LOW COST RENTAL FLAT DEVELOPMENT IN INDONESIAN LARGE CITIES

Transformation from traditional Kampung to multistory housing

インドネシア大都市におけるローコスト賃貸集合住宅開発
～伝統的カンポンから多層住宅供給への変容～

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This paper is a basic study which examines an affordable rental flat housing in the Indonesian large cities, by both macro level and micro level; that is housing needs and market analysis, and this is living style transformation of low-income inhabitants. First, in this, we clear the characteristics of low cost rental flats market through the examination about the house-ownership brands, typology of rental house, the subsidy and its affordability, and so on. Second, we make sure of the problems of rental flat housing with the continuity on the traditional living style of inhabitants who intend to own houses through the survey for the inhabitants of rental flats on kampung redevelopment. Base on these circumstances, we suggest that, when rental housing is implement targeting low-income people in the Indonesian large city planning, it is necessary to make a appropriate planning of business and living space, not simply of living, and, at same time, to design space and use in consideration of the continuity with traditional kampung lifestyle.

Keywords : *Low Cost Rental Flat Housing, Gentrification, Transformation of Kampung Living Style*

ローコスト賃貸集合住宅供給、ジェントリフィケーション、カンポン住様式変容

1. Introduction

The housing demand especially for urban area is still very high in Indonesia. Most of the urban people prefer to own houses than to rent them. But, on the other hand, the scarcity of land within the city's boundaries makes the land's and housing prices so unaffordable that they can't purchase houses. In 1960s, Kampung Redevelopment starts for this housing and infrastructure problems, and its policy has been changed from "Demolition and Relocation" into "Improvement" and "Community-based"¹⁾. Recently many low-cost urban housing have been implemented, but the programs of owning houses have not become the main solution against the urban housing problem because of land's price sky-rocketing. The affordability for purchasing houses for low income people became slowly increasing during the last decade. Based on these facts and land shortage, the choice solution for "low cost rental flat" has become to be the important policy for urban housing. While, it is true that there is a remarkable change in the pattern of space use in rental flat housing owing to the transformation of living style from traditional kampung to multistory housing.

About the kampung in Indonesia, there is a series of Funo's research and study on the kampung. And about Indonesian rental housing, there are some unpublished thesis of Gadjah Mada Univ., and so on, and some report to show the condition of rental housing by statics. In this paper we

would like to explain the pattern and characteristics of low cost flat development concerned to the significance of rental housing market ("rental types and subsidy affordability") and the problem of kampung living style transformation. First, for this purpose, we review the low cost flat development in relation to the type of rent and subsidy affordability. Second, we mention the results of our investigation on 3 areas in Jakarta and Surabaya by POE (Post Occupation Evaluation) mainly about community's character and inhabitants' spatial behavior. Finally, we evaluate some facts and findings in planning and designing problems to make the recommendation notes to redevelop the kampung and build low cost flat in the inner city areas.

2. Ownership Type of Urban Housing

In Indonesian large cities (metropolitan cities), 38% of households rent houses, and 3% don't have to pay the rent fee because their house is provided by family, relatives and friends, or by employer for special services. (Table 1) The distribution of this ownership varied according to the city size. In medium cities, owned houses are more popular than metropolitan cities. But in small cities, the ratio of rental houses is higher than medium cities (29%), but the renters generally are young people (more than 80% under 30 years old) and 67% are students. Thus, the percentage of rental houses in metropolitan cities is very high²⁾.

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Table 1. Ownership Type of Household

		Owned	Rent	Other	Total
Metropolitan Cities	38%	59%	38%	3%	100%
Jakarta	17%	65%	35%	-	100%
Others	21%	55%	40%	5%	100%
Other Urban Areas	62%	84%	16%	-	100%
Medium Cities	39%	92%	8%	-	100%
Small Cities	23%	71%	29%	-	100%
Total	100%	75%	24%	1%	100%

(Source: Indonesian Housing Survey in 1995 (ref. 4.))

Given the demand for rental houses, quite number of individuals make available space or add a room to their owned houses for the purpose of renting out. This individual initiative is the construction of 'pondok' (means 'dormitory') living system for circular migrants which sometimes include their family. There are two types in rental apartment; 'pondok' and 'tinggal'. The 'pondok' type consists of several or many apartment usually without facilities, of which rooms are inhabited by separate household. The 'tinggal' type is apartment with more than one room and facilities, which more than one household inhabits.

The composition of types of rental houses in urban areas except metropolitan cities is 5% of 'pondok' type and 11% of 'tinggal' type. While, in Jakarta, the rental houses estimated 35% with the composition of 11% of 'pondok' type and 24% of 'tinggal' type³. Looking back to the colonial period in 1937, the survey⁴ of 1,073 coolies showed that a small proportion (4%) was living in municipal dwelling. The remainder fell into three groups: those sharing dwelling with other families (20%), those living in rented dwelling (57.5%), and those owning their own dwelling (18.5%). And the 'pondok' type was the most common type of dwelling (54.5%) and the 'tinggal' type was 23%, and together with occupant owned houses as much as 26.5% of all type of dwelling.

3. The Jakarta Low Cost Flat

In 1992, 76% of the new housing development in Indonesia was allocated for replacement and new construction, and 24% was done for improvement and renewal program⁵. The total housing demand for Jakarta city covered 15% of total urban housing stock, and this is only supply 10% for the total need per year. The classification of the city size shows that 23% of urban households lived in small towns, and that 39% lived in big cities excluding Jakarta. The Jakarta metropolitan city covered 17% of the total urban households. The average size of one floor of each dwelling unit in urban area⁶ is about 50 m² with the composition range that 25% is less than 28 m² and 10% is more than 130 m². The average plot size of one for middle income is 120 m² and 60% for building (it means 'plot ratio') whereas 14% of the houses have 100% plot ratio or having no open space. Smaller the city size is, slower the plot ratio becomes increasing. This indicates that the land in the big cities is very scarce even in Jakarta. 23% of the houses have plot ratio of 100% contrast to the small cities which only 4% of houses have the plot ratio of 100%.

The housing target for low cost flat of Jakarta city is 7,500 units per year, but the projection of supply capacity is estimated only 3,150 units per year from 1995 until 2000. It means that they have 15,750 units of low cost flat in the end of the year 2000 at least.

3.1 Subsidy and Affordability

The Jakarta local government has two types of subsidy for low cost flat that is for rental type ('sewa' in Indonesian) and for 'rent to purchase' type ('sewa beli'). The housing need for the people with the income under 200,000 rupiah⁷ in Jakarta reaches 9,675 units (15%), and that for 200,000-300,000 rupiah reaches 22,575 units (35%)⁸, as people in this category have no affordability for purchasing houses. Based on the standard of the household, the limit of an expenditure for purchasing houses is 30% of monthly income. The affordability for purchasing houses by loan for this low income category can be estimated only under 50,000 rupiah per month, or just purchasing a house with the price of 3 million rupiah. This is still far for purchasing the one unit of rental flat with the price 10 to 15 million rupiah per unit, even for purchasing landed simple housing in urban fringe with the price of 4.9 million rupiah is unaffordable. The housing demand for the middle income (300-400 thousand rupiah) reaches 19,350 units per year (30%), and that for the income of more than 400,000 rupiah reaches 12,900 units per year (20%). The people of this income level can buy the 'rent to purchase' type with the affordability of paying 100-150 thousand rupiah per month or purchasing house with the price of 10 million rupiah. This shows that there is also the need of the subsidy for purchasing houses in the inner city area, because it costs almost 500,000 rupiah per m² to get a house or smallest unit flat excluding the land's price. Thus, the rental flat development for low income level is very unprofitable for developer.

3.2 Change of Kampung Flat Inhabitants

The urban renewal projects was implemented the flats for accommodating the kampung people with low income with the basic principle concepts; it has no displacement and gives the opportunity for running their informal economic activities and community empowerment.

Table 2. Income According to Origin Place Before Living in Flat Housing

Income	Same Location of Flat (%)	Same Kecamatan of Flat (%)	Other Kecamatan Area (%)	Total (n)	Total (%)
(rupiah)					
<=300,000	45	31	14	253	25
300,000-500,000	34	29	21	259	26
500,000-700,000	11	11	15	128	13
>700,000	10	29	50	356	36
Total (%)	100	100	100	-	100
Total (n)	197	302	497	996	-

(Source: Kompas Research Institute, 1996)

The social survey of this kampung flat housing by Kompas Research Institute has been conducted on 9,336 units low cost flat, 996 respondents in 18 locations from 18 to 27 March 1996. The result identified that the target of low cost flat for low income inhabitants was missed the target for middle income people. Low Cost Flat Regulation (U.U.No.16 Tentang Rumah Susun 1985) targeted the low cost flats for low income people, while Master Plan for Low Cost Flat Development of Jakarta 1995 targets ones for low and middle income people. So the target of low cost flat development shifted during 10 years.

The Kompas survey (Table 2) showed that majority of the low cost flat inhabitants in Jakarta have the income more than 700,000 rupiah. The category of low income people in Jakarta is under the 300,000 rupiah, and the survey found that only about 25% of the kampung flat inhabitants were categorized in this income level, and that the remainder was the middle and high income people. The majority of the inhabitants there was

the former local inhabitants of the location where the flat had been built, and the percentage is 45%. But only 10% of them had the income of more than 700,000 rupiah. Meanwhile the others who had middle and high income were come from other location. Each kampung flat has the different characteristics. The high percentage of high income inhabitants was found in Pluit, Pulo Mas, Kebon Kacang, Tanah Abang and Klender, while, the high percentage of the low income inhabitants was found in Cengkareng, Jati Rawasari, Tambora, Pondok Kelapa, Pondok Bambu, Tanah Tinggi and Bendungan Hilir in Jakarta.

The other result of the investigation showed that only very small percentage of the kampung flat households came from the local former inhabitants which can be found in flat occupied before 1990 that is in Tanah Abang(1981), Klender(1982), Jati Rawasari(1988), Pluit(1988), Pulo Mas(1985), Pondok Kelapa(1986) and Cipinang Besar(1982). In Tanah Abang, all of the households were new comer from other location, whereas, in the earlier occupation of the flat in 1981, all of them were the former local households. In the new kampung flat occupied after 1990, the amount of the former local households still showed the relatively high percentage that is Tanah Tinggi (1994) and Bendungan Hilir (1996). In Kemayoran which built in 1990, the inhabitants were only about 500 households (10%) of the 5,000 evacuees of the flat development area.

The survey also provides the results that 80% of the kampung flat inhabitants came from other location, and only 20% were former local households. Most of the status of ownership of the former local households were 'rental' ownership. The survey also found that 10% of the former local households have owned houses in the refuge area for flat development and from this amount only 37% have the owned status and the remainder (63%) have occupied with the rent status or just occupied with their relatives with no rent.

The type of flat's units could be categorized into three types that is small type, middle type and large type. The small type has 14~16 m² space consist of 1 room (4x3 m² or 4x4 m²) with a kitchen (1x1 m²). The middle type has 18~28 m² consist of 1 room (4.5x3 m²) and a kitchen (1.5x0.8 m²). And large type has 36~54 m² consist of 2 or 3 rooms with a kitchen and a bathroom. Most of the households from other location

occupied the middle and large type, and the small type is mostly occupied by former local inhabitants. It could be seen from the consumption level, the inhabitants of the flat housing have relatively high affordability, for such as the percentage of having car in Tanah Abang and Kebou Kacang was 41%, in Pulo Mas it was 35%, and in Pluit it was 37%. And that of having the telephone facility in Tanah Abang was 77%, and it was 61% in Kebou Kacang and Klender, 47% in Pluit, 26% in Kemayoran, and 23% in Pulo Gadung.

3.3 Gentrification of Low Cost Flat

In the process of occupation of kampung flat, there is the allocation terms of 'jatah langsung' (means 'direct allocation') that means the allocation for former local evacuees to occupy the flat which built in the former location of their houses. For the type of 'owned' or 'purchased to own' of the flat, the 'jatah langsung' could be in the form of 'tukar guling' (compensation) for the households who had the owned land or house in the evacuation area for the flat development. And for the rental type, the 'jatah langsung' could be in the form of 'hak sewa' (rental right) for the households who just rent the house in the evacuation area.

The households who come from other area and want to live in the flat usually purchase or rent the flat by taking through developers or changing hands from the first owner or renter. The survey results identified that 32% of the kampung flat households obtained the flat from the second owner either through the first owner or the broker. This showed the relatively higher percentage than that of the households (it was only 25% of the owner households) who got the 'jatah langsung', and 21% got the flat from the second owner, third owner, and so on. Or almost 40% of the renter households rent from second renter, third renter, and so on. Therefore, the kampung flat housing has high possibility of changing the function into commodity goods for middle and upper households. In other words, it can often indicate the "gentrification" phenomena and miss the target of kampung community who most of them were low and low-middle income households. The investigation results showed that the heads of households who live in kampung flat have the educational background of, at least, graduating from high school (63% of all), and that most of them have the job in

Fig. 1. Plans of the Conventional Type and the Innovative Type of Multistory Kampung Flat Housing

formal private sector (46%) with the average income of 785,000 rupiah (60%). Working in formal sector of either public or private companies (62%) also characterized the kampung flat housing. This is very different from the characteristics of the kampung houses which most of the inhabitants work in the informal sector.

These facts show that the areas of kampung flat development project was gradually changed hands to become residential areas owned by new households from other location, who mostly had middle and upper income level. That is why the former local kampung inhabitants had to move out again toward cheaper areas to survive.

4. Kampung Flat Living Style

With changing the residential place from traditional kampung houses into the flats, it happens an inevitable change in the patterns of living style. In 1993, we conducted the social and spatial-behavior survey in Penjaringan rental flat in Jakarta as the conventional type, and the Dupak and Sombo rental flat in Surabaya as the innovative type (Fig. 1). From the results, we have done the comparative study on the three cases for the purpose of investigating the changes of living tradition.

4.1 Characteristic of Household

We conducted the survey against the samples of 150 respondents in Penjaringan (50 samples in block A, B, C, D, 50 samples in block E, F, G, and 50 samples in block H, I), 30 samples in Dupak and 70 samples in Sombo; the samples were randomly chosen households, and we surveyed them by hearing and observation. According to what we have analyzed the results, it was found that there are 4 main groups of living types; a) one person, b) group, c) nuclear family, d) extended family. The

following tables (Table 3~6) give the breakdown of household's basic characteristics.

4.2 Dwelling Unit Living Activity

The mapping of space use and living activities in dwelling units can be cataloged as the following anatomy. The anatomy presents the pattern from which based on the mapping of multistory kampung setting and its activities. The pattern defines an arrangement of part of behavioral indicators and have five defined sections: 1)definition of territory, 2)social occasion or timing of event, 3)users, 4)activities or behavior, 5)elements of reference, or place of scene. The following tables (Table 7~10) give the breakdown of dwelling unit space typology and its space use.

4.3. Pattern of Extension, Interchange and Conceptual Change

This survey formulated initial questions to assess the pattern and tested them on the case study through the process of developing questions and answers which dealt primary with three main interacting themes: 1) Room arrangement, 2) Interchange, 3) Extension (Table 11~13). To answer the question at the level of detail, this survey provided a basic order of: 1) Categories of activities space by functions, 2) Variety of change modes as residents' control of the setting. The following tables give a breakdown of room arrangement, interchange and extension (Table 14, Fig. 3).

In these circumstances, the settlement in kampung flat housing is realized by flexible and various patterns of space-use transformation, and the extension of many functions, even sleeping and guest's spaces, to balconies and corridors, and it is not only because people make up for the smallness of dwelling units.

Fig. 2. Examples of Space Use Behavior in Kampung Flat Housing

4.4. Shared Spaces and Facilities

In Dupak and Sombo, shared bathing/toilet facilities and shared kitchens are provided on the 2nd, 3rd and 4th floor. The observation shows that the shared bathroom and toilet are more acceptable or better reception by kampung community compared to the shared kitchen.

It is assumed that this phenomena due to their having experience on the using of MCK (communal bathing, washing and toilet) in their former living in traditional kampung. The observation shows that, compared with using shared kitchen, providing the shared facilities for laundry is more acceptable for the community, especially the women (Table 15).

Table 3. Household Type (%)

	Dupak	Sombo	Penjaringan (Block)		
			A,B,C,D	E,F,G	H,I
One Person	-	-	6.0	2.0	2.0
Group	3.3	-	22.0	28.0	14.0
Nuclear Family	73.3	68.6	64.0	48.0	70.0
Extended Family	23.3	31.4	8.0	22.0	14.0

Table 4. Number of Household Member (%)

	Dupak	Sombo	Penjaringan (Block)		
			A,B,C,D	E,F,G	H,I
1 person	-	-	6.0	2.0	2.0
2 persons	10.0	2.4	12.0	6.0	4.0
3 persons	23.3	11.4	24.0	16.0	28.0
4 persons	26.7	20.0	18.0	24.0	22.0
5 persons	30.0	18.6	24.0	32.0	24.0
6 persons	3.3	24.3	16.0	10.0	12.0
7 persons	-	14.3	-	-	4.0
8 persons	-	4.3	-	-	2.0
9 persons	-	1.4	-	-	-
10 persons	-	2.8	-	-	2.0
More than 10	6.7	-	-	-	-

Table 5. Head of Household's Job, and Spouse's Job (%)

	Dupak	Sombo	Penjaringan (Block)		
			A,B,C,D	E,F,G	H,I
Head of Household					
- Public Official	10	21.4	12	12	6
- Private Formal	13.3	31.4	52	52	60
- Private Informal	76.7	47.2	36	36	34
Spouse					
- Public Official	-	1.4	-	6.0	-
- Private Formal	-	-	8.0	14.0	10.0
- Private Informal	20.0	35.7	36.0	22.0	18.0
- Housewife	80.0	62.9	56.0	58.0	72.0

Table 6. Household Income (%)

	Dupak	Sombo	Penjaringan (Block)		
			A,B,C,D	E,F,G	H,I
Less than 50	3.3	-	-	2.0	-
50-100	6.7	-	-	6.0	10.0
100-150	26.7	8.6	6.0	6.0	22.0
150-200	20.0	15.7	12.0	14.0	20.0
200-250	3.3	10.0	24.0	12.0	8.0
250-300	3.3	-	10.0	16.0	12.0
More than 300	3.0	-	40.0	34.0	26.0
NA	33.4	65.7	18.0	10.0	2.0

Table 7. Typology of Dwelling Unit Space (%)

	Dupak	Sombo	Penjaringan (Block)		
			A,B,C,D	E,F,G	H,I
One Plan	6.6	8.6	26.0	32.0	40.0
Curtain as Divider	13.3	17.1	10.0	24.0	18.0
Panel as Divider	36.6	11.4	24.0	16.0	14.0
Furniture as Divider	40.0	54.3	26.3	12.0	34.0
Using Mezzanine	-	4.3	-	6.0	-
Extension to Balcony	16.7	27.1	12.0	38.0	30.0
Extension to Corridor	43.3	81.4	60.0	72.0	66.0

Table 8. Having Space for Each Space Use (%)

	Dupak	Sombo	Penjaringan (Block)		
			A,B,C,D	E,F,G	H,I
For Sleeping	93.3	92.8	94.0	98.0	94.0
For Dining Room	10.0	18.0	2.0	6.0	8.0
For Guest Room	73.3	44.2	36.0	24.0	36.0
For Small Business	13.3	17.1	14.0	20.0	34.0

Table 9. Means for Sleeping (%)

	Dupak	Sombo	Penjaringan (Block)		
			A,B,C,D	E,F,G	H,I
Mats	20.0	15.7	10.0	-	18.0
Mattress	-	27.1	64.0	24.0	32.0
Bed	90.0	94.3	86.0	92.0	90.0
Sofa	6.6	5.7	4.0	12.0	-
Folded Bed	-	-	18.0	26.0	-

Table 10. Space Use for Sleeping (%)

	Dupak	Sombo	Penjaringan (Block)		
			A,B,C,D	E,F,G	H,I
Bed Room	93.3	92.8	94.0	98.0	94.0
Guest Room	13.3	34.3	24.0	22.0	18.0
Mezzanine	-	4.3	-	6.0	-
Balcony	2.8	5.7	-	-	-
Corridor	10.0	22.8	12.0	16.0	4.0
Open Plan	6.6	8.6	26.0	32.0	40.0
Shared Kitchen	-	8.6	-	-	-
Praying Room	6.6	17.1	-	-	-
Outside the Block	3.3	12.9	4.0	-	2.0

Fig. 3. Category of Room Arrangement

Table 11. Room Arrangement

	Dupak	Sombo	Penjarangan (Block)		
			A,B,C,D	E,F,G	H,I
Core Type					
- One Bed Room Open Plan	6.6	6.6	26.0	32.0	40.0
Core with Guest Room	10.0	18.6	2.0	6.0	8.0
Core without Guest Room					
- Additional Multipurpose Room	-	-	2.0	-	6.0
- Additional Bed Room	6.6	14.3	6.0	22.0	2.0
- with Room for Economic Act.	3.3	5.7	4.0	10.0	18.0
Standard Type					
- (Guest, Bed, Dining) Room	73.5	52.8	60.0	30.0	26.0

Table 12. Interchange of Space

	Dupak	Sombo	Penjarangan (Block)		
			A,B,C,D	E,F,G	H,I
Guest Room - Bed Room	6.7	20.0	18.0	10.0	16.0
Guest Room - Dining Room	23.3	44.2	26.0	32.0	36.0
Bed Room - Dining Room	26.7	37.1	12.0	24.0	-
Stall - Bed Room	3.3	-	6.0	2.0	14.0
Bed Room - Workshop	3.3	4.2	-	10.0	-

Table 13. Extension of Space

	Dupak	Sombo	Penjarangan (Block)		
			A,B,C,D	E,F,G	H,I
Balcony for :					
- Bed Room	2.8	5.7	-	-	-
- Kitchen	20.0	38.0	-	-	-
- Storage	6.7	12.9	8.0	-	14.0
- Workshop	3.3	-	-	-	-
- Dining Room	3.0	2.8	-	-	-
- Sitting Room	7.6	11.4	-	-	-
Corridor for :					
- Bed Room	10.0	22.0	12.0	16.0	4.0
- Guest Room	16.7	12.8	-	-	-
- Stall	10.0	15.7	14.0	18.0	30.0
- Storage	3.3	8.6	12.0	6.0	22.0
- Kitchen	6.7	17.1	-	-	-
- Workshop	3.3	1.4	-	-	-
- Dining Room	-	4.2	-	-	-

Table 14. Modes of Change

	Dupak	Sombo	Penjarangan (Block)		
			A,B,C,D	E,F,G	H,I
Sleeping Equipment	6.7	20.0	18.0	10.0	16.0
Divider	-	-	4.0	14.0	-
Additional Furniture	16.7	12.9	-	-	-
Enclosing Balcony	3.3	2.9	-	6.0	-
Mezzanine	-	4.3	-	-	-
Kitchen Equipment	26.7	55.7	-	-	-
Change Used Furniture	3.3	5.7	4.0	12.0	-

Table 15. Preference for Using Shared Facility

	Dupak	Sombo	Penjarangan (Block)		
			A,B,C,D	E,F,G	H,I
Bathroom and Toilet :					
- Available	32.0	38.0	32.0	40.0	48.6
- Not Available	62.0	48.0	60.0	53.3	48.6
- Don't Know	6.0	14.0	18.0	6.7	2.8
Kitchen :					
- Available	26.0	20.0	10.0	23.3	22.9
- Not Available	60.0	58.0	76.0	56.7	52.8
- Don't Know	14.0	22.0	14.0	20.0	24.3
Laundry					
- Available	56.0	74.0	50.0	63.3	74.3
- Not Available	28.0	18.0	36.0	26.7	18.6
- Don't Know	16.0	8.0	14.0	10.0	7.1

Table 16. Type of Small Business Activity

	Dupak	Sombo	Penjarangan (Block)		
			A,B,C,D	E,F,G	H,I
Food stall	3.3	2.8	2.0	4.0	12.0
Daily Items Kiosk	3.3	8.6	10.0	12.0	8.0
Service	-	-	2.0	2.0	6.0
Workshop	6.6	5.7	-	2.0	8.0

Fig. 4. Small Business Activity in Kampung Flat Housing

Fig. 5. Pattern of Behavior Extension

Through the observation, the pattern of space use in shared kitchen can be categorized into the following: 1) unused at all, 2) just for washing, cooking in the dwelling unit, 3) just for cooking, preparing in dwelling unit, 4) storage for domestic wares, except kitchen wares, 5) used for kitchen both cooking and preparing, 6) used for sleeping in the night (unused kitchen), 7) storage for kitchen wares.

4.5 Space Use for Small Business Activity

This observation on typology of informal economic activity in kampung multistory housing in the study area led to the suggestion that there are four main types (as shown in Table 16): a) food stall, b) daily-items kiosk, c) service, d) workshop. All of these above activities can be cataloged in the following figures and diagram (Fig. 4). These shows that the dwelling units, the shared spaces in flats, and the common space in housing estates is used not only for living, but also for small business activities.

Considering all the circumstances mentioned above, it is obvious that living activities will extend from dwelling unit level to block level and neighborhood level as shown in Fig. 5. And this shows that there is the continuity between kampung lifestyle and flat housing lifestyle, and, in other words, the habitants will secure the settlement just like traditional kampung especially in innovative flats.

5. Conclusion

After evolution of some planning issues and investigation of the case study areas, the recommendation notes could be concluded as follows:

1. The 'rent' type is more appropriate than the 'purchased to own' type for low income group especially for 'pondok' living system, because they have very low affordability for purchasing the house and just using the house as dormitory or lodging purposes in the inner city as working place.
2. The subsidy in the form of 'rent' type is more appropriate not only because the income affordability must be assured for low income level, but also because the 'purchased to own' houses have the high possibility for changing the function into commodity goods and causing the gentrification of local kampung community to move out toward cheaper areas, and changing hands to become residential area owned by new households from outer area who mostly have middle and upper income level.
3. The living types in rental flat could be grouped into four types: living place system, living and working place system, working place system and lodging place system. This is very similar to the traditional kampung which have two types of setting; 'pondok' (lodging) and 'tinggal' (living), and sometimes accompany with the settings for working.
4. The kampung flat inhabitants do the consolidation activities dealt with their living and small business activities with the room arrangement, space extension and interchange of space use.

After detail examination of the study area on a sample method basis, some evaluation notes of consolidation behavior are obvious and can be concluded as follow:

1. A corridor and small hall either in ground floor or in upper floor are shared spaces in kampung multistory housing instead of alleys and pocket open spaces in traditional kampung.
2. The concept of corridor is redefined not just for 'go' space, but also for 'do, sit, place and occur' space.
3. The shared spaces as 'go, do, sit, place and occur' space showed that the different types of design accommodate the various behavior which double up as both social and economical function concurrently giving the sense of kampung community.

The community-based approach is needed for exploring and developing a working mechanism which provides the community not only to solve their housing problems, but also to improve their social and economic condition by mobilizing the already existing efforts and skills. In this paper, we could make sure that the rental flat housing for low income people is appropriate, and that it is important to consider location and subsidy affordability for rental flat housing. And through the case study, we could suggest the approach point of the planning and designing with concerning to that the community can identify their specific needs or problems in designing their neighborly shared spaces.

These conclusion are some preliminary notes for the planning and designing of low cost flat development for low income level. After this, we need suggest more concrete methodology to develop, plan and design.

Notes :

- *1 See Funo, Shuji. (1991). *Kampung Housing System*(Ref. 9) in detail. About rental housing finance system, there are three types. First is private sector type which private investor would be authorized to develop areas considered profitable. Second is government control type which the government will be in charge of development in areas which are not supposed to be profitable. Third type is provincial government - owned firms or state owned foundation which in charge of development in areas considered only somewhat profitable.
- *2 In urban areas except small cities, the income level of household is high comparatively, and the percentage of owned house becomes very high. Adding, the building type of rental house is a little different between metropolitan and small cities; that of metropolitan cities consists of landed or two-three stories houses and flats, while, that of small cities is mostly landed and two-three stories houses.
- *3 Taken from Pref. 4.
- *4 Taken from Pref. 6.
- *5 1 yen $\div$ 24 rupiah, in 1997

References

1. Yudohusodo, S. (1990). *Housing for All People*, (Inkoppol).
2. Pemda DKI. (1995). *Development Manual for Jakarta Low Cost Flat*, (Jakarta, Indonesia).
3. Prayitno, Budi. (1994). *A Study on Continued living Adaptability of Kampung Multistory Housing*, (Master Thesis, Kyoto University, Kyoto).
4. Ministry of Public Housing. (1995). *Indonesian Housing Survey, 1995*, (Jakarta, Indonesia).
5. Kompas Research Institute. (1996). *Social Survey of Kampung Flat Housing*, (Jakarta, Indonesia).
6. Volkstelling. *Indonesian Censuses of 1971 and 1980*.
7. Local Government Office of DKI. (1995) (Jakarta, Indonesia).
8. Dermawati D.S. (1994). *Spatial Change of Tourism Kampung in Sosrowijayan Yogyakarta*, (Unpublished Master Thesis, Graduate School of Architecture, Gadjah Mada University, Jakarta, Indonesia).
9. Funo, Shuji. (1991). *Kampung Housing System (Kampung Sekai'in Japanese)*, (Parco Publisher, Tokyo).
10. Devas, Nick. (1981). *Indonesia's Kampung Improvement Program = An Evaluative Case Study*, (Elcistics, vol., 48).
11. Rahardjo, Sarwono. (1994). *Spatial Consolidation of Privacy in Sombo Flat Housing*, (Unpublished Master Thesis, Graduate School of Architecture, Gadjah Mada University, Jakarta, Indonesia).
12. Sukanto, Joko. (1995). *New town and Community Empowerment = The Case of Kemayoran Jakarta*, (Unpublished Report, DP3KK, Jakarta, Indonesia).

和文要約

1. はじめに

インドネシアでは、大都市圏を中心に大量住宅需要が存在する。都市部の人々は持ち家志向が強いものの、地価高騰により住宅購入は困難な状況になっている。都市型住宅供給事業も展開されているが、それらは高騰する地価のもとでは、住宅不足解決の手法とはなっていない。一方、ローコスト賃貸集合住宅供給は、カンボンなどのスラム化した都市居住環境を改善する手法として導入され、そのいくつかは実現するに至っている。しかし居住者の高所得層化(ジェントリフィケーション)や、伝統的カンボン居住様式の継承などの問題も浮上している。

本稿は、このような背景のもとに、インドネシア大都市圏におけるアフォーダブルな賃貸住宅供給に関して、ニーズと市場のマクロと、低所得居住者の接地型住宅から集合住宅居住によるリビングスタイル変容のミクロの両面で検討した基礎的な調査研究である。

2. 都市住宅の所有関係タイプ

インドネシアでは、55%が持ち家、40%が借家である。この住戸の所有関係は、市町村の規模によって変化し、小さな市では、借家が29%と借家率が低くなり、大都市になると、借家は16%と、さらに持ち家率が高くなる。しかし、ジャカルタのメトロポリスでは、借家ニーズが高くなり、約35%になると考えられる。借家供給についてみると、きわめて多くの人々がここに所有する住戸に部屋を増築し、他の世帯に貸し出すケースがみられることが特記される。戸建住戸における賃貸用増築が、人口の内部移住の吸収源となっているのである。この戸建住宅増築には、2つのタイプがある。一つは、"pondok"タイプと呼ばれ、複数の部屋を用意し、それらを、トイレ・台所・接客スペースを持たない住戸として供給されるタイプであり、もう一つは、"tinggal"タイプと呼ばれ、トイレ・台所などを設けて、複数の世帯が居住するタイプである。大規模都市圏では、5%が pondok タイプ、11%が tinggal タイプである。ジャカルタでは、それぞれ11%、24%となると予測される。植民地時代には特に顕著で、ある調査では、pondok タイプが54.5%、tinggal タイプは23%に及んだとされる。

3. ジャカルタのローコストフラット

1992年ジャカルタにおける住宅開発事業は、その76%が移住・クリアランスによる事業、24%が改良・リニューアルによる事業であり、それらは住宅ニーズの10%に相当する。町の規模別世帯数をみると、全都市世帯の17%がジャカルタのメトロポリスに集中していることもあり、現在ジャカルタにおけるローコストフラットによる住宅供給目標は年間7500戸とされているが、実際には1995年から2000年の間は年間3150戸にとどまるとみられている。

ジャカルタの地方政府はローコストフラットのために2つの補助制度を用意している。一つは、賃貸される住戸用、もう一つは賃貸後購入される住戸用である。これは、住宅を購入、賃借できない所得者層が数多くいるためである。月30万ルピア(日本円で12千円)以下の低所得者層の住宅需要はジャカルタでは約32千戸に及ぶが、1千万ルピア(40万円)する賃貸住宅はもちろん、郊外の土地付きシンプル住宅(490万ルピア、

約20万円)も新しく購入する余裕は彼らにはない。また、月収30~40万ルピアの中所得者層の住宅ニーズも年間約2万戸あるが、10~15万ルピアの賃貸住宅か、1千万ルピアの住宅しか購入できない。また、土地代をのぞく建設コストは㎡あたり50万ルピアかかることも都市部での住宅購入さらにデベロッパーによる住宅開発を難しくしている。

一方、カンボン集合住宅供給事業による居住者についてみると、低所得者層から中所得者へとシフトするというジェントリフィケーションの現象もみられる。ジャカルタのローコスト集合住宅の居住者に対する調査報告では、70万ルピアを越える居住者が全体の36%にもなり、その多くが、他の地域から流入した居住者であった。また、カンボンフラットの占有関係をみると、従前居住者が従前地区に、住戸を賃貸する形で居住するタイプと、ディベロッパーから直接に、もしくは、最初の所有者、賃借人から譲り受けて住戸を所有もしくは賃貸して居住しているたいぶがあるが、調査報告では、持ち住戸の32%が後者のタイプであり、前者の25%より高いパーセンテージになっている。また賃貸についても、ほぼ40%が賃貸し状態であった。これらの事実は、カンボン集合住宅開発事業による集合住宅居住者層が、徐々に、従前居住者から他地域からの移民者へ、低所得者層から、中高所得者層へとシフトしていくことを示している。

4. カンボンフラットのライフスタイル

伝統的なカンボン居住から集合住宅へと移行すると、生活スタイルにも変化が現れる。1993年我々は、ジャカルタのPenjaringanの賃貸集合住宅と、スラバヤのDupak、Somboの集合住宅を取り上げ、そこでの社会・空間行為について現地調査を行った。調査では、Penjaringanで150世帯、Dupakで30世帯、Somboで70世帯のサンプルを得て、世帯主属性、住戸での生活行動、住戸内外の変更、共有スペースの使用状況、小規模ビジネス行動などについて分析を行った。その結果、多くの世帯で、住戸内の改造、廊下やバルコニーへの住戸拡張、生活行為(就寝、接客行為など)のあふれ出し、共有スペースの占有化がみられ、インフォーマルな小規模ビジネスも行われていることがわかった。

これらの結果は、それぞれの住戸での生活行為が、住戸レベルから、住棟レベル、近隣レベルへと広がっていることを示しており、単に住戸の狭さを補うためだけでなく、伝統的なカンボンにおいてみられた生活スタイルが、新しくデザインされた集合住宅においても継承されていることを表しているといえる。

5. 結論

以上、本論文では、まず第一に、低コスト賃貸集合住宅市場の性格を、持ち家志向、賃貸タイプ、補助制度・アフォーダビリティなどの諸点から明らかにし、第二に、持ち家志向・接地型住宅志向の強い居住者の従前居住との連続性を確保した賃貸集合住宅供給の課題を、カンボン地区の再開発賃貸集合住宅の居住者調査から明らかにした。その上で、低所得者層をターゲットとした賃貸住宅供給には、居住のみならず職住併用空間の適切な計画とカンボン生活との連続性を考慮した空間設計の必要性を提起している。

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