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## Factors affecting residential choice in Greater Jakarta

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# Factors affecting residential choice in Greater Jakarta

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**Abstract.** Various factors might affect the choice of residential location. It might be transport- related or not. This paper was intended to identify factors affecting residential choice in Greater Jakarta. 102 respondents asked to complete 52 online surveys and 50 direct interviews. The questionnaires consist of 2 main parts, i.e. the general questions (gender, age, marital status, religion, job, ethnicity, educational attainment, vehicle ownership & use, and family structure) and residential choice related questions (characteristics of residential unit/ environment/ facility/ distance and accessibility). The second part questions were responded by the respondents using 1 to 4 Likert scale from not important at all, slightly important, important and very important as a factor affecting residential choice. A one-sample t-test mean difference with 2.5 (a departure from not important to important with  $\alpha=0.05$ ). It was found that in general, Respondents perceived that in general, all observed characteristics were important to affect residential location choice except for a few exemptions.

## 1. Introduction

According to Prashker et al [1] in 2008, attributes which affect the decision to choose a residence can be categorised into four factors, i.e. (1) residential unit characteristics (size, type, parking space availability, etc); (2) environment characteristics (safety, traffic, noise and air pollution); (3) accessibility characteristics (job/ school/ shopping/ entertainment availability likelihood); (4) individual characteristic (educational attainment, age, income, etc).

Stockenberg [2] in 2019 analysed the relative importance of the existence of the extended family surrounding the residences of people with low to medium income in Bogota, Colombia. It was found that most of the respondents choose to live close to the extended family compare to live at a location with high accessibility to the business centre. Respondents with a high dependency on the assistance of the extended family during a personal and/ or economic crisis have a higher preference to live close to the extended family compared to respondents with low dependency. Besides to cope with crisis situations, the required assistance from the extended family was on childcare. Patacchini & Arduini [3] in 2016 found that in the USA, the increasing number of American young generation who live with their parents was related to lower job and payment prospects around the great recession era.

Tu et al [4] found that in 2016, green space provides both direct benefit (recreational) and indirect benefit (beautiful scenery). Moreover, the ownership of private garden decreases the willingness to pay to live closer to the city garden.

Lotfi et al [5] in 2018 observed the satisfaction on residential choice based on several parameters, i.e.

(1) closeness to the location of the main job; (2) closeness to shops, public services and facilities (sport hall, library, etc.), (3) closeness to child daycare, elementary and junior high school, high school and universities; (4) access to highway, public transport, pedestrian and bicycle spaces; (5) the quality of trees, greenery, quietness and the atmosphere; (6) the quality of environment safety and the neighbourhood characteristics.

Dewita et al [6] in 2019 examine transport and housing affordability by exploring middle- to



low- income household's transport and housing costs in the Bandung, Indonesia. Households in nine locations in Bandung with various housing type and spatial characteristics were observed. The sample was from 405 households was used to measure variables including fuel, parking, maintenance expenses, public transport fares, rent and owners' equivalent rent. The result was household affordability not only was affected by housing type, but also by the choice of transport modes. The intention of preparing this current paper was to add more comprehensive knowledge regarding factors affecting residential choice in Greater Jakarta both from transport and non-transport point of view.

## 2. Method

There were 102 respondents recruited in this study (consist of 52 online surveys and 50 direct interviews). Putranto [7] in 2019 found that the use of online survey can speed up the survey process and had no significant difference in result compared to the direct interview. The questionnaires consist of 2 main parts, i.e. the general questions (gender, age, marital status, religion, job, ethnicity, educational attainment, vehicle ownership & use, and family structure) and residential choice related questions, i.e. the importance of characteristics of:

- a. Residential unit:
  - Building area
  - Land area
  - Number of rooms
  - Location
  - Building quality
  - Maintenance cost
- b. Environment:
  - Road networks
  - Drinking water networks
  - Drainage networks
  - Electricity networks
  - Phone networks
  - Neighbourhood security
  - Road pavement
  - Pedestrian surface condition
  - Neighbourhood quietness.
- c. Facilities:
  - Education
  - Health
  - Shopping
  - Government offices
  - Public services
  - Culture
  - Recreation
  - Worship
  - Indoor sport
  - Outdoor sport
  - Open green space
- d. Closeness to the:
  - Extended family
  - Same ethnic community

- Same Religion.
- e. Self-reliance.
- f. Distance to the:
  - Work
  - Public services
  - School place.
- g. Accessibility to the:
  - Highway
  - Public transport
  - Pedestrian
  - Cycling lanes.

The second part questions were responded by the respondents using 1 to 4 Likert scale from not important at all, slightly important, important and very important as a factor affecting residential choice. A one-sample t-test mean difference with 2.5 (a departure from not important to important with  $\alpha=0.05$ )

### 3. Respondent Profile

Within the 102 respondents, the number of male and female was about the same, i.e. 52 and 50 respondents respectively. Most of the respondents fall in 20-29 years old and 30-39 years old group with the number of respondents 43 and 38 respectively. Most of the respondents (56) were not married and most of them (45) was Buddhist. Most of the respondents (66) was an employee and most of them (80) got a bachelor's degree. Most of the respondents (99) owned private motorized vehicles and most of them (61) used the car daily. Most of the respondents (89) was using the vehicle more than four times a week (89) and most of them (85) spent USD 282-563 monthly (family expenses). Most of the respondents (75) live in a family consists of 2 to 4 family members.

### 4. Results

Respondents perceived that all observed residential unit characteristics were important as the mean responses were significantly higher than 2.5 with  $\alpha<0.001$ . The mean responses for building area, land area, number of rooms, location, building quality, and maintenance cost were 3.25, 3.25, 3.23, 3.45 and 3.29 respectively.

Respondents perceived that all observed environmental characteristics were important as the mean responses were significantly higher than 2.5 with  $\alpha<0.001$ . The mean responses for road network drinking water network, drainage network, electricity network, phone network, neighbourhood security, road pavement condition, pedestrian surface condition, and neighbourhood quietness were 3.23, 3.41, 3.36, 3.35, 3.02, 3.57, 3.18, 2.97 and 3.40 respectively.

Respondents perceived most (7 out of 11) of facility characteristics were important as the mean responses were significantly higher than 2.5 with  $\alpha<0.05$ . The mean responses (and the  $\alpha$ ) for education, health, shopping, public services, recreation, worship, and open green space were 2.79 ( $\alpha=0.001$ ), 3.00 ( $\alpha<0.001$ ), 2.67 ( $\alpha=0.027$ ), 2.77 ( $\alpha=0.001$ ), 2.68 ( $\alpha=0.017$ ), 2.68 ( $\alpha=0.025$ ) and 2.90 ( $\alpha<0.001$ ) respectively.

None of the observed closeness characteristics perceived important by the respondents as all of the mean responses were lower than 2.5. Respondents perceived that self-reliance was an important factor affecting their decision to live by themselves regardless their opportunity to remain in their parents/ extended family home as the mean responses were 2.71 which was significantly greater than 2.5 ( $\alpha=0.007$ ).

Respondents perceived that all observed distance characteristics were important as the mean responses were significantly higher than 2.5 with  $\alpha<0.001$ . The mean responses for distance to the place of works, public services and schools were 3.27, 3.03 and 2.86 respectively.

Respondents perceived most (3 out of 4) of observed distance characteristics were important

as the mean responses were significantly higher than 2.5 with  $\alpha < 0.001$ . The mean responses for accessibility to the highway, public transport, and pedestrian lanes were 3.32, 3.03 and 2.98 respectively.

## 5. Conclusions and Recommendations

From the analyses in the paper, it can be concluded that:

1. Respondents perceived that all observed residential unit characteristics were important to affect residential location choice.
2. Respondents perceived that all observed environmental characteristics were important to affect residential location choice.
3. Respondents perceived most (7 out of 11) of facility characteristics were important to affect residential location choice.
4. None of the observed closeness characteristics perceived important by the respondents to affect residential location choice.
5. None of the observed closeness characteristics perceived important by the respondents.
6. Respondents perceived that all observed distance characteristics were important to affect residential location choice.
7. Respondents perceived most (3 out of 4) of observed distance characteristics were important to affect residential location choice.

The above conclusions can be used by both the local authority and the property developer to combine the plan and execution of city and regional development based on the needs of potential consumers. It is also important, that any development can be arranged to minimize motorized vehicle travel. In order to get more representative samples, it is recommended to enlarge the number of samples and includes more diverse communities.

## References

- [1] Prashker J Shiftan Y & Hershkovitch-Sarusi P 2008 *Journal of Transport Geography* **16** 332–41.
- [2] Stokenberga A 2019 *Urban Studies* **56(2)** 368–84.
- [3] Patacchini E & Arduini T 2016 *Journal of Housing Economics* **34** 69–81.
- [4] Tu G Abildtrup J & Garcia S 2016 *Landscape and Urban Planning* **148** 120–31.
- [5] Lotfi S Despres C & Lord S 2018 *Journal of Housing and the Built Environment*.
- [6] Dewita Y Burke M & Yen, B T H 2019 *Case Studies on Transport Policy*.
- [7] Putranto L S 2019 IOP Conference Series: Materials Science and Engineering **508**