Affordable Life Insurance Spending Among B40 Income Group in Malaysia: A Case Study

Noraini Manan[1], Nurhasniza Idham Abu Hasan[2], Nur Faezah Jamal[3]

[1]Center for Actuarial Sciences Studies, Faculty of Computer & Mathematical Sciences, Universiti Teknologi MARA, 40450 Shah Alam, Malaysia

[2,3]Department of Statistics, Faculty of Computer & Mathematical Sciences, Universiti Teknologi MARA, Perak Branch, Tapah Campus, 35400 Tapah Road, Perak, Malaysia

Abstract: Life insurance is critical in providing coverage and protection against the risk of a person's death and total permanent disability. However, only a small number of Malaysians own life insurance and a few of them are from the B40 group. This paper examines the consumption of Life Insurance and Takaful policies for the B40 group in Malaysia. The secondary data were obtained from 15 Takaful operators in Malaysia from the year 2014-2019. There are six factors namely, (1) Ethnicity, (2) Monthly Income, (3) Gender, (4) Age, (5) Occupation, and (6) Highest level of education that use to predict the affordance amount of insurance spending among B40 group in Malaysia. By using Multiple Linear Regression (MLR) indicates that ethnicity, monthly income, and education level were statistically significant to predict the affordance amount of insurance spending among B40 group in Malaysia. Based on their monthly income, the average affordable amounts spending among B40 group were RM 43.48±84.38. Therefore, in promoting financial services that are accessible to all Malaysian especially B4 group, it was suggested to provide an affordable amount of premium for B40 group.

Keywords: Affordable, B40 group, Life Insurance, Low-income group, Multiple Linear Regression.

I. INTRODUCTION

In promoting financial services such as Life Insurance and Takaful that are accessible to all Malaysian from all levels of income, Bank Negara Malaysia had come out with the idea of providing financial protection to the nation low-income earners or bottom 40% group (B40 group). The financial protection is aimed to ease the burden of the B40 group in the event whereby there are financial loss happened. Recently, LohGuat Lan, President of the Life Insurance Association of Malaysia (LIAM), stated that life insurance should be purchased by everyone and should not be viewed as an additional financial burden [1]. However, the existence of these financial insurance services does not seem to catch the eyes of the B40 group although the price of the product is lower compared to the usual Life Insurance and Takaful product offered in the market. Question has arisen as to why the B40 groups have not yet purchased the Life Insurance and Takaful product.

In 2015, the combined market penetration rate of Life Insurance and Takaful in Malaysia was 55%, considerably below the target of 75% set by the Economic Transformation Programme for 2020 [1]. According to LohGuat Lan,

President of Life Insurance of Malaysia (LIAM), about 90% of those who are insured do not have enough compensation for themselves and their loved ones, even though 41% of the community is covered [1]. Meanwhile, only 4% of low-income families have Life Insurance or Takaful. According to [2] stated that the affordable life insurance premium for the B40 group can choose either policy 1 or policy 2. These policies are discrete term life insurance with the coverage period of 10 years, an interest rate of 3.5%, and a sum assured of RM100,000 for Policy 1 and RM550,000 for Policy 2.

Researching the factors that influence the purchase of Life Insurance and Takaful is critical to increase market penetration in Malaysia, particularly among the B40. Previous research has discovered that many factors affect Life Insurance and Takaful consumption, including income, level of education, awareness, perception of insurance, household size, and regionallocation.

An empirical study was conducted to discover specific factors that impact life insurance demand. [3] Investigated the effect of demographic factors on insurance consumption over time. When conducting these studies, most researchers include the level of income and education as a demographic factor. So, the level of income and education are important for life insurance consumption in Malaysia. However, few studies have been conducted to determine the impact of age, ethnicity, gender, and activity level on life insurance consumption. As a result, the focus of this research is to investigate the factors that affect life insurance consumption in Malaysia. Researchers believe that this research will indirectly help in achieving financial inclusion among Malaysians.

II. LITERATURE REVIEW

Life Insurance andTakaful

Life insurance is seen as a product that provides protection and savings. Life insurance is used by most Malaysian families for financial planning purposes, such as financial protection [4]. The main feature of insurance is the transfer of risk, as it is created to act as a protection for individuals or companies against unexpected accidents [5]. In the event of accidental death or approaching a certain age, a life insurance policy obligates the issuer's firm to pay a lump sum amount of money (based on the paid insurance sum) to the insured

person (beneficiary) or a party nominated by the insured person as a dependent beneficiary [4]. Meanwhile, Takaful is an Islamic insurance product in which each participant contributes money to a pool of funds that will help each participant in the event of a loss due to unexpected circumstances [6]. Takaful operators, like traditional composite insurance firms, provide both general takaful and family takaful policies. The contributions of family takaful participants are divided into two distinct accounts. These accounts are the participants' investment accounts (PA), which is the savings and investment account, and the participants' special accounts (PSA), which is a donation fund based on the tabarru' concept [5].

Factors Contributing to Life Insurance Ownership

Income has a clear and significant relationship with the purchase of life insurance [7]. An individual's purchasing power increases when their salary increases, making ownership of life insurance more affordable [8].People with better education are exposed and understand better the advantages of life insurance while forecasting unexpected events [8]. However, some educated people buy less life insurance because they are drawn to other risk management and investment products [7]. Consumers' willingness to purchase insurance is based on consumer awareness, as once one is aware of it, he or she may decide to pay more, particularly for the expense that covers the safety risk. Consumers should arm themselves with life insurance knowledge to improve their understanding and lead to a purchase intention [4]. Market awareness refers to product knowledge that customers gain over time through exposure to advertisements, sales information, or product use and that influences their purchasing decisions [4].

A favourable view of life insurance is expected to increase the need for consumers to purchase life insurance and make an informed decision [9]. Knowledge improves one's ability to process information, which leads to a more accurate perception of a problem [9]. There is no significant relationship between the number of dependents and life insurance demand [7], whereas a negative and significant relationship between the number of children and life insurance demand [8].Households with a greater number of dependents have more need for financial resources in the event of the insured's untimely death [8]. Rural residents are more likely to own protection-type insurance, whereas urban residents are more likely to benefit from employer- sponsored insurance, such as term-life or health insurance plans [8].Life insurance demand differed significantly between rural villagers and urban households [10].Urban areas in Malaysia provide more extensive information dissemination channels for promoting insurance as an integral component of daily life, increasing the likelihood that urbanites will be insured [8].

III. METHODOLOGY

Data collection

The secondary data were obtained from 15 Takaful operators in Malaysia from the year 2014-2019. The data consist of six factors namely, (1) Ethnicity, (2) Monthly Income, (3) Gender, (4) Age, (5) Occupation, and (6) Highest level of education that use to predict the affordance amount of insurance spending among B40 group in Malaysia.

Theoretical framework

This paper aims to identify the factors that significantly predict the amount spending on Life Insurance (dependent variables) among B40 group given by six factors namely,$X1$ =Ethnicity, $X2$ = Monthly Income, $X3$ = Gender, $X4$ = Age, $X5$ = Occupation, $X6$ = Highest level of education. The theoretical framework for this study shows in Fig. 1.
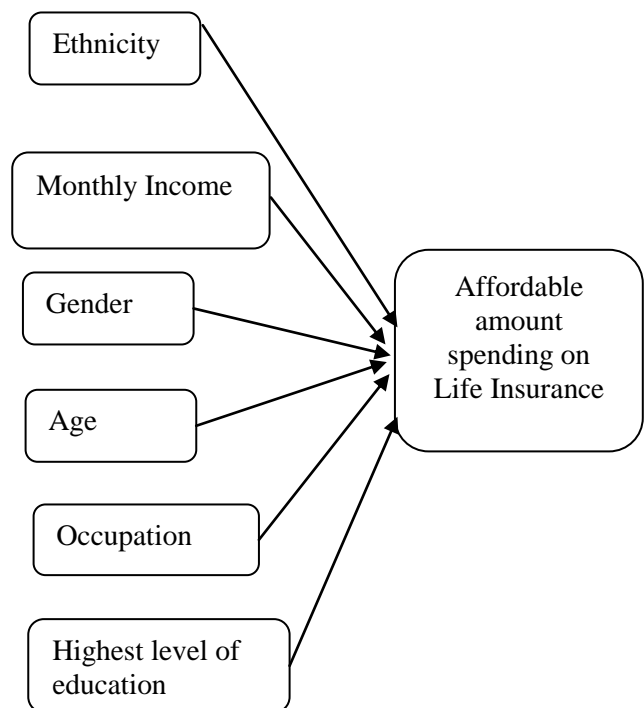

Fig.1Theoretical framework for predicting the amount spending on life insurance among B40 group

Multiple Linear Regression

Multiple Linear Regression (MLR) uses in this study to identify the factors that significantly predict the amount spending on Life Insurance (dependent variables) among B40 group. The R square is a multiple determinant coefficient that displays the total variation in the dependent variables that can be explained by the independent variables. The adjusted R-square indicates whether adding more predictors improves a regression model. The factor is significant if their P-values are less than0.05.

The general mathematical equation for MLR as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_m X_m + \varepsilon \qquad (1)$$

Where

Y is predictor variable

$\beta_0, \beta_1, \beta_2, \ldots, \beta_m$ are regression parameters

$X_1, X_2, \ldots, X_m$ are the independent variables

ε is the random error component reflecting the difference between the observed and fitted linear relationship.

There are several basic assumptions must be fulfilled before uses MLR such as:

i. The dependent variable's relation to the independent variable must be linear.

ii. The errors are normally distributed between the dependent variable and independent variables.

iii. No multicollinearity.

iv. Homoscedasticity exists.

IV. RESULT

Summary of data

Table 1a show the summary of the socio- demographic of the respondents. A total of 541 respondents were participated in this study. The majority of the participants (79.3%) are male and the remaining 20.7% are female. Malay and Bumiputera are slightly more than non-Bumiputera (45.7%). Besides, highest level of education of the respondents were SPM/SPMV (44.7%). Additionally, most the respondents are from private servant Malaysian (50.5%).

Table 1a. Sample Distribution Regarding Socio- demographic

Demographic Characteristic (Categorical variable)	n=541	Percentage (%)
Gender		
Male	429	79.3
Female	112	20.7
Ethnicity		
Malay & Bumiputera	294	54.3
Non-Bumiputera	247	45.7
Education Level		
Degree/STPM	38	7.0
Diploma	50	9.2
STPM	19	3.5
SPM/SPMV	242	44.7
PMR/SRP	79	14.6
No certificate	132	24.4
Occupation		

Government servant	71	13.1
Private servant	273	50.5
Self-employed	144	26.6
Housewife	12	2.2
Pensioner	41	7.6

Table 1b show the summary of the socio-demographic of the respondents for continuous variables. The mean age of respondents' 47.91±15.00 years. Meanwhile the average income per month is RM 3181.43±882.36. In addition, the average amount spend on the life insurance ownership among B40 group are RM 43.48±84.38. The result shows that all of the respondent's monthly income are below RM 3,860 which shows that all respondents are categorized as B40 group.

Table 1b. Sample Distribution Regarding Socio-demographic

Demographic Characteristic (Continuous variable)	Mean ±SD	Range
Age	47.91±15.00	18 – 92
Income	3181.43±882.36	801.54 – 4840.82
Amount Spend on Insurance	43.48±84.38	0.32 – 800.00

Multiple Regression test

Table 2. Model of Summary

R	R Square	Adjusted R Square	Std. Error of the estimate
0.912	0.832	0.826	0.6767

Based on Table 2, the value of R Square is 0.832 which means that 83.2% variation in the amount of insurance spending on insurance among B40 be explained by ethnicity, monthly income, gender, age, level of education and occupation. Meanwhile, another 16.8% variation be explained by other factors used in this research.

Table 3. ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	13480.46	7	1925.78	10.982	0.000*
Residual	93466.88	533	175.36		
Total	106947.34	540			

* Significant at 0.05

ANOVA tests the overall significant of the regression model. The F value is 10.982 and the significant value is 0.000 which less than 0.05. It means that the model is highly significant.

Table 4. Coefficients

Coefficient	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	P-value
Constant	7.393	26.064			.777
Ethnicity	11.212	7.602	.066	.284	.041*

Monthly Income	.009	.004	.091	1.475	.001*
Gender	2.975	9.058	.014	2.004	.743
Age	.215	.300	.038	.328	.475
Highest level of education	3.926	3.175	.062	.715	.017*

 * Significant at 0.05

Based on the Table 4, there are two factors which is that significantly predict the affordable amount of spending on insurance among B40 group is Ethnicity (P-value=0.041),Monthlyincome (P-value=0.001) and levelof education (P-value=0.017). Meanwhile, the rest are not significant.

The regression equation developed in this model is:

$$Y = 7.393 + 11.212\,X_1 + 0.009\,X_2 + 2.975\,X_3 + 0.215\,X_4 + 3.926\,X_5 \quad (2)$$

Where: Y(DV) = Amount Spend on Life Insurance, X1 =Ethnicity, X2 = Monthly Income, X3 = Gender, X4 = Age, X5 = Independent Variables (IV5) = Activity Status, X6 = Highest level of education.

V. DISCUSSION

The result from the study indicates that there are three factors that significantly predict the amount of spending on insurance among the B40 group is Ethnicity, Monthly income and level of education. This is similar to the findings of [7] and [8], where income has a clear and significant relationship with the consumption of Life Insurance and Takaful. Insurance consumers whose highest certificate is lower than a bachelor's degree tend to spend less on Life Insurance and Takaful. Insurance consumers with a higher level of education prioritize more on purchasing Life Insurance and Takaful. This is similar to the findings of [8],[11] and[12], where they find that educated people tend to purchase Life Insurance because they have the financial knowledge and understanding of the benefits of Life Insurance and Takaful.

VI. CONCLUSION

Due to the extreme rising cost of living, it is more crucial than ever for individuals to be adequately insured, particularly those in the lower-income group, B40 However, the market penetration rate of Life Insurance and Takaful in Malaysia is low, and only a small proportion of this number is from the B40 group. By using Multiple Linear Regression (MLR) indicates that ethnicity, monthly income, and education level were statistically significant predict the affordance amount of insurance spending among B40 group in Malaysia. Based on their monthly income, the average affordable amounts of spending among B40 group were RM 43.48±84.38. Therefore, in promoting financial services that are accessible to all Malaysian especially B4 group, it was suggested to provide the affordable amount of premium for the B40 group.

ACKNOWLEDGEMENT

REFERENCES

[1] Krishnan, D. B. (2020). LIAM urges Malaysians to get life insurance coverage. New Straits
[2] Times Online. https://www.nst.com.my/news/nation/2020/09/623238/liam-urgesmalaysians-get-life-insurance-coverage
[3] Manan, N., Hasan, N. I. A., Jamal, N. F., & Hasan, N. A. (2021). Development of VBA Program for Affordable Premium and Coverage for Lower Income Group in Malaysia. International Journalof Academic Research in Business and Social Sciences, 11(8), 1819–1831.
[4] Hwang, T., &Gao, S. (2003). The determinants of the demand for life insurance in an emerging economy–the case of China. Managerial Finance.29(5-6), 82–96.
[5] Lajuni, N., Lai, F. H., Sondoh Jr., S., &Mohidin, R. (2020). Consumer Knowledge on Intention to Purchase Life Insurance. Labuan E-Journal of Muamalat and Society, 14,69–79.
[6] Gustina & Nurdianawati, I. A. (2019). Analysis of Demand for Family Takaful and Life Insurance: A Comparative Study in Malaysia. Journal of Islamic Economics, Banking and Finance,8(4).
[7] Malaysian Takaful Association. (2017). 2017 Annual Report. Retrievedfrom https://www.malaysiantakaful.com.my/sites/default/files/2020-03/AR-2017.pdf.
[8] Lim, C. C., & Tan, S. S. (2019). Demographic profiling of life insurance ownership in the northern regions of Malaysia. International Journal of Business and Society, 20(3), 1022–1035.
[9] Tan, A. K. G., Yen, S. T., Hasan, A. R., &Muhamed, K. (2014b). Demand for Life Insurance in Malaysia: An Ethnic Comparison Using Household Expenditure Survey Data. Asia-Pacific Journal of Risk and Insurance, 8(2).https://doi.org/10.1515/apjri-2013-0007.
[10] Lim, T.S., Dzulkifli, D.Z., Osman, Z., Mohidin, R., Jamal, A.A.A. (2020). Determinants of Perception Toward Life Insurance and Its Impact on Intention to Purchase. Labuan Bulletin of International Business & Finance 18(1), 2600-7894.
[11] Liu, T. C., & Chen, C. S. (2002). An analysis of private health insurance purchasing decisions with national health insurance in Taiwan. Social Science and Medicine, 55(5), 755–774.https://doi.org/10.1016/S0277- 9536(01)00201-5.
[12] Bakri, S. M., Ramli, N. R. @, &Sulaiman, N. A. (2018). Insurance Coverage amongst Low Income Households (B40) in Perak. International Journal of Academic Research in Business and Social Sciences, 8(11), 1733–1746.
[13] Chi, L. A., Hui, T. K., & Santhanarajan, M. E. (2019). Factors influencing life insurance consumption in Malaysia. In ACM International Conference Proceeding Series (pp. 88–92). Association for Computing Machinery