FACTORS INFLUENCING HOUSING PURCHASE DECISIONS OF MILLENNIALS IN MALAYSIA

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Factors Influencing Housing Purchase
Decisions of Millennials in Malaysia

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DECLARATION

I hereby declare that:

(1) This Research Project is the end result of my own work and that due acknowledgement has been given in the references to all sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) The word count of this research report is _____11,867_____.

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LIST OF ABBREVIATION

MRED   Master of Real Estate Development

L   Location

F   Financial

PD   Property Developer

S   Structural

FMI   Family Member Influence

ABSTRACT

Millennials nowadays are just going into their young adulthood stages where some are just out of university and there are those who are already into their late 30s who are already deep into adulthood. The increasing pressure to own a property and to start families has never been prevalent. Many millennials have thought of owning a home to build a family with but with the increasing prices of property and the aspect of location and even the financial situation, as a property isn't some small object that is cheap to own and is a long-term financial commitment, me and many other millennials have found it a struggle to move out. With the many policies provided by the government for home ownership, these policies could also be analysed to see how the population, especially Millennials, are being targeted and see if people even know of these policies when deciding on a house.

In this research paper, the five main factors that would influence the decision-making process of purchasing a house are location, financial, property developer, structural, and family member influence in that order. The questionnaire focused on all five factors which had 80 respondents. Majority of respondents ranked financial as the top for its influence in housing purchase decisions followed by location, structural, property developer and lastly, family member influence. The results of the research could help potential property developers, investors, and government officials in their planning of properties for the future of the growing population of Malaysia and can try to solve the property overhang problem.

CHAPTER 1

INTRODUCTION

This chapter will encompass the reasons for such a study. Firstly, the research background will explain the context of the research into why this research topic came about. Next, the problem statement which will outline the issue that this research paper aims to address. Thirdly, the research questions and the research objectives of the paper will be identified to focus on the objective of the research. Next will be the significance of the study which will explain why the research needs to be carried out. Next the hypothesis of the study which will state the expected outcome of the research and lastly the summary of the chapter before moving on to the literature review chapter.

1.1 Research Background

As the population of the world is ever increasing with more and more people moving into urban areas and metropolis such as Tokyo, which has the world's most populous metropolis on Earth with a population of over 37 million people which is followed by Jakarta, Indonesia, and Delhi, India, with 35 million and 30 million respectively. (Moon, J., 2021) Housing has become a huge problem as soaring prices has left most of the population unattracted to buy a house due to scarcity of land in the inner cities due to their high prices. People are left looking outwards towards the edge of the city in order to live in an affordable home, but this leaves the question of what other factors will people consider before purchasing a property. Many housing developers and government officials will also have these questions up in the air in order to figure out how to target the housing market and within that population, the up-and-coming new buyers of properties will become a huge target market for them which are millennials.

Looking at the statistics on NAPIC (2021a), in 2021, the residential overhang was up 24.7% to a total of 36,863 units compared to 2020 where it was only at 29,565 units of overhang. It was shown to have a downward trend however since the Covid-19 pandemic there has been an influx of overhang residential units. The state with the highest number of overhang units is the

state of Selangor at 6,095 units, second comes Johor and thirdly with Penang with 6,089 and 5,493 units respectively. It also shows the price range with the highest number of overhangs to be the units which are RM300,000 and below which are the affordable housing category. The type of housing which has the highest number of overhang units are unsurprisingly the high-rise units coming in at 20,505 units out of the total 36,863 units of overhang and this can be caused by the over-supply of high-rise units. As seen from NAPIC (2021b), the housing price trend can be seen to drop since 2012 and ever decreasing. It also shows the average price has decreased in Kuala Lumpur and Pulau Pinang as supply has increased tremendously with 9,827 newly launched units in the state of Selangor alone. Looking at NAPIC (2021c), the number of transactions for residential has increased from 2020 to 2021 from 191,354 to 198,812 units transacted however the number of transacted units below RM300,000 has decreased at a negative 7.3% however for units RM300,000 – RM500,000 all the way to units above RM1 million, there has been an increase in transactions at 15.4% to 26.3% which shows that millennials are not buying as many affordable homes as before and might be the cause in the increased overhang in the country.

Property affordability is not the only issue which might lead to the overhang of units in Malaysia, the median household income might also be a factor which has affected the purchasing decision of houses. Due to the high unemployment rate as well, many households had a decrease in their median income. According to DOSM (2021), the median household income for paid employment had reduced by 10.3% at RM7,089 compared to RM7,901 in the year of 2019. Overall, the median of monthly household gross income decreased by 11.3% which turned out to be RM5,209 compared to RM5,873 in 2019. Generally, there was a shift of income groups as 20% of the M40 group has moved to the B40 group and 12.8% of the T20 group has moved to the M40 group. These statistics show that there was a general decrease in the income in households and this would have led to the decrease in housing purchasing as well as people tend to spend more sparingly on necessities.

Millennials which according to studies such as from Michael Dimock (2019) of Pew Research Centre and James Chen (2022) of Investopedia has decided that millennials are born within the years 1981, who will turn 41 this year, and 1996, who will turn 26 this year, although other studies from Goldman Sachs (2022) have suggests millennials are people born within 1980 to 2000. As millennials, also known as generation Y, are also the population that grew up with the technological boom where now they would be on their phone at almost every hour

consuming data. Due to the overwhelming data that they consume, the world has become an even smaller place where people have access to anything that they search for, and this includes housing. There are abundant of websites, advertisements on social media and also phone messages where people can find a house just about anywhere in the world which include housing sizes, nearby amenities, price per square feet, number of bedrooms and bathrooms right up to the street name which the house sits on. As millennials grew up in this digital era and are the new adults who will be looking to buy a house of their own in the future, there are not many studies into what factors would affect their housing purchasing decisions in Malaysia. The property overhang in Malaysia has increased year by year with it being 30,664 units in H2 2019 to 31,661 in H1 2020. (Property Guru, 2020) It seems like the yearly overhang has not decreased even though people have been moving into the city. Therefore, in this research paper, it will focus on identifying the factors which influence housing purchasing and how they affect the housing purchase decisions of millennials of Malaysia.

1.2 Problem Statement

Previous research has suggested on such factors such as location of the property, the financial ability of the consumer, property developer credentials, structural which also means the layout of rooms and the family member influence which take precedent over the consumer, in this case the millennial, housing purchasing decisions. (Kurniawan, C., Dewi, L.C., Maulatsih, W., Gunadi, W., 2020) However, I don't see other factors like nearby amenities such as public transport and also type of property being some factors which are studied upon in other research. Research attaining to these factors also don't target the millennial generation and usually target the greater population or middle-income workers. (Mariadas, P. A., Abdullah, H., & Abdullah, N., 2019) (Rachmawati, D., Shukri, S., Azam, S., & Khatibi, A., 2019) In studies such as one done by Heriyati, P., Tamara, D., Saiman, N. I., Ningrum, R. K., & Suriae, R. S. (2021), they have also identified another factor in Indonesia which is Feng Shui as they believe that the Chinese community has a huge belief in feng shui and this might affect the purchasing decisions greatly. As Indonesia is fairly similar to Malaysia in terms of the ethnicities of the general public, feng shui might very well be a factor as well which might influence the purchasing decisions of the people.

The main idea is to find out what millennials are thinking when they are deciding to buy a property or not or if they are not interested in buying at all. Due to this issue, the paper will

want to identify if millennials are interested in buying a new property and also if the factors listed above will have an effect on the decision-making process of purchasing their unit. The problems that this paper would like to solve is to understand the future buyers and their behaviour in making decisions before purchasing their properties and how this can allow property developers, architects and also government officials to understand what kinds of design, policies and also strategies they can make in order to target more effectively in order to reduce the amount of overhang as the amount of development is ever increasing. With the HOC 2020-2021 program given out by the government, this has significantly increased the amount of property purchases as according to NAPIC (2022), it showed a decrease in the volume of overhang units from 36,863 in H1 2021 to 34,092 units in H1 2022. This showed the effectiveness of the program which was given out as financial aid is definitely one of the best factors which would affect purchasing decisions.

The purpose of this study is to cover the research gap on the factors of location, financial, property developer, structural and family member influence which will affect the housing purchase decisions of millennials in Malaysia or more specifically the Kuala Lumpur/ Selangor region as this has the highest number of new launches and overhang in the entire country. With the questionnaire given out to the millennial group, the data will tell us how these will affect the purchasing decisions to find out how the overhang issue can be tackled. Therefore, in this research paper, it will focus on identifying the factors which influence housing purchasing and how they affect the housing purchase decisions of millennials of Malaysia.

1.3 Research Questions

The Research Questions identified for the study are:
1. What are the factors which are influencing the purchase decisions of millennials in Malaysia?
2. How the factors influence the purchasing decisions of millennials in Malaysia?

1.4 Research Objectives

The Research Objectives identified for the study are:
1. To identify the factors which influence the purchase decisions of millennials in Malaysia.

2. To analyse the factors which influence the purchase decisions of millennials in Malaysia.

1.5 Significance of Study

Housing remains one of the most important milestones for almost everyone and especially now with millennials beginning to start their own families or just looking to move out on their own. This study will generate clear results and provide real estate agents, housing developers, town planners and even government officials an insight into what the next generation of house buyers in Malaysia are looking for and to understand what affects their decisions.

1.6 Summary of Chapter

To summarise the introductory chapter, it has provided the research background which outlines the basis of this research paper. As said in the introduction, this research paper will look into the factors which will influence the housing purchase decisions of millennials in Malaysia and also will analyse the factors. The problem statement has also been stated to see the research gap in studying the factors which will influence millennials and not just the general population. The research questions and objectives have been stated in this chapter with the significance of the study stating the reasons why this study should take place. The conceptual framework of the research has also been created which also hypothesize the outcomes of the research paper.

CHAPTER 2

LITERATURE REVIEW

Housing has been one of the more expensive basic necessities as it is a basic human need, shelter. Comparing to the previous generations, housing has been at an all-time high due to the lucrative property market that has beckoned many property developers to build upwards due to the ever-flowing population into urban areas. As land gets scarce and houses, being very permanent and non-portable, prices inflate to highs due to the demand and supply of units available to the population.

Due to the increase in demand, the question would arise as to what would set each unit or properties apart from one another. There are an abundant of factors which would set each of them apart such as the general location of the unit to the CBD, the proximity to amenities such as a shopping mall or neighbourhood shops and food outlets, might even be the accessibility to highways and main roads as people would be looking to travel to and from their workplace. However, in this study, the aim is to find out what would be the main factors which might influence the purchase decisions of millennials in Malaysia and carry out a study on do they carry heavy weightage in the final decision of buying a property.

In this Chapter, multiple pieces of literature will be reviewed to identify factors related to the independent variables stated in the conceptual framework. This will be mainly from many research papers, journals, websites, and books. The factors identified earlier in the conceptual framework will be analysed on how they will influence the purchase decision making of millennials of Malaysia so that the hypothesis stated in the first chapter can be trialled and tested.

2.1 Housing

Before going through to understanding the factors which affect purchasing decisions of housing for millennials, understanding what housing means to everyone needs to be understood.

Housing has been a huge part of human evolution with it first being defined as "shelter" as a safe space to call home where people find a sense of security and also provides protection against the elements. As urbanisation began, housing was not only considered for shelter and safety but also as a means of comfort as people were starting to build permanent dwellings in cities. With the evolution of technology and creativity, the design of housing has evolved tremendously with increasing demand for housing. High-rise buildings have become one of the biggest sources of housing demand especially in countries with increasing population and urbanisation as more than 75% of the population will be living in urban areas. With the increase in land scarcity, buildings are only ever getting taller and higher dense than before. (CDC, 2009)

Housing also has an essential role within the economic development of a country as they bring in many trades and workers by bringing employment to the population. Not only does housing nowadays are a necessity, but they also need to be economical and comfortable with compliance to the environment as well due to housing being one of the biggest contributors the greenhouse gases. (Henilane, I., 2016) The UN has created sustainability goals as well with one of them being to build more sustainable cities and communities and also their climate action goal in being net zero carbon by 2050. The housing industry will need to align with these targets as technology continuously evolve, more green materials and standards can be used to construct modern housing and bring not only comfort to housing but also build a greener future with net zero carbon emissions. (United Nations, n.d.)

2.2 Millennials

Millennials as defined by Chen, J. (2022) is the name given to the generation of people born from 1981 to 1996 which are currently the age of 26 till 41 years old (in 2022) which are also defined by the Pew Research Centre and are also defined as Generation Y. (Dimock, M., 2019) This generation was born in the technological era and have grown up with technology with a greater adaptability to technology and have grown up in the era of texting as a main form of communication and have taken advantage of the digital era by creating jobs which can be done remotely. (TechTarget Contributor., 2021)

However, this generation has had a stagnant number of wages ever since the great recession of 2007. With the coronavirus pandemic hitting in 2020 as well, this has not helped that one bit

with unemployment rates reaching an all-time high during this time. (Chen, J., 2022) In terms of their financial planning, it is shown that millennials focus on the present as they are also the generation with the lowest starting household income due to the increasing wealth gap.

As Millennials come into the market as one of the growing housing purchasers, the needs also differ from previous generations and housing developers will have to take note of this in order to market their products into the future. As more millennials are being well educated and going to universities, the student loan debt is one of the major factors in preventing millennials from getting housing loans as higher student loan balance would equate to a lower approval rate for a mortgage. (Lake, R.,2022)

2.3 Housing Trend in Malaysia

According to a study on the Property Market Index by Property Guru (2021), it has shown that among the larger cities such as Kuala Lumpur, Selangor, Penang and Johor, there is a positive increase in housing prices since the pandemic hit in 2020. However, property supply has decreased since due to the lockdowns having halted all construction projects and stopped the flow of supply which resulted in a 6.51% drop in the third quarter of 2021. (Property Guru, 2021)

2.4 Characteristics of Houses for Millennials

As the world is ever growing and advancing with technology, the millennial generation have also grown to adapt to them and are driven by it too. As this generation spend majority of their time on smartphones, some would like their homes to be the same with the use of smart home systems so that they can interact with their house the same as they would do with their phones. (Araj, V., 2020) Currently majority of millennials also use their smartphones to search for properties so a major way of getting property to the eyes of millennials are through online channels such as social media or websites.

Location is another important factor for Millennials as this generation would prefer to live near their workplace and also near shops and restaurants. As most of the millennial generation would be focused on their career, the travel time to work plays a huge importance in the decision making of where they would purchase a home. Due to Malaysia being a car-centric country as

well, the accessibility to main highways and roads also plays a part in the decision making due to traffic being the number one reason people are more careful of where they decide to live.

Millennials do also vary in terms of their financial situation. Some might have their parents put down a down payment for them on their houses, some might even be privileged enough to have their parents already buy them a home and some might not be able to afford and might stick to renting instead. There's a huge spectrum when it comes to wealth and financial situation which might affect how they view house purchasing, either as an own stay or for investment purposes. Nevertheless, the financial factor would play a big part in the purchasing decision of a home.

Another characteristic of a home for the Millennial generation might be their proximity to their parents or family. As this generation would be in the work force and spend a majority of time at work, their proximity from their home to their parents who are on the elderly side of the population might affect the location of where they would live as well. As the older end of the Millennial generation might be young parents with young kids, they may still bring their kids to their parents or in laws to babysit while they are at work which gives the parents more time with the grandchildren so the decision to buy a home far away might not be ideal however this would of course vary as some young parents with older kids would send them to either kindergarten or primary schools where they would ideally be looking for homes near schools depending on their children's age. Some might even decide to not have a child or partner and might not leet any of the forementioned factors affect them.

2.5 The Factors that Influence the Housing Purchase Decisions

According to previous studies done by Kurniawan, C., et. al. (2020) and Heriyati, P., et. al. (2021), some of the more important factors for their studies were the location, financial, property developer, structural, family member influence.

2.5.1 Location

As stated by Struyk, T., (2022), location is one of the most important driving factors for property value especially when land within the city is scares and only a certain number of units can be built or is already existing in that location. Houses can be built anywhere and, in all shapes, and sizes as renovations can be done however only this one unit will be available in that location which drives prices up when demand for that particular unit is high.

Location can also be tied into the distance one might travel to work either by public transport or by personal vehicle. The time taken to get to work and back and what nearby amenities which are not only available but also convenient. Amenities such as schools, retail outlets, F&B or medical centres play a huge factor into the decision making when buying properties and they vary between different stages of life. The younger millennials would look more to proximity to F&B like bars, restaurant, and cafes while the older end of the millennials would look to be nearer to a school or medical centre as they're starting families.

Public transport definitely plays a huge part in the decision factor due to its accessibility and affordability especially to those who are living further away from the city. As stated by Al-Nahdi, T. S., Ghazzawi, O. H., & Bakar, A. A. (2015), the availability to public transport may or may not affect the decision making as Malaysia tends to be a more car-centric country and will be able to find out if it has a major impact in the decision-making process of millennials. Chwiałkowski, C., & Zydroń, A. (2022) also mentioned that the public transport system acts as a basic function that is necessary for the economic, business, and social development of the country and acts to reduce the traffic congestion and the quality of life for the population. They also act to reduce the amount of greenhouse gas emission to the environment compared to the use of motor vehicles as a mode of transport.

In terms of property, they might act as a catalyst for investors to buy property with this accessibility. Property prices are also said to gain from the increased accessibility and options of transport including bus lines or MRTs. Following the Bid-Rent Theory, it is said that housing price increases as the distance to the CBD decreases and this theory has affected the property prices as well so not only is the access to public transport a factor but also the location to the needs of the purchaser. (Chen, Y., Yazdani, M., Mojtahedi, M., & Newton, S., 2019)

2.5.2 Financial

The financial aspect of decision making is also one of the biggest factors as everyone will have a different budget in terms of how much they would spend on a property. The household income would also be considered as buying a property includes several extra fees such as stamp duty, legal fees, real estate agent's commission and the first major lump sum of the down

payment on the property which tends to be 10% of the value of the property being bought. Housing affordability will play a big aspect as well due to the incline in salary cuts or people's lifestyle which might deter people from buying houses and rent instead.

A big factor for purchasing a house is also getting a loan for it as it is a big-ticket item and is a huge financial commitment as loans are paid for 30 years or more. According to Property Guru (2022), Most people's biggest achievement is to own a home and unless they're born with a silver spoon in their mouth, a home loan would need to be taken out to purchase their home. Bank loans however come with an interest rate of around 1.75% to 2.75% on top of the value of the house which the longer you pay, the more interest you pay. Possible problems for new home buyers are their credit scores and loan eligibility as banks use the CCRIS Report Database to do a background check on borrowers' information such as outstanding debt and previous loan applications. (Free Malaysia Today, 2022) Different banks might also have different policies in terms of eligibility.

2.5.3 Property Developer

In a study done by Rahadi, R. A., Wiryono, S. K., Koesrindartoto, D. P., & Syamwil, I. B. (2013), it showed that the top 3 responses which would affect the pricing is brand and reputation from a customer's point of view. The property developer in this context is the reputation and sometimes prestige the developer brings with the project. The branding that comes from buying from a reputable property developer will affect the price of the unit. (Mulyano, Y., Rahadi, R. A., & Amaliah, U., 2020)

As stated by Kurniawan, C., et. al. (2020), the reputation of a property developer will offer buyers more confidence in buying a property developed by them as it shows how they meet customer needs by developing the building on time and with good quality. A property developer's after-sales services also play a big role in customer retention and repeat buyers, and this would allow these property developers to price their properties higher as well. Due to a better reputation, developers would try at all costs to keep that reputation and so will deliver on what they promised to the purchasers.

2.5.4 Structural

Structural in this standpoint isn't about the structural loading or load bearing capacities of the building but more so on the physical attributes of the building and unit. (Moghimi, V., & Jusan, M. B. M., 2015) Some of these structural attributes might be the total floor area of the unit, the outdoor space available such as a balcony for high rises or back or front yards on landed units, the layout of the rooms, the exterior façade of the building and even the building orientation. However typically the main attributes people would look out for are the number of bedrooms and bathrooms or if a garden space is provided as people at different stages of their lives would have different needs.

2.5.5 Family Member Influence

Family member influence plays a big importance especially in Malaysia due to the culture of a strong bonded family where members can be influenced by each other directly or indirectly. (Kurniawan, C., et. al., 2020) Friends and colleagues and even social media might also play a role in influencing the decision maker however most often times people will still listen to their own family members or even make a decision on a property based on the distance away from them and also decisions on extra rooms in the case of visiting during festive seasons.

In a study done by Sangkakoon, P., Ngarmyarn, A., & Panichpathom, S. (2014), they have identified the influence of a spouse, a child, the elderly parents, and friends which might affect the decision-making process. The study showed that the spouse, child, and parents had positive impact on the decision-making process while friends showed the least influence on the purchasing decision. As the friends won't be staying in the house and more so visit them, the influence showed the least but the child and spouse have the biggest influence as they would be the ones living in the home so they would definitely have the bigger influence on it. (Levy, D. S., & Lee, C. K. C. ,2004)

2.6 Hypothesis and Conceptual Framework

The conceptual framework which is based on the factors which will target the research questions and objectives has been created and are as shown in the figure below.
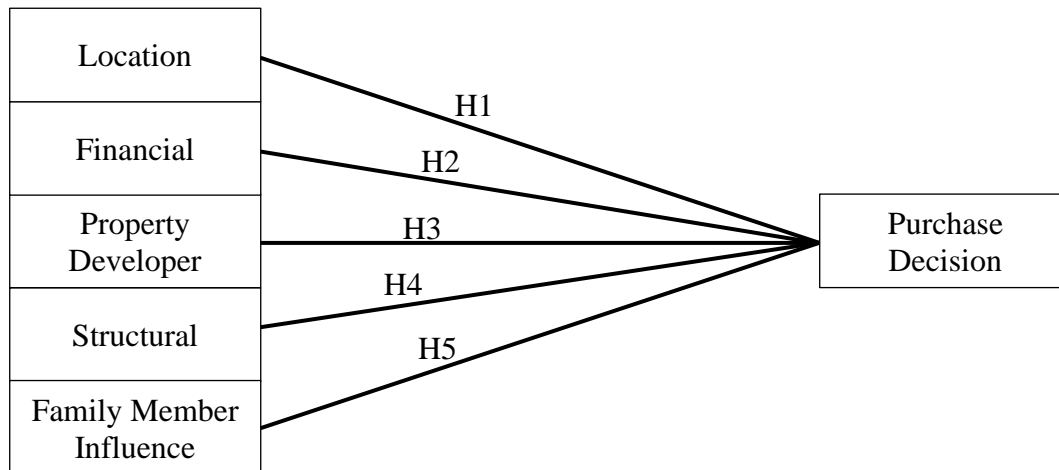
Figure 1 Linear Relationship Framework of the Independent-Dependent Variable

The hypothesis was based on each of the factors listed in the conceptual framework and will understand the relationship between them and the purchasing decisions of the millennials in Malaysia. The hypothesis is stated as below:

H1. Location will have a significant influence in the housing purchase decision.

H2. Financial position will have a significant influence in the housing purchase decision.

H3. The property developer will have a significant influence in the housing purchase decision.

H4. Structural space will have a significant influence in the housing purchase decision.

H5. Family member influence will have a significant influence in the housing purchase decision.

2.7 Conclusion

In conclusion, this chapter describes the reasoning and outlines the hypothesis of the research being carried out and how each hypothesis has come to light which would affect purchasing decisions in Millennials. The next chapter will outline the methodology in carrying out this research.

CHAPTER 3

METHODOLOGY

In this chapter, the methodology will be discussed and outlined to be applied in order to carry out the research. This includes the research design, data collection, the sampling design, the target population, the sampling element & frame, the sampling location, the sampling size, research instrument, data collection, data processing and data analysis and a conclusion.

3.1 Research Design

The word research is used all over the world and in every industry imaginable. Research is done to further improve the knowledge currently existing to us via books, the internet, even through human interactions. Research itself has created endless possibilities in terms of enhancement of knowledge and skill and has developed the world in terms of technology and data. In terms of a study, it is defined as a collation of data where it is examined by testing hypothesis and later proving those hypothesis or theories. Research design, however, is defined as the "structural framework of various research methods and techniques used by the researcher" (Leverageedu., 2023). The 2 main types of research design frameworks that researchers will adhere to which are quantitative and qualitative research.

Qualitative analysis, as mentioned by McCombes, S., & Bhandari, P. (2023), tend to be more flexible as the research goes along with new discoveries and are subjective to experiences and other external factors such as beliefs. Quantitative analysis on the other hand is a research design based on data and statistics. Hypothesis are drawn up with relationships to a variable the researcher wants to analyse and are always data driven as numbers and data are objective (Bouchrika, I., 2023). As mentioned by McCombes, S., & Bhandari, P. (2023), quantitative research designs are more fixed and deductive with clear hypothesis and variables designed even before data collection.

Positivism is a type of quantitative approach to research where the research is observable and quantifiable without the effect of personal values are used in the study and where the research is objectively analysed. Positivism will be the research format for this study as it is used to explain and predict the outcomes with clear hypothesis stated before the data collection is being done and they are judged logically with the absence of any biases (Dudovsiky, J., n.d.). This method is considered more fitting to the approach of this research.

This research method is being used in this study to determine location, pricing and financial factors, economic factors, cultural housing preference factors and buying behaviour of real estate during the pandemic in Malaysia which data can be collected objectively, and the data will be collected through questionnaires that are being distributed out to respondents. The unit of research will only focus on individuals, mainly Malaysian consumers. There will be no costs and required a shorter time to complete the survey as well.

3.2 Sampling Design

The sampling design is the basis of every research as it outlines the functions of a research and sets out the parameters for the study. A few examples of a sampling design are systematic sample, stratified sample, and cluster strata. (Glen, S., n.d.) In this study however, the non-probability sampling method will be used which is convenience sampling. Convenience sampling is chosen due to the time frame and are also easier to obtain respondents which include the workplace or through online platforms such as WhatsApp, Facebook, LinkedIn and Email.

3.2.1 Target Population

As millennials are the target group for this study, the questionnaires which are to be sent out would not be for every one of every age, so this was taken into account for. Based on Figure 2, you can see based on the Millennial age gap of 26 to 41, the millennial population on takes up about roughly 26% of the overall population.
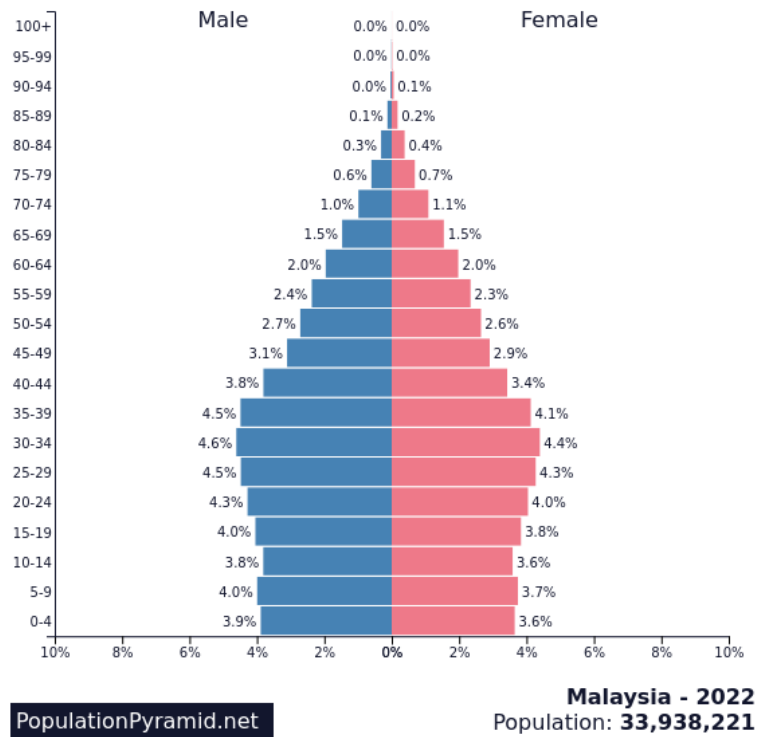
Figure 2 Population Pyramid of Malaysia 2022
Sources: PopulationPyramid.net

3.2.2 Sampling Element & Frame

For the sampling element, this is defined by a sampling method which gives every individual or group an equal chance to be selected for the study sample. (DJS, 2023) However the sampling frame is defined by Turner, A. G. (2003), states that the definition of sampling frame is the group of primary sources which is used to choose the sample. In this scenario where Millennials are the specific population group targeted, this would be the sampling frame of the study whereas the sampling element is the opportunity for every individual in this frame to get an equal chance to partake in the study who are living in Peninsular Malaysia.

3.2.3 Sampling Location

For the sampling location, as with the title of the study, this research is a study on the Millennial generation of Malaysia. As Malaysia is also separated by East and West Malaysia, this study would mainly focus on the population in West Malaysia where majority of the population are located. This study did not take into account the different states where Millennials are residing and is mainly targeted to people based in Peninsular Malaysia only.

3.2.4 Sampling Size

As defined by Fleetwood, D. (n.d.), sampling size is a term used in research where the number of people to be included in the researched is defined. There is a wide selection of areas sample from which might be age, race, gender however in this research, will be focused on the age part as this is a study on the Millennial generation born in 1996 to 1981. For the sampling size, based on the data from the above, the sampling size would be much smaller comparative to another research. However, due to time constraints, the number of participants will be stuck at 150 people.

Using the formula

$$n = \frac{z^2 * P(1-P)}{e^2} / 1 + (\frac{z^2 * P(1-P)}{e^2 N})$$

Where n = sample size
z = z score (1.96)
P = Standard Deviation (0.5)
e = Margin of Error (0.05)
N = Number of participants (150)

The sample size would equate to 107.9 which would round up to 108 respondents needed for the study.

3.3 Research Instrument

The research instrument used in this study is a questionnaire which will be prepared and send out to participants through Email, WhatsApp, and LinkedIn to obtain the data before being analysed using the SPSS software.

3.3.1 Questionnaire Design

On the questionnaire design, the questions will be set in English as it is a universal language and is widely understood in Malaysia. The questions are all close ended questions where there is a definite answer for all the questions in the questionnaire.

The questionnaire only consists of two sections. Section A distinguishes the demographic of the respondent. Section B will consist of questions relating to the five independent variables which consists of Location, Financial, Property Developer, Structural and Family Member Influence.

The questionnaire design is as below:

Section	Demographic	
A	Q1	Year of birth
	Q2	Your income level
	Q3	Race
	Q4	Level of education
	Q5	Occupation

Section	Variables	Questions	Sources
B	Location	1. I would consider the presence of shops when I purchase a residential property. 2. I would consider the availability of retail centres when I purchase a residential property. 3. I would consider the presence of public infrastructure when making a decision to purchase a residential property. 4. I would consider the presence of schools when I purchase a residential property. 5. I would consider the distance travelled to work when I purchase a residential property. 6. I would consider the level of crime rate when making a decision to purchase a residential property. 7. I would consider the safety of the neighbourhood when making a decision to purchase a residential property. 8. I would consider the level of pollutants in the air when making a decision to purchase a residential property.	Sean, S. L., & Hong, T. T. (2014).
	Financial	1. I would consider the price of a property when making a decision to purchase a residential property. 2. I would consider the instalment amount when making a decision to purchase a residential property. 3. I would consider the rate of instalment when making a decision to purchase a residential property. 4. I would consider the easiness to attain bank financing when making a decision to purchase a residential property. 5. I would consider the cost of maintenance when making a decision to purchase a residential property.	Heriyati, P., Tamara, D., Saiman, N. I., Ningrum, R. K., & Suriae, R. S. (2021).

	Property Developer	1. I would consider the brand reputation of a property developer when making a decision to purchase a residential property. 2. I would consider the brand awareness of a property developer when making a decision to purchase a residential property.	Heriyati, P., Tamara, D., Saiman, N. I., Ningrum, R. K., & Suriae, R. S. (2021). Rahadi, R. A., Wiryono, S. K., Koesrindartoto, D. P., & Syamwil, I. B. (2013).
	Structural	1. I would consider the size of the living area or dining area when making a decision to purchase a residential property. 2. I would consider the number of bathrooms when making a decision to purchase a residential property. 3. I would consider the number of rooms when making a decision to purchase a residential property. 4. I would consider the internal and external structure of a house when I purchase a residential property.	Sean, S. L., & Hong, T. T. (2014).
	Family Member Influence	1. I would consider the influence of my parents when making a decision to purchase a residential property. 2. I would consider the influence of my spouse when making a decision to purchase a residential property. 3. I would consider the influence of my children when making a decision to purchase a residential property.	Kurniawan, C., Dewi, L.C., Maulatsih, W., Gunadi, W., (2020)

Table 1 Questionnaire Design

3.3.2 Measurement/ Likert Summated Scale

In section A of the questionnaire, it is a demographic study on the respondents on their age, income level, race, level of education and occupation. In section B of the questionnaire, both nominal scale and interval scale were used to determine the respondent's preferences towards the independent variables which comprise of Location, Financial, Property Developer, Structural and Family Member Influence. Degree of preference of the respondents will be

identified using 5-point Likert Scale. The Likert scale are range from Strong Disagree to Strongly Agree as shown below.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Table 2 5-point Likert Scale to be used in the research

3.4 Data Collection

Data collection can be separated into 2 kinds which are primary and secondary data. Secondary data is data which can be retrieved from other sources. Primary data will be the main method of data collection as a survey will be created. To collect the data for this study, Google Forms will be used to create the online survey. The survey will be sent to Malaysians who are born within the millennial age gap of 1981 to 1996 and will be sent through an online link through WhatsApp, Email or LinkedIn.

3.5 Data Processing

Data processing, by definition, is the conversion of attained data into data which can be used for analysis. (Cint, 2023) The researcher will basically translate the data into readable data such as tables, graphs or report and shall use this information to gain insights into the hypothesis drawn in the start of the research. Through these methods, the data can be transformed into usable data to different stakeholders as the data can be analysed in different ways and perspectives in order to prove or disprove ideologies and theories to make more informed decisions whether in business or daily life. There are 6 stages of data processing, namely Collection, Preparation, Input, Processing, Output and Storage. (Fleetwood, D., 2023, Cint, 2023)

Collection, as stated in point 3.4, is the use of the survey in order to obtain data from the sampling frame defined. Second stage is to prepare the data which organizes the raw data and eliminate any errors in the data obtained and only leave high quality data to be used in the third stage which is input. During the input stage, the data will then begin to be inserted manually or automatically to software which will translate them into digitally readable data. The next stage is to process the data from the systems and to understand the data from all angles the research was aiming to target. Next stage is to output this data into usable reports or graphs which could be used by any stakeholder who the study applies to. This shall serve as decision making points

and make self-analysis for further study by the readers. The final step is the storage of the study most likely on a database for future researchers or analytics to further study.

3.6 Data Analysis

To analyse the data to be collected, the SPSS statistics software will be used to carry out the analysis and also the Cronbach's Alpha Reliability Test to find out the reliability of the factors chosen. The demographics of the respondents will also be tabled out to get an idea of the year of birth, level of income, race, level of education, and their occupation to get a better understanding on various aspects of the generation.

3.7 Conclusion

In conclusion, this chapter outlines the research methodology of how the study is going to be carried out. The sampling sizes are defined, and the questionnaire design outlined to get a better understanding of the questions being asked to the respondents. In the next chapter, it will show the results of the survey and will define the outcome of the study.

CHAPTER 4

RESULTS AND FINDINGS

In this chapter, data collection can be separated into 2 kinds which are primary and secondary data. Secondary data is data which can be retrieved from other sources. Primary data will be the main method of data collection as a survey will be created. To collect the data for this study, Google Forms will be used to create the online survey. The survey was sent out via WhatsApp, Email and LinkedIn and a total of 80 respondents replied which is below the expected 108 respondents however due to time constraints, the study shall be carried out with the 80 respondents. The data will be analysed using the SPSS software which will carry out a liner regression, correlation, and their mean and standard deviation of each factor.

4.1 Demographic

The profile of the respondents can be found below in Figure 3 which have been segregated by Year of Birth, Level of Income, Race, Level of Education and Occupation. For this research, a total of 80 respondents are the sample of this research.
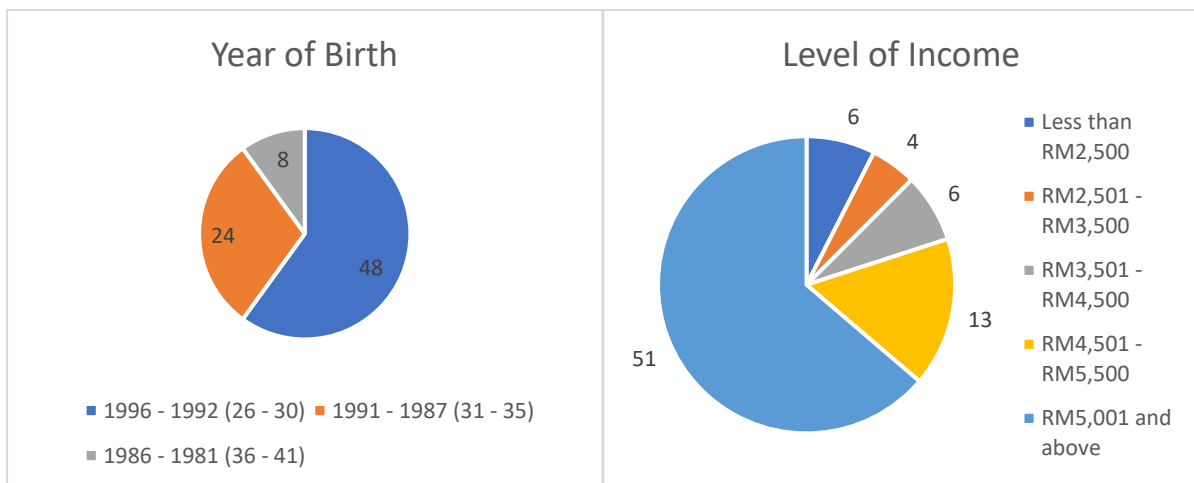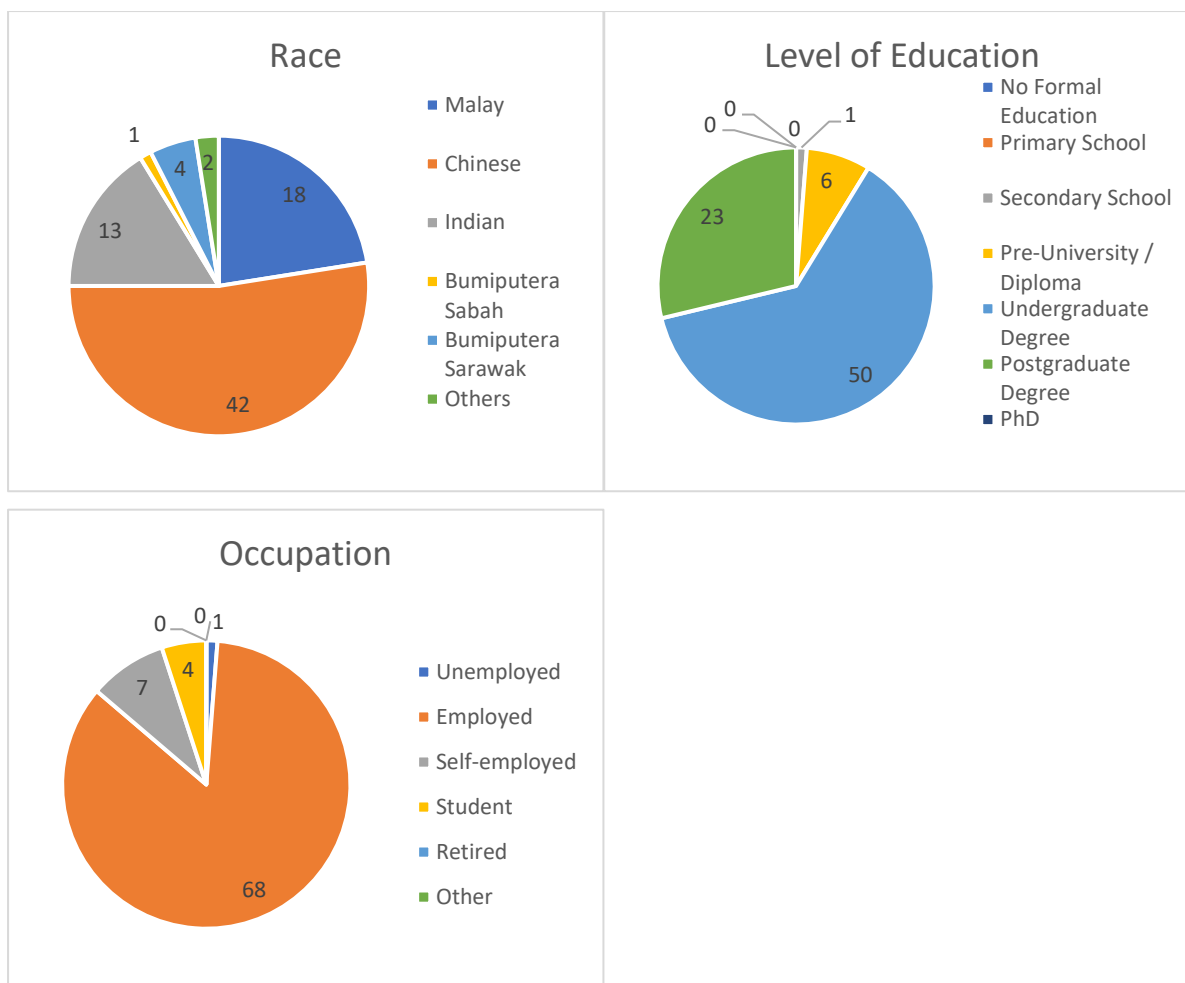
Figure 3 Characteristics of the Sample Respondents
Source: Survey Data

4.1.1 Age

		Frequency	Percent	Valid Percent	Cumulative Percent
	Year of Birth				
Valid	1996 - 1992 (26 - 30)	48	60.0	60.0	60.0
	1991 - 1987 (31 - 35)	24	30.0	30.0	90.0
	1986 - 1981 (36 - 41)	8	10.0	10.0	100.0
	Total	80	100.0	100.0	

Table 3 Year of Birth of the Sample Respondents
Source: Survey Data

In table 3, out of the 80 respondents, the majority of them are born between the years 1996-1992, aged 26-30 at the time of the study, which make up 60% of the study. 30% of the respondents are born between the years 1991-1987, aged 31-35 at the time of the study. 10% of the respondents are born between the years 1986-1981, aged 36-41 at the time of the study.

4.1.2 Level of Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Level of Income					
Valid	Less than RM2,500	6	7.5	7.5	7.5
	RM2,501 - RM3,500	4	5.0	5.0	12.5
	RM3,501 - RM4,500	6	7.5	7.5	20.0
	RM4,501 - RM5,500	13	16.3	16.3	36.3
	RM5,001 and above	51	63.7	63.7	100.0
	Total	80	100.0	100.0	

Table 4 Level of Income of the Sample Respondents
Source: Survey Data

In table 4, out of the 80 respondents, the majority are earning RM5,001 and above at 63.7%. 16.3% of the respondents are earning within the range of RM4,501 – RM5,500. 7.5% of the respondents are earning between RM3,501 – RM4,500. 5 % of the respondents are earning between RM2,501 – RM3,500 and lastly 7.5% of the respondents are earning less than RM2,500.

4.1.3 Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Race					
Valid	Malay	18	22.5	22.5	22.5
	Chinese	42	52.5	52.5	75.0
	Indian	13	16.3	16.3	91.3
	Bumiputera Sabah	1	1.3	1.3	92.5
	Bumiputera Sarawak	4	5.0	5.0	97.5
	Others	2	2.5	2.5	100.0
	Total	80	100.0	100.0	

Table 5 Race of the Sample Respondents
Source: Survey Data

In table 5, majority of the respondents are Chinese at a percentage of 52.5% with the Malay respondents coming in at 22.5%. 16.3% of the respondents are Indian while for Bumiputera Sabah, Sarawak and Others coming in at 1.3%, 5% and 2.5% respectively.

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4.1.4 Level of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Level of Education					
Valid	Secondary School	1	1.3	1.3	1.3
	Pre-University / Diploma	6	7.5	7.5	8.8
	Undergraduate Degree	50	62.5	62.5	71.3
	Postgraduate Degree	23	28.7	28.7	100.0
	Total	80	100.0	100.0	

Table 6 Level of Education of the Sample Respondents
Source: Survey Data

In table 6, majority of the respondents have an undergraduate degree at 62.5% with 28.7% having a postgraduate degree as well. For the respondents with a Pre-University Degree / Diploma, they make up 7.5% of the respondents and only a 1.3% have finished Secondary School Education which make up 1 of the respondents. The study also takes into consideration people who had no formal education, finished up to primary school and those who have a PhD, however none of the respondents fall into these categories.

4.1.5 Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Occupation					
Valid	Unemployed	1	1.3	1.3	1.3
	Employed	68	85.0	85.0	86.3
	Self-employed	7	8.8	8.8	95.0
	Student	4	5.0	5.0	100.0
	Total	80	100.0	100.0	

Table 7 Occupation of the Sample Respondents
Source: Survey Data

In table 7, majority of the respondents are employed with 85% while the respondents who are self-employed make up 8.8% of the respondents. The remaining respondents are students or unemployed which make up 5% to 1.3% respectively. None of the respondents are retired.

4.2 Linear Regression on Factors

Linear Regression is used on each factor where we test the relationship and strength of each variable or in this case factors, between two or more other variables. The dependant variable

will be swapped between the factors of location, financial, property developer, structural and family member influence.

4.2.1 Location

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.748[a]	.560	.536	.32782	1.849
a. Predictors: (Constant), FMI, PD, S, F					
b. Dependent Variable: L					

Table 8 Model Summary for Location Factor as the Dependent Variable

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.252	4	2.563	23.848	<.001[b]
	Residual	8.060	75	.107		
	Total	18.312	79			
a. Dependent Variable: L						
b. Predictors: (Constant), FMI, PD, S, F						

Table 9 ANOVA for Location Factor as the Dependent Variable

In table 8, the R-value shows 0.748 which means there is a strong and positive correlation among the 5 variables as it is greater than 0.5. With an R^2 value of 0.560, this shows that 56% changes in L, is explained by FMI, PD, S, and F jointly while the lesser 44% is captured by the error term. This shows the model has a good fit. Lastly on the Durbin-Watson value, as 1.849 is within the acceptable DW range of 1.45 – 2.44, the result shows that there is no evidence of autocorrelation. In table 9, the ANOVA measures the overall significance of the model. The results show an ANOVA-value of 23.848 and its probability value of less than 0.001. As the probability value if less than 0.05, it shows that the overall significance of this model is positive.

4.2.2 Financial

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.724[a]	.524	.498	.37921	2.174
a. Predictors: (Constant), FMI, PD, S, L					
b. Dependent Variable: F					

Table 10 Model Summary for Financial Factor as the Dependent Variable

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regressio n	11.855	4	2.964	20.610	<.001[b]
	Residual	10.785	75	.144		
	Total	22.639	79			
a. Dependent Variable: F						
b. Predictors: (Constant), FMI, PD, S, L						

Table 11 ANOVA for Financial Factor as the Dependent Variable

In table 10, the R-value shows 0.724 which means there is a strong and positive correlation among the 5 variables as it is greater than 0.5. With an R^2 value of 0.524, this shows that 52.4% changes in F, is explained by FMI, PD, S, and L jointly while the lesser 47.6% is captured by the error term. This shows the model has a good fit. Lastly on the Durbin-Watson value, as 2.174 is within the acceptable DW range of 1.45 – 2.44, the result shows that there is no evidence of autocorrelation. In table 11, the results show an ANOVA-value of 20.610 and its probability value of less than 0.001. As the probability value if less than 0.05, it shows that the overall significance of this model is positive.

4.2.3 Property Developer

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.509[a]	.259	.220	.60134	1.898
a. Predictors: (Constant), FMI, F, S, L					
b. Dependent Variable: PD					

Table 12 Model Summary for Property Developer Factor as the Dependent Variable

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.501	4	2.375	6.569	<.001[b]
	Residual	27.120	75	.362		
	Total	36.622	79			
a. Dependent Variable: PD						
b. Predictors: (Constant), FMI, F, S, L						

Table 13 ANOVA for Property Developer Factor as the Dependent Variable

In table 12, the R-value shows 0.509 which means there is a strong and positive correlation among the 5 variables as it is greater than 0.5. With an R^2 value of 0.259, this shows that 25.9% changes in PD, is explained by FMI, F, S, and L jointly while the lesser 74.1% is captured by the error term. This shows the model does not have a good fit. Lastly on the Durbin-Watson value, as 1.898 is within the acceptable DW range of 1.45 – 2.44, the result shows that there is no evidence of autocorrelation. In table 13, the results show an ANOVA-value of 6.569 and its probability value of less than 0.001. As the probability value if less than 0.05, it shows that the overall significance of this model is positive.

4.2.4 Structural

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.582[a]	.339	.303	.41432	1.956
a. Predictors: (Constant), FMI, PD, F, L					
b. Dependent Variable: S					

Table 14 Model Summary for Structural Factor as the Dependent Variable

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.593	4	1.648	9.602	<.001[b]
	Residual	12.875	75	.172		
	Total	19.468	79			
a. Dependent Variable: S						
b. Predictors: (Constant), FMI, PD, F, L						

Table 15 ANOVA for Structural Factor as the Dependent Variable

In table 14, the R-value shows 0.582 which means there is a strong and positive correlation among the 5 variables as it is greater than 0.5. With an R^2 value of 0.339, this shows that 33.9% changes in S, is explained by FMI, PD, F, and L jointly while the lesser 66.1% is captured by the error term. This shows the model does not have a good fit. Lastly on the Durbin-Watson value, as 1.956 is within the acceptable DW range of 1.45 – 2.44, the result shows that there is no evidence of autocorrelation. In table 15, the results show an ANOVA-value of 9.602 and its probability value of less than 0.001. As the probability value if less than 0.05, it shows that the overall significance of this model is positive.

4.2.5 Family Member Influence

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.505[a]	.255	.215	.59955	2.261
a. Predictors: (Constant), S, PD, L, F					
b. Dependent Variable: FMI					

Table 16 Model Summary for Family Member Influence Factor as the Dependent Variable

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.206	4	2.301	6.403	<.001[b]
	Residual	26.959	75	.359		
	Total	36.165	79			
a. Dependent Variable: FMI						
b. Predictors: (Constant), S, PD, L, F						

Table 17 ANOVA for Family Member Influence Factor as the Dependent Variable

In table 16, the R-value shows 0.505 which means there is a strong and positive correlation among the 5 variables as it is greater than 0.5. With an R^2 value of 0.255, this shows that 25.5% changes in FMI, is explained by S, PD, L, and F jointly while the lesser 74.5% is captured by the error term. This shows the model does not have a good fit. Lastly on the Durbin-Watson value, as 2.261 is within the acceptable DW range of 1.45 – 2.44, the result shows that there is no evidence of autocorrelation. In table 17, the results show an ANOVA-value of 6.403 and its probability value of less than 0.001. As the probability value if less than 0.05, it shows that the overall significance of this model is positive.

4.3 Correlation

Correlations		L	F	PD	S	FMI
L	Pearson Correlation	1	.681**	.448**	.496**	.487**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001
	N	80	80	80	80	80
F	Pearson Correlation	.681**	1	.454**	.521**	.350**
	Sig. (2-tailed)	<.001		<.001	<.001	.001
	N	80	80	80	80	80
PD	Pearson Correlation	.448**	.454**	1	.381**	.224*
	Sig. (2-tailed)	<.001	<.001		<.001	.045
	N	80	80	80	80	80
S	Pearson Correlation	.496**	.521**	.381**	1	.355**
	Sig. (2-tailed)	<.001	<.001	<.001		.001
	N	80	80	80	80	80
FMI	Pearson Correlation	.487**	.350**	.224*	.355**	1
	Sig. (2-tailed)	<.001	.001	.045	.001	
	N	80	80	80	80	80
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Table 18 Correlations between Each Factor

In table 18, it shows how each factor correlates to one another. For the L factor, it's correlation to F, PD, S and FMI is significant at the 0.01 level however for the correlation to F, it is the highest with 68.1% which is higher than 50%. For the F factor, it has a high correlation to factors L and S which are 68.1% and 52.1% respectively as they are higher than 50% but shows that it correlates to all other factors at the 0.01 level. For the PD factor, it shows that it's correlation is significant at the 0.01 level with factors L, F, and S but only significant at the 0.05 level with factor FMI. For factor S, it has a significant correlation to factor F at 52.1% which is higher than 50% but also shows a significant correlation at the 0.01 level with factors L, PD, and FMI. Lastly, for factor FMI, there are no particularly high correlation between any of the factors as they're all below 50% however they have a correlation at the 0.01 level with factors L, F, and S and at a 0.05 level with PD.

4.4 Reliability Test

In this study, the Cronbach's Alpha Reliability Test is used to assess the reliability of the questionnaire which uses the Likert scale. This will convey the hidden, immeasurable, or unobservable variables and will show how the variables are closely related. How Cronbach's Alpha interprets the results are as listed. $\alpha > 0.9$ Excellent; $0.8 < \alpha < 0.9$ Good; $0.7 < \alpha < 0.8$ Acceptable; $0.6 < \alpha < 0.7$ Questionable; $0.5 < \alpha < 0.6$ Poor; $\alpha < 0.5$ Unacceptable. (Glen, S., n.d.)

Variables	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	Result
Location	0.79	0.801	8	Acceptable
Financial	0.85	0.855	5	Acceptable
Property Developer	0.857	0.861	2	Acceptable
Structural	0.85	0.857	4	Acceptable
Family Influence	0.568	0.57	3	Poor

Table 19 Cronbach's Alpha Reliability Test Results

In table 19, all variables presented an acceptable result while only the Family Influence Factor has a poor result.

4.5 Descriptive Analysis with Mean and Standard Deviation

The mean scores of all variables were determined by descriptive analysis of the means and standard deviations of the dependent and independent variables. All results were assessed by five categories in a five - point Likert Scale. The mean scores were interpreted as 4.51 - 5.00 as "strongly agree", 3.51 - 4.50 as "agree", 2.51 - 3.50 as "agree", and 3.50 as "agree". - 3.50 interpreted as "neutral", 1.51- 2.50 interpreted as "disagree", 1.00 - 1.50 interpreted as "Strongly Agree" Disagree." (Zhang, P., & Nuangjamnong, C., 2022).

Location		Mean	Std. Deviation	Interpreted
L1	I would consider the presence of shops when I purchase a residential property	4.45	0.673	Agree
L2	I would consider the availability of retail centres when I purchase a residential property	4.3	0.786	Agree

L3	I would consider the presence of public infrastructure when making a decision to purchase a residential property.	4.15	0.873	Agree
L4	I would consider the presence of schools when I purchase a residential property.	3.94	0.876	Agree
L5	I would consider the distance travelled to work when I purchase a residential property.	4.35	0.677	Agree
L6	I would consider the level of crime rate when making a decision to purchase a residential property.	4.56	0.633	Strongly Agree
L7	I would consider the safety of the neighbourhood when making a decision to purchase a residential property.	4.58	0.569	Strongly Agree
L8	I would consider the level of pollutants in the air when making a decision to purchase a residential property.	3.9	0.894	Agree
Financial				
F1	I would consider the price of a property when making a decision to purchase a residential property.	4.81	0.424	Strongly Agree
F2	I would consider the instalment amount when making a decision to purchase a residential property.	4.54	0.674	Strongly Agree
F3	I would consider the rate of instalment when making a decision to purchase a residential property.	4.44	0.76	Agree
F4	I would consider the easiness to attain bank financing when making a decision to purchase a residential property.	4.21	0.807	Agree
F5	I would consider the cost of maintenance when making a decision to purchase a residential property.	4.49	0.656	Agree
Property Developer				
PD1	I would consider the brand reputation of a property developer when making a decision to purchase a residential property.	4.2	0.683	Agree
PD2	I would consider the brand awareness of a property developer when making a decision to purchase a residential property.	4.04	0.77	Agree
Structural				
S1	I would consider the size of the living area or dining area when making a decision to purchase a residential property.	4.56	0.548	Strongly Agree
S2	I would consider the number of bathrooms when making a decision to purchase a residential property.	4.48	0.693	Agree
S3	I would consider the number of rooms when making a decision to purchase a residential property.	4.6	0.542	Strongly Agree

S4	I would consider the internal and external structure of a house when I purchase a residential property.	4.5	0.595	Agree
Family Member Influence				
FMI1	I would consider the influence of my parents when making a decision to purchase a residential property.	3.85	0.929	Agree
FMI2	I would consider the influence of my spouse when making a decision to purchase a residential property.	4.11	0.811	Agree
FMI3	I would consider the influence of my children when making a decision to purchase a residential property.	3.78	1.018	Agree

Table 20 Results of Mean and Standard Deviation

In table 20, it shows the means of each question for each factor being studied in this research. The highest mean of location was "I would consider the safety of the neighbourhood when making a decision to purchase a residential property." which equals 4.58. The highest mean of financial was "I would consider the price of a property when making a decision to purchase a residential property." which equals 4.81. The highest mean of property developer was "I would consider the brand reputation of a property developer when making a decision to purchase a residential property." which equals 4.18. The highest mean of structural was "I would consider the number of rooms when making a decision to purchase a residential property." which equals 4.20. The highest mean of family member influence was "I would consider the influence of my spouse when making a decision to purchase a residential property." which equals 4.11.

4.6 Conclusion

Five main factors have been identified for the housing purchase decisions of millennials namely location, financial, property developer, structural and family member influence. The data is collected by using a questionnaire survey method which uses the 5-point Likert scale and answered only by respondents who fit the Millennial generation, born 1981 to 1996, and are living in Peninsular Malaysia. The study showed that the five main factors conveyed a high significance in the purchase decisions of millennials. Family member influence ranked as one of the lowest in terms of its influence with the financial aspect of housing ranked the highest in terms of its influence in the decision making of millennials in purchasing a house.

CHAPTER 5

CONCLUSION

In this chapter, it will conclude the study and will walk through the finding of the study. It will also describe the limitations of this study, any further research that could be done after this research paper and also the final recommendation.

5.1 Discussion on Result

Based on the results concluded, the findings suggest that the five main factors have a relationship with housing purchase decisions of millennials. The results show that financial ranked the highest in terms of its influence on housing purchase decisions of millennials. Secondly, location ranked second in terms of their influence on housing purchase decisions of millennials. Thirdly, structural takes third place in their ranking followed by property developer and lastly, family member influence.

5.1.1 Demographic

The demographics of the respondents show that majority were born in the later years of the millennial generation from 1992 – 1996 with 48 respondents. Majority earned more than RM5,001, which were 51 respondents, and were of Chinese descent, 42 respondents. Majority were also undergraduate degree holders, which were 50, and were employed, 68 respondents.

5.1.2 Location

In terms of location, it ranked second in terms of its influence in the decision of housing purchase of millennials. Property developers should take into consideration the safety of the home buyers as from the results, majority cared more about the safety and security of their homes. Property developers should take note on areas within Malaysia which might have a high crime rate and also plan to build near shops over retail malls as people tend to overcrowd those areas which would increase the amount of crime occurring. As distance travelled to work

ranked quite high as well, property developers should think to build in a location with good accessibility to major highways which will aid in shortening the time and distance travelled to and from work. As majority of the respondents were born in the later years of the millennial generation and might not have had any children, the proximity to schools did not rank very high however still plays into account as the older millennials would be at that stage of their lives to plan to have children.

5.1.3 Financial

The terms of the financial factor, this factor ranked the highest in terms of its influence. The price and affordability play a huge key factor in the decision to purchase a property. Property developers might think to reduce their unit prices or provide alternative financial channels to aid people to purchase their homes. Another way would be for government bodies or banks to decrease the interest rates on loans especially for the younger millennials as most would be looking to buy their first home but with them just starting out in the work force, it might not be possible to afford homes which are close to the workplace as homes get more expensive the closer they are to the CBD. Repayment period also plays a big role as the younger millennials are able to obtain longer periods compared to the older millennials.

5.1.4 Property Developer

In terms of property developer, this factor ranked second lowest in terms of its influence and this might be due to the abundant of housing available for sale due to the overhung units. This also provides an opportunity for the buyers to have a look at the units before purchasing so that the buyers can have a good sense before placing their money. The branding for property developers do still play a key role in terms of their reputation within the market for their quality homes and amenities, however some might see it as a downfall if the rumours of their units or homes built are not up to par.

5.1.5 Structural

In terms of structural, this factor ranked third in terms of its influence. The internal and external structure of the unit is fairly important to the buyers. The top decision maker from the study is the number of rooms provided in the unit followed by the size of the living and dining areas. Property developers and designers should take into consideration these aspects as millennials

at different stages of their lives are looking to expand their family so these aspects are important in the purchasing decision of millennials.

5.1.6 Family Member Influence

In terms of family member influence, this factor ranked the lowest in terms of its influence. The spouse's influence turned out to be the top ranking followed by their parents and then their kids. As the millennial generation are aging and are having a spouse, purchasing a home together would be on the list of achievements for the millennial generation. Due to high cost of living and expenses, many millennials are having children later which is why children ranked lower than their parents in terms of influence. Parents of millennials would also be higher than children as the closest person they would seek advice from would be their parents as they would have more experience in home purchasing with some planning to move their parents along with them.

5.2 Conclusion

In conclusion, this study has showed that all five main factors play a significant role in influencing the millennial generation in the purchasing of homes. All five factors have been analysed and they rank from the top, financial, location, structural, property developer, and lastly family member influence.

5.3 Limitation of Study

According to the study, it was restricted in terms of time frame and also, it's reach to a larger number of millennials. In the design questionnaire as well, it does not take into consideration if the respondents are interested in buying a property or not and is mainly answered by millennials in general. There are people who would prefer to rent for the rest of their lives and would not buy a property. This study also does not only focus on the main cities such as Kuala Lumpur, Penang, Johor or Selangor and just focuses on the entire Peninsular Malaysia. This might vary the results as property prices varies from city to city. As the study is only targeted at Malaysian millennial buyers, a wider scope could include overseas investors which usually higher end developments target and also foreigners who would want to live migrate and live in Malaysia permanently or as an investment property.

5.4 Future Research

For future research, more time could be provided in gathering a larger number of respondents which also highlights which city do they come from and focus the study on purchasing property within a certain city such as Kuala Lumpur where more people are moving towards. This further study could also include a question to know if the respondents are interested to buy a property or to just rent a property to gauge their interest in purchasing a home. The further study could also include foreigners or overseas investors as they would play a big part in purchasing higher end homes within the CBD area and are most likely able to afford them as well. As majority earned more than RM5,001, the salary range could be widened as well to have a better understanding of the affordability of the millennial generation, especially those towards the older millennials who might be earning a lot more either due to promotions or their own business venture.

5.5 Recommendation

From this research, I would recommend property developers and government bodies to look into any other financial aid or alternative channels to increase the possibility for millennials to purchase units as to decrease the number of overhung units within Malaysia. Marketing teams would need to take into account all the five factors studied and advise property developers and designers alike to look into improving not only the units to be designed and built, but also their surroundings i.e., shops or retail centres to attract the next generation of home buyers to their development or townships. In terms of affordability, this certainly needs to be looked at as millennials might look elsewhere further but can provide them the satisfaction of a landed home which is gated and guarded for the security of their family. This research should provide some insight into how property developers move forward to provide better quality homes with higher security with great accessibility.

REFERENCES

Al-Nahdi, T. S., Ghazzawi, O. H., & Bakar, A. A. (2015). Behavioral factors affecting real estate purchasing. *International Journal of Business and Social Science*, *6*(8), 146-154.

Araj, V. (2020). *What Do Millennials Look For In A Home? A Seller's Guide.* Retrieved October 30, 2022, from https://www.quickenloans.com/learn/what-do-millennials-look-for-in-a-home-a-sellers-guide

Bouchrika, I. (2023). *Types of Research Design: Perspective and Methodological Approaches*. Retrieved Jun 5, 2023, from https://research.com/research/types-of-research-design

CDC. (2009). *Chapter 1: Housing History and Purpose.* Retrieved August 15, 2022, from https://www.cdc.gov/nceh/publications/books/housing/cha01.htm

Chen, Y., Yazdani, M., Mojtahedi, M., & Newton, S. (2019). The impact on neighbourhood residential property valuations of a newly proposed public transport project: The Sydney Northwest Metro case study. *Transportation Research Interdisciplinary Perspectives*, *3*, 100070.

Chen, J. (2022). *Millennials: Finances, Investing, and Retirement.* Retrieved October 25, 2022, from https://www.investopedia.com/terms/m/millennial.asp

Chwiałkowski, C., & Zydroń, A. (2022). The Impact of Urban Public Transport on Residential Transaction Prices: A Case Study of Poznań, Poland. *ISPRS International Journal of Geo-Information*, *11*(2), 74.

Cint. (2023). *What is data processing in research?*. Retrieved September 28, 2023, from https://www.cint.com/blog/what-is-data-processing-in-research

Colibri Real Estate. (2022). *Who Are Millennials and What Do They Want in a Home?*. Retrieved October 30, 2022, from https://www.colibrirealestate.com/career-hub/blog/who-are-millennials-home-ownership/

Dimock, M., (2019). *Defining generations: Where Millennials end and Generation Z begins.* Retrieved February 15, 2022, from https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/

DJS. (2023). *Element Sampling*. Retrieved September 20, 2023, from https://www.djsresearch.co.uk/glossary/item/Element-Sampling

DOSM. (2021). *Household Income Estimates and Incidence of Poverty Report, Malaysia, 2020.* Retrieved June 25, 2022, from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=493&bul_id=VTNHRkdiZkFzenBNd1Y1dmg2UUlrZz09&menu_id=amVoWU54UTl0a21NWmdhMjFMMWcyZz09

Dudovskiy, J. (n.d.). *Positivism Research Philosophy*. Retrieved May 18, 2023, from https://research-methodology.net/research-philosophy/positivism/

Elders Real Estate. (2022). *What do Millennials want in a house?.* Retrieved October 30, 2022, from https://www.eldersrealestate.com.au/the-view/what-do-millennials-want-in-a-house/

Fleetwood, D. (2023). *Data processing in research: What is it, steps and examples*. Retrieved September 28, 2023, from https://www.questionpro.com/blog/data-processing-in-research/

Fleetwood, D. (n.d.). *Sample Size Determination: Definition, Formula, and Example*. Retrieved June 28, 2023, from https://www.questionpro.com/blog/determining-sample-size/

Free Malaysia Today. (2022). *5 Mistakes Firs-Time Home Buyers Should Avoid.* Retrieved October 5, 2022 from https://www.freemalaysiatoday.com/category/leisure/property/2022/05/20/5-mistakes-first-time-home-buyers-should-avoid/

Glen, S. (n.d.). *Cronbach's Alpha: Definition, Interpretation, SPSS*. Retrieved November 15, 2023, from Cronbach's Alpha: Definition, Interpretation, SPSS - Statistics How To

Glen, S. (n.d.). *Sampling Design: Definition, Examples*. Retrieved October 20, 2023, from Sampling Design: Definition, Examples - Statistics How To

Goldman Sachs (2022). *Millennials.* Retrieved October 25, 2022, from https://www.goldmansachs.com/insights/archive/millennials/

Henilane, I. (2016). Housing concept and analysis of housing classification. *Baltic Journal of Real Estate Economics and Construction Management*, *4*(1), 168-179.

Heriyati, P., Tamara, D., Saiman, N. I., Ningrum, R. K., & Suriae, R. S. (2021). Factors Affecting The Decision Of Home Buying Of Millenial During The Covid-19 Pandemic. *Turkish Journal of Computer and Mathematics Education*, *12*(3), 5013-5023.

Kurniawan, C., Dewi, L.C., Maulatsih, W., Gunadi, W., (2020). *Factors Influencing Housing Purchase Decisions of Millennial Generation in Indonesia*, International Journal of Management, 11(4), pp. 350-365.

Lake, R. (2022). *How Millennials Are Changing the Housing Market.* Retrieved October 30, 2022, from https://www.investopedia.com/personal-finance/how-millennials-are-changing-housing-market/

Leverageedu. (2023). *Research Design*. Retrieved May 18, 2023, from https://leverageedu.com/blog/research-design/

Levy, D. S., & Lee, C. K. C. (2004). The influence of family members on housing purchase decisions. *Journal of Property Investment & Finance*.

Mariadas, P. A., Abdullah, H., & Abdullah, N. (2019). *Factors influencing the first home purchase decision of middle-income earners (M40) in Selangor, Malaysia. e-BANGI*, *16*(1), 1-11.

McCombes, S., & Bhandari, P. (2023). *What Is a Research Design | Types, Guide & Examples*. Retrieved Jun 18, 2023, from https://www.scribbr.com/methodology/research-design/

Moghimi, V., & Jusan, M. B. M. (2015). Priority of structural housing attribute preferences: identifying customer perception. *International Journal of Housing Markets and Analysis*.

Moon, J. (2021). *10 Fun Facts About Tokyo to Celebrate the Start of the Summer Games in Japan.* Retrieved October 25, 2022, from https://people.com/travel/tokyo-olympics-population-1964-olympics-facts-history/

Mulyano, Y., Rahadi, R. A., & Amaliah, U. (2020). Millennials Housing Preferences Model in Jakarta. *European Journal of Business and Management Research*, *5*(1).

Mun, Y. S., Tamil Selvi, A., & Renganathan, P. MALAYSIAN MILLENNIAL BUYING BEHAVIOR AND COUNTRY-OF-ORIGIN EFFECT.

NAPIC. (2021a). *Property Market Status 2021*. Retrieved June 25, 2022, from https://napic.jpph.gov.my/portal/web/guest/key-statistics?p_p_id=ViewStatistics_WAR_ViewStatisticsportlet&p_p_lifecycle=2&p_p_state=normal&p_p_mode=view&p_p_resource_id=fileDownload&p_p_cacheability=cacheLevelPage&p_p_col_id=column-1&p_p_col_count=1&fileURI=21945

NAPIC. (2021b). *Malaysian House Price Index 2021*. Retrieved June 25, 2022, from https://napic.jpph.gov.my/portal/web/guest/key-statistics?p_p_id=ViewStatistics_WAR_ViewStatisticsportlet&p_p_lifecycle=2&p_p_state=normal&p_p_mode=view&p_p_resource_id=fileDownload&p_p_cacheability=cacheLevelPage&p_p_col_id=column-1&p_p_col_count=1&fileURI=21961

NAPIC. (2021c). *Property Market Activity 2021*. Retrieved June 25, 2022, from https://napic.jpph.gov.my/portal/web/guest/key-statistics?p_p_id=ViewStatistics_WAR_ViewStatisticsportlet&p_p_lifecycle=2&p_p_state=normal&p_p_mode=view&p_p_resource_id=fileDownload&p_p_cacheability=cacheLevelPage&p_p_col_id=column-1&p_p_col_count=1&fileURI=22462

NAPIC. (2022). *Property Market Status H1 2022*. Retrieved June 25, 2022, from https://napic.jpph.gov.my/portal/web/guest/main-page?p_p_id=ViewStatistics_WAR_ViewStatisticsportlet&p_p_lifecycle=2&p_p_state=normal&p_p_mode=view&p_p_resource_id=fileDownload&p_p_cacheability=cacheLevelPage&p_p_col_id=column-2&p_p_col_count=1&fileURI=22500

PING, N. T. S., JAMBULINGAM, D. M., & RES70302, E. X. E. C. U. T. I. V. E. S. (2021). RESEARCH PROPOSAL MBA FACTORS INFLUENCING BUYING BEHAVIOUR OF REAL ESTATE IN MALAYSIA DURING COVID-19 PANDEMIC.

Property Guru (2021). *PropertyGuru Malaysia Property Market Index Q4 2021.* Retrieved September 25, 2022, from https://www.propertyguru.com.my/property-guides/propertyguru-malaysia-property-market-index-q4-2021-57331

Property Guru (2020). *Where is the Biggest Property Overhang in Malaysia in 2020?*. Retrieved September 25, 2022, from https://www.propertyguru.com.my/property-guides/property-overhang-in-malaysia-38935

Property Guru (2022). *Everything You Need to Know About Home Loans in Malaysia!*. Retrieved October 10, 2022, from https://www.propertyguru.com.my/property-guides/complete-guide-home-loan-malaysia-20638

Rachmawati, D., Shukri, S., Azam, S., & Khatibi, A. (2019). *Factors influencing customers' purchase decision of residential property in Selangor, Malaysia*. *Management Science Letters*, *9*(9), 1341-1348.

Rahadi, R. A., Wiryono, S. K., Koesrindartoto, D. P., & Syamwil, I. B. (2013). Attributes influencing housing product value and price in Jakarta metropolitan region. *Procedia-Social and Behavioral Sciences*, *101*, 368-378.

Salmonsen, M., (2020). *Six Ways Covid-19 Could Impact Housing Design*. Retrieved September 25, 2022, from https://www.builderonline.com/design/consumer-trends/six-ways-covid-19-could-impact-housing-design_o

Sangkakoon, P., Ngarmyarn, A., & Panichpathom, S. (2014). The influence of group references in home purchase intention in Thailand. *IDEAS Working Paper Series from RePEs, St. Louis*.

Sean, S. L., & Hong, T. T. (2014). Factors affecting the purchase decision of investors in the residential property market in Malaysia. *Journal of Surveying, Construction and Property*, *5*(2), 1-13.

Struyk, T., (2022). *The Factors of a "Good" Location.* Retrieved September 29, 2022, from https://www.investopedia.com/financial-edge/0410/the-5-factors-of-a-good-location.aspx

Tan, A. L., (2020). *Property buying: It's all about the price post-MCO.* Retrieved September 13, 2022, from https://www.edgeprop.my/content/1685397/property-buying-its-all-about-price-post-mco

TechTarget Contributor. (2021). *Millennials (generation Y).* Retrieved September 27, 2022, from https://www.techtarget.com/whatis/definition/millennials-millennial-generation

Turner, A. G. (2003). Sampling frames and master samples. United Nations secretariat statistics division, 1-26.

United Nations. (n.d.). *Take Urgent Action to Combat Climate Change and its Impacts.* Retrieved September 20, 2022, from https://unstats.un.org/sdgs/report/2021/goal-13/#:~:text=To%20meet%20these%20goals%2C%20global,exceeding%20410%20parts%20per%20million.

Zhang, P., & Nuangjamnong, C. (2022). Factors influencing the purchase decision of Bangkok building property in the context of new normal life situation. International Research E-Journal on Business and Economics, 7(1), 44-60.