Value Determinant Factors for Apartment Products in Indonesia

Review of Integrative Business & Economics Research

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ABSTRACT

This study aims to address the factors or attributes that would influence the price of apartment products in Bekasi, Bandung, and Surabaya city. In total, 531 respondents from across these three cities participated in the questionnaire for this study. The questionnaire was made based on the author's previous studies. For data analysis, the authors utilised a descriptive analysis to conclude this study. The findings suggested that each of the cities surveyed has their unique traits that are different from each of them. The objectives of this research have successfully been obtained with data collection, development, data verification and validation of the factors influencing the price of apartment products. The result of this study will create a better understanding of how these factors can influence the consumer perception of price in Indonesia. Currently, this is the first study in Indonesia that analyses apartment consumer preferences in Indonesia. The findings from this study will be useful for all stakeholders. Consumers and property developers will be able to understand the motivation for purchasing apartment products in those major cities, while for the government it would be useful to produce a better regulation for the industry.

Keywords: Apartment markets, Apartment Price, Apartment market analysis, Indonesia.

1. INTRODUCTION

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Indonesia is the fourth largest country in Indonesia, with a population of nearly 270 million in 2019. With most of the population and business activities centred on Java, the country has for the past several years enjoyed massive development and economic improvement. This condition causes the island of Java to become the main attraction of urbanisation and business for all Indonesian people. As a result, most of the big cities on Java, such as Jakarta, Bandung, Surabaya, and the surrounding area are flooded by Indonesians who work and do business (World Bank, 2019).

Based on a report given by the Indonesian Statistics Board in 2017, currently, around 150 million people are living on Java Island (Badan Pusat Statistik Provinsi Jawa Timur, (2018). The current population density per square kilometre on Java Island reaches 1,200 in 2017 (Badan Pusat Statistik Provinsi Jawa Timur, (2018).
The concentration of this population combined with the process of urbanisation has created housing problems. The scarcity of land for housing development also worsened the situation. Because real estate products have their differences (Hai-Zhen et al., 2005), they make the prices of residential products unpredictable. At present, with weak government control and limited policies, housing prices in Indonesia are primarily controlled by real estate developers.

The purpose of this study is to analyse the attributes that affect the price of apartments in Java. This research will focus only on apartment products because it is one of the housing products that appear in Indonesia. With high land prices and limited land stocks, apartment products have become attractive alternatives for consumers to live. This research is expected to uncover factors that influence the price of apartment product in Bekasi, Bandung, and Surabaya area. This study will be valuable for the development of apartment in Indonesia, as currently there are limited studies performed that discuss the specific industry in Indonesia.
This research is intended to be the first to lead research on the preference factors for apartment products in Indonesia. Methods and findings can be replicated in other major cities throughout Indonesia. In the end, the results of this study will benefit apartment consumers, apartment developers, the government, and the next generation of researchers in the real estate industry.

2. LITERATURE REVIEW

2.1. General view for Indonesian real estate market condition

In the second quarter of 2017, Indonesia's Gross Domestic Product (GDP) grew by 5.01% in line with the growth recorded in the previous quarter. The above 5% growth is felt positive in Indonesia while the opposite for growth below 5% is correct.

According to the Jones Lang LaSalle (JLL) property market report, demand in the property market has increased slightly, especially at the CBD location. Investors will be more attractive if the developer can offer the best price and payment term. Moreover, Bank Indonesia also estimates that a slight increase in GDP will be between 5.10% - 5.20% at the end of Q3 2017. On the currency aspect, the rupiah will stabilise at IDR 13,237 per US $ 1.00, while inflation will fall to 3, 82% due to August 2017, from 4.37% in the previous quarter (Jones Lang LaSalle, 2017).

The Jakarta Composite Index (JCI) increased slightly during the quarter and closed at

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5,885.61. During 2017, Bank Indonesia has decided to reduce the reference rate from 4.75% to 4.5% in Q2. 2017 and 4.25% in Q3.2017 due to low inflation growth. This result is also expected to cause a reduction in one bank loan as a mortgage because it is still the most preferred transaction method. In terms of supply and demand, the middleand lower-class segments are expected to continue to dominate supply in Q2, 2017 (Bloomberg, 2017).

2.2. General view for Indonesian real estate market condition

2.2.1 Bandung City

The city of Bandung is the capital of the province of West Java in Indonesia. This is the third most populous city in the country, with more than 2.61 million. The city of Bandung has cool temperatures compared to most cities in Indonesia. Bandung economy is mainly built on business, tourism, high technology, creative industries & manufacturing industries, educational institutions, technology, retail services, financial services, pharmaceutical companies, and food production. Bandung has almost 50 higher education institutions and is one of the most popular destinations for education in Indonesia.

As we can see from the table below, Bandung's population growth always increases from year to year. Its growth is around 15,000 people every year or around 0.6% every year. This population increase also affects the demand for housing simultaneously.

Table 1 Population of Bandung from 2011 - 2016
(Source: Badan Pusat Statistik Kota Bandung, 2017)

Jumlah Penduduk dan Laju Pertumbuhan Penduduk di Kota Bandung 2011 - 2016

Tahun Year	Jumlah Penduduk Population	Laju Pertumbuhan Penduduk per Tahun Annual Population Growth Rate (%)
-1	-2	-5
2011	2 429 176	0,71
2012	2 444 617	0,64
2013	2 458 503	0,57
2014	2 470 802	0,50
2015	2 481 469	0,43
2016	2 490 622	0,37

Sumber/Source: 2014-2016 : Proyeksi Penduduk Indonesia 2010–2035/Indonesia Population Projection 2010–2035

2.2.2 Surabaya City

Surabaya is the second metropolitan city after Jakarta and the capital of East Java province with a size of around 327 square kilometres (Badan Pusat Statistik Kota Surabaya, 2016). The location is in the northeast corner of Java Island. Surabaya is a gateway to the economic path in eastern Indonesia. Surabaya is the centre of various businesses, industries and political centres and educational services. The potential and development of Surabaya quickly followed Jakarta. Surabaya's infrastructure

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development is no less rapid than Jakarta, which stimulates economic growth and the property sector significantly. Like many other major Indonesian cities, Surabaya has become a point of attraction for urbanisation and business for people from all over Indonesia after Jakarta. This fact has attracted many migrants seeking permanent employment in Surabaya. As a result, the population in Surabaya continues to increase dramatically every year.

According to official 2010 population data from the Indonesian Statistics Board, around 2,771,615 people live in Surabaya with a population density of 7,889 people per square kilometre. During the last 50 years, the population in Surabaya has multiplied by an average of 0.65% per year (Badan Pusat Statistik Kota Surabaya, 2016). According to the Central Bureau of Statistics, it is estimated that the population increased to 3,366,249,000 people in 2040 as shown in Figure 1. Meanwhile, city growth may be higher than official data.

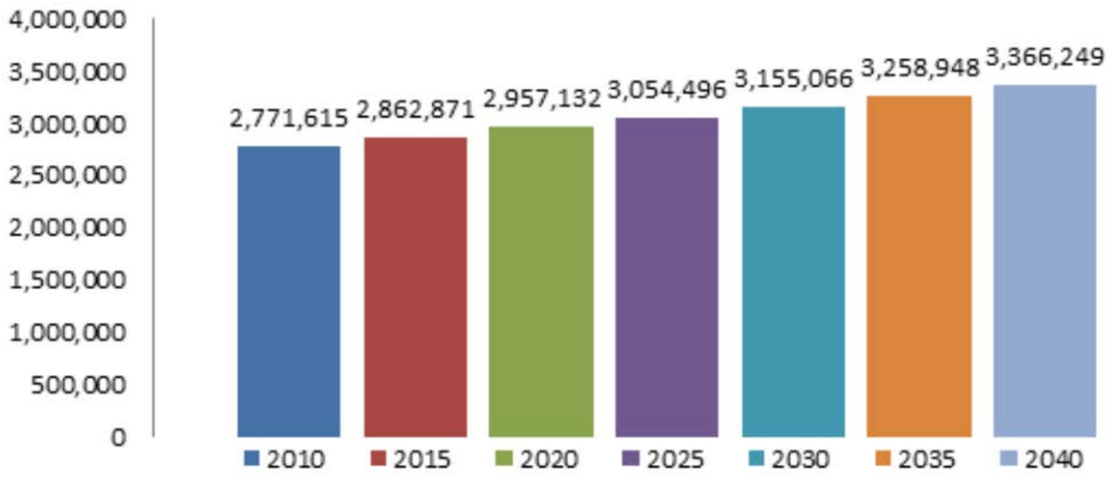

Figure 1 Population of Surabaya
(Source: Badan Pusat Statistik Kota Surabaya, graphic modified)

The phenomenon of increasing population growth from year to year in Surabaya has led to greater housing demand. However, the increase in population growth in Surabaya is offset by the growth of Surabaya, which continues to increase every year. That can be seen from the development of Surabaya City's infrastructure which is not inferior to Jakarta. The economic growth of Surabaya City reaches 6% and is higher than the national average, which only reaches around 5.1% (Badan Pusat Statistik Kota Surabaya, 2018). Infrastructure development and infrastructure facilities are also continuously carried out by the Surabaya City Government, such as the construction of intercity toll roads, completing the construction of the front road and planning the MRT (Mass Rapid Transit).

Surabaya has excellent potential for investors to invest and do business in the property sector (Collier International Indonesia, 2018). Many developers are starting to build new property business projects in Surabaya. Property developers are optimistic about the potential for property development in Surabaya according to high demand for property. Compared to Jakarta, there is more land available to develop property

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projects.

Analysts also stressed that land prices rose rapidly in Surabaya. However, considering that land will become scarce from time to time, property developers in Surabaya are starting to focus on apartment projects. The apartment concept is still new for residents in Surabaya. However, rapid population growth has led to a sharp demand for living space which has finally aroused housing development in the Surabaya area, as well as opening opportunities for real estate developers to benefit from housing prices with their value increasing over time. This, of course, makes property demand increase, but the increasing need for property that is not in line with the availability of land has significantly strengthened housing prices.

The Surabaya government also created a conducive atmosphere especially in the field of property development licensing. It is not surprising that many property developers have begun to develop their business in Surabaya; this has increased intense competition in Surabaya. The total number of strata-title apartments will reach 36,523 units in 2021. From 2018 to 2020, supply is scheduled to grow to 9,251 units per year. Around 46% of all new units are planned in the middle to lower segments. While demand for apartments in Surabaya, at the end of 2018, take-up rates may be up to 81-82%. The brisker prospect for 2019 and 2020 can allow take-up rates to reach 84% and 85% respectively (Collier International Indonesia, 2018). Unlike Jakarta, which relies heavily on foreign developers, most developers in Surabaya are local players.

2.2.3 Bekasi City

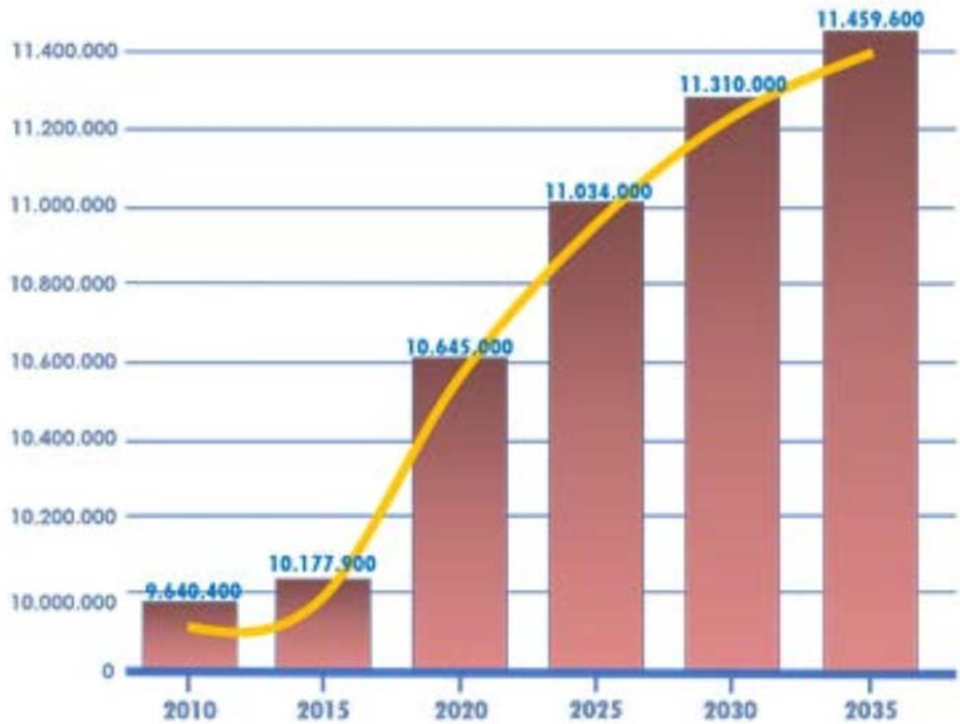

Figure 2 Population of Jakarta and Bekasi
(Source: Badan Pusat Statistik DKI Jakarta, graphic modified)

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As Indonesia's national economic and capital strength, Jakarta is considered the country's main economic engine. Many businesses, political centres, and educational services are centred in Jakarta. Jakarta is Indonesia's gateway to investment both for foreign and domestic investors. Pride of being the country's leading commercial, Jakarta is a booming city with many migrants looking for permanent jobs in Jakarta. As a result, the population in Jakarta has increased steadily for decades.

Underdeveloped areas in Jabodetabek decreased from 17,956 hectares in 1992 to 7,166 hectares in 2005. There was a reduction in land available by 60% in only 13 years (Badan Pusat Statistik DKI Jakarta, 2005). Over the past 50 years, the population in Jakarta has proliferated by an average of 2.4% per year (Badan Pusat Statistik DKI Jakarta, 2009) whose growth has doubled from 530 thousand people in 1930 to 2.9 million in 1961 to 6.5 million in 1980 and finally 10,855 million people in 2018. The Central Bureau of Statistics estimates that the population increased to 11,459 million people in 2035 as shown in Figure 2. Meanwhile, urban growth may be higher than officially shown because it did not try the number of seasonal migrations.

Avoiding overcrowded populations, in 1983 the government drafted a master plan to develop suburban areas namely Bogor, Tangerang, and Bekasi which were integrated into Jakarta (from now on referred to as Jabotabek). Then in 2008, Depok entered the acronym Jabo (de) tank and since then Depok has become one of the Jakarta Metropolitan areas. During 2001 to 2009, the built-up area has increased from 24,032ha to 29,213 ha (Nagasawa et al., 2015) as shown in Figure 3.

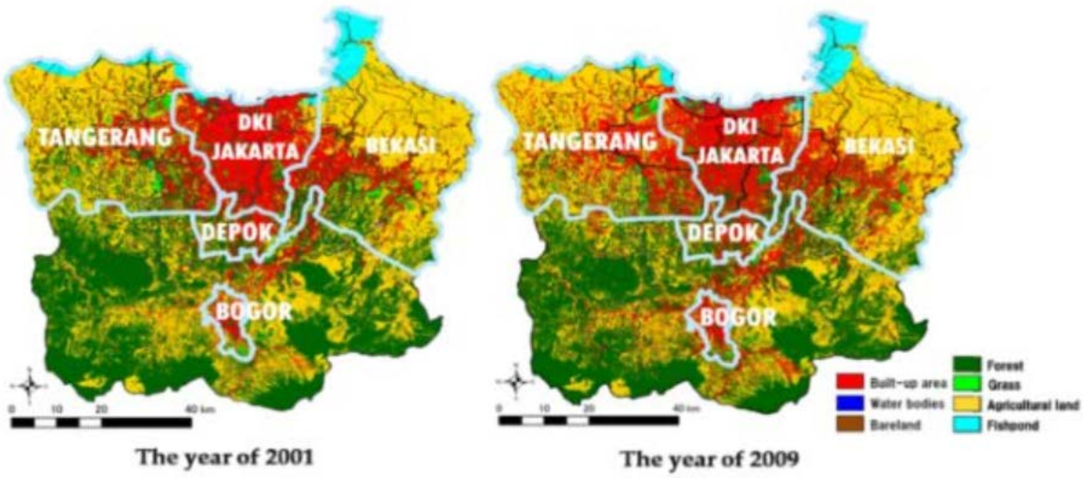

Figure 3. Built Up area of Jabodetabek.
Image courtesy of Nagasawa, et al. (2015). Image modified

The Central Bureau of Statistics shows that the Jabodetabek population will reach 32 million by 2018 which was previously 28 million in 2010. Rapid population growth has caused a sharp demand for living space which has finally aroused housing development in the periphery from Jakarta. To accommodate and connect Jakarta with its suburbs, physical infrastructure such as highways and railways has been built. This condition has attracted real estate developers to expand housing development through the Jakarta suburbs. In 1995, the housing development was expanded to a radius of

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30-40 km from downtown Jakarta.

Due to the significant increase in land prices in the city, new developments in Jabodetabek over the past decade have been dominated by high-density vertical housing known as apartments. It is challenging especially because Indonesians tend to stay in landed houses because it provides open green space and fresh air that provides greater comfort. However, the development of apartments continues to mushroom the market because the demand for shelter incessantly and the land in DKI (Special Capital Region) Jakarta has skyrocketed. Beginning in 2000 was a booming period for the apartment market in Jakarta, 34,071 apartments were completed in 2017 (Savills, 2017). Savings are estimated at 42,471 apartment units in Jakarta ready for sale in 2018 as shown in Figure 4.

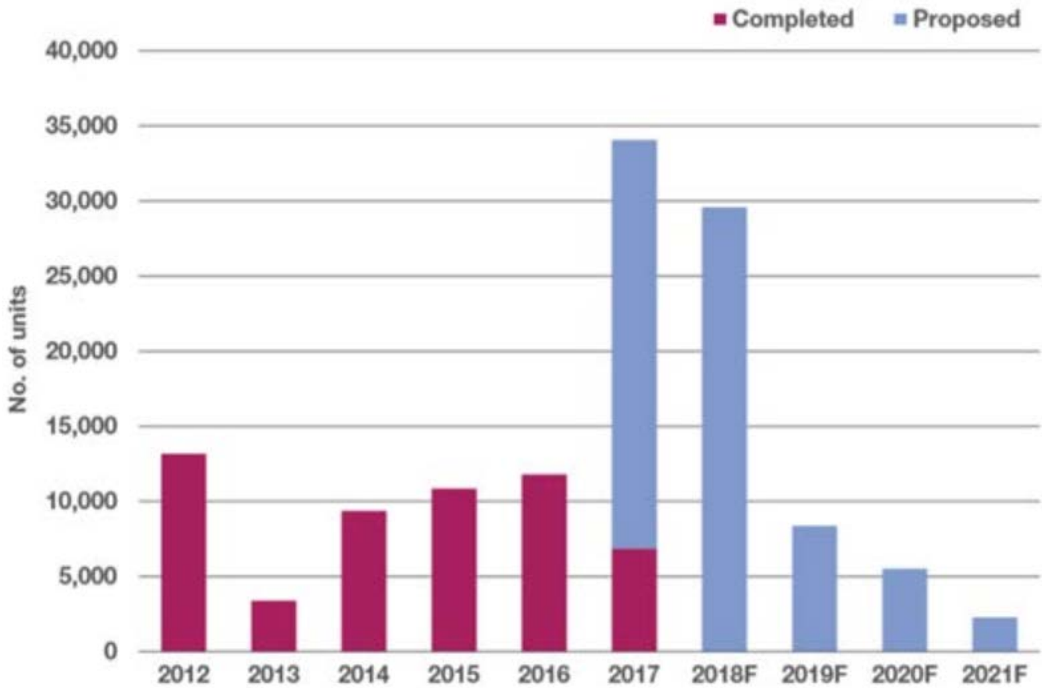

Figure 4. Annual Apartment Supply. Image courtesy of Savills Research & Consultancy (2017)

2.3 Consumer Preferences for Residential Products

The study conducted by Steggel et al. (2003) shows that there have been several developments in the theory of consumer behaviour for housing products. They can analyse which theories stand out in housing research, according to the most quoted references.

Based on their research, we can assume that six theories affect housing Studies. These six theories have been cited more frequently in housing studies from 1989-1999. First, the theory used is the theory of Housing Adjustment. First mentioned by Morris and Winter (1975) in a summary of the theories discussed household behaviour when carrying out daily activities. They will continue to change and adjust their housing situation to achieve satisfaction. From this theory, we can see that some behaviors and preferences change to meet the standards sought by households. The second theory is

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the Congruence Person-Environment theory. This theory briefly discusses the relationship between human behaviour and its environment. Human life is determined by a set of goals, and to fulfil that goal, humans must interact and adapt to their environmental conditions (Ittelson, Proshansky, and Rivlin, 1970). Next is the Diffusion of Innovation Theory. This theory mentions innovations that occur around human life and how they are communicated and introduced to their daily activities and based on their benefits and objectives whether they will be spread or not (Rogers, 2003).

Four elements influence the diffusion process: innovation; communication channel; social system; and time. The fourth theory is the Symbolic Interaction Theory. The approach itself was adopted and used based on physiological and sociological theory, which was later adapted for housing research by Erman (1996). In this context, elections and housing preferences are based on symbolic meanings that are considered standard in society. The fifth theory is the Theory of Social Exchange. This theory tries to explain the relationship between social interaction and links and resources. It states that social interactions and relationships are carried out in the society based on rewards and balance of costs (Thibaut and Kelly, 1959; Blau, 1964; and Homans, 1961). The final theory is the Causal Model of Obstacles and Incentives for Affordable Housing. This theory relates to interactions and relationships between people and households based on interacting variables (McCray et. Al., 1994).

Researchers have conducted studies to understand the behaviour of real estate customers when choosing and buying residential products. There are several methods for finding consumer attributes when choosing a home for them to buy (Zanis and Jusan, 2010). Research in real estate customer preferences can be classified into two main categories (Weimer, 1966). These categories are occupant characteristics and environmental characteristics.

Furthermore, population characteristics can be divided into population demographics and socio-economic population. Environmental characteristics can be divided into environmental and living environments. Research that addresses the characteristics of occupants can be found in research by Blakely & Snyder (1998); Daly et al. (2003) and Shafiei et al. (2010). Research that addresses environmental characteristics can be found in a study by Eves (2006); Aluko (2007); Kopits et al. (2007); and Hoshino (2008).

2.4 Consumer Preferences for Residential Products in Indonesia

There is intensive research conducted by Rahadi et. Al. (2012, 2013, 2014, 2015 (a), 2015 (b), and 2018) Who have carried out literature synthesis followed by qualitative and quantitative analysis in the research process, the authors can create a conceptual model that defines the factors that influence housing product prices in the Jakarta Metropolitan Area. As seen in Figure 5, the factors that influence consist of physical quality, livability, location, accessibility and reinvestment value.

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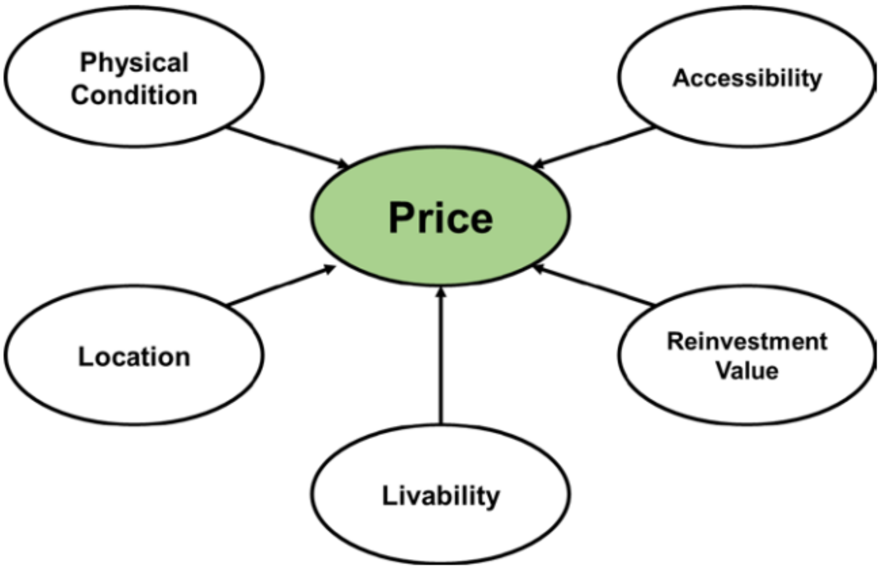

Figure 5. Research Conceptual Model (Adapted from Rahadi et al., 2015)

This research uses the conceptual model for understanding the housing consumer behaviour towards price for an apartment in Java Island. The findings from this study would be useful for understanding the current apartment market condition in Java Island. This approach can be justified to bridge the current gaps in the literature for consumer preference in Indonesia. It will also be beneficial practically for all stakeholders involved in the residential industry.

3. METHODOLOGY

The questionnaire survey was conducted in 2017-2018. The process of data collection was conducted in Bandung with 104 respondents, Bekasi with 252 respondents, and 175 respondents from Surabaya. The age range of respondents is between 18-56 years. Data collected using judgmental sampling with a non-sequential approach. The respondents were then asked about their willingness to buy apartment products. The questionnaire items are grouped into two parts. The first part deals with demographics information, while the last part relates to their preferences for apartment products on Java.

Five factors (Physical Quality, Location, Accessibility, Reinvestment Value, and Livability) and attributes were included in the questionnaire. Respondents answered based on a Likert scale of 1-6 for their studies in Bandung, Bekasi and Surabaya, with a score of 1 representing a high reluctance to buy and 6 representing a high desire to buy a product mentioned earlier.

During the data collection process, the confidentiality of the respondent's personal information is maintained. Before the research process, respondents were given instructions to fill out questionnaires, research objectives, and information about data confidentiality. All respondents gave their consent to participate in this study. The research process, from building survey methods, data collection, and data analysis, was monitored and approved by university advisors.

4. RESULTS

4.1 Bandung City

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From the statistic below, we can see the result that our location is preferable for society to buy. As we can see that the average means for physical condition factor is 4.28, accessibility factor is 4.54, uniqueness factor is 4.40, investment factor is 4.70, and the comfort factor is 4.16. As all the aspect factor is more than value 3, we can conclude that the market is feasible.

Table 2 Mean Analysis Results for Bandung City (Authors' Analysis)

Item	Mean	Std. Deviation	Std. Error Mean
Physical Condition	4.28	1.265	0.124
Accessibility	4.54	1.230	0.121
Location	4.40	1.153	0.113
Reinvestment Value	4.70	1.181	0.116
Livability	4.16	1.301	0.128

Scale 1 = not buying and scale 6 = buying

4.2 Bekasi City

Customer preference that influences them to purchase an apartment in Bekasi consist of five questions and use the Likert scale of 1 – 6 to present the findings. The scale of 1 indicates the least preferable factor influencing customer preference and the scale of 6 indicates the preferable factor influencing customer preference. This finding analysed by using one sample statistics.

Table 3 Mean Analysis Results for Bekasi City (Authors' Analysis)

Item	Mean	Std. Deviation	Std. Error Mean
Physical Condition	5.075	0.8961	0.0565
Accessibility	5.456	0.7795	0.0491
Location	5.548	0.7742	0.0488
Reinvestment Value	5.147	0.9891	0.0623
Livability	5.373	0.7755	0.0488

Scale 1 = not buying and scale 6 = buying

Five factors of customer preferences being asked in this questionnaire section regarding apartment preference in Bekasi. As seen in table 3, the location has the highest mean (5.548) followed by accessibility (5.456) which influencing the customer preference towards an apartment purchase decision.

This result is in line with prior results conducted by several researchers such as Herath

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& Maier (2010), Kamal et al. (2015), and Rahadi et al. (2016), which indicate location is the most influencing factor for purchasing decision on the residential product. This result is also in line with the prior finding on demographic information which stated that 64% of the total respondents need less than an hour to arrive at the office.

Following the location, accessibility is the second factor that influences customer the most on apartment purchasing decision with the mean score of amounted 5.456. Most of the residents who live in outskirts Jakarta prefer to commute using their vehicles (Rahadi et al.,2015). Since Jakarta has a massive traffic jam, accessibility will help residents shorten the distance to their destination, for example near to toll road gate, near to commuter line shuttle, near to the shelter of public transportation and more than one exit and entrance ways to access the entering gate of the apartment.

After location and accessibility, livability is on the third factor that influences customer the most on apartment purchasing decision with the mean score amounted 5.373. Shorten time needed to reach the office, avoided from traffic jam, near to public facilities, eventually will conduce livability.

4.3 Surabaya City

Customer preference that influences them to purchase an apartment in Surabaya consist of ten questions and use the Likert scale of 1 – 6 to present the findings. The scale of 1 indicates the preferable factor influencing customer preference and the scale of 6 indicates the least preferable factor influencing customer preference. This finding of this result is analysed by using one sample statistics.

Table 4 Mean Analysis Results for Surabaya City (Authors’ Analysis)

Item	Mean	Std. Deviation	Std. Error Mean
Physical Condition	4.909	1.215	0.092
Accessibility	4.851	1.097	0.083
Location	5.154	1.559	0.118
Reinvestment Value	5.131	1.462	0.111
Livability	4.794	1.109	0.084

Scale 1 = not buying and scale 6 = buying

Five factors of customer preferences being asked in this questionnaire section regarding an apartment located in Surabaya. As seen in table 4, the location has the highest mean (5.154) followed by reinvestment value (5.131) which influencing the customer preference towards apartment purchases decision.

This result is in line with prior results conducted by several researchers such as Herath (2010), Kamal et al. (2015), and Rahadi et al. (2016), which indicate location is the most influencing factor for purchasing decision on the residential product. This result is also in line with the prior finding on demographic information according to

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excellent location to purchase an apartment, which stated that 49,7% of the total respondents prefer an apartment in East Surabaya because of its close from their office and family member. While 43,4% prefer an apartment in Central Surabaya as a central city of Surabaya, as a result, they can reach every location in Surabaya easily.

5. DISCUSSIONS

For consumers in Bandung city, we can see that reinvestment value is the most important aspect for them when purchasing apartment products in that city. For consumers in Jakarta/ Bekasi and Surabaya area, the factor of location is the most critical aspect for the consumers. It is exciting findings, as it reflects the current behaviour of consumers of the different cities. This finding is by the golden rules of real estate by Lord Harold Samuel in 1944 about the importance of location when selling real estate products (Safire, 2013). When buying residential products, most respondents agree when considering house prices, location is the most influential factor to analyse respondent.

As the fact's states (Poerwanto, 2017) most of the apartment being purchased in Bandung, are not used individually by the consumers. Instead, they expect the return from the resale value and apartment rental such using providers such as Airbnb, Oyo, RedDoors or other accommodation vendors. The findings are a bit different in Jakarta/ Bekasi and Surabaya city, as consumers to purchase their product for their use, not for gaining rental or resale value. Thus, that is why consumers looked for location as their first factors.

Table 5 Mean Analysis Results for All Cities (Authors' Analysis)

Item	Bandung	Bekasi	Surabaya
Physical Condition	4.28	5.075	4.909
Accessibility	4.54	5.456	4.851
Location	4.40	5.548	5.154
Reinvestment Value	4.70	5.147	5.131
Livability	4.16	5.373	4.794

Scale 1 = not buying and scale 6 = buying

For the least important from the survey, we can see that livability is deemed as the least important for consumers in Surabaya and Bandung, while the physical condition is deemed as the least important for consumers in Bekasi area.

It is also interesting to see that after the data from three cities being compared side-by-side, all the data showing results differently for each city. For the city of Bandung, the arrangement from the most important to the least important is reinvestment value>accessibility>location>physical condition>livability. For Bekasi, the arrangement is location>accessibility>livability>reinvestment value>physical

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condition. For Surabaya, the arrangement is location>reinvestment value, physical condition>accessibility>livability.

Table 6 Ranking of Mean Analysis for All Cities (Authors' Analysis)

Item	Bandung	Bekasi	Surabaya
Physical Condition	4	5	3
Accessibility	2	2	4
Location	3	1	1
Reinvestment Value	1	4	2
Livability	5	3	5

6. CONCLUSIONS

In this paper, we tried to analyse the apartment consumers from three different major cities in Indonesia. The factors that we analysed are based on the authors' previous studies results. A total of 531 respondents were interviewed from all those cities. The findings suggest that each of the cities surveyed has their unique traits that are different from each of them. The objectives of this research have successfully been obtained with data collection, development, data verification and validation of the factors influencing the price of apartment products.

The result of this study will create a better understanding of how these factors can influence the consumer perception of price in Indonesia. Currently, this is the first study in Indonesia that analyse apartment consumer preferences in Indonesia. The findings from this study will be useful for all stakeholders, including the consumers, the property developers, and government. Consumers and property developers will be able to understand the motivation for purchasing apartment products in those major cities, while for the government it would be useful to produce a better regulation for the industry.

7. FUTURE RESEARCH

The current conceptual framework and the research method can be utilised in other major cities in Indonesia outside of Java Island, such as Medan, Makassar, and Pekanbaru. The reapplication of this study would be beneficial to verify whether similar results are also present in those other cities. If so, we can use the current model to develop the real estate industry, particularly the apartment industry in Indonesia.

It is also interesting to verify and apply this analysis in other major cities around Indonesia, such as Singapore, Bangkok, Manila, Hanoi and Kuala Lumpur. With similar heritage, correlations between these factors might occur.

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