Millennials Housing Preferences Model in Jakarta

Y. Mulyano, R. A. Rahadi, and U. Amaliah

Abstract—This paper will discuss the housing preferences among Millennials in Jakarta. The approach used is by analyzing twenty papers related to housing preferences, making synthesis from collected paper, and producing critical view for each related papers. The objective of this research is to find the reasons for the Millennial Generation when purchasing a house. This paper found that housing preferences for Millennials divided into several indicators, such: location, accessibility, price, physical attributes, facilities, design, and aesthetic aspects, developer reputation, and land ownership. All of these indicators will determine the choices of Millennials in buying houses, especially the character of the house, which landed a house or vertical house. This limitation of this research is that this research only studies about preferences on millennials generation who lived in the Jakarta Metropolitan Area. The findings of this study will be useful for the stakeholders, real estate developers, and consumers. The government could use this study to produce regulations regarding housing in Jakarta, while real estate developers could enhance their preferences when developing real estate targeted to Millennial's market segment.

Index Terms: *Housing; Millennial; Preferences; Property.*

I. INTRODUCTION

This study will try to elaborate on the concept of housing preferences for Millennials in Jakarta. The purpose of this paper is to understand the factors influencing Millennials when buying a house. Jakarta, as the capital city of Indonesia, becomes the magnet of urbanization with a total area of 662 km² and accommodate 10.47 million people all over the city.

A significant number of people, while the space is limited, made Jakarta more crowded. The increasing number of population creates housing problem in the city, as well as open opportunities for real estate developers to sell their products and making a profit with the house value keep increasing over time [1]. The increasing needs for housing while the supply is limited have the housing price getting expensive. The house price to income ratio in Jakarta is higher than in New York, London, Singapore, and Tokyo [2]. The private developer usually aims for the middle to high-income market segment to buy the house in the center of the city. The type of land ownership also profoundly influencing customers when buying a housing product. In Indonesia, there are types of land ownership that an individual could possess. The young generation in Asian countries tends to postpone buying a property until in their 30s [3]. Economic and financial problems like global economic crises, the high rate of inflation, and unemployment put Millennials in a situation where they are harder to buy a house compared to

their parents [4].

The purpose of this study is to analyze the influencing factors for Millennials when buying a house in Jakarta. This research will also determine the reasons for millennials when choosing between landed houses or vertical houses.

This study is using an analysis of literature studies. Twenty studies used in this study. A conceptual framework produced at the end of the paper. The conceptual framework and methods can be used in other major cities in Indonesia. In the end, the findings from this research could enrich the database for real estate developers, consumers, and stakeholders in this field.

This research is also essential for government and real estate developers in Indonesia since there are limited studies about millennials related to this industry.

II. LITERATURE REVIEW

The review of the literature is divided into eight major sections and provides them with an explanation for the study. This section will review some articles discussing the location, accessibility, price, building quality, facilities, design, and aesthetic aspects, developer reputation, and land ownership. A conceptual framework mapping will be available to indicate the research position of this study.

A. Location

The definition of location in terms of the housing is where the located in, whether in the cities or suburbs [5]. The distance between the house and daily activities takes place plays a vital role in making a decision when buying a home. Location as a housing indicator is considerably more important than the house itself, and consumers prefer easy accessibility to reach residence [6]. People seek the specific location of the house because they have an intended purpose, such as the distance to work, school, or market. The location near close relatives like parents, brother or sister, and other close family members also affect consumer preferences when deciding to buy a house [7]. Housing in the strategic area also has attractiveness more than those who do not. The close distance from the housing to the medicine, health care facilities, and hospitals also have an identical impact on the decision of buying or renting a house [5]. In Jakarta, with the drainage condition is not helpful during the raining season, flood-free factors is also a significant concern for the consumer to determine the housing location [8].

Published on February 22, 2020.

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B. Accessibility

Accessibility of a precise location determined by the easiness to enter and exit the area using a transport system and land-use pattern is indicated as an essential aspect of housing location [9]. The main road, toll road, and access to station or public transportation are the factors that are affecting consumers in buying houses. The integration between housing and transportation is the vision of urban development since it is getting harder to drive private vehicles in the city. Ease of accessibility means that there is more than one access to entrance and exit available to reach the real estate location [10]. Accessibility will help consumers get faster to the destination and shorten the time used in their movement [11]. In the case of Jakarta, the proximity to the workplace, school, market, and other community centers are essential because the public transport facility and other options of transportation mode in Jakarta are inadequate [8].

C. Price

Price is one of the most influencing factors for the consumer's decision-making process when purchasing a product [12]. Price is determined by combining several factors in housing development. People usually prefer to have as many alternatives as possible, but they are becoming less interested if it means an increase in the price [13]. The higher amounts of price consumers are willing to pay for a house can be expressed as a benefit to the projects [14]. The limited supply of land, while the demand for housing is increasing, makes the house price spikes.

On the contrary, the increase in income could not match the housing price. This condition makes an imbalanced situation for the real estate industry, as the price is adjusted and controlled by real estate developer [1]. The high price of real estate and the low-income level of the consumer can lead to the signs of an impending economic crisis and the possibility of the real estate bubble because the consumer could not afford the high price houses [15].

D. Physical Attributes

Physical attributes of housing products are the first thing to be noticed by the consumer when buying a house [1]. For this study, physical attributes are the category for any physical utilities attached to the building, like the number of floors, technical equipment, structures, building qualities, floor layout, and others. Lot size and area, number of bedrooms and bathrooms, and the presence of garden and number of floors have been identified as a leading aspect when customers were choosing the house [16]. Water supply and green environment features also become an important indicator that affecting housing preference [17]. The use of products and materials which promote energy efficiency, provide natural light inside the rooms, have better insulation, and offer non-allergic qualities have the likelihood to be purchased by consumers for better indoor environmental quality features [18]. In terms of vertical living like an apartment or condominium, the higher floor level provides more luxuries like less noise, much fresher air condition, and magnificent sceneries from upside [19].

E. Facilities

Facilities are the housing environment that could offer

consumers to enrich the likeliness to live in the developed real estate. Most of the apartment buildings are located at the urban center, where many facilities are nearby and reachable [20]. Environmental ambiances, traffic safety, and environmental safety are the facilities that looked at by consumers in determining a house [21]. An advanced security system like a security patrol or one gate residence also becomes a factor for the consumer when deciding to buy a house [22]. The more secure the area, the more likely for a consumer to live in residence. Parking space also influences consumers in determining the type of house they want to purchase. There is a study found that there is a correlation between the size of the house and the number of occupants with several cars in the household [5].

F. Design and Aesthetic Aspects

Design and aesthetic aspects divided into two categories, which interior design and exterior design. Interior design, space efficiency, the material used, exterior appearance, and functionality of the rooms are the key influencing factors for consumers [23]. Interior design aspects also rule about the space maximization and floor layout. A study reveals that consumers are willing to pay a higher price for a better façade design [24]. By designing the building façade better, it can increase the sustainability of the building environment and lead to the efficiency of energy [1]. Façade and exterior appearance have a direct influence on price, as it is the first physical factor that visible by consumers [25]. Housing exterior and facade have a function that can describe the personal identity, taste, social class, aesthetic preferences, and personality traits of the consumers [26]. The importance of the maintainability of the outer material for the façade expressed by some consumers as some of them would worries the tropical weather could affect the material for the housing facade [27].

G. Developer Reputation

The developer brand has a role in stimulating consumers in deciding on buying property. Decision made by the consumer includes the added value of the product, selection of brand name (housing), the selection of the seller (developer name), the prestige about the product, the timing and amount of purchase [28]. It is common for real estate developers in Indonesia to mention the brands used for building the house and specification in the advertising to increase the sales for their housing products [1]. Some real estate developers also mentioned the name of a well-known architect in charge of the projects. Purchasing a property from a reputable developer with excellent achievement will give the consumer a safe feeling regarding their investment in property.

H. Land Ownership

Land ownership is one of the required documents when acquiring a building. In Indonesia, several certificates of the right could be owned by the individual. Each certificate has a different characteristic and value that affect individual property. Land ownership is the Middle-class community that will prioritize safety factor ownership or security of tenure (Turner, 1972). In Indonesia, there are two types of land ownership, which are *Sertifikat Hak Milik* (SHM) and *Sertifikat Hak Guna Bangunan* (SHGB). SHM is the

strongest and fullest right on land, which one can hold. Indonesian Citizens can only own SHM. The owner of SHM could sell, exchange, or use it as a guarantee for a bank loan. In terms of housing, this type of right applies to a landed house.

Meanwhile, SHGB is a right to construct and possess buildings on the land, which is not one's own for at most 30 years (Law No. 5 of 1960). SHGB could be extended upon request of the rights holder for at most 20 years. According to Government Regulation No. 40/1996, the land that could be granted with SHGB divided into three different types, which are SHGB on State Land, SHGB on Land with right of Cultivation, and SHGB on SHM.

SHGB on State Land could be granted by a decision on granting of a right by a minister or a designated official. The HGB on State Land could be given a maximum period of 30 years and could be extended for 20 years more at most. After the renewal period expired, the rights holders may be given the HGB renewal on the same land. The right of HGB could be removed if the terms are expired and not able to extended. The abolition of HGB on State Land resulted in the land back to the state. The former HGB holders had to demolish the building and objects upon the land on its own cost and give the land back to the state within one year if the right is not renewed. However, if the building and objects thereon are still required, then the former HGB holder shall be given compensation that regulated on Presidential Regulation.

HGB on HPL could be granted by the decision on granting of a right by a Minister or a designated official on the recommendation of HPL holders. Same with HGB on State Land, HGB on HPL also given a maximum period at 30 years and could be extended for 20 years more at most. The renewal of HGB on HPL could be granted upon approval of HPL holders. If the right of HGB not approved by the HPL holders, the land should be back to the HPL holder, and the former HGB holder must surrender the land according to the agreement with the HPL holders.

HGB on SHM is a type of right where the permit of using the land as a building stands on land with SHM or Freehold Title. HGB on SHM is given a maximum period of 30 years. The HGB could be extended with an agreement between HGB Holder and SHM landowner and shall be submitted to the Ministry of Agrarian Affairs and Spatial Planning / National Land Agency.

III. DISCUSSIONS

Based on the works of literature that have examined, this study identified eight significant factors affecting consumer housing preferences. These factors were determined by listing every factor mentioned in the previous study. Each factor was grouped into one primary indicator that represents the mentioned factors. Previous studies stated that location is one of the most influencing indicators for the consumer making a decision when buying a house. When buying housing products, location is the most influential factor to be asked to the real estate developers [1]. Consumers would like to make sure that they would have the property in a strategic location that could increase the value of their house. The location factor consists of the distance to the workplace,

shopping avenue, schools, personal care, and city zoning.

The next influencing indicator is physical attributes. In general, different types of buildings have different sizes and several facilities [5]. Based on the finding from previous studies, physical attributes consist of the size of the house, number of rooms, number of floor level, technical installation, and the quality of the building itself. The type landed house or vertical house also becomes a consideration for the consumer before buying a house. Accessibilities to reach the house also a vital aspect for consumers to consider because accessibility is the key for them to reach other points from their house. Some points mentioned about accessibilities are access to public transport, main road, and toll road. Housing projects should have well planned, designed, and executed, especially on accessibility, proximity to workplace, school, health care facilities, shops, and other community centers [29].

Later, the price also the main factor that contributes to the decision making process for consumers. Price factors consist of the economic value of the property, affordability, level of income, and the market condition of the property. The price aspect is always critical because the low-class income always finds it sensitive toward price. The lower-income class expects an affordable down payment and cheap mortgage for purchasing the houses [21]. Another influencing factor is the facilities. The community center, children play area, security, parking lot, and green space are the attributes for facilities. More complete facilities will make real estate more preferable. Well-developed facilities will make real estate more buyable, especially for married consumers, since they are willing to build families in the right environment.

The sixth indicator that influences consumers' housing preferences is the design and aesthetic aspects. The aesthetic aspects include both interior and exterior design. For the interior design, the factors which important are space efficiency, livability, the floor layout, while for exterior design, the factors are façade design, materials, and easiness for maintenance. The next important factor for consumer's preferences is the developer's reputation. The development of an area by a property developer always tries to give more value to a special social status and prestige level for their consumers [30]. Bonuses and special prices also increase the likeliness for the consumer to buy a property from individual real estate developers.

The last influencing indicator is land ownership. In Indonesia, land ownership divided into three types of ownership, which legalized with a different certificate of ownership. Different types of use for the land will have a different type of certificate and different rights for the holders. The society has already known about the importance of prioritizing the legal aspect of their land [28]. They want to make their house an investment that could be passed to their children.

IV. CONCLUSIONS

Based on the discussion above, this study can conclude that there are eight indicators for consumers have to consider before buying a house. The key preferences are the location of the house, accessibility, price, physical attributes, facilities, design, and aesthetic aspects, developer reputation, and land ownership. The findings in this research can be used to determine government regulation, real estate developers, and the community itself to have a reflection of housing preferences.

Figure 1. Conceptual Framework Research (Author Interpretation)

The further research could use the conceptual framework not only in terms of location but also could be used to determine the housing preferences for a niche market, such as the millennials market that have a significant potential market for the real estate industry. By knowing millennials' housing preferences, the developers could make products that relevant to the millennials' needs. Lastly, another research related to housing preferences could be compared with the findings in this paper in order to generate a better understanding of the real estate industry in Indonesia.

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Appendix A: Conceptual Framework for the Literature Review (Authors' Analysis)

	Author	Objective	Conclusion	Critical view
1	Khan, P. A., Azmi, A., Juhari, N. H., Khair, N., & Daud, S. Z. (2017). Housing Preference for First Time Home Buyer in Malaysia. <i>International Journal of Real Estate Studies</i> , 11(2), 1–6.	The study aims to evaluate preferences first time buyers of houses to live in. The author tried to evaluate six variable when deciding to buy a house which is: 1) demographics, 2) economic, 3) financial, 4) location, 5) neighborhood and 6) structure	the first time buyers in Malaysia prefer to economic, neighborhood, structure and location factors when deciding to buy a house	had to make a clear definition with the variable to make the reader fully understand what are the parameters
2	Delgado, A., & Troyer, F. D. (2017). Housing preferences for affordable social housing projects in Guayaquil, Ecuador. <i>International Journal of Housing Markets and Analysis</i> , 10(1), 112–139.	The purpose of this study is to describe the principles of a conceptual model to help developers and housing users achieve their expectations by incorporating additional values as housing preferences. The model for this study is using five concepts: 1) design, 2) cost, 3) market price, 4) project investment, 5) affordability	the higher price people are willing to pay for housing characteristic can be expressed as a value that could be added to the project. Housing users will select those housing characteristics that will provide the maximum quality (value) for a minimum of cost.	Had to define what aspects that customer prefer the most in buying house, especially for the maximum value with a limited budget.
3	Moghim, V., & Jusan, M. B. M. (2015). Priority of structural housing attribute preferences: identifying customer perception. <i>International Journal of Housing Markets and Analysis</i> , 8(1), 36–52.	This paper aimed to determine the combination of housing preferences that generate multiple criteria decision making. This paper used five criteria as housing preferences: 1) housing interior atmosphere, 2) housing exterior, 3) floor layout, 4) interior, 5) technical system	technical system was evaluated as the leading factor in buying preferences. However, the interior housing atmosphere and housing exterior were regarded as the two leats' essential dimensions.	this paper only considering for structural/vertical living and did not include price, location or any macro factor when buying a house
4	Hanif, S., Ahmad, S. T., & Saleem, S. S. (2015). The Need to Build Upwards: A Study on Perception of Vertical / Apartment Housing Among Middle Income Group of Lahore. <i>Vidyabharati International Interdisciplinary Research Journal</i> , 4(2), 39–57.	This research aims to find the acceptability/perception level of vertical housing among middle-income people of Lahore. The attributes used in this paper are: 1) housing attributes like number of bedrooms, form of housing, rent, size of open area and possession period, 2) Environment attributes like location of parking, privacy, view, green spaces, children play area, 3) Economic and social ties include relative, friends, work and previous residential place, 4) location characteristic like access to school, workplace, public transport, shops, community center, and leisure facilities	study revealed an increasingly negative trend in perception of vertical living with the increase in ages. Education also has a vital role since people with higher education levels tend to prefer an apartment. The young generation is more willing to live on the upper floors. Safety & Security, Privacy, and Proper Daylight are the three most important feature followed by green area; children play area, store and balcony	this paper did not consider price as an attribute in buying a house. The paper also already states that land ownership issue but did not make an explanation about what kind of issue in ownership for vertical housing.
5	Rahadi, R. A., Wiryono, S. K., Koesrindartoto, D. P., & Syamwil, I. B. (2015). Factors influencing the price of housing in Indonesia. <i>International Journal of Housing Markets and Analysis</i> , 8(2), 169–188.	The purpose of this study is to analyze the influencing factors for housing prices in Jakarta Metropolitan Region. From the real estate developer's point of view, four primary factors are influencing the price: Design, Accessibility, Facilities, Developer Reputation. From the consumer point of view, there are three influencing factors: Gated Concept, Prestige/Reputation, Security.	Most of the respondents agree that location is the most influential factor to be analyzed by the respondent. The next cluster of factors is the concept of housing, esp green concept, and development scale, which promised to be an independent satellite city. The last factor that determines price is the qualities of the house, such as floor plan layout, infrastructure, and ROW.	The study revealed the most influential factors toward price in housing.
6	Olanrewaju, A. L. C. & Woon, T. C. (2017). An Exploration of Determinants of Affordable Housing Choice. <i>International Journal of Housing Market and Analysis</i> , 10(5), 703–723.	This study explains the determinants of affordable housing choices in Malaysia. There are 7 component that was affecting preferences in buying house: 1) financial factors, 2) building factor: unit size, number of bedrooms, parking area, 3) income factors, 4) accessibility factors: access to working place, crime rate, economic trends, 5) market factor: shopping malls and child daycare, 6) location factor: cities/suburb	household income appears to be the highest consideration. Another consideration attached to non-financial determinants, including location, security, and building. Furthermore, implicit in these findings is that the household makes choices to reduce their financial burden. Therefore, the housing should ensure that the occupiers will not pay more than required transportation to workplaces, hospitals, parking, and the market.	

	Author	Objective	Conclusion	Critical view
7	Rahadi, R. A., Qastharin, A. R., Bekt, R., Aryakusuma, W., Rahmawaty, A., & Golda, S. P. (2020). Value Determinant Factors for Apartment Products in Indonesia. <i>Review of Integrative Business and Economics Research</i> , 9(1), 46–61.	The study aims to address factors or attributes that would influence the price of apartment product in Bekasi, Bandung, and Surabaya. Later, consumers and developers will be able to understand the motivation of purchasing an apartment in those cities. The factors that influence the price are: 1) Physical condition, 2) Location, 3) Livability, 4) Reinvestment value, 5) Accessibility	according to those three cities, Bandung had Reinvestment value as the highest factor that influences the price of the apartment. However, both Bekasi and Surabaya put Location as the most crucial factor in determining the apartment price. For the least important factor, Bandung and Surabaya put Livability, and Bekasi put Physical condition as the least influential factor	should explain again about the determinant factors even though already stated in previous research?
8	Coolen, H. (2015). Affordance Based Housing Preferences. <i>Open House International</i> , 40(1), 74–80.	This paper describes several essential aspects of current approaches to measuring housing preferences. The author tried to set out to develop a more user-oriented approach to measuring housing preferences, which is based on the theory of affordances. There are seven indicators that dwelling should afford according to this paper: 1) construction, 2) maintenance, 3) sustainability, 4) improvement, 5) aesthetics, 6) desired affordance (shelter, personal care), 7) undesired affordance (human injury, degradation)	with Affordance Feature Matrix (AFM), the desired affordances are categorized based on the room usually set up in a house. The number of desired affordances covered by a single room, then the more critical that room in a housing unit. The AFM may be considered as the make-up for an affordance based development and design process used by developers, architect and also for inhabitants	the paper told that indicators of housing preferences could be very different depends on the needs of the users
9	Rahardjo, H. A., Dinariana, D., & Permana, V. (2015). The Determinant Factors for Residential Selection of the Relocated Low-Income Communities in Jakarta, Indonesia. <i>International Journal of Social Science and Humanity</i> , 5(8), 667–671.	This study is expected to know the opinion of the inhabitants of the vertical housing. The research also intended to identify the factors that influence the low-income decision-making process. The result of this study is expected to provide input to the government or developers to build flats following the wishes of the dwellers of kampung pulo to reduce the impact of losses due to the floods that regularly hit. Eight criteria must be considered in housing selection: 1) zoning, 2) utilities, 3) technical factors, 4) location, 5) aesthetic, 6) community, 7) city service, 8) cost	based on the analysis of correlation analysis above, there are six criteria of independent variables: 1) easy access to public transport, 2) close to the workplace, 3) close to market, 4) conformity of rental price per month, 5) flood-free location, 6) the availability of clean water facilities.	
10	Kaya, S. K., Ozdemir, Y., & Dal, M. (2019). Home-Buying Behaviour Model of Generation Y in Turkey. <i>International Journal of Housing Markets and Analysis</i> , ahead-of-print (ahead-of-print).	The study aimed to determine the preferences among Gen Y in Turkey when buying a house. There are macro and micro marketing factors that affect housing marketing for Gen Y. The macro-environment factors are economical, demographics, political, legal, social-cultural, environment, and technology, while the micro factors are competitors, clients, insurance, and real estate investment trust. Six main factors that are believed to affect home buying are: 1) Reliability, 2) Economic, 3) Transportation, 4) Quality of Social Life, 5) Building Quality Standard, 6) Technological	the result of this study revealed that the factors affect housing preferences are 1) Quality, 2) Technology, 3) Economy, 4) Transportation, 5) Quality of Social Life, 6) Reliability	the study shows that the structure of the family and socio-economic differences affect home buying preferences. Experience and culture have a significant impact on preferences among Gen Y when buying houses.

	Author	Objective	Conclusion	Critical view
11	Gupta, V. K., & Malhotra, G. (2016). Determining Customers' Preferences for Housing Attributes in India. <i>International Journal of Housing Markets and Analysis</i> , 9(4), 502–519.	<p>The purpose of the paper is to highlight the essential attributes to the customer when purchasing a residential property. The paper also aimed at the requirements of the customers and their willingness to pay for residential real estate. The author also considered the number of rooms per apartment as the critical characteristic of costs when purchasing a residential flat.</p> <p>Housing preferences influenced by macro factors (the housing market, housing system, and economic condition) and micro factors (age, household composition, income, and current housing situation). The attributes used in this paper are: 1) Number of rooms, 2) price, 3) flat size, 4) open area, 5) floor level, 6) premium finishing, 7) location (work, school, market), 8) amenities offered (health service, fitness, swimming pool, leisure)</p>	<p>the customer in Delhi mainly prefers to buy residential flats only if they have sufficient family income to pay loan installment. There are also differences in the preferences in the number of rooms and floor level. Around 62.5% of the respondent prefers to buy 3 BHK choice on floor levels 1 - 6. Lower floor level is preferred by the family with INR 2-4 million per annum, whereas floor level 7-15 are preferred by respondents with income more than INR 6 million per annum.</p>	<p>The author also discusses the intention of buying apartments, such as for personal use, investment purpose, family purpose, and others. Almost 42.5% of the respondent prefers to buy 4 BHK mainly for personal use. Investment purpose is the prominent trend in the higher income groups (above 6 million INR)</p>
12	Verhetsel, A., Kessels, R., Zijlstra, T., & Bavel, M. V. (2016). Housing Preferences among Students: collective housing versus individual accommodations? A stated preference study in Antwerp (Belgium). <i>Journal of Housing and the Built Environment</i> , 32(3), 449–470.	<p>The purpose of this research is to discover the housing preferences of Belgian Students with a focus on the relative importance they attached to private versus shared amenities. There are six relevant attributes used in this research: 1) rent, 2) distance to campus, 3) facilities, 4) building type, 5) size of the room, 6) furnished or not</p>	<p>the result of this research state that the type of housing is the most crucial attribute in the decision making processes followed by rent price and size of the room.</p>	<p>the paper aims for a college student who usually has a short term period of living (4-6 years)</p>
13	Rahadi, R. A., Wiryono, S. K., Koesrindartoto, D. P., & Syamwil, I. B. (2015). Comparison of the Property Practitioners and Consumer Preferences on Housing Prices in the Jakarta Metropolitan Region. <i>International Journal of Housing Markets and Analysis</i> , 8(3), 335–358.	<p>The purpose of this paper is to compare the different preferences between property practitioners and residential consumers on housing prices in the Jakarta Metropolitan area.</p> <p>The indicators for describing the preferences are: 1) Location Accessibility, 2) Physical qualities, 3) Livability, 4) Concept, 5) Financial Condition, 6) Brand, 7) Location uniqueness</p>	<p>housing consumer and property practitioners have different preferences on the categories important for housing price. Housing consumers have a more straightforward assumption about the categories influencing price. Location near-religious center, activity center, shopping center, education have the highest mean score. The next essential attributes are ease of accessibility and direct toll road access. The last attributes are the green concept and a sound security system.</p>	<p>This study is one of the research that investigates not only from a customer perspective but also from the developers. this result could reduce the gap between the users and the practitioner</p>
14	Cai, W., & Lu, X. (2015). Housing affordability: Beyond the income and price terms, using China as a case study. <i>Habitat International</i> , 47, 169–175.	<p>The most common method to understand and evaluate housing affordability is using a ratio approach like 30/40 rule or Price to Income Ratio (PIR). While successfully making the calculation more simple and straight forward, this method falls short of accurately depicting the housing affordability situation in a different household.</p> <p>This paper adds some dimension to adjust the judgment before buying a house, which: Housing affordability, Housing accessibility, Housing amenities, and housing adequacy</p>	<p>the study in Wuhan, China, the housing affordability were at a moderate level. By comparison, participants have had such severe problems with over-crowding, suggesting the need for more space. By applying a concept of housing appropriateness with four dimensions, the income-constrained consumers are making trade-offs between housing costs and the quantity of housing they consume. A single dimension of housing affordability fails to show that consumers make the trade-off to manage their housing expenditures</p>	<p>the study shows that housing appropriateness should contain not only financial or affordability but also other dimensions, which could be the trade-off of financial factors.</p>

	Author	Objective	Conclusion	Critical view
15	Indrianingrum, L. (2017). Housing Ownership and Affordability among Low-Income Society in the Poorest Sub-district of Semarang, Central Java, Indonesia. <i>AIP Conference Proceedings</i> , 1818(1).	This research analyzes the housing preferences of the low-income society related to the housing ownership and affordability aspects. The ownership aspect was analyzed through their vision on ownership status and housing type. The affordability aspect was analyzed based on the installment factor, preferable housing price, and loan institution installment.	The low-income society's vision was living in the same neighborhood or anywhere else as long as it had the same price range. They understand that in order to get a better living, they need to have a higher-priced house. The public housing was not considered as an option because of the ownership issue. vertical living considered less comfortable and had limited spatial movement	this study need to dig more in-depth about the reasons why they are not willing to live in the vertical houses
16	Rahmadaniyati, D., Faqih, M., & Hayati, A. (2016). Housing Preference for Low-Income People in Indonesia. <i>Proceeding "Enhancing Academic Collaboration Through ASEAN-UNINET Scientific Meeting."</i>	This study aims to describe the ideal and suitable housing preferences for low-income society. The parameters used in the paper are 1) physical aspects, 2) house quality (air circulation, safety, green concept), 3) size, 4) price, 5) location, 6) supporting facilities, 7) bonuses, 8) land tenure	the result showed that land tenure become the most prioritized factor for the low-income society when buying houses, followed by size, price and the quality of the house.	the study also compares the preferences for low-income society with others, and land tenure would be the most critical factor for them
17	Farraz, M. A., & Barus, L. S. (2019). Housing Preferences and Choice Young Families Commuters in Depok City, Indonesia. <i>IOP Conference Series: Earth and Environmental Science</i> , 264, 012010.	The study intends to know the characteristic of young commuter families and analyze the essential housing attributes among young families. The attributes used in this study are: 1) type of house (landed or vertical), 2) location, 3) comfort and environment, 4) price, 5) accessibility, 6) mechanism (purchase or rent), 7) desire to move	there is a life stage of young couple according to Duval: couple stage - no children, childbearing - family stage, Preschool family stage. Homes are vital for young families to developmental psychology in managing their relationships in urban households. Many respondents want to live in a suburban area (Depok) because it was more decent and friendly to live, mainly because they are familiar with the environment.	The research focused on young married couples and put the limitation on Depok City.
18	Farasa, N., & Kusuma, H. E. (2018). Housing Preferences of Young Adults in Indonesia: Housing Attributes and Consequences. <i>IOP Conference Series: Earth and Environmental Science</i> , 126, 012184.	This research is supposed to contribute to the understanding of young adult preferences in housing and consequences in decision making. The attributes used in this research are 1) green area, 2) location, 3) simplicity, 4) home design, 5) accessibility	, the most common attributes mentioned in this research are comfort, convenience, economy, interaction, and ambiance.	The study seeks the most mentioned indicators when purchasing a house.
19	Leh, O. L. H., Mansor, N. A., & Musthafa, S. N. A. M. (2016). The Housing Preference of Young People in Malaysian Urban Areas: A Case Study Subang Jaya, Selangor. <i>Malaysian Journal of Society and Space</i> , 12(7), 60–74.	The study is aiming at the young generation's preferences on housing in USJ 1, Subang Jaya. The indicators used in this study are: 1) location, 2) types, 3) size (no. Of bedroom), 4) pricing, 5) housing facilities, 6) ownership	landed house type is the most popular type of house among medium to high income. It also found that in terms of ownership, the young generation prefers to own the house rather than rent it.	the research already contain such factors for young generation housing preferences
20	Wulandari, A. E., Oktafiana, B., Faqih, M., & Hayati, A. (2016). Upper-Middle Society Preference in Indonesia in Selecting a Dwelling. <i>International Journal of Engineering Research & Technology</i> , 5(1), 90–95.	This study aims to identify the preferences of upper-middle society in Indonesia in selecting a dwelling and formulate the factors affecting upper-middle society in selecting a dwelling. Nine factors found in the research: 1) land ownership status, 2) Location, 3) House size, 4) price, 5) house physical, 6) quality, 7) developer, 8) supporting facilities, 9) bonuses	the priority for upper-middle-income society housing is the land ownership status. The community understands the importance of prioritizing the legal aspect of their land as secure tenure. The second priority is location. Middle to high society prefers legality occupancy with a precise and strategic location	the study already state the factors of society in making a decision when buying a house. It is already mentioned about the ownership of the land as security tenure.