. Given that construction cost has gone up enormously, many work units could not afford in the redevelopment of the old area.

In theory, the work of municipalities is to provide investors an ideal development environment in the process of relocation as well as to provide basic infrastructure. But actually, often they have to continue carrying financial burden for relocation and even for consequent result of a failed joint-development. During demolition period, the municipality needs to manage temporary shelters and compensates in cash monthly to those who ask helps of relatives or work units. (Table-10). Moreover, in the area with very high population density and high proportion of private owned old housing, the redevelopment usually can not achieve a acceptable ratio of residual units, work unit-joint development could hardly be carried out. In Beijing, classified old dangerous structure are more than 2 million square meters;¹¹ it holds 84000 households. (Li P., Yuan H., 1984, p.33) In these areas, the households with serious difficulties in their living condition are 53%. Due to high density of the neighborhood, a few residual units can be left; not many work units would like to invest in the area. Most of

¹¹. Dangerous structure are those in the third and fourth classes of housing structure. The third class include main structure over-aged, corroded; low quality materials for roof, wall; leaking, broken ceiling, no maintenance. The fourth class include main structure near collapse, roof deformed, not repairable.

TABLE.-10. RELOCATION COST OF FOUR PROJECTS IN BEIJING: 1984

Items	SJF	GY	XWH	ZSH
Population	113	366	120	198
No. of HH	28	93	25	49
Demolition Floor Area (M ² per person)	8.65	5.88	5.14	
Re-Construction Floor Area (M ² per person)	8.94	7.97	8.95	9.88
Type of relocation(HH):				
once	28	54	3	
temporary			13	
relative or W.U. help		39	9	23
Cost of Relocation				
shelter (yuan)		42060	480	159978
compensation (yuan)	5415	58550	31397	55496
Total	5415	100610	31877	215474
Yuan per Person	47.92	274.89	265.64	1088.25

Sources: Wei, Wenzhen, "Some opinions in Old City Redevelopment", Urban Housing Problems, 1984, p.16.

dangerous structures are not repairable, the reconstruction of them are imperative. This task unavoidably were be put over city government. From 1974 to 1983, the municipality of Beijing strived hard to collect about 75.26 million yuan from different public resource for reconstruction of dangerous structures. It did not even cover 5% of total needed investment for these areas. (Yu C., 1984, p.30)

There are some other suggestions have been put forward in the past several years, such as individual investment plus residents work unit subsidies, establishment of housing bank, etc. These suggestions either lack integrated development package for the necessary management, or still have to tie to

the work unit credit so that the replicability is not high. Besides, one important factor deeply discouraged all different proposals was the terrible inflations in past recent years. The total development cost per square meters in 1985 was 1100 yuan, (Lu X., 1985, p.87) and increased close to 2000 yuan in 1988.

From above analysis, the previous experience of upgrading in China's big city can be characterized as two major points:

a) Large scale demolition of old housing and reconstruction of new standard housing.

b) The main role of work unit investment, secondary role of local government subsidies in financing the projects.

Since the beginning of the housing reform, the effort to shift development power from public sector to private sector has not been successful. The individuals' power either in terms of financing or in terms of labor could not actively participate in housing development under current delivery and financial system.

Under the condition that the establishment of a complete housing financial institution in the market type need the cooperation of changes in the whole national economic system, it is not a short-term task. Depending on system change is not a realistic approach for meeting desperate needs of the old neighborhood residents. Besides, the work unit's responsibility for the housing is not absolutely a bad idea, just that some adjustment among the share of corporation,

society, and individuals should be made to balance the distribution of funds.

Comparing with other countries, what is lacking in China's experiences is to study and explore affordability and self-help which do not necessarily require substantial economic changes. It should be noticed that not only in developing countries, but also in rich capitalist countries, these two issues have long been discussed and practiced. In order to help the urban poor to get low-income housing, which compensate the loophole of market dominated housing system, the public and collective power are introduced into the development. Although China is going to an opposite way - encouraging private sector, the purpose of the movement in both societies is to adjust the functions of different powers, and remedy the disadvantages of the systems.

Based on the analysis in this thesis, the last chapter will contribute to the suggestions for the policy changes. The analysis of the cost and affordability for upgrading on self-help basis will be done to help uphold the argument. I will also try to address the feasibility of other different self-help strategies, such as new design approach for upgrading units, community organization, and diversified financial resources. The approach will inherit some merits of the existing system, for instance, work units role in helping employees, and combine them into new approach to create a flexible, cheaper, and easily built housing program.

CHAPTER FIVE: FEASIBILITY OF NEW UPGRADING STRATEGY

5.1 Strategy

In previous chapters, I has discussed the nature of existing housing system, current housing conditions, as well as ongoing housing reform efforts in China. From the extensive discussion, we identify two main factors causing the persisting urban housing problems in China, namely the existing unequal distribution system, and the limited impacts of recent commercialization scheme (due to skyrocketing price of commodity housing). A closer look at the problem indicates that the government's inability to adopt effective upgrading programs in urban China shares more direct blame, since most households who have housing problems reside in the old city neighborhoods. In a sense, the lack of experience and integrated policies on housing upgrading becomes the major barrier for solving the current housing problems in China.

Given the similar constraints problems, the widely implemented site services and settlement upgrading programs offer valuable lessens for Chinese planners. Behind many successful upgrading projects around the world, the self-help, low cost, community organization and effective management are key factors, which have not been well developed in China under the existing centralized welfare housing system. It becomes clear that what China needs to do is to adopt more realistic national housing policy by relying more on the private sector,

setting lower housing standard, and more importantly, developing a more effective upgrading program.

In contrasted with the existing centralized and large scale mass housing approach, the new upgrading program should be designed in such a way that it could be carried out as a self-help, small scale and incremental process. Such new alternative approach requires a series changes on the existing housing system, from basic attitudes, tenure structure, design approach, to financial arrangement, which will be summarized in the following six aspects. They are the critical conditions for the success of this new upgrading approach. The recent progresses of urban housing reform in China indicate that such changes are not just possible, some of them have already been implemented in the limited scale across the country.

(1) Shift of Priority

The first change is on the government emphasis in housing construction. Instead of focusing exclusively on large scale of new housing production, upgrading the old urban housing stock should be the high priority. The purpose of this shift is enable us to use scarce resources more effectively, and to strive towards an more equal development. By limiting more spending on the high standard public housing units, more money should go to the people who need it most - the residents of old city neighborhoods.

(2) Shift of Approach

In order to achieve the success of upgrading efforts,

first of all, the concept of upgrading needs to be re-interpreted; and the power of human resources in creating a better life needs to be re-valued. The basic attitude of local government towards upgrading the old housing neighborhoods, which believes only large scale demolition and reconstruction can improve the living environment, should also be corrected.

Under the new upgrading scheme, the government's full commitment on upgrading will be replaced by private self-help process, which has been proved in many developing countries as one way to reduce the upgrading cost. Self-help will be encouraged in housing financing, construction, services provision, and other related activities. People themselves are the best judge of what are their real needs, and how to achieve them.

Consequently, the current renovation method, in which, identical walk-up apartment buildings blindly replace one-story old neighborhood, should be avoided. New types of housing should be developed, which is more suitable for individuals and communities to conduct small scale upgrading construction. A preliminary analysis will be done later to prove the feasibility of this new design approach.

(3) Transform Tenure Structure

In order to encourage the self-help and community based upgrading efforts, for individual households, to freely obtain their ownership becomes a crucial issue. Under the current housing commercialization scheme, private housing ownership

are vigorously encouraged. But the high price of the commodity housing units has effectively prevent most urban residents from achieving that dream. By reducing the upgrading cost, the self-help and low-cost upgrading projects will create a great opportunity for ordinary urban households to afford their own housing units. In addition, as proved in many different countries, the private ownership will help to stimulate people's desire to invest, and provide continuous improvements on their housing stock in long run.

(4) Encouraging Community Participation

To decentralize the upgrading process and to encourage the self-help do not mean there is not need for any institutional arrangement. Many aspects of upgrading process require some form of institution acting as a bridge between municipal government and individual households, such as obtaining services provision, seeking technical assistance, organizing construction and negotiating financial assistance from different work units. Here, a new form of housing institution is proposed, which is based on the existing neighborhood community structure.

Unlike work units, which are fully responsible for housing provision, the role of new community housing organization will be limited on organizing, facilitating and providing technical assistance. During actual upgrading process, it is the individual households who will make their final decisions on the type of financing, building layout, and

different phases of construction.

(5) Provide Service and Infrastructure

While the improvement or reconstruction of houses will be managed by individual households or local communities, the services provision, such as water supply, street improvements, and sewage system, should still be the responsibility of city government. In many developing countries, the effective service provision is one major factor for the success of the upgrading programs. However, unlike in some other developing countries, where service provision means to put new infrastructure, the focus of upgrading in China is to improve the existing infrastructure in old city neighborhoods, which was provided over the past years. It is important to have these infrastructure and services improved during the upgrading process, because inadequate and poor facilities contribute the larger part of housing problems in these neighborhoods.

(6) Create Access to Housing Resource

To conduct a successful self-help upgrading, another important factor is the access to some important housing resources, such as credit and building materials. Although self-help upgrading implies that the residents are responsible to finance the housing improvements without government subsidy, under the current personal income situation, it is impossible for most household to have enough savings or income to buy the upgraded units. Therefore, a well planned financial

package should be studied to provide diversified resources, such as housing bank loan, work units' credit, local housing cooperatives, and cross subsidy from the commercial development within or near the neighborhoods.

The supply of building materials is another important factor that government should arrange some plan for the upgrading program. In China, since most building materials are under centralized planning control, there has been no formal market for people to purchasing them, especially in large cities. With the increasing amount of private housing construction, the supply of building materials should be ensured, not just to for state companies, but also for individuals. Given the fact that housing commercialization will be long-term objective, the government should make special efforts so that a market for material production and distribution can be established.

In summary, the main purpose of this alternative upgrading approach is trying to find a proper way to gradually transform the existing centralized and welfare housing system into a more decentralized and market oriented housing system with the proper public intervention. This low-cost and self-help upgrading strategy will be an important step to facilitate such transformation. As I mentioned earlier, most of interventions suggested above are very possible under the current political and economic context of China. In the following pages, I will have more discussion on several

selected aspects of upgrading process, such as building design, financial aspect and institutions, in order to see the implications of such new approach.

5.2. A New Design Approach

Under this alternative upgrading scheme, the first major change is on the design aspect of current housing construction in China. For many years, large mass of multi-story or high-rise apartment buildings become only design solution to both new and renovation housing projects, which is the result of highly centralized housing production system. It not only creates monotonous image in all Chinese cities, but also raises the construction cost. To a large degree, it becomes a major obstacle for effective upgrading process, which requires more self-help and small scale intervention. Therefore, an appropriate new design approach will be an important component of the new upgrading scheme.

In order to change the appearance of public housing, some Chinese architects have already studied alternative design solutions with reference to the traditional courtyard houses. Although most such studies or proposals are motivated from preserving the traditional urban environment, their low-rise with high density design approach also has very valuable significance for the study of self-help housing issue. Particularly, those design proposals concerning preserving courtyard housing environment, will have direct contribution

for the new design approach, since the courtyard house is the typical building type in the old neighborhoods of Beijing. Next, I will review one such design proposal in order to develop some basic design principle for the new upgrading process.

(1) Design Proposal on Chenxian Jie Neighborhood¹

Chengxian Jie neighborhood is located at northeast corner of inner city in Beijing. It occupies 40 hectares of land area, among which about 54% of land area or 21 hectares are residential use. The lower residential land ratio is due to the existence of landmarks: Confucius Temple and Royal Academy. To preserve the historic structures and their surroundings are the main motivation behind this design proposal. The population density in the residential area is 550 persons per hectare; and the average housing floor area per capita (including temporary structures) is 12 square meters. In general, the living condition of this neighborhood is slightly above the average level in the old city of Beijing; but the services provision is as bad as the rest of old neighborhoods. Over 90% of house hold have no separate water tap, sanitation and the whole neighborhood have no heating system.

¹. The information of this design proposal comes from a master thesis of Qinghua University: Liu Yan, The Preliminary Research on Preservation and Planning of Old City of Beijing, 1987.

Given the preservation purpose, the designer uses a strategy of combining two types of housing renovation in her upgrading proposal. The first type is to have total restoration of some good quality courtyard houses, which requires the demolition of illegal structures and reduce of total housing floor area within each courtyard house. The second type is to rebuild new structure (2-3 stories) on the existing courtyard housing site in order to increase housing floor area. The combination of these two types would help to improve overall living condition in the neighborhood. The standard of the improvement is similar with other renovation projects: 15 square meters floor area per capita, with private bathroom and kitchen for each household.

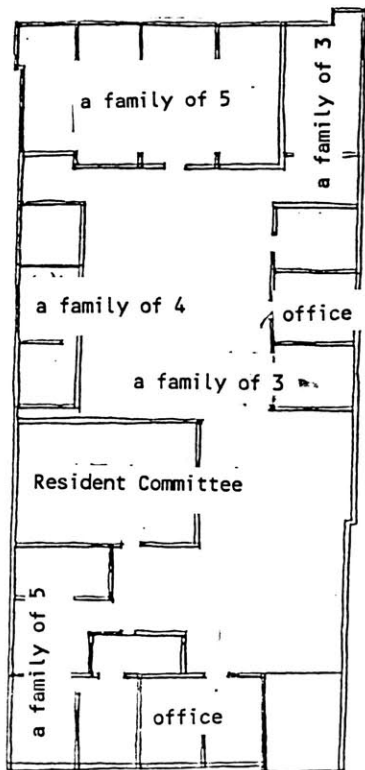
(A) restoration of existing courtyard houses

Table-11 illustrates some statistics of three different courtyard houses renovation: #43, #45, and #47. The physical layout of #43 courtyard house is shown in Figure-4.

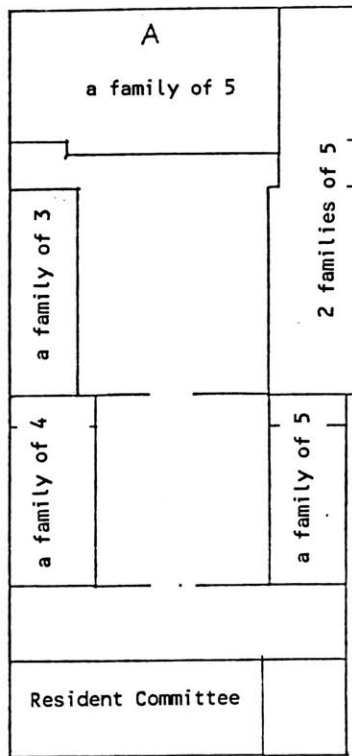
TABLE-11. IMPROVEMENTS OF UPGRADING IN #43, #45, #47 COURTYARD HOUSES

	#43		#45		#47	
	before	after	before	after	before	after
population	18	22	52	52	61	53
floor area (M ²)	205	285	439	482	580	683
floor area /capita	11.4	13	8.4	9.3	9.5	12.9
demolition (M ²)		67		18		41
addition (M ²)		80		45		103
move out POP.		0		0		8
move in POP.		4		0		0

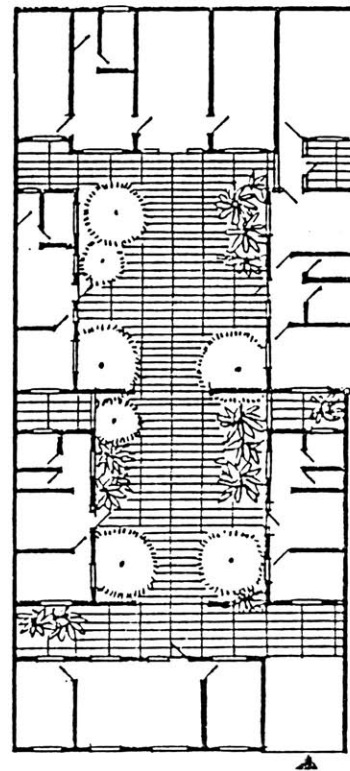
Source: Liu, Yan, The Preliminary Research on Preservation and Planning of Old City of Beijing, P.89, master thesis, Qinghua University, 1987.



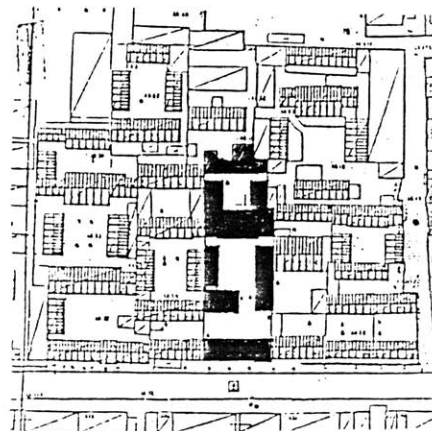
Existing Condition



New Household Arrangement



Renovation Plan



Site

Fig.4. Upgrading Proposal for #43 Courtyard House

Source: Lui, Yan, *The preliminary Research on Preservation planning of Old City of Beijing*, 1987.

As we can see, most existing residents will remain after upgrading, only 4 people need to move out. Those who have to move out, can be relocated to other new housing structures within the neighborhood. The improvements of living condition are not homogeneous, and still lower than the current standard; however, comparing with their own, all households get improvement. The major advantage of this approach is very convenient for the self-help construction, because of its small scale and flexible intervention with each courtyard. The limitation of this design solution is that it only applies to those courtyard houses with relative good quality, which are rare in some old districts.

(B) new courtyard housing environment

In contrary to the first type of approach, here the deteriorated courtyard houses will be demolished; and a new two-three level of housing structure will be built in the existing context. As a result, both the quantity and quality of living condition will be enhanced significantly. (Fig.-5) In spite of some resemblance of typical walk-up apartment building, the new design also keeps the courtyard concept; about 95% of households either next to the internal yard or have big roof terrace.

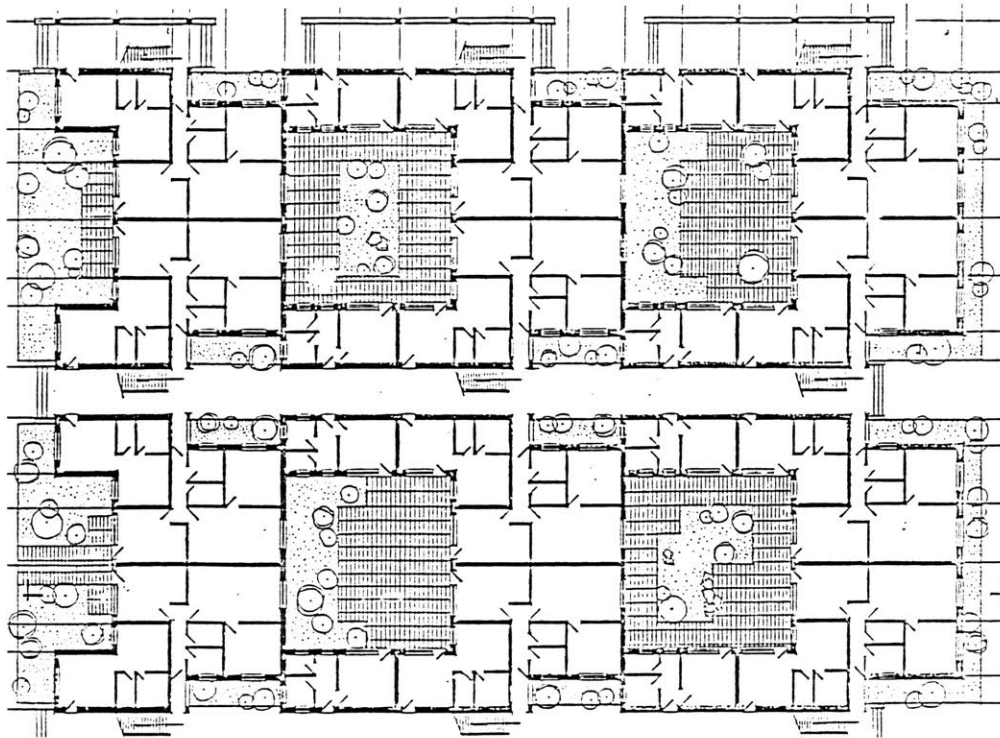
Since the new building unit is based on the size of individual courtyard house, the design is suitable both for a large area (a dozen of courtyard houses) of upgrading, and for yard by yard renovation. The basic units can also be



Elevation



Section



Floor Plan

Fig.5. A New Courtyard Housing Design Proposal

Source: Lui, Yan, *The preliminary Research on Preservation planning of Old City of Beijing*, 1987.

recomposed in any number according to the lot size and shape. This flexibility creates a good condition for implementing the self-help and community based upgrading process. (Fig.6-7)

(2) Design Principle

Although this is only one design proposal, the merits behind this more responsive design approach is quite clear. There are several distinctive principles shared in these design proposals, which differ greatly from the exiting design solution. (1) keeping the existing neighborhood layout. As we will see that this approach will reduce a lot of renovation cost by saving most available infrastructure in the old neighborhood. In addition, it will also avoid the expenses and difficulties of relocating the residents, and provide a basis for more spontaneous improvement. (2) small scale intervention. To arrange the design intervention in a way that each courtyard with several households could have independent renovation, will greatly encourage more self-help upgrading efforts. It is believed that the dwellers know best what kind improvements they want, and what the best way to achieve them. (3) balance the new housing space and other facilities within each neighborhood. In those old neighborhoods, some old structures have to be torn down and new housing structures will be added with various amenities, such as small parks, shops, and day-care center. These decisions will be decided within each community, which will help produce a more sensible living environment.

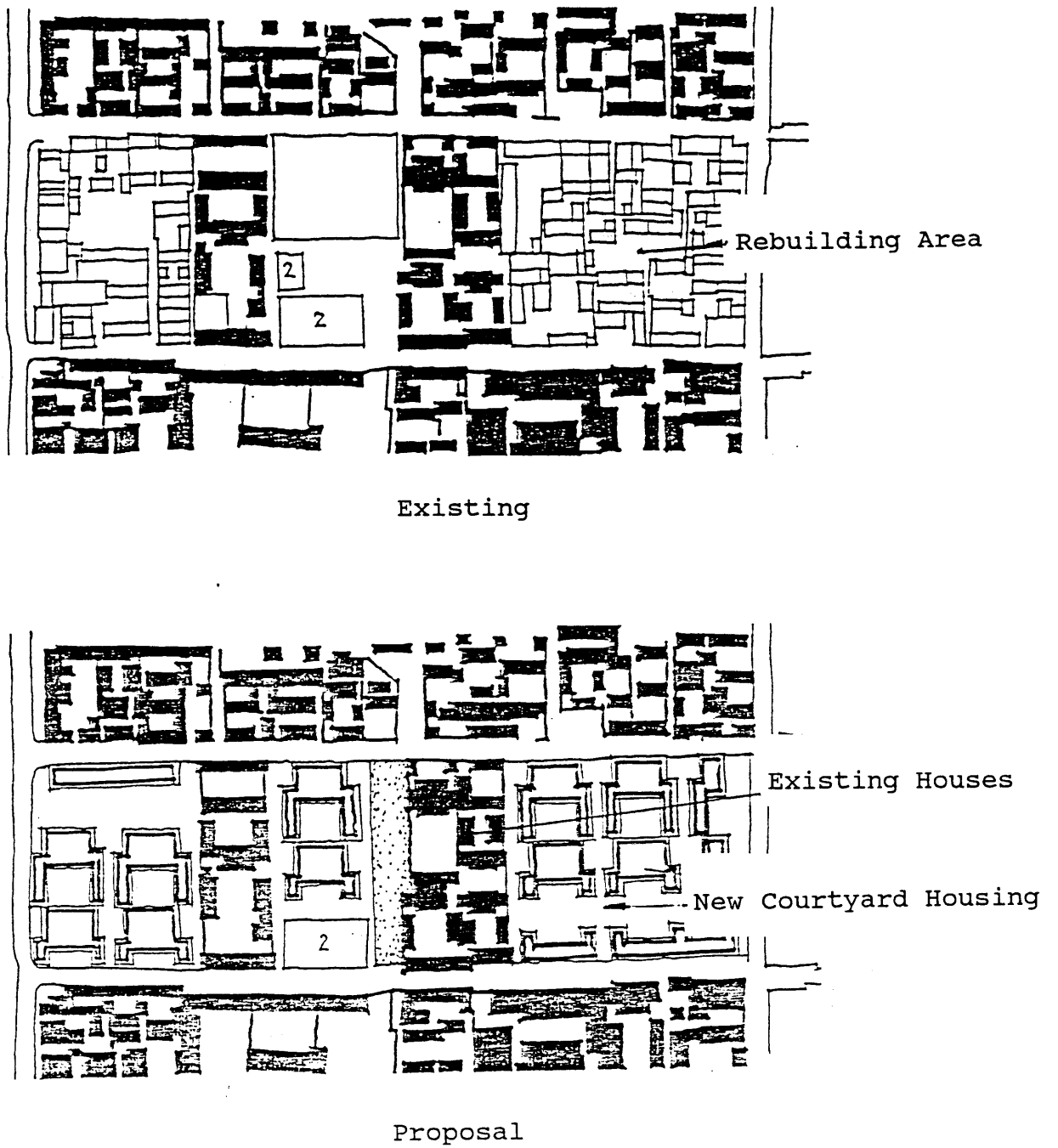


Fig.6. A Large Area of Replacement

Source: Lui, Yan, *The preliminary Research on Preservation planning of Old City of Beijing*, 1987.

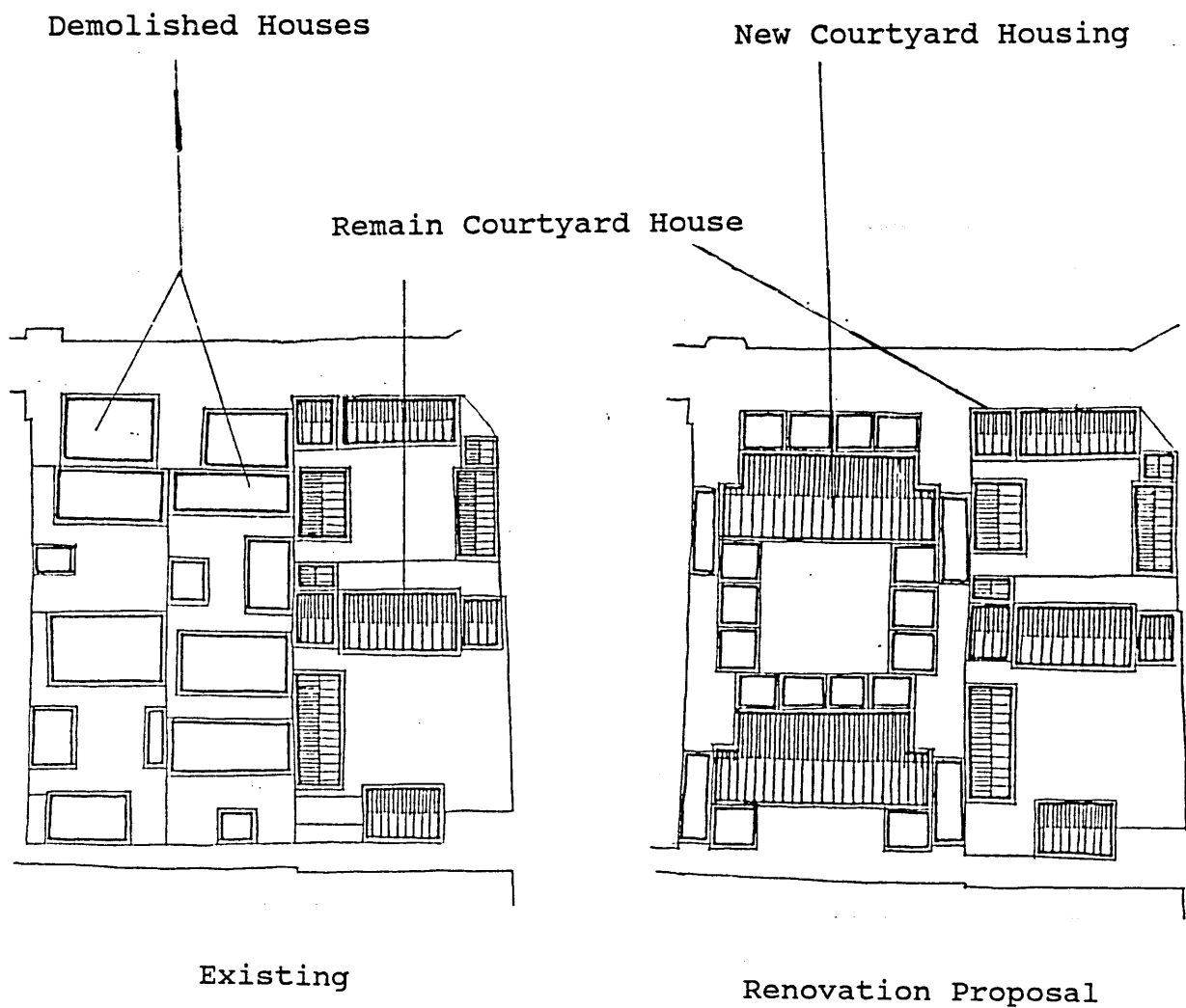


Fig.7. Single New Building Unit Replac An Old Courtyard House

Source: Lui, Yan, *The preliminary Research on Preservation planning of Old City of Beijing*, 1987.

As we can see that all these could be well integrated as part of design guidelines for the new upgrading scheme. Not only can it bring down overall construction cost and enhance the environmental quality, but also it can greatly facilitate the self-help upgrading process, and improve living condition for of large number of urban residents.

5.3 Affordability Analysis

The most significant contribution of the new upgrading approach is to increase the affordability for many local residents. This will be mainly achieved through both the reduction of upgrading cost, and the re-arrangement of financial access.

1. Cost Reduction

One major factor behind the limited development of current housing commercialization is its high cost. Table-12 gives us a general price composition of a typical commodity housing unit. Compared with that, due to the nature of upgrading, many cost components will be greatly reduced in the new upgrading scheme. Table-13 gives a rough account of cost components of new upgrading scheme; assuming that the unit cost of each item in upgrading is same as that in commodity housing, the total cost of a upgrading housing unit will be at least reduced by 50%. If we further consider fact that both the construction cost and relocation cost of new upgrading project are much lower than those of commodity housing

TABLE-12. NEW COMMODITY HOUSING COST COMPOSITION

ITEMS	PERCENTAGE
1. BASIC COST:	75.70%
construction cost	36.03%
utility station	1.67%
sewage, landscape	3.79%
survey, design	1.06%
relocation	16.88%
leveling, electricity. water, road	1.82%
contingence	3.03%
fire protection	3.86%
administration	1.74%
profit	3.48%
tax	2.35%
2. OTHERS	24.30%
services	11.93%
infrastructure network	7.31%
neighborhood landscape	0.49%
land acquisition	4.57%
TOTAL	100.00%

source: The Appraisal of Beijing Commodity housing Price,
 "Beijing Housing Reform Investigation and Research,
 p.69, 1987.

TABLE-13. UPGRADING COST COMPOSITION
(adapted from Table-12)

ITEMS	PERCENTAGE
construction cost	36.03%
utility station	1.67%
sewage, water, landscape,	3.79%
survey, design	1.06%
demolish	
contingence	3.03%
fire protection	3.86%
administration	1.74%
Total	51.18%

Source: *ibid.* p.69.

projects (because of its two-three story structures and minimal relocation), the final cost of new upgrading housing unit will be much lower than 50% of commodity housing cost.

According to Beijing Housing Management Authority, the cost for the upgrading is about half the basic cost of commodity housing. (Song X., 1988, p.65) In 1986, the basic cost of commodity housing in Beijing is 660-690 yuan/m², which means that the basic cost of a standard 55 m² commodity housing unit will reach 33000 to 34500 yuan, not to mention another 24% of other kind costs (Table-12). During the same period, the estimated unit cost for upgrading housing, including reconstruction and providing sanitation, is about 300 yuan/m². (Table-14) Therefore, the cost for a 55 m² upgraded housing unit is 17,600 yuan. If we include the factor that only part of courtyard structures need to be rebuilt in the new upgrading scheme, the total cost for upgrading project

TABLE-14 CONSTRUCTION COST FOR UPGRADING HOUSING (yuan/m²)

Demolition	60
Reconstruction of main structure	220
Interior finish, sanitation, electricity, heating.	42
Total	322

Source: Song, Xiaoguang, Preservation and Renovation of Beijing Old City Courtyard Housing District, Master thesis, Qinghua University, 1988. p.72.

can be further reduced to only 18% of the commodity housing cost, which will undoubtedly increase the affordability in the upgrading process. (Song X., 1988, p.62)

2. Re-arrangement of Financial Access

The improvement of affordability in the new approach is further contributed by changing the current incentive mechanism and increasing financial access for many affected residents. Under the new strategy, there is a range of new policies will be adopted. Some of them are designed to encourage more contribution from local residents during the upgrading process; some of them are designed to form new financial resources in order to cover the cost of the upgrading. I believe that the combination of all these elements will make the housing ownership within the reach of most urban households, which in term will facilitate the development of the urban housing reform.

Under the self-help upgrading scheme, there are at least two incentives for the old neighborhood residents to participate financially. One is the willingness to stay in the existing neighborhood. Because of the convenient location of most old neighborhoods, people enjoy the easy access to many public services, such as various shops, cultural and health facilities, and easy transportation. By allowing the residents to continue living in their familiar environment without large interruption, the new upgrading strategy could receive both

emotional and financial support from the local residents.²

The second incentive will come from allowing conditional transfer of public ownership to private housing ownership during the upgrading process. The experience of many developing countries tells us how important of appropriate housing tenure system will be for the success of upgrading program. It is also holds true in China. In recent years, many residents have openly expressed their willingness to pay themselves for the upgrading. In 1985, a survey of 85 households who were willing to buy the house, 40% of them had average wage income. Some of them indicated that they could pay off all in cash once, if the price of an apartment is controlled around 10,000 yuan. (Li Y, 1987, p.114) According to my rough calculation earlier, a 50 square meter upgraded unit is about 15,000 yuan, which seems to be highly acceptable, if diverse types of pay-back method are offered.

The last but not least important element for increasing affordability is to improve the housing financial mechanism. According to new scheme, the upgrading cost will be covered by selling upgraded units to the current occupants, or by raising rent to market level. There are at least three different financial sources could be tapped for such purpose.

². According to one neighborhood survey, about 64.2% of residents prefer two-three story housing on the original site; 46.7% prefer one story renovation approach, only 3.3% like to move out of inner city. In addition, 69.2% of all residents volunteer to participate in some form of upgrading work, no one against this such work. (Song, X. P.62, 1988)

(1) personal savings and income. In 1985, the average saving per household in Beijing is 3,166 yuan, which is about 20% of cost of an upgraded housing unit. (Li, J, 1985, p.46)³ In terms of income, between 1978 to 1987, the per capita annual income in urban area has increased from 316 yuan to 1012 yuan a year; while the percentage of living expenditure on housing consumption has reduced from 1.9% to only 0.87%. (Chinese Statistical Yearbook 1988, p.806 and p.826)) According to many experts, to eliminate the heavy subsidy and to raise the housing expenditure to 6-10% of total expenditure is theoretically possible. (Cai R. and Liang P., 1987, p.19)⁴ Given the average 3.8 persons per household, the annual housing expenditure per household could be raised to 233-385 yuan, which will be 10 times of current spending on housing (33 yuan per household). In general, to increase the personal expenditure on housing will not only benefit the cause of housing reform, but also benefit the whole national economy.

(2) Work unit financial assistance. In existing housing system, the work units bear the full responsibility to provide housing for their employees. Although the new approach is to promote the socialization of housing delivery, it does not

³. Because of unequal distribution of savings among different social group, many families can not reach to this level. This number can be only used as a reference.

⁴. In fact, the housing expenditure remained at 6-10% expenditure for most 1950's and even to 1960's in many Chinese cities.

mean we should not utilize the financial resources of work units during this long transition period. For many work units, even though it becomes increasingly difficult for them to buy expensive commodity housing for their employees, to provide limited financial assistance for upgrading is quite possible. (Zhu, Y., 1986, p.8) These work units can offer their support on providing loans, or giving some direct financial subsidy to their employees. The work units, who own the housing units in the neighborhood, can provide lease with option to own for their employees, so that a more realistic payment schedule could be arranged.

(3). Cross subsidies from commercial development within or near the neighborhood. Since most the old neighborhoods located in downtown, it provides them an advantage for commercial development. Many investors are willing to have development in these areas. The communities should be entitled to manage land for profitable use and getting their share to compensate those residents who neither can get support from the work unit nor can pay by themselves.

As we can see, there are a range of different ways to increasing the affordability in the new upgrading process. Perhaps, the most important issue here is to change the attitude towards the housing upgrading. Instead of viewing it as a final product, and applying it with high standards, the government should allow more autonomy of individual neighborhood, and be willing to accept more incremental and

small scale upgrading process. Because it is only through such changes, that the private housing ownership, which the reform has encouraged, could be widespread in urban China.

5.4 Community As A New Housing Institution

From the experience of many developing countries, the upgrading program is not merely dealing with physical improvements. Rather, it is a comprehensive development process which include many social issues. All these require a well represented and effective institutional framework, which is often considered as key factor for the success of a housing program.

As we discussed earlier, one major cause of Chinese urban housing problems is its unequal distribution system. As a result of work unit based housing delivery system, many urban residents who work in small and non-profit work units have no access to new housing units. One important purpose of this thesis is trying to use upgrading as an alternative solution to provide housing improvements for those who are left out from the existing housing system. In this sense, a new housing institution, different from the work units and city housing authority, needs to be established in order to help residents to carry out the self-help upgrading process.

The nature of this new community based institution will be different from the existing housing institutions. It will operate as an housing cooperative in assisting residents

during the upgrading process. Elected from local residents, the new housing organization should be recognized by the city government. It can directly negotiate with city government or other work units on various issues in upgrading, such as property registration, financial assistance, community land arrangement and so on. It also has responsibility to help residents obtaining the services connection, technical assistance, and relocation some households during the construction period. In addition, after the project completed, it will help to do housing maintenance, and monitor the cost recover process.

The nature of this upgrading program also needs such new community based housing organization. Since there are many aspects of upgrading involving with more than one courtyard houses (or more than 10-20 households), such as building the two-three story structures, a self elected housing organization can well represent the majority interests of the community to organize such activities. It will also function as bridge between local government and many individual households. Another more practical reason for setting the new housing institution at the community level is because there is already a set of residential community institutions existing in China, which has been quite effective in carrying out many tasks within the neighborhood. It seems to be quite possible to incorporate the housing upgrading scheme with this community institution, the residential committee in

particular.⁵

Finally, the community housing organization can also play an important role in land management. At least, the new community housing organization should be given some control over the development of their community, which including the decision on whether to have certain public facilities and new commercial development. The key point is that the organization should be able to negotiate with outside investors in order to bring some improvements to the community, and facilitate the upgrading process. In this way, the housing upgrading can be cross-subsidized by the commercial and industry development.

⁵. The residential committee is the lowest institution in urban China. It does not belong to formal administrative system. The size of a residential committee will include several hundreds households. Staffed by housewives or retired persons, the residential committee performs various social activities concerning the neighborhood.

CHAPTER SIX: CONCLUSION

In the introduction, I have identified two major causes behind the current urban housing problems in China: the unequal distribution and affordability. In order to overcome these two major constraints, an alternative approach has been developed, which will focus on self-help and low-cost upgrading. I believe that under the current circumstances, such innovative approach will provide most effective relief on current urban housing problems.

For solving the first problem, instead of trying to change the existing housing institutions, which may take a long time to accomplish, the upgrading program can provide immediate housing improvements for those who have been left out from existing housing distribution system. In other words, to shift the focus from exclusively mass new housing production to the upgrading old residential districts could maximize the limited resources, and have more effective results in terms solving the persisting housing problems in China. More importantly, through conducting a self-help housing upgrading program, a new community based housing system can be gradually established, which will in term help to eventually replace the old one.

In dealing with the second problem - affordability, the suggested upgrading approach also appears having an bigger

advantage over the conventional mass housing production. By adopting the self-help and incremental nature of upgrading process, the new approach can reduce the construction cost considerably. By combining a community based housing institution, an incremental design approach and a diversified financing arrangement, the new approach can create a bright future towards the affordable housing in China.

However, due to limited information, and rapid changing situation in China, there are some important issues not being addressed in this study, which should be included in future studies. Here, I would like to mention two most crucial ones: the urban land, and the conflicting between upgrading and urban redevelopment.

Unlike in many developing countries, the issue of urban land has never been considered as one major factor in the housing development, because in China urban land is not a commodity, and has no official recognized value. According to Chinese Constitution, all urban land are owned by the state; for many years, the urban land are allocated administratively to various enterprises and institutions. Since there is no cost for using them, the wasteful use of land by enterprises are common phenomenal in all Chinese cities.

In addition, without effective administrative, legal and economic controls from the state, the current land users often abuse their rights by illegally trading land for profit. With the growth of cities and increasing demand for urban land, the

illegal deals on land by individuals or work units have also increased. Such trend has intensified in today's reform era, due to decentralized control over economic activities, and high demand on urban land. In past years, a great deal of urban land were illegally sold, leased or exchanged among different parties at very high price. As a result, a quasi land market begins to emerge through such transactions. In last two years, the reform has also moved into urban land sector; a special tax will be charged on urban land; and the sell, trade and transfer of land use rights began to be experimented in some coastal cities. All these are aiming to encourage more efficient land use pattern in cities.

Such on going changes will create much more complicated condition for upgrading the old urban residential area. On one hand, the valuable location of these neighborhoods would provide ideal condition to attract commercial development and to cross subsidize for the housing upgrading; on the other hand, the recognized land value would make acquisition of certain properties, such as those along the main streets, too expensive to obtain, which will create difficulties for the community based upgrading process. Therefore, how to negotiate trade-offs, and how to persuade current housing owners to cooperate, will become important issues to be explored in the further studies.

In developing the new upgrading strategy, an implicit assumption is made that there are no major land use change

within each neighborhood during the upgrading. That assumption might not be valid today for some areas, particularly in large cities. From the consideration of city-wide economic development, some old urban area may not be kept as pure residential districts, instead, more intensive and mix use redevelopment will be planned. As a result of such intensive development, enough new off-site housing could be built by outside investors for relocating residents. This approach has already achieved some success in a few coastal cities. Under current rapid economic growth, and increasing number of commercial development, such redevelopment projects become more and more popular in many Chinese cities, which requires some changes on the upgrading program.

As matter of fact, such new development seems to share similarity with the recent trend of urban management in other developing countries. It is a way to bring upgrading of old urban neighborhood into a higher level of city-wide economic development. In this case, whether an area should adopt self-help strategy or the one above, will need more detail studies, and take more time to be put into practice.

In summary, although the self-help upgrading is not a solution for solving all the housing problems, under the current constraints, it is still a pragmatic strategy worth to try, because there is no other better or quicker ways to provide housing for those people who have been long neglected by the existing housing system.

BIBLIOGRAPHY:

Beijing Research Institute of City Development and Technology Management edited, Urban Housing Policy and Reform, 1985.

Beijing Research Institute of City Development and Technology Management edited, Housing Operation and Management, 1986.

Bamnerge, Michael, "The Role of Self-Help Housing in Low-Cost Shelter Programs for the Third World", Built Environment, Vol. 8, No.2, 1982.

Burns, S. Leland and Grebler, Leo, Housing of Nations: Analysis and Policy in a Comparative Framework, Halsted Press, a Division of John Wiley & Sons, Inc. New York, 1977.

Cai, Derong and Liang Ping, "Research on Rationalize the Consumption Pattern of Urban Residents", research paper, 1987, Institute of Consumption Economy, Xiangtan University.

Chen, Lijian, Urban Housing Policy and Housing Commercialization in Socialist Countries: China and Hungary, Master thesis, School of Community and Regional Planning, the University of British Columbia, 1988.

Colfford Culpin and Partners, Urban Project Manual, Liverpool University Press, 1983.

Cohen, A. Michael, Learning By Doing: World Bank Lending For Urban Development, 1972-1982, The World Bank, 1983.

Cohen, A. Michael, "The Challenge of Replicability: Towards a New Paradigm for Urban Shelter in Developing Countries", the World Bank Paper, 1982.

"Comprehensive Urban Renewal of Old Urban District in Shenyang", China City Planning Review, Volume 4, No. 1, 1988.

Feng, Jun and Zhen, Jirong, "The Analysis and Projection of Urban Housing Situation", Real Estate Economy, 1987, No.3, pp.42-45.

Gaag, van der Jacques, Private Household Consumption in China: a Study of People's Livelihood, the World Bank, 1984.

Guo, Wenxing and Wang, Wannan, "Practice and Research of Subsidized Housing Sales", The Proceedings of First National Conference on Urban Housing Problem, 1984, pp.41-44.

- Ha, Senog-Kyu, Housing Policy and Practice in Asia, Croom Helm, New York, 1987.
- Haarhoff, Errol, Planning and Financial Evaluation of Housing Strategies, university of Natal, 1983.
- He, Gongjian, "The Current Residential Housing Situation and Tentative Ideas for Resolving Problems" Jiangnan Luntan, No.6 (1980), pp. 12-19.
- Housing and Development Corporation, Programme Procedures and Guidelines, Kamal Art Press, New Delhi, 1982.
- Li, pingshan, and Yuan, Hantong, "Some Opinions on Upgrading Dangerous Structures in Beiijing", Urban Housing Problems, edited by Beijing Housing Research Association, 1984, pp.32-39.
- Li, Tienjun, "A discussion on Housing Price Reform of Our Country", in Urban Housing Problem in China: Proceeding of Conference in 1985, 1985, pp.61-63.
- Li, Xuezheng, Yang Shengming, and He Juhung, The structure of China's domestic Consumption: Analyses and Preliminary Forecasts, The Work Bank, 1985.
- Li, Zhongyou, "Redirect Workers' Consumption to Housing", in The Proceedings of First National Conference on Urban Housing Problem, 1984, pp.24-26.
- Lin, Zhiqun, "Housing Construction in China: A Briefing", City Planning Review, 1987, No.6. pp.1-4.
- Lin, Zhiqun, "The Present Situation, Prospect and Countermeasures Regarding Urban Housing in China", 1988, p.10. From "the International Workshop on Urban Housing Problem" Shenzhen, China, Oct.7-10,1987.
- Lin, Zhiqun, "Housing Construction in China: A Briefing", City Planning Review, 1987, No.6. pp.2-7.
- Liu, Hanchi, "About Improvement on Urban Housing Problems", Urban Housing Problems, 1984, pp. 148 - 153.
- Liu, Yen, The Preliminary Research on Preservation and Planning of Old City Districts of Beijing, Master Thesis, Qinghua University, 1987.
- Liu, Pingshan and Yuan, Hantong, "Some opinions on Renovating Dangerous Housing in Beiijing", Urban Housing Problem: Proceeding of Conference in Beijing, pp.32-39.

Lu, Xiangyun, "On Housing Sale and Comparison between Housing Sale Price and Rental Cost", in Beijing Housing System Reform: Investigation and Research, edited by Research Institute of Beijing People's Government and Beijing Housing Reform Research Team, 1987, pp. 80-97.

Lu, Xiangyun, "The Preliminary Proposal of Housing System Reform in Beijing", in Beijing Housing System Reform: Investigation and Research, edited by Research Institute of Beijing People's Government and Beijing Housing Reform Research Team, 1987, pp. 7-27.

Ma, Laurence and Cui Gonghao, "Administrative Changes and Urban Population in China, Annals of Association of American Geographers, Vol 77, No. 3, 1987. pp.388.

Pasteur, D., The Management of Squatter Upgrading, 1977

Payne, Geoffrey, "Introduction", in Low-income Housing in the developing World, G.K. Payne, (Ed.), John Wiley and sons, 1984.

Peng, Ruijue, Towards a New Housing Approach: Analysis of Settlement Environment and Housing Policy in Shanghai, China, Master thesis, Department of Architecture, M.I.T. 1986.

Reanud, Bertrand, Housing and Financial Institutions in Developing countries, International Union of Building Societies and savings Associations, Chicago, Illinois, 1984.

Research Institute of Beijing People's Government and Beijing Housing Reform Research Team, Beijing Housing System Reform: Investigation and Research, 1987.

Shah, Kirtee, "People's Participation in Housing Action: Meaning, Scope, And Stragety", in Low-income Housing in the developing World, G.K. Payne, (Ed.), John Wiley and sons, 1984. Chapter 12.

Shang, Zhiyuan, "Prospects of China's Urban Housing Development", Chinese City Planning Review, Vol 3, no.2, 1986, pp.24-30.

Shi, Huiying, "History of Beijing Urban Housing Construction", in Urban Housing Problem: Proceeding of Conference in Beijing, 1984, pp.103-105.

Shi Jiazhuang Urban Development Company, "The Investigation on Expanding Housing Construction Fund", The Proceedings of First National Conference on Urban Housing Problem, 1984, pp.177-

183.

Song, Xiaoduan, Conservation and Renovation of Courtyard Housing in Inner City of Beijing, (Thesis) Qinghua University, 1988 (in Chinese), p.20.

Su, Xing, Urban Housing Problem in Our Country, 1987.

"The Status Quo and Future Urban Housing in China Analysis of First National Survey of Urban Building in 1985", 1988, p.13. The paper was from "the International Workshop on Urban Housing Problem" Shenzhen, China, Oct.7-10,1987, sponsored by MURCEP and IPA.

The World bank, The Philippines, Housing Finance:a World Bank Country Study, the World Bank, 1982.

Tym, Roger, "Finance and Affordability", in Low-income Housing in the developing World, G.K. Payne, (Ed.), John Wiley and sons, 1984. Chapter 12.

Urban Housing Policy and Reform, edited by Beijing Research Institute of City Development and Technology Management, 1985.

Wang, Yuqing, "The Theoretical Discussions on Housing Economy in Recent Years", in China's Urban Housing Problems: Proceedings on Annual Conference, 1984, pp.69-75.

Wei, Wenzhen, "Some Opinions on Upgrading", Urban Housing Problems, edited by Beijing Housing Research Association, 1984, pp.11-16.

Williams, G. David, "The Role of International Agencies: The World Bank", in Low-income Housing in the developing World, G.K. Payne, (Ed.), John Wiley and sons, 1984. Chapter 10.

Wheaton, C. William, "Housing Policies in Developing Countries", Open House, 1988.

Yan, Zhongqou and Li, Zhao, "Some Opinions on Accelerating the upgrading of Dangerous Structure Area in Beijing", in Beijing Housing System Reform: Investigation and Research, edited by Research Institute of Beijing People's Government and Beijing Housing Reform Research Team, 1987, pp. 121-127.

Yang, Yenming, "Urban Housing Development Should be Tied with Increasing Standard of Old Housing Stock", The Proceedings of First National Conference on Urban Housing Problem, 1984, pp.133-140.

Yu, Changling, "A Discussion on Financial Resources of Upgrading Dangerous Structure", Urban Housing Problems, edited

by Beijing Housing Research Association, 1984, pp.30-32.

Yue, Xuewen, "Analyzing Urban Land Development of Beijing Through Aerial Survey", Chinese City Planning Review, 1986, No.2, pp.9-11.

Zhang, Lisheng, "From Reforming the Distribution Policy to Gradually Solve the Urban Housing Problems in Beijing", The Proceedings of First National Conference on Urban Housing Problem, 1984, pp.74-82.

Zhang, Yurun, "Tentative Opinion on Reforming Real Estate Management System", in Proceedings of First Conference on Urban Housing Problems, 1984, pp.90-92.

Zhongguo Tongji Nianjian (ZGTJNJ) 1983-1988, (China's Statistical Yearbook 1983-1988).

Zhu, Yicheng, "A Review of Problems in Upgrading the dangerous Structure: a Report From the Survey of Four Dangerous Structure area", Urban Housing Problems, edited by Beijing Housing Research Association, 1984, pp.7-10.

Zhu, Youxuan, Urban Housing Renovation in China toward a New Approach, Master Thesis, Department of Architecture, M.I.T. 1986.