HOW MUCH DOES AN AFFORDABLE HOUSE COST TO BE PAID BY YOUNG PROFESSIONALS IN GREATER KL, MALAYSIA?

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Abstract

Affordability of housing has been a hot topic among various socioeconomic groups. Surprisingly, given the current situation, the majority of the young generation is negatively affected by this stressful issue. This study, therefore, focuses on young professional groups from the built environment profession, namely, the engineer, architect, urban planner, and quantity surveyor. These professional groups also earn an income between B40, M40 and T20. Two research objectives were composed in this study: (1) To measure the monthly affordable housing cost and (2) To define affordable housing types by different household income groups amongst young professional based on the residual income model (RIM), which is used to measure housing affordability. The surveys were distributed amongst 341 respondents selected through stratified random sampling. The findings have revealed that B40 can only bear a monthly housing' costs not exceeding MYR 728, followed by M40 and T20 around MYR 2503 and MYR 6159, respectively. Hence, the B40 group had lesser house option types, i.e., around ten house types compared to M40 and T20.

Keywords: Affordable house cost; Housing affordability; Young professional, Residual income model; Cost of Living

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INTRODUCTION

What is the affordable housing price in Greater KL? Arguably there is no standard pricing to indicate affordable house price. Local governments employ a variety of criteria to determine what constitutes a reasonable house price. For example, PR1MA charges between MYR 100,000 and MYR 400,000 for households earning between MYR 2,500 and MYR 7,500, and then the income eligibility is raised to MYR 15,000 after that (PR1MA, n.d). Meanwhile, the Department of State Housing defines an affordable house as one that is sold for less than MYR 300,000 and has a monthly household income of less than MYR 5000. (Ministry of Federal Territory and Urban Well-being, 2013). Accordingly, houses in the *Rumah Mampu Milik Wilayah Persekutuan* (Rumah WIP) project are priced at MYR 300,000 and below, assuming a household income of MYR 10,000 (Ministry of Federal Territory and Urban Well-being, 2013). Notably, there is the National Affordable Housing Policy, which is a sub-policy of the National Housing Policy 2018-2025. Unveil by the Ministry of Housing and Local Government, this sub-policy aims to highlight the housing affordability issues and most importantly to provide details for the ceiling price of affordable houses. Therefore, the policy has set the price of affordable houses to MYR 300,000, however, the actual selling price will differ across different states based on the median household income and construction cost in each area. The policy has set the affordable house price in Kuala Lumpur at MYR 326,628 with a median household income of MYR 9,073. This is followed by Putrajaya at around MYR 297,900, while the affordable house price in Selangor is between MYR 184,284 and MYR 267,948 with a median household income between MYR 5,119 and MYR 7,443 (Department of Statistics, Malaysia, 2020).

LITERATURE REVIEW
Residual Income Model

Measuring housing affordability should not merely be weighed in housing cost as applied in the price-to-income ratio (PIR) approach, but also to take into account basic human needs- to ensure the household well-being and sustainability (Sohaimi, 2018). The RIM differs from PIR, as PIR indicates the ratio based on the median housing prices over the annual household income (Osman et.al, 2020). The younger generation make their basic daily expenses including transportation and education cost as their first claim on household income. As a result, the RIM is used in this study since it considers the sufficiency for other home essentials after removing the housing cost (Milligan, 2003). Figure 1.0 shows that in order to achieve housing affordability, monthly household income (residual income) must be positive after deducting monthly housing costs and monthly household expenditures, whereas unaffordability is the opposite. A positive proportion of

residual income indicates that a household's income is sufficient to cover housing costs and other expenses.

$$\text{Housing Affordability} = \text{Monthly Household Income} - \text{Monthly Housing Cost} - \text{Monthly Household Expenditure}$$

Figure 1: The Theoretical Framework of RIM
Source: (Stone, 2006)

The reasons for adopting the RIM are, first, it assesses the household living standards (Nwuba, 2015; Stone, 2006). By employing the RIM, the affordability considerations are expanded to include household income, housing costs, and household expenditure, with a household's size and composition having a direct impact on household expenditure. Housing affordability is determined not only by the link between housing costs and income, but also by the integration of other factors. For example, in a prior study, it is also expressed in terms of housing quality and location (Shuid, 2016) as well as the interpretation of socioeconomic and development environments (Zainon et al., 2017). Overall, the RIM is an alternative to the housing cost approach (PIR), as it considers both aspects, i.e., the housing cost and non-housing cost simultaneously.

Household Income

Most previous researchers believe that household income is a key component of home affordability (Yates et al., 2007) and a ubiquitous factor in measuring affordability (Ismail et al., 2015; Bujang et al., 2010; Md. Sani, 2015[a,b]). In Malaysia's perspective, 'household income' refers to a household as an individual or a group either related or unrelated who live together, as well as share food and other necessities (Khazanah Research Institute (KRI), 2018). However, according to Arimah (1997), only the income of spouses (if both are working) is considered family income, and the income of adult children is not included because they will leave the house. Accordingly, this study employs Arimah's view on household income. The graduate traces report (2011-2016) is reviewed as stated in Figure 2.0, in which the information of six graduate traces reports have been compiled. Overall, it proved that young graduates earned below the standard income. Most graduates received an income in the range of MYR 1,501-MYR 2,500. Between 2011 and 2013, the salary range of MYR 1,501-MYR 2,000 had the greatest percentage (20.7% - 22.1%). However, the percentage of this income range has shrunk in the following years. Instead, for 2014-2016, the income range of MYR 2001-MYR 2500 was the greatest. Another trend that existed referred to the percentage for the income range of MYR 5001 and above, which had been recorded to have increased during 2011 until 2016. However, this has only contributed to the lowest percentage (1.2%-2.8%) amongst the other

income ranges. The fact that current graduates earn less than MYR 1000 is also a source of concern. Despite the percentage fluctuations between 2011 and 2016, the cost of living continues to rise year after year. The MYR 1,000 wage range not only falls short of housing affordability, but persons in this income bracket will also struggle to satisfy other family essentials.
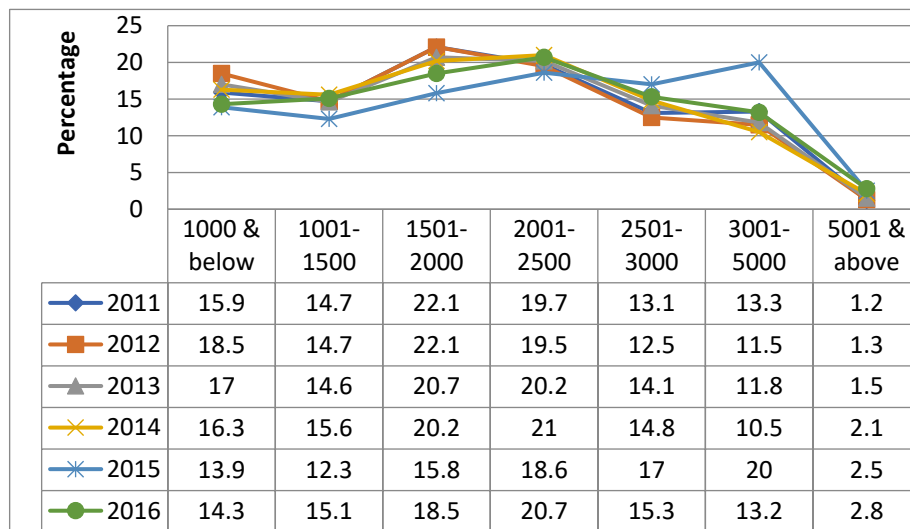
	1000 & below	1001-1500	1501-2000	2001-2500	2501-3000	3001-5000	5001 & above
2011	15.9	14.7	22.1	19.7	13.1	13.3	1.2
2012	18.5	14.7	22.1	19.5	12.5	11.5	1.3
2013	17	14.6	20.7	20.2	14.1	11.8	1.5
2014	16.3	15.6	20.2	21	14.8	10.5	2.1
2015	13.9	12.3	15.8	18.6	17	20	2.5
2016	14.3	15.1	18.5	20.7	15.3	13.2	2.8

Figure 2: Income Trend among Malaysian Graduates from Year 2011 until 2016
Source: (Ministry of Higher Education Malaysia, 2012-2017)

Household expenditure
Housing expenditure is a variable to housing affordability since the household expenditure pattern is linked to budgetary capability for other consumption, and this is an agreed fact by most prior studies (Ismail, et al., 2015; Md Sani, 2015b). In this study, the categories of expenditures have been obtained from the Department of Statistics (2017) and the Central Bank of Malaysia (2016), which comprise food and beverage (non-alcoholic & alcohol), tobacco, clothing and footwear, utilities (water, electricity, gas), household maintenance (decoration and hardware), health, communication, entertainment (recreation and culture service), education, dining outside (restaurant and hotel), as well as miscellaneous goods and services. However, the household expenditure attributes are not discussed in detail, as this study specifically focus on identifying the affordable housing cost. Correspondingly, the monthly housing cost has been considered as a financial stress and is ubiquitous in determining the housing affordability. As Zainon et al. (2017) has stressed, house price is one of the decision attributes for homeownership preferences. Most Malaysians cannot afford to own a newly launched residential unit, as the realistic median house

price is MYR 793,000 in current market but ironically the maximum affordable price is MYR 454,000 (Ganeshwaran, 2019). In addition, since 2014 in Kuala Lumpur, there is an absence of houses that are launched below MYR 250,000, and instead there is a massive launched in the range of MYR 500,000 - MYR 1M (KRI, 2015). This is also proven by the Malaysian House Price Index (MHPI) as shown in Figure 3.0 (a), which exhibits the prolonged rise at a gradual trend. The MHPI stood at 100.0 points in 2010, increased by 1.9% on an annual basis (193.7 point at year 2018), and in 2010 was reported as the lowest. However, Kuala Lumpur recorded a decreased by 0.4% to MYR 785,000 (2018: MYR 788,000) compared to other states such as Selangor, Johor and Penang who reported moderate annual growth (see Figure 3.0 (b)). Overall, the house price shows prolonged increases and albeit the house price in Kuala Lumpur that indicates shrinkage with MHPI 9.1 points in 2014, and a decrease to 0.4 on two conservative years- 2018-2019, the actual house price in Kuala Lumpur especially for those that are newly launched is considered as unaffordable for the young group of adults.
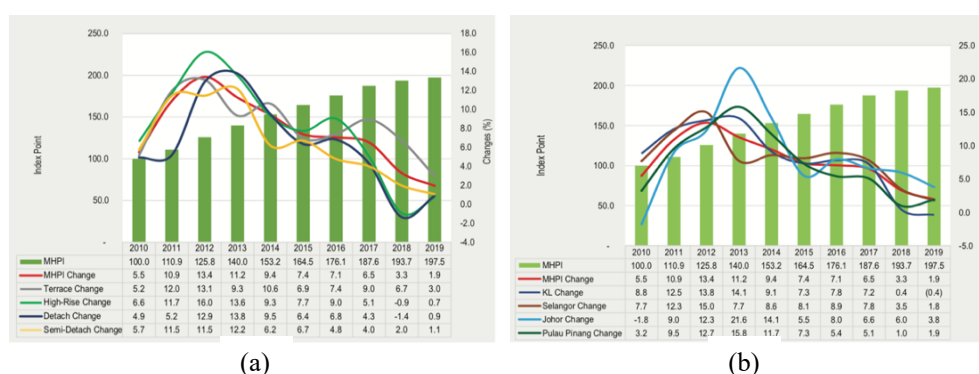

(a)   (b)

Figure 3: MHPI-Point and Annual Changes by Types (a) and Changes by Major States (b), Year 2010-2019.

Source: (Valuation and Property Service Department, 2019)

METHODOLOGY

The unit of analysis of this study refers to the young professional group. The data were collected through a survey, through professional bodies from the field of the built environment, namely, the Institution of Engineers Malaysia (IEM), Malaysian Institute of Architects (MIA), Malaysian Institute of Planners (MIP) and the Board of Quantity Surveyor Malaysia (BQSM) for the engineer, architect, urban planner and quantity surveyor (QS), respectively. The young professional criteria are (i) being between the ages of 25 and 35; (ii) having a Bachelor's degree; (iii) working or living in Greater Kuala Lumpur; (iv)profession as an

engineer, architect, urban planner, or QS. Meanwhile, fieldwork was conducted utilising self-administered questionnaires based on 341 out of 372 returned surveys. Because there were four separate groups in this study, a probability sample with stratified random sampling was used, and then simple random sampling was chosen from each stratum. The study region is Greater KL, which was chosen by young working groups to include professionals and business centres (Zyed, 2014). This study used a deductive approach because it is based on the RIM, which uses the equation below to determine housing affordability.

$$\text{HA} = \text{MON.HI} - (\text{MON.HE} + \text{MON.TC} + \text{MON.HC})$$
$$= \pm \text{ balance of HI}$$

Note:

HA: Housing affordability	MON.TC: Monthly transportation cost
MON.HI: Monthly household income	MON.HC: Monthly housing cost
MON.HE: Monthly household expenditure	

Figure 4: The Conceptual Framework of The Study
Source: (The author, and adapted Stone, 2006: Md Sani, 2015b)

RESULT AND ANALYSIS

By revealing the number of respondents by gender, age, and marital status, the respondent's background was descriptively stated. The total sample size was 341 (n= 341), and the data distribution between genders among the professionals appeared to be about equal, with 178 males and 163 females, respectively. The cohorts aged 25-28 had the highest number of responses (143), followed by cohorts aged 29-32 (123), and cohorts aged 33-35 (barely a fourth of the sample size) (75 respondents). The data then revealed that married respondents exceeded single respondents by only 18 people, three of whom were divorcees.

Table 1: Respondents' Background

Gender		Age			Marital Status		
Male	Female	25-28	29-32	33-35	Single	Married	Divorced
178	163	143	123	75	160	178	3

Figure 5.0 illustrates the varying housing cost in three different ownership types, namely, homeownership, rent, and parental home. Notably, most of the young groups bore a housing cost that ranged from MYR 500 and below, about 93 respondents under the rent type being the highest (84 respondents). Housing cost was the second highest with a zero range, as 89 respondents lived with their parents. Meanwhile, the cost of home ownership ranged from MYR 501 to MYR 2000, with the higher the cost, the fewer respondents who could afford it.
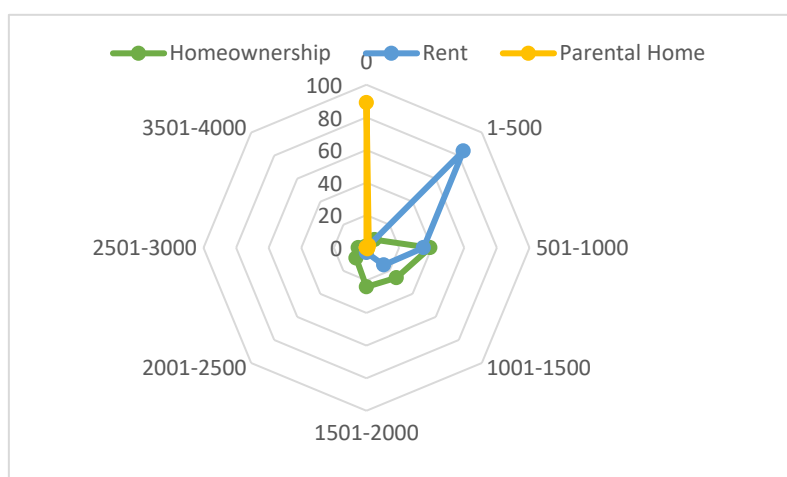
Figure 5: Housing cost for different ownership types

Table 2.0 presents the residual income after household expenditure has been deducted from the household income but excluding the housing cost for three of the young professionals' income groups. The result showed that the B40 group was the most affected by housing affordability issues, as they bore monthly housing costs not exceeding MYR 728. Meanwhile M40 and T20 were more privileged as they had a residual income of about MYR 2503 and MYR 6159, respectively, as presented in Table 2.0.

Table 2: The Residual Income for Three Income Groups

Groups	Monthly household income	Monthly household expenditure (exclude housing cost)	Residual Income
B40	2763	2035	728
M40	5883	3380	2503
T20	10650	4491	6159

Figure 6.0 shows the correlations between monthly housing costs for various dwelling types and household income, as well as expenditure, for three categories. The dwelling price was collected from the Property Market Report (PMR) of 2017 (issued by the Valuation and Property Services Department (Napic), 2018), while household income and spending were obtained through the survey conducted for this study. The house price from PMR 2017 was calculated using the property calculator with an assumed interest rate of 4.5 percent, a loan margin of 90 percent, and a loan tenure of 35 years, resulting in a simulation of monthly housing costs. The chart also displays the two monthly home cost values

for each house type, which represent the minimum and maximum monthly housing cost (instalment). The affordability issue clearly impacted the B40 group of young professionals the most, since their household income and expenditure margins were very tight, leaving them with little residual cash to pay for housing costs. Meanwhile, as compared to B40, M40 appeared to have more housing options, but had fewer than T20. The table shows that the B40 group is more likely to struggle to satisfy their basic needs since their household income is insufficient to cover all of their expenses, forcing them to set aside housing costs. Then, with a residual income of MYR 728, the B40 group might not be limited to renting, but rather to owning.
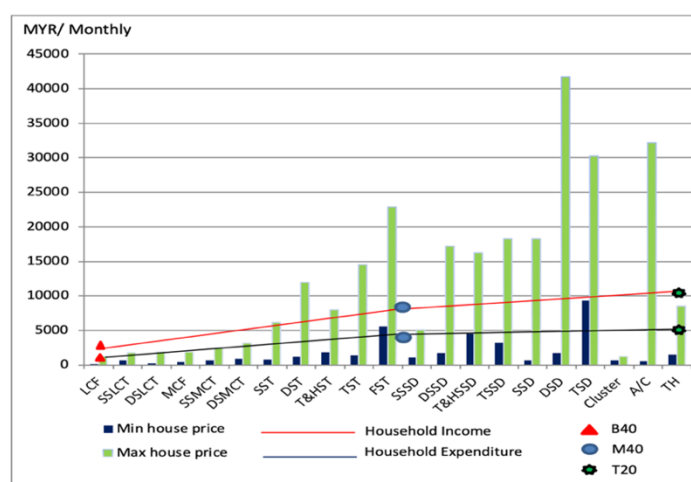

Figure 6: The Relationships Between Monthly Housing Cost,
Household Income, and Expenditure
Source: (The author, and Napic, 2018)

LCF	: Low-cost flat	DST	: Double storey terrace	TSSD	: Three storey semi-detach
SSLCT	: Single storey low-cost terrace	T&HST	: Two & a half storey terrace	SSD	: Single storey detach
DSLCT	: Double storey low-cost terrace	TST	: Three storeys terrace	DSD	: Double storeys detach
MCF	: Medium cost flat	FST	: Four storeys terrace	TSD	: Three storeys detach
SSMCT	: Single storey medium cost terrace	SSSD	: Single storey semi-detach	CLUSTER	: Cluster house
DSMCT	: Double storey medium cost terrace	DSSD	: Double storey semi-detach	A/C	: Apartment/Condominium
SST	: Single storey terrace	T&HSSD	: Two & a half storey semi-detach	TH	: Town house

Note: House Type

This study also defines affordable prices of sub-sale houses in Greater KL for three income groups of young professionals, as represented in Table 3.0. The housing preferences of young professionals are not considered in this regard. Overall, the B40 group has fewer housing alternatives, as they can only choose from ten house types at a minimum cost of less than MYR 700 per month, while the highest cost of a similar house type is between MYR 1,277 and MYR 2,555

per month. The M40, on the other hand, has 29 house type options, while the T20 has 38. (see Table 3)

Table 3: Affordable prices of sub-sale houses in Greater KL

House Type	Value	Kuala Lumpur			Household Income Groups			Selangor			Household Income Groups		
		Price	Monthly	Cash Required	B40	M40	T20	Price	Monthly	Cash Required	B40	M40	T20
LCF	Min	65000	276	13693	✓	✓	✓	35000	149	9579	✓	✓	✓
	Max	300000	1277	48645		✓	✓	290000	1235	47169		✓	✓
SSLCT	Min	190000	809	32441		✓	✓	150000	638	26575	✓	✓	✓
	Max							425000	1810	67094		✓	✓
DSLCT	Min	280000	1192	45693	✓	✓	✓	60000	255	13007	✓	✓	✓
	Max	450000	1916	70784		✓	✓						
MCF	Min	95000	404	17807									
	Max	450000	1916	70784									
SSMCT	Min	600000	2555	93618			✓	160000	681	28041		✓	✓
	Max							410000					
DSMCT	Min	300000	1277	48645		✓	✓	200000	851	33907		✓	✓
	Max	735000	3130	114324				648000					
SST	Min	360000	1533	57501		✓	✓	170000	724	29508	✓	✓	✓
	Max	1450000	6176	223034				732000					
DST	Min	530000	2257	82828		✓	✓	290000	1235	47169		✓	✓
	Max	2800000	11926	426077				2140000					
T&HST	Min	1338000	5698	206167			✓	440000	1874	69308			✓
	Max	1880000	8007	287791				1872000					
TST	Min	340000	1448	54549		✓	✓	635000					
	Max	3400000	14481	515751				2000000					
FST	Min	2280000	9711	347938				1300000	5537	200444			✓
	Max	5380000	22915	808891									
SSSD	Min	690000	2938	107422			✓	260000	1107	42741			✓
	Max	1200000	5111	185338				950000					
DSSD	Min	665000	2832	103588			✓	400000	1703	63405			✓
	Max	4050000	17250	612116				3650000					
T&HSSD	Min	2000000	8518	305863				1050000	4472	162584			✓
	Max	3800000	16185	575052				2050000					
TSSD	Min	1500000	6388	230564				750000	3194	116624			✓
	Max	4300000	18315	649179				2800000					
SSD	Min	4300000	18315	649179				140000	596	25109	✓	✓	✓
	Max							1200000					
DSD	Min	2750000	11713	418564	✓	✓	✓	400000	1703	63405		✓	✓
	Max	9800000	41741	1435077	✓	✓	✓	6630000					
TSD	Min	3300000	14055	500893		✓	✓	2188000	9319	334113			✓
	Max	7100000	30241	1060591				6150000					
Cluster	Min	140000	596	25109	✓	✓	✓						
	Max	299000	1273	48498		✓	✓						
A/C	Min	125000	532	22909	✓	✓	✓						
	Max	7570500	32245	1129023									
TH	Min	355000	1512	56763		✓	✓						
	Max	2000000	8518	305863									

Source: (The author, 2019 and Napic, 2018)

CONCLUSION

The B40 group of young professionals were the most affected by the housing affordability issue, as their household income and expenditure margin was very narrow. Meanwhile, M40 seemed more likely to have more housing options when compared to B40, but had fewer than T20. One must bear in mind that although low-cost housing has met the young professional's affordability, especially the B40 group, however, due to the high cost of living, they have limited themselves to do so. Besides that, those who are new in the employment industry (Zyed et al., 2016) also face the dilemma of being underpaid, while simultaneously they also have to bear an education loan and other non-housing costs. Subsequently, the RIM approach is appropriate in defining housing affordability as it reflects the household's ability to buy a house and considers the household's spending patterns, although the RIM requires detailed household income and expenditure data. As such, recommendations for future work are to define the young professionals' housing affordability by taking into account their housing preferences, and that the research extends beyond the monetary aspect in defining housing affordability.

ACKNOWLEDGEMENTS

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