

## Analysis of Housing Affordability by Generation Y Based On Price to Income Ratio In Jakarta Region

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**ABSTRACT:-** This paper will discuss about Generation Y preferences in purchasing their first house and how it affects their affordability using price to income ratio. The approach being used is by analysing twenty-three papers related to preferences and housing affordability, making synthesis from collected papers, and generating critical view from papers that have been read. From this paper researcher find that Gen Y preferences mainly focuses on three aspects such as product specifications, future considerations, and dwellers characteristics. It is also shown that supplemental factors such as taxes and mortgage payments also included in Gen Y preferences and further affects price and affordability. All of these papers will be analysed to find the most proper objectives, deeper understandings, methodologies, and conclusion.

**Keywords:-** Gen Y, Housing Preferences, Affordability, Price to Income Ratio

### I. INTRODUCTION

Generation Y (or simply Gen Y) is determined by the researchers and popular media as the generation who is born between early 1980 to early 2000. In Indonesia, Generation Y is currently dominating the society based on the data gathered from Ministry of National Development Planning back in year 2018 and actively contributed to the Indonesian's GDP.

Ting Xu (2017) explained that GDP influences building values and bank credit to stimulate investment needs, thus it influences house prices. Rumah123 as the largest property site in Indonesia stated that more than 95% of Indonesian Gen Y will not able to own a house based on their survey because of the consumptive lifestyle and a very high-rise in property asset price. In order to gain more information, Rumah123 conducted the survey in cooperation with karir.com. Based on that research, the data gathered that the increase in house prices in Indonesia reached 17%, far higher than the salary increase of at most only 10% due to improvements of economic growth and decreasing in inflation.

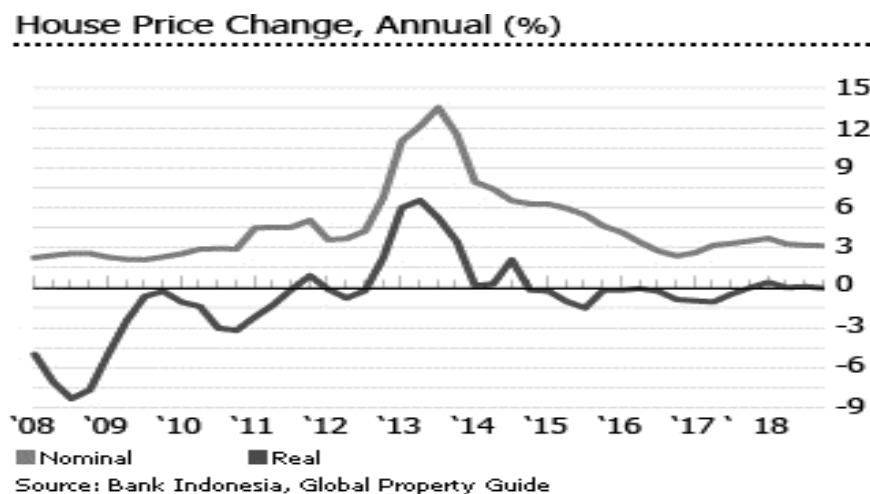
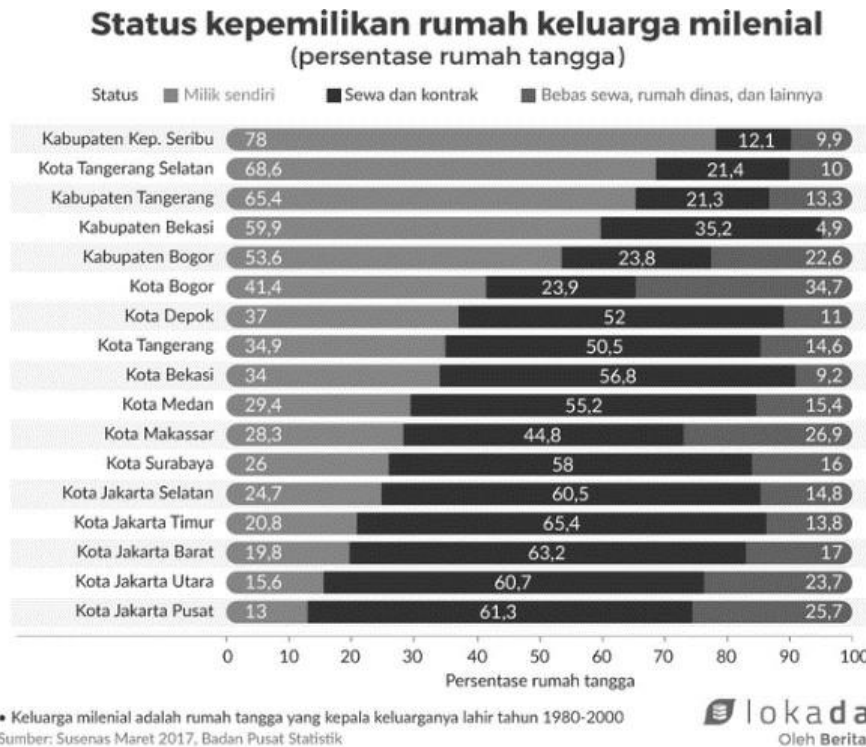


Figure 1: House Price Change (Source: Bank Indonesia, Global Property Guide 2019)

= Looking from the other side, property or house investment in Indonesia is not as attractive as other investments such as mutual funds, stocks, gold or peer to peer lending because the amount of money they have to spend and time of return. The Deloitte Gen Y Survey (2019) clarify that only 49% from 13416 respondents (with 300 Indonesian respondents in it) who put owning their property asset as their first priority.



**Figure 2: House Ownership by Gen Y, Processed by Lokadata (Source: Susenas 2017, Badan Pusat Statistik).**

As a real solution the government has provided a KPR program, but that is not an easy matter. An important point Gen Y must have is the bank's trust in your financial capabilities. Banks, of course, are not just about approving KPR applications, especially for those who have just worked. Gen Y need to make sure that the loan repayments related to the bank are paid smoothly. In addition, KPR will only help Gen Y to get their own house based on their ability, and most of it located in the supporting city.

Indonesia also experiencing the increasing number of urbanisations (Oxford Business Group, 2019) and according to the law of supply and demand, if the demand is greater than the supply so the product providers will increase the price. The current demand for housing in Jakarta itself already 11.4 million units by the year of 2018 and continue to increase 8% from year to year while the current supply being brought to the market represents only 400,000 to 500,000 per year (Investor Daily, 2019). While in fact, it is very important for Gen Y to have their own at least one property asset because it is a part of the human primary needs and really beneficial for the buyers for example it will increase in value, build equity and provide a nest egg for the future (Weintraub, 2019).

According to *Survei Sosial Ekonomi Nasional (SUSENAS)*, research agency under Statistics Indonesia (BPS), in 2017, Gen Y families that have house in Jakarta are still very few, especially in the central and northern Jakarta areas with the exact numbers of 13% and 15.6%. Most of them still live in the houses they rent, and some live in the service house provided by the instances they work. As many as 46% of Gen Y in Jakarta still have salary below 4 million rupiah and the rise in property prices is faster than the rise in income. Solutions such as KPR, lowering BI rate, and expansion development to supported areas also has been conducted by the government but the house ownership is still quite low.

With this issue going on in Indonesia, the researcher aims to understand the deeper reasons why Indonesian Gen Y aren't that aware with owning a house and the Price to Income Ratio as an indicator of the industry on which factor the parties needs to develop.

## II. LITERATURE REVIEW

### 2.1 Real Estate Industry

Real estate can be defined as the property, land, buildings, air rights above the land and underground rights below the land. The term of real estate means real or physical property. The industry can be classified into four types, the first one is residential. It is including the undeveloped land, houses, condominiums and townhouses, which the structures may be single- family or multi-family dwellings and may be owner-occupied or

rental properties (Chen, 2017). Different from the residential, the second type of real estate is commercial (CRE). It is property used exclusively for business purposes rather than a living space and usually leased to tenants to conduct business (Chen, 2019). While the third one is industrial or it can be simply understood as a region that consist everything such as industrial warehouses and any other special purposes real estate over long-term agreements, and the last one is retail where the landlord also receives a percentage of sales generated by tenant in addition to the rent fees (Kennon, 2017).

## **2.2 Global Problematic Issues, Trends, and Challenges in Real Estate Industry**

After nine years of continuous expansion, Asia's real estate market are currently facing an unstable condition. It is shown by the strictly competitive market, increasing interest rate, tightening access to credit, and decreasing buyer's affordability in purchasing property asset (Urban Land Institute, 2019). Mass and luxury home prices are likely to increase by 5 to 10% in 2013 due to rising minimum wages and electric costs leading to higher building material costs. It is also affected because of the limited land and secondary market supply. With average prices expected to grow 10-20% in 2013 despite prices already reaching an all-time-high (Frank, 2013).

Indonesian real estate market condition itself was first discussed by Firman (1999). He recommended on his paper that due to the urban crisis, the real estate market has been negatively affected. It resulted in the increasing price of property asset that unconsciously affected the economic condition in Indonesia as a whole (Oxford Business Group, 2014). The price of the real estate in Indonesia is increasing at a serious phase because of the significant number in just 5 years shown in various growing areas near Jakarta such as Serpong, Bogor, Bekasi, and areas within Jakarta itself (Global Property Guide, 2013; Bland, 2014).

## **2.3. Housing Affordability**

Housing affordability is one of the elements that can determine the socioeconomic stability and development of a region with the goal to understand is the house provided affordable for every income groups (Suhaida, 2011). Stone (2006), defined housing affordability as a process of decision function which is made by a family between housing and non-housing product expenditure. After comparing two countries (Reed, 2008), it came to conclusion that measurement of housing affordability can be measured into three; purchase affordability, repayment affordability, and income affordability (Gan & Hill, 2009).

## **2.4. Solution in Improving Housing Affordability**

As a solution to improve housing affordability, Ivan Rijavec (2013) argues that affordability can be improved by matching housing demand and supply to more deliberative way. While Sharam (2015) suggested that there needs to be a structure of housing provider that is able to respond the purpose of housing planning scheme while the public policy needs to facilitate the housing development so it will affect the project viability and further affect the housing price and supply.

Poon (2012) stated that increases in new housing supply will help to improve the housing affordability, this statement further added by The Baker Review (2012) that changes in the planning system were needed not only to increase the housing supply but also to make the supply more sensitive to the demand.

## **2.5. Generation Y Preferences in Purchasing a House**

Before we further determined the Generation Y preferences, it is important to first understand the general customer preferences in purchasing a house. Those preferences are presented on the figure below;

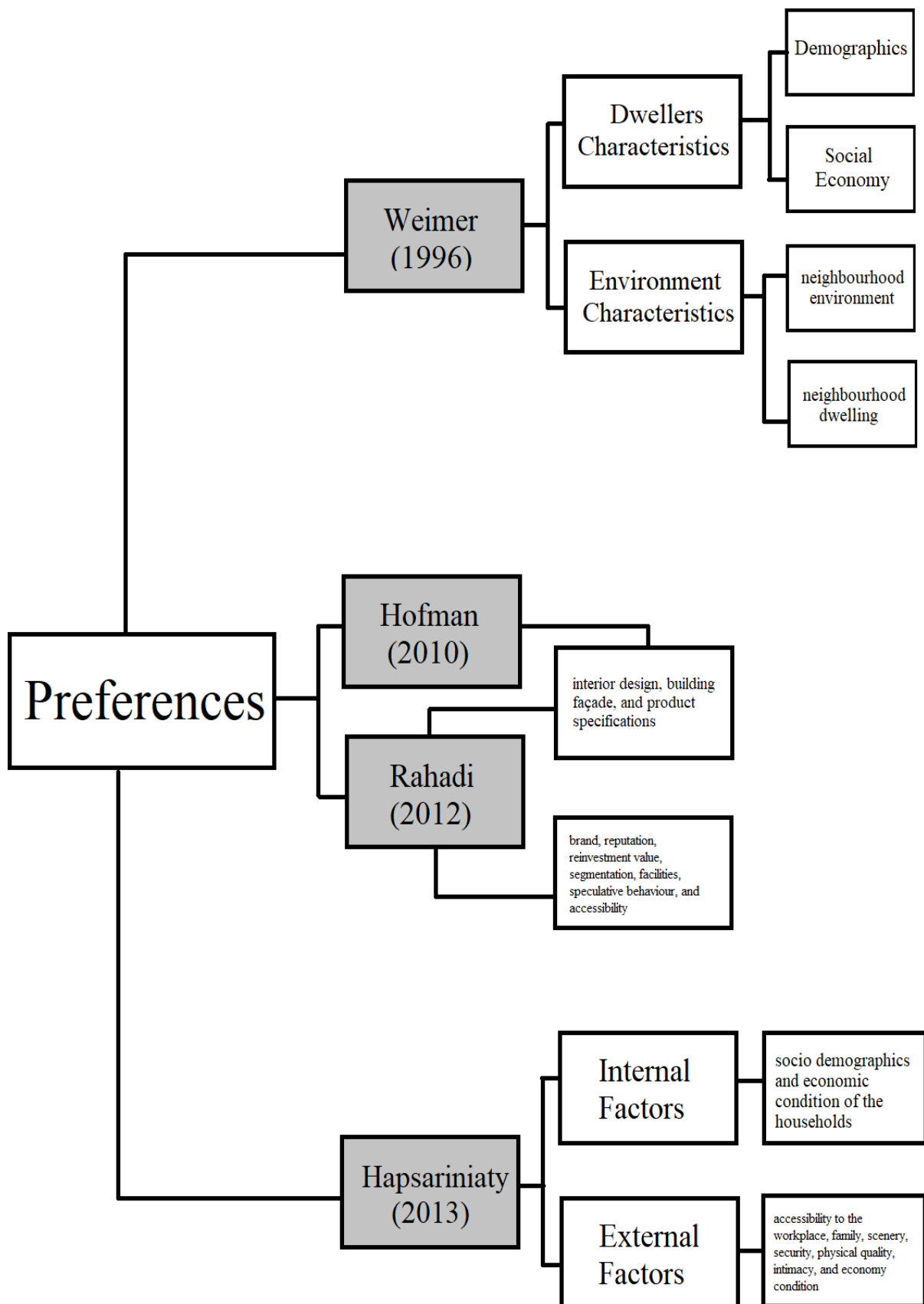


Figure 2.2: Housing Preferences from Various Literature Resources (Source: Author’s Analysis)

Based on 18 possible reasons offered on survey conducted by Lachman Associates Survey (2014), Generation Y preferences in deciding which house to purchase is mostly because of wanted more space (24%) and job location accessibility with the same amount of percentage (24%). While their least reasons are educational facilities (10%) followed by their indecisive choice of living by wanting to try new places to live with the same amount of percentage (10%).

Still from the Lachman Associates Survey (2014) Gen Y preferences mostly focus on management handles in repairs and maintenances, flexibility in how long the buyer can do the mortgage, and the commitment duration between the seller and the buyer. Several facilities such as garage parking, internet connection, and eco-friendly features as energy saving appliances are also considerations. While in the neighbourhood aspect, they prefers neighbour that has the same lifestyle as them.

**2.6. Indonesian Generation Y Population Profile**

There are 63 million Generation Y in Indonesia or equals to 24% of working age populations and categorized as a majority group in Indonesia demographic structure, which further it can be classified into two categories; Junior Gen Y who was born in 1991 to 1998, and Senior Gen Y who was born in 1983 to 1990 (Bappenas, 2019).

According to IDN Research Institute (2019); when it comes to priority, Senior Generation Y differentiate it into three which are becoming good parents (58%), buying a house (51,5%), and making parents happy (52,7%). Similar to it, Junior Generation Y classified it into two which are buying a house on their top priority list (56,7%) and making parents happy (55,9%). Generation Y mostly spends their salary or income focuses on 5 products. Defined as clothes or garment, mobile phone, computer or laptop, and household items. While in entertainment and recreation expenses it divided into music, movies, games, photos, and traveling.

**2.7. Jakarta’s Real Estate Problem**

The retail industry continues to grow, housing in Jakarta remains as a problem. According to *Perumnas* Official Website, *Perumnas* finally decided to do massive improvement by building 30.000 low-cost housing units as a solution while in fact it’s not. Global Business Guide Indonesia (2014) reported that Jakarta required an additional 800.000 new housing units annually because of the increasing population caused by urbanisation.

**2.8. Price to Income Method**

Journal of Economics, Business and Management, Vol. 3, No. 12 (2015) stated that Price to Income Ratio can be defined as a “Median Multiple” or median house price divided by median annual gross pre-tax household income. Simply as the average house price divided by average household income.

Year	Author	Research Title	Method
1996	Steven C. Bourassa	Measuring the Affordability of Home Ownership	Used the Deposit Gap which is based on the median wages and house prices. The house prices include the mortgage payments, maintenance expenses, and property taxes. To further validate, the writer also adapted the Grigsby and Rosenberg (1975) Expense to Income Ratio.
2011	M. S. Suhaida	Housing Affordability: A Conceptual Overview for House Price Index	Used the Price to Income Ratio where housing markets were divided into four categories; affordable, moderately unaffordable, seriously unaffordable and severely unaffordable. Primary data gathered from interview, while the secondary data came from literature review.
2018	Alain Bertand	15 <sup>th</sup> Annual <i>Demographia</i> International Housing Affordability Survey: 2019	Used the Price to Income Ratio specified as “Median Multiple” which can be described as median house price divided by median annual gross pre-tax household income. The income data gathered from regional’s not grouped individual income.
2019	Unison	2019 Home Affordability Report	Used the combination of home price data and income data to compare different housing markets. The index gathered will show how affordable a particular market is by estimating the number of years it takes to save for the down payment.

**Table 1: Previous Research using Price to Income Ratio (Source: Author’s Analysis)**

**2.9. Mixed Method Analysis**

Mixed methods research classified as a research where the researcher combines the elements of qualitative and quantitative research in order to gain wider and deeper understanding (Schoonenboom & Johnson, 2007). In order to fulfil the research objectives, researcher need to use the mixed methods analysis and convinced by the previous research Table 2: Previous Research using Mixed-Methods Analysis (Source: Author’s Analysis)

**Table 2: Previous Research using Mixed-Methods Analysis (Source: Author’s Analysis)**

<b>Year</b>	<b>Author</b>	<b>Research Title</b>	<b>Method</b>
2015	Raden Aswin Rahadi Sudarso Kaderi Wiryo Deddy Priatmodjo Koesrindartoto Indra Budiman Syamwil	<b>Factors Influencing the Price of Housing in Indonesia</b>	The study is conducted using the sequential mixed-methods approach. This approach is divided into five different phases. The first phase is literature review study to identify the factors influencing housing product price from previous researchers. The second phase is theoretical model construction. The third phase is the data collection for questionnaire development via interview. The fourth phase is questionnaire delivery and data gathering. The last phase includes the analysis, validity checks and factor analysis before reaching a conclusion.
2015	Jenna Beeson, Amber Beyer, Corryn Dahlquist, Clarissa Ipema, Dakotah Jordan, Andrew Powell, Kelcie Scarlett, Hannah Twedt, and Anthony Wubben	<b>Housing Research Realities and Perceptions: A mixed model study of quantitative data for Sioux County, Iowa and Orange City, Iowa with qualitative data collected in Orange City, Iowa</b>	Combining qualitative and quantitative methods where the quantitative research was conducted by examining and compiling existing data and the qualitative research further divided into two; major and minor themes. The major themes are the unknown needs and bias, while the minor themes are the community situation, developments and taxes.
2018	Marziyeh Riazi, Ali Emami	<b>Residential Satisfaction in Affordable Housing: A Mixed Method Study</b>	It was conducted using the mixed-methods research by first adopting an exploratory and qualitative approach to analyse satisfaction factors using the semi-structured interviews. Further continued by doing the quantitative approach along with structured questionnaires.

### **III. HYPOTHESIS DEVELOPMENT**

#### *3.1. Product Specifications towards House Pricing*

Product specifications can be further determined as building façade and interior design (Hofman, 2010), brand (Rahadi, 2012), security and accessibility (Hapsariniaty, 2013) in affecting customer preferences to buy a house. Those preferences gathered from literature review and interview questions conducted by Rahadi (2012), with ten questions focusing on underlying reasons for real estate developer when deciding to set a price. Based on that interviews the data can be concluded that seven respondents agreed that design affect housing price, six respondents considered brand, five respondents considered facilities, and four respondents considered the accessibility. Based on the statements above, it can be concluded the hypothesis formula as follows:

H1: Product Specifications has a significant positive influence on the growth of housing price

#### *3.2. Future Considerations towards House Pricing*

Future considerations consist of the reputation and reinvestment value (Rahadi, 2012) which can be further described the influence of low interest rate and the continued investment of multinational corporations and easy homeownership have developed new property investors from wealthy group. At the same time, rising market has increased the housing price (Kamal, 2016).

H2: Future considerations has a significant positive influence on the growth of housing price

#### *3.3. Dwellers Characteristics towards House Pricing*

Dwellers characteristics consist of the demographics, social economy and neighbourhood (Hapsariniaty, 2013) which can be further determined as the population increases and can be attributed to migration of local citizens and foreign workforce also the returns of people from overseas has contributed to the increasing of demand that is positively related to the house price (Kamal, 2016). While the social-economy is affected from the increasing of construction cost that isn't aligned with the increasing of dwellers' income (Hassan & Osmadi, 2016).

H3: Dwellers characteristics has a significant positive influence on the growth of housing price

#### *3.4. Supplemental Factors towards House Pricing*

Bourassa (1996) stated a concept where house pricing is affected by the supplemental factors such as mortgage payments, maintenance expenses and property taxes. While other factors focus on the developer point of view, supplemental factors affected by the government policy also and financial factor. Abdullah (2012) said that for the first-time buyer, financial factor is the most crucial consideration for them in purchasing a house.

H4: Supplemental factors has a significant positive influence on the growth of housing price

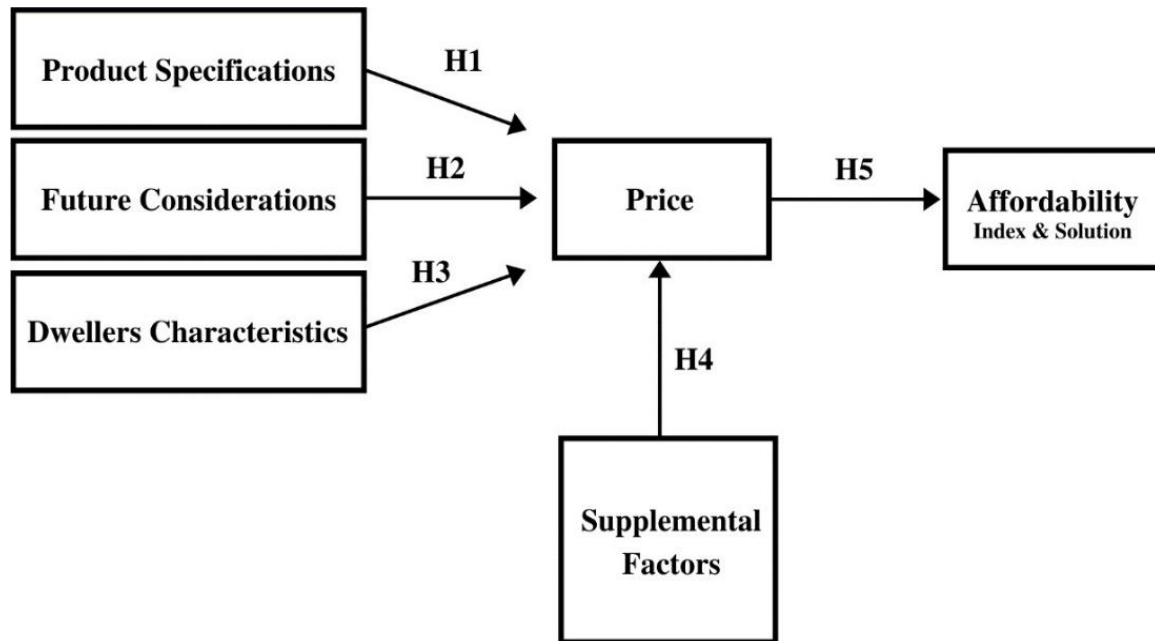
#### *3.5. House Pricing towards Affordability*

In calculating the affordability, house price is the most-used factor in the ratio. An already high or increasing price-income ratio should immediately signal to urban managers that they should take urgent action in fixing the condition (Bertand, 2018). A high price-income indicates a discrepancy between housing supply and demand, so when the demand is high and the supply is low it causes the house price to increase and lower the affordability (Bertand, 2018).

H5: House pricing has a significant negative influence on the growth of affordability.

### **IV. CONCLUSION**

The following conceptual framework is developed to meet the objectives of this study. This conceptual framework explained the correlation between the independent variables toward house pricing and affordability. The conceptual framework of this research can be seen in Figure 3 below:



**Figure 3. Conceptual Framework (Source: Author’s Analysis)**

From the data analysis above, we can conclude that there are three main preferences in purchasing a house such as product specifications (building façade, interior design, brand, security, and accessibility), future considerations (reputation and reinvestment value), and dwellers characteristics (demographics, social economy and neighbourhood). Supplemental factors (mortgage payments, maintenance expenses and property taxes) unconsciously also affects the housing price outside the preferences that will further influence the housing price and affordability.

Further research should be conducted to improve the findings of this research by conducting interviews to the real estate experts and survey to Gen Y in order to gain their specific preferences and wages. Those findings can be used to calculate the Price to Income Ratio and find the solutions to achieve the ideal condition.

**REFERENCES**

- [1]. Anon (2010), “No place like home: the generation who can’t afford to buy”, The Independent, 16 March, available at: [www.independent.co.uk/life-style/house-and-home/property/no-place-like-home-the-generation-who-cant-afford-to-buy-1921781.html](http://www.independent.co.uk/life-style/house-and-home/property/no-place-like-home-the-generation-who-cant-afford-to-buy-1921781.html)
- [2]. Baker, D. (2008). *The housing bubble and the financial crisis*. Washington DC: Center for Economic and Policy Research.
- [3]. Global Property Guide (2013), “Indonesia’s property market - a real estate boom in the making?”, Global Property Guide, available at: [www.globalpropertyguide.com/Asia/indonesia/Price-History](http://www.globalpropertyguide.com/Asia/indonesia/Price-History)
- [4]. Hapsariniaty, A.W. (2013), “Analisis Perbandingan Preferensi Masyarakat Golongan Menengah Dalam Memilih Hunian pada Gated Communities di Kawasan Kota dan Pinggiran Kota Bandung: Studi KasusKec. Kiara Condong dan Kec. Parongpong (Comparative Analysis of Middle-Class’ Preferences Choosing to Live in Gated Communities in the Urban and Suburban area of Bandung: Case Study Kec. Kiara Condong and Kec. Parongpong), Master Thesis”, *School of Architecture, Planning, and Policy Development*, Institut Teknologi Bandung, Bandung.
- [5]. Hashim, Z.A., *House Price and Affordability in Housing in Malaysia* Akademika, 2010. 78: p. 37-46.
- [6]. Hofman, E., Halman, J.I. and Ion, R.A. (2006), “Variation in housing design: identifying customer preferences”, *Housing Studies*, Vol. 21 No. 6, pp. 929-943.
- [7]. Opoku, R. A., Abdul-Muhmin, A. G. (2009), Housing preferences and attribute importance among low-income consumers in Saudi Arabia, *Habitat International*, 2009.
- [8]. Purwandi I, 2016, “*Indonesia 2020: The Urban Middle Class Millenials*”, Alvara Research Center
- [9]. Purwandi I., 2017, “Milenial Nusantara”, PT Gramedia Pustaka Utama
- [10]. Rahadi, R.A., Wiryono, S.K., Koesrindartoto, D.P. and Syamwil, I.B. (2013), “Factors influencing housing product value and price in Jakarta metropolitan region”, *2013 AMER International Conference on Quality of Life*, Langkawi, 8 November, Procedia - Social and Behavioral Sciences, pp. 368-378.



- [11]. Rahadi, R. A., Wiryono, S. K., Koesrindartoto, D. P., Syamwil, I. B. (2012). Relationship between Consumer Preferences and Value Propositions: A Study of Residential Product. *AcE-Bs 2012 Bangkok Procedia - Social and Behavioral Sciences*
- [12]. Ratnaningsih, I. Z., & Prasetyo, A. R. (2017). Work-Life Balance pada Generasi Y. Dalam Asosiasi Psikologi Industri dan Organisasi, Prosiding Temu Ilmiah Nasional APIO 2017 (hal. 208-216). Jakarta: Himpunan Psikologi Indonesia.
- [13]. Sezin, Baysal, 2014, "Working with Generations X and Y In Generation Z Period: Management Of Different Generations In Business Life", *Mediterranean Journal of Social Sciences MCSEER Publishing, Rome-Italy* The Council of Economic Advisers. (2014). 15 *Economic Facts about Millennials. Washington D.C: The Council of Economic Advisers.*
- [14]. Sharam, A. 2012. 'Smart Housing', Presentation to the Housing Melbourne Symposium, 7th November, Office of the Victorian Government Architect, Swinburne University and the Princes Foundation, National Gallery of Victoria. [http://www.ovga.vic.gov.au/images/Alves\\_Sharam\\_McShane\\_words.pdf](http://www.ovga.vic.gov.au/images/Alves_Sharam_McShane_words.pdf).
- [15]. Stone, M. E.. What is housing affordability? The case for the residual income approach. *Housing Policy debate*, 2006. 17(1), Pp. 151–184.
- [16]. Tan, T.H., *Affordable Housing for First-Time Homebuyers: Issues and Implications from the Malaysian Experience*, in *1st International Conference on Innovation and Sustainability (ICOIS 2013)*2013: Sunway Resort Hotel, Kuala Lumpur.
- [17]. Thalmann, Phillippe. 2003. "House Poor" or Simply "Poor"? *Journal of Housing Economics* 12(4):291–317.
- [18]. Tan, T.H. (2011), "Measuring the willingness to pay for houses in a sustainable neighborhood", *The International Journal of Environmental, Cultural, Economic and Social Sustainability*, No. 7, pp. 1-12.
- [19]. Tan, T.H. (2012), "Meeting first-time buyers' housing needs and preferences in greater Kuala Lumpur", *Cities*, Vol. 29 No. 1, pp. 389-396.
- [20]. Wang, D. and Li, S.M. (2006), "Socio-economic differentials and stated housing preferences in Guangzhou, China", *Habitat International*, Vol. 30 No. 2, pp. 305-326.
- [21]. Yang, Z., & Shen, Y.. The affordability of owner occupied housing in Beijing. *Journal of Housing and the Built Environment*, 2008. 23(4), Pp. 317-335.
- [22]. Yin, Robert K. 2013. *Case study research: Design and methods*. 5th Los Angeles: Sage.