COMPARISON OF THE PROPERTY PLAYERS' PREFERENCES ON HOUSING PRICES IN SURABAYA

KOMPARASI PREFERENSI PELAKU PROPERTI TERHADAP HARGA RUMAH DI SURABAYA

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ABSTRAK
Rumah merupakan produk real estate yang digunakan untuk memenuhi motif konsumsi atau investasi. Penelitian ini dilakukan untuk membandingkan preferensi pengembang, konsumen, dan investor terhadap harga rumah di Surabaya pada kedua motif. Responden dipilih secara purposive sampling dan diperoleh 417 responden. Pengumpulan data melalui penyebaran kuesioner dilakukan secara offline kepada developer dan secara online kepada konsumen dan investor. Pengujian data menggunakan konkordansi Kendall dan uji Kruskal Wallis untuk menganalisis komparasi preferensi pengembang, konsumen, dan investor. Hasil penelitian menunjukkan bahwa ketiga pelaku memiliki preferensi variable yang berbeda terhadap harga rumah di Surabaya terkait kualitas fisik, merek, konsep perumahan, lingkungan lokasi, kondisi keuangan, dan kelayakan huni. Pengembang fokus pada produk (kualitas fisik dan konsep perumahan) dan merek. Konsumen memprioritaskan kualitas fisik, lingkungan lokasi, dan kondisi keuangan. Selanjutnya, investor memprioritaskan kualitas fisik dan lingkungan lokasi. Kualitas fisik merupakan preferensi utama pada developer, konsumen, dan investor. Hasil temuan ini mengindikasikan tiap pihak memiliki kepentingan masing-masing sehingga preferensinya berbeda sesuai motifnya.
Kata Kunci: Pengembang, Konsumen, Investor, Harga Rumah

ABSTRACT
A landed house is a real estate product that is used to fulfill consumption or investment motives. This study was conducted to compare the preferences of developers, consumers, and investors for housing prices in Surabaya on both motives. Respondents were selected by purposive sampling and obtained 417 respondents. Data collection through questionnaires was conducted offline to developers and online to consumers and investors. Test data used Kendall concordance and Kruskal Wall test to analyze the comparison of developer, consumer, and investor preferences. The results showed that the three players had different preference variables on house prices in Surabaya related to physical quality, brand, location concept, location environment, financial condition, and livability. Developers focus on products (physical quality and housing concept) and brands. Consumers prioritize physical quality, location environment, and financial condition. Furthermore, investors prioritize the physical and environmental quality of the location. Physical quality is a key preference among developers, consumers, and investors. These findings indicate that each party has their own prioritized interests, so their preferences differ according to their motives.
Key Words: Developer, Consumer, Investor, Housing Price

1. INTRODUCTION

Surabaya's population is constantly increasing, and it was estimated in 2020 to be around 2,971,300 people (Badan Pusat Statistik Kota Surabaya, 2023). This creates a high demand for housing and opens up market opportunities for developers to offer landed house products and reap benefits (Rahadi et al., 2015b). However, a landed house is a complex product and has both consumption and investment functions

(Hårsman & Quigley, 1994; Henderson & Ioannides, 1983). The difference between these two functions makes it hard for practitioners to determine the right price for a landed house based on their preferences. According to theories of economics, preferences for housing are affected by macro-level factors such as property market, property system, and economic conditions (Coolen & Hoekstra, 2001) and micro-level factors such as age, household composition, income, and housing situation (Clark & Dieleman, 2017). The study of Daly et al. (2003) and Aluko (2007) show that there are differences in preferences between consumers and developers. These studies were later developed by Rahadi et al. (2015a) by comparing the preferences between consumers and developers in Jakarta, Indonesia. The result shows that there are differences where the developer's preferences are more specific than that of the consumers. Changes in the housing market have also created shifts in market behavior that expects to benefit from investing in landed houses (Gabrielli, 2018; Lee, 2008; Lowies et al., 2018).

Property-related preferences are the tendency of a person's choice in deciding which property product they want to buy. Weimer (1966) states that property products have characteristics that distinguish them from other economic products. Study by Rahadi et al. (2015a) shows differences in views between consumers and developers on six variables that affect house prices in Indonesia, such as physical quality, brand, concept, location environment, financial conditions, and livability. Developers' preferences are more detailed than consumers. Kwanda, Rahardjo, & Wardani (2001) explained that building quality, design, price, facilities, infrastructure, and location are indicators that influence the price of a house from the consumer's point of view. Security will improve status and lifestyle (Blakely & Snyder, 1999), good neighborhood (Glaeser et al., 2005), road accessibility (Boarnet & Chalermpong, 2001) and proximity to activity centers, education centers, health centers, places of worship, workplaces, and toll (Farasa & Kusuma, 2018; Shimizu, 2014; Vadali, 2008; Wen et al., 2014) also play a role. Furthermore, green concept (Farasa & Kusuma, 2018; Njo et al., 2021; Sander & Polasky, 2009), façade and building specifications (Hofman et al., 2006) are preferences that consumers consider, such as house size, number of floors, layout, garage, and interior (Aliyev et al., 2019; Daly et al., 2003). In contrast, Henderson and Ioannides (1983) and Njo et al. (2019) state that houses have dual functions, for consumption and investment. Investors note the number of returns generated from properties, as well as the location, accessibility, design of the building, and the environment (de Bruin & Flint-Hartle, 2003; Roberts et al., 2012) .

Previous studies focused more on the consumer side. Therefore, this research was developed on additional property players that is investors who prefer location, finance, and layout (Sean & Hong, 2014) as well as the amount of return gained from property (Roberts et al., 2012). However, in this study, a comparison of housing preferences is discussed between market players, which are developers, consumers, and investors together on housing prices in Surabaya. The purpose of making comparisons between the three parties is to sharpen the preferences of each party. Preference differences will give benefits to each market player to determine their next business strategy or decision-making.

2. DATA AND METHOD

2.1. Research Location

The research location is Surabaya City, East Java. Surabaya has an area of ±335.28 km² and is the capital of East Java Province. Surabaya city area is divided into 5 (five) regions namely Central Surabaya, North Surabaya, East Surabaya, South Surabaya, and West Surabaya. As the economic center of East Java, population growth has encouraged housing development in various areas, especially in East, West, North, and South Surabaya. These four regions are the areas selected for the survey.
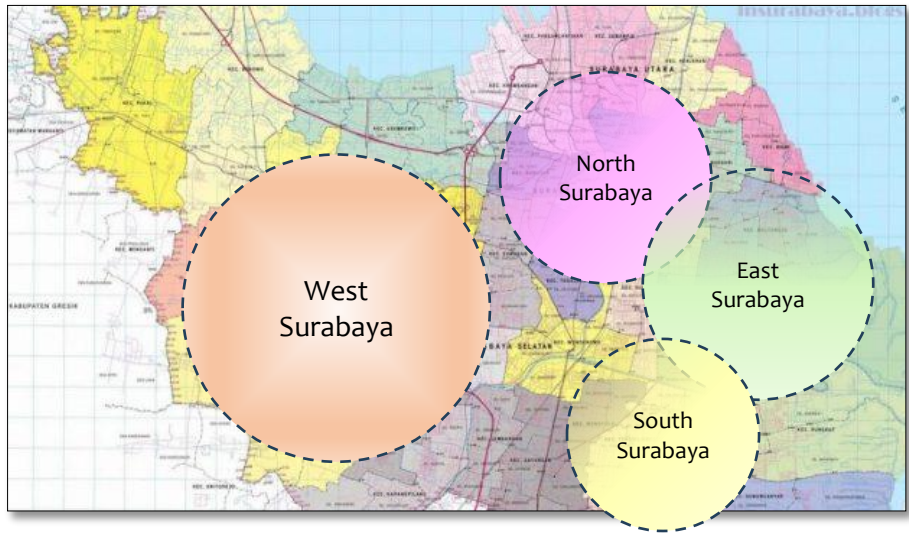
Figure 1. Map of Questionnaire Distribution in East and West Surabaya

2.2. Data Used in the Study

This study is a comparative quantitative study, which compares variables on three sample groups in the form of numbers and analyzes those using statistics (Sugiyono, 2019). Sample selection using purposive sampling is done on housing developers in Surabaya. For consumers and investors according to the criteria, they are willing or have conducted a residential transaction in Surabaya and is 21 years of age and older. Data is collected through questionnaires given both offline to developers and online to consumers and investors. The questionnaires are divided into 3 sections. The first section is the respondents' personal data. The second section is statements developed from Rahadi et al. (2015b) related to respondents' consideration of variables that influence housing prices which are physical quality, brand, concept, location environment, financial condition, and livability. The statements are coded using a Likert scale from 1 (strongly disagree) to 6 (strongly agree) to limit respondents' tendency to choose a middle value (Dhar & Simonson, 2003). The third section is questions to determine the priority order for the six variables that influence housing prices. Details of the variables, indicators and code used can be seen in Table 1.

Table 1. Variable Group and Indicator

Variable	Indicator	Code
Physical Quality	Facade/front view of the building	PQ1
	Infrastructure (telephone line, power line, water)	PQ2
	Width of access road	PQ3
	Rooftop design	PQ4
	Specification of materials used	PQ5
	Building plan	PQ6
	Land area	PQ7
	Living area	PQ8
	Building age	PQ9
Brand	Developer's commitment	B1
	Quality of houses built	B2
	Aftersales service	B3
	Developer's reputation	B4
Concept	Environment-friendly product and environment (green concept)	C1
	Area of land developed for housing (development scale)	C2
	Clusters developed with specific themes (American, Japanese, etc.)	C3

Variable	Indicator	Code
	Development concept in-line with today's trends	C4
	Residential area is divided into smaller clusters that support each other	C5
	Premium facilities (clubhouse, golf court, and others)	
	Development of smaller clusters in sync with the whole theme	C6
	Variety of houses offered	C7
		C8
Location Environment	Proximity to toll access	Loc1
	Proximity to family	Loc2
	Proximity to place of work	Loc3
	Good security system	Loc4
	Good neighbors	Loc5
	Ease of access	Loc6
	Proximity to activity centers	Loc7
	Proximity to shopping centers	Loc8
	Proximity to education centers	Loc9
	Proximity to places of worship	Loc10
	Proximity to terminal	Loc11
	Prone to traffic jam	Loc12
	Prone to flood	Loc13
	Unique location	Loc14
Financial Condition	Alternative payment scheme (Cash, installment, or KPR)	FC1
	Investment value of house	FC2
	Personal financial capabilities	FC3
	Pricing scheme (price difference based on payment method)	FC4
Livability	Prestige	Liv1
	Increasing social status	Liv2
	Following lifestyle	Liv3
	Prioritizes privacy	Liv4
	Availability of complete fixtures (stairs railings, toilet, pantry, etc.)	Liv5
	Neighborhood of similar age and background	Liv6

2.3. Method

The validity test uses Pearson Product Moment Correlation by testing the correlation between each question in the questionnaire and its total value. If the significance value of $p < 0.05$, it is stated to be valid. Furthermore, the reliability test to measure the degree of stability, consistency, predictive power, and accuracy using Cronbach's alpha, if the alpha value> 0.7 then the reliability is sufficient. Kendall's concordance is principally used to determine the alignment or agreement between k-variables measured on an ordinal scale. The observation values in each row will be averaged and ranked. The ranking of the objects studied will be analyzed through Kendall's concordance test by showing the comparison of preferences between developers, consumers, and investors on six variables (physical quality, brand, concept, location environmental factors, financial conditions, livability). Details of the variables, indicators and codes used can be seen in Table 1.

3. RESULT AND DISCUSSION

Based on questionnaire selection, 417 respondents were acquired, comprised of 25 developers, 43 investors, and 349 consumers.

3.1. Developer Characteristics

The demography of developers can be shown in Table 2. Description The developers who were given the questionnaire had the job titles of marketing personnel (40%), marketing managers (20%) and managers for other divisions (16%) such as Project Managers and Finance Managers. The most responding developers were male (80%), aged 25-35 years (48%) and had a bachelor's degree (84%). The developers that were studied offer housing products with a price range of Rp. 1 - 6 billion (80%) with an area developed as housing of 25 - 100 ha (80%).

The housing development is mostly conducted in East Surabaya and West Surabaya. Some of the developers in the West area who responded were Graha Mitra Asri, Dian Istana, Prambanan Residence, Wisata Bukit Mas, while developers in the East area were Galaxi Bumi Permai, Central Park Gunung Anyar, Puri Galaxy, and Ardenville Residence.

Table 2. Demography of Developers

Information		Location (Surabaya)				Total	%
		East	West	North	South		
Position	Director	0	2	0	0	2	8%
	Marketing Manager	0	5	0	0	5	20%
	Other Manager	1	1	2	0	4	16%
	Marketing	6	3	0	1	10	40%
	Estimator	1	1	0	0	2	8%
	Surveyor	0	2	0	0	2	8%
Gender	Male	5	12	2	1	20	80%
	Female	3	2	0	0	5	20%
Age (years old)	≤ 25	1	4	0	0	5	20%
	25 - 35	5	6	0	1	12	48%
	> 35	2	4	2	0	8	32%
Education	Undergraduate	6	12	2	1	21	84%
	Graduate	2	2	0	0	4	16%
Price (Rupiah)	≤ 1 M	1	3	0	0	4	16%
	1 – 6 M	6	11	2	1	20	80%
	> 6 M	1	0	0	0	1	4%
Area for Development	≤ 25 Ha	1	3	0	0	4	16%
	25 – 100 Ha	6	11	2	1	20	80%
	> 100 Ha	1	0	0	0	1	4%

3.2. Consumer Characteristics

The demography of consumer can be shown in Table 3. The majority of consumers are male (62%) and under 25 years old (58%) with the latest education diploma/bachelor's degree (89%). Consumers tend to choose house locations in areas around West Surabaya (55%) and East Surabaya (33%). They are interested in buying houses in the price range below Rp1 billion (37%) and Rp1 - 2 billion (34%). The transaction status, 70% of consumers are still in the process of purchasing, the rest consumers have made purchase transactions with a long process of more than 3 years (17%) and less than 3 years (13%) to complete the purchase transaction.

Table 3. Demography of Consumers

Information		Consumer	%
Gender	Male	217	62%
	Female	132	38%
Age (years old)	≤ 25	204	58%
	25 - 35	102	29%
	> 35	43	13%
Education	Mid/High school	12	3%
	Diploma/Undergraduate	309	89%
	Graduate/Doctoral	28	8%
Location	Center Surabaya	6	2%
	East Surabaya	113	33%
	West Surabaya	193	55%
	North Surabaya	12	4%
	South Surabaya	25	6%
Price (Rupiah)	≤ 1 M	130	37%
	1 – 2 M	119	34%
	2 – 3 M	57	16%
	> 3 M	43	13%
Transaction Purpose	Sell	0	0%
	Buy	349	100%
Transaction Status	Completed ≤ 3 years prior	46	13%
	Completed > 3 years prior	59	17%
	Undergoing	244	70%

3.3. Investor Characteristics

Investor demographics can be shown in Table 4. The majority of investors are male (81%) under the age of 25 (58%) with the latest education diploma/bachelor's degree (91%). The location of the house that is the choice for investment is East Surabaya (35%) and West Surabaya (44%) with a price range below Rp1 billion (30%) and Rp1 - 2 billion (38%). The purpose of investors making transactions is to sell in the future (40%) and increase the purchase of other properties (60%). Investors expect to complete the purchase transaction in less than 3 years (35%) and investors are currently in the transaction process (56%).

Table 4. Demography of Investors

Information		Investor	%
Gender	Male	35	81%
	Female	8	19%
Age (years old)	≤ 25	25	58%
	25 - 35	12	28%
	> 35	6	14%
Education	Mid/High school	0	0%
	Diploma/Undergraduate	39	91%
	Graduate/Doctoral	4	9%
Location	Center Surabaya	0	0%
	East Surabaya	15	35%
	West Surabaya	19	44%
	North Surabaya	2	5%
	South Surabaya	7	16%
Price (Rupiah)	≤ 1 M	13	30%
	1 – 2 M	16	38%
	2 – 3 M	7	16%
	> 3 M	7	16%

Information			Investor	%
Transaction Purpose	Sell		17	40%
	Buy		26	60%
Transaction Status	Completed	≤ 3 years prior	15	35%
		> 3 years prior	4	9%
	Undergoing		24	56%

3.4. Analysis of Property Preferences

Table 5 shows that through the validity test, three indicators of developer preference were obtained, which are proximity to family (Loc2), proximity to the terminal (Loc 11), and neighborhood of similar age and background (Liv 6) with a significant value > 0.05, so the indicator was discarded as invalid. However, other indicators have a significance value <0.05 so they are valid and used in further data processing. Furthermore, the reliability test uses Cronbach's Alpha value which is indicated by values above 0.7, from 0.718 to 0.933. These results indicate that the variables studied are reliable.

Table 5. Validity and Reliability Test

Indicator	Developer		Consumer		Investor	
	Validity[a]	Realibility[b]	Validity[a]	Realibility[b]	Validity[a]	Realibility[b]
PQ1	0,940**	0,913	0,716**	0,876	0,828**	0,899
PQ2	0,787**		0,623**		0,697**	
PQ3	0,864**		0,745**		0,797**	
PQ4	0,483**		0,675**		0,649**	
PQ5	0,711**		0,767**		0,860**	
PQ6	0,781**		0,804**		0,811**	
PQ7	0,907**		0,718**		0,712**	
PQ8	0,924**		0,728**		0,616**	
PQ9	0,488**		0,598**		0,778**	
B1	0,931**	0,933	0,880**	0,882	0,848**	0,885
B2	0,932**		0,856**		0,868**	
B3	0,863**		0,876**		0,852**	
B4	0,939**		0,826**		0,886**	
C1	0,835**	0,862	0,738**	0,906	0,848**	0,922
C2	0,812**		0,719**		0,805**	
C3	0,407**		0,807**		0,739**	
C4	0,804**		0,806**		0,881**	
C5	0,654**		0,801**		0,839**	
C6	0,822**		0,794**		0,792**	
C7	0,765**		0,816**		0,880**	
C8	0,743**		0,742**		0,664**	
Loc1	0,631**	0,869	0,596**	0,896	0,652**	0,930
Loc2	0,235		0,657**		0,729**	
Loc3	0,741**		0,737**		0,832**	
Loc4	0,852**		0,702**		0,633**	
Loc5	0,768**		0,688**		0,735**	
Loc6	0,934**		0,760**		0,799**	
Loc7	0,853**		0,758**		0,841**	
Loc8	0,920**		0,730**		0,832**	
Loc9	0,920**		0,677**		0,803**	
Loc10	0,872**		0,664**		0,761**	
Loc11	-0,162		0,555**		0,698**	
Loc12	0,630**		0,613**		0,606**	
Loc13	0,463**		0,615**		0,680**	

Indicator	Developer		Consumer		Investor	
	Validity[a]	Realibility[b]	Validity[a]	Realibility[b]	Validity[a]	Realibility[b]
Loc14	0,717**		0,574**		0,644**	
FC1	0,865**	0,838	0,888**	0,908	0,833**	0,874
FC2	0,806**		0,869**		0,802**	
FC3	0,832**		0,888**		0,906**	
FC4	0,881**		0,896**		0,902**	
Liv1	0,835**	0,781	0,866**	0,868	0,846**	0,924
Liv2	0,805**		0,857**		0,843**	
Liv3	0,829**		0,785**		0,868**	
Liv4	0,866**		0,696**		0,858**	
Liv5	0,781**		0,694**		0,888**	
Liv6	0,387		0,770**		0,822**	

*Details: [a]Pearson Correlation; [b]Cronbach's Alpha; **significant at α: 5%*

3.5. The Comparison of preferences among Developer, Consumer, and Investor

The next test is the Kendall's concordance test for the comparison among property players. Based on the mean order, the three property players have different preferences towards variables that influence house prices in Surabaya. The order of preference difference between property players can be seen in Table 6.

Table 6. Priority of Price-Determining Variables According to Developers, Consumers, and Investors

Variable	Developer		Consumer		Investor	
	Mean	Order	Mean	Order	Mean	Order
Physical Quality	2,84	1	2,83	1	2,74	1
Brand	2,92	2	3,95	5	3,79	4
Concept	2,84	1	3,70	4	3,28	3
Environment of location	3,24	3	3,21	2	3,07	2
Financial Condition	4,68	5	3,31	3	4,00	5
Livability	4,48	4	4,00	6	4,12	6

Based on the priority scale of variables physical quality, brand, concept, location environment, financial condition, and livability, players in the property market have their own preferences on those variables and prioritize according to their own roles.

Developers' Preference

Developers have their priorities on the physical quality and concept of housing. Then, in their respective order, comes brand, location environment, livability, and financial condition. This indicates that developers are more concerned with the products they offer than with the consumers' financial condition. Rahadi et al. (2015a) also stated that developers are very concerned with physical quality. The developers' preferred physical indicators include road width in front of the house, age of the building, material specification, and building plan. Developers will sell newly built houses as soon as possible as older houses generally have lower quality (Tan, 2011). Developers with large land areas pay even more attention to the road width. A wider road will create a more comfortable open space (Shimizu, 2014). In addition, developers prioritize the quality of the house built as it plays an important role in boosting the company's brand. House purchasing is influenced by the quality of the existing building (Chia et al., 2016). The area of development, development concept that follows the trend, varying types of houses, and green concept are very much considered by the developer. Large-scale development will attract consumers to choose said developer (Rahadi et al., 2015b). Moreover, the large-scale development will encourage developers to prioritize premium facilities, small clusters development, and house type variance. However, for developers in general, the indicators of development with specific themes and development of small clusters that are in line with the housing concept are not a top priority. The development of small clusters is often overlooked because the

number of developers with a land area of ≤ 100 Ha in Surabaya is much greater than the number of developers with land area of >100 Ha. Developers also prioritize a good security system, ease of access, and proximity to shopping and education centers. Financially, developers prioritize payment scheme alternative, price scheme, investment value of the house, and lastly, personal financial capability. The condition of house sales on several different groups of developers often offers a variety of payment scheme alternatives to attract consumers. Livability, prestige, privacy, and the availability of a complete fixture are key to developers while improving social status and lifestyle are not a major indicator. Residential reflects a sense of pride over others, thus developers use it as a promotional tool (Rahadi et al., 2015a). Tan (2012) also stated that having privacy at home will meet a person's needs in terms of psychology and security.

Consumers' Preference

Consumer's first priority is the physical quality, followed by location environment, financial condition, concept, brand, and livability. Rahadi et al. (2015a) and Daly et al. (2003) also stated that consumers really pay attention to physical quality and location, as consumers expect comfort and accessibility for their activity. Financial condition is an additional variable or complementary for consumers. The most considered indicator of physical quality is infrastructure, materials specification, building plan, and road width in front of the house. Consumers prioritize those indicators more than the façade (Rahadi et al., 2015b). The build quality of the house, developer's reputation, developer's commitment, and aftersales service, respectively, are the order of the brand indicator according to consumers. The most considered points regarding concept are the area of development, green concept, variety of houses, and premium facilities. House variety is a solution to both consumers and developers to the ever-growing prices of landed houses (Tse & Love, 2000). As for the location environment, a good security system, ease of access, good neighborhood, and proximity to activity centers are points which the consumers consider the most. This is in line with Blakely & Snyder's (1999) study that a person will choose a community in which security is ensured. Neighborhood has also been an important indicator in previous studies (Glaeser et al., 2005; Lee, 2021; Wang & Li, 2006). The least considered location indicators are uniqueness of location and proximity to terminals. Reliance on private vehicles and the lack of a culture of using public transport are the main reasons why proximity to terminals are not taken into consideration (Mulliner & Algrnas, 2018). Financially, consumers' considerations include payment scheme and investment value of the house, financial capability, and price scheme. High house prices cause consumers to really pay attention to their financial capabilities and expect investment value from what they have already expended as in the study of Daly et al. (2003) and Ratchatakulpat et al. (2009). On the variable of livability, indicators such as privacy, complete fixture, and prestige are more preferred. Consumers prefer houses that are not interrupted by the outside environment. The indicator the consumers consider the least is age and background similarity with neighbors. Every individual who lives in a heterogeneous community will improve their social life in the neighborhood (Schnell & Harpaz, 2005).

Investors' Preference

Investors' preferences are physical quality, location environment, brand, financial condition, and livability. In line with the study of Roberts et al., (2012) along with Sean and Hong (2014), investors are very concerned with physical quality and location. Adversely, financial condition and livability are not a top priority as 40% of investors earn more than Rp10.000.000,00 per month. Investors tend to have no financial difficulty to invest in property. Indicators of the physical variable that investors prefer are infrastructure, road width in front of the house, building plan, and materials used. Investors do not always buy a new house as their investment product, but rather consider the developer's commitment, build quality of the house, developer's reputation, and aftersales service. Variable of concept such as green concept, area of development, small cluster development, and house type variation are investor's priorities. Green concept or environment-friendly housing has been around for a long time and is growingly popular in Jakarta (Rahadi et al., 2015a) and Surabaya, and investors consider this green concept indicator to be important because it adds value. Financially, investors prioritize the investment value of a house, price scheme, personal financial capability, and payment scheme alternative, in line with the study of Roberts et al., (2012). Prestige, privacy, having a complete fixture, good security system, ease of access, good neighborhood,

proximity to activity centers are the most important things investors consider (Blakely & Snyder, 1999; Glaeser et al., 2005; Wang & Li, 2006).

4. CONCLUSION

Developers, consumers, and investors have different preferences on variables of physical quality, brand, concept, location environment, financial condition, and livability which influences landed house prices. Developers will focus on their products, simultaneously prioritizing physical quality and housing concept. Developers also prioritize brand as their second priority. On the other hand, consumers prioritize physical quality, followed by location environment. In the third priority, consumers place financial condition which shows that the physical quality and location environment selected are also adjusted to their existing financial condition. Investors also prioritize physical quality as their top and location environment as their second, but financial condition is not of great consideration. Thus, physical quality is the top priority according to the preferences of developers, consumers and investors. The location environment is the second priority for consumers and investors while developers prioritize the development concept and brand.

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