DETERMINANTS OF LIFE TAKAFUL DEMAND IN MALAYSIA: A QUANTITATIVE STUDY ON INCOME LEVEL, RISK ATTITUDE, AND INCOME PROTECTION

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ABSTRACT

Life takaful is one of the ways to secure finances for one's family if the breadwinner dies or experiences total permanent disablement. However, the preference of Malaysians to purchase life takaful is mediocre. This study aims to investigate the determinants of demand for life takaful in Malaysia, focusing on income level, risk attitude, and income protection. This research involved a total of 196 respondents from Kuala Lumpur, Malaysia, and data collected from questionnaire were analysed quantitatively using Statistical Package for the Social Sciences (SPSS) via descriptive analysis, Analysis of Variance (ANOVA), Correlation and Regression. The results reveal that both risk attitude and income level had significant positive influences on life takaful demand, while income protection produced a negative relationship. Notably, the strongest correlation was found between risk attitude and income level ($r = 0.430$, $p < 0.01$), while the weakest was between income level and income protection ($r = 0.180$, $p < 0.05$). Despite the uncertainty among respondents about purchasing life takaful, many believed their current coverage was adequate. The findings imply that takaful providers should target individuals with higher income and risk tolerance, while also enhancing educational outreach to improve financial literacy. The contribution of this study lies in its examination of behavioral and financial factors, specifically risk attitude and income protection as underexplored variables in the context of life takaful demand.

Keywords: Life Takaful, income level, risk attitude, income protection, demand factors.

1.0 INTRODUCTION

Life takaful acts as the security to the participants in the event of losses, while the participants are obliged to pay for a certain amount of the takaful contribution to the takaful provider. If a participant dies or becomes totally and permanently disabled, the takaful provider will pay the agreed-upon sum to the participant or beneficiary. In general, takaful provides financial aid to the individuals and the economy, besides income risk management. Additionally, life takaful also encourages long-term saving via its investment link plans, by reinvesting the sum of the principals and profits in shariah compliance private and public sector projects.

In year 2021, the Malaysian Takaful industry has shown positive performance despite the phase of recovery from the pandemic. According to the Malaysian Takaful Association Annual Report 2021, the takaful market penetration rate had reached 18.6%, up from 16.9% in the year 2020. The life takaful or Family Takaful new business recorded RM 8.5 billion in gross contributions, an increase of 29.7% compared to RM 6.59 billion in 2020. New business certificates were issued with a total of 1,135,189 in the year 2021, an increase of 35.2% compared to 839,355 certificates in the year 2020. Meanwhile, there is an increase of 37.9% for new business single contributions from RM 5.09 billion in the year 2020 to RM 6.28 billion in the year 2021. Significant growth of 48.8% was recorded for annual contributions of new business at RM2.23 billion, compared to only RM 1.5 billion in the year 2020. Interestingly, it was the first time that annual contributions reached the 2-billion mark (Najas, 2021).

However, majority of people in Malaysia do not purchase life takaful or life insurance. If compared to the other Asian countries, Malaysia is away behind. According to World Bank collection of development indicators, the life insurance premium volume to GDP (%) in Malaysia was reported at 2.4457 % in year 2019 (Trading Economics, 2022). In contrast, life insurance premium volume to GDP (%) in Singapore was reported at 8.072 % in year 2020. On the other hand, Japan recorded 5.4163 % in year 2020 and Thailand at 3.1746% in year 2020 respectively. It was also reported that Malaysia's insurance industry grew by 7.6% in 2021 after declining 2.8% in year 2020 and projected to slight decline of 7.0% in year 2022 (Walker, 2022). The figures mentioned revealed that there is huge potential in those market and industry which yet to be tapped in Malaysia. Therefore, this study will identify the reasons to uptake life takaful for individuals as one of their financial protections. At the same time, it can clearly identify the reasons why Malaysia is away behind in the numbers compared to other Asian countries.

The Malaysian government has provided protection through Socso for Employment Injury System and Employment Insurance Systems (EIS). The Employment injury system will benefit the employee and their dependents in the case of death, or disability and cover the medical cost in the event of an accident or an occupational disease arising out of and in the course of his employment. Meanwhile, for the EIS, it is covered for employees that have loss employment. This program provides a range of benefits to eligible individuals who are unemployed or underemployed, including job search allowance to help cover expenses related to job hunting, reduced income allowance to provide financial support for those who are working but earning less than their usual income, and an early re-employment allowance to help those who can secure new employment quickly after becoming unemployed. Both schemes are intended for employees only. Even though this is a conventional insurance which does not comply with the shariah requirement, most people would not choose to take additional takaful due to having this free protection and lack of knowledge on shariah compliance products.

Apparently, there are limited number of empirical studies for demands of takaful. Rusni, Syed, Salina, and Hafiz (2018) claimed that the education level and level of awareness play a critical part in affecting the choices to buy takaful. Comparable research by Md Hussain & Ab Rahman (2016), applies the hypothesis of arranged conduct in anticipating shoppers purposeful to take part in Takaful. 384 respondents were examined utilizing organized condition displaying and the result indicated that

knowledge, awareness, and exposure have impacts on the decision to take takaful. Another research reveals that word of mouth and mass media have a gigantic impact on subjective norms and thus, the subjective norms can impact the eagerness to take part in Takaful. Sherif & Shaari (2013) illustrates that the Muslim population, development of Islamic banking, dependency ratio and education variables are emphatically related to purchasing life takaful. On the other hand, it appears that the key elements that have a negative impact on the overall family or life Takaful consumption are inflation, real interest rates, financial development, and life expectancy.

Despite of the awareness, knowledge, exposure, economics, and demographics, to our knowledge, no existing literature had given attention on the individual financial ability and risk attitude as drivers towards the demand of life takaful. Therefore, this study intends to fill the gaps in the literature by examining the three determinants to purchase life takaful which are the level of income, the need of income protection, and the attitude toward the risk. The desire to understand these factors is crucial as the takaful has significant contribution to stimulate the economic growth through its function being the financial intermediation and risk transfer mechanism.

2.0 LITERATURE REVIEW

In this section, a review of the key determinants of life takaful as identified by previous researchers will be given. Each of these determinants is discussed and their impact on the demand of life takaful is examined.

Determinants of Life Takaful

Since its inception in early 1984, the Takaful (Islamic insurance) market in Malaysia has expanded at a rapid pace, paralleling the growth of Islamic banking. The Financial Services Board (IFSB) and the International Association of Insurance Supervisors (IAIS) refer to takaful as the Islamic equivalent of insurance with either life (or family) and general class coverage (Aziz, 2017). Ansari (2022) identifies economic and behavioural elements as those that drive the demand for takaful or insurance.

Similarly, the dependence ratio, income, education, development of Islamic banking, the Muslim population, inflation, interest rate, the growth of the financial sector, longevity, the trade and consumer price index, government spending, and saving rate all have an impact on the demand for takaful (Muhamad Abduh, 2017). Hwang and Greenford (2005) examine the critical determinants affecting life insurance usage in the Chinese territories, which include Taiwan, Hong Kong, and mainland China. They used per capita premium expenditures as a measure of demand for life insurance. Although several international cross-sectional research have uncovered characteristics that affect the uptake of life insurance, little is known about these factors in the Chinese territories.

In order to fill this informational void, researchers in this study created two econometric models to analyse the demand for life insurance in the three Chinese areas. The link between the assumed determinants and life insurance usage was investigated using a fixed effects model, which showed varied intercept values for various regions in cross-sectional effects but not in temporal effects. Based on the data collected, this study suggests that, life insurance consumption is significantly influenced by factors such as income, social structure, the one-child policy, education level, and economic development. Meanwhile, a similar concept by Browne and Kim (1993) with the previous researcher was studied. According to the study, since World War II, the global economy's service sector has experienced significant growth. The global insurance market has grown at an average yearly rate of

over 10% ever since 1950. The global life insurance market expanded at an average annual rate of more than 25% in the middle of the 1980s. This article outlines the variables that affect how different life insurance is demanded in various nations. The dependence ratio, national income, social security spending by the government, inflation, insurance costs, and whether Islam is the country's main religion are all determined to be significant variables.

The study by Truett and Truett (1990) found that national income, as well as other economic factors such as social security expenditures, were positively correlated with the demand for life insurance. This suggests that as a country's economy grows and becomes more stable, people are more likely to purchase life insurance. The study also indicated there was an adverse correlation between inflationary expectations and the life insurance uptake. This means that when people expect high levels of inflation, they are less likely to purchase life insurance. This could be due to the perception that the value of their insurance policy will decrease as inflation rises. The subsequent findings of the study indicate that income, wealth, and inflation all have a significant role in shaping the demand for life insurance. This demonstrates why life insurance demand analysis must consider the economy. The study's results shed light on what drives the global demand for life insurance and why it differs so much by country. If people's propensity to buy life insurance is proportional to their level of disposable income, then rising incomes would lead to higher life insurance premiums. This might be attributable to an increased awareness of the need of safeguarding one's finances, or it could be the result of an increase in the capacity to pay for life insurance premiums.

This research also stresses the significance of analyzing life insurance demand while taking into account country-specific characteristics. Given that the income elasticity of demand for life insurance in Mexico is higher than in the United States, it is possible that cultural, social, and economic variables in Mexico have a different effect on the demand for life insurance than they do in the United States. In addition, the income factor in determining the demand for life insurance is better understood. This result is in line with those of Enz (2000) and Ward and Zurbruegg (2000), that the income elasticity of demand for life insurance is greater in low-income nations. It is worth noting that contrasting results are commonplace in scholarly investigation. Variations in sample size, demography, and study methods are all potential causes for discordant findings. Maysami and Williams (2006), and Husin and Rahman (2013) employed diverse samples and research methodologies to investigate the link between takaful product awareness, perception, and intent to purchase. Thus, it is crucial to take into account the results of several research to acquire a more complete picture of the variables impacting the demand for takaful goods.

The Level of Income

According to Yaary (1965), income, interest rates, and premiums are all important considerations for customers when making decisions about insurance coverage. It is also worth noting that the concept of a utility function, which represents the satisfaction or value that customers derive from purchasing insurance, is still a key component of modern economic models of insurance demand. Furthermore, the researcher observed that the level of market financial development can influence the consumers' utility function for consumption and wealth. Additionally, a study done by Palmer and Burnett (1984) support that the customers' income affected the desire to purchase life insurance. Moreover, this was justified by Pliska (2007) stating that wealth accumulated from the salary earn have significant affect

towards the purchase of life insurance. Basically, individual that earn much more income will have more intention to purchase life takaful. This group of individuals also are more aware on the takaful beneficial as financial security for future.

Next, according to researcher Wang and Rosenman (2007), income is a major factor that directly affects the demand for life insurance. They also suggested other factors such as the geographical area (urban or rural) also play a significant role in the demand for life insurance. In rural areas, where access to education and job opportunities are limited, the level of income is lower compared to urban areas. As a result, individuals in rural areas may have less intention to purchase life takaful as it is considered an expensive product. Conversely, individuals in urban areas with higher incomes may purchase life takaful to protect their income from uncertain risks and to provide financial security for their loved ones in the future.

By focusing on Syarikat Takaful Malaysia Berhad, Hawariyuni (2006) explored the long-term price and income elasticity of demand for the takaful industry. Moreover, this study investigated the relationship between the demand for takaful and macroeconomic and demographic characteristics. By employing non-stationary time series in the co-integration test, the data indicated that the income elasticity of demand for takaful is more than 1. This indicates that in Malaysia, Takaful is viewed as a luxury good. It also suggested that the demand for takaful tends to increase whenever there is a considerable increase in income. Moreover, the education variable as a demographic component is not significantly associated with takaful demand. Meaning that even while individuals are educated and aware of takaful services, they may not necessarily acquire the products of takaful.

Hendon (2009) conducted a study on family takaful consumption, utilizing multiple regression models to examine the correlation between the demand for family takaful and various independent variables. The study findings indicate that the demand for family takaful has a positive correlation with income level and savings rate, whereas the demand for family takaful has a negative correlation with an interest rate, inflation rate, and stock composite. Furthermore, the study discovered that the income coefficient is highly significant and robustly predictive of the demand for family takaful, demonstrating that income is a key factor influencing the demand for this type of takaful. Finally, these findings provide insights into the characteristics that drive demand for family takaful, which can help takaful providers and policymakers design strategies to increase consumer adoption of takaful products.

Income Protection

The desire to leave the heirs with the inheritance wealth for them to enjoy the wealth is known as a bequest. Normally, the heirs may have a guarantee in a future life as the bequest leaves a large amount of inheritance wealth. The breadwinner is usually the person that wants to leave their heirs with larger wealth. This group of individuals seems to have higher demand for the life takaful. This statement was supported by previous researchers that found demands on the life insurance increased for the individuals that intended to leave larger inheritance for their love ones (Lewis, 1989). Significant increase of the demand was due to the requirement towards the protection of their income from any uncertain event.

Besides, one of the studies mentioned that individuals who have more dependents are more likely to have more life policyholders (Goh, 2012). The study identified the socio-demographic and economic

variables that significantly affect Malaysia's demand for life insurance. The demand for life insurance is divided into two parts: whether to purchase a life insurance policy and, if so, how many policies. To accommodate these different decisions, a hurdle count-data model is utilised. The findings indicate that there are some minor variations in the variables that influence consumers' decisions to buy life insurance and the number of policies they will buy.

Next, the assumption of the breadwinner to choose the life insurance was derived from his intention to maximize the expected uncertain lifetime (Fischer, 1973). The circumstances where the beneficiaries may receive the claim fund upon the death of the breadwinner show that the decision to uptake life takaful derived from the function of the bequest. On the other hand, the researcher (Lockwood, 2018) proved that the bequest motives and the adoption of life insurance have a negative relationship. He clarified that the higher the bequest motive is, the more preferred to have savings instead of having a life insurance legacy.

Moreover, the findings of this study are consistent with previous research conducted by Gupta and Sinha (2016) which reported a positive association between income level and demand for life insurance. Gupta and Sinha (2016) also suggested that individuals with higher incomes are more likely to purchase life insurance as they have more financial resources to protect and more responsibilities towards their dependents. Furthermore, the study revealed that other factors such as age, education, and family size also influence the demand for life insurance. Specifically, older individuals and those with larger families tend to have a higher demand for life insurance as they have more dependents to protect. Finally, the study emphasized the importance of financial literacy and awareness in increasing the demand for life insurance, as individuals who are more financially literate and aware are more likely to understand the benefits of life insurance and make informed decisions about purchasing it.

Risk Attitude

There is a significant impact on risk protection towards the determination of the purchase (Ewing, 2004). Risk can be described as the threat or probability on the quantify losses, damages, injuries, liabilities, or any other negative occurrence caused by accidents, natural reasons or any vulnerabilities externally or internally. The insurance or takaful is a mechanism to transfer the risk from an individual, group of individuals, or companies to another company which known as takaful provider or insurance company.

Omar (2007) stated that risk protection is the main factor that influenced the attitude on life insurance. The reason to purchase life takaful may vary based on the individuals risk appetite. For example, certain people purchase life takaful for the coverage against the financial risk in the way of health perception. Meanwhile, certain people purchase life takaful due to the nature of their work that might be imposed danger, for example, occupations such as pilots, offshore workers, and construction workers. There are also people that purchase life takaful due to the experience of the incident. For example, due to the impact of covid-19, people will start to purchase life insurance or life takaful because of the experience of the other on losses of loved ones especially the breadwinner. Past experience could be the factor that will increase the desire to buy health insurance, especially those who experience with unofficial treatment, which raises awareness of the danger and encourages the purchase of health insurance (Courbage & Roudaut, 2008). These include incidents

that happened to people surround such as the close friend of one of family member which who was unable to pay for medical care, which led to the decision to buy health insurance.

The risk-taker individuals are more likely to get life insurance, according to the research of Wookjae Heo (2013). This study's major objective was to investigate the relationship between socioeconomic characteristics and household life insurance coverage. Empirical evidence suggests that between 2004 and 2008, an increase in household net worth was positively associated with higher purchases of cash-value life insurance. During this period, households with female heads were more likely to increase their life insurance consumption. Additionally, the study found that an increase in the intention to save was positively related to a rise in household life insurance usage. The study's results indicate that life insurance not only replaces but also enhances wealth. This statement means that if a consumer's income is positively related to the potential loss associated with early death, then a risk-averse consumer is more likely to purchase life insurance. In other words, if the financial loss resulting from the consumer's death would have a greater impact on their income, they may be more inclined to buy life insurance to protect against that potential loss.

Furthermore, Halek and Eisenhauer (2001) examined the relationship between demographic characteristics and risk aversion. They used survey data to analyze the risk aversion of individuals based on demographic characteristics such as age, gender, marital status, education, income, and employment status. They found that risk aversion varies significantly among different demographic groups and that these differences are important for understanding individual financial decision-making. In addition, they explore the relationship between risk aversion and the demand for insurance and found that individuals who are more risk-averse are more likely to purchase insurance, particularly life insurance and health insurance.

In addition, the study by Stroe and Ionescu (2013) aimed to explore the attitudes and perceptions of consumers in relation to their insurance decisions. The study found that consumers tend to perceive insurance as a safety net and a means of protecting their financial future. The study emphasizes that there was a positive relationship between the decision-making that related to the safe environment and surrounding when they decide to uptake life insurance. It is merely to dismiss the worry as the reason for the adoption of life insurance. In other words, the intention is to change the uncertainty even via certainty protection against the guaranteed life insurance compensation in the case of death and total permanent disability. The results showed that the decision to purchase insurance is influenced by various factors, including trust in insurance providers, the recognition that insurance was important and the perceived risk of negative events. The study also revealed that consumers tend to rely on recommendations from friends and family members when making insurance decisions. Moreover, the study highlights the importance of understanding consumer attitudes and perceptions in order to develop effective insurance products and marketing strategies.

Lastly, Tennyson and Yang (2014) explored that bad life experiences may lead to higher demand for health insurance because they alter how people react towards risk. In the case of life takaful, the experience of a close person or family member with a bad incident and lack of financial support can create a sense of vulnerability and urgency to ensure that their loved ones are protected in the event of a similar situation.The study found that individuals who had a higher level of personal experience with long-term care needs, either through personal experience or through caring for someone else,

were more likely to purchase long-term care insurance. In addition, individuals who perceived themselves to be at higher risk for long-term care needs were also more likely to purchase insurance. The study also found that gender, age, income, education level, and health status were significant predictors of long-term care insurance purchase. Finally, the study found that individuals who perceived long-term care insurance to be more affordable and effective were more likely to purchase it.

**The Theory of Planned Behavior**

The Theory of Planned Behavior (TPB) which was initially introduced in 1980 as the Theory of Reasoned Action aimed to forecast an individual's intention to perform a behaviour in a particular place and time. The TPB is a theoretical framework in psychology that explains human behaviour and how people make decisions. The TPB suggests that an individual's behaviour is determined by their attitudes, subjective norms, and perceived behavioural control.

Attitudes refer to an individual's positive or negative evaluation of behaviour. Subjective norms refer to social pressure and the perceived expectations of others regarding the behaviour. Perceived behavioural control refers to the perceived ease or difficulty of performing the behaviour. The TPB suggests that these three factors together can predict and explain human behaviour. When an individual has a positive attitude towards a behaviour, perceives that others in their social group also support that behaviour, and perceives that they have control over the behaviour, they are more likely to engage in that behaviour. The TPB has been applied to a wide range of behaviours, including health behaviours, environmental behaviours, and consumer behaviours. It has been found to be a useful framework for predicting and understanding behaviour in a variety of contexts.

This framework provides a conceptual basis for studying the factors that influence the decision to purchase life takaful, and it highlights the importance of subjective norms in this context. The framework suggests that a positive attitude toward life takaful and a perception of social pressure to purchase it can both be important drivers of the intention to buy life takaful. By understanding the relationships between these variables, researchers can gain insights into the underlying mechanisms that shape an individual's decision-making process when it comes to life takaful, and this can help to inform strategies for promoting life takaful uptake. This shows the subjective norms towards the risk attitudes among them will affect their decision to buy life takaful. Additionally, the perception of subjective norms can be influenced by factors such as cultural values and beliefs. For example, in some cultures, it may be seen as socially responsible to have life takaful or insurance coverage to protect oneself and one's family, while in other cultures, self-reliance and independence may be valued more highly, and takaful may be seen as unnecessary or a sign of weakness. Therefore, understanding the subjective norms surrounding takaful or insurance purchases in a particular social network or cultural context can be helpful in designing effective communication strategies to promote insurance uptake and increase financial protection.

Figure 1 presents the proposed theoretical framework based on the Theory of Planned Behavior (TPB), illustrating how attitudes, subjective norms, and perceived behavioral control influence an individual's intention to purchase life takaful. This framework highlights the critical role of subjective norms and risk attitudes in shaping decision-making processes within different cultural contexts. By visualizing

these relationships, the figure supports the conceptual foundation for understanding the factors driving demand for life takaful.

Figure 1 : Proposed Theoretical Framework
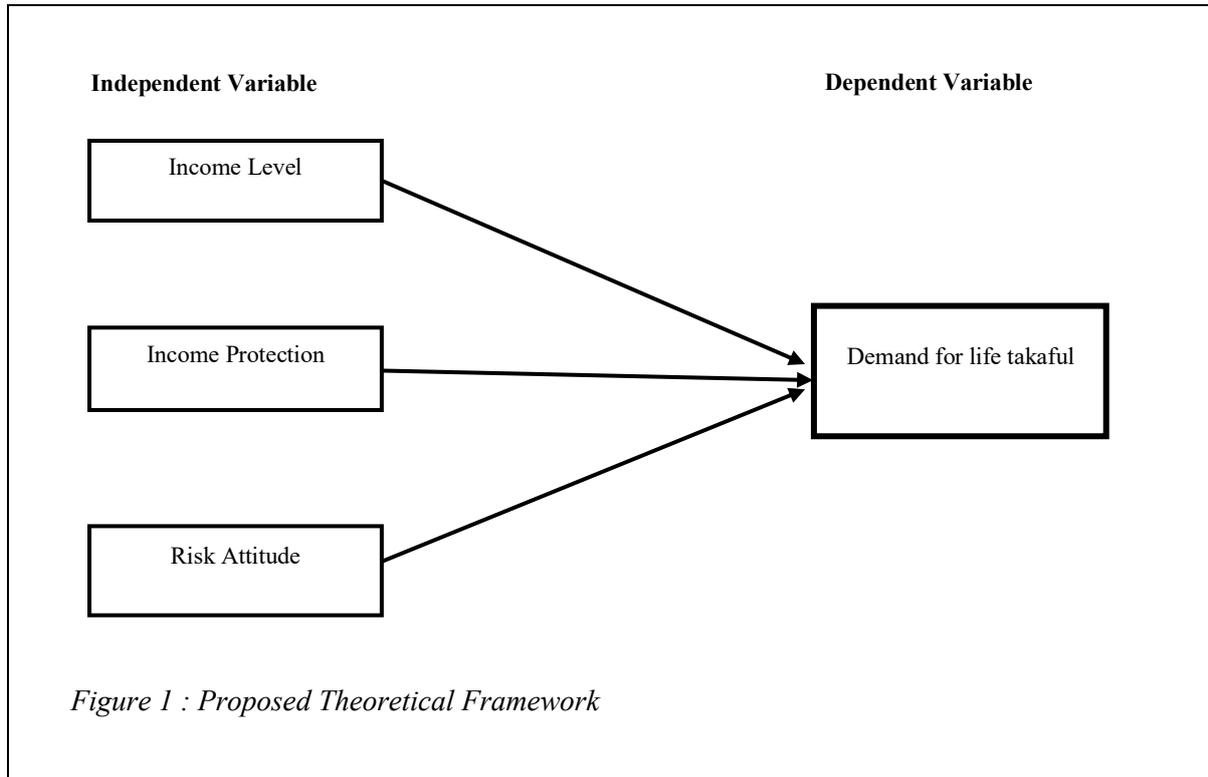
Hypothesis Development

Income level

Enz's (2000) S-curve hypothesis suggests that at higher levels of income per capita, insurance consumption becomes less sensitive to income growth due to insurance product saturation. Wealthier consumers may also be able to retain risks within their existing financial portfolios. According to earlier theoretical studies including Yaari (1965), Hakansson (1969), Fortune (1973), Fischer (1973), and Lewis (1989), there is a positive relationship between income and the demand for life insurance, as individuals seek to protect their dependents from the loss of expected future income in the event death or permanent disability.

H_1: The level of income has a positive effect towards the demand for life takaful in Malaysia.

Income Protection

Chen et al. (2019) found that income protection had a significant factor influencing the demand for life insurance among Chinese households. Another study by Jafari et al. (2019) exposed that income protection was a significant predictor of the demand for life insurance among Iranian households. In the context of takaful, a study by Alam et al. (2019) found that income protection was one of the key factors driving the demand for family takaful products in Pakistan. Another study by Othman et al. (2014) also found that income was a significant predictor of demand for takaful products in Malaysia.

H_1: The need of income protection has positive affect towards the demand for life takaful in Malaysia.

Risk Attitudes

Study by Shafie and Kassim (2017) found that risk attitudes were positively associated with the demand for takaful products in Malaysia. Another study by Jiranyakul and Brahmasrene (2013) found that risk attitudes were significant predictors of insurance demand in Thailand.

H_1: There is a significant positive relationship between risk attitudes and the demand for life takaful in Malaysia.

3.0 METHODOLOGY

For this research, the quantitative method is found fit and appropriate because it attempts to access the relationship between Malaysian's demand for life takaful with three determinants consisting of income level, income protection and risk attitude. The quantitative method involves the analysis of numerical data collected via surveys, polls, or questionnaires. It is in line with Cresswell (2009) who stated that quantitative research is involved collecting, analysing, interpreting, and writing the results of a study. This study employed a survey questionnaire and descriptive research methodology.

Sampling Method

This study focuses on the target population among Muslims in Malaysia due to the involvement of Islamic-based products. According to the Department of Statistics Malaysia, the current population of Malaysia are 32,833,903. Since there is a large number in Malaysia's population, it is impossible to distribute the questionnaire to all Malaysian population. Hence, the samples collected do not reflect the general population concerned and the questionnaire was distributed within Kuala Lumpur. The sample size of 196 is based on the calculation via an online sampling calculator. The number of populations based in Kuala Lumpur is 1,964,517 people. From this number, 42.20% are Muslims which is equivalent to 829,026 people. Then, only 67.3% of the population aged from 15-65 years which is equivalent to 557,935 people. Nevertheless, this research only focuses on 15% of 557,935 people in view that these people are in the group of people that willing to respond to the questionnaire. Furthermore, to arrive at a sample size of 196, the researchers employed the stratified sampling technique. Stratified sampling involves dividing the population into homogeneous groups, or strata, and then selecting a random sample from each stratum. In this study, the population of Kuala Lumpur can be stratified by age group, religion, and other relevant factors (religion) to ensure a representative sample. By using stratified sampling, the researchers can ensure that the sample reflects the characteristics of the population being studied and can generalize about the population with greater confidence.

Research Instrument

For this study, the questionnaire is adopted from previous researches (Benjamin, Foong, Gon, Tan and Tan, 2014) that consists of open and closed-ended questions by sections. The questionnaire consists of six sections where the purpose of the first section is to screen on the respondents' profile that include gender, age, marital status, area of living, highest education, occupation and level of income.

The second section is to assess the general information on takaful among the respondents on life takaful, monthly contribution and other takaful coverage taken. The third until six sections measure how the participants would respond on the purchase of the life takaful affected by their level of income, the need of income protection and the risk attitude. These 4 sections use the psychometric response scale known as 5-point Likert Scale that will shows the level of the agreement of the participants on the statements given in five points; Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5.

Data Analysis

This study utilized the SPSS 27.0 software for quantitative data analysis consisting of descriptive and inferential statistics. Data collected from questionnaire responses were analysed quantitatively using descriptive analysis, Analysis of Variance (ANOVA), Correlation and Regression.

4.0 ANALYSIS AND RESULTS

Descriptive Analysis

The descriptive analysis discusses the examination and presentation of the features and organization of data collected through the distribution of questionnaires during the survey.

Demographic Profile

In this study, there are seven queries related to the demographic information of the participants, which includes their gender, age, marital status, geographic location, educational attainment, employment type, and monthly earnings.

Overall, 121 (46.9%) of responders were female, with just 75 (29.1%) being male. The age group of 25 to 40 years old had the highest percentage of respondents at 111, which represents 43% of the total number of respondents. In contrast, the age group of fewer than 25 years had the lowest response rate at only 1 respondent, which represents 0.4% of the total number of respondents. This indicates that the study may not have effectively reached out to individuals in this age group. Additionally, 28.7% of the respondents fell within the 41-54 age range, with a total of 74 respondents. Finally, only 3.9% of respondents were aged 55 years and above, with a total of 10 respondents. Respondents who were married with children have a larger frequency distribution of marital status at 128 (49.6%), followed by respondents who are single at 44 (17.1%), and respondents who were married without children, at 24 (9.3%). In terms of geographical area, most of the respondents, specifically 167 individuals or 64.7%, were from urban areas, while a smaller proportion of respondents, specifically 29 individuals or 11.2%, were from rural area. As for education level, 165 respondents or 64% of the total graduated from University/College which made up the majority. Those having secondary level qualification came in second with 13 (5%) respondents. The next category which is professional qualification, captured 11 (4.3%) respondents. Meanwhile, those who choose more than 1 option of their education levels came in last with the lowest frequency at 5 (1.9% of respondents). Besides, respondents from private sector had the highest frequency at 141 (54.67%), followed by the government sector at 33 (12.8%). Next in line were the unemployed, businessmen/women, and students, who account for 13 (5%), 8 (3.1%), and 1 (0.4%) of respondents, respectively. Finally, the

demographic findings revealed that the largest single group of participants (55, or 28.1%) had annual household incomes or salaries of at least RM10,000. The lowest category has a total of 16 (8.2%) respondents who earn less than RM3,000. Moreover, 36 (18.4%) and 35 (17.9%) respondents, respectively, reported having a monthly household income/salary between RM3,001 and RM5,000; and RM8,001 and RM10,000. 54 respondents (27.6%) reported having a monthly household income/salary of RM5,001 to RM8,000.

Respondent's Behaviour towards Life Takaful

In regards to the question pertaining to whether respondents were willing to purchase life takaful, the largest group of respondents, totalling 72 (367%), indicated a neutral option. Then, followed by those who agreed, strongly agreed, and disagreed, with 62 (31.6%), 38 (19.4%), and 14 (7.1%) respondents respectively. The lowest response was strongly agreed, with only 10 (5.1%) respondents.

Regarding the question on satisfaction towards their current certificate holding, a large portion of respondents, specifically 73 (37.2%), opted for a neutral response. Conversely, only a small number of respondents, a mere 10 (5.1%), chose to strongly disagree. The rest of the respondents fell into the following categories: 71 (36.2%) agreed, 30 (15.3%) strongly agreed, and 12 (6.1%) disagreed.

In relation to the query regarding the adequacy of the current takaful coverage to meet their demands, a considerable number of respondents, consisting of 77 (39.3%) individuals, selected a neutral response, which was the most common answer. The next two most frequently selected responses were also neutral, with 67 (34.2%) and 8 (4.1%) respondents each. The remaining responses were divided between 32 (16.3%) respondents strongly agreeing with the statement, and 12 (6.1%) respondents disagreeing with it.

Lastly, in regards towards respondents' awareness of the importance of life takaful, the majority, consisting of 76 (38.8%) individuals, agreed with its significance. This was followed by 60 (30.6%) respondents who strongly agreed, and 48 (24.5%) who selected a neutral response. In contrast, both disagree and strongly disagree responses were the least selected, each being chosen by only 6 (3.1%) respondents. This suggests that the respondents recognized the significance of life takaful.

Respondents' General Information on Takaful Purchase

There were 128 (49.6%) and 23 (8.9%) respondents who said they were currently subscribing to life takaful/Insurance. The remaining 13 (5%) respondents, however, do not have any life takaful and would not take it. This indicates that out of a total of 196 responders, 58.5% purchased life takaful/insurance.

Prudential BSN Takaful was the most popular takaful provider among the respondents, selected by 22.5% individuals. On the other hand, Great Eastern Takaful, AIA Takaful, and Takaful Ikhlas were the least popular, each being selected by only 0.4% respondent. Several respondents indicated that they had takaful or insurance coverage from other providers, while there are respondents stated that they had no takaful coverage.

The study's questionnaire was designed to gather information on whether respondents having takaful coverage beyond life takaful, such as medical cards, critical illness coverage, education plans,

savings/investment plans, and life insurance. Most respondents (16.3%) reported having medical card, savings, and critical illness coverage as their current takaful coverage. On the other hand, only a small percentage of respondents (0.4%) reported having hibah, savings, and life insurance coverage. For those who chose the "other" option, a few respondents reported having types of coverage not listed in the survey such as motor insurance, personal accident insurance, or insurance coverage from their employer. Additionally, some respondents indicated that they did not have any takaful coverage.

Out of the 196 respondents, 50% (98) have at least one takaful certificate or insurance coverage. The lowest number of respondents is in the category of those who have three certificates, with a percentage of 8.7% (17) of respondents. Meanwhile, 9.7% (19) and 18.9% (37) of respondents claimed to have more than three and two certificates, respectively. Furthermore, 12.8% (25) of respondents did not have any takaful or insurance coverage. 53 of the respondents paid the takaful provider less than RM1,000 annually which was the highest number recorded. It was found that 19 of the participants paid an annual contribution ranging from RM3,001 to RM4,000. Additionally, 39 of the respondents paid between RM2,001 to RM3,000, 36 paid over RM4,001, and 34 paid between RM1,000 and RM2,000.

Responses on Variables

Income Level on Life Takaful Demand

The statement with the highest mean score and ranking is "Every month I will allocate a portion of my salary/income for life takaful contribution (fee)" with an average score of 3.78. These results suggest that the participants are highly committed to making monthly contributions towards their life takaful plan.

The statement ranked third is "Life takaful is my primary commitment" with a mean score of 3.22 and a ranking of 3. This indicates that the participants somewhat agree that life takaful is a top priority for them. Furthermore, the statement with the lowest mean score and ranking is "My demand on life takaful shall increase once my salary/income increases" with a mean score of 3.10 and ranking 4. This implies that participants are less likely to increase their demand for life takaful as their income increases.

Income Protection on Life Takaful Demand

The statement with the highest mean score and ranking is "I will purchase life takaful in order to safeguard my children's education after I death" with a mean score of 3.75 and ranking 1. This indicates that participants strongly agree that they will purchase life takaful to ensure their children's education is secured in the event of their death.

The statement with the second-highest mean score and ranking is "In my view, the critical design element of the life takaful is the guaranteed death benefits" with a mean score of 3.69 and ranking 2. This suggests that participants value the guaranteed death benefit offered by life takaful plans as a crucial design element. The statement with the equal second-highest mean score and ranking is "I think I will purchase takaful to avoid out of pocket health expenses" with a mean score of 3.69 and

ranking 2. This indicates that participants somewhat agree that they may purchase life takaful to protect themselves from out-of-pocket health expenses.

According to the survey results, the statement with the third highest mean score and ranking is "I buy life takaful as I have a pending mortgage, and the takaful will settle it in the event of my death." With a mean score of 3.45 and a ranking of 3, this indicates that the respondents somewhat concur that they would opt for life takaful to guarantee the payment of their mortgage in the unfortunate event of their demise. Finally, the statement with the lowest mean score and ranking is "I am a breadwinner in the family" with a mean score of 3.23 and ranking 4. This indicates that participants are somewhat less likely to agree that they are the sole breadwinner in their family.

Risk Attitude Towards Life Takaful Demand

The results suggest that among the respondents, the average level of agreement with the statement "I am a risk taker person" is moderate, with a mean score of 3.23 and a ranking of 5 out of 5. On the other hand, the respondents generally agreed that life takaful provides financial safety, with a mean score of 3.66 and a ranking of 1 out of 5, indicating that this is the most important factor that influences their decision to purchase takaful.

The previous experience of sickness and the presence of others who have purchased life takaful were also significant factors that drive respondents to purchase life takaful, with mean scores of 3.54 and 3.60, respectively, and rankings of 3 and 2 out of 5. Meanwhile, the demand for life takaful may also be influenced by respondents' current occupation, as suggested by the mean score of 3.47 and a ranking of 4 out of 5. Overall, these results provide further understanding into the factors that influence consumers' decisions to purchase life takaful.

Inferential Statistics

Pearson Correlation Analysis

Table 1

Pearson Correlation Analysis

		Income Level	Income Protection	Risk Attitudes
Income Level	Pearson Correlation	1	.180*	.430**
	Sig. (2-tailed)		0.012	0.000
	N	196	196	196
Income Protection	Pearson Correlation	.180*	1	.373**
	Sig. (2-tailed)	0.012		0.000
	N	196	196	196
Risk Attitudes	Pearson Correlation	.430**	.373**	1
	Sig. (2-tailed)	0.000	0.000	
	N	196	196	196

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 1 shows the results of Pearson correlations between three variables: Income Level, Income Protection, and Risk Attitudes. The table displays the correlation coefficient (Pearson Correlation) between each pair of variables, along with the significance level (Sig.) at both the 0.05 and 0.01 levels. The results suggest that there is a positive and significant correlation between Income Level and Income Protection ($r = 0.180$, $p < 0.05$), as well as between Income Protection and Risk Attitudes ($r = 0.373$, $p < 0.01$). Furthermore, there is a strong and significant positive correlation between Risk Attitudes and Income Level ($r = 0.430$, $p < 0.01$). Overall, these findings suggest that there is a relationship between these variables, with higher income levels and greater income protection being associated with more risk-taking attitudes.

Regression Analysis

Table 2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.749[a]	0.561	0.554	0.656	0.561	81.830	3	192	0.000

Table 2 is the model summary table that provides information about all independent variables considered fit the regression model. The first row of the table shows the values of the coefficient of determination (R-squared) and the multiple correlation coefficient (R) for the model. R-squared indicates the proportion of the variance in the dependent variable (demand for life takaful) that can be explained by the independent variables (predictors) included in the model. In this case, the R-squared is 0.561, which means that the three independent variables (Risk Attitudes, Income Protection, and Income Level) included in the model can explain 56.1% of the variance in the dependent variable.

The second row of the table shows the adjusted R-squared value, which adjusts the R-squared value for the number of predictors in the model. This value considers the fact that adding more predictors to the model will generally increase the R-squared value, even if the added predictors have only a small effect on the dependent variable. In this case, the adjusted R-squared is 0.554, which is slightly lower than the R-squared value, indicating that the inclusion of the three independent variables has not substantially increased the explanatory power of the model.

The third row of the table provides the standard error of the estimate, which is a measure of the average amount by which the actual values of the dependent variable differ from the predicted values. The change statistics table shows the contribution of each independent variable to the overall R-squared value. In this case, the R-squared change column shows the increase in the R-squared value that results from adding each predictor to the model, while holding the other predictors constant. The F-change column shows the statistical significance of the increase in R-squared value associated with adding each predictor, based on the F-distribution. In this case, all three predictors have a statistically significant effect on the dependent variable, with p-values of 0.000 (i.e., $p < 0.05$).

ANOVA

Table 3

ANOVA

ANOVA
Demand for Life Takaful

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	87.988	4	21.997	42.009	0.000
Within Groups	100.012	191	0.524		
Total	188.000	195			

Table 3 indicates the one-way ANOVA analysis on the demand for Life Takaful, which measures the variation of the means of five groups. The "Between Groups" column displays the sum of squares, degrees of freedom (df), mean square, F-value, and significance level (Sig.) for the differences between the group means. The sum of squares measures the deviation of each group mean from the grand mean, while the degrees of freedom is the number of groups minus one. The mean square is the sum of squares divided by the degrees of freedom, and F-value is the ratio of the mean square of the between-group variation to the mean square of the within-group variation. The F-value of 42.009 is significant at $p < 0.001$, indicating that there is a significant difference between at least two of the five groups in terms of their demand for Life Takaful. The "Within Groups" column displays the sum of squares and degrees of freedom for the differences within each group. The "Total" row represents the overall sum of squares and degrees of freedom for the entire dataset.

Coefficients

Table 4

Coefficients

		Coefficients[a]				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.863	0.205		4.198	0.000
	Income Level	0.427	0.044	0.517	9.762	0.000
	Income Protection	-0.032	0.043	-0.038	-0.736	0.462
	Risk Attitudes	0.394	0.059	0.377	6.710	0.000

a. Dependent Variable: Demand for Life Takaful

Table 4 shows the coefficients for a multiple regression model with the dependent variable "Demand for Life Takaful" and three independent variables: "Income Level," "Income Protection," and "Risk Attitudes." The "Unstandardized Coefficients" column shows the raw regression coefficients for each independent variable. The "B" column represents the regression coefficient, while the "Std. Error" column represents the standard error of the coefficient estimate. The "Standardized Coefficients" column shows the standardized regression coefficients, or betas, which allow for comparison of the relative strength of the effects of each independent variable on the dependent variable. The "t" column shows the t-value for each independent variable, which tests the null hypothesis that the true population coefficient is zero. The "Sig." column shows the corresponding p-value for each

independent variable. From the table, we can see that income level (B = 0.427, p < 0.001), and risk attitudes (B = 0.394, p < 0.001) have statistically significant positive effects on demand for life takaful, while income protection (B = -0.032, p = 0.462) does not have a significant effect on demand for life takaful.

From the table above, the equation below can be form;

Simple Linear Regression: Y = a + bX + u

Demand for Life Takaful = 0.863 + (0.427 x Income Level) - (0.032 x Income Protection) + (0.394 x Risk Attitudes)

whereby:

Y = Dependent Variable

X = Independent Variable

a = Intercept

b = Slope

u = Residual.

This equation shows the relationship between the demand for life takaful and the three independent variables: income level, income protection, and risk attitudes. The constant term (0.863) represents the expected demand for life takaful when all independent variables are zero. The coefficients for each independent variable indicate the expected change in the demand for life takaful associated with a one-unit increase in that variable, holding the other variables constant. For example, holding income protection and risk attitudes constant, a one-unit increase in income level is associated with a 0.427 unit increase in the demand for life takaful. Similarly, holding income level and risk attitudes constant, a one-unit increase in income protection is associated with a 0.032 unit decrease in the demand for life takaful. Finally, holding income level and income protection constant, a one-unit increase in risk attitudes is associated with a 0.394 unit increase in the demand for life takaful.

Limitations and Potential Confounding Factors

While the findings of this study provide valuable insights into the demand for life takaful, there are several limitations and potential confounding factors that should be acknowledged. First, the sample demographic showed an underrepresentation of respondents under 25 years old (only 0.4%), which may limit the generalizability of the results to younger populations who might have different attitudes towards life takaful. Second, the reliance on self-reported data through questionnaires may introduce response bias, where participants might overstate or understate their true behaviors or intentions regarding takaful purchase. Third, the cross-sectional design of the study limits the ability to infer causal relationships between variables; longitudinal data would be necessary to observe changes over time and establish causality.

Furthermore, confounding factors such as socio-economic status, cultural beliefs, and financial literacy were not deeply explored in this study but may significantly impact respondents' demand and perception of life takaful. For example, individuals with higher financial literacy might be more inclined to appreciate the benefits of takaful, independent of income level or risk attitude. Additionally, external factors such as recent economic fluctuations or public awareness campaigns about takaful could have influenced respondents' attitudes during the data collection period. Addressing these limitations in future research could improve the robustness and applicability of the findings.

5.0 CONCLUSION

The findings of this study suggest that risk attitude and income level are the crucial factors that determine Malaysia's demand for life takaful. Based on the correlation analysis and regression analysis, the significant difference between at least two of the three groups in terms of their demand for life takaful suggests that there are different factors influencing the demand for life takaful among these groups. Understanding these factors can help managers in the insurance industry to develop targeted marketing strategies that are tailored to the specific needs and preferences of each group.

In addition, the regression analysis provides valuable understanding for companies that offer life takaful in terms of understanding the factors that influence customers' demand for their products. For example, the analysis suggests that customers with higher risk attitudes are also more likely to demand life takaful. Therefore, companies can design marketing campaigns and products that appeal to customers who are more risk-averse, and emphasize the benefits of life takaful in protecting their financial well-being.

However, although more study is required to confirm the link between income protection and the demand for life takaful, the variable for income protection does not exhibit the anticipated positive sign. Also, this study has limitations that should be addressed by other research, which may draw on ideas or other strategies. Therefore, future studies could consider conducting research across the country to ensure more precise and accurate results, as this study was only conducted in Kuala Lumpur. Furthermore, the sample size for this study was limited to 196 participants. To obtain more reliable and accurate conclusions, future researchers may consider increasing the sample size. It is also recommended that the questionnaire be distributed not only through telephone and internet surveys but also through face-to-face interactions to reach a wider range of participants. A research study with a larger sample size can be considered more comprehensive. Moreover, it is advised to have multiple versions rather than just the English version. This is because conducting surveys with people of diverse races can be easier if the questions use their native language. Lastly, future researchers can consider additional factors that could affect the demand for takaful. These include the awareness or knowledge level towards life takaful, the service factor from the takaful operators or the takaful agents, and the takaful operators' stability in order to better comprehend this issue.

6.0 ACKNOWLEDGMENT

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