

Domestic Space Arrangement of The Private Rental Housing : A Case of Urban Village Housings of Yogyakarta, Indonesia

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Abstract

It is the purpose of this study to examine the domestic space arrangement of the private rental housings in *kampung* (urban village) settlement. Kampung Ngentak Sapen, an urban periphery settlement at Yogyakarta, Indonesia was selected as a case study due to the occurrence of a lot of its houses, which were gradually expanded to be a private rental housing. This study focused on how the households re-arrange their domestic space to be shared with the tenants. Besides, the implication of this change on spatial occupation within a private rental housing will be discussed. Investigations found that the occupation adjustment, spatial adjustment and extension of the original housing processes have developed the private rental housings. The domestic space arrangement of the private rental housing could be categorized into maximum separation, moderate separation, and minimum separation based on the number of spaces which might be interchangeably used by both the household and the tenants.

Key words: domestic space, private rental housing, spatial arrangement, self-help settlement, urban village

1. Introduction and Objectives of Study

Yogyakarta as those cities in developing country is up against the housing problem since there are many supply problems in the formal housing sector. However, the shortfall has been effectively compensated for by the self-help settlement, which is known as a *kampung* (urban village) settlement¹. Even though tends to be seen as irregular, unplanned, and was faced to the infrastructure problems, however the *kampung* settlement system would play an important role in the future of city. The *kampung* settlement still continuously growing provides an affordable living space for the majority of urban inhabitant in various levels of income.

The ways of urban village inhabitant build the house in many stages have offered the opportunity for them to conduct a continuously spatial adjustment day by day. It provides the house types according to financial ability of inhabitant while offer the possibility for them to meet the contemporary requirements. Spatial arrangement and spatial function of house could be easily adapted to accommodate the number of family composition changes, appearance of new activities in a house, and other new demands.

Kampung Ngentak Sapen is one of those urban village settlements at Yogyakarta city where the spatial arrangement of its housings has been adjusted to fulfill the new requirements. As the consequence of a

university development around this settlement, the students who lived there increased followed by the increasing numbers of rooms and housings demand. The inhabitant gradually expanded their original housing into a private rental housing by re-arrange the domestic space to accommodate the tenants while they could reside it.

The presence of the tenants together with the household's family within a house has compelled the household to adjust the domestic space utilization since a house constrains interface between different kinds of inhabitant².

This study is aimed to clarify how the households re-arrange their previous domestic space to be shared with the tenants. The implication of this new arrangement on spatial occupation within the house also will be discussed. It could be useful to propose an appropriate planning which concern on the local dynamic of urban village settlement.

2. Method

Kampung Ngentak Sapen, one of an urban periphery settlement in Yogyakarta, was selected as a case study due to the occurrence of a lot of its houses within this settlement, which were gradually expanded to be a private rental housing (Fig.1). Data were gathered through multi-method data collection approaches consisting of observation, photographs, measurement, questionnaire, and informal interview. The research was began by conducting an observation of the whole of fieldwork area which consists of 4 sub-neighborhood units to find out the housing cases which were resided by both the household's family and

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the tenants. 21 housing cases which the area between the range of 51 to 280 meter square were selected to describe the ways of the households in re-arrange the domestic space of their previous house to be shared with tenants. Analysis is carried out at two levels; 1) house plan arrangement; 2) the way of the household's family and the tenants utilize the private rental housing spaces.

3. Private Rental Housing at Ngentak Sapen
3.1. Development Process into A Private Rental Housing

The households expanded their original house to be a private rental housing for many reasons: 1) to get a main family's income: The number of area within a house belongs to the household does not appears as the reason to refuse the tenants to live with. Even the area of her house is 51 meter square only, the household of case X3 decided to rent two of her three bedrooms for

other families since she did not have any family's income as her husband death. She and her daughter occupied only 20% of total floor area for bedroom while they have to share a living room, a dining room, a kitchen, and a bathroom to be interchangeably used with tenants (Table 1). 2) to get an additional family's income; 3) to make use of the empty rooms : Married children who move to their own house caused the decreasing number of family member lived within a house. The household resolved to rent those empty rooms for tenants to make use of it while they could get the family's income.

The common ways of the household in adjusting their previous house arrangement into a private rental housing could be classified into various development processes (Fig.2):

1) occupation adjustment: The spaces were switched from the owner to be occupied by the tenants without re-arrange the spatial formation of the previous

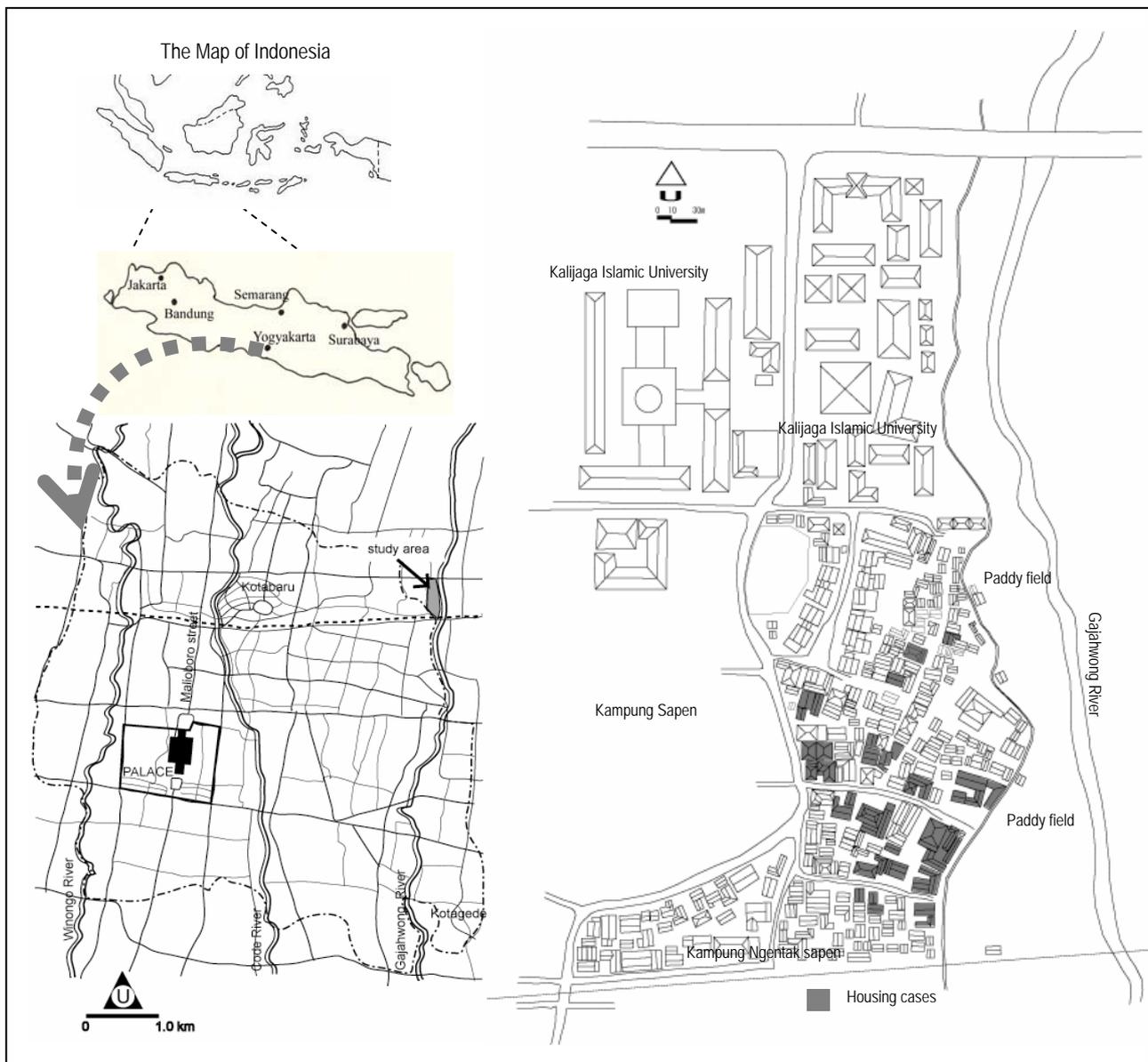


Fig. 1. The Location of Study and Housing Cases

house (house of X3, Y2, Y11). Bedroom appears as the common space that was shifted to be occupied by the tenants. The house of Y2 (Fig. 2.) where a couple with two children ever lived could describe this occupation adjustment process. Since there were many empty bedrooms as married children move into their own houses, the household allowed the tenants to occupied those rooms while let them in an original arrangement. The tenants occupy bedrooms in front section of the house while the household in back section. The household treated the tenants as their own children and consented to interchangeably used a guest room, a living room, a kitchen, and bathroom with them.

2) spatial adjustment: The previous spatial arrangement of a house was adjusted by dividing the large rooms to provide smaller rooms followed by altered the spatial utilization. Domestic space of traditional house was compound of main house (*dalem*) with enclosed room (*senthong*), the attachment room (*gandhok*), and kitchen (*pawon*). The *dalem* and *gandhok* were built as a commodious room to be interchangeably used for sleeping, eating, leisure, and other domestic tasks in the past³. Since those rooms were composed in open lay out plan, they served possibility to be re-arranged by inhabitants to meet the contemporary requirement. Build smaller room inside those rooms constitute a common simplest way to develop bedroom to be rented for tenants (house of X1, X6, X7, X9). As the consequence of this spatial adjustment, the household and families allowed to interchangeably used many spaces in many activities with tenants.

3) extension of the original house : The household expanded the house by attach the new rooms into the original house to be rented for tenants while keep the previous house arrangement (house of X4, Y3, Y4, Y7, Y9, Y10, Y12). The presence of tenants together with the household's family in the house does not compel the household to conduct spatial utilization adaptability on the previous house, since the space for tenants was separated from the household space. The room

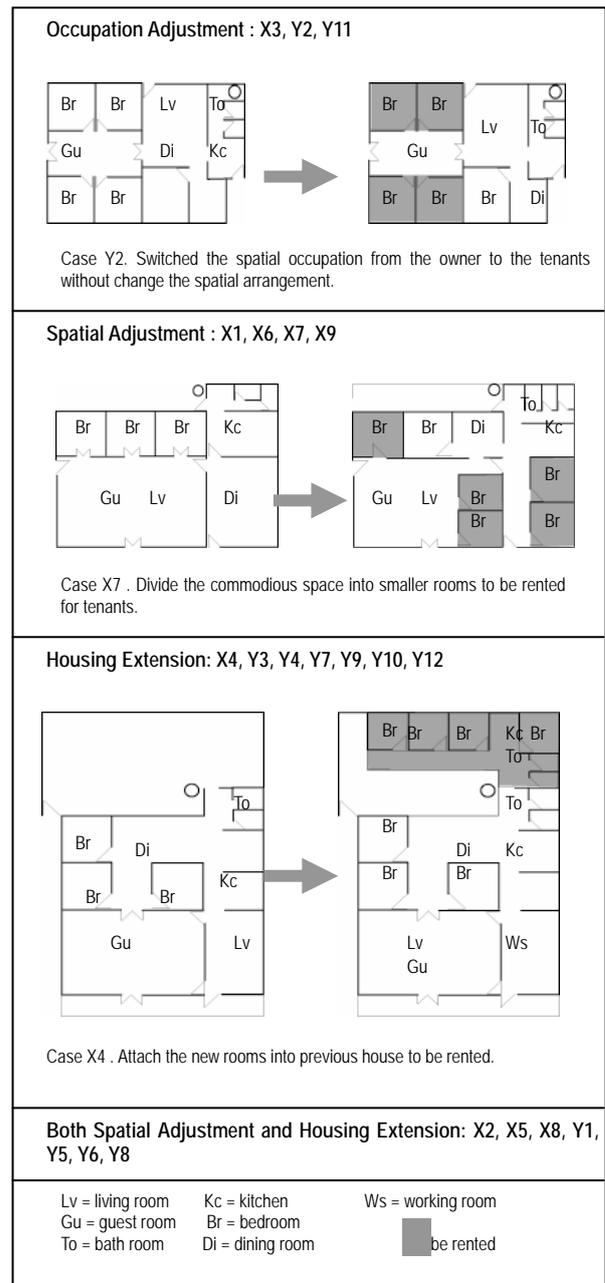


Fig. 2. Various Ways of Private Rental Housing Development Processes

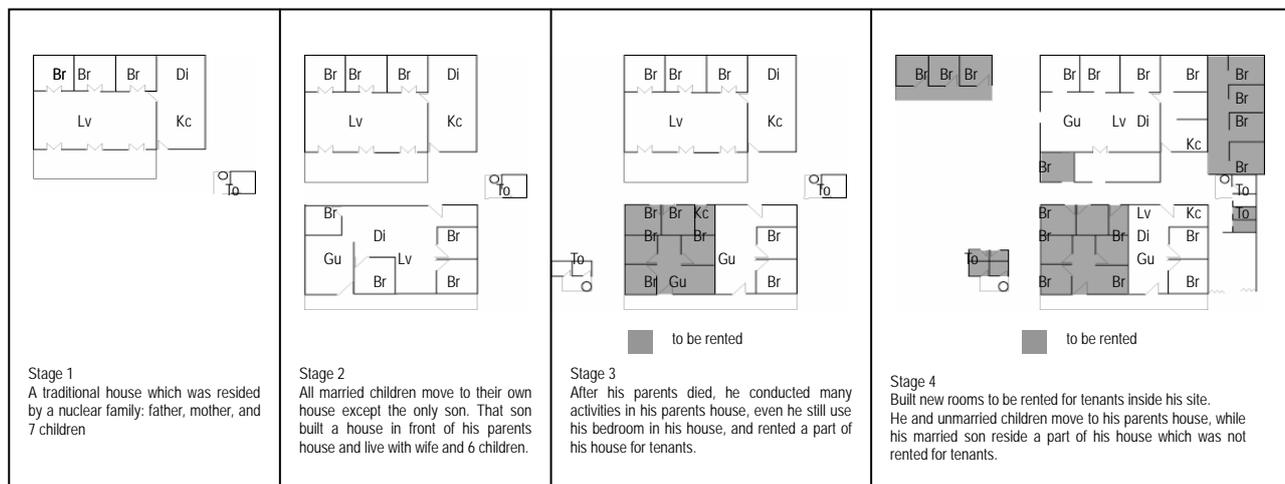


Fig. 3. Development of X8 into Private Rental Housing Through both Spatial Adjustment and Extension Processes

expansion was added in backside (house of X4, Y4, Y12), in front (Y10), and in side of previous house (X8, Y3, Y7, Y9).

4) both spatial adjustment and extension of the previous house : The first stage of this private rental housing development was carried out by re-arrange the previous house to provide bedrooms for tenants. To serve more rental rooms the household therefore attaches the new rooms into previous house to be rented (X2, X5, X8, Y1, Y5, Y6, Y8). Fig. 3 shows the development process of house X8 into a private rental house that was conducted firstly by adjusted the spatial arrangement then followed by extended the previous house by build the new rooms in front and back of his original house.

3.2. Spatial Utilization and Occupation

The household conducted various expansion processes into a private rental housing according to their need based on the number of previous house area availability and its arrangement. The ways of the household places the rental rooms within the house could be categorized into: 1) at the back of main house; 2) at main house while the household lives in backside; 3) at the side of main house; 4) shared main house together between household and tenants⁴.

It is the common way to develop private rental housing based on gender group difference. A private rental house is available for female or male tenants only. But the household of case X8 developed rental rooms for both female and male tenants. The household compounded each gender group in separated space

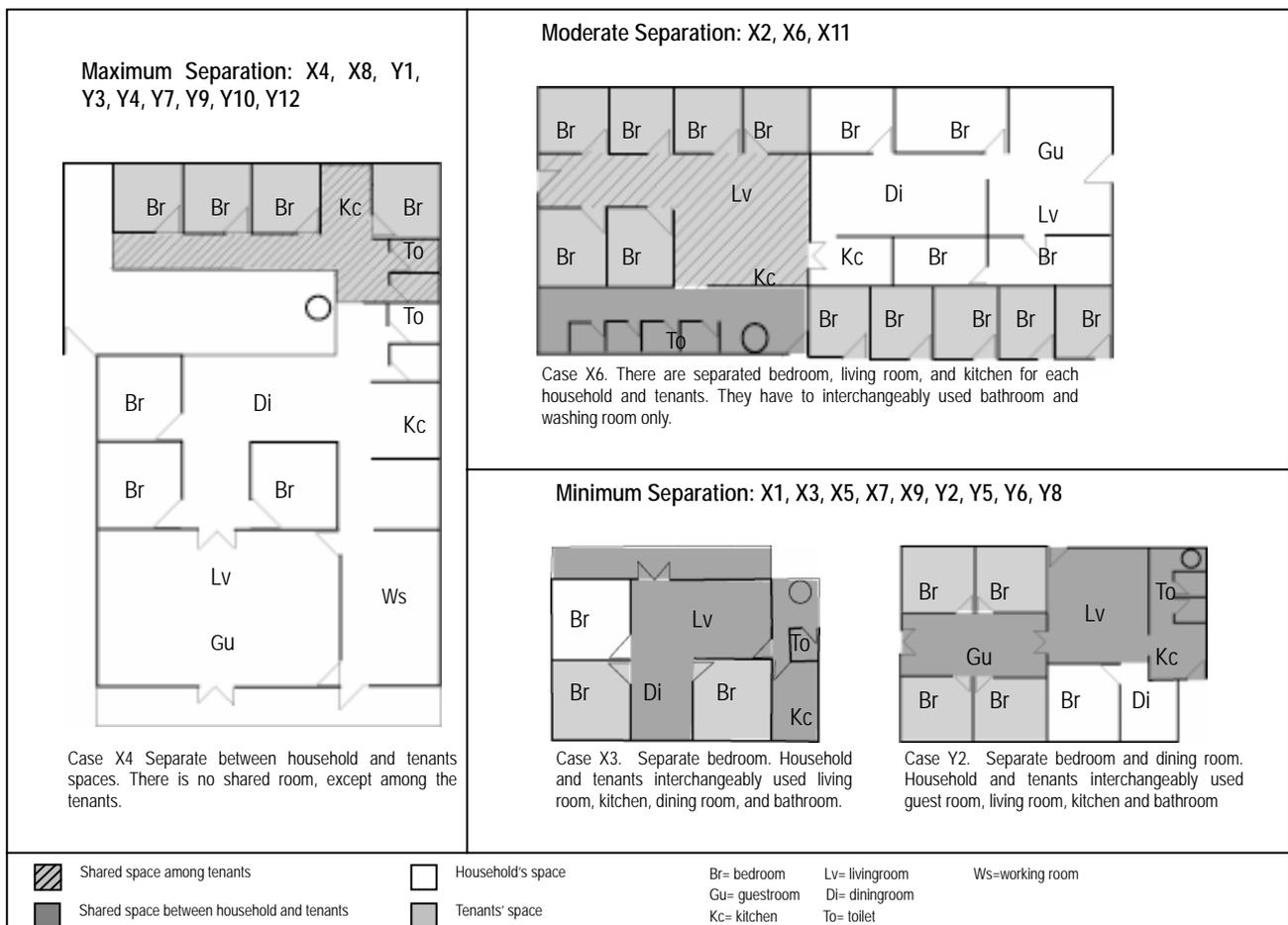


Fig.4. Spatial Arrangement of Private Rental Housing

Table 1. Separated and Interchangeably Used Spaces for Household and Tenants in Private Rental Housing

	X1	X2	X3	X4	X5	X6	X7	X8	X9	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12		
Guest room																							
Bedroom																							
Living room																							
Dining room																							
Kitchen																							
Bathroom																							

Separated space
 Interchangeably used for household and tenants

with separated shared space. The male tenants occupy the rooms in front and side of his main house while the female tenants at backside.

Spatial use and occupation was clarified through inhabitant activities investigation by means of questionnaire. Activities of household and tenants in each place of house were identified using taxonomy: 1) entertain task 2) domestic task; 3) leisure; 4) common family needs; 5) private needs⁵. Each place of house was identified using topology: 1) front house; 2) inner house; 3) back house⁶. Spatial relationship between household and tenants is classified into (Fig. 4) :

1) maximum separation: The household arranged the separated spaces to be used by themselves and tenants to avoid an interface appearance between them (house of X4, X8, Y1, Y3, Y4, Y7, Y9, Y10, Y11). Both the household and tenants have their own guest room, living room, dining room, bathroom, and kitchen. A rental bedroom that could be resided by one or two of single tenants served a private need requirement for tenants. To fulfill other needs requirement the household arranged the shared space such a kitchen, a living room, and bathroom to be used among the tenants.

2) moderate separation: Both the household and tenants have their own guest room, living room, dining room, and kitchen. Those rooms constitute the shared space to be interchangeably used among the tenants. The household and tenants just interchangeably used a bathroom and washing room (house of X2, X6, Y11) It means that an interface between household and tenants might happened only at the back side of house.

3) minimum separation: Expansion process into a private rental housing through both occupation and spatial adjustment have a consequence on the appearance of shared spaces. Those spaces including front section, main section, and back section of house have to be interchangeably used by household and tenant partially or entirely. This sort of private rental housing arrangement could be categorized into:

- A. entirely share : Both household and the tenants only have their own bedroom to fulfill a private need requirement. Other spaces such as guest room, dining room, living room, kitchen and bathroom were interchangeably used between household and tenants for domestic task, leisure, and common family need (house of X3).
- B. partially share: The household arranged bedroom and a dining room to be used by themselves, while serve a bedroom for each tenants. Space for leisure and domestic task, including for bathing and cooking, were interchangeably used between household and tenants (X7, X9, Y2, Y5, Y6, Y8). Even the house of X1 and X5 used the separated space for cooking, however other domestic tasks were conducted in a shared space (Table 1.).

3.3. Implication on Spatial Occupation

The extension processes into a private rental housing have changed the spatial occupation of previous house in many cases, but not changed in other cases. The households who build the new rooms to be attached into their previous house (X4, Y3, Y4, Y7, Y9, Y10, Y12) could develop a private rental housing while keep their previous spatial occupancy rate.

Even the households have lost 10-50% of their previous spatial occupation to be shifted for tenants usage, however most of those cases could live in spatial occupancy rate limitation (Table 2). The spatial

Table 2. Proportion of Spatial Occupation within a Private Rental Housing

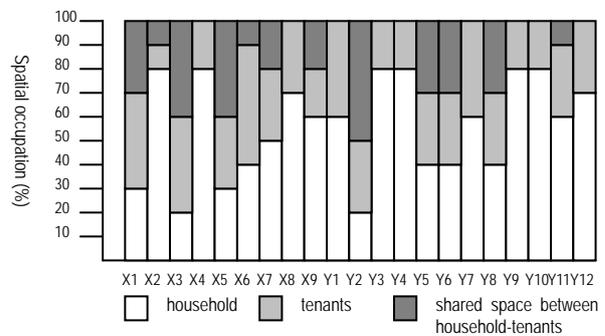


Table 3. Profile of Private Rental Housing

	X1	X2	X3	X4	X5	X6	X7	X8	X9	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12
HH ¹	ext	ext	wc	ext	c	hwc	ext	ext	ext	ext	hw	ext	hwc	hwc	hc	hwc	hwc	ext	gg	ext	ext
HH size (person)	12	10	2	5	2	5	8	10	8	6	2	9	4	4	5	3	5	15	3	5	4
TE ²	sg	sg	fm	sg	sg	sg	sg	sg	sg	sg	sg	sg	sg	sg	sg	sg	sg	sg	sg	fm	sg
TE size (person)	18	6	8	8	8	12	10	18	14	12	6	4	8	6	4	7	8	8	4	4	12
Original floor area (m2)	280	120	51	120	76	144	120	228	232	184	90	140	180	60	60	100	100	150	80	160	180
Addition floor area (m2)	-	40	-	30	36	-	-	30	-	36	-	28	30	12	17	40	20	36	16	-	84
Total floor area (m2)	280	160	51	150	112	144	120	258	232	220	90	168	210	72	77	140	120	186	96	164	264
HH area (m2)	92	124	9	120	36	52	60	168	132	130	18	140	170	24	30	90	48	150	76	97	180
TE area (m2)	108	27	18	30	36	72	35	90	52.5	90	30	28	40	24	24	50	30	36	20	55	84
HH-TE shared area (m2)	80	9	24	-	40	20	25	-	47.5	-	52	-	-	24	23	-	42	-	-	12	-
HH occupancy (m2/person)	10.3	13	6.9	24	22	11.6	8.9	16.8	18.7	21.7	15.5	15.6	42.5	8.4	8.6	30	12.8	10	25.3	20.7	45
TE occupancy (m2/person)	8.7	5.1	4.7	3.8	8.5	7.2	4.9	5	6	7.5	11.5	7	5	6.4	8.6	7.1	7	4.5	5	15.1	7

Type of house: X = traditional style Y = contemporary style

1) HH = household : ext = extended family h = husband w = wife c = children gg = grandmother-granddaughter

2) TF = Tenants : sn = single fm = family

occupancy rate of house cases of X3, X7, Y5, and Y6 of are under the minimum limitation that was determined by the Regional Government in the amount of 10-meter square per person.

There is a high difference of spatial occupancy rate between household and tenants (Table 3). The average of household spatial occupancy is 18.4-meter square per person with the minimum 6.9 and the maximum 45-meter square per person. The average of tenant's spatial occupancy is 6.9-meter square per person with the minimum 3.8 and the maximum 15.1-meter square per person.

4. Conclusion

The study on domestic space arrangement of private rental housing which was conducted in Kampung Ngentak Sapen conclude that:

1) The development process into a private rental housing could be realized through: occupation adjustment, spatial adjustment, and extension of the previous house. It depends on the number of area belongs to the household and spatial arrangement of previous house.

2) Spatial arrangement of private rental housing was categorized into: maximum separation (both household and tenant carry out all needs in separated spaces), moderate separation (only bathroom that constitutes a back section of house was interchangeably used by household and tenant), minimum separation (front house, main house, and back house were interchangeably used between household and tenants partially and entirely)

3) Even the households have lost 10-50% of their previous spatial occupation to be used for tenants, however they could live in spatial occupancy limitation rate determined by the Regional Government.

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Notes

1. Urban village settlement (*kampung*) constitutes almost 60% of total housing at Yogyakarta where almost 80% of urban population lived.
2. Franca noted, in order to understand the interfaces between

different kind of inhabitant could be dealt three aspects: 1) relations between inhabitant; 2) relations between inhabitant and visitors; 3) relations between inhabitant and servant.

3. Reference 5)
4. Main house that is the synonym of inner house, in Javanese tradition constitutes an important part of house where the inhabitant could carry out sleeping, relaxing, chatting, eating, and praying activities. Therefore, it consists of rooms such as a bedroom, a living room, and a dining room in a contemporary term.
5. This taxonomy originally was proposed by Monteiro which was cited by Franca: 1) domestic task (cooking, washing, ironing); 2) passive leisure (watching tv, listening music, physical exercise); 3) interactive leisure (meeting friends, dating); 4) common family needs (having breakfast, lunch, dinner); 5) private needs (taking bath, sleeping, resting). In this research interactive leisure task was adapted into entertain task to make it suitable for local habit.
6. The definition of the front and the backside of house plan were adopted from housing topology proposed by Subroto (Ref. 8)). He distinguished Javanese house plan topology into such three spatial domains: 1) front house (guest room); 2) inner house (bedroom, dining room, living room); 3) back house (kitchen, bathroom)

References

- (1) Alexander, Christopher ea., 1979, *A Pattern Language: Towns, Building, Construction*, Oxford University Press. New York.
- (2) Altman, Irwin, 1981, *The Environment and Social Behavior: Privacy, Personal Space, Territory, Crowding*, Wadsworth, New York.
- (3) Funo, Shuji, ea., 2002, *Typology of Kampung Houses and Their Transformation Process –A Study on Urban Tissues of an Indonesian City*, Journal of JAABE, Vol.1 No.2, November 2002.
- (4) Franca, F., Hollanda, F., 2003, *My bedroom, my world: Domestic space between modernity and traditional*, Proceedings of 4th International Space Syntax Symposium, London.
- (5) Hidayah, R., Shigemura, T., 2004, *Culture, Continuity, and Change: The Shift of Single into Multifamily in Individual Javanese Dwelling*, Proceeding of 5th International Symposium on Architectural Interchanges in Asia, Matsue
- (6) Muhadjir, Noeng, 1989, *Metoda Penelitian Kualitatif*, Rake Sarasin, Yogyakarta.
- (7) Rapoport, Amos, 1977, *Human Aspect of Urban Form: Toward a Man-Environment Approach to Urban Form and Design*, Pergamon Press, Oxford.
- (8) Subroto, T Yoyok Wahyu, 1995, *A Study on the Spatial Linkage in Urban Settlement as an Alternative Tool for Improving Living Environment in the Cities of Java' An Attempt to Interpret and Implement the Vernacular Space-Order into Contemporary Housing Planning*, Unpublished Dissertation, Osaka University

