Interior Living Space Preferences in the Early Housing Career of Low-Income People in DKI Jakarta, Indonesia

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Abstract. DKI Jakarta has been the most prospective destination for Indonesian low-income urban migrants to find jobs. The need for affordable housing for low-income people increase along with the rise of low-income urban migrants’ number. Providing houses for Indonesian low-income people has become the Indonesian government's concern as the housing providers for many years. There were unmatched between the housing government-supplied and the demands of the low-income people. Low-income people have unique preferences in choosing their residences. Moreover, the previous studies show one’s preferences on housing develop over one’s lifecycle, namely housing career. The preferences for living space is one of the house attribute importance that considered in choosing a residence. This paper will discuss the low-income people preferences on the living spaces and the changes of these preferences over their lifecycle, especially in their early housing career. The research method used distribution of living space preference changes by selected independent variables and bivariate statistical analysis with Pearson Contingency Coefficient. The study took five of the most populated districts in DKI Jakarta and used snowball sampling on 420 respondents. The paper discussion only focuses on 369 of 420 respondents who have at least 2-residence-career, while the other respondents have never moved out from their first residence. This study found that the majority of respondents consider living space when choosing their residence, and almost half of the preferences change along with the changes in the lifecycle. The results of this study are expected to be a consideration for the Indonesian government in providing affordable housing for Indonesian low-income people.

1. Introduction

Indonesia government ensure its citizens for affordable housing. This is as regulated as on the Law of the Republic of Indonesia Number 1 the year 2011 concerning Housing and Settlements. Based on the law, providing adequate and affordable housing for the low-income people and understanding the consideration low-income people made in choosing a residence become essential concerns for Indonesian government as achieving the aims of Indonesian Government National Program, namely One-million House. Sylvia et al. [1] differentiate between the preferences and choices. Preference is a subjective desire that comes from the internal one’s self, while choice is the meeting point between the individual preferences and external-self conditions, such as the housing availability, housing prices, and housing regulations. So, one’s choice of a residence influenced by one’s preferences. Opoku and Abdul Muhmin [2] stated that choosing of a residence is not only influenced by one’s preferences but also the house attribute importance. The house attribute importance influences the housing choice
from intrinsic housing attributes such as cost, size, and interior living space through extrinsic attributes such as exterior design and exterior space to neighborhood and other locational factors.

Jim and Chen conducted a study that shows South China residents rate internal environment elements of the house as more important than external [3]. The residents consider an internal environment as a place where the residents actually live. From the Opoku and Abdul Muhmin’ result study in Saudi Arabia, the residents also consider the intrinsic attributes have significant meaning [2]. In everyday life, internal living space of a house can serve a symbolic function, providing clues for others about the identity, social class, aesthetic preferences, personality traits, and personal histories of the residents [4]. It may show the social demographic conditions of the owner. However, people grow, change, and evolve. One’s lifecycle changing can affect one’s preference for the intrinsic attributes in housing choice. It is as stated as Mulder & Hooimeijer’ argument that housing preference of an individual or family changes as the life-changing [5]. The changes can also be influenced by events or life plans such as marriage plan, career plan, work location, and other else [6]. Kok explained the individual or family’s life course is dynamic and complex; therefore, housing preference will be dynamic and unpredictable [7]. Hence, individual or family preference is divided into durations that caused by events in every life stages of households [8].

Published academic studies of consumers’ housing preferences and related issues have been conducted in marketing perspectives with medium-high income people as its respondents. The focus of this paper is on the low-income segment in their early housing career. Living space availability that will support individual life needs can be one of their consideration in choosing a residence, and the preferences can differ from one to another stage of their life. Understanding the low-income people demand on living space of a house can be a consideration for the government to make an appropriate housing design so that it can maximize its occupancy.

2. Aims of the study
Various studies prove that the mismatch of housing design with social, economic, and cultural conditions are the leading causes of the government’ housing programs for the Indonesian low-income people failure [9]. Indonesian government believes that affordability of rental or purchase prices is the only factor that determines the preference of low-income people in choosing a residence. Whereas in choosing a residence, low-income people have unique preferences and have a housing career that related to their needs and social, economic, and cultural conditions. Every residence that has been chosen has different backgrounds of preference that related to life needs and social, economic, and cultural conditions at that time. Therefore, these preferences continue to change as the low-income people life cycle changes. Unfortunately, the lack of understanding of the government regarding the changing factors that influence the preference of the low-income people has caused various housing programs has not achieved the expected results. This study aims to identify and understand changing factors that focus on living space that influence the selection of residence in the early housing career of low-income people in Jakarta. The results of this study are expected to be a consideration for low income-income people housing providers in designing adequate living space for affordable housing.

3. Methodology
This research is located in the Indonesian Capital City, DKI Jakarta Province. As the capital city, Jakarta becomes the prospective destination for Indonesian urban migrants to find jobs. This condition makes Jakarta has the highest migration rates among other cities in Indonesia. There are 5 selected most populated villages namely Kampong Kalibaru (Cilincing Subdistrict, North Jakarta); Kampong Menteng (Tebet Subdistrict, South Jakarta); Kampong Melayu (Jatinegara Subdistrict, East Jakarta); Kampong Tanah Tinggi (Johar Baru Subdistrict, Central Jakarta); and Kampong Kapok (Cengkareng Subdistrict, West Jakarta). Data collection uses a structured questionnaire at 50 households with a category of age over 15 years. Distribution of questionnaires in each village was carried out by snowball sampling technique so that 420 respondents were collected. Each respondent has a different living career with diverse reasons for housing choice. About 234 respondents had a one-time residential career, 111 respondents who had a two-times residential career, 23 respondents who had a three-times residential career, one respondent who had a four-times residential career, and 51
respondents who never experienced moving out from their first house. This study focuses on 369 of 420 respondents who have at least a 2-residence-career. This study aims to determine the relationship between living space preferences and the life-changing in the early housing career of low-income people. The analysis was carried out with a quantitative approach by descriptive and inferential analysis. The descriptive analysis used cross-tabulation between the dependent variable and selected independent variables. The inferential analysis used chi-square method to see the magnitude association between dependent and selected independent variables. Calculation of the correlation magnitude between selected independent variables and dependent variables shows the low-income people general information about their living space preferences in Jakarta.

4. Results and discussions

4.1. Data Collection

Data was collected from 369 respondents spread in 5 of the most populated villages in DKI Jakarta. The distribution of respondents in these five villages can be seen in table 1. Most respondents were in Kampung Melayu with 82 respondents and the fewest in Tanah Tinggi as many as 63 respondents.

| District           | Total | Percentage |
|--------------------|-------|------------|
| Tanah Tinggi       | 63    | 17.07%     |
| Kapuk              | 69    | 18.70%     |
| Kalibaru           | 76    | 20.60%     |
| Menteng Dalam      | 79    | 21.41%     |
| Kampung Melayu     | 82    | 22.22%     |
| **TOTAL**          | 369   | **100.00%**|

The chosen living space preference of the respondents are a living room, bathroom, bedrooms, additional bedrooms, kitchen, laundry room, storage room, garage, terrace, other, and some of the respondents did not choose any rooms as their interior living space preference. Based on data collected, almost one-third of the respondent has no preference for interior living space. To simplified the collected respond of the questionnaire, the eleven preferences options are simplified into four categories, namely:

- Primary rooms (bedrooms, kitchen, bathrooms)
- Secondary rooms (living room, family room)
- Tertiary rooms (garage, storage room, terrace, laundry room, additional bedrooms, other)
- No preference

Based on data collected, almost one-third of the respondent has no preference for interior living space. However, these interior living space preferences changed as the respondent moved to their first residence, as shown in Table 2.

| Preference for living space element | first house | second house |
|------------------------------------|-------------|--------------|
| n        | %           | n           | %           |
| Primary rooms            | 88          | 23.85%      | 103         | 27.91%      |
| Secondary rooms          | 91          | 24.66%      | 99          | 26.83%      |
| Tertiary rooms           | 44          | 11.92%      | 59          | 15.99%      |
| No preference            | 146         | 39.57%      | 108         | 29.27%      |
| **TOTAL**                | **369**     | **100.00%** | **369**     | **100.00%** |
Based on the data analysis, the changes in the preferences and the socio-demographic condition of the respondents from the 1st residence to 2nd residence shown in Table 2. Based on this result, an in-depth analysis was conducted to see what changes that have the most significant association to the interior living space preference changes.

4.2. Analyses and Result

Facilitating multivariate statistical analysis with Pearson Contingency Coefficient, the changes in interior living preferences are simplified into four categories, namely:

- No preference: both on the 1st residence and 2nd residence, the respondent has no preference
- Downgrade: on the 1st residence, the respondent has upper-level rooms preference and change it into lower level rooms on the 2nd residence (e.g., tertiary rooms to secondary rooms, secondary rooms to primary rooms)
- Steady: both on the 1st residence and 2nd residence, the respondent has the same level rooms preference (e.g., tertiary rooms to tertiary rooms, secondary rooms to secondary rooms, primary rooms to primary rooms)
- Upgrade: on the 1st residence, the respondent has lower level rooms preference and change it into upper-level rooms on the 2nd residence (e.g., primary rooms to secondary rooms, secondary rooms to tertiary rooms)

Based on Table 3, the respondents who have no preference in the 1st residence and 2nd residence mostly are the respondent who stayed out of Jakarta, lived less than 20 years on the 1st residence and more than 20 years on the 2nd residence, has steady occupation status, turned to be not married on the 2nd residence, were the head of the family on the 1st residence but turned to be not the head of the family on the 2nd residence, and upgraded the ownership status of the residence. The respondents who downgraded their preference mostly are the respondent who moved out of Jakarta, lived more than 20 years on the 1st residence and less than 20 years on the 2nd residence, has steady occupation status, were not married on the 1st residence, were the head of the family on the 1st residence but turned to be not the head of the family on the 2nd residence, and downgraded the ownership status of the residence. The respondents who have steady preference are mostly the respondent who moved into Jakarta, lived more than 20 years on the 1st residence and less than 20 years on the 2nd residence, has upgraded occupation status, stayed not married on the 1st residence and the 2nd residence, were the head of the family both on the 1st residence and 2nd residence, and upgraded the ownership status of the residence. Meanwhile, the respondents who have upgraded preference mostly are the respondent who stayed in Jakarta, lived more than 20 years both on the 1st residence and the 2nd residence, has downgraded occupation status, turned to be married on the 2nd residence, were not the head of the family on the 1st residence but turned to be the head of the family on the 2nd residence, but downgraded the ownership status of the residence.

| Independent Variables | Variable Category | Living Space Preference Changes | Total |
|-----------------------|-------------------|---------------------------------|-------|
|                       |                   | No preference | Downgrade | Steady | Upgrade | Count | Row % |
|                       |                   | Row %         | Row %     | Row %  | Row %   |       |       |
| Location towards DKI | Moved into DKI     | 30.2 %        | 16.9 %    | 29.2 % | 23.4 %  | 154   | 100%  |
| Jakarta changes       | Jakarta           |               |           |        |         |       |       |
|                       | Moved out of DKI  | 0 %           | 25 %      | 25 %   | 50 %    | 8     | 100%  |
|                       | Jakarta           |               |           |        |         |       |       |
|                       | Stayed in DKI     | 25.2 %        | 18 %      | 28.6 % | 28.2 %  | 206   | 100%  |
|                       | Jakarta           |               |           |        |         |       |       |
|                       | Stayed out of DKI | 100 %         | 0 %       | 0 %    | 0 %     | 1     | 100%  |

Table 3. Distribution of Living Space Preference Changes by Selected Independent Variables
Based on the bivariate statistical analysis with Pearson Contingency Coefficient on Table 4 and hypothesis tested by Chi-square method, the association between the independent variables and the interior living space preference that has the most significant value is the period of the house occupation changes as much as 0.546.

**Table 4. Pearson Contingency Coefficient by Selected Independent Variables**

| Independent variables                              | Contingency Coefficient | Approx Sig* |
|----------------------------------------------------|-------------------------|-------------|
| Location towards DKI Jakarta changes              | .151                    | .476        |
| Period of the house occupation changes             | .546                    | .000        |
| Occupation status changes                          | .177                    | .063        |
| Marital status changes                             | .273                    | .001        |
| Relation with the head of the family               | .174                    | .240        |
| Ownership status changes                           | .212                    | .008        |

*Notes: significant at $\alpha=10\%$

Source: Data analyzed by authors
The bivariate statistical analysis shows a more accurate result of the association between the independent variables and the interior living space preference that has the most significant value is the period of the house occupation changes than the analysis with distribution of living space preference changes by selected independent variables. Based on the bivariate statistical analysis, the result shows that living space preference changes have association significantly with the period of the house occupation changes, occupation status changes, marital status changes, and ownership status changes.

5. Conclusion
The interior living space preference has a significant association with the period of the house occupation changes. This paper focuses on the early housing career of low-income people in five kampong in Jakarta, Indonesia. A further examination needs to be followed to have a deeper understanding of the low-income people's preference in choosing the interior living space of their residence. The result of this study is different from several previous studies that have conducted before. In past studies, low-income people's preferences of interior living space influenced by a socio-demographic aspect such as income, education, and marital status. However, in this study, it was found that the period of the house occupation had the most influence on low-income people on interior living space.

6. References
[1] Sylvia, J., Jansen, and Coolen, R. W. (2011). The Measurement and Analysis of Housing Preference and Choice. Heidelberg: Springer.
[2] Opoku, R. A., and Abdul-Muhmin, A. G. (2010). Housing preferences and attribute importance among low-income consumers in Saudi Arabia. Habitat International, volume 34, issue 2 (April 2010), 219-227. DOI= https://doi.org/10.1016/j.habitatint.2009.09.006
[3] Jim, C. Y. and Chen, Y. W. 2006. Consumption preferences and environmental externalities: A hedonic analysis of the housing market in Guangzhou. Geoforum, volume 38, issue 2 (March 2007), 414-431. DOI= https://doi.org/10.1016/j.geoforum.2006.10.002.
[4] Cupchik, G.C., Ritterfield, U., and Levin, J. 2003. Incidental Learning of Features from Interior Living Spaces. Journal of Environmental Psychology, volume 23, issue 2 (June 2003), 189-197. DOI= https://doi.org/10.1016/S0272-4944(02)00103-2.
[5] Mulder, C. H., Hooimeijer, P. 1995. Moving into owner-occupation. Journal of Housing and the Built Environment 10: 5–25.
[6] Clark, W. A. V., Dieleman, F. M. 1996. Households and housing: choice and outcomes in the housing market. New Brunswick, NJ: CUPR Press.
[7] Kok, J. 2007. Principles and prospects of the life course paradigm. Annales de Démographie Historique 1: 203–230.
[8] Clark, W. A. V., Deurloo, M. C., Dieleman, F. M. 2003. Housing careers in the United States, 1968–93: Modelling the sequencing of housing states. Urban Studies 40: 143–160.
[9] Sihombing, A., Adianto, J., Hasan, C., Gabe, R. T., Sulistiani, C. D., & Saska, C. S. (2018). Preference of Location Selection at the First Residence: Study in Several Kampong in DKI Jakarta, Indonesia. Presented in ICETsAS. Lampung (unpublished seminar proceedings).

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