# FACTORS AFFECTING INDIVIDUAL LIFE INSURANCE OWNERSHIP, A STUDY OF PENANG RESIDENTS

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# FACTORS AFFECTING INDIVIDUAL LIFE INSURANCE OWNERSHIP, A STUDY OF PENANG RESIDENTS

by

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*Specially dedicated to:*

*My beloved wife, Oh Saw Yong and our daughter, Hui Ying.*

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# ABSTRAK


Kajian ini meninjau bagaimana umur, pendapatan, jantina, bangsa, persepsi terhadap faedah insuran hayat dan pandangan terhadap risiko persendirian mempengaruhi pemilikan insuran hayat. Perhubungan di antara tahap pendidikan dengan persepsi terhadap faedah insuran hayat juga diuji. Kaedah persampelan mudah telah digunakan dan sebanyak 247 calon dari seluruh Pulau Pinang telah menyertai kajian ini.

Hasil empirik dari kajian ini menunjukkan bahawa lelaki, ethnik bukan Melayu, gulungan pendapatan tinggi dan mereka yang berumur melebihi 35 tahun memiliki insuran hayat yang lebih banyak. Di samping itu, persepsi terhadap faedah insuran hayat and pandangan terhadap risiko persendirian juga mempengaruhi tahap pemilikan insuran hayat. Tambahan pula, tahap pendidikan juga didapati mempengaruhi persepsi terhadap faedah insurance hayat.

# ABSTRACT

This study examines how age, income, gender, ethnicity, perception of life insurance benefits and attitude towards personal risk affects the individual life insurance ownership. The relationship between education level with the perception of life insurance benefits was also studied. The convenient sampling method was deployed and 247 respondents around the Penang Island responded.

The findings of this study provides empirical evidence that male, non-Malay, higher income group and those age above thirty five years old own significantly higher life insurance. The perception of life insurance benefits and attitude towards personal risk were also found to be affecting the magnitude of life insurance ownership. In addition, the education level was found to be affecting individual perception of life insurance benefits.

# Chapter 1

# INTRODUCTION

## 1.0 Introduction

Insurance is one of the most interesting and important transactions engaged in by individual and business firms. Almost every aspect of the transaction is of sufficient interest for review and thought. As defined by Dorfman (1987), " Legally, insurance is a contractual arrangement one party agrees to compensate another party for losses." The party agreeing to pay the losses is called the insurer while the party who will receive the payment for a loss is called the insured. The payment the insurer receives is called a premium and the insurance contract is termed as policy. Specifically, life insurance may be defined as one " who secures the payment of an agreed sum of money on the happening of contingency or of a variety of contingencies, dependent on a human life" (Huam, 1999).

According to Rispler (1985), marine insurance is believed to be the first type of insurance known to world civilization. The earliest life insurance policy of which any known record exists was dated back in June 18, 1583 in England. It provided the insurance upon the life of William Gybbons for a period of 12 months from the date of underwriting (Beadles, 1973).

The basic principle of life insurance is that human life has an economic value. This value is closely associated to the individual's ability to generate financial income. The purchase of life insurance, in general, is aimed towards providing financial security against premature death, disability, forced retirement, and one exhausting financial assets. However, life insurance should not be purchased of indemnity for this economic value. It should be purchased to meet specific needs that could not be covered by other assets if death were to occur immediately. Two distinctive elements that form the foundation of life insurance are the human life value definition and the established mortality table. The human life value may be defined quantitatively as the capitalized value of net future earning of an individual. It plays important roles in the compensation analysis in the event of wrongful death lawsuits. On the other hand, the mortality table is the bridge that closes the gap between the sum insured and the amount of premium required. This cross-reference set a standard for the life insurance industry and avoided the subjective and discretionary judgement to premium versus sums insured relationship. The earliest mortality table was compiled in 1693 by Hally. In those early years, the inferior natural premium system was commonly used. (Huam,1999) The level premium system, an improved version to calculate the premium rate was conceptualized and deployed to the field in 1755. (Lee, 1987) This system was further refined through historical data analysis of insured and the mathematical techniques, resulting in a more accurate relationship.

The Equitable Society will issue the life insurance policies based on the following principles:

- Coverage is available to anyone who satisfied the initial health requirements and continues to pay the contractual premium.
- Once accepted for insurance, further proof of continuing good health is not required.
- Level premium is determined at entry and must be paid through the term of contract.
- Extra premium is chargeable for special occupational and substandard health risks.

## 1.1 The Development of Life Insurance Industry in Malaysia

The life insurance business was first introduced to Malaysia during the 18th. Century. The British East India Company and their merchants were responsible for sowing the insurance seed in Malaysia. Initially, this facility was owned and managed by the British to protect their merchandise. There was negligible local participant due to ignorance and lack of expertise (Huam, 1999). The actual wave that hits Malaysia began back in late 1940s and early 1950s, after the World War II. Dominated both by the British and American through their locally incorporated wings. By 1999, there were 48 foreign branches operating in Malaysia. Pressured by the nationalistic sentiments and the Government requirement, the 48 foreign insurers have restructured to become 37 locally incorporated Malaysia insurers (BNM, 1999). In the last two decades, there has been some fundamental changes in the landscape of The Malaysian insurance industry, a few notable one are listed below:

- 48 foreign branches of insurers have restructured to become 37 locally incorporated Malaysian insurers.
- The legislative framework revamped with the enactment of Insurance Act 1996, which substantially strengthened the regulatory regime in Malaysia. The key highlights were the reinstatement of the higher capital and solvency margin requirements for insurance companies.
- A true Islamic insurance or Takaful was introduced to the Malaysian community in 1984.
- The admission of foreign reinsures in 1993.
- The underwriting agencies and representative offices were phased out in 1991 and 1993 respectively to promote greater commitment and professionalism.
- With the advent of bancassurance, cross selling of financial products has proliferated in the financial institutions.

- In line with the advancement of e-Technology, e-commerce in the marketing strategies and operating procedure has begun to revolutionize the insurance industry.

In his speech on 20th August 1999 during the 1999 Malaysia Insurance Institute Annual dinner, the Minister of Finance II has posted the following comments and advice:

- The industry remains fragmented in all sectors, not very different structurally from the landscape ten years ago. Also noted was the domestic institutions are still lagging behind their foreign counterparts in terms of efficiency, productivity, innovation, customer service as well as market reach.
- The industry was urged to make corresponding intrinsic changes in response to external forces. It must strengthen itself financially, strategically and competitively.
- Malaysia insurance industry is intrinsically small but sound. A consolidation will definitely benefit it. This is not an option and must be done urgently!
- The industry cannot and should not be sheltered indefinitely by the government. It must enhance competitiveness and compete in the global arena.
- Consolidation for financial strength should be the primary strategy for the future growth of the life insurance industry. Insurers, brokers and adjusters were asked to refocus their energies and resources on achieving the critical success factors that can make or break their business.
- Knowledge is the most important commodity in a service-based insurance industry. A structured industry-wide training is vital in the competitive environment of the 21st century.

- The industry must also continue to improve its public image. It should embrace itself in the wave of technology and intellectual property advancement to ensure future success.

## 1.2 Research Problem

In line with the strong economic growth in the 1990s, the Malaysia life insurance industry has been growing at an accelerated pace, achieving double digit growth rate from 1994 onwards. The total Whole Life Insurance Premium Paid increased from RM 1,576.7 million in 1990 to RM 6,201.2 million in 1998, almost four times. In parallel the number of registered Life Insurance agents have also increased from 37,373 to 88,764 for the corresponding period. ("Malaysian Life Insurance Key Indicators Chart", Jan. 14th.2000. Life Insurance Association of Malaysia [LIAM, http://www.liam.org.my] ). However the Asian financial crisis which erupted in 1997/98 had adversely affected the financial sector. The life insurance industry has shown signs of slowdown. It recorded a combined premium income of RM 5.2 billion for the first half of 1998, a marginal increase of 3.4% compared with 19.3% for the comparable period in 1997. For the first nine months of 1998, both new premium and new sums insured of life insurance business decreased by 11.8% and 9.4% respectively. All categories of policies registered negative growth in new business premiums. (Bank Negara Malaysia, 1998) The life insurance companies were asked to control commission and management expenses in order to maintain the underwriting margin. At the same time, the lucrative income from the insurance industry has attracted a lot of talented professionals to join the force and created intense competition amongst the agents. Securing a Life Insurance Policy is not as simple anymore and the cost incurred has risen from year to year (Press, 1997).

In view of the crucial and competitive market environment in the life insurance industry, it is timely to carry out this research that studies the relationship between demographic factors, attitude towards personal risks and life insurance benefits and see how they affect the individual life insurance ownership in Penang. The conclusion generated from this study, in addition to the traditional underwriting criteria, can be used to segment, target, promote and develop the markets with greater precision resulting in higher efficiency and lower cost per policy.

## 1.3 Research Objectives

The objective of this study is to determine how demography, perception of life insurance benefits and attitude towards personal risk affect the magnitude of consumers' life insurance ownership. This research also aimed to establish the relationship between education level with the perception of life insurance benefits. The results from this study will be able to identify a set of demographic factors, how perceptions of life insurance benefits and attitude towards personal risk affect individual life insurance ownership. Besides, the way education level affects individual perception of life insurance benefits will also be discovered. This information can be used by the life insurance companies to segment, target, promote and develop their overall market with greater precision resulting in higher efficiency.

## 1.4 Significance of Study

The outcome of this study will be able to offer some insights into the demographic factors affecting Penang residents' life insurance ownership. This information can help the insurers to segment, target, develop, and promote their market resulting in a higher growth and efficiency. Also, assuming there is a positive relationship between the attitude towards personal risks and life insurance benefits with individual life insurance ownership, the information can be used to promote potential market through training and awareness campaign. In short, this research is hoped to generate some beneficial findings that will add value to the Malaysia Life Insurance Industries.

## 1.5 Research Scope

This study is to be carried out within Penang Island only. It will only cover the demographic factors, attitude towards personal risks and perception of life insurance benefits as the factors affecting individual life insurance ownership. Other unknown factors that may potentially impact one's life insurance ownership will not be discussed as this study is strictly based on evidence surfaced during literature review.

## Chapter 2

## LITERATURE REVIEW

Searches on factors affecting individual life insurance ownership in The Malaysia context have provided very little insight, both conceptually and empirically. Only a limited published and unpublished materials were discovered in this subject. However, there were quite a number of published and unpublished papers available outside the country.

In reviewing the literature, this chapter will concentrate on the definitions and dimensions of individual life insurance ownership. In addition, the factors affecting their ownership will also be reviewed.

### 2.0 Individual Life Insurance Ownership

#### *2.0.1 Definition of Individual Life Insurance Ownership*

In the field of life insurance marketing and research, the life insurance ownership could be one of the most prominent criterion variables. The construct is perhaps even more significant and important in the sales and marketing sector, given that its' magnitude is a direct indication of the agent's performance.

#### *2.0.2 Dimensions of Individual Life Insurance Ownership*

There are many dimensions in which the individual life insurance ownership can be measured. The amount of cash benefits purchased upon maturity, death and disability, the number of policies in force and the absolute amount of annual premium paid are three of the more common ones. Gandolfi and Miners (1996) in their research in gender-based differences in life insurance ownership used the benefits purchased in their research. Lim (1996) has used annual life insurance premiums collected in the previous year and persistency ratio obtained by the insurance agents as the dimensions of the performance of life insurance agents, this has a direct correlation with the ownership. Huam (1999) used the first year premium collected in accounting year 1998 in his study to determine factors influencing life insurance agents' job performance. Biggs (1983) used the percentage of each year's income as ownership in his study for the demand for life insurance in the American society. In this study, the annual life insurance premium paid by each individual is the definition of their ownership.

## 2.1 Factors Affecting Individual Life Insurance Ownership

The life insurance sales forces have always tried to understand the various factors that affect individual life insurance ownership. In response to this interest, individual researchers and prominent life insurance research association such as LIFE INSURANCE MARKETING RESEARCH ASSOCIATION (LIMRA) have examined the many possible determinants of individual life insurance ownership.

In general, these studies have provided some generic insights for the reason of purchases, especially from the social economic and demographic angle. In addition, the perception of life insurance benefits and attitude towards personal risks are believed to be impacting the ownership of life insurance.

### *2.1.1 The Demographic Factors*

With the demographic change of an aging population, growing longevity, increased literacy and education level that promotes awareness, higher per capita income, changing marriage profile and number of dependant, increase in working women population and other cultural evolution in Malaysia, the demand for life insurance is going to change significantly. The demographic factors will certainly play a crucial role in determining the shift in life insurance ownership in Penang. This has been evident in most of the developed countries, particularly in the United States of America. (U.S.A.)

LIMRA and Life Insurance Association Malaysia (LIAM) joint study on "Consumers' Attitude and Their Buying Habit Survey" carried out in September 1996 found out that the Chinese possess the highest percentage of life insurance in Malaysia, follow by Indian and Malay in descending order.

In their study on "Gender-Based Differences in Life Insurance Ownership", (Gandolfi and Miners, 1996) have indicated that there are meaningful differences between husbands and wives in their demand for life insurance functions. Although money income is the most significant determinant of life insurance holdings for both husbands and wives, there is evidence that contributions to household production also influence the purchase of life insurance. Their empirical results showed that full-time working wives in The U.S.A. had 48 percent as much life insurance as their husbands and nonworking wives had 15 percent as much.

Lewis's (1989) study of life insurance demand revealed that "a breadwinner's demand for life insurance depends on the demographic structure of his or her household". Lewis also extended Yaari's (1965) life-cycle model with uncertain lifetime where a consumer purchases life insurance to increase his expected lifetime utility. His empirical analysis finds household income and number of children to be positively related to life insurance ownership of the husband and also finds ages of the offspring to be important. According to the results obtained from the estimation of various models using the premium expenditure measure, Kim (1992) concluded that household income is one of the three factor variables that affect social and life insurance demand.

Retzloff (1993) in his study on "Trends in U.S. life insurance ownership" conducted jointly with the American Council of Life Insurance (ACLI) and the Million Dollar Round Table (MDRT) discovered that young singles (never-married), young couples, and young parents account for 44 percent of the total U.S.A. life insurance market. Their need for and likelihood of having life insurance also varies by lifestage. Young singles are less likely than other young households to have any life insurance coverage. While the gap between the likelihood of men and women having coverage continues to narrow, women are still less likely than men to have either individual or group coverage.

Burnett and Palmer (1984) find that "owners of large amounts of life insurance are better educated and have larger families". Truett (1990) found that age, education, and level of income are factors that affect the demand for life insurance". Sheehan's (1997) analysis suggested two consumer characteristics: gender and household income, and two behaviors: seeking information and using cost-related information, as impacting consumer knowledge that leads to Life Insurance purchase. Harby (1985) concluded that the most important explanatory variable for the amount of life insurance purchased is current income.

Rispler (1986) mentioned that Muslim religious scholars are still continuing to debate whether Islam and insurance can coexist. Saleh (1996) and Azmi (1997) suggested that the prohibition of conventional life insurance in the Muslim community could be due to "Riba" and "Gharar" which represent "Unjustified profit" and "Uncertainty of counter value". This can pose a significant difference in life insurance ownership among Muslim and Non-Muslim.

In a study using ordinary least squares, Ferber and Lee (1980) stated that the life insurance purchase decision is influenced by home ownership, and by the husband's education. In discussing a household's intensity for bequests, which is positively related to its demand for life insurance, Campbell (1980) says that this intensity "is likely to be a function of the age and number of dependents in the household [and] their future need of economic support".

Goldsmith (1983) does take the wife's human capital accumulation into account in determining purchases of life insurance on the husband. He included the wife's labor force participation and her education level, as well as the impact of household size on term life insurance purchases on the husband. Daily (1994) in his study on "The Demand for Life Insurance in Mexico and the United States" concluded that age, education and level of income affect the demand for life insurance in Mexico and the U.S.A. He also mentioned that income elasticity of demand for life insurance is much higher in Mexico than in the U.S.A.

### *2.1.2 The Perceptions of Life Insurance Benefits*

According to the definition of Oxford Advanced Learner's Dictionary of Current English edited by Crowther (1998), "Perception is a way of seeing, understanding or interpreting something". In this study, the perception of life insurance benefits means the way the respondents interpret and agree to the stipulated benefits that include financial protection against disability to work, saving, investment return, retirement funding, medical expenses coverage, children's educational funding, social status projection and the way to express love to family members.

Three broad categories for the use of life insurance are protection, financing and investment. Death, disability, health problems, or casualties can drastically reduce or eliminate earning power. Taxes and other bills can become so great that those personal assets and employed capital may have to be liquidated to the extent an individual may never recover from its financial effects. Hence Life insurance can be an extremely important component of one's financial planning. The amount purchased should be adequate to fund a readjustment period of several years for surviving dependants if the principal breadwinner dies. In view of the many prevailing advantages, consumers' perception of life insurance benefits will definitely play a vital role in deciding life insurance ownership.

LIMRA & LIAM (1996) joint study on " Consumers' Attitude and Their Buying Habit Survey" revealed that, in general most Malaysian believe that life insurance is of good value and a good form of long term savings. They also agreed that people should have life insurance if they can afford it. ACLI (1993) studies show that fewer consumers today feel that most people should have life coverage and fewer think that life insurance is the best way to financially protect one's family against the death of the breadwinner. This decline in the proportion of the public rating life insurance as necessary and as the best protection vehicle has occurred because more people say it is unnecessary or inappropriate. This is a clear indication that perception towards life insurance benefits will determine the need to have it.

Retzloff (1993) revealed that young parents were especially interested in developing a plan to save money for their children's education. They are also more interested in disability income plans. In his study on " A means to fund college costs", Kistner (1996) found out that cash-value life insurance policy is a good way to fund children's college tuition cost and it has attracted a lot of clients, especially the young married couple with kids. Michael E. Callahan (1995), President-elect of the American Society of Pension Actuaries suggested life insurance could be used in many ways to assist in solving business problems related to retirement issues. This factor alone is believed to have attracted a vast number of policy owners in the U.S.A.

Barney (1999) revealed that "With the demographic change of an aging population, growing longevity and a move from defined benefit plans to defined contribution plans, there's a lot of concern about retirement". This has made the living benefits an attractive feature in the list of life insurance benefits. People don't have to wait until their death or disability to withdraw their benefits. Scott (1995) noted that life insurance can be an extremely important component of one's financial planning. Life insurance is an excellent investment that buys time needed to build wealth and to earn cash reserves. A permanent life insurance policy can be one way to diversify a portion of a family's wealth. Life insurance can be owned outside the taxable estate, which offers a tremendous financial benefit.

Screws (1994) in his article, "Life insurance and the power of Love" shared with the American public how he was able to live through and see his quadruplets born, six months before he dies of cancer. His life insurance also helped to bring up his babies. Daily (1992) in his article, "Life Insurance Sense and Nonsense" believed that three broad categories for the use of life insurance are protection, financing, and investment. Owens (1999) quoted that nothing can reduce the emotional loss of a person's untimely death, having one's life adequately insured can reduce the risk of financial loss. Barry and Poynter (1998) suggested that life insurance can be used to cover disability, sickness or injury, retirement as well as premature death.

According to the excerpted book Talking Dollars Making Sense, by Brooke Stephens (1997), "If African Americans are going to build firm financial foundations for their families, a life insurance policy is the best way to prevent financial ruin for a succeeding generation". Shoemaker (1999) found that many Americans also invest in variable annuities in life insurance to supplement their retirement income.

"We protect ourselves against dying but not against losing our greatest asset -- our earning potential. To put it bluntly, when you die, you no longer have expenses. When you're disabled, you still have living expenses, now compounded by medical expenses. You've got rent or a mortgage to pay, food, car, utilities, and perhaps your children's college tuition." Quoted Lacerte (1999) in his article titled " Disability coverage becomes a more important benefit"

These various perceived life insurance benefits are believed to be the major driving force towards the growing life insurance market in the world. With no exception, Penang is expected to experience the same wave in her journey to growing life insurance business. Also, during my literature search, there isn't a known study that directly relates the individual perception towards life insurance benefits and their life insurance ownership. With the assumption that many people purchase life insurance based on the benefits stipulated above, I believe that there should be a relationship between their perception of life insurance benefits with the magnitude of their life insurance ownership.

*2.1.3 The Attitude Towards Individual Personal Risk*

Attitude is defined as " A way of thinking about or behaving towards something" by the same dictionary quoted in section 2.1.2. In this study, it is interpreted as the way the respondents think about how risky they are in relation to all the personal risks. The concept of "risk" became popular in the field of economics in the 1920s (Knight, 1921). Since then, it has been successfully used in the theories of decision making in economics, finance and decision science. Bauer (1960) introduced the concept of "perceived risk" to the marketing literature and then the psychologist Kogan and Wallach (1964) wrote their major work on risk taking. Dowling & Staelin (1994) defined risk as the uncertainty on the consequences of a decision or action. Miller & Baumwald (1987) defined the personal risk as the possibility that an individual will not achieve financial goals for one of the following reasons, i.e. Death, disability, health problems and casualties.

The study of risk perception, particularly its relationship with decision making, is dominated by the work of the Oregon Decision Research Group led by Slovic, Fischoff and Lichtenstein. While this work, known as the "psychometric tradition" is concerned with decision making, it is largely concerned with the public's viewpoint, rather than that of managers - although managers are in effect part of the public. As such the work has generated an impressive body of data on individuals' perceptions, which describes people's judgement of hazards and their risks based on subtle and complex relationships between multiple qualitative dimensions. The work has so far failed to produce progress towards a theoretical explanation of risk perceptions. (Smallman, 1996)

As pointed out by Resnick (1998), life insurance is purchased for the purpose of transferring risk. Hence, there is a tendency for an individual to acquire higher life insurance coverage, ceteris paribus if he perceives himself exposed to high personal risk.

Vaughan and Elliott (1978) established that the probability a risk may or may not occur is less important and the financial burden it would impose. Hence, the commitment towards life insurance premium should be directly related to one's economic value and not depend on the risk perceptions. Kletz (1996) suggested that the probability of an incident is, of course, one of the factors that the public takes into account, but it is not the only one, and in addition the public's knowledge of the relative size of different risks is often far removed from their actual sizes. Risk behavior is conceptualized as an individual's decision-making behavior in risky contexts, and may be characterized by the degree of risk associated with the decisions made (Sitkin and Pablo, 1992). They also observed that a number of theoretical perspectives relied on the view that risk behavior is ultimately determined by the label attached to a risky situation. In turn, the level of risk associated to each situation is often a direct output of one's perception.

A comprehensive literature search found no study has ever been performed to establish the relationship between individual attitude towards personal risks with their life insurance ownership. However, based on the literature review, it was evident that these two variables are closely linked. The empirical findings on their relationship will be able to help the life insurance agents to strategize and promote their market.

# Chapter 3

## RESEARCH FRAMEWORK AND METHODOLOGY

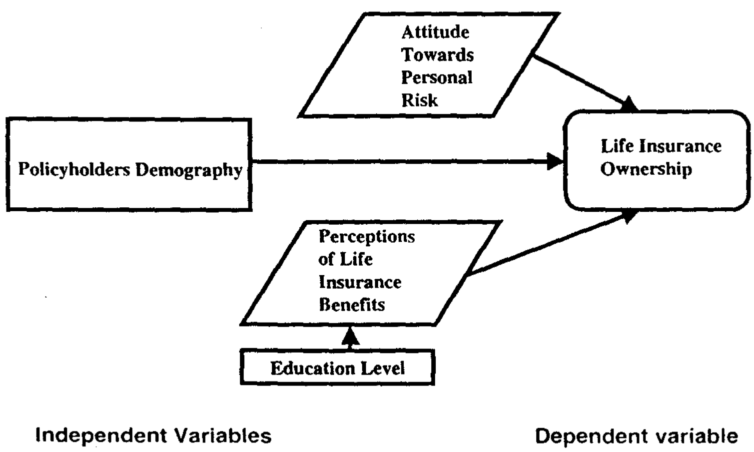
The entire research framework, definition of variables, development of hypotheses, research design, questionnaire administration and data collection method will be discussed in this chapter.

### 3.0 Research Framework

This study attempts to investigate the impact of demography, perception of life insurance benefits and attitude towards personal risks on individual life insurance ownership. The impact of education level on the perception of life insurance benefits will also be examined. A model was developed for further illustration on the relationship between the dependent and the independent variables (Figure 3.1). As shown, the dependent variable is life insurance ownership that measured the amount of annual life insurance premium paid, while the independent variables are depicted as attitude toward personal risks, demography (Age, gender, income and ethnicity). The education level is also depicted to be affecting the perception of life insurance benefits.

The schematic diagram of the research model is shown in Figure 3.1

**Figure 3.1: Research Model**



Based on the literature review described in chapter 2, the above research model is established. It will form the core structure for the entire study. In addition, the effect of education level on perception of life insurance benefits will also be studied.

## 3.1 Definition of Variables

### *3.1.1 Individual Life Insurance Ownership*

This is the dependent variable. It is defined as the total amount of annual life insurance premium paid by the respondent. The annual premium paid was deliberately designed in the categorical format to ease response and maintain respondents' confidentiality.

### *3.1.2 The demographic variables*

Based on the literature review, gender, ethnicity, age and gross monthly income were conceptualized and believed to be relevant.

### *3.1.3 The perception of life insurance benefits*

The intention to adopt and modify existing questionnaire for this category failed when the comprehensive literature review failed to find one. Hence, oral interviews with four insurance agents, three agency supervisors, three agency managers and ten MBA students was conducted to conceptualize how people perceive life insurance benefits. Those valuable inputs were then validated through extensive literature review. Protection, saving, financial return, retirement, major illness funding, children education fund, social status and love expression to family were identified to be the major benefits of life insurance. These constructs were then measured through questionnaire using a 7-point scale rating from strongly disagree to strongly agree.

### *3.1.4 The Attitude Towards Personal Risks*

The constructs of personal risks were conceptualized based primarily on the study of Wood, Lilly, Malecki and Rosenbloom (1984) titled "Personal Risk Management and Insurance". The same interview conducted to assess the perception of life insurance benefits was repeated for the attitude towards personal risks. Vaughan and Elliot (1978) study of "Fundamental of Risk and insurance" then further substantiated it. Physical disability, probability of accident, workplace safety, hazardous environment, terminal disease, food hygienic and premature death were used to measure individual attitude towards personal risk.

## 3.2 Development of Hypotheses

Based on the theoretical framework, the following hypotheses were generated:

H1: The individual life insurance ownership for male is higher than female.

H2: The individual life insurance ownership for Non-Malay is higher than Malay.

H3: The higher the income, the more life insurance will be owned.

H4: Those ages above 35 years old own more life insurance than those below.

H5: The better the perception of life insurance benefits, the more life insurance will be owned.

H6: The stronger the attitude towards personal risks, the more life insurance will be owned.

H7: Higher education level will demonstrate better perceptions of life insurance benefits.

## 3.3 Research Design

### *3.3.1 Type of Study*

This is a correlational study involving cross-sectional data. The objective of this study is to establish the relationships between the dependent variable (Individual life insurance ownership) with the independent variables such as demographic factors, perception of life insurance benefits and attitude towards personal risks. The study also attempts to find out that how much does the education level influence one's perception of life insurance benefits.

### *3.3.2 Nature of Study*

This is an analytical study aimed towards establishing the empirical relationship between the dependent variable and the independent variables.

### *3.3.3 Study Setting*

This is a field study that investigates the convenient sampled individual, regardless of whether or not they have a life insurance policy. No artificial setting was introduced.

### *3.3.4 Unit of Analysis*

The unit of analysis is the individual ownership of life insurance. It measures the amount of annual life insurance premium paid by the respondents.

### *3.3.5 Population and Sample*

The population of this study consists of all Penang residents. A total of 300 questionnaires (hardcopy) were distributed through convenient sampling. 247 were returned. However 60 of the respondents who did not possess any policy were discarded giving a useable response rate of 62.3%.

### 3.4 Questionnaire Design

The questionnaire was written in English, all were short and concise to enable speedy and candid response. None of them was adopted from any previous study. A pilot study was done by distributing ten questionnaires to 3 different social groups, differing in education level to check the clarity of content. The response was positive with 80% who understood them clearly. Two were not able to comprehend due to the poor command of English and were discarded. The researcher verbally translated and walks through the questionnaire with respondents who do not have a good command of English.

The questionnaire consists of three parts. The first part consists of 8 items designed to measure the perception of life insurance benefits. The second part of 7 items was designed to measure the attitude towards personal risks. The last part consists of 11 elements of demographic variables and the dependent variable, individual life insurance ownership, measured in seven different ranges. The questions for the first two parts were measured using the Likert scales, scored based on a 7-point rating from strongly disagree to strongly agree. The dependent variable, the life insurance ownership was designed to be categorical instead of continuos to smoothen and speed up response, as it is very difficult to remember the exact amount of individual annual life insurance premium paid. Moreover, individual privacy is another concern.

### 3.5 Data Collection Method

In view of the time constraint faced by the researcher, a convenient sampling was adopted in this study. Three hundred questionnaires were hand-delivered to all respondents by the researcher himself and three other helpers at various communities on Penang Island. Most of the completed questionnaires were collected on the spot but some of them were returned a few days later. 53 questionnaire never got returned due to unknown issues. Also, sixty questionnaires with zero policy were discarded. Net responses was only 187.

### 3.6 Data Analysis

The data collected for this research was analyzed using the SPSS version 6.0. All positively worded questions from section I-II carry the score that is equivalent to their selected scales. The score for the negatively worded questions is subtracted from 8 from the selected scale. A frequency table for each question in the questionnaire was generated to ensure correctness of data entry. Apart from supportive face validity established through literature review in chapter 2, question 1 through 15 from section 1 and 2 will be subjected to Cronbach's alpha value checks to ensure adequate reliability.

Means and standard deviation for all questions in part I-II were also computed to review the central tendency respondents' distribution. On the other hand, the frequency and percentage for all categorical variables were also established. These will be used to determine the relationship with the dependent variable.

Since the dependent variable (Individual Life Insurance Ownership) is categorical instead of continuos, the chi-square testing of alleged independence of two qualitative variables were adopted to test the various factors affecting individual life insurance ownership. For part I and part II, the mean values for overall questions is calculated and categorized into "Below" and "Above" median, the median was chosen instead of mean value to ensure equal group size. They were then combined with all the categorical variables in section 4 to run the chi-square-alleged independence of two qualitative variables. Also, the categorical variable of education level and was ran through one way ANOVA with respect to perception of life insurance benefits to assess if there is a significant different of mean values for different education level.