Consumers' Life Insurance Purchase and Lapse Behavior: A Behavioral Economics Perspective

THESIS

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Ritika Bhatia (Nee Ritika Khanna)

ID No. 2018PHXF0022P

Under the Supervision of

Prof. Anil K. Bhat

Co-Supervision of

Prof. Jyoti Tikoria

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI

Pilani Campus, Rajasthan, India

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BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
PILANI CAMPUS, RAJASTHAN, INDIA

CERTIFICATE

This is to certify that the thesis entitled, **"Consumers' Life Insurance Purchase and Lapse Behavior: A Behavioral Economics Perspective"** submitted by **Ms. Ritika Bhatia (Nee Ritika Khanna)** ID No. **2018PHXF0022P** for the award of Ph.D. Degree of the institute embodies original work done by her under my supervision.

_____

Signature of the Supervisor

Name : **Prof. Anil K. Bhat**

Designation : **Professor, Department of Management,**

BITS Pilani, Pilani Campus, India

Date: $_-/_-/_-_-$

_____

Signature of the Co-Supervisor

Name : **Prof. Jyoti Tikoria**

Designation : **Professor, Department of Management,**

BITS Pilani, Pilani Campus, India

Date: $_-/_-/_-_-$

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ABSTRACT

Life insurance offers financial protection for families in case of the unexpected death of the insured and helps them achieve long-term saving goals like retirement planning or inheritance. Apart from this, life insurance also has a significant impact on a country's economic growth. With the COVID-19 pandemic resulting in many deaths and job losses due to long lockdowns, the importance of life insurance has increased. An endowment life insurance policy is a type of life insurance plan that provides both a death coverage and a savings component. Developing countries can benefit more from endowment life insurance policies as individuals in these countries often have restricted access to financial services and conventional saving options, making it challenging to plan for future financial objectives. A major concern in developing countries such as India is the insufficient adoption of life insurance products, given that a considerable portion of the population remains either uninsured or underinsured. The way customers make their life insurance purchase decisions is a major contributor to this problem. Research shows that when making choices about life insurance, consumers frequently deviate from rational decision-making behavior. Instead rely on ad-hoc rules in their decision-making process, which can lead to behavioral biases that result in either under-purchasing or over-purchasing of policies.

Previous research has extensively investigated consumers' life insurance purchasing behavior in literature. However, no comprehensive and systematic analysis of the current state-of-the-art has been conducted through a literature survey. To address this gap, a framework-based systematic literature review was conducted on the topic. To bridge identified research gaps, a framework-based systematic literature review was undertaken. Our analysis identified a major area lacking in research: the influence of attribute framing techniques (e.g., premium, benefits, etc.) on consumers' life insurance purchase behavior. Within this domain, two specific gaps emerged: firstly, the need to investigate the direct impact of attribute framing on purchase decisions; and secondly, the examination of how

financial literacy affects this framing effect. Additionally, a separate but equally significant gap was found in understanding the relationship between consumers' beliefs and their life insurance lapse behavior. Specifically, three research questions were developed: 1) Does the framing of premium price affect consumers' intention to purchase endowment life insurance policies? 2) Does the attribute framing of premium prices and guaranteed maturity benefit affect consumers' intention to purchase endowment life insurance policies? Also, to what extent does financial literacy moderate the attribute-framing effect in the context of endowment life insurance? 3) What are the core beliefs of life insurance consumers that lead to policy lapses? To address these research inquiries, experimental and qualitative research methods were employed. The experimental approach explored the effect of attribute framing on consumers' intention to purchase endowment life insurance policies and the moderating effect of financial literacy on the attribute framing effect. The qualitative method facilitated an understanding of the consumer belief systems that underlie their behavior to lapse life insurance policies.

To assess the effect of framing premium prices on endowment life insurance purchase intention (research question 1), a hypothesis was derived from the literature on the pennies-a-day strategy, and an experiment was performed for two levels of premium price – monthly and yearly. For analysing the experimental data one-way ANCOVA was used controlling for the effect of perceived risk due to COVID-19.

To explore the second research question, another hypothesis was crafted basing on concepts like hedonic editing rules, quasi-hedonic editing rules, and the pennies-a-day strategy. These concepts relate to the mental accounting process where individuals assess financial outcomes to maximize pleasure and minimize pain, as explained by Thaler (1985). Thaler's study outlined how people mentally manage financial transactions to enhance their experience of gains and mitigate the perception of losses. Subsequent empirical work by Thaler and Johnson (1990) further scrutinized these hedonic principles, finding consistent behavior in scenarios involving pure gains and losses. However, their study suggested an alternative model, the "Quasi-hedonic editing model," where the application of hedonic principles is time-bound.

In the realm of marketing, the way products and services are presented cost-wise can significantly affect their appeal. A common technique employed is to present a large cost as a series of small, regular payments. Introduced by Gourville (1998), the "pennies-a-day" (PAD) strategy reduces the psychological impact of a payment by distributing it over time, making the cost appear less daunting.

A between-subject experiment was conducted for different combinations of attribute framing using a choice-based conjoint analysis (CBC) to examine this hypothesis. The experiment focused on the essential features of endowment life insurance policies, such as premium price, policy term, premium payment term, and guaranteed maturity benefit, while controlling the influence of perceived COVID-19 risk on customers' inclination to purchase life insurance policies. The impact of liquidity constraints on the causal link between attribute framing and purchase intention was also explored. A financial literacy intervention was created using the time value of money concept to assess the moderating effect of financial literacy. A between-subject experiment was performed with and without financial literacy intervention.

To answer research question 3, the grounded theory approach was used to collect and analyze data from real events in the study's context. Semi-structured interviews were conducted with policyholders and advisors, and the resulting data was analyzed through open coding and synthesized into major categories. A life insurance lapse belief (LLB) model was proposed, depicting the relationship between identified perceptions, core beliefs, and consumers' lapse behavior thus extending the theory of planned behavior proposed by Ajzen (1985).

The thesis found that framing the premium prices of endowment life insurance policies on a monthly basis positively influences consumers' purchase intention due to reduced perceived cost and pain of paying. Similarly, framing the guaranteed maturity benefit also positively affects purchase intention, with participants perceiving an illusion of a larger benefit. Consumers often lack accuracy in calculating the future value of their money, leading to exponential growth bias. The study found a significant impact of perceived COVID-19 risk on purchase intention. There was also a significant interac-

tion effect between premium and guaranteed maturity benefits. Finally, the intervention enhanced participants' intention to purchase endowment life insurance policies with aggregated guaranteed maturity benefits and monthly premiums.

For research question 3, interview data yielded four core beliefs among policyholders: beliefs concerning life insurance, process, insurer, and personal. Life insurance beliefs reflect policyholders' perspectives on life insurance policies, while process beliefs relate to the purchasing processes and perceived need-based selling. Insurer beliefs pertain to trust in policy advisors and life insurance companies. Personal beliefs relate to policyholders' ability to understand the product, perform financial planning, and make need-based purchase decisions. The Life Insurance Lapse Belief Model (LLB) model proposes that policyholders' perceptions influence their core beliefs, leading to the development of policyholders' attitudes towards lapse behavior, subjective norms and perceived behavioral control resulting in policyholders' intention to lapse, further influencing lapse behavior.

The study illustrated how framing premium prices and benefits could influence consumers' purchase intent. The study also presented primary outcomes while also adding innovative insights to the existing literature. It combined financial literacy and attribute framing domains and used a financial literacy intervention to educate subjects about the time value of money concept. The thesis contributed a novel Life Insurance Lapse Belief (LLB) Model that connects consumers' perceptions, beliefs, and the components of the theory of planned behavior complementing past research.

This study's findings have significant implications for stakeholders such as life insurance companies and policy regulators. Effective communication strategies and policy features aligned with consumers' preferences can encourage them to purchase life insurance policies, improving their financial security. The proposed Life Insurance Lapse Belief (LLB) Model can help regulators and companies understand policyholders' lapse behavior thus improving their feedback mechanisms and customer retention efforts. Understanding the framing effect and beliefs influencing customer decision-making can lead to more informed decisions. Finally, the study identifies research gaps and guides future research in the field.

Contents

List of Abbreviations

WHO : World Health Organization

CMIE: Centre for Monitoring Indian Economy Pvt. Ltd.

RBI: Reserve Bank of India

GDP: Gross Domestic Product

IRDAI : Insurance Regulatory and Development Authority of India

LIP: Life Insurance Policy

ADO : Antecedents Decisions and Outcomes

TCM: Theory, Contexts, and Methods

TCCM : Theory, Contexts, Characteristics and Methods

PRISMA : Preferred Reporting Items for Systematic Reviews and Meta-Analyses

OLS: Ordinary Least Squares

LIPD: Life Insurance Purchase Decision

HDI: Human Development Index

GDS: Gross Domestic Savings

CEE: Central & East Europian

ANOVA: Analysis of Variance

ANCOVA: Analysis of Covariance

PAD: Pennies a Day

GMB: Gross Maturity Benefits

TVM: Time Value of Money

CVIL: Cash Value Life Insurance

OECD-INFE: OECD International Network on Financial Education

CBC: Choice based conjoint analysis

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Chapter 1

Introduction

1.1 Introduction

Life insurance is an essential tool that can serve two crucial purposes for consumers and their families. Firstly, it provides a safety net for the family's income stream in case of an unexpected death of the primary breadwinner. This reduces the financial risk and uncertainty that the family may face during such a difficult time. Secondly, life insurance can help consumers achieve their long-term saving objectives, such as planning for retirement, paying for college tuition, or leaving an inheritance for their heirs. These objectives may be subject to various risks and uncertainties, and life insurance can provide a level of security and peace of mind for consumers as they plan for their financial future.

The development of the life insurance sector can have a significant impact on a country's economic growth, according to Outreville (2013). In addition to providing protection against mortality risk, life insurance plays a critical role in mobilizing long-term savings through financial intermediation, as noted by Arena (2008) and Zietz (2003). However, some developed countries, despite making substantial contributions to the global economy, still have low life insurance penetration. For example, in 2018, the United States

accounted for the highest share of the global economy at 24 per cent, but its life insurance penetration rate was only 2.88 per cent (World Bank, 2018; Statista, 2019).

The COVID-19 pandemic has caused multiple waves of infections, with new variants emerging. According to the World Health Organization (WHO), COVID-19 has resulted in nearly a million deaths worldwide, with 19 million active cases still present (WHO Coronavirus Dashboard, 2022). India has been particularly affected, with almost 45 million confirmed cases and half a million deaths reported (COVID-19 India, 2022). The lockdowns implemented during the first and second waves of the pandemic have contributed to a global recession, leading to decreased household incomes and a significant rise in unemployment rates. In India, for instance, 22.8 million jobs were lost between March and May 2021 (CMIE, June 2021). Beyond these economic consequences, COVID-19 has also had significant social, health, and environmental impacts, as documented in various studies (Mofijur et al., 2020; Vegt and Kleinberg, 2020; Heo et al., 2020; Jose et al., 2020). The threat posed by COVID-19 remains significant, with new variants and high levels of active cases continuing to pose a risk to global health and economic stability.

In the Indian context, Jose et al. (2020) examined the effect of COVID-19 on economic and budgetary conditions in India. The author used economic indicators (published in the annual report of RBI) such as GDP, human development indicator, consumer spending using the digital platform, Industrial Production Index, and employment indicators to indicate the relative drop in their values from March 2020 to September 2020 in India. Therefore, a series of COVID waves and global recession have boasted the importance of taking the life insurance policy as a preventive measure to safeguard the dependents' financial needs after the uncertain death and permanent disability of the breadwinner of the household.

1.2 Endowment Life insurance Policy

According to the Insurance Regulatory and Development Authority of India (IRDAI), "an endowment policy is a savings-linked insurance policy with a specific maturity date.

Should an unfortunate event by way of death or disability occur during the period, the sum assured will be paid to the beneficiaries. On surviving the term, the maturity proceeds on the policy become payable" (IRDAI). A study by Slovic et al. (1977) examined a significant inclination of the subjects in the experiment towards policies with a refund compared to a traditional insurance policy.

Due to several factors, endowment life insurance is particularly relevant for developing countries like India. One of the main advantages is that it provides a guaranteed lump sum payout after a fixed number of years, regardless of whether the policyholder passes away or not. This feature can offer valuable financial security for families in developing countries who may not have access to other forms of financial protection. Additionally, the savings component of an endowment policy can be attractive to people in developing countries who may not have access to formal savings accounts or investment opportunities. An endowment policy can offer a unique combination of benefits by allowing policyholders to save money while also receiving life insurance coverage. Moreover, because it is generally considered a low-risk investment, it can appeal to people in developing countries who may be hesitant to invest in higher-risk opportunities. Overall, the combination of a guaranteed payout and savings component makes endowment life insurance a compelling option for people in developing countries who are seeking financial stability and security.

The multiple waves of COVID-19 have also resulted in a significant increase in the unemployment rate. Additionally, the lockdown imposed to control the spread of the coronavirus during the first and second waves has badly affected household incomes. The citizens of India witnessed a total loss of 22.8 million jobs between March and May'2021 (CMIE, June 2021). In addition to household income reduction and job losses, the studies in the literature have found a significant effect of COVID-19 on the social, economic, health, and environmental domains (Mofijur et al., 2020; Vegt and Kleinberg, 2020; Heo et al., 2020; Jose et al., 2020). Therefore, a series of COVID waves have boasted the importance of taking the endowment life insurance policy as a preventive measure to safeguard the dependents' financial needs after the uncertain death and permanent disability

of the breadwinner of the household.

The problem of inadequate uptake of endowment life insurance products in developing countries like India is a significant concern. Despite the government's efforts to increase awareness and promote life insurance, a significant portion of the population remains uninsured or underinsured. This issue poses a challenge to the growth and development of the insurance sector. In India, as per the Economic Survey by the Ministry of Finance, only 3 out of 100 people have a life insurance policy, despite a life insurance penetration and density of 4.2 percent and USD 91, respectively, in 2021-22 (IRDAI Annual Report, 2021-22).

We selected an endowment life insurance policy for this study because, with the outbreak of COVID-19 in 2019 in India, the majority of the households faced financial stress due to the uncertain death of the bread earner of the family and also due to unemployment or cash flow because of the long lockdown periods (Kuang et al., 2020). Due to this, the financial risk awareness of households and the perception of households towards life insurance as a life cover product have changed tremendously. For both cases, the insurance market noticed a significant inclination of the subjects towards policies with a refund in future compared to a traditional insurance policy (Deb et al., 2021). Moreover, the endowment life insurance purchase helps to attain household financial stability, thus indirectly impacting society by reducing poverty and unemployment.

1.3 Life Insurance Purchase Behavior

Understanding this phenomenon of individuals' life insurance purchase behavior is a constant source of concern for policymakers and regulators. Rational choice behavior involves individuals evaluating their choices on the basis of the standard economic model i.e. expected utility theory. According to expected utility theory, rational or risk-neutral individuals would purchase an insurance plan at an actuarially fair price that is equivalent to the expected loss probable to occur in the future. However, in practice, individuals often use some ad-hoc rules to assess the uncertainty and risks (Camerer Kunreuther, 1989; Richter et al., 2014). To explain this phenomenon, studies have identified that indi-

viduals often rely on heuristics while taking complex decisions to reduce their judgment efforts, which results in behavioral biases in decision-making (Tversky Kahneman, 1973; Kahneman Tversky, 1979).

Kahneman Tversky (1979) demonstrated several choice problems with the objective of examining the individuals' choice decisions under risk and developed an alternative theory called "Prospect Theory" to better explain the phenomenon of individuals' choice behavior under uncertainty. According to this theory, individuals evaluate the choices based on the perspective values attached to the changes (gain or losses) rather than on the absolute magnitude of the wealth. Also, individuals' choice decisions under risk depend on the probability of the outcomes, which when attached to the choice problem, violates expected-utility theory axioms. With such complexity of deciding to purchase LIP and the significant importance of life insurance for consumers as well as for the country's economic development, it is critical for individuals, regulators, and insurance companies to understand the life insurance purchase behavior of consumers. In his seminal work, Yaari (1965) proposed that individuals' bequest motive towards their dependents stimulates the demand for life insurance. Later, studies identified numerous factors and empirically tested their influence on consumers' life insurance purchase behavior. These factors include both demand-side factors such as demographic factors, economic, psychographic, individual's financial status, etc., and supply-side factors, namely price of the policy, premium loading factors, company image, among others (Beck and Webb, 2003). Few studies have also examined that behavioral biases such as loss aversion, framing effect, and overconfidence bias significantly affect life insurance purchase decisions (Coe et al., 2016).

There is also sufficient evidence from the literature that while making risky or probabilistic choice decisions (as in the case of life insurance), consumers in practice often deviate from rational choice behavior (Huber et al., 2015). They often use ad-hoc rules to assess the uncertainty and risks (Richter et al., 2014). As a result, they either overestimate or underestimate the probability of loss events because they make decisions based on subjective probability estimations rather than objective probability calculations (Camerer and

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Kunreuther, 1989). Thus, consumers sometimes over-purchase or under-purchase the LIP cover (hereafter referred to as LIP).

1.4   Motivation of the Study

The above discussion suggests that existing survey papers on understanding customers' life insurance purchase behavior do not provide comprehensive and systematic information about the state-of-the-art in this field. Considering this, we performed a systematic literature review (Chapter 2) that also helped us derive the research questions addressed in this thesis. The systematic review enabled a thorough analysis of the existing literature, and it was evident that several gaps still exist in our understanding of consumer behavior in relation to life insurance purchases. While the existing literature has provided some insight into this area, a gap still exists in our understanding. We found that there is a need for further exploration of the effect of attribute framing on consumer life insurance purchase behavior. Framing of choices influences individuals' decision-making process (Levin et al., 1998). Based on this notion, the studies in the literature used different frames (i.e., different representations or descriptions of the same information) and demonstrated that decision-makers respond differently to different but objectively equivalent descriptions of the information (Tversky and Kahneman, 1981; Johnson et al., 1993; Salovey and WilliamsPiehota, 2004; Yin and Dubinsky, 2004; Botzen et al., 2013; Lin, 2021).

Camerer and Kunreuther (1989) demonstrated the effect of framing on risky choices in the insurance context. They examined the shift in respondents' preferences when the problems are framed in the insurance context rather than as a lottery choice option. Johnson et al. (1993) proved the existence of framing effects in consumers' decision to purchase flight, disease-specific, and accident insurance. The study identified a significant impact of the deductible frame compared to the rebate frame. Consumers found the insurance policy with rebates more attractive than those with deductibles. In the case of annuity decisions, Brown et al. (2013) provided evidence that consumers preferred annuity products framed as a product emphasising the consumption feature instead when framed as investment products. Botzen et al. (2013) performed a study to estimate the

demand for flood insurance presented with the risk communication frames. They observed a significant increase in the households' willingness to pay for flood insurance.

Influenced by the growing field of behavioral economics, researchers tested and offered multiple options for framing the policy information to improve consumers' life insurance purchase decisions (Bauchet Morduch, 2019; Huber et al., 2015). Huber et al. (2015) used prospect theory and investigated the effect of different ways of presenting price information (bundled or de-bundled) of unit-linked life insurance on consumers' purchase intentions. The study identified no significant effect of bundled or de-bundled prices on consumers' intent to purchase a unit-linked life insurance policy. Bauchet and Morduch (2019) examined the effect of insurance premium payment modalities on term life insurance demand by customers of microfinance companies in Mexico, which acted as an intermediary between the insurer and the insured. The study identified a significant increase of 59 to 74 per cent in demand for the life insurance policy when customers were given the option to pay the premium in instalments rather than the lump sum payment option. Moreover, when paying in instalments, the total cost of the insurance was higher than the lump-sum premium price. The sample of this natural experiment was only the women customers of a microfinance company. The study explained this phenomenon by the liquidity and saving constraints of the customers.

Agarwalla et al. (2015) performed a study to identify the level of financial literacy of the young working population (of age less than or equal to 30 years) in urban India. They identified a low level of financial knowledge, low financial attitude (respondents' belief towards planning, propensity to consume and propensity to save), and high level of financial behavior (respondent's engagement in long-term financial planning, evaluation of financial products, household budget, and into the act of borrowing and saving) among the young working population of urban Indians compared to other countries. The authors also suggested that to improve the financial literacy of the consumers, the interventions should focus on the specific concept where weakness is observed. Studies in the literature also emphasized considering the effectiveness of the intervention when designing it for the experiment (Peeters et al., 2018; Hoffman and Plotkina, 2020). The situation-based

counseling and just-in-time education were identified as essential means to increase the effectiveness of the intervention on consumers' financial behavior. In this research work, we focus on testing the moderating effect of financial literacy intervention on the attribute framing effect.

A consumer belief system refers to the set of values, attitudes, opinions, and perceptions that a person holds about products, services, brands, and the overall marketplace. They are shaped by personal experiences, cultural background, family, friends, media, and other sources of information and influence. Understanding a consumer's belief system is critical for marketers to effectively reach and engage with their target audience. The belief system of a consumer plays a critical role in the decision-making process. In literature, Kuklinski (2004) and Larson (1994) studied the individual's belief system about the political world. They identified a significant role of individual belief systems in policy making. In the context of public healthcare problems, the health belief model was developed in the 1950s by U.S. public health services. According to this model, individuals' health-related behavior depends on their beliefs about their health and health conditions. The model includes six key factors influencing individuals' behavior towards their health conditions. These include perceived severity, perceived susceptibility, perceived benefits, perceived barriers, cues to action and self-efficacy. Rostami-Moez et al. (2020) used the health belief model to determine the households' earthquake preparedness level.

Consumer's belief system can impact their purchasing behavior regarding life insurance. For example, a person's beliefs about the importance of insurance and life insurance can influence whether they choose to purchase a policy. In addition to influencing purchase behavior, consumer's belief system can also impact their behavior with regard to lapsing or discontinuing a policy. For instance, if consumers believe that the value they receive from the policy is insufficient compared to the cost, they may be more likely to discontinue it. Similarly, the trustworthiness and reliability of an insurance service provider can impact their likelihood to continue using their services. In conclusion, a consumer's belief system can play a significant role in determining their behavior with

regard to lapsing or discontinuing service in the service sector. Marketers and insurance providers must understand these beliefs to retain customers and maintain long-term relationships effectively.

By gaining insight into a customer's beliefs and values, insurance companies can tailor their products and marketing strategies, segment the market and meet the needs and expectations of their target audience. Also, by acknowledging and addressing a customer's beliefs, insurance companies can build stronger relationships for increased customer engagement and provide personalized and positive customer experience, leading to increased customer satisfaction. Overall, considering consumer beliefs in addition to traditional analytical methods can provide a more comprehensive and nuanced understanding of life insurance purchase/lapse behavior, which can help insurance companies improve their marketing efforts and increase sales. One of the objectives of this research work is to identify the core beliefs of the policyholder towards the lapsation of policy and propose a life insurance lapse belief model to understand the relationship between consumers' core beliefs and their lapse behavior.

Knowing a customer's belief system means understanding their values, attitudes, and opinions that influence their decisions and behavior. On the other hand, understanding the reasons behind policy lapse behavior focuses on identifying the specific factors that led a customer to cancel or not renew their insurance policy. The former provides insight into the customer's overall mindset and helps to build a relationship, while the latter is more specific and focused on improving retention. Both pieces of information are valuable but serve different purposes.

1.5 Research Gaps

The following research gaps in understanding consumer life insurance purchase behavior are revealed by the systematic literature review.

1. **State-of-the-art on consumers' life insurance purchase behavior**
   There exist some review articles with the objective of summarizing the studies fo-

cusing on understanding consumers' life insurance purchase behavior. Zietz (2003) reviewed 26 articles to examine the micro factors, including economic and financial factors, and personal and demographic factors affecting life insurance demand. Hussels et al. (2005) reviewed articles based on life and property-casualty insurance. The study examined economic, political/legal, and social factors affecting life insurance and property-casualty insurance demand. Later, Outreville (2013) provided an extensive review of articles focused on understanding the effect of macroeconomic factors on life insurance demand. Eling et al. (2014) used the categorization framework proposed by Outreville (2013) to categorize 12 key determinants. Outreville (2014) reviewed the measurement and magnitude of risk aversion levels identified in the life insurance literature. Masud et al. (2020) proposed a conceptual framework to understand Malaysian households' life insurance purchase intention. The study hypothesized a cause-and-effect relationship between independent factors and intention to purchase insurance. The independent factors the study considers are perceived financial benefits and risk perception, awareness of insurance, subjective norm, perceived behavior, and attitude towards having insurance. Thus, it is observed from the literature that the latest extensive review paper, in the direction of this review, was published in 2013 (Outreville, 2013). The total number of micro and macro antecedents discussed by existing reviews altogether is 64 only. However, none of the review studies exists that provide a comprehensive review of the articles on consumers' life insurance purchase behavior from the Scopus database and provides a multi-level categorization of antecedents. It is unlike earlier reviews that adopted only single-level categorization of antecedents.

2. **Effect of attribute framing on consumers' life insurance purchase intention**

The framing effect is the cognitive bias that people's decisions are influenced by how information is presented. According to Levin et al. (1998), the framing of choices has a significant impact on individuals' decision-making processes. Several studies in the literature have explored this concept by using different frames,

which refer to various representations or descriptions of the same information. These studies have demonstrated that decision-makers tend to react differently to these objectively equivalent descriptions of information (Tversky and Kahneman, 1981; Johnson et al., 1993; Salovey and Williams-Piehota, 2004; Yin and Dubinsky, 2004; Botzen et al., 2013; Lin, 2021).

The literature predominantly covers non-life insurance (covers a wide range of risks associated with tangible assets and liabilities), unit-linked life insurance (combines insurance coverage with investment opportunities), term life microinsurance (provide financial protection to individuals with low incomes or limited access to traditional insurance products) and annuity products (provide a stream of income payments to the individual who purchases the annuity over a specified period of time) when examining the effects of the framing effect in the insurance context. Previous research primarily explores unitlinked life insurance and term life microinsurance, analyzing the influence of price bundling or de-bundling and premium payment methods on consumer behavior. However, none of the existing studies delve into the effects of framing premium prices on consumers' purchase intentions regarding endowment life insurance products. Additionally, none of the studies in the literature demonstrated the attribute framing effect of both premiums and benefits on the consumers' intention to purchase an endowment life insurance policy.

3. **Moderating effect of financial literacy on the attribute-framing effect**

3. Moderating effect of financial literacy on the attribute-framing effect A person's financial literacy and numeracy levels have a significant impact on their decision to purchase an insurance policy, as highlighted in studies by Barnes et al. (2021), Long et al. (2014), McGarry et al. (2016), and Lin et al. (2017). According to the Organization for Economic Co-operation and Development-International Network on Financial Education (OECD-INFE), financial literacy encompasses an individual's financial knowledge, behavior, and attitude (RBI, 2019). Financial knowledge includes an individual's comprehension of fundamental financial concepts such as

compound interest, simple interest, inflation, risk return trade-offs, interest rates, and the time value of money. Financial behavior refers to an individual's management of money in their daily lives, while financial attitude pertains to their disposition towards short-term or long-term investments.

When it comes to life insurance policies, individuals who are financially literate are more likely to understand the various terms and conditions of the policy, such as the premiums, deductibles, and payout options. They can better evaluate the potential benefits and drawbacks of each option and make decisions based on their personal circumstances and risk tolerance. Financial literacy can moderate the framing effect in the context of life insurance policies because it can help individuals better understand the options available and make more informed decisions. However, we did not find any study in the literature investigating the moderating effect of financial literacy on the framing effect in the context of life insurance.

4. **Role of customer beliefs in policy lapsation**

Policy lapsation can have significant economic consequences for insurers, resulting in reduced liquidity, future benefits, adverse selection and damage to the insurer's reputation. To manage policies effectively and reduce lapses, it is essential to understand life insurance lapse behavior and persistency ratios. Life insurance lapse behavior refers to the study of policyholders who terminate or cancel a policy before its maturity date. Both insurers and policyholders benefit from understanding lapse behavior to make informed decisions about coverage and improve policy management.

Although there has been extensive research into the impact of macro and microeconomic variables on the aggregate lapse rate, none of the studies have specifically investigated individual policyholders. No research has focused on understanding why some people engage in potentially negligent life insurance behavior, or why many fail to retain a life insurance policy to protect against future financial risks associated with the loss of a breadwinner or income shock in the household.

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1.6 Research Questions

In this section, we discuss the specific research questions addressed in this thesis, which were derived after conducting a systematic literature review in the subject area.

1.6.1 What are the micro and macro-level antecedents of life insurance purchase behavior?

To derive both micro and macro-level antecedents from the research work published during the year 1995 to 2020, a framework-based systematic review approach using the TCM (theory, contexts, and methods) framework proposed by Paul et al. (2017) and ADO (antecedents, decision, outcome) framework developed by Paul and Benito (2018) was adopted. This helps provide a multi-level categorization of antecedents and Identifies important research gaps for future research based on TCM and ADO frameworks.

1.6.2 Does premium price framing affect consumers' life insurance purchase intention?

Prior research indicates that most works on understanding the repercussions of the framing effect in the insurance context relate to non-life insurance, unit-linked life insurance, term life microinsurance, and annuity products. However, none of these research works focused on understanding the impact of framing premium prices of the endowment life insurance products on consumers' purchase intention.

1.6.3 Does financial literacy moderate the attribute-framing effect in the context of life insurance?

Financial literacy, or the ability to understand and effectively manage financial matters, can play a significant role in how individuals perceive and respond to different frames presented to them when making life insurance purchase decisions. Individuals with higher financial literacy can better understand the associated costs and benefits of a policy framed in a particular manner. This knowledge can help them make a more informed decision

when evaluating different frames and considering which policy best suits their needs. However, no research study examining the moderating impact of financial literacy on the framing effect concerning life insurance was found in the literature.

1.6.4 What are the core beliefs of the life insurance consumers responsible for the lapsation of policy?

Even though plenty of research focused on identifying the effect of macro and micro economic variables on the aggregate lapse rate, none of the studies focused on the individual policyholder. They understood why people engage in potentially negligent life insurance behavior. Why are many people not motivated to retain a life insurance policy to safeguard against future financial risk due to the uncertain death or disability of the bread earner or income shock in the household? This indicates a gap in research required to offer insights into what beliefs of the policyholders influence life insurance lapse behavior. Thus providing a life insurance lapse belief model to understand policyholders' life insurance lapse behavior.

1.7 Objectives of the Study

The objectives of the thesis are as follows, derived from the identified research questions:

1. To derive micro and macro-level antecedents of life insurance purchase behavior from the research works by performing a framework-based systematic review.

2. To assess the framing effect of premium price on the consumers' intention to purchase an endowment life insurance policy.

3. To investigate the moderating effect of financial literacy on the attribute framing effect of premium price and guaranteed maturity benefit on consumers' endowment life insurance policy purchase intention.

4. To identify core beliefs of the policyholders influencing their life insurance lapse behavior.

1.8 Scope and Methodology

This section outlines the scope of the study and the methodologies employed to conduct the experiment and analyze the results in order to answer the research questions identified. We utilized experimental methods to investigate the impact of framing on consumer purchase intention and qualitative methods to gain insight into the consumer belief systems that lead to their decision to lapse on life insurance policies.

1.8.1 Experimental Study to Understand Attribute Framing Effect

Theories from the literature were used to develop hypotheses for testing the benefit of price and benefit framing on customer purchase intentions. Kahneman and Tversky's (1979) Prospect Theory was used to explain the risky choice behavior of consumers, which characterizes choices using a value function and codes outcomes as gains or losses relative to a reference point. Thaler's (1985) Mental accounting principle was used to understand how multiple outcomes are perceived and coded by consumers while making decisions, and the Hedonic and Quasi-hedonic editing rules were applied. The Penniesa-day strategy proposed by Gourville (1998) was also used to test how transaction attractiveness is affected when payment is framed in pennies-a-day form, and how it decreases when the benefit is framed in pennies-a-day form.

To test the derived hypotheses, we used choice-based conjoint analysis (CBC) experiments to determine consumers' stated preference for various endowment life insurance policies. CBC requires participants to rank or rate hypothetical alternatives for a product or service that includes various attributes and levels (Ben-Akiva et al., 1978). The method involves rating hypothetical alternatives with different attributes and levels. Participants were presented with six different endowment life insurance policies with varying attribute levels and were asked to rate them on a five-point scale. Participants were randomly assigned to either the control or treatment group, and the choices were presented in different orders to avoid ordering effects. The control group was presented with choices framed yearly, while the treatment group was presented with choices framed monthly.

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The experimental study uses a survey instrument with three sections. The first section gathered socio economic details of the participants to examine its effect on their intention to purchase. The second section measured risk perception due to COVID-19 using a validated scale. The third section presented six endowment life insurance policies using choice-based conjoint analysis to elicit participants' intention to purchase. The study restricted respondents to people aged 25 to 45 years. The lower limit of 25 was chosen because a significant portion of the Indian population below 25 years rely on their parents. The upper limit of 45 was chosen due to the high mortality rate and low life expectancy after this age. These findings will act as an outlier for the study. Also, this age group's reasonably similar mortality risk allowed for experimenting with the same choices for individuals of different ages, avoiding the need to change premium prices.

The experiments focus on key attributes of endowment life insurance policies available in the Indian market, including premium price, policy term, premium payment term, and guaranteed maturity benefit. Each attribute has multiple levels based on the available range in the market. Monthly premiums were calculated using the Time Value of Money concept instead of dividing yearly premiums by 12. However, the impact of inflation on TVM was ignored. The use of TVM to calculate monthly premiums made both options theoretically equivalent, so participants with knowledge of TVM would consider them the same. This helped compare the effects of premium price framing on purchase intention.

The experiments were conducted in India after the first and second waves of COVID-19, so it was important to consider the impact of perceived risk related to COVID-19 on customers' intention to buy life insurance policies. We used the risk perception scale developed by Dryhurst et al. (2020) to evaluate participants' perceived risk associated with COVID-19. Data was collected from 311 life insurance policyholders in Rajasthan, India, randomly assigned to two experimental groups. Participants were asked to rate their purchase intention for six endowment life insurance policy options with different attribute combinations on a five-point Likert scale.

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1.8.2 Qualitative Study to understand Consumer Beliefs Influencing life insurance lapse behavior

Our study utilized the grounded theory approach, which involves collecting and analyzing data from real events within the context of the study and interpreting those events through the perspectives of key actors in the setting. This method emphasizes developing new theories based on data collection and analysis rather than testing pre-existing hypotheses. The resulting theory is intended to be widely applicable and highly generalizable.

Data for this study was collected through semi-structured interviews with policyholders and policy advisors in Pilani, Rajasthan between September and November 2022. Theoretical sampling was used to select participants based on emerging theories. Eleven life insurance advisors with at least one year of experience were interviewed for 45 minutes to an hour, and their transcribed responses were thematically analyzed and coded using established methods. The resulting analysis provides insights into the perspectives of policyholders and advisors on life insurance in Pilani.

The interview questions for the second data collection stage were modified based on insights gained from the first stage. Only policyholders who had lapsed their life insurance policy at least once were interviewed, with the interviews lasting 30 to 45 minutes. The resulting data were thematically analyzed and coded to better understand the policyholders' lapse behavior. Collecting data from both policy advisors and policyholders provides a more comprehensive understanding of their beliefs and perspectives, enabling the identification of diverse viewpoints. This multi-faceted approach allows for the collection of varied and valuable data from different groups. Interviews were coded using open coding, and data was synthesized into major categories that emerged from interpretation. To ensure accuracy, interpretations were shared with 15 interviewees who were contacted. Demographic information was not analyzed due to a small sample size of 42 interviewees with limited diversity.

1.9 Industrial and Societal Implications

This thesis significantly advances the understanding of consumer behavior in the life insurance sector, particularly focusing on purchasing and lapsation behaviors. The introduction of the Life Insurance Lapse Belief (LLB) Model offers a comprehensive framework that enhances our understanding of the motivations behind policy lapsation and provides a blueprint for insurers to enhance customer retention strategies. This model underlines the importance of aligning communication strategies and policy features with consumer beliefs and preferences, a crucial element for stabilizing the insurance market.

For life insurance companies, the findings suggest the adoption of income-based insurance plans that cater to the diverse financial needs of different income groups. The study recommends that insurers incorporate educational resources into customer interactions, recognizing the pivotal role of financial literacy interventions in empowering consumers to make informed choices. This investment in customer education builds trust and loyalty, which are essential for the longevity of customer relationships and the profitability of Endowment Life Insurance Policies (ELIPs). Moreover, insurers are advised to maintain clear and transparent communication of premium and benefit options, emphasizing the future value of premiums and policy benefits to foster informed decision-making and enhance consumer trust .

Regulatory bodies are encouraged to provide guidelines that promote monthly premium payment options and support financial literacy initiatives among consumers. This research advocates for regulatory frameworks that enforce transparent presentation of premiums and benefits, including standardized product disclosure practices and the use of comparative tools to enable consumers to make well-informed choices .

On a societal level, the research underscores the importance of understanding framing biases and beliefs that influence consumer decision-making processes. It highlights the need for educational programs that can effectively guide consumers in making knowledgeable decisions regarding life insurance purchases. Such programs not only help in mitigating lapse behavior but also contribute to the overall economic stability by ensuring

informed participation in the life insurance market .

For policymakers and insurance companies, this thesis provides actionable strategies for effectively guiding consumers towards purchasing endowment policies. It suggests that framing premium prices on a monthly basis and showcasing guaranteed maturity benefits in an aggregated form could nudge consumers towards making a purchase. Additionally, the effectiveness of a Time Value of Money (TVM) intervention in endowment policies, which helps consumers focus on the future value of their premium payments, eases the complexity of financial calculations and fosters a more rational decision-making process .

In conclusion, this thesis enriches both theoretical and practical discourse in the life insurance field by bridging gaps in current literature and paving the way for future research and policy developments that consider the nuanced influences of consumer beliefs and economic behaviors. It contributes to more informed decision-making and policy design, aiming to enhance both industry stability and societal well-being.

1.10   Thesis Structure and Overview

Figure 1.1 provides a schematic diagram illustrating the overall work done as part of this thesis starting from studying the effect of premium/benefit framing on consumers' life insurance purchase intention, the moderating effect of financial literacy and liquidity constraint on this effect, and finally, how the policyholders' beliefs effect their policy lapse behaviour.
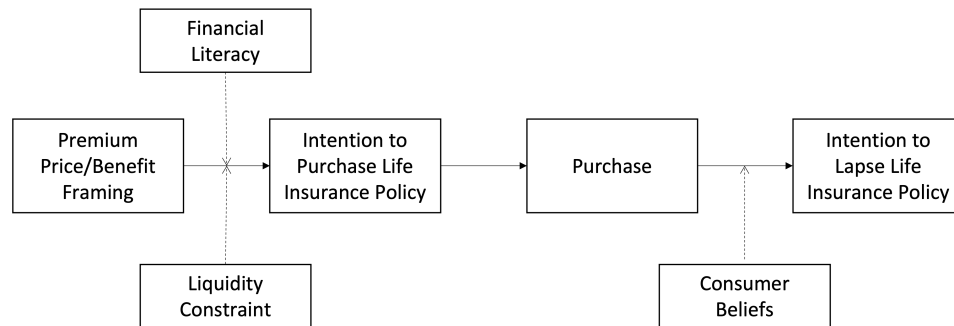
Figure 1.1: Thesis Conceptual Framework

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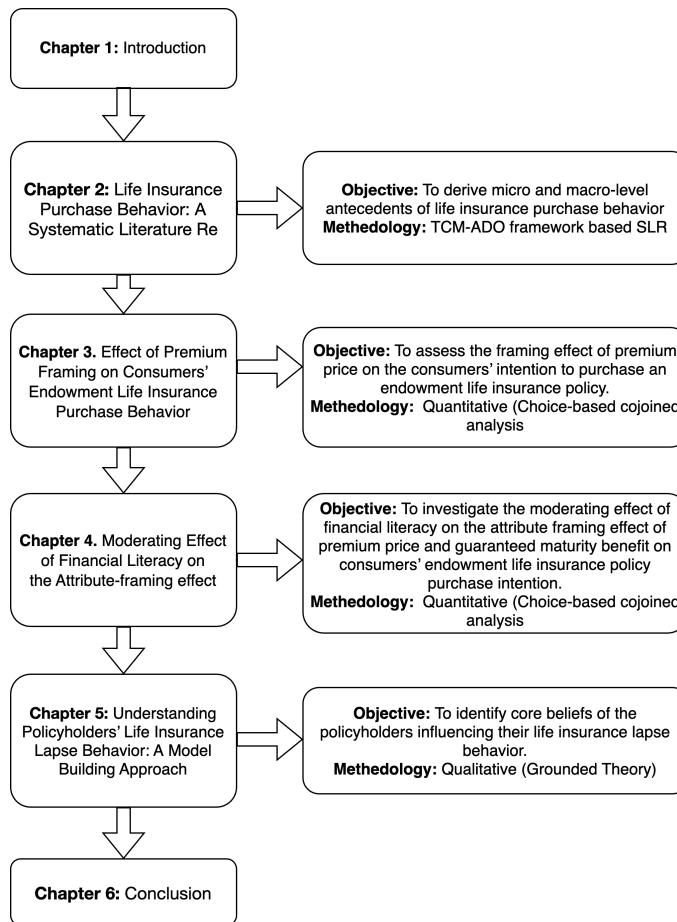
Figure 1.2: Thesis Overview

Fig 1.2 provides the chapter wise overview of the thesis illustrating the objectives and the methodology adapted to archive the corresponding objective.

The rest of the thesis is structured as follows. Chapter 2 presents, a combination of ADO and TCM framework-based systematic literature review undertaken to understand the state of the art on life insurance purchase behavior of consumers. A total of 136 unique antecedents are identified from 76 review articles under study, thus providing a sufficiently large and coherent body of knowledge to understand consumers' life insurance purchase behavior. This review categorizes the identified 136 antecedents into eight broad categories and develops a relationship map to represent the relationship between antecedents, decisions, and outcomes. The presented literature review also identifies important research gaps in the area of life insurance purchase behavior for future research.

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Chapter 3, focuses on testing the effect of temporally framed premium prices on endowment life insurance purchase intention while controlling for the COVID-19 perceived risk effect. In addition, we tested the moderating effect of liquidity constraint on the relationship between the temporal framing effect and purchase intention to examine whether the liquidity constraint is the reason for the temporal framing effect.

Chapter 4 investigates the moderating effect of financial literacy on the attribute framing effect of premium price and guaranteed maturity benefit on consumers' endowment life insurance policy purchase intention. To financially literate the participants, we introduced an intervention by providing a just-in-time education about the time value of money. The study also makes a theoretical contribution to the literature by showing the applicability of behavioral economic theories, viz. prospect theory and mental accounting principles, in the context of endowment life insurance.

Chapter 5 aims to identify the core beliefs policyholder hold that influences their decision to lapse the life insurance policy and presents the link between policyholders' beliefs and their life insurance lapse decisions. To achieve this, qualitative semi-structured interviews were undertaken with the policyholders. Four core policyholder beliefs were identified: Life Insurance beliefs, Insurer beliefs, Process beliefs and Personal beliefs using the grounded theory approach with zero-order, first-order and second-order coding.

Lastly, chapter 6 concludes the thesis by presenting the overall findings and future scope of this research work.

Chapter 2

Life Insurance Purchase Behavior: A Systematic Literature Review

2.1 Introduction

In this chapter, the primary focus is to understand the overview of life insurance research in the consumer purchase behavior context. The objective is to identify micro and macro-level antecedents of life insurance purchase behavior from the existing research works by performing a framework-based systematic review. There exist some review articles with a similar objective of summarizing the studies focusing on understanding consumers' life insurance purchase behavior.

Zietz (2003) reviewed 26 articles to examine the micro factors, including economic and financial factors and personal and demographic factors affecting life insurance demand. The review also discussed factors affecting life insurance demand, such as inflation, deductibles, loading factors, risk aversion and risk attitude, wealth, and bequest motives. Hussels et al. (2005) reviewed articles based on life and property-casualty insurance. The study examined economic, political/legal, and social factors affecting demand for life insurance and property-casualty insurance. Later, Outreville (2013) provided an

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extensive review of articles focused on understanding the effect of macro-economic factors on life insurance demand. The survey categorized the identified 28 macro factors into four categories: demographic, social and cultural, economic, and institutional and market structure factors.

Eling et al. (2014) used the categorization framework proposed by Outreville (2013) to categorize 12 key determinants. They also compared the micro-insurance factors with the traditional insurance factors. Outreville (2014) reviewed the measurement and magnitude of risk aversion levels identified in the life insurance literature. The study also demonstrated the differences in the individual's risk preferences based on their demographic characteristics. Masud et al. (2020) proposed a conceptual framework to understand Malaysian households' life insurance purchase intention. The study adopted the "Theory of Reasoned Action" and extended it by including socio-demographic control variables. The study hypothesized a cause-and-effect relationship between independent factors and intention to purchase insurance. The independent factors the study considers are perceived financial benefits and risk perception, awareness of insurance, subjective norm, perceived behavior, and attitude towards having insurance.

Thus, it is observed from the literature that the latest extensive review paper, in the direction of this review, was published in 2013 (Outreville, 2013). The total number of micro and macro antecedents discussed by existing reviews altogether is 64 only. There are also review papers in the insurance domain catering to different categories, which is out of this review's scope. This includes health insurance (Acharya et al., 2013; Adebayo et al., 2015; Dror et al., 2016; Ekman, 2004; Freeman et al., 2008; Meng et al., 2011; Schneider, 2004), flood insurance (Bubeck et al., 2012) and general insurance (Schwarcz, 2010).

A comprehensive review of the articles on consumers' life insurance purchase behavior from the Scopus database is offered in this chapter. In particular, this review makes the following significant contributions:

- Derives both micro and macro-level antecedents from the research work published

during the years 1995 to 2020, in contrast to the earlier reviews by Zietz (2003) and Outreville (2013) only on micro-level and macro-level factors, respectively.

- Adopts framework-based systematic review approach using TCM (theory, contexts, and methods) framework proposed by Paul et al. (2017) and ADO framework developed by Paul and Benito (2018). Lim et al. (2021) used a similar approach of combining TCM and ADO frameworks. It helps to provide a more structured and organized review of the life insurance research compared to the (semi-) structured review approach adopted by earlier reviews (e.g., Zietz, 2003; Outreville, 2013).

- Provides a multi-level categorization of antecedents. It is unlike earlier reviews that adopted only single-level categorization of antecedents.

- Identifies important research gaps for future research based on TCM and ADO frameworks.

This chapter is organized as follows. The next section provides an overview of systematic literature review methods proposed by Paul and Criado (2020). It also discusses the PRISMA protocol adopted in this review for article identification, screening, eligibility, and inclusion. In section 3, the statistics related to the year of publications and journal of publications are provided. The subsequent section adopts the TCM framework to provide insight into the theories, contexts, and methods used in the studies under review. The findings of the studies that depict the relationship between ADO are discussed in detail using the ADO framework in section 5. The next section discusses the implications of the study for LIP holders, policymakers, and insurance regulators. Section 7 discusses the review outcomes to identify the research questions and research objectives for future research. Finally, the last section provides the conclusions of the study.

2.2 Methodology

In this chapter, a systematic literature review is chosen over a traditional general review as it adopts a reproducible, transparent, unbiased, rigorous, and scientific approach (Cook

et al., 1997). It involves identifying, selecting, quality assessment, extraction, and synthesis of research works available in the literature (Tranfield et al., 2003). A well-crafted systematic review article provides a comprehensive overview to the researchers in a particular research area, identifies research gaps, and suggests future research avenues (Lim et al., 2021). As proposed by Paul and Criado (2020), a systematic review can be broadly classified under four categories, as discussed below:

1. Domain-based review aims at discussing the domain knowledge of the underlying topic and is further classified into five sub-categories

   Structured review aims at synthesizing the theories, constructs, contexts, and methods that are widely used in the literature related to specific research themes (Canabal and White, 2008; Hao et al., 2019; Kahiya, 2018; Paul and Singh, 2017; Paul and Feliciano-Cestero, 2020; Rosado-Serrano et al., 2018).

   Framework-based review is dedicated to using existing frameworks such as ADO (Antecedents, Decisions, and Outcomes) framework or TCCM (Theory, constructs, characteristics, and methods) framework or 7P framework to structure the review and provide insightful information related to the research area (Lim et al., 2021; Paul and Benito, 2018; Paul and Mas, 2020; Paul and Rosado-Serrano, 2019). The authors can also develop their framework to structure the review.

   Bibliometric review focuses on the statistics related to the year of publications, journal of publications, and authors (Donthu et al., 2020; Vallaster et al., 2019).

   Hybrid reviewis developed by integrating different tenets of different types of domain-based review (Paul et al., 2017; Kumar et al., 2019).

   Review aiming for theory development focuses on developing theoretical models, hypotheses, or propositions for future testability (Paul, 2019a; Paul and Mas, 2020; Sharma et al., 2021).

2. Theory-based review aims at providing an in-depth analysis of the role of different theories in a specific research area (Gilal et al., 2021; Gilal et al., 2019; Lim, 2021;

Lim and Weissmann, 2021; Paul Rosado-Serrano, 2019).

3. Meta-analytical review focuses on identifying the effect sizes of different variables, indicating the degree of relationships using statistical techniques such as the weighted average technique (Rana and Paul, 2020; Schmid Morschett, 2020; Tang Buckley, 2020).

4. Method-based review is centered on providing the current state of knowledge about the specific methods used in the subject area (Ji et al., 2019).

This chapter performs a framework-based structured review, as it provides a systematic structure to integrate the peculiar findings from the articles under review. As proposed by Lim et al. (2021), a combination of the ADO framework established by Paul and Benito (2018) and the TCM framework developed by Paul et al. (2017) are used for the integration of significant approaches and findings from the articles. The integration of these two frameworks helps to achieve a more extensive overview of life insurance literature and permits overcoming the limitations of each framework (Lim et al., 2021).

2.2.1 Literature Search

This review chapter adopts Preferred Reporting Items for Systematic reviews and Meta Analyses (PRISMA) protocol to scrutinize the articles to be included in the review. This protocol involves four phases of scrutinization, i.e., identification, screening, eligibility, and inclusion (Moher et al., 2009). The flow diagram depicting the details of each phase is shown in Figure 2.1.

In the identification phase, journal articles were searched in the Scopus database from 1995 to May 30, 2020. As this study was conducted in 2021, it only covers the literature published until the end of year 2020. The 25-year review period is considered sufficient to understand the evolution and overview of the specific topic of research. The search was restricted to the journal articles indexed in the Scopus database. It ensures the quality of the journal articles included in the review and indexes a large fraction of peer-reviewed
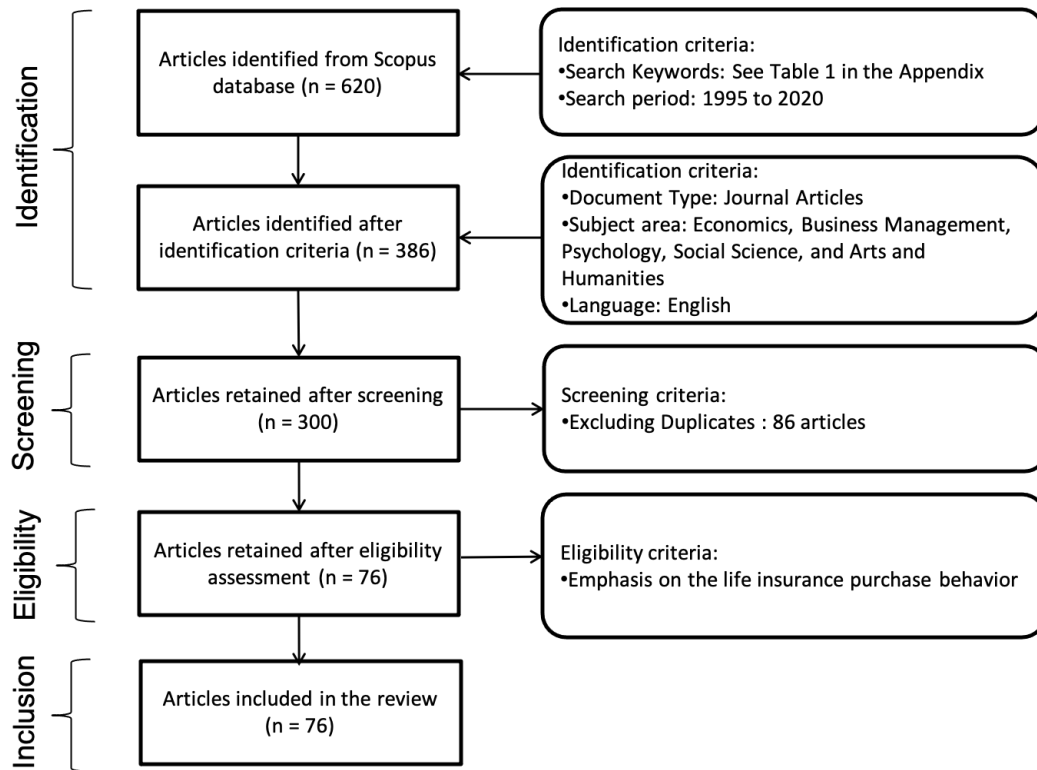
Figure 2.1: Flow Diagram of article selection using PRISMA Protocol

literature. The keywords were selected based on the scope of the review. As the primary focus of the review is to understand the purchase behavior of consumers for life insurance products, all the chosen keywords are used along with the term "life insurance". Initially, the keywords were included based on the authors' subject knowledge. This initial search also included keywords that we have found to be used in existing review articles in the related field. To ensure that all relevant studies are included in the review, the authors also included related keywords such as purchase behavior, purchase intention, and purchase decision. For the final selection of the keywords, the decision was reached based on expert opinion and discussions among the authors. The keyword search was performed in the title, abstract, and keywords sections of the paper. A total of 620 articles were obtained with the keyword search in the identification phase. In the next step of the identification phase, the search was refined for journal articles published in the English language in Economics, Business Management and Accounting, Psychology, Social Science, and

Arts and Humanities. A list of 386 articles was identified from the Scopus database using keywords search and the above criteria.

In the screening phase, the final list of 386 articles was tested for duplication. A total of 86 duplicates were identified and excluded. The full text of the remaining 300 articles is then downloaded using Google Scholar or individual publishers' websites. In the eligibility phase, the manual content screening of the 300 full-text articles is performed based on the following inclusion criteria:

- This review aims to understand consumers' life insurance purchase behavior.

- he articles focusing on group life insurance are excluded from the study.

The authors performed the manual content screening of 300 articles. With the inclusion criteria mentioned above and based on the discussion and consensus between the authors, 76 articles are included in the review.

In the inclusion phase, in-depth content analysis is performed that focuses on extraction, coding, and organizing data from the 76 articles under review. The final dataset comprises 76 journal articles in the English language published between 1995-2020, mainly in Economics, Business Management and Accounting, Psychology, Social Science, and Arts and Humanities. This review considers a protocol focusing on a) bibliometric characteristics of the studies, b) theory, context, and methods used in the studies, and c) ADO of life insurance purchase behavior. The outcome of the in-depth content analysis is discussed in the following sections.

2.3 Bibliometric characteristics of the studies

This section focuses on the statistics related to the journal of publications (or publication outlets) and the year of publications (or publishing trends).

2.3.1 Publication Outlets

Table 2.1 depicts the journal-wise distribution of articles considered under study. The table shows that two journal publication outlets - Journal of Risk and Insurance and Geneva

Table 2.1: Articles Distribution over Journal Publication

Journal Title	N articles	Journal Title	N articles
Geneva Papers on Risk and Insurance: Issues and Practice	7	International Journal of Recent Technology and Engineering	1
Journal of Risk and Insurance	7	International Journal of Bank Marketing	1
International Journal of Business and Society	2	International Review of Economics and Finance	1
International Journal of Emerging Markets	2	Journal of Behavioral and Experimental Finance	1
Economic Research	2	Journal of Development Economics	1
Applied Economics Letters	2	Journal of Financial Services Research	1
International Journal of Social Economics	2	Journal of Financial Services Marketing	1
Journal of Banking and Finance	2	Journal of Pension Economics and Finance	1
Journal of International Business Studies	2	Management Science Letters	1
Journal of Public Economics	2	Managerial Auditing Journal	1
North American Actuarial Journal	2	Managerial Finance	1
African Development Review	1	Margin	1
Applied Economics	1	Mathematical social sciences	1
Asian Social Science	1	Pacific Basin Finance Journal	1
Problems and Perspectives in Management	1	Research in International Business and Finance	1
Australasian Accounting, Business and Finance Journal	1	Periodica Polytechnica Social and Management Sciences	1
Australian Journal of Management	1	Quantitative Finance	1
Eastern European Economics	1	Asian-Pacific Economic Literature	1
Economic History Review	1	Review of Behavioral Finance	1
Economic Modelling	1	Review of Economics of the Household	1
Economics Letters	1	Review of Finance	1
Explorations in Economic History	1	Risk Management and Insurance Review	1
Financial Analysts Journal	1	World Bank Economic Review	1
GENEVA Risk and Insurance Review	1	Service Industries Journal	1
German Economic Review	1	World Development	1
Insurance: Mathematics and Economics	1	Scientific Annals of Economics and Business	1
International Advances in Economic Research	1	Transylvanian Review of Administrative Sciences	1
International Business Management	1		

Papers on Risk and Insurance: Issues and Practice have the most number of publications in the area under review. Nine journals namely, Applied Economics Letters, Economic Research, International Journal of Business and Society, International Journal of Emerging Markets, International Journal of Social Economics, Journal of Banking and Finance, Journal of Financial Services Marketing, Journal of Public Economics, and North American Actuarial Journal have published two articles each in the area under review. The list

also indicates a diversified distribution of articles across journals with scopes including finance, economics, behavioral finance, business management, and services marketing.

2.3.2 Publishing Trends

Figure 2.2 displays the publishing trends of the research publications under review. The graph shows that in the specific research area of life insurance considered under study, the publication trend over the years has increased. This indicates that there has been a rise in the interest among researchers and academicians over the years to understand consumers' life insurance purchase behavior.
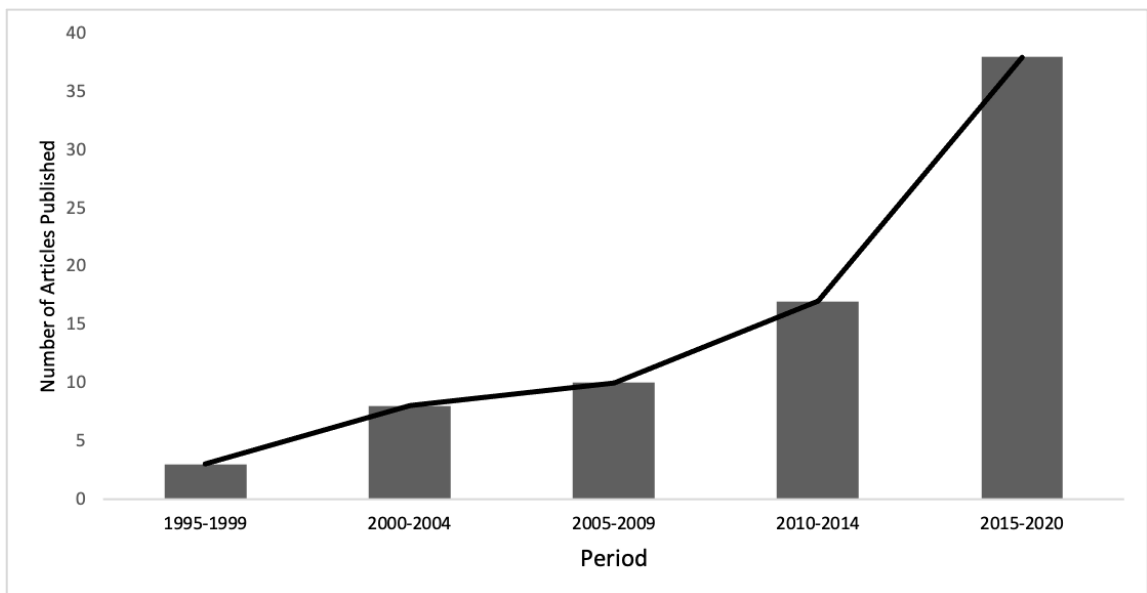
Figure 2.2: Publishing Trends

In the next section, we discuss the theories, contexts, and methods used by the articles under review in detail with the help of the TCM framework. After that, in section 2.5, the ADO extracted from the articles under review is discussed using the ADO framework.

2.4 TCM framework-based review of the studies

In this section, the TCM framework proposed by Paul et al. (2017) is used to analyze the articles under review. Figure 2.3 provides a comprehensive overview of the theories, contexts, and methods adopted in the studies under review. It also represents ADO in the

context of consumers' life insurance purchase behavior, which is discussed in the next section. The structure to represent the overview is adapted from Lim et al. (2021). The present review of life insurance articles yields significant information related to theories, contexts, and methods used in the life insurance literature. Each of these is discussed in detail as follows:

2.4.1 Theories

Theories are the foundations on which the findings of the studies are built (Lim et al., 2021). A total of 31 theories are used in the life insurance literature under review. Table 2.2 shows the list of 31 theories used and their citations. The list reveals the theories that are prominently used in the studies under review are 1) Expected Utility Theory (with 24 votes), 2) Life Cycle Model (with eight votes), 3) Prospect Theory and behavioral economic theory (with four votes), 4) Theory of Reasoned Action (with three votes), 5) Unified human capital-based model (with two votes), and 6) Other theories (with one vote each).

Table 2.2: List of Theories

Theories	N articles	Theories	N articles
Expected Utility Theory	24	Portfolio Taxation Theory	1
Life Cycle Model	8	Portfolio Theory	1
Theory of Reasoned Action	3	Regulatory Focus Theory	1
Behavioral Economic Theory	2	Social Exchange Theory	1
Prospect Theory	2	Stochastic Differential Utility	1
Unified Human Capital Based model	2	Supervision Theory	1
Attribution Theory	1	Technology Acceptance Model	1
Cognitive Model	1	Theory of Bounded Rationality	1
Collective Household Model	1	Theory of Insurance Consumption	1
Commitment Trust Theory	1	Theory of Interdependence	1
Constant Absolute Risk Aversion Model	1	Theory of Planned Behavior	1
Contract Theory	1	Theory of Relationship Marketing	1
Death-Contingent Claim Model	1	Utility Model with Partial Borrowing Limit	1
Lifecycle Consumption & Portfolio Choice Model	1	Wage Earner's Lifetime Model	1
Lifecycle Model with Tax Incentives & Bequest Motive	1	Dual Process Theory of Thinking, Knowing and Information Processing	1
Mean Variance Theory	1	Lifecycle Model with Tax Incentives & Bequest Motive	1

2.4.2   Contexts

The context of a study refers to the circumstances and economic or political environment under which it is performed (Lim et al., 2021). This review categorizes studies under review by the country in which they were conducted. Table 2.3 provides details of different contexts. The data shows that 12 articles were conducted in the United States context, while Germany and India each had five studies. European countries studying consumer life insurance purchase behavior received a maximum of three votes in the cross-country context.

Table 2.3: List of Contexts

Contexts	N articles	Contexts	N articles
United States	12	Poland	1
Germany	5	Singapore	1
India	5	Sri Lanka	1
Malaysia	4	Sweden	1
China	3	Taiwan	1
Italy	3	Tunisia	1
Nigeria	2	United Kingdom	1
Romania	2	Multiple Countries	4
Switzerland	2	31 European countries	4
Australia	1	17 Middle East and North America	1
East Germany	1	25 OECD countries	1
Ghana	1	12 Asian countries	1
Vietnam	1	17 emerging economies from Asia and Europe	1
Japan	1	17 MENA countries	1
Mexico	1	28 European countries	1
Minnesota	1	31 African countries	1
Montenegro	1	41 Romanian countries	1
Ontario	1		

Theories

- Expected Utility Theory
- Life Cycle Model
- Theory of Reasoned Action
- Behavioral Economic Theory
- Prospect Theory
- Unified Human Capital Based model
- Attribution Theory
- Cognitive Model
- Collective Household Model
- Commitment Trust Theory
- Constant Absolute Risk Aversion Model
- Contract Theory
- Death-Contingent Claim Model
- Lifecycle Consumption & Portfolio Choice Model
- Lifecycle Model with Tax Incentives & Bequest Motive
- Mean Variance Theory
- Portfolio Taxation Theory
- Portfolio Theory
- Regulatory Focus Theory
- Social Exchange Theory
- Stochastic Differential Utility
- Supervision Theory
- Technology Acceptance Model
- Theory of Bounded Rationality
- Theory of Insurance Consumption
- Theory of Interdependence
- Theory of Planned Behavior
- Theory of Relationship Marketing
- Utility Model with Partial Borrowing Limit
- Wage Earner's Lifetime Model
- Dual Process Theory of Thinking, Knowing and Information Processing

Contexts

- United States
- Germany
- India
- Malaysia
- China
- Italy
- Nigeria
- Romania
- Switzerland
- Australia
- Vietnam
- Japan
- Mexico
- Minnesota
- Montenegro
- Ontario
- Poland
- Singapore
- Sri Lanka
- East Germany
- Ghana
- Sweden
- Taiwan
- Tunisia
- United Kingdom
- Multiple countries
- Multiple OECD countries
- Multiple Asian countries
- Multiple MENA countries
- Multiple European countries
- Multiple Romanian countries
- Multiple African countries
- Multiple Middle East and North America
- Multiple Emerging Economies from Asia and Europe

Methods

Research Methods
- Log Linear regression
- Logistic Regression
- Probit Regression
- OLS Regression
- Factor Analysis
- Theoretical Model
- Tobit Regression Model
- Fixed effects model
- Random Effect model
- Bootstrap method
- Case study
- Chi square test
- Floodlight Analysis
- GMM estimation
- One way ANOVA
- PLS-SEM method
- Polled GLS Regression
- t-test
- Pooled OLS
- Interval regression

- Linear regression model
- Multiple regression model
- Panel Data Regression Analysis
- Difference in difference estimator
- Dynamic Panel regression model
- Importance-performance map analysis
- Instrumental variables regression
- Multinomial logistic regression
- Multiple correspondence analysis
- Multivariate analysis of variance
- Multivariate linear regression
- Natural Experiment
- Pooled Probit Regression Model
- Spatial Econometrics Methodology
- Structural Time Series Analysis
- Synthetic Regression
- Augmented Dickey-Fuller (ADF) Test
- Binary logistic regression analysis
- Bivariate probit regression model
- Cohort Regression Method

- Cross country Panel Data Analysis
- Cross-sectional time series feasible least square technique
- Data envelopment analysis
- FGLS regression technique
- Polled GLS Regression

Data Collection Methods

Secondary Data

Primary Data

Experiment
- Randomized control Experimental
- Natural Experiment
- Psycho-physiological experiment

Interview
- In depth telephonic interviews
- Computer assisted telephonic interview

Survey
- Web-based Survey

Antecedents

Individual-related
- Age
- Gender
- Religion
- Ethnicity
- Education
- Marital Status
- Health Status
- Financial Literacy
- Mortality Risk
- Occupation Type
- Human Capital
- Financial Proximity

Service-related
- Service Experienced
- Company Loyalty
- Ease of Procedure
- Satisfaction Level
- Company Image
- Product Accessibility
- Company-Client Relationship
- Trust on Insurance Company
- Usefulness of online technology
- Service Quality provided by company
- Lack of Confidence on Insurance Company
- Trust on Insurance Agents
- Interaction Intensity of the agents
- Service Quality provided by agents
- Overt Information sharing by the agents
- Covert Information sharing by the agents

Family-related
- Family Structure
- Presence of Dependents
- Marital Bargaining Power
- Number of Dependents
- Average Number of Dependent Years
- Age Differential
- Age of Children
- Number of Children
- Education of Spouse
- Labor Participation by Spouse

Company-related
- Foreign Market Share
- Solvency Margin Ratio
- Surplus Participation rate
- Efficiency of Insurance Company

Finance-related
- Liability
  - Health Expenditure
  - Financial Vulnerability Index
  - Positive correlation between return on human capital and financial market
- Asset
  - Wealth
  - Net Worth
  - Annuity Wealth
  - Saving Level
  - Real estate
- Ownership
  - Net Liquid Asset Holding
  - Ownership of transportation and communication device
- Income
  - Current Income
  - Future Income

Macroenvironment-related
- Economic
  - Inflation
  - HDI Index
  - Asset Index
  - Interest Rate
  - Tax Reforms
  - Fiscal Freedom
  - Business Freedom
  - Income per capita
  - Disposable Income
  - Income Distribution
  - Marginal Propensity
  - Unemployment rate
  - Utility Discount Rate
  - Gross savings per capita
  - Global competitive index
  - Marketization level
  - Monopolistic Market
  - Banking sector development
  - Financial sector development
  - Share of health expenditure in GDP
  - Gross savings as percentage of GDP
  - Asymmetry in retired couples pension income distribution
- Regulatory
  - Regulatory Quality
  - Rule of law
  - Partial Borrowing Limit
  - Capital requirement
  - Supervisory control on the policy conditions of life annuity and pension product
- Governmental
  - Social Security
  - Institutional Quality
  - Government Spending
  - Government Effectiveness
- Cultural
  - Individualism
  - Power distance
  - Masculinity/Femininity
  - Long-term orientation
- Population
  - Birth rate
  - Hazard rate
  - Life expectancy
  - Dependency ratio
  - Youth dependency ratio
  - Elderly dependency ratio
  - Children dependency ratio
- Geographical
  - Seasonal effect
  - Size of the city
  - Region of residence
  - Degree of urbanization

Behavior-related
- Risk aversion
- Risk Tolerance
- Subjective Norm
- Survival probability
- Trust on future
- Long-term saving attitude
- Smart Device Acceptance
- Emotional arousal to losses
- Spirituality and religious belief
- Experience of the death of family member
- Prevention as investment strategy
- Financial activity of investing/purchasing
- Motives
  - Charitable Motive
  - Bequest Motive
  - Life cycle Motive
  - Precautionary Motive
  - Wealth Accumulation Motive
- Information Source
  - Financial Advisor
  - WOM Recommendations
  - Recommendation by family and friends
  - Trade descriptions and conversation with family and friends
- Perception
  - Risk perception
  - Financial Perception
  - Perceived Protection
  - Perceived Transparency
  - Pre-conceived need of pre-independent income fund
- Behavioral Biases
  - Loss aversion
  - Status Quo
  - Anchoring
  - Signaling
  - Money Illusion
  - Mental accounting

Product-related
- Premium
- Price Bundling
- Loading Factor
- Modality of Payment

Decisions

- Face Value
- Intention to buy
- Willingness to insure
- Investor decision making
- Life Insurance Ownership
- Satisfaction with the product
- Income fraction paid for insurance coverage
- Perception towards investment in life insurance
- Likelihood of recommending the offer
- Life insurance premium paid or not
- Amount of Life insurance premium paid

Outcomes

- Life Insurance Density
- Purchase rate
- Life insurance penetration and density
- Life insurance penetration
- Life insurance premium per capita
- Gross Premium Written
- Gross Premium Income
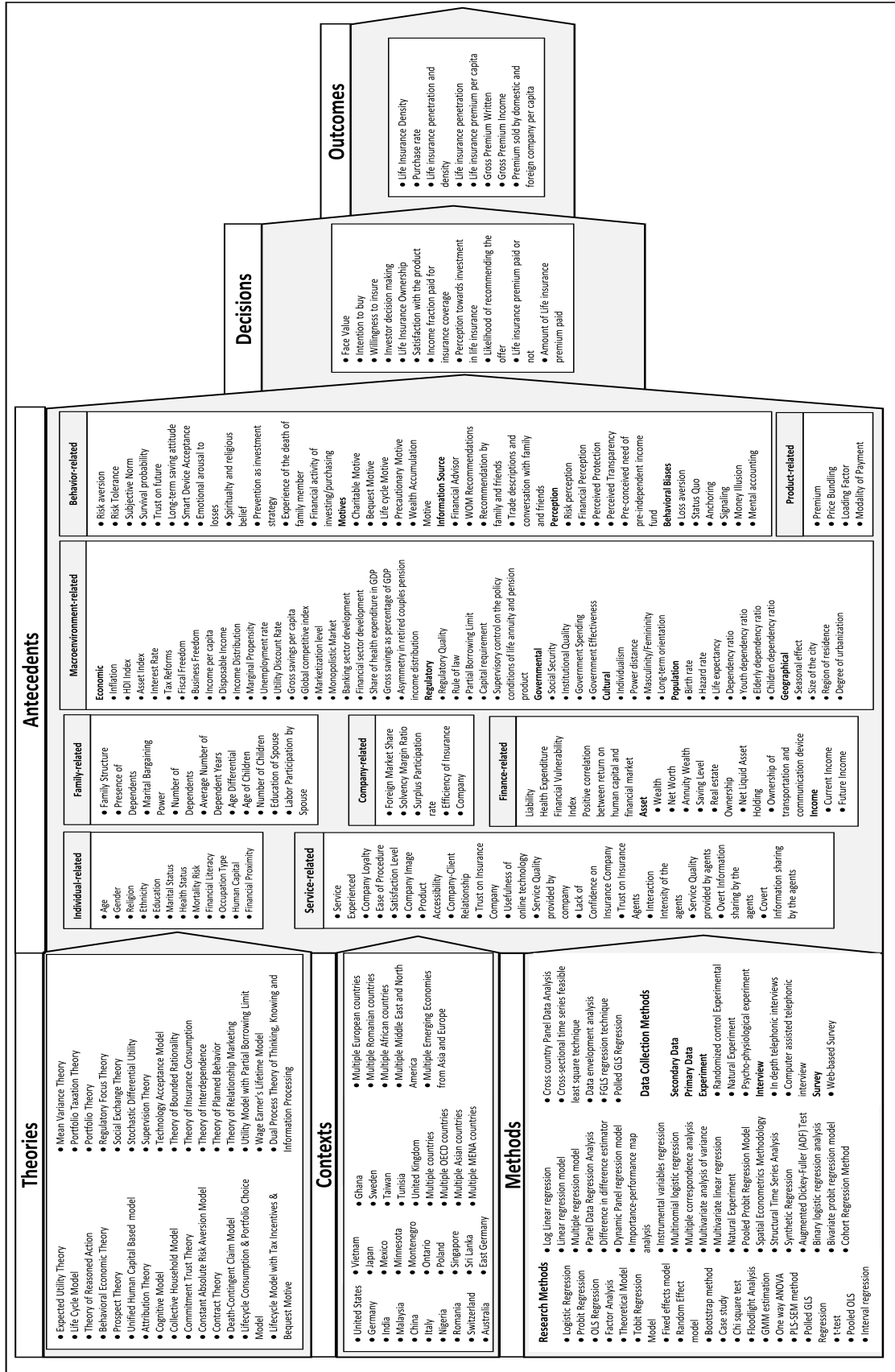- Premium sold by domestic and foreign company per capita

Figure 2.3: Consumers life insurance purchase behavior using TCM and ADO frameworks

2.4.3 Methods

Methods involve systematic collection and analysis of the data used for empirical investigations (Lim et al., 2021). In this review, methods of data collection and their analysis used by the studies are examined to characterize 76 articles under study. Table 2.4 shows the different data collection approaches used in 76 articles, and Table **??** represents various data analysis methods used in them.

Table 2.4: Data Collection Methods

Data Collection Methods	N articles
Survey	19
Web-based Survey	2
Experiment	8
Randomized control Experimental	1
Natural Experiment	3
Psycho-physiological experiment	1
Interview	5
In-depth telephonic interviews	1
Computer assisted telephonic interview	1
Secondary Data	41

The data analysis method is further divided into quantitative and qualitative methods. Out of all quantitative methods used to perform the data analysis, researchers have mostly preferred using the regression method with 71 votes. Among these, logistic and probit regression methods have attained the highest of 11 votes each. This is followed by OLS regression, Linear regression model, and Tobit regression models, with 10, 7, and 6 votes, respectively. The other quantitative data analysis method many researchers prefer is the factor analysis method with seven votes. Only nine studies used a qualitative method to analyze the data. This includes developing theoretical models with eight votes and a case study with one vote.

Articles under review involve both primary data and secondary data collection methods. The primary data collection method includes data collection using survey methods, interview methods, and experiment methods. The distribution indicates that articles used secondary data as a data collection method in estimating the purchase behavior or de-

Table 2.5: Data Analysis Methods

Quantitative Data Analysis	**N Articles**		
Regression Method (71)		Factor Analysis	7
Logistic Regression	11	Chi square test	1
Probit Regression	11	Cross country Panel Data Analysis	1
OLS Regression	10	Time series Analysis	2
Regression Model	7	Data envelopment analysis	1
Tobit Regression Model	6	Importance-performance map analysis	1
Panel Data Regression Analysis	5	ANOVA	2
Multiple regression model	4	PLS-SEM method	1
Linear regression model	3	Spatial Econometrics Methodology	1
Log Linear regression	2	t-test	1
Binary logistic regression analysis	1	Others (12)	
Bivariate probit regression model	1	Fixed effects model	3
Cohort Regression Method	1	Random Effect model	2
Dynamic Panel regression model	1	Augmented Dickey-Fuller (ADF) Test	1
FGLS regression technique	1	Bootstrap method	1
Interval regression	1	Difference in difference estimator	1
Instrumental variables regression	1	Floodlight Analysis	1
Multinomial logistic regression	1	GMM estimation	1
Multivariate linear regression	1	Multiple correspondence analysis	1
Polled GLS Regression	1	Pooled OLS	1
Pooled Probit Regression Model	1	**Qualitative Data Analysis**	
Synthetic Regression	1	Conceptual/Theoretical Model	8
		Case study	1

mand for life insurance. Out of the different primary data collection methods, survey methods are the most widely used methods, with 21 votes. This is followed by 13 votes on experiment methods.

2.5 ADO framework-based review of the studies

This section focuses on the ADO used in the studies under review. This involves identifying the antecedents influencing consumers' decisions to purchase or not to purchase an LIP and examining their direct or indirect effect on outcomes. Table 2.6 presents the relationship map of the ADO of 76 articles in consumers' life insurance purchase behavior context (using the voting method proposed by Kahiya, 2018).

Table 2.6: Relationship map of the ADO in consumers' life insurance purchase behavior context

Antecedents	Decisions																																	Outcomes																																							Total		
	Life insurance ownership			Amount of life insurance coverage			Face value			Intention to purchase			Amount of premium paid			Perception towards investment in life insurance			Investor decision making			Income fraction paid for insurance coverage			Intention, satisfaction, likelihood			Willingness to insure			Change in LI ownership			Proportion of human capital being insured			Purchase rate			Life insurance density			Life insurance penetration			Life insurance penetration and density			Life insurance premium per capita			Gross premium written			Gross premium income			Premium sold by domestic and foreign company			per capita			Asset base of all LI company			Direct premium written growth			Life insurance consumption			Positive	Insignificant	Negative
	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	0	-	+	-	-
Individual-related antecedents	20	6	3	3	0	1	5	1	2	1	3	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	2	3	0	0	0	0	1	0	2	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	14	10
Financial-related antecedents	10	0	3	7	0	1	7	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	33	2	8
Behavioral-related antecedents	9	1	1	11	0	4	0	1	6	0	1	4	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	41	2	6
Family-related antecedents	1	3	2	2	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	1	13	4	7
Company-related antecedents	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	1
Product-related antecedents	1	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	4
Service-related antecedents	4	0	0	0	0	0	0	0	0	7	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	16	0	1
Macroenvironment-related antecedents	5	2	1	2	1	2	0	1	1	0	0	3	0	3	0	3	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	1	1	3	9	2	0	5	21	5	7	1	1	1	6	2	4	2	1	1	2	4	1	0	1	1	0	0	1	0	1	0	0	3	0	1	57	14	38
Total	51	12	10	28	0	7	18	1	8	14	6	2	9	0	3	1	0	0	4	0	1	4	0	1	4	2	0	1	2	0	1	1	0	2	0	1	1	0	0	13	6	9	3	0	6	26	5	9	4	1	1	7	3	5	2	1	1	5	0	4	1	0	1	1	0	0	3	0	1	204	36	75

2.5.1 Antecedents

In this chapter, a total of 136 unique antecedents are obtained from 76 articles considered in this review. The antecedents used by the studies under consideration are classified into eight broad categories, namely individual-related antecedents, family-related antecedents, finance-related antecedents, behavior-related antecedents, company-related antecedents, product-related antecedents, service-related antecedents, and macroenvironment-related antecedents. This section examines the different antecedents and their direction of influence on decisions and outcomes using the voting method suggested by Kahiya (2018).

2.5.1.1 Individual-related antecedents

Individual-related antecedents include age, education, marital status, gender, religion, ethnicity, occupation type, financial literacy, mortality risk, financial-proximity, health status, and human capital. The relationship map (Table 2.6) indicates a total of 47 associations between individual-related ADO variables. In the following, the influence of each individual-related antecedent is discussed.

In the literature, the age of the consumer or the husband-and-wife average age is used to express the age factor. In general, the demand for the LIP increases as individuals grow a family and decreases as they age. This depicts that the consumers' age and the demand for the LIP are related non-linearly (Brighetti et al., 2014; Buric et al., 2017; Chen et al., 2001; Frees and Sun, 2010; Luciano et al., 2016; Sauter, 2014; Tan et al., 2009).

To capture this non-linear relationship between age and life insurance demand, some studies used the age square factor ($age^2/1000$). As individuals grow a family, they purchase a LIP to protect the family members from financial loss in case of premature policyholder death. However, as individuals age, their probability of death increases, leading to a rise in the face value of LIP and high premium payments. A couple of studies only found a positive relationship between age and demand for life insurance since they considered respondents of age less than 55 years and of a mean age of 31 years, respectively (Sauter, 2014; Tan et al., 2009). In contrast, few studies also found the negative effect of age on the demand for life insurance. For instance, Arun et al. (2012) examined that the

demand for micro-life insurance decreases with age. They explained that middle-aged consumers hold a LIP of a lesser amount and increase the amount as they get older due to a greater incentive to protect their family in case of premature death.

The *financial literacy* level of a consumer denotes his/her knowledge and awareness about financial products. Lin et al. (2017) used a literacy scale consisting of four factors, namely insurance and pension planning, money management and savings, financial and investment planning, and credit and loan management, to measure the individuals' financial literacy level. They found a positive influence of financial literacy on consumers' life insurance ownership. Moreover, married, financially literate consumers are more likely to purchase life insurance, and women with financial literacy are more prone to purchase a LIP. Similarly, Mare et al. (2019) used the five-item insurance literacy index to assess the insurance literacy of the consumer. The study identified a positive effect of insurance literacy on life insurance density in a country. This implies that consumers with better knowledge of the different types of LIPs in the market, knowledge related to the rights and obligations of a life insurance contract, etc. are more inclined towards purchasing LIPs and thus contribute towards increasing life insurance density in a country.

The *occupation type* of the head of the household has a significant effect on life insurance ownership. Ampaw et al. (2018) found that consumers with self-employment and wage/salaried employees are more likely to own LIP than consumers engaged in domestic employment, family employment, or apprenticeship. Similarly, Brighetti et al. (2014) identified that being in a managerial career increases the likelihood of holding an LIP compared to employees or pensioners. Also, Buric et al. (2017) considered employee, self-employed, and not employed as the occupation type in their study. They concluded that employed consumers are more inclined towards purchasing LIP than unemployed consumers. Also, Luciano et al. (2016) identified that self-employed consumers are more likely to own LIP than salaried. Kakar and Shukla (2010) considered regular salary/wages, self-employment in non-agriculture, labor, self-employment in agriculture, and other occupations. Their findings suggested significantly high participation of salaried self-employed households in life insurance purchase decisions (LIPD). How-

ever, households engaged in casual labor have very low participation.

Studies in the literature measure the *education* of consumers in different ways. For instance, Eisenhauer and Halek (1999) considered years of formal education in school, whereas Zerriaa and Noubbigh (2016) used the gross enrollment rate in tertiary education to measure education level. Consumers with higher education levels (defined in either of the three ways) have better knowledge and understanding of risk management, especially in the LIP context. Also, they are financially stable enough to purchase the LIP. Thus, profoundly educated consumers are more likely to purchase a LIP (Gandolfi and Miners, 1996; Buric et al., 2017; Eisenhauer and Halek, 1999; Frees and Sun, 2010; Hwang and Gao, 2003; Kakar and Shukla, 2010; Li et al., 2007; Lim and Tan, 2019; Mahdzan and Victorian, 2013; Mureşan and Armean, 2016; Yuan and Jiang, 2015; Zerriaa and Noubbigh, 2016). On the contrary, some studies also identified the negative effect of education on LIPD. Zerriaa et al. (2017) and Mitra (2017) explained the negative effect of education by the fact that consumers with higher education are capable of managing risky assets and thus more interested in a diversified portfolio instead of purchasing the LIP. Education is identified to have no significant effect on the purchase of endowment policy. In contrast, it depresses the intention to purchase term life insurance policies and is bought by poor households with a bequest motive (Inkmann and Michaelides, 2012). The study by Celik and Kayali (2009) examined that consumers with higher education levels are critical in analyzing their consumption and thus avoid purchasing LIP. Moreover, Outreville (2015) found that the level of education dampens consumers' risk aversion level, implying a decline in the demand for life insurance with the increase in the level of education.

Consumers of a particular *ethnic group* affect their decision to purchase the LIP. Lim and Tan (2019) performed a study in Malaysia and asked the respondents to indicate their ethnicity as either Chinese, Indian, Malay, or others. The findings showed that consumers of Chinese ethnicity purchase more LIPs than Malay, as Malay citizens have more inclination towards Islamic LIPs as compared to conventional LIPs. The author explained this by the fact that the majority of Malay in Malaysia are Muslim, who strongly

believe that their life is in God's hands and are against purchasing conventional LIP, which is based on uncertainty and gambling.

Beck and Webb (2003) conducted a study to assess the effect of *religions* like Catholicism, Protestantism, and a composite of other religions. They found a significant impact of religion on life insurance penetration. The study stated that consumers' religious inclination reflects their attitude towards life insurance institutions and their risk aversion level. Whereas Zerriaa and Noubbigh (2016) found that life insurance penetration decreases in the region, with a high proportion of the Islamic population as Islamic believers are assumed to consider the purchase of life insurance against Allah's will.

Studies have shown that males are more likely to own an LIP than females. Females consider their importance in the family as emotional support rather than monetary support. They do not perceive the risk of death as necessary as losing the bread earner of the family (Luciano et al., 2016). Furthermore, males have higher mortality rates than females and are assumed to hold the key responsibility for the financial well-being of their families in case of premature death (Lim and Tan, 2019).

Eisenhauer and Halek (1999), Nagy et al. (2019), and Sauter (2014) found a significant positive effect of the marital status of the head of the household on their willingness to insure and life insurance ownership, respectively. Married head of households purchases a LIP to cover the uncertain risk of their premature death and to fulfill their financial commitment towards their spouse and children in that case. Similarly, Lin et al. (2017) identified that financially literate married consumers are more likely to purchase LIP. On the contrary, Mahdzan and Victorian (2013) found that single individuals are more likely to purchase an LIP than married couples as they have less financial expenditure than married couples.

He (2009) conceded mortality risk as to the death of a consumer during the sample period instead of asking about consumers' perceptions of their risk to mortality. The author found a positive influence of estimated mortality risk on life insurance ownership decisions. According to the study, consumers who died within the sample period presumably own a term life insurance policy. The research suggests that consumers assess their

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mortality risk quite accurately and have purchased a term life insurance policy.

Luciano et al. (2016) referred to financial proximity as consumers' familiarity with the financial market's different opportunities and the importance of diversifying their funds. The authors used home ownership and stock holding as variables to estimate the consumers' financial proximity. They found that financial proximity has a positive and significant influence on consumers' life insurance ownership.

Ampaw et al. (2018) assessed the health status of the respondent by asking a question to select "1" to denote ill health or injury in the last two weeks and "0" otherwise. In contrast, Shi et al. (2015) used four categories, very bad, bad, so-so, and good, or very good, to denote the health status of the respondents. Both identified a negative correlation between health status and life insurance purchases (Ampaw et al., 2018; Shi et al., 2015).

In the literature, studies found the value of human capital affects life insurance purchases positively, explaining that the value of human capital increases the future or expected income, increasing the incentive to purchase the LIP.

2.5.1.2 Family-related antecedents

Family-related antecedents are related to the family characteristics of the consumer. A total of 10 family-related antecedents were revealed from the literature. The relationship map (Table 2.6) reveals 41 associations between family-related ADO variables. The influence of each family-related antecedent on consumers' life insurance purchase behavior is discussed in detail.

The age of children also plays a significant role in influencing the demand for life insurance. Various studies found both positive and negative influences on LIPD. The positive effect is that couples with children of smaller age groups tend to be more responsible and have a longer horizon to invest in life insurance (Nagy et al., 2019). Contrarily, the negative effect is due to the shrink of children's need to bequest, as with growing age, they become independent (Chang, 2004).

Another family-related antecedent is *age differential*. Chang (2004) showed that the age differential has a positive effect on life insurance consumption because the younger

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child will take a longer time to reach independence. The household breadwinner has to purchase life insurance to protect the needs of the youngest child.

Gandolfi and Miners (1996) determined that the full-time *labor participation* of the wife has a positive impact on her life insurance ownership. However, it has a negative impact on her husband's life insurance ownership. In contrast, the part-time labor participation of the wife does not significantly impact the husband's ownership of life insurance. Still, it has a positive impact on the wife's life insurance ownership. Moreover, the educational attainment of the wife has a significant negative impact on the husband's life insurance coverage. This is because higher educational attainment implies a higher income profile of a working full-time wife, which, in turn, reduces the life insurance coverage by the husband.

The *presence of dependents* is explained to have a significantly positive effect on life insurance underwritten (Brighetti et al., 2014). Li et al. (2007) defined the number of dependents as the ratio of dependents to the working-age population between 15 and 64. The population below 15 and above 64 is considered as the dependent population. They found a positive effect of the number of dependents on premiums sold by life insurance companies per capita. Ampaw et al. (2018) identified the effect of the number of dependents as significantly positive for female heads and insignificant for male heads. The study was conducted in Ghana, where it is believed that female heads of the family in the absence of male heads are more likely to emerge and efficiently manage the family's financial burden. Thus, to safeguard the future needs of their dependents, the female heads of the family transfer the financial risk of their sudden demise by purchasing life insurance policies.

The *family structure* is demonstrated to have a significant effect on the demand for life insurance. The family with members of the age group of 25 to 55 and senior citizens tend to own less amount of life insurance (Luciano et al., 2016).

With the increase in the average *number of dependent years*, the amount of life insurance ownership by the wife also increases. This indicates a positive relationship between the average number of dependent years and the amount of life insurance ownership (Gan-

dolfi and Miners, 1996).

Wong (2015) used the *marital bargaining* model to test the effect of joint and collective decision-making between spouses (where the spouse's opinion is assumed to differ) on their purchase of a term life insurance policy. The study found that in the case of the balance of bargaining power between husband and wife, the amount of life insurance covering the husband's life is influenced. In contrast, when the bargaining power is shifted towards the husband, there is an increase in the amount of life insurance coverage of the wife, where the wife contributes significantly to the household income. Moreover, no significant relationship exists between the marital bargaining power and the amount of LIP purchased when the final say of the wife is considered.

2.5.1.3   Finance-related antecedents

Under this category, the financial characteristics of the consumers are discussed. A total of 13 finance-related antecedents are uncovered from the articles under review. The relationship map (Table 2.6) indicates 33 positive and eight negative associations between these 13 finance-related antecedents and dependent variables.

The total asset held by the household is an essential antecedent influencing LIPD. The broad category "Assets" includes consumer's wealth, annuity wealth, ownership of real estate, net worth, ownership of transportation and communication devices, net liquid asset holding, and saving level.

Wealth held by the consumer is determined to have a positive influence on LIPD since wealthier consumers are more risk-averse and inclined to cover the mortality risk by purchasing an LIP (Ampaw et al., 2018; Eisenhauer, 1997; Shi et al., 2015). Eisenhauer (1997) also obtained similar findings by controlling loss probabilities, household size, income, age, inflation, and premium expenses. However, some studies have contradicting results; that is, household wealth influences LIPD negatively (Chen et al., 2006; Di Matteo and Emery, 2002; Pliska and Ye, 2007). The wealthier a consumer is, there is less incentive to purchase life insurance. Inkmann and Michaelides (2012) analyzed the determinants of term life insurance and endowment policies. They found that the wealth

of the consumer has a negative influence on their purchase of a term life insurance policy and a positive influence on the endowment policy. The plausible reason given was that term insurance policies are bought for bequest motive by relatively poorer households.

An increase in *annuity wealth* results in a decrease in the non-liquid conventional asset holdings and an increase in the marginal utility of bequeathable wealth (Hau, 2000). Thus, annuity wealth is determined to have a positive effect on the term value of all life insurance holdings by the consumer. Similarly, the ownership of either transportation and communication devices or only communication devices has a significant and positive effect on the consumer's participation in life insurance ownership (Kakar and Shukla, 2010; Shi et al., 2015).

A consumer's *net worth* positively affects life insurance coverage (Eisenhauer and Halek, 1999; Hau, 2000). Hau (2000) calculated consumers' net worth by subtracting the total debt from the sum of conventional asset holding and annuity wealth.

Moreover, *ownership of real estate* increases the income fraction paid for life insurance coverage (Arun et al., 2012) and the amount of life insurance ownership (Gandolfi and Miners, 1996). Firstly, consumers with ownership of land are financially capable of purchasing an LIP, and secondly, LIP is required for many home mortgages. Besides, Frees and Sun (2010) investigated that real estate ownership is having a negative effect on the face value of the term insurance policy and its positive effect on the whole LIP. They explained that consumers with real estate ownership are more likely to diversify their investment and purchase LIP with a saving component.

According to Hau (2000), the *net liquid conventional asset holding* of a consumer refers to "the holding of conventional assets that do not incur or incur little capital loss in case of immediate liquidation." The author found a negative relationship between net liquid conventional asset holdings and the consumer's life insurance holding.

The increase in household *saving levels* also increases the ownership of LIP (Song et al., 2019). Households with a high saving level prefer to preserve the value of the savings and purchase life insurance to cover the mortality risk, thus using both the saving amount and coverage amount to maintain the standard of living (Hammond et al., 1967).

Frees and Sun (2010) found that the household's *total debt* has a positive influence on the demand for life insurance, as the purchase of life insurance will protect the survivors from the burden of debt.

Based on the explanations of the household's *income* in the studies, the household income is further classified into two sub-categories: current income and future income. The household's current income level is found to have a positive effect on the face value of LIP (Frees and Sun, 2010). Households with high income levels are more risk-averse and thus increase their demand for LIP. Also, as household income increases, it increases the household's overall financial capability to purchase an LIP (Kakar and Shukla, 2010; Lee et al., 2018). Gandolfi and Miners (1996) determined that household income has a positive impact on the life insurance ownership amount by husband and wife. Moreover, a study by Shi et al. (2015) considered the non-linear relationship between income and money spent on LIP and found that the income factor has a hump-shaped effect (the demand increases in a curvilinear fashion up to a particular income and then starts decreasing) on demand for LIP. In contrast, a study also observed a negative effect of income on life insurance purchases. It explained that life insurance is an inferior product compared to other financial products in the market with complementarities (Alhassan and Biekpe, 2016). However, Mathew and Sivaraman (2017) associated higher income with the educational level of the consumer. They thus explained that consumers with higher educational levels better manage their risk by investing in low-cost, high-yield financial products.

In addition, Pliska and Ye (2007) and Zhu (2007) explained that the consumer's *future income* has a positive impact on life insurance ownership, as high future income incentivizes consumers to buy LIP.

Alhassan and Biekpe (2016) found a positive correlation between *health expenditure* per GDP and life insurance penetration. The researchers observed that investments made by consumers in social health insurance are independent of owning an LIP. Hence, the consumer's having social health insurance does not restrict them from owning a LIP.

The *Financial vulnerability index* is expressed as the degree of the financial impact,

i.e., the decline in the standard of living of the household member in the event of the death of the family (Lin and Grace, 2007). Frees and Sun (2010) identified that the higher the financial vulnerability index of the household, the higher the household probability to own term life insurance. However, for an extremely high financial vulnerability index, households are less likely to own a term insurance policy.

Based on the household's risk diversification theory, the *positive correlation between the return on human capital and the financial market* decreases the money spent on LIP (Shi et al., 2015).

2.5.1.4 Company-related antecedents

This category includes antecedents such as surplus participation rate, foreign market participation, the efficiency of the life insurance company, and solvency margin ratio that reflect the insurance company's profile, affecting the LIP's demand. In the relationship map (Table 2.6), these antecedents are identified to have five positive and only one negative association with the dependent variables.

Eling and Kiesenbauer (2012) described the *surplus participation* rate as the indicator that measures the insurer's performance and reflects the discipline in the life insurance market. The study identified a positive influence of surplus participation rate on the life insurance demand. According to the study, with the changes in the product characteristics, customers discipline the life insurance market by changing the demand for the insurance product.

Li et al. (2007) found a non-linear relationship between *foreign market participation* and life insurance demand, i.e., the demand for life insurance is high at both high and low levels of foreign market participation, whereas, at an intermediate level, the influence of this factor is significant. At high levels and low levels of foreign market participation, the life insurance market is very competitive and saturated, respectively, resulting in high demand for life insurance. In contrast, at the intermediate level, Sen and Madheswaran (2013) identified that foreign participation affects insurance consumption positively. However, Sliwinski et al. (2013) observed the opposing effect of the share

of foreign company's life insurance demand. The higher *efficiency of an insurance company* implies more benefits for its customers. Tan et al. (2009) observed that with the rise in the company's efficiency, the demand for their LIPs increases. The author used data envelopment analysis to estimate the company's efficiency.

Park and Tokutsune (2013) used rating changes and solvency margin ratios to assess the insolvency risk of insurers in Japan. The study identified that the *solvency margin* ratio of a foreign life insurance company determines the demand for foreign life insurance. However, no significant effect of financial strength on demand for domestic LIPs is observed. The author explained this phenomenon by stating that not all domestic life insurance companies receive financial strength ratings from the agencies, and understanding the solvency margin ratio is a little complex for the consumers.

2.5.1.5 Product-related antecedents

The premium, loading factor, price presentation, and payment mode are critical antecedents that influence consumers' LIPD. The relationship map (Table 2.6) reveals only two positive and four negative associations between antecedents and dependent variables.

The higher the *price* of the LIP, the lesser the amount of LIP purchased. Thus, the price of the life insurance product has a negative influence on its demand (Nagy et al., 2019). Other factors that contribute to the price of the policy are premium and its loading factors. The amount of LIP purchased decreases with the increase in the net premium paid by the consumer (Zhu, 2007). Similarly, with the rise in the life insurance *premium's loading factor*, which increases the total premium paid, life insurance demand decreases (Eisenhauer and Halek, 1999; Wang, 2019).

Huber et al. (2015) examined the effect of the different *price presentations* on unit-linked life insurance purchases. The study identified that the different manners of price presentations do not have a significant impact on customers' LIPD. However, very experienced consumers prefer insurance products with bundled price presentations

The *payment mod* (weekly, monthly, or lump-sum payment) of the premium significantly affects the demand for term life micro-insurance (Bauchet and Morduch, 2019).

However, paying in pieces increases the payment cost; the plausible explanation was that consumers purchase micro-life insurance to maintain liquidity and savings.

2.5.1.6 Service-related antecedents

Services are the intangible component of the life insurance product (Zeithaml, 1981). Antecedents related to this category include antecedents corresponding to the services provided by the agents and services provided directly by the company. As reflected in the relationship map (Table 2.6), most service-related antecedents have a positive effect on the decision and outcome variables, thus indicating an overall positive impact of services provided by agents or insurance companies on purchasing LIP.

Agents are the first contact of the customers with the company. The *quality of service provided by agents* plays a vital role in the customer's decision-making. It includes the knowledge and skill of the agent to handle customers' queries, the reliability of agents, the empathy of agents towards the customer, responsiveness, and others (Parasuraman et al., 1988). Thus, service quality provided by agents has a significantly positive influence on the life insurance the consumer owns (Chow-Chua and Lim, 2000).

Ankitha and Basri (2019) conducted a study to understand the impact of *r*elational selling on purchasing an LIP. They used different relational selling behavioral variables such as cooperative intentions, interaction intensity, personal rapport, mutual disclosure, trust, and policy information. The study used "trust" as a mediating variable, and the scale to measure each factor was adopted from the studies on the relationship marketing theory.

Understanding consumers' *perceptions towards the company* is the prerequisite for insurance companies to serve their customers better. This category involves different antecedents that explain consumers' perceptions of the life insurance company. Epetimehin (2011) found a positive relationship between service quality, company loyalty, ease of procedure, company image, satisfaction level, intention to purchase, and company-client relationship.

Nagy et al. (2019) found a positive effect of the *use of technology* on a consumer's

willingness to insure. This correlation may be due to the increase in the use of online technology to perform financial transactions and consumers' inclination towards adopting it for life insurance purchases. To assess the usefulness of online technology, a five-item scale from the Technology Acceptance Model is used.

Mureșan and Armean (2016) suggested that a consumer's *experience with insurance* plays an essential role in determining life insurance ownership. The author categorized the factor into four levels: very unpleasant, unpleasant, pleasant, and very pleasant, and concluded that a pleasant experience has a positive impact on LIPD.

In the insurance sector, *trust* is of paramount value and explains business ethics; thus, consumers' trust in the insurance company is observed to have a positive correlation with LIPD (Mureșan and Armean, 2016).

The life insurance sector is mainly based on trust and confidence, where both trust and confidence express consumers' perceptions of the insurance company. A consumer's *lack of confidence* in insurance companies declines their intention to purchase an LIP (Ejye Omar and Owusu-Frimpong, 2007).

2.5.1.7 Behavior-related antecedents

Behavior-related antecedents are those that explain the consumers' behavioral or psychological characteristics while making a life insurance purchase decision. In total, 47 associations are uncovered between behavior-related antecedents and dependent variables, with 41 positive votes and six negative votes (see Table 2.6).

Consumers save their money or assets for different motives. The literature has established a relationship between four primary saving motives, namely, precautionary motives, bequest motives, wealth accumulation motives, and life-cycle motives of the consumers and their amount of life insurance premium paid. (Mahdzan and Victorian, 2013). Mahdzan and Victorian (2013) found that consumers' *precautionary motives* have a significant impact on the amount of premium paid by them. This is because life insurance protects the insured dependents' future needs in case of his/her death. Consumers purchase life insurance to fulfill their precautionary motives. In the same paper, the re-

searchers posited that consumers' *life-cycle* motives positively influence the annual premium paid by them and hence increase the demand for life insurance. They measured life-cycle motives using four items by asking whether they bought life insurance for retirement, for the education of children, for their wedding, or for a newborn child in the family. Also, the researchers examined a positive correlation between consumers' *wealth accumulation motive* and an annual premium paid.

The *bequest motive* is identified to have a positive influence on the demand of term, whole life insurance, and micro-life insurance (Arun et al., 2012; Chen et al. 2006; Frees and Sun, 2010; Inkmann and Michaelides, 2012; Mahdzan and Victorian, 2013; Sauter et al., 2015; Zhu, 2007). However, no correlation exists between the consumers' motives to bequest and ownership of the endowment policy (Inkmann and Michaelides, 2012). Also, being married, having children, and the number of children were identified as the key reasons behind consumers' bequest motives. Thus, studies often used these variables as proxies to measure the bequest motive (Arun et al., 2012). In addition to the saving motives, the researchers have found a significant effect of charitable motives of consumers on LIPD. Hau (2000) assessed the charitable motive of the consumer by using the past charitable donations made by them and determined a positive influence of the charitable motives on consumer's life insurance consumption.

Experience of the family member's death is positively correlated with life insurance ownership when controlling for the consumer's income, family size, savings, marital status, self-esteem, and risk-taking (Song et al., 2019). The study explained that the death of a family member results in the arousal of negative emotions, stimulating the demand for life insurance.

Chow-Chua and Lim (2000) and Ejye Omar and Owusu-Frimpong (2007) analyzed the effect of *recommendations by friends and family* on the consumer's decision to purchase life insurance. The study found a direct and significant positive impact of word of mouth on their decision to insure. Similarly, Lin et al. (2017) determined information from financial advisors, advertisements, family and friends, and trade descriptions as a positive determinant of the consumer's life insurance ownership.

Nagy et al. (2019) found *smart device acceptance* as a positive determinant of consumers' willingness to insure. They plausibly explained that consumers with smart device acceptance are more inclined to adopt new technologies and are self-aware about risk and uncertainties, and, hence, are more willing to purchase LIP.

Survival probability is obtained by asking the respondents about their belief in survival at a particular age (Chen et al., 2006). Inkmann and Michaelides (2012) and Chen et al. (2006) identified a negative impact of subjective survival on LIPD. They stated that consumers with high survival probability show greater inclinations towards not purchasing term life insurance policies. However, the impact of survival probability is positive for an endowment policy, as demonstrated by Inkmann and Michaelides (2012).

Studies identified that a person with a *high-risk aversion* level tends to avoid risk. It is determined to have a positive influence on consumer's LIPD to cover the uncertainty of the financial risk in the event of premature death (Chang, 2004; Chen et al., 2006; Han and Hung, 2017; Pliska and Ye, 2007; Wang, 2019; Zhu, 2007). On the other hand, the consumer's willingness to take the risk (with a low-risk aversion level) has a negative influence on life insurance ownership (Song et al., 2019). The study used a 10-item scale to assess the risk-taking level of the respondents.

Kakar and Shukla (2010) found that households *engaged in the financial activity* of either purchasing jewellery and durable products or investing in the financial market instead of borrowing money from the market have a high propensity to own LIP.

Gill et al. (2018) pointed out that *religious belief* is associated with the consumer's risk-taking behavior and is positively correlated to the LIPD of the small business owner. Similarly, the author identified a positive correlation between consumers' spirituality and their decision to insure. As religious belief derives from consumer's spirituality, both the antecedents is examined to have a positive effect on LIPD (Gill et al., 2018).

Based on the studies conducted in neuroscience and behavioral sciences to understand human behavior under risk and uncertainty, Brighetti et al. (2014) hypothesized and empirically tested the influence of emotions on consumers' decisions to insure. They found that consumers with high *emotional arousal to losses* tend to purchase life insurance to

cover future losses by paying premiums. Even a small loss affects them emotionally, resulting in the purchase of life insurance to safeguard the futuristic losses.

A study by Kakar and Shukla (2010) proved that consumers with *long-term saving attitudes* are more focused on achieving long-term goals such as purchasing a house, children's education, their marriage, and retirement funds. As a result, they are more likely to go for long-term investments, i.e., life insurance purchases. Contrary to this, consumers with short-term goals like purchasing consumer durable, social ceremonies, and so on are less likely to purchase life insurance products.

As stated by the theory of reasoned action, "a person's behavior is determined by their intention to perform the behavior and that this intention is, in turn, a function of their attitude toward the behavior and subjective norms" (Fishbein and Ajzen, 1977). Ejye Omar and Owusu-Frimpong (2007) used this theory to understand consumers' life insurance purchase behavior and found a significant influence of *subjective norms* on the consumers' intention to buy LIP.

According to Brighetti et al. (2014), consumers with *trust in the future* are believed to be self-protective for their wealth, thus discarding external defence for their wealth. They found that a consumer's trust in the future is considered to be related to future reimbursements from life insurance and identified a positive effect on life insurance underwritten.

Luca (2018) described it as an investment strategy in which consumers aim to achieve financial safety by reducing the variance between the current state and the undesirable end state. Using multi-cumulative prospect theory, the study examined the positive impact of *"prevention as an investment strategy"* on the consumers' intention to purchase unit-linked LIP. The author used a consumer's perception of the unit-linked life insurance product as a mediating variable and a consumer's financial literacy as a moderating variable between prevention and consumer's perceptions. The study found a positive correlation between consumers' prevention strategy and their intention to purchase unit-linked insurance products, mediated by a consumer's perception of unit-linked LIP.

Perception includes consumers' perception of the life insurance product, their financial perception, and their beneficiary's perception of the pre-independent income fund.

Based on the dual-process theory of considering normative theory and bounded rationality theory, Huber and Schlager (2018) developed a framework to understand consumers' decision-making process to purchase unit-linked LIP. Under the normative theory, consumers use logical and analytical systems to evaluate purchase decisions. Under bounded rationality theory, consumers are believed to rely on their intuitive and gut feelings to evaluate the purchase decision. The author found a positive effect of risk avoidance on perceived risk, which in turn positively influences purchases. Also, the guarantee is determined to moderate the impact of risk avoidance and perceived protection. On the other hand, uncertainty avoidance positively affects perceived risk and perceived transparency, moderated by perceived expertise. Additionally, perceived transparency and perceived protection are identified to have a significant positive impact. In contrast, perceived risk has a negative effect on consumers' intention to purchase a LIP.

Financial perception is identified to have a positive relationship with the ownership of LIP (Kakar and Shukla, 2010). This may be due to the consumer's belief that he/she will manage to pay life insurance premiums even in case of the termination of the primary source of income.

Behavioral biases are errors that occur due to heuristics used for making choices, which results in the deviation of individuals' rational choice behavior (Tversky and Kahneman, 1974). In the context of life insurance, studies in literature analyzed the bounded rational behavior of individuals and identified different behavioral biases that influence their decision to insure. Coe et al. (2016) performed an experimental study on the employees of a company to understand their behavior toward purchasing employee benefit plans by controlling the factors such as income, age, education, marital status, and the number of children. The study found that employees were aware of life insurance's significance but could not decide what amount they should purchase. They identified status quo, money illusion, mental accounting, anchoring, signalling, and loss aversion as the potential behavioral biases that are responsible for consumers' deviation from taking the optimal decision.

2.5.1.8 Macroenvironment-related antecedents

Antecedents under this category encapsulate the characteristics of the marketing environment that influence life insurance purchase decisions and outcomes (Lim et al., 2021). Based on the different antecedents uncovered from the life insurance literature, macroenvironment-related antecedents are further divided into six sub-categories: economy-related antecedents, regulation-related antecedents, culture-related antecedents, geography-related antecedents, population-related antecedents, and government-related antecedents. The relationship map (Table 2.6) reveals that a significant amount of research (with 95 votes) is performed with respect to these antecedents.

Economic Antecedents

Human Development Index (HDI) consists of literacy rate, income per capita, and life expectancy. Emamgholipour et al. (2017) used the human development index to assess the population's risk preference in the Middle East and North Africa region. They identified a significant positive effect of HDI on demand for life insurance. They explained that to enhance the life insurance demand in the country, it is necessary to improve the life expectancy, literacy rate, and per capita income of the population.

Asset Index measures the household's asset endowment and is positively related to the income fraction the consumer pays to purchase micro-life insurance in Sri Lanka (Arun et al., 2012). The researchers found that households with a high asset index have a higher probability of holding micro-life insurance than households with lower asset endowments, as they are financially more stable to pay the premiums than their counterparts.

Hubener et al. (2014) measured *asymmetry in the pension income distribution* by the "ratio of the pension income share of the spouse to the total pension income share of the couple". They found this antecedent as a positive determinant of the face value of life insurance owned by the household. However, the ownership amount varies between husband and wife, i.e., husbands are found to hold more term life insurance than the wife. The author's plausible reason was that the household purchases a term life insurance to

cover the loss of annuity income in case of the spouse's premature death with high annuity income after retirement and not to bequest the wealth for their children.

According to Mare et al. (2019), the *unemployment rate* decreases the density of the life insurance market in Romania. The increase in the employment rate increases disposable income, which in turn increases LIP purchases by consumers in the country. Similarly, Sliwinski et al. (2013) identified a negative effect of the unemployment rate on life insurance demand in Poland.

The *utility discount rate* for wage earners is found to have a positive impact on the ownership of life insurance by consumers (Pliska and Ye, 2007). This implies that with the increase in the utility discount rate, the wage earner will purchase life insurance at present and saves less for the future.

Sliwinski et al. (2013) determined a negative correlation between *health expenditure relative to GDP* and demand for life insurance in Poland, which indicates that with the increase in the health expenditure of the population, the demand for life insurance decreases.

In the economy, *financial sector development* involves the cash flow securitization of the consumers to secure future income by holding financial products (Li et al., 2007). Considering this explanation, the studies in the literature determined that economies with high financial sector development have a high level of life insurance consumption, where the development of the financial sector is calculated as the "ratio of the broad definition of money M2 to GDP" (Li et al., 2007; Zerriaa and Noubbigh, 2016; Mathew and Sivaraman, 2017; Zerriaa et al., 2017). Besides this, the financial sector development also involves the growth of the credit system, which in turn requires businesses and consumers to purchase the LIP as a security for the credited amount (Alhassan and Biekpe, 2016). The study examined the positive influence of financial sector development on life insurance purchases and calculated the financial development of the economy by calculating the ratio of money M2 to GDP. Sliwinski et al. (2013) also obtained similar results. However, they used the monetary aggregate of the money M1 and M2. It is calculated as the "difference between aggregate money M1 and M2" with respect to aggregate money M2

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(Outreville, 1996). Sen and Madheswaran (2013) determined a positive effect of financial depth on the penetration and density of life insurance in Asian Economies.

Beck and Webb (2003) examined the positive and direct influence of the *development of the banking sector* in the economy on life insurance penetration, conjecturing that with better banking systems, the confidence and trust of the consumers or businesses in the life insurance market will increase.

Global Competitiveness Index measures the barrier level to foreign investments in the economy's insurance market and is a positive determinant of life insurance density (Mitra, 2017). With the increase in the competitiveness between the insurance companies in the economy, more insurance companies will invest in the competitive insurance market.

The *real interest rate* has a positive or negative effect on the demand for life insurance depending upon the perspective used by the researchers. From one perspective, the increase in the interest rate increases the return on investments by life insurance companies, increasing the demand for life insurance (Sliwinski et al., 2013; Zerriaa and Noubbigh, 2016). Another perspective, which considers the interest rate of saving products, encourages consumers to invest in them, providing higher financial benefits than purchasing LIP. This results in a decrease in life insurance consumption, thereby increasing interest rates (Emamgholipour et al., 2017; Han and Hung, 2017; Lee et al., 2018; Li et al., 2007; Mathew and Sivaraman, 2017; Pliska and Ye, 2007; Sen and Madheswaran, 2013). Moreover, consumer preferences towards current consumption against deferred consumption decrease life insurance consumption (Lee et al., 2018; Li et al., 2007).

The *gross domestic product (GDP)* of a country indicates its economic development and average income levels for a given period (Mitra, 2017). Thus, the economy with a high level of GDP has a well-developed insurance market and high-income levels of households, resulting in a positive influence on the life insurance demand (Emamgholipour et al., 2017; Mitra, 2017). Emamgholipour et al. (2017) examined the impact of GDP on life insurance penetration in the Middle East and North Africa (MENA) region. They identified a positive relationship between GDP and life insurance penetration but with low elasticity of demand due to the dominance of mandatory LIP in the market compared

to voluntary life insurance.

The higher the household *income*, the higher the affordability and probability of the household purchasing LIP. Different antecedents are used by the studies to assess the effect of income on life insurance demand, and thus, their effect varies accordingly. Disposable income measured using GDP per capita has a positive, statistically significant effect on LIPD (Li et al., 2007). Beck and Webb (2003) used income per capita and determined that income per capita and life insurance consumption are positively correlated. However, income distribution represented by the Gini coefficient negatively affects life insurance demand as only the middle-class people in the economy purchase LIP, as poor people cannot afford to purchase LIP, and rich people have a lesser need for life insurance protection. (Dragos, 2014).

Mitra (2017) estimated *gross savings* as a percentage of GDP and examined a negative influence on life insurance density. They explained that households with higher savings would use their savings to cover the expected future loss instead of purchasing the LIP as protection. In contrast, Sen and Madheswaran (2013) used gross domestic savings (GDS) per capita to estimate the household's gross savings and identified that GDS per capita impacts life insurance density positively. Because with the increase in the savings level, their affordability to purchase LIP increases.

The studies found both positive and negative effects of *inflation* on the life insurance demand based on the context of the study. Mathew and Sivaraman (2017) found a significant positive effect of inflation. They explained that with the rise in inflation, there is a drop in the future value of money, and to cover this loss, consumers purchase LIPs. Zerriaa and Noubbigh (2016) described this positive relationship between inflation and life insurance penetration by using the phenomenon of money illusion. Money illusion is "the tendency of people to think money in nominal terms rather than in real terms," leading to an increase in the purchase of life insurance with an increase in its price. Also, in terms of human capital, the rise in inflation increases the human capital, increasing the demand for life insurance (Han and Hung, 2017). However, there are also studies in the literature that discussed the negative effect of inflation on life insurance demand (Alhas-

san and Biekpe, 2016; Beck and Webb, 2003; C¸elik and Kayali, 2009; Emamgholipour et al., 2017; Lee et al., 2018; Li et al., 2007; Mitra, 2017; Sen and Madheswaran, 2013; Yuan and Jiang, 2015). With the rise in inflation, life insurance being long-term contracts, its value or benefits erodes with the rise in inflation (Alhassan and Biekpe, 2016; Lee et al., 2018; Li et al., 2007; Yuan and Jiang, 2015). Also, as stated by Emamgholipour et al. (2017), the consumers' purchasing power will decrease with the rise in the inflation rate, leading to a decrease in the demand for life insurance. Celik and Kayali (2009) and Mitra (2017) explained that due to constraining regulations, the perceived real costs of life insurance are high, reducing the demand for life insurance.

Gaganis et al. (2019) identified that an increase in the *capital requirements of the insurance company* slows down the life insurance market developments. The study used a general capital index, frequency of reporting of the company's solvency situation, and an overall index of capital requirement as indexes to assess the capital requirement of the insurance company. They explained that with the increase in the insurance company's capital requirements, the price of the life insurance product would increase; however, the benefits and coverage would reduce.

Gaganis et al. (2019) also examined the influence of *supervisory control* on the policy conditions of life annuity and pension products on the penetration of the life insurance market. The study found that the rise in the regulatory control on the prior approval of the premium price and conditions before marketing the product increases the life insurance company's burden. This leads to a decrease in the premium rate and, hence, the overall premium generated in the economy.

A *partial borrowing* limit is described as "the individual's limit to borrow based on only a portion of his/her future labor income". It is shown to have an inverse relationship with life insurance ownership (Lim and Kwak, 2019).

Regulatory Antecedents

Regulatory quality promotes business freedom, competitiveness in the market, and

freedom to invest in the market. Thus positively influencing the demand for life insurance (Dragos et al., 2017). Dragos and Dragos (2013) used business freedom as a proxy for regulatory quality. They concluded that an economy where government regulations favor the entry of new national businesses results in the development of the life insurance market, thus increasing the life insurance density in the country.

The soundness of the *rule of law* enhances the confidence of the customers in the life insurance market and hence increases the life insurance density (Dragos et al., 2017).

Business freedom refers to the ability to start, operate, and close a business freely, which is essential for the growth of the life insurance market. On the contrary, the monopolistic market dampens market growth, resulting in a high price and less inclination of the customers to purchase the life insurance products, reducing the gross premium written (Sliwinski et al., 2013).

Dragos and Dragos (2013) found a negative effect of *fiscal freedom on life insurance density*. The study explained that the increase in fiscal freedom increases the consumers' unwillingness to purchase life insurance as it reduces the incentive to buy it.

Cultural Antecedents

Studies in the literature observed a significant effect of *cultural differences* on consumers' LIPD (Chui and Kwok, 2008; Mitra, 2017). Chui and Kwok (2008) investigated the effect of the cultural index by controlling the effect of economic, institutional, and demographic factors. Hofstede (2001) developed cultural indexes, including the masculinity/femininity index, long-term orientation index, uncertainty avoidance index, individualism index, and power distance index.

Also, literature found that consumers belonging to the countries with a high level of individualism tend to purchase more LIPs than people from collectivist culture, where one relies on their social networks for financial securities of their dependents in case of one's premature death (Chui and Kwok, 2008; Mitra, 2017). Chui and Kwok (2008) found a negative effect of masculinity/femininity on life insurance density. This indicates that countries with high femininity index tend to purchase more life insurance than

masculine societies because women are more sensitive towards the needs of their dependents. Chui and Kwok (2008) found that there exists a negative relationship between power distance and life insurance density. This implies that high power distance leads to an increase in the dependency of subordinates on their leaders to manage the family's financial needs in case of their premature death. Thus reducing the demand for the LIP in the market. Mitra (2017) identified a positive relationship between long-term orientation and life insurance penetration in the economy. They claimed that the long-term orientation in society encourages consumers to purchase life insurance products with long-term saving components.

Population Antecedents

The *population* of the country has a positive and direct effect on the demand for life insurance (Celik and Kayali, 2009; Emamgholipour et al., 2017; Lenten and Rulli, 2006; Mitra, 2017). The studies concluded that the larger the country's population, the more the demand for life insurance.

Depending on the type of life insurance product, *life expectancy at birth* is identified to have both positive and negative impacts on life insurance demand. In the case of life insurance products to cover the premature death of the breadwinner of the family, the life expectancy at birth is found to have a negative impact on the life insurance demand (Sen and Madheswaran, 2013; Zerriaa et al., 2017; Zerriaa and Noubbigh, 2016). The researchers explained that with the increase in life expectancy, the probability of death reduces, reducing the inclination to purchase the LIP. However, the higher value of average life expectancy positively impacts the purchase of annuity products as consumers purchase the policy to cover the longevity risk associated with the increase in life expectancy (Alhassan and Biekpe, 2016; Li et al., 2007).

The *birth rate* is examined to have a positive influence on the life insurance gross premium written (Sliwinski et al., 2013). Hazard rate increases the risk of mortality, leading to an increase in the amount of life insurance ownership by consumers (Pliska and Ye, 2007).

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The literature shows a negative correlation between the *youth dependency ratio* and life insurance penetration in the economy (Lee et al., 2018; Sen and Madheswaran, 2013; Zerriaa and Noubbigh, 2016). They considered that a high youth dependency ratio increases household expenses, reducing willingness to purchase an LIP that provides future benefits. In contrast, Zerriaa et al. (2017) found a positive correlation. They concluded that a higher youth dependency ratio increases the number of dependents in the family, increasing the strain on the household income and making it difficult to purchase the LIP.

The *elderly dependency ratio* includes the proportion of the population over 65 and is found to have a positive influence on life insurance density (Yuan and Jiang, 2015). Moreover, the study showed contrary findings across the geographical areas. Eastern and Central China exhibited a positive impact, whereas the elderly population of Western China was found to have a negative influence on the consumption of LIP. This states that a high elderly dependency ratio stimulates the demand for annuity life insurance products. However, this demand is low in the regions where the elderly population believes in "raising children to provide against old age. Yuan and Jiang (2015) found that life insurance density decreases with the increase in the population under the age of 14 years, as the expenses related to child development, which include fertility, education, healthcare, etc. increase.

A higher *dependency ratio* increases the current expenditure of the household, resulting in a decrease in disposable income and hence reducing life insurance penetration (Alhassan and Biekpe, 2016). However, Sliwinski et al. (2013) found a positive relationship between dependency ratio and gross premium written. According to them, the rise in the dependency ratio stimulates the need to purchase life insurance to protect the dependents against financial risk in case of the breadwinner's premature death.

Governmental antecedents

Life insurance is a legal contract between the consumer and the life insurance company (Esho et al., 2004). Hence, a sound legal environment enforces the evolution of an

efficient life insurance market, protecting the rights and interests of both insurers and the insured. Similarly, the country's political environment greatly influences the life insurance market. Studies in the literature discussed various antecedents used to assess the political and legal environment of the country.

To establish long-term financial security for their citizens, the governments either introduce different social welfare benefit plans or try to influence the purchases by bringing tax reforms exemption of taxes on life insurance returns) for long-term savings decisions. In light of this, a natural experiment conducted by Sauter and Winter (2010) determined a positive effect of tax reforms on life insurance holdings in Germany. Sauter et al. (2015) also obtained a similar finding for a whole LIP in Germany. Hecht and Hanewald (2012) investigated the effect of the tax reform brought by the German government in 2005 on the ownership of endowment policy by consumers. They found a positive correlation between them by conducting a natural experiment.

Marketization level is identified to positively influence the life insurance density in China (Yuan and Jiang, 2015). Since the year 2000, China has seen a surge in the number of private enterprises entering the life insurance market due to the government's encouraging policies. This provided multiple alternatives for the customers to choose from based on their current situations and stimulated the consumption of life insurance in the economy.

Dragos and Dragos (2013) indicated the *level of government spending* as a percentage of GDP and determined that it affects the life insurance density outcome positively. The study explained that the increase in the government's spending on social insurance and retirement savings would diminish the demand for life insurance in the country.

The country's *institutional quality* is the average of the six indicators, namely, political stability, the rule of law, voice and accountability, regulatory quality, and control of corruption, that measure the government's effectiveness (Kaufmann et al., 2011). A high institutional quality score boosts life insurance penetration by stimulating the demand for life insurance (Alhassan and Biekpe, 2016; Beck and Webb, 2003).

Dragos, et al. (2019) performed a study to test the effect of *government effectiveness*

on the life insurance consumption outcome variable in 31 different European countries. They found that in a developed economy where government effectiveness is high, the economy tends to have high life insurance density compared to the developing economies, when interest rate, fiscal freedom, and inflation variables are controlled.

Studies under review determined a negative effect of *social security* benefit plans provided by the government on demand for life insurance (Andersson and Eriksson, 2015; Li et al., 2007; Zerriaa et al., 2017; Zerriaa and Noubbigh, 2016). They argued that the demand for private life insurance reduces with the increase in the social security provisions, as the social security provisions act as a substitute for private life insurance.

Geographical antecedents

Another macro-environment-related antecedent contributing to the changes in the demand for an LIP is *seasonal effects*. Lenten and Rulli (2006) observed that the demand for life insurance is highest in Quarter 1, i.e., January to March, and lowest in Quarter 4, i.e., October to December. They also found a moderate drop in the demand from April to June, i.e., Quarter 2, and a rise in the demand with an equivalent fraction from July to September, i.e., Quarter 3. They explained this phenomenon by arguing that in Quarter 4, being the festive season with a positive environment, consumers purchase fewer LIPs. In quarter one, they are more inclined towards purchasing an LIP to receive the tax benefit in the financial year.

Urbanization is calculated as the percentage of the urban population (Dragos, 2014; Mare et al., 2019; Zerriaa et al., 2017). Studies have found a positive relationship between urbanization and LIPD taken by consumers (Dragos, 2014; Hwang and Gao, 2003; Mare et al., 2019; Zerriaa et al., 2017). Hwang and Gao (2003) argued that with the increase in urbanization, the number of children per family reduces, leading to a rise in the need to hold a LIP to meet retirement needs. Similarly, Zerriaa et al. (2017) explained that an increase in the urbanization level, the operation costs like the premium collection cost, the marketing cost, and claims handling are reduced significantly. As a result, life insurance penetration increases as well. Dragos (2014) tested the effect of urbanization rate on life

insurance density in Asian and Central and East European (CEE) countries. They found a significant effect of the urbanization rate on the emerging Asian countries but no significant effect on CEE countries. Because during the period under study, the urbanization rate was stagnant in these economies. In contrast to other studies, Sliwinski et al. (2013) identified a negative relationship between urbanization and gross premium written. This may be because consumers residing in urban areas can manage their investment portfolios well and do not prefer investing in life insurance.

The study by Luciano et al. (2016) analyzed the *residence's city size* as an essential driving factor for life insurance ownership. They found consumers belonging to the large or megacities of Italy own lesser LIP than those in small cities. Similarly, Ampaw et al. (2018) examined the significant effect of the consumer's region on life insurance ownership. The study found a consumer living in the upper west, upper east and northern areas of Ghana is more inclined towards purchasing LIPs irrespective of their gender.

2.5.2 Decisions

Decisions indicate consumers' behavioral responses to the purchase decision (Paul and Benito, 2018). Studies under review majorly used life insurance ownership, amount of life insurance coverage, face value, amount of life insurance premium paid, and intention to buy as the decision variables to estimate the life insurance purchase behavior. As shown in Table 6, the relationship map represents the different decision variables used in the articles and their association with antecedents.

Life Insurance Ownership is widely used as a decision variable with a total of 61 votes. Of the 61 votes, individual-related and finance-related antecedents have a major contribution. This indicates that while estimating the effect of individual-related antecedents and finance-related antecedents on consumers' decisions to purchase, life insurance ownership is predominantly used as the decision variable. In these studies, the data is collected by conducting a survey, and respondents were asked whether they own an LIP or not.

The *amount of life insurance coverage* held by consumers received 35 votes, with a majority of 11 votes from behavior-related antecedents and eight votes from finance-

related antecedents. This is followed by a face value as a decision variable with 26 votes from finance-related and individual-related antecedents. Another decision variable with 16 votes was the intention to purchase. Intention to purchase was majorly used to estimate the effect of behavior-related and service-related antecedents. Unlike other decision variables discussed above, the intention to purchase is a subjective variable. Subjective variables are qualitative, which adopts the interval scale to measure the variable under study. The amount of life insurance premium paid received 12 votes, which are mainly concentrated on macroenvironment-related antecedents. In addition to these decision variables, other decision variables are used mostly by a single study only.

2.5.3 Outcomes

Outcomes result from the consumers' behavioral responses (Paul and Benito, 2018). The articles under review mainly used life insurance density, life insurance penetration, the premium per capita, and gross premium written as the outcome variable.

Studies in the literature most often used a combination of life insurance penetration and life insurance density as the outcome variable to gauge the impact of different antecedents on demand for insurance. As shown in the relationship map (Table 2.6), a total of 35 votes are received by this outcome variable, with its major concentration on the macroenvironment-related antecedents. *Life insurance density* received 22 votes and is followed by a *gross premium writte*n by an insurance company with 12 votes. *Life insurance penetratio*n and *premium sold by domestic and foreign companies per capita* stand at the same level with nine votes.

2.6 Other Related Works

In this chapter, we have extensively covered studies on consumer purchase behavior in the life insurance sector up to the year 2020. This section extends the discussion by incorporating recent research from the period between 2021 and 2024. This newer body of work introduces additional antecedents influencing life insurance purchase behavior, reflecting the evolving dynamics of consumer behavior in different global contexts. Among

these, the impact of personal values, the needs of dependents, and the effects of epidemic perceived risk and anticipated regret, especially in the context of public health crises like the COVID-19 pandemic, have been significantly highlighted. Additionally, the role of ethical behavior of salespeople and the trust it engenders also emerge as critical factors.

Bah and Abila (2024) analyzed the impact of technological advancements on efficiency and service delivery in the life insurance sector in South Africa. Utilizing a mixed methods approach, the study integrates quantitative data from insurance performance metrics and qualitative interviews with industry experts. Findings indicate that technological integration, especially digital platforms and AI, significantly enhances operational efficiency and customer satisfaction in the life insurance industry. The study also finds that while technology reduces operational costs, it requires substantial initial investments. This research primarily focuses on South Africa, limiting its generalizability, and it assumes uniform technology adoption across the insurance sector, which may not reflect actual disparities.

Ndawula et al. (2024) explored how psychographic characteristics influence life insurance demand decisions in Uganda. Employing a cross-sectional survey design, data was collected from 389 life insurance policyholders across Uganda using structured questionnaires. Partial least squares structural equation modeling (PLS-SEM) was used for analysis. The research revealed that psychographic characteristics significantly influence demand decisions for life insurance products. Specifically, price consciousness and consumer innovativeness positively predict demand decisions, whereas religious salience shows a negative, albeit non-significant, effect. The study is constrained to Uganda, limiting broader applicability, and it employs cross-sectional data, which restricts insights into long-term trends and causality in insurance demand decisions.

Bateman et al. (2023) explored how consumers progress through various life insurance decision states influenced by personal values and other consumer characteristics. The research utilized a survey approach to gather data on consumers' self-rated "decision state" regarding life insurance purchase intentions and the associated factors influencing these states. The study found that personal values, specifically benevolence and self-

direction, are significant in progressing through decision states of life insurance acquisition. The study highlights that these values, alongside financial literacy and the needs of dependents, play a crucial role in shaping consumers' readiness to purchase life insurance. The originality of the research lies in its focus on the impact of personal values on life insurance decision states, a relatively underexplored area within consumer behavior studies in the context of financial decisions.

Sun et al. (2023) analyzed the long-term impact of public health emergencies on life insurance demand in China, using the 2003 SARS outbreak as a case study. The research employs the propensity score matching–difference in differences method to analyze panel data from 30 provinces, addressing potential endogeneity concerns. There was a significant increase in life insurance demand following the SARS outbreak, influenced by heightened risk perception and anticipated regret among consumers. This paper uniquely explores the dynamic multi-year effects of health crises on insurance demand, providing theoretical insights into behavioral economic impacts on the insurance market.

Ahmed et al. (2023) investigated the relationship between investor confidence and life insurance demand under different economic conditions. Utilizing a bias-corrected bootstrapped sample from OECD economies, the study examines the impact of economic conditions on the nexus between investor confidence and life insurance demand. The research found that lower investor confidence and negative economic conditions significantly reduce life insurance demand. It also revealed that the investor confidence and life insurance demand relationship is influenced by economic and market conditions. This study pioneers the linking of investor confidence with life insurance demand under varying economic conditions, using a robust methodological framework to explore this relationship.

Ndawula et al. (2023) explored how behavioral biases affect demand decisions for life insurance products in Uganda. Employing a cross-sectional survey design, the study collected data from 351 life insurance policyholders in Uganda. Structural equation modeling was used to analyze the data. The findings indicate that behavioral biases, particularly heuristic and prospect biases, significantly influence demand decisions for life insurance

products among Ugandan policyholders. This research is the first to assess the impact of behavioral biases on life insurance demand in a developing country context, offering insights into the irrationality often prevalent in financial decision-making processes.

Blanchard and Trudel (2023) investigated the impact of message framing on young adults' interest in life insurance, examining the effects of gain versus loss frames and temporal orientation (present vs. future). A combined approach of a field experiment and a laboratory experiment was used to explore how different framing strategies affect the motivation of young adults to consider life insurance. The study revealed that gain frames are generally more effective than loss frames at inducing interest in life insurance among young adults, especially when the benefits are framed as being in the future. The effectiveness of these frames varied with the temporal orientation of the message. This research adds to the understanding of behavioural finance by demonstrating that the effectiveness of framing strategies (gain vs loss) in life insurance marketing depends significantly on the temporal orientation of the message and the life stage of the target audience.

Rajput et al. (2023) examined the influence of salespeople's ethical behavior on customer loyalty in the life insurance sector, focusing on the Indian market. Data was collected from 382 consumers to analyze the relationship between salespeople's ethical behavior and customer loyalty, satisfaction, and trust. Various statistical analyses, including regression and correlation, were utilized to assess these relationships. The study found that ethical behavior by salespeople significantly impacts customer loyalty, satisfaction, and trust. Ethical behavior not only improves customer satisfaction but also fosters trust, which in turn enhances loyalty towards the insurance company. This research contributes to the literature by highlighting the critical role of ethical behavior in relationship management within the insurance sector, particularly in a developing country like India.

Novovic et al. (2023) assessed the economic and demographic factors impacting premium reserve penetration in Western Balkan countries during and after the 2008 financial crisis. The research utilizes panel data analysis, examining the impact of economic stability, deposit rates, and demographic changes on the life insurance sector's growth and

premium reserves. The results reveal that economic stability and higher deposit rates encourage life insurance market development. Interestingly, factors like youth dependency and educational investments overshadowed traditional determinants like aging populations, differing from trends in more developed markets. The study offers unique insights into the dynamics of life insurance in less explored regions like the Western Balkans, focusing on the effects of economic crises on insurance markets, which are typically underrepresented in global research.

Boyle et al. (2022) examined how consumption habits influence household demand for life-contingent claims, such as life insurance and annuities, across different lifecycle stages. The authors propose a life-cycle model incorporating habit formation, where consumption habits significantly impact life insurance and annuity choices. The methodology integrates theoretical modeling with empirical observations. The study finds that consumption habits play a crucial role in shaping the demand for life insurance and annuities, with habit formation leading to variations in consumption levels and consequently affecting insurance decisions. The research contributes to the literature by providing a novel perspective on the influence of consumption habits on life insurance and annuity demand, integrating habit formation into a life-cycle model of financial decisions.

Qian (2021) explored the impact of the COVID-19 pandemic on the demand for various types of insurance in China, focusing on how regional differences in medical infrastructure affect insurance uptake. Using data from 241 Chinese cities, the study examined insurance company revenues and COVID-19 case counts to determine patterns in insurance demand across regions with different medical facilities and burdens. The results showed higher COVID-19 case counts correlated with increased insurance demand, particularly for life and health insurance. The effect was more pronounced in regions with poorer medical infrastructure or higher medical burdens. The study offers new insights into how pandemics influence insurance markets and highlights the importance of regional medical capabilities in shaping insurance demand during health crises.

Giri and Chatterjee (2021) explored socio-economic and demographic determinants affecting changes in life insurance consumption among Indian households over differ-

ent time periods. Employing logistic regression on short panel data from the Indian Household Development Survey, the study examines the effects of financial inclusion and socio-economic status on life insurance coverage. Income levels and socio-economic status significantly impact the likelihood of obtaining or discontinuing life insurance, with financial inclusion playing a crucial role in enhancing insurance coverage among rural households. This research contributes to understanding dynamic changes in insurance coverage over time, focusing on India's unique socio-economic landscape. Kozarevic and Hodzic (2021) investigated the primary factors influencing life insurance purchasing decisions in Bosnia and Herzegovina (BiH). The study involves a survey of 200 respondents, using binary logistic regression to analyze the impact of income, policy price, and savings propensity on insurance purchasing decisions. It was found that personal income is the most significant factor affecting purchasing decisions, while other factors like policy yield and brand image were less impactful. The study provides new insights into the BiH market, which is generally underexplored, highlighting differences in insurance purchasing drivers compared to more developed markets.

Sharku et al. (2021) aimed to identify key economic factors influencing the demand for life and non-life insurance in Albania. Using data on GDP, inflation, interest rates, and unemployment, the study explores their impacts on insurance density as market demand indicators. Significant correlations were found between economic conditions and insurance demand, with GDP and interest rates being influential factors, while inflation showed less impact. The study fills a gap in the literature on insurance demand in emerging markets like Albania, offering policy implications for enhancing market development.

Abdullah et al. (2020) explored the behavioral factors influencing Malaysian Generation Z's decisions to purchase life insurance. A quantitative survey was distributed to 200 individuals using a Google Form to collect data on factors like service quality, the perceived value of life insurance, and the role of agents in influencing purchasing behavior. Service quality and the perceived value of the life insurance policy significantly influenced the purchasing behavior of Malaysian Generation Z. Interestingly, the role of agents was found to have no significant effect on their decision-making. The study

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contributes to the field by focusing on Malaysian Generation Z, a demographic often un-derrepresented in insurance market studies, and highlights unique factors that drive their purchasing decisions in the life insurance market.

2.7 Directions for future research

This section pertains to discuss various future research avenues related to consumers' life insurance purchase behavior. Moreover, this section will also uncover future research avenues considering the recent global changes due to the intense effect of COVID-19 on consumers and investigate the directions for future research. In the following, we use different dimensions of the TCM and ADO framework to discuss future research possibilities.

2.7.1 Future Directions: Theory

This review reflects that the existing research in life insurance purchase behavior is mostly based on the Expected Utility Theory. The theory assumes that consumers purchase LIPs to maximize the beneficiary's utility (e.g., Alhassan and Biekpe, 2016; Ampaw et al., 2018; Andersson and Eriksson, 2015; Arun et al., 2012; Beck and Webb, 2003; Celik and Kayali, 2009; Chen et al., 2001). However, an inadequate amount of research is present in the literature on investigating consumers' bounded rational behavior in a life insurance context based on the behavioral economics theory (Bauchet and Morduch, 2019; Coe et al., 2016). According to this theory, consumers often use some heuristics to estimate their probability of losses and estimate the gain and losses differently. Also, life insur-ance being a long-term investment product to cover uncertain losses, it is difficult for consumers to estimate the probability of loss accurately. Coe et al. (2016) experimented with a company's employees to identify the behavioral biases affecting their decision to purchase group life insurance. In the future, experiments can be performed to empirically test the effect of different behavioral biases (derived in literature by Thaler (1980)) on consumers' purchasing non-group LIP.

A large number of theories used in life insurance literature are reflected in Table

2. It indicates that past scholars have not fully explored certain theories, such as the collective household model, social exchange theory, and commitment trust theory. Future researchers can explore using these theories in the life insurance context. They can also use these theories to develop new theoretical models using theory-development-based reviews (Paul and Rosado-Serrano, 2019).

To shed light on consumers' life insurance purchase behavior in the COVID-19 context, we encourage future research to describe consumers' adoption and acceptance of different technology-based services offered by life insurance companies, using the Technology Acceptance Model developed by Davis (1986). The study will help to investigate effective technology-based services that will encourage consumers to purchase and manage their LIP from home in this pandemic situation. Based on the above discussion, some of the key research objectives for future research are as follows:

- To investigate consumers' life insurance purchase behavior using behavioral economic theory.

- To develop a new theoretical model using a theory-development based review (Paul and Rosado-Serrano, 2019).

- To determine the impact of technology-based services on consumers' life insurance purchase behavior in the current COVID-19 situation using the Technology Acceptance Model.

2.8   Future Directions: Contexts

In terms of the context of studies (Table 3), this review indicates that most of the articles (77%) gathered data from a single country (e.g., Ampaw et al., 2018). In contrast, relatively fewer articles (23%) performed a study on the data from multiple countries (e.g., Alhassan and Biekpe, 2016). Future research can focus more on comparing the life insurance purchase behavior of consumers across countries. This will help examine the effect of religious beliefs and cultural differences on consumers' life insurance purchase

behavior across countries. We propose the following contextual-based future research questions.

- How do religious beliefs and cultural differences affect consumers' life insurance purchase behavior?

- Do consumers' life insurance purchase behavior differ between emerging and developed economies, and if so, how?

2.8.1 Future Directions- Methods

The methodologies adopted for data analysis by the articles under review (Table 5) show a predominance of using classical statistical techniques such as regression, ANOVA, factor analysis, etc. In the future, researchers can use more advanced techniques such as supervised and unsupervised machine learning and artificial neural network methods to perform big-data analytics to understand the life insurance purchase behavior of consumers. This review also recommends longitudinal research (e.g., Lenten and Rulli, 2006) to explain the causal relationship between ADO better. We propose the following methodology related research objectives as the suggestion for future research.

- To perform longitudinal analysis on consumers' life insurance purchase behavior.

- To perform big-data analytics using machine learning and artificial neural network methods to understand the life insurance purchase behavior of consumers.

2.8.2 Future Directions: Antecedents

Future research can be conducted to examine the effect of antecedents that have received less attention in the literature. For instance, the researchers can investigate the effect of antecedents, such as labor participation by the spouse, marital bargaining power, health expenditure, and many others. Pragmatic studies on identifying the effect of these antecedents on demand for life insurance in developed and developing countries need to be examined.

Another point of investigation could also be to see the interaction effect of the key antecedents and their main effect on the consumers' life insurance purchase decisions. For instance, studies can analyze the interaction between household income and inflation or between tax reforms and the consumer's education level. The interaction effect would help to understand the collective impact of two or more antecedents on the LIPD.

Due to COVID-19, there is a sudden decline in the economic condition across many countries. As a result, the purchasing power of consumers has reduced. This pandemic may also have impacted the consumers' psychological states and spending behavior (Marmarosh et al., 2020). A study can be conducted to understand the consumers' life insurance purchase behavior under such economic slowdown and possible changes in consumers' psychological behavior. Future research can develop new techniques to nudge individuals to purchase a LIP in the current scenario. For example, researchers can focus on testing the effect of different payment options and representation of benefits on consumers' intention to purchase. Moreover, we encourage future research to examine the effect of different behavioral biases on life insurance purchase intentions or decisions in the COVID-19 context. In the future, researchers can investigate the following research questions related to the antecedents that may affect life insurance purchase decisions or outcomes.

- How do collective decision-making and differences within the married household affect consumers' life insurance purchase behavior?

- How consumers' health expenditure influence their life insurance purchase decisions?

- How education level and occupation of the spouse impact the household's life insurance purchase decisions?

- How does the interaction between antecedents influence consumers' decision to purchase life insurance?

- How do economic slowdown and change in consumers' psychological behavior due to COVID-19 impact life insurance purchase decisions or outcomes?

- How do different premium or benefit representations affect a consumer's decision to purchase life insurance?

- In light of the current pandemic situation, what could be other behavioral biases that may significantly affect life insurance decisions or outcomes?

2.8.3 Future Directions: Decisions

The relationship map (Table 6) reflects that majority of the articles (35%) on life insurance used life insurance ownership as decision variables. This is followed by the amount of life insurance ownership as a decision variable. However, decision variables such as willingness to insure, intention to purchase, and change in life insurance ownership are interesting decisions that emerged from the review have largely been unexplored so far.

2.8.4 Future Directions: Outcomes

The relationship map (Table 6) suggests that most of the articles under review focused on estimating the relationship between antecedents and decisions (e.g., Gandolfi and Miners, 1996). In contrast, there is a relatively lesser number of articles directed towards developing a relationship model between antecedents and outcome (e.g., Gaganis et al., 2019). One possible reason for this could be limited access to the financial performance measure of the insurance company. Future research could shift the focus from financial performance outcome variable to non-financial performance outcome variable or strategic outcomes. This includes variables such as customer loyalty, brand value, customer retention, and intellectual capital.

2.9 Conclusion

In this chapter, a combination of ADO and TCM framework-based systematic literature review is undertaken to understand the state-of-the-art life insurance purchase behavior

of consumers. A total of 136 unique antecedents are identified from 76 articles under study, thus providing a sufficiently large and coherent body of knowledge to understand consumers' life insurance purchase behavior. This review categorizes the identified 136 antecedents into eight broad categories and develops a relationship map to represent the relationship between antecedents, decisions, and outcomes. The relationship map indicates that macroenvironment-related antecedents are the most researched antecedents, followed by individual-related and behavior-related antecedents. Regarding the positive and negative effects of antecedents on life insurance purchase decisions and outcomes, the relationship map reflects a dominance of antecedents' positive effects. Additionally, life insurance ownership and the amount of life insurance coverage are the two decision variables that are predominantly used in the life insurance literature. Similarly, the outcome variable that has gained the maximum votes in the relationship map is life insurance density and penetration.

This review also discusses the theories, contexts, and methods adopted in the extant studies to understand the existing research better. The review identified Expected Utility Theory as the most widely used theory in life insurance research. Most research articles in the literature are based on secondary data and have used regression data analysis methods. Most of the studies are performed in the context of the United States of America. Finally, based on the systematic framework-based review, certain important research gaps have been identified for future research.

Chapter 3

Effect of Premium Framing on Consumers' Endowment Life Insurance Purchase Behavior

3.1 Introduction

The second objective of this thesis is to investigate the impact of framing premium prices of endowment life insurance policies on consumers' purchase intention. This chapter is dedicated to achieving this objective. In India, as per the Economic Survey by the Ministry of Finance, only 3 out of 100 people have a life insurance policy, despite a life insurance penetration and density of 4.2 percent and USD 91, respectively, in 2021-22 (IRDAI Annual Report, 2021-22). Studies have demonstrated that due to cognitive biases or heuristics, consumers often deviate from rational choice behavior while purchasing insurance policies (Huber et al., 2015). These deviations in the consumers' purchase behavior can attribute to the different components of the insurance purchase decision, like estimations of the probability of the risk they may face in the future, the cost of the insurance policy, and its benefits (Johnson et al., 1993).

Framing, a cognitive tool that affects decision-making, plays a key role within the consumer policy framework. Specifically, the framing of choices influences individuals' decision-making (Levin et al., 1998). Based on this notion, the studies in the literature used different frames (i.e., different representations or descriptions of the same information) and demonstrated that decision-makers respond differently to different but objectively equivalent descriptions of the information (Tversky and Kahneman, 1981; Johnson et al., 1993; Salovey and Williams-Piehota, 2004; Yin and Dubinsky, 2004; Botzen et al., 2013; Lin, 2021).

Prior research on framing effects in insurance contexts mainly focuses on non-life insurance, unit-linked life insurance, term life microinsurance, and annuity products. Studies in life insurance products have examined price bundling or de-bundling and premium payment modality effects on consumer behavior. However, no research has explored the impact of framing of premium prices on endowment life insurance products and the role of liquidity constraint on the framing effect. This study investigates the effect of framing premium prices on consumers' purchase intention for endowment life insurance policies while controlling for participants' risk perception about COVID-19. We adopted the risk perception scale by Dryhurst et al. (2020) to measure COVID-19 risk perception.

We derived the hypothesis based on the Pennies-a-day strategy proposed by Gourville (1998) and thus tested it through an experiment. We also hypothesized and tested that liquidity constraint affects the causal relationship between the framing and purchase intention to examine whether the liquidity constraint is the major reason for the framing effect. The research carries significant importance in the context of developing better consumer policies. This study addresses a critical aspect of consumer decision-making in an era where consumer protection and empowerment are central to regulatory agendas. By investigating the impact of framing on consumers' intentions to purchase endowment life insurance policies, the study directly contributes to the formulation of more effective and informed consumer policies.

We organise the rest of the chapter as follows. Section 2 provides a literature review and develops the hypotheses. Section 3 presents the methodology adopted in this study

and the experimental design. Section 4 discusses the analysis and interpretation of the experiment results in detail. We then discuss the findings and the implications of the study in Section 5 and then present the moderating effect of income on the framing effect in Section 6. In Section 7, we conclude our research study.

We organise the rest of the chapter as follows. Section 3.2 provides a literature review and develops the hypotheses. Section 3.3 presents the methodology adopted in this study and the experimental design. Section 3.4 discusses the analysis and interpretation of the experiment results in detail. We then discuss the findings and the implications of the study in Section 3.5 and then present the moderating effect of income on the framing effect in Section 3.6. In Section 3.7, we conclude our research study.

3.2   Literature Review and Hypotheses Development

Framing effects, a key aspect of behavioral economics, underscore the influence of presentation on decision-making. Gourville (1998) investigated the effect of the Pennies-a-day (PAD) strategy on customers' likelihood to donate. He found that donations increased when prices were framed in per-day terms rather than in aggregated form. The research also identified a significant moderating effect of monetary magnitude on customers' transaction evaluation. In a subsequent study, Gourville (1999) explored the moderating influence of consumption rates (immediate versus continuous consumption) on the relationship between framed prices and consumer product evaluation. The findings showed that prices framed in per-day terms were more effective for continuously consumed products than aggregate prices.

Gourville (2003) conducted a study investigating the influence of transaction monetary magnitude and framing levels on customer price attractiveness. The study examined the role of monetary magnitude by comparing the effects of framed prices expressed daily, monthly, and yearly. It found that for high-magnitude expenses, the impact of framing is reversed, with consumers preferring yearly prices over daily and monthly prices. However, Bambauer-Sachse and Mangold (2009) highlight complexities linked to price and consumer perception of manipulation. They examined a strong negative effect of price

complexity and consumers' feeling of being manipulated on the direct positive effect of framed prices on product evaluation. This leads to a negative effect of framing prices on consumer product evaluation.

Early research on diverse insurance products has also unveiled the power of framing effects on consumers' choices. Bauchet and Morduch (2019) investigated premium payment modalities for term life insurance demand among Mexican microfinance customers, noting a 59-74% demand increase when installment payments were offered despite the higher total cost. The study attributed this to liquidity and saving constraints. Huber et al. (2015) studied the effect of presenting bundled or de-bundled prices on unit-linked life insurance purchase intentions, finding no significant impact.

Pincus et al. (2017) explored the impact of framing on consumers' willingness to pay for long-term care insurance. They identified a significant positive effect of emotional frames over rational risk frames on consumers' willingness to pay. Camerer and Kunreuther (1989) showed the influence of framing on insurance-related risky choices. Johnson et al. (1993) discovered framing effects on consumers' decisions to purchase various insurance types. They found policies with rebates more appealing than those with deductibles. Brown et al. (2013) revealed that consumers preferred annuities framed as consumption-focused rather than investment products. Botzen et al. (2013) investigated flood insurance demand using risk communication frames, observing increased household willingness to pay.

Kairies et al. (2023) examined the impact of health insurance design on reducing inefficient care. The authors compared the effectiveness of cost-sharing and rebate strategies in promoting efficient healthcare practices. They found that cost-sharing reduces healthcare utilization but not necessarily a reduction in low-value care. Rebates do not lead to increased healthcare utilization. Burkovskaya et al. (2022) investigated how framing affects insurance decisions. The authors found that the treatment group, given a comprehensive description of the risk, chose more comparable deductibles than the control group, which received a succinct description, underscoring the significant impact of framing on insurance choices. Zheng (2020) explained how narrow framing affects insurance

decisions and suggested adding a deductible and co-insurance to the optimal insurance contract, highlighting the need to merge traditional insurance economics with behavioral economics.

Building on prior framing research, this study hypothesizes that framing of endowment life insurance premium prices enhances product attractiveness and affordability. Furthermore, we propose that income levels play a moderating role in this relationship. Low-income individuals, constrained by liquidity concerns, may exhibit heightened responsiveness to framing due to the perceived flexibility offered by staggered payments but less pronounced for their high-income counterparts. Therefore, the two hypotheses tested in this study are as follows:

> *H1: Consumers' intention to purchase endowment life insurance policies will be higher when the premium price is framed monthly rather than yearly.*

> *H2: Income moderates the impact of framing premium price in monthly terms and yearly terms on purchase intention.*

3.3 Methodology

In this study, an experiment is performed to test hypothesis H1. The survey instrument includes three sections: The first section had questions related to socioeconomic details such as personal income, education, and age of the participants to facilitate the examination of the effects of socioeconomic information of the participants on their intention to purchase. The second section contained questions to measure the participants' risk perception due to COVID-19 using the COVID-19 risk perception scale developed and validated by Dryhurst et al. (2020). The third section contained six endowment life insurance policies explicitly designed to elicit participants' intention to purchase using choice-based conjoint analysis.

3.3.1 Participants

In our study, purposive sampling was employed to select life insurance policyholders from six distinct cities and towns in Rajasthan: Jaipur, Sikar, Kota, Jhunjhunu, Pilani,

and Chirawa. We opted for this approach over random sampling due to the specific nature of our research questions, which necessitated a sample of individuals actively engaged in financial decision-making within a particular age range known to reflect a shift toward financial independence and family responsibility. Random sampling, while beneficial for their randomness and representation, would have necessitated a considerably larger sample size to achieve the same level of accuracy. This would have been difficult to achieve in offline mode given the time and resources required for each participant's response.

We selected individuals between the ages of 25 to 45 to reflect a segment of the population that is beginning to independently take financial decisions regarding life insurance. This age range is pivotal as it typically transcends the threshold of financial dependency on parents, with the majority of individuals starting their families around the age of 28 (World Population Review, 2022). We set the lower age limit to 25 to ensure our participants were likely to have dependents, marking the onset of financial planning needs. Conversely, the upper limit was capped at 45 years to avoid the confounding effects of higher mortality rates which are prevalent beyond this age, potentially skewing the study's data.

The survey was conducted offline, providing a direct approach to participants who were selected via references and personal contacts within these locales. To guarantee the maintenance of demographic and economic balance among the respondents, we approached individuals who represented a wide range of marital statuses, educational backgrounds, and income levels. This purposive sampling strategy aimed to reflect the broader policyholder population's attributes in Rajasthan accurately.

In total, 287 policyholders were initially surveyed through a questionnaire that we administered in person. Responses that did not pass the consistency check were deemed unreliable and thus excluded from the final analysis. This led to the rejection of 27 responses that failed to demonstrate consistency, resulting in a final sample of 160 participants for our study.

Approximately 59% of our participants were male, and 41% were female. Most participants reported their marital status as "Married" (87%), and only 13% were "Single".

Also, our sample varied based on the participants' educational background, with 64% being graduates, 31% being postgraduates, and only 5% holding a doctorate. The age of the participants included in the experiment was between 25 to 45 years, in which approximately 46% of the participants were of the age group 30-35 years, followed by the age group 35-40 years (30%), 25-30 years (15%) and 40-45 years (9%). Finally, 57% of our sample had an annual income between INR 0.5 million to 1.0 million and 43% with INR 1.0 million to 2.0 million.

3.3.2 Identification of endowment policy attributes and their levels

According to the Insurance Regulatory and Development Authority of India (IRDAI), "an endowment policy is a savings-linked insurance policy with a specific maturity date. Should an unfortunate event by way of death or disability occur during the period, the sum assured will be paid to the beneficiaries. On surviving the term, the maturity proceeds on the policy become payable" (IRDAI). Various insurance companies offer diverse endowment policies with distinct death and maturity benefits. This study focuses on basic endowment policies, which grant beneficiaries the sum assured upon the policyholder's premature death and a guaranteed maturity benefit if the policyholder outlives the maturity date and pays all premiums. This study focuses on endowment plans with fixed GMBs and negligible variable benefits to avoid additional effects from framing attributes with probabilistic returns on customers' perceived probabilities and benefit framing.

Based on the key attributes of the endowment life insurance policies available in the market today, the attributes included in the study are premium price (PP), policy term (PT), and premium payment term (PPT). The premium price is one of the essential attributes of any life insurance policy. "Policy term" represents the duration the policy will be active, and "premium payment term" is the period for which the policyholder needs to pay the premium for the life insurance policy.

Each attribute can take on several selected levels based on the range of levels observed in today's endowment life insurance market. The two levels of PP, INR 50000 and INR 75000 each in yearly terms, were included in this study. Similarly, this study used two

levels of PPT – 5 years and 7 years and PT – 10 years and 15 years to understand the framing effect better. In 1989, Dar and Dodds discovered that the rate of return on an endowment plan significantly influences consumer purchasing decisions. One important feature of these plans is the guaranteed maturity benefit (GMB). Table 3.1 displays the GMB for policies of both terms. Table 3.2 illustrates the benefit for participants to understand the GMB calculation and estimate the lump sum they will receive at the end of a 10-year PT with an annual premium of Rs. 30000 paid for PPT of 5 years. We provided all participants with this illustration before asking them to rate the policy.

Table 3.1: Guaranteed Maturity Benefit

S. No	Policy Term	Guaranteed Maturity Benefit
1.	10 years	Sum of yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
2.	15 years	The yearly benefit for a year is calculated as 10% of the total premium paid till that year

Table 3.2: Illustration of Guaranteed Maturity Benefit Calculation

Year	Premium paid for the year	Total premium paid till date	Yearly Benefit = Guaranteed rate*sum of all premium paid
1.	30,000	30,000	0.09*30,000=2700
2.	30,000	60,000	0.09*60,000=5400
3.	30,000	90,000	0.09*90,000=8100
4.	30,000	1,20,000	0.09*1,20,000=10,800
5.	30,000	1,50,000	0.09*1,50,000=13,500
6.	0	1,50,000	0.09*1,50,000=13,500
7.	0	1,50,000	0.09*1,50,000=13,500
8.	0	1,50,000	0.09*1,50,000=13,500
9.	0	1,50,000	0.09*1,50,000=13,500
10.	0	1,50,000	0.09*1,50,000=13,500

3.3.2.1 Calculating the monthly equivalent of the yearly premium price

To examine the effect of premium price framing on purchase intention, the premium price is presented monthly or yearly to the participants. We calculated the monthly equivalent of the yearly premiums considered in the study to frame the policies differently for different experiments. The monthly premium prices are calculated using the "Time Value

of Money (TVM)" concept instead of dividing the yearly premium by 12. The TVM concept states that the value or worth of an amount received today is always greater than the amount received in the future. However, we ignored the impact of inflation on TVM, which decreases the value of a currency over time. The use of the TVM concept to calculate the monthly premium prize makes both options theoretically equivalent. In this manner, participants in the treatment groups with knowledge of the TVM concept will consider the policy with the monthly payment option the same as its yearly equivalent shown to the control group.

Based on the time value of money, the formula used to calculate the future value (FV) of a current asset (PV) after "n" periods, considering the rate of return "r" per period, is

$$FV = PV(1 + r)^n \tag{3.1}$$

For example, the value of FV, corresponding to PV = INR 50,000 (yearly premium paid at the beginning of each year), would be INR 52820.

Equation 2 provides the formula to estimate the repeating monthly payment (A) equivalent to FV when payment is made at the beginning of each period,

$$A = FV\left(\frac{r/(1+r)}{(1+r)^n - 1}\right) \tag{3.2}$$

Substituting the value of FV from equation (1) into equation (2), we get

$$A = PV(1+r)^n\left(\frac{r/(1+r)}{(1+r)^n - 1}\right) \tag{3.3}$$

Using equation 3, we get A = INR 4270 (rounded from INR 4273) as a monthly premium for PV = INR 50000 yearly premium amount, n = 12 and r = 0.005. Similarly, we get A = INR 6410 as a monthly premium amount corresponding to PV = INR 75000 yearly premium amount. In the equation above, "r" is calculated as 1/12 of the annual rate of return. The annual rate of return is fixed at 5.5 %, as this is the fixed deposit interest rate in India at the time of experimenting.

3.4 Experimental Design

We performed a between-subject experiment to examine the framing effect of premium prices on consumers' intention to purchase endowment life insurance policies. The between-subject experiment involves showing sets of endowment policies with premium prices framed in yearly terms to the control group and showing sets of endowment policies with premium prices framed in monthly terms to the treatment group.

We adopted the choice-based conjoint analysis method to elicit consumers' stated preference for the set of endowment life insurance policies with or without the framing effect. The conjoint analysis involves ranking or rating the hypothetical alternatives of the product or services comprising different attributes and their levels (Green and Srinivasan, 1978).

In this study, endowment life insurance policies with different combinations of attribute levels are presented to the participants. They were asked to rate each choice on a five-point scale starting from 1 (would definitely not buy it) to 5 (would definitely buy it). Participants were randomly assigned to two experimental groups: - the control and the treatment group. Also, in an experiment to avoid the ordering effect, choices are presented in different orders to the participants. The control and treatment groups in the experiment are presented with choices in which premium prices are framed yearly and monthly, respectively. Figure 3.1 shows the flow diagram illustrating the steps involved in the experiment to test H1.

3.4.1 Designing of choice sets

The attributes and their levels included in the design of choice sets for the control group are shown in Table 3.3. With three attributes, each of two levels, a factorial design is constructed, giving rise to eight choices.

Out of the eight choices, we excluded two in which the PPT is more than 50% of the PT. Because when the PPT is more than 50% of the PT, the GMB paid at the maturity comes more than the sum assured. Hence, the choices with a PT of 10 years and a PPT
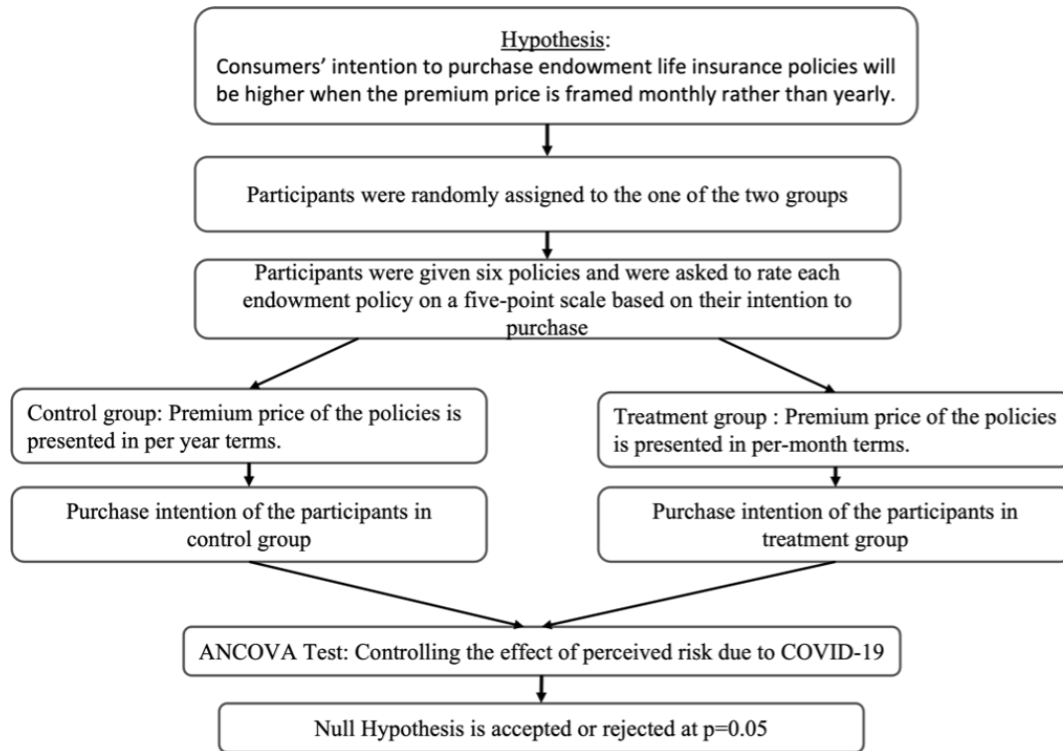
Figure 3.1: Flow diagram showing the steps involved in the experiment

Table 3.3: Attributes and their levels for the control group

Level	Premium Price	Policy Term	Premium Payment Term
1.	Yearly payment of INR 50000	10 years	5 years
2.	Yearly payment of INR 75000	15 years	7 years

Table 3.4: The eight choices with three attributes of two levels each

1	INR 50000 premium price paid for 5 years, when the policy term is 10 years
2	INR 50000 premium price paid for 5 years, when the policy term is 15 years
3	INR 50000 premium price paid for 7 years, when the policy term is 10 years
4	INR 50000 premium price paid for 7 years, when the policy term is 15 years
5	INR 75000 premium price paid for 5 years, when the policy term is 10 years
6	INR 75000 premium price paid for 5 years, when the policy term is 15 years
7	INR 75000 premium price paid for 7 years, when the policy term is 10 years
8	INR 75000 premium price paid for 7 years, when the policy term is 15 years

of 7 years are dropped from our experimental choices. As a result, the control group is presented with six experimental choices in experimental design. The final six choices assigned randomly to the control group are shown in Table 3.4, and participants were asked to indicate their intention to purchase on a five-point Likert scale.

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For designing the choice set for the treatment group, the attributes and their levels included are shown in Table 3.5. Similar to the above, 23 factorial designs with three attributes in each of the two levels are used to generate eight choice combinations, out of which two choices were excluded for simplicity, as discussed in the above paragraph.

Based on the PAD strategy proposed by Gourville (1998), the premium price is framed in monthly terms to test the effect of framing of premium price on consumers' purchase intention for the endowment life insurance policy under consideration. The final six choices randomly assigned to the participants in the treatment group are shown in Table 3.6, and participants are asked to indicate their intention to purchase on a five-point Likert scale.

Table 3.5: The eight choices with three attributes of two levels each

1	INR 50000 premium price paid for 5 years, when the policy term is 10 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
2	INR 50000 premium price paid for 5 years, when the policy term is 15 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year
3	INR 50000 premium price paid for 7 years, when the policy term is 15 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year
4	INR 75000 premium price paid for 5 years, when the policy term is 10 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
5	INR 75000 premium price paid for 5 years, when the policy term is 15 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year
6	INR 75000 premium price paid for 7 years, when the policy term is 15 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year

Table 3.6: Attributes and their levels for the treatment group

Level	Premium Price	Policy Term	Premium Payment Term
1.	Monthly payment of INR 4270	10 years	5 years
2.	Monthly payment of INR 6410	15 years	7 years

Table 3.7: Final six choices presented to the subjects in the treatment group

1	INR 4270 premium price paid for 5 years, when the policy term is 10 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
2	INR 4270 premium price paid for 5 years, when the policy term is 15 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year
3	INR 4270 premium price paid for 7 years, when the policy term is 15 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year
4	INR 6410 premium price paid for 5 years, when the policy term is 10 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
5	INR 6410 premium price paid for 5 years, when the policy term is 15 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year
6	INR 6410 premium price paid for 7 years, when the policy term is 15 years, GMB is Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year

3.4.2 Control Variable

The COVID-19 pandemic has caused significant psychological effects that might have triggered in individuals the fear of themselves or their loved ones getting infected by a coronavirus. Pappas et al. (2009) defined fear as a "normal reaction to an evolving threat, preparing the individual, both physically and mentally, for an acute response to possible harm," thus, the fear of getting infected by a coronavirus, which is invisible, imminent, and transmissible, may influence individuals' rational thinking and their perception towards the risk due to COVID-19. Qian (2021) identified a significant effect of COVID-19 on per capita insurance revenue for life insurance in China.

As this experiment is performed in India after citizens have experienced the first and second waves of COVID-19, it is essential to measure and control the effect of risk perception due to COVID-19 on customers' intention to purchase endowment life insurance policies. To achieve this, we measure the level of perceived risk due to COVID-19 in the participants using the risk perception scale developed and validated by Dryhurst et al. (2020).

3.5 Results

This section discusses the method and results of the experiment performed to test the hypotheses empirically. Participants were randomly assigned to each of the two experimental groups. Participants in each group were asked to imagine that they were planning to purchase an endowment life insurance policy and have shortlisted six endowment policies with different combinations of attributes. Participants were asked to indicate their intention to purchase on a five-point Likert scale for each of the six choices. Of the total 160 participants who participated in the experiment, responses from 12 participants were removed as they indicated no intention to purchase an endowment life insurance policy by rating "1" on the purchase intention scale of 1 to 5.

The results from one-way (premium price - yearly, monthly) between-subject analysis of covariance (ANCOVA) (Rutherford, 2011) indicate a significant effect of framing of premium price in monthly terms on consumers' purchase intention when controlling for the effect of consumers' perceived risk of COVID-19 on consumers' purchase intention. The ANCOVA model predicting consumers' intention to purchase endowment life insurance policies demonstrated a significant effect of risk perception due to COVID-19 on purchase intention ($F_{1,143} = 23.77, p = 0.01$) and a significant effect of framing premium price in monthly terms on consumers' purchase intention ($F_{1,143} = 10.40, p = 0.002, \eta^2 = 0.068$). Mean purchase intention is 2.74 when the premium price in the life insurance policy is conveyed in "per year" terms and 3.24 when conveyed in "per month" terms.

This indicates that the ANCOVA results are consistent with hypothesis H1, in which we hypothesised that there is a significant increase in consumers' intention to purchase the policy when the premium price is conveyed in monthly terms as against when conveyed in yearly terms by adjusting for the covariate "Risk perception due to COVID-19".

3.6 Discussion

Framing of premium prices may significantly affect households' liquidity constraints, especially due to COVID-19. Monthly premium payments could ease liquidity concerns without disrupting regular expenses. Studies show COVID-19 impacts household financial behavior, consumption, and risk behavior. In India, the pandemic led to decreased income and employment levels, potentially influencing households' liquidity and preference for monthly premium endowment policies.

Perceived costs of endowment life insurance policies depend on expected benefits (life cover and savings components). For ages 25-45, low mortality rates make perceived costs higher than expected benefits. Monthly premium framing may reduce the perceived costs of these policies. Premium prices framed monthly can lead to lower perceived opportunity costs compared to yearly pricing. Consumers may have several expenses similar in magnitude to the monthly premium price, while fewer expenses are comparable to yearly premiums. Monthly premiums seem more viable for customers since they can continue with similar expenses by sacrificing only one or two. In contrast, yearly premiums might feel more restrictive, requiring greater compromise on other expenditures.

A *lack of self-discipline* to save money every month can also lead the participants to select the monthly framed premium price. Individuals might think that it is difficult to pay the yearly premium as they will not be able to save monthly on their own, and thus the burden of paying the premium in lumpsum at the end of the year will be onerous for them. Rabbani (2020) found a significant role of self-discipline in purchasing Cash value life insurance (CVLI).

Another factor could be consumers' effort and time in calculating the total premium paid. Studies in literature have found that consumers often use heuristics to do calculations like multiplication or addition, resulting in a deviation from the expected value (Morwitz et al., 1998; Jain et al., 2020). This study suggests that life insurance companies can encourage consumers to purchase the endowment policy by framing premiums in monthly terms, ultimately leading to better product design.

3.7 Moderating effect of liquidity constraint

As discussed above, the liquidity constraint can be one of the reasons for participants' higher intention to purchase the endowment policy with a monthly premium option compared to a policy with a yearly premium option. Studies in the literature demonstrated that consumers' income level significantly impacts their intention to purchase a life insurance policy (Kakar and Shukla, 2010; Lee et al., 2018).

In this section, we examine our second hypothesis (H2), which aims to determine whether participants' income moderates the framing effect on purchase intention. To test the hypothesis, we categorised the participants into two income levels – low (INR 0.5 million to 1.0 million) and high (INR 1.0 to 2.0 million) and performed a one-way (premium price – yearly, monthly) analysis of covariance (ANCOVA) on purchase intention for each income level adjusting for participants' perceived risk due to COVID-19. The establishment of these income thresholds was based on the annual premium amount, and the consideration of how manageable and financially impactful premium payments are for individuals. It's important to note that this categorization method differs from the conventional income classification approach based on overall financial capacity and lifestyle factors.

The low-income group detected a significant effect of perceived risk due to COVID-19 ($F_{1,83} = 6.373, p = 0.013, \eta^2 = 0.07$) on participants' purchase intention. We found a significant main effect of framing of premium price (M Yearly = 2.77 Vs M Monthly = 3.25; $F_{1,83} = 8.048, p = 0.006, \eta^2 = 0.088$) on participants' intention to purchase endowment policy. The results indicate an increase in the purchase intention when the premium price is framed in monthly terms than when framed in yearly terms.

For the high-income group, the effect of perceived risk due to COVID-19 was significant ($F_{1,62} = 12.49, p = 0.001, \eta^2 = 0.168$). Although, the main effect of premium price framing on participants' purchase intention was significant at p = 0.008 (M Yearly = 2.69 Vs M Monthly = 3.32, $F_{1,62} = 7.63, \eta^2 = 0.11$). Thus, we can see no significant difference between the mean purchase intention across low and high-income groups.

3.8 Conclusion

The study investigated how presenting endowment life insurance policy premium prices in a context affects consumers' intention to purchase them, controlling for the potential influence of COVID-19 risk perception on participants' decision-making processes. The study's results supported our first hypothesis, indicating that consumers prefer paying a monthly premium over yearly while purchasing an endowment life insurance policy. However, we found no notable difference in the mean purchase intention between the low-income group (with liquidity constraints) and the high-income group (without liquidity constraints). As a result, our second hypothesis that income significantly moderates the relationship between the framing effect and purchase intention cannot be accepted. This implies that while income can account for the framing effect on purchase intention, additional factors also shape individuals' framing behavior which needs further investigation. Regulators and policymakers can use this insight to enforce guidelines that ensure a clear and transparent presentation of premium prices.

This research has some limitations. Firstly, participants' ability to rate the six choices in an experiment depends on their computation skills, which can affect their purchase intention. To reduce cognitive effort, future research could use pairwise comparisons to test the study's findings. Moreover, the current study did not examine the impact of benefit framing on purchase intention. Future research could investigate the main and interaction effects of benefit and premium price framing. Lastly, researchers could explore the moderating effect of financial literacy on the causal relationship between premium price framing and purchase intention.

Chapter 4

Moderating Effect of Financial Literacy on the Attribute-framing Effect

4.1 Introduction

The third objective of our thesis is to test the moderating influence of financial literacy on the impact of attribute framing, specifically related to premium price and guaranteed maturity benefit, on consumers' purchase intention of endowment life insurance policies. This chapter is dedicated to investigating the attributes framing effect and the moderating influence of financial literacy on it.

Consumers often deviate from rational choice behavior while making life insurance purchase decisions (Huber et al., 2015), resulting in the under-purchase or over-purchase of the policy. This deviation in the consumers' purchase behavior attributes to the different elements of the insurance purchase decision, like an estimation of the risk they may face in the future, the estimation of the cost of the insurance policy, and its benefits (Johnson et al., 1993). Influenced by the growing field of behavioral economics, the studies in the literature used different frames to improve consumers' life insurance purchase decisions (Bauchet and Morduch, 2019; Huber et al., 2015) and demonstrated that decision-makers respond differently to different but objectively equivalent descriptions of the information in the life insurance context. However, no research has explored

the impact of attribute framing of premium and guaranteed maturity benefit (GMB) on purchase intention in the endowment life insurance context.

Additionally, prior literature found that consumers often lack the knowledge and skill to evaluate and make informed financial decisions (OECD/INFE, 2016; Lusardi and Mitchell, 2014). Some studies have also shown that consumers' financial literacy and numeracy levels influence their policy purchase decisions (McGarry et al., 2016; Lin et al., 2017). Adequate research is available ILIP the literature to understand the multifaceted impact of financial literacy on various dimensions of financial behavior and decision-making, encompassing retirement planning, stock market decisions, wealth management, portfolio allocation, savings, financial inclusion, risky investment intentions, and household health investment (Li et al., 2023; Ling et al., 2023; Mutlu and Özer, 2021; Wangzhou et al., 2021; Aren and Aydemir, 2015; Lusardi, 2012; Hilgert et al., 2003). A closely aligned study by Pitthan and Witte (2021) explored the fundamental role of financial literacy in mitigating behavioral biases (overconfidence, narrow framing, availability heuristics) related to policy purchases. However, none of the existing research has focused on understanding the moderating effect of financial literacy on the relationship between attribute framing and purchase intention in the context of endowment life insurance policy (ELIP).

ELIP is a life insurance plan that provides a sum assured in case of premature death or a guaranteed maturity benefit if the policyholder survives until maturity. However, this combined advantage of protection and saving provided by endowment policies varies in many dimensions, making the decision process more complex for consumers than the term life insurance policy. Therefore, the complexity involved in the ELIP purchase decision and lack of financial literacy may worsen the irrational purchase behavior of the consumers.

Motivated by the two research gaps discussed earlier, the study aims to answer the following research questions: RQ1) Does framing of ELIP attributes (premium and GMB) affect consumers' purchase intention? RQ2) Does financial literacy intervention moderate the effect of attribute framing on consumers' purchase intention?

To answer the above research questions, we first developed a couple of hypotheses based on related literature and multiple theories: hedonic editing rules, quasi-hedonic editing rules, and pennies-a-day strategy. After that, we present two experiments to test these hypotheses. Experiment 1 tests the main and interaction effect of framing two attributes, premium and GMB of ELIP, on purchase intention while controlling the effect of participants' risk perception of COVID-19. In addition, we also tested whether consumers' income level significantly moderates the attribute framing effect of premium and GMB on purchase intention. Experiment 2 assesses whether providing financial literacy about the time value of money (TVM) to the participant moderates the attribute framing effect of premium and GMB on purchase intention.

4.2   Background

In the following, we discuss the prospect theory developed by Kahneman Tversky (1979), the mental accounting principle developed by Thaler (1985), and the Pennies-a-day strategy proposed by Gourville (1998) to derive the hypotheses for testing the benefit of price and benefit framing on customer purchase intentions. We also discuss the financial literacy literature to derive the hypothesis for testing the moderating effect of financial literacy intervention on the attribute framing effect.

4.2.1   Prospect Theory and Mental Accounting Principle

Prospect theory explains the risky choice behavior of consumers and uses value function to characterize choices, and outcomes are coded as gains or losses relative to a reference point. On the contrary, expected utility theory involves the integration of outcomes with the current wealth and evaluates the total outcome based on its utility (Harrison and Rutstrom, 2009). Thaler (1985) explained 'mental accounting' as "the process of coding, categorizing and evaluating events." which helps to understand the behavioral-based theory of consumer choices. On the one hand, where prospect theory value function describes single unidimensional outcomes, on the other hand, mental accounting explains how multiple outcomes are perceived and coded by consumers while making decisions.

The study by Thaler (1985) examined the effect of psychophysics on customers' evaluation of multiple outcomes. It states that while performing the mental accounting process of coding, categorizing, and evaluating multiple outcomes, individuals follow key hedonic editing rules of maximizing pleasure and minimizing pain.

Editing rules are the guidelines followed during the editing phase of the prospects to get their alternative representation. In principle, customers can arbitrarily integrate or segregate the outcomes to maximize pleasure. Thaler (1985) derived four rules of hedonic editing adopted by individuals to evaluate multiple outcomes:

(i) Segregate gains for pure gains (due to the concave nature of the gain function)

(ii) Integrate losses for pure losses (due to the convex nature of the loss function)

(iii) Integrate small losses with large gains (to overcome the effect of loss aversion)

(iv) Segregate small gains from large losses (the slope of the gain function is highest at the starting point; thus, segregating small gains will increase the magnitude of gain and, thus, when combined with large losses, will exceed the overall utility of the outcomes).

The experiments performed by Thaler and Johnson (1990) confirmed that subjects behave consistently with hedonic editing for pure gains, mixed gains, and mixed losses. However, for multiple losses, Thaler and Johnson (1990) rejected the hedonic editing model and proposed another editing model named the "Quasi-hedonic editing model," according to which customers follow the hedonic editing rule for a time limit. Later, to further examine the hedonic editing principle of Thaler (1985), Linville and Fisher (1991) proposed a renewable resources model according to which the individuals' preference to segregate or integrate multiple events temporally also depends on the renewable but limited cognitive, physiological, and social resources available to them. The study stated that individuals possess limited renewable loss-buffering resources to overcome the losses and limited but renewable gain-savoring resources to experience the gains occurring in temporal proximity. Thus, multiple gains are temporally segregated on different days to avoid sharing gain-savoring resources and maximize the pleasure attached to them. Again, for pure losses, individuals will prefer to segregate the losses into different days to have sufficient loss-buffering resources to decrease the impact of losses. Integrating

the outcomes for the same day will maximize the pleasant experience for large gains and small losses because gains will act as loss-buffering resources for losses.

The above review of the literature suggests that in the case of pure gain, the segregation of gains, i.e., segregating the gains to different days based on the hedonic editing model, spreads out the pleasure experienced and prevents sharing of gain-savoring resources based on the renewable resources model. However, in contrast to the similar findings for experiments on pure gains using the hedonic editing model and renewable resources model, the two models indicated different findings for experiments on pure losses. According to the hedonic editing principle, people prefer to integrate losses on the same day to reduce the pain of losses. In contrast, the renewable resource model states that individuals have limited but renewable resources, and therefore, for pure losses, they prefer to segregate the losses to different days to have sufficient loss-buffering resources to decrease the impact of losses. Besides considering mental accounting as the process of coding, categorizing, and evaluating events, it is also indicated as the framing that helps individuals create psychological accounts for the costs and benefits of a particular purchase (Prelec and Loewenstein, 1998; Kamleitner and Kirchler, 2006). In addition, the literature discusses numerous implications of the mental accounting principle, such as trading decisions (Lim et al., 2006), borrowing decisions (Hirst et al.,1994), household spending, and investing decisions(Zhang and Sussman, 2017), portfolio choice(Choi et al., 2009), consumer credit decision (Ranyard et al., 2006), household finance decision (Antonides et al., 2011).

Another approach often adopted by existing studies to test the effect of price framing on consumer purchase behavior is the Pennies-a-day strategy (PAD strategy) proposed by Gourville (1998). The following section discusses the pennies-a-day strategy in detail.

4.2.2 Pennies-a-day Strategy

The pennies-a-day strategy proposed by Gourville (1998) tested the effect of framing the cost and benefit of the product in a segregated form on the perceived attractiveness of the transaction. He found an increase in the transaction attractiveness when payment is

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framed in pennies-a-day form and a decrease in the transaction attractiveness when the benefit is framed in pennies-a-day form.

The study investigated the effect of the pennies-a-day (PAD) strategy on customers' likelihood of donating. The subjects were asked to contribute to the hypothetical financially equivalent donation request. Half of the subjects were shown the donation request framed on a per-day basis (85 cents per day), and half saw the contribution request framed in aggregate form, i.e. per year basis ($300 per year). The author identified that the subjects' likelihood of donating was increased when contributions were presented under the PAD strategy compared to when presented in aggregated form. For framing of gain or benefit received, the author performed a pilot study on switching telephone carriers in return for receiving aggregated funds ($56 per year) and segregated funds ($11.56 per month, equivalent to $141 per year). He observed a decrease in the perceived magnitude of the transaction when funds are framed in segregated terms rather than in aggregated terms, thus validating the PAD effectiveness. The study also examined a significant moderating effect of the monetary magnitude on customers' transaction evaluation. A growing body of literature used the Pennies-a-day strategy to test the price framing effect in different areas as diverse as health care (Chandran and Menon, 2004), consumer products (Gourville, 1999; Gourville, 2003; Shirai, 2017), charity donation (Gourville, 1998), and financial decision making for a recurring deposit (Hershfield et al., 2020).

Hershfield et al. (2020) conducted a field experiment to test the effect of temporal reframed savings on customers' participation in a recurring deposit program. They found a significant increase in the participation rate of customers in the saving program when savings are temporally framed in daily terms compared to when framed in monthly terms. Similarly, the study found a rise in the participation rate when savings are framed in weekly terms compared to monthly terms. Also, the participation gap between high- and low-income customers reduces when savings are temporally framed in daily terms.

However, there needs to be more research work in understanding the mental accounting principle followed by consumers in case of receiving benefits or funds. Gourville (1998) performed only the pilot study and stated that consumers prefer to receive the

benefits in a segregated form instead of an integrated one. However, the author did not perform a large-scale experiment to establish the finding. Yi et al. (2013) studied the effect of segregating and aggregating the rewards on consumers' evaluation of loyalty programs for varying perceived reward uncertainty. The study found that consumers prefer loyalty programs providing segregated rewards when the perceived uncertainty of receiving the reward is low and aggregated rewards when the perceived uncertainty of receiving the reward is high. In trading decisions, Lim (2006) found that investors prefer to sell the stocks on the same day when they realize a loss on selling multiple stocks, whereas they prefer to sell the stocks on different days when they realize a gain on selling multiple stocks.

4.3 Hypotheses Development

In addressing research question 1, we formulated hypotheses grounded in the attribute framing literature and various theories, including hedonic editing rules, quasi-hedonic editing rules, and the pennies-a-day strategy. For research question 2, we developed hypotheses based on the financial literacy literature.

Based on the quasi-hedonic editing principle and the PAD strategy, we hypothesise that consumers' intention to purchase ELIPs will be higher when the premium is framed monthly rather than yearly. We believe that the hedonic editing principle of integrating multiple losses would not work when framing premiums in monthly terms due to the large distance between the two loss events. This argument is in line with the findings of Thaler and Johnson (1990) that individuals follow the hedonic editing principle when the events occur within a particular time limit.

For GMB framing, we hypothesise that the consumers' intention to purchase ELIPs will be higher when the GMB is framed in a segregated form than in an aggregated form. We base this hypothesis on the hedonic and quasi-hedonic editing principles. We do not consider the PAD theory for GMB framing, as no relevant study is present on understanding the effect of benefit framing based on this theory. Our study is the first of its kind to test the applicability of these theories in the context of ELIP.

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According to the Organization for Economic Co-operation and Development- International Network on Financial Education (OECD-INFE), financial literacy includes individuals' financial knowledge, behavior, and attitude (RBI, 2019). Santini et al. (2019) identified gender, financial knowledge, education, income, financial attitude, household investments and financial behavior as the key determinant of financial literacy. Numerous studies suggest a lack of knowledge among consumers about financial products and financial principles (Lusardi and Mitchell, 2011), making it difficult for consumers to make sound and informed financial decisions. Lusardi and Mitchell (2007) demonstrated a significant effect of financial literacy on financial planning. Based on the financial literacy literature provided in section 2.2 and the above discussion, we hypothesise that financial literacy moderates the interaction and main effects of premium and GMB on purchase intention.

4.4 Literature Review

This literature review section is divided into two parts: the works related to attribute framing effects on consumer behavior, especially in the insurance context, and the works related to the impact of financial literacy and the impact of financial literacy intervention on consumer behavior.

4.4.1 Attribute Framing

Many researchers have demonstrated a significant impact of attribute framing on consumer purchase intention across various products (Jebarajakirthy et al., 2023; Rapp, 2022; Gamliel et al., 2011). Early research on diverse insurance products has also unveiled the power of framing effects on consumers' choices. These studies demonstrate that framing significantly influences consumers' insurance decisions, with preferences favoring policies with rebates over deductibles (Johnson et al., 1993), consumption-focused annuities over investment products (Brown et al., 2013), and risk communication frames increasing willingness to pay for flood insurance (Botzen et al., 2013). Huber et al. (2015) studied the effect of presenting bundled or de-bundled prices on unit-linked life insurance pur-

chase intentions, finding no significant impact. Pincus et al. (2017) explored the impact of framing on consumers' willingness to pay for long-term care insurance. They identified a significant positive effect of emotional frames over rational risk frames on consumers' willingness to pay.

Bauchet and Morduch (2019) investigated premium payment modalities for term life insurance demand among Mexican microfinance customers, noting a significant demand increase when instalment payments were offered. Kairies et al. (2023) examined the impact of health insurance design on reducing inefficient care. The authors compared the effectiveness of cost-sharing and rebate strategies in promoting efficient healthcare practices. They found that cost-sharing reduces healthcare utilization but not necessarily a reduction in low-value care. Rebates do not lead to increased healthcare utilization. Burkovskaya et al. (2022) investigated how framing affects insurance decisions. The authors found that the treatment group, given a comprehensive description of the risk, chose more comparable deductibles than the control group, which received a succinct description, underscoring the significant impact of framing on insurance choices. Zheng (2020) explained how narrow framing affects insurance decisions and suggested adding a deductible and co-insurance to the optimal insurance contract, highlighting the need to merge traditional insurance economics with behavioral economics.

4.4.2 Financial Literacy

Li et al. (2023) conducted a study on the impact of social endowment insurance on household portfolio allocation disparities. The relationship between social endowment insurance and portfolio preferences was found to be moderated by financial literacy, with urban and rural households experiencing different levels of divergence. The study also showed that financial literacy positively affects financial inclusion in all areas.

Ling et al. (2023) analyzed the relationship between financial literacy and household health investment (HHI) in China. The findings underscore that households led by individuals with higher levels of financial literacy demonstrate a greater willingness to embrace diversified investments. The research also unravels the mediating role of infor-

mation sources, health knowledge, and family income, which collectively contribute to the relationship between financial literacy and HHI. Mutlu and Özer (2021) examined the effect of financial literacy and locus of control on financial behavior. The study highlighted that financial literacy moderates the relationship between locus of control and financial behavior.

Wangzhou et al. (2021) investigated the interplay of regret aversion, information cascade bias, risk perception, and financial literacy in the real estate sector context. The study emphasized the potential of financial education to combat cognitive biases and make informed investment decisions. Furthermore, financial literacy is critical in the complex relationship between regret aversion, information cascade bias, and investment decisions. Aren and Aydemir (2015) explored the interplay between individual factors, financial literacy, and the propensity for risky investment intentions. The study shows that people with better financial knowledge are less likely to take risks when investing.

Costa *et al.* (2021) explored the differential impacts of financial literacy and numeracy on financial decision-making, particularly in the context of biases like loss aversion and framing effects. Through an experimental task simulating share sale decisions, it was found that while numeracy aligns decisions closer to economic rationality, financial literacy may paradoxically enhance susceptibility to framing effects. This suggests that higher financial literacy does not necessarily guard against common cognitive biases and might, in fact, amplify them. Conversely, numeracy was associated with more rational financial choices, highlighting a distinct dissociation in how these competencies affect decision-making. These findings challenge the prevailing assumption that financial literacy alone is sufficient for improving financial decisions, underscoring the need for financial education to also focus on enhancing numeracy and critical thinking skills to effectively mitigate biases.

4.4.3 Financial Literacy Intervention

In this section, we provide a comprehensive review of existing research on the effectiveness of financial literacy interventions in enhancing individuals' financial knowledge and

behavior. These studies encompass a spectrum of methodologies, from digital learning interventions and experimental research to field experiments and surveys, offering valuable insights into the strategies that can be employed to bolster financial literacy and financial decisions.

One noteworthy study by Popovich et al. (2020) delves into the realm of community college education in the Midwestern region of the United States. Their objective was to identify an intervention capable of improving the financial knowledge, attitudes, intentions, and behaviors of community college students. Using digital learning objects focused on essential financial topics such as budgeting, saving, credit, and loans, their research unveiled a positive effect, showcasing the potential of technology-driven tools in enhancing financial literacy and saving and budgeting decisions among this specific demographic.

Gill and Bhattacharya (2019) expanded the scope of financial literacy interventions by examining their impact on 11th and 12th-grade students. Their study, which did not specify a particular geographical location, centred on money management and financial investment topics. The research yielded a positive effect on financial knowledge, emphasizing the effectiveness of financial literacy programs within high school education settings. Mandell and Klein (2009), on the other hand, focused on assessing the influence of financial literacy interventions on high school students' financial behavior. Their investigation involved a personal financial management course and a survey conducted in a Midwestern region. Surprisingly, their findings revealed no significant effect, highlighting the importance of fine-tuning the design and delivery of financial education programs to maximize their impact.

Agarwalla et al. (2014) conducted an extensive study in India, examining the long-term and short-term effects of financial literacy interventions using various training methods. Their research revealed positive outcomes in both timeframes, emphasizing the enduring benefits of financial education across different formats. The study employed six alternate training methods, incorporating lectures, movies, and games, and was carried out among women participants. Sayinzoga et al. (2014) undertook a field experiment in

Rwanda, Africa, targeting smallholder farmers. Their financial literacy training program included lecturing, discussions, questions, and practical illustrations, with exercises at the end of each day. The findings demonstrated a positive influence on both financial knowledge and behavior among the participants.

Chauhan and Dhami (2021) explored the financial well-being and individual economic behavior of working people in Chandigarh, India, before and after financial literacy interventions. The intervention consisted of a 90-minute lecture adapted from various available resources, including investor education programs and financial literacy materials provided by government authorities. The study reported a positive impact on financial well-being and economic behavior. Cole et al. (2009) conducted research in Indonesia and India, focusing on unbanked households and their financial behavior. Their study compared the impact of financial literacy education with a small incentive on opening a savings bank account. While financial literacy education had no significant effect, the incentive demonstrated a positive influence on account-opening behavior.

Torma et al. (2023) analyzed the effect of financial education on financial behavior among university students in Croatia. Their training intervention aimed to improve financial decision-making among students. However, the study reported no significant effect on financial behavior, highlighting the complexities of influencing financial choices in higher education settings. Lastly, Clark (2023) examined the impact of employer-provided financial education programs on employee retirement savings decisions in the United States. The interventions included onboarding programs, mid-career informational nudges, and retirement planning seminars. The research found a positive effect, emphasizing the role of workplace-based financial education in influencing retirement savings decisions.

In summarizing the literature, we observe a robust body of research underscoring the influence of attribute framing on consumer behavior, especially in insurance product choices, and the significant role of financial literacy and financial literacy intervention in shaping financial decision-making. However, a notable gap emerges in the understanding of how these two streams interact, particularly in the context of endowment life insurance

policies. Previous studies have independently explored the effects of attribute framing and financial literacy but have not examined the intersection of these factors. Specifically, while the literature has extensively documented how financial literacy can influence broad financial behaviors and outcomes, there is a conspicuous absence of research on how financial literacy interventions might modify or amplify the effect of attribute framing on consumer intentions and actions within the complex and long-term investment context of ELIPs.

Our study aims to bridge this gap by investigating the combined effects of attribute framing and financial literacy interventions on consumer purchase intentions for ELIPs. We seek to understand not only how different framings of premiums and maturity benefits influence purchase decisions but also how financial literacy intervention can modify these effects.

The following hypotheses are developed based on these identified gaps and the need to explore further the interplay between attribute framing and financial literacy in shaping consumer intentions in the context of endowment life insurance.

4.4.4 Hypotheses Development

In addressing research question 1, we formulated hypotheses grounded in the attribute framing literature and various theories, including hedonic editing rules, quasi-hedonic editing rules, and the pennies-a-day strategy. For research question 2, we developed hypotheses based on the financial literacy and financial literacy intervention literature.

Based on the quasi-hedonic editing principle and the PAD strategy, we hypothesise that consumers' intention to purchase ELIPs will be higher when the premium is framed monthly rather than yearly. We believe that the hedonic editing principle of integrating multiple losses would not work when framing premiums in monthly terms due to the large distance between the two loss events. This argument is in line with the findings of Thaler and Johnson (1990) that individuals follow the hedonic editing principle when the events occur within a particular time limit.

For GMB framing, we hypothesise that the consumers' intention to purchase ELIPs

will be higher when the GMB is framed in a segregated form than in an aggregated form. We base this hypothesis on the hedonic and quasi-hedonic editing principles. We do not consider the PAD theory for GMB framing, as no relevant study is present on understanding the effect of benefit framing based on this theory. Our study is the first of its kind to test the applicability of these theories in the context of ELIP.

Based on the financial literacy literature provided in Sections 4.4.2 and 4.4.3, we hypothesise that financial literacy intervention moderates the interaction and main effects of premium and GMB on purchase intention.

4.5   Design of Experiment

We adopted choice-based conjoint analysis experiments to elicit consumers' preferences for different ELIPs. It involves ranking or rating the hypothetical alternatives of the product or services comprising different attributes and their levels (Ben-Akiva et al., 1978). The schematic diagram shown in Figure 4.1 provides an overview of the steps involved in the experimental study.

4.5.1   Identification of ELIP attributes and their levels

The key attributes of the ELIP included in the study are premium, policy term (PT), premium payment term (PPT), and GMB. Apart from premiums, Dar and Dodds (1989) identified that the rate of return of an endowment plan significantly influences consumers' purchases. Furthermore, Inkmann and Michaelides (2012) demonstrated that consumers purchase ELIP predominantly to resolve their saving motive instead of a bequest motive; thus, the GMB is another key attribute of an ELIP included in the experiment. PT represents the duration the policy will be active, and PPT is the period for which the policyholder needs to pay the premium for the ELIP. Each attribute can take on several selected levels based on the range of available levels in the endowment life insurance market. Figure 4.2 shows the different attributes and their levels included in the study.

The monthly equivalent of the yearly premiums is calculated using the TVM concept instead of simply dividing the yearly premium by twelve. The TVM concept states that
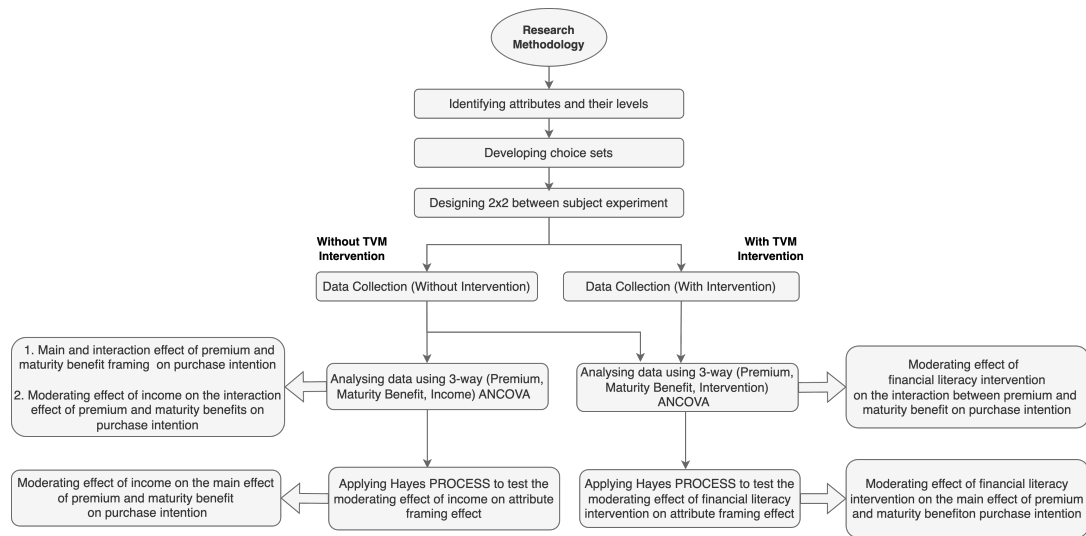
Figure 4.1: Steps involved in the experimental study

the value of an amount received today is always greater than that received in the future, assuming the money would be invested in some saving instrument.

Figure 4.2: Attributes and their levels

Premium	Policy Term (PT)	Premium Payment Term (PPT)	Guaranteed Maturity Benefit (GMB)
Yearly payment of INR 50000	10 years	5 years	72 percent of the total premium paid in PPT
Yearly payment of INR 75000	15 years	7 years	120 percent of the total premium paid in PPT
Monthly Payment of INR 4270			130 percent of the total premium paid in PPT
Monthly Payment of INR 6410			Sum of yearly benefits calculated every year till PT. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
			Sum of yearly benefits calculated every year till PT. The yearly benefit for a year is calculated as 10% of the total premium paid till that year

Based on the TVM, the formula used to calculate the future value (FV) of a current asset (PV) after "n" periods, considering the rate of return "r" per period, is

$$FV = PV(1 + r)^n \tag{4.1}$$

For example, the value of FV, corresponding to PV = INR 50,000 (yearly premium paid at the beginning of each year), would be INR 52820.

Equation 2 provides the formula to estimate the repeating monthly payment (A) equivalent to FV when payment is made at the beginning of each period,

$$A = FV\left(\frac{r/(1 + r)}{(1 + r)^n - 1}\right) \tag{4.2}$$

Substituting the value of FV from equation (1) into equation (2), we get

$$A = PV(1 + r)^n\left(\frac{r/(1 + r)}{(1 + r)^n - 1}\right) \tag{4.3}$$

Using equation 3, we get A = INR 4270 (rounded from INR 4273) as a monthly premium for PV = INR 50000 yearly premium amount, n = 12 and r = 0.005. Similarly, we get A = INR 6410 as a monthly premium amount corresponding to PV = INR 75000 yearly premium amount. In the equation above, "r" is calculated as 1/12 of the annual rate of return. The annual rate of return is fixed at 5.5 %, as this is the fixed deposit interest rate in India at the time of experimenting.

The five levels of GMB include two segregated levels and three aggregated levels. Table 4.1 shows aggregated GMB and its equivalent segregated GMB for different combinations of policy terms (PTs) and premium payment terms (PPTs). In segregated GMB, the benefits were calculated every year, and then the sum of yearly benefits till the policy term gives the total GMB received by the participants as the lump sum amount at the end of the policy term. Notably, the GMB for the monthly and yearly premiums is the same and is calculated based on the present value of the equivalent yearly premium paid. For instance, the GMB of a policy with INR 50000 yearly premium and INR 4270 monthly premium is calculated using INR 50000 as the premium paid per year.

To illustrate the calculation of guaranteed maturity benefit in segregated terms, Table

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Table 4.1: Aggregated GMB and its equivalent segregated GMB

S. No	PT	PPT	GMB (expressed in aggregated form)	GMB (expressed in segregated form)
1.	10 years	5 years	72% of the total premium paid in PPT	Sum of yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
2.	15 years	5 years	130% of the total premium paid in PPT	Sum of yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year
3.	15 years	7 years	120% of the total premium paid in PPT	Sum of yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year

D1 in Appendix D3 shows the segregated guaranteed maturity benefit calculation for a policy with an annual premium payment of INR 30000 for a PPT of 5 years and a policy term of 10 years. The illustration will help the participants to understand the calculations involved in segregated GMB and estimate the lumpsum GMB they will receive at the end of the policy term for each policy in the choice set. We provided and administered the same illustration during the experiment to all the participants with segregated GMB policies before asking them to rate the policy.

4.5.2 Design of choices

Table 4.2 shows the attributes and their levels used in generating the choice set for yearly premium and aggregated GMB conditions.

Table 4.2: Attributes and their levels for "yearly premium & aggregated GMB" condition

Level	Premium	PT	PPT
1	Yearly payment of INR 50,000	10 years	5 years
2	Yearly payment of INR 75,000	15 years	7 years

A factorial design is constructed with three attributes, each of two levels, giving rise to eight choices. Two of the eight choices were eliminated because they had a premium payment term (PPT) that exceeded 50% of the PT. This was done because if the PPT exceeds 50% of the PT, the GMB paid at maturity would exceed the sum assured. Thus, participants were presented with six choices for each choice set. Table 4.3 shows four choice sets for different combinations of premium and GMB levels, each with six choices.

Table 4.3: Four choice sets for 2X2 attribute framing

GMB / Premium Price	Aggregate GMB	Segregate GMB
Yearly	Choice Set 1	Choice Set 3
Monthly	Choice Set 2	Choice set 4

The GMB for each choice is set as 72%, 120%, or 130% of the total premium paid, depending on the PT and PPT, as shown in Table 4.4 . Participants were requested to provide their intention to purchase on a five-point Likert scale.

4.6 Experiment 1

In Experiment 1, we test the attribute framing effect on purchase intention and the moderating effect of income on their relationship. We used a 2 (yearly premium, monthly premium) X 2 (aggregated GMB, segregated GMB) X 2 (low-income, high-income) between-subjects experimental design. In a "between-subjects" experimental design, each participant is subjected to a single treatment condition (Charness et al., 2012). A survey-based questionnaire consisting of three sections was designed to collect the participant's demographic information, their risk perception of COVID-19 and their intention to purchase ELIP. Before evaluating the ELIP options, participants were asked to provide

demographic information, including age, gender, marital status, educational background, and annual income. To identify the risk perception of COVID-19, participants were asked to rate their worry/agreement/likeliness level with the given statements on a five-point Likert scale.

To know the participants' intentions to purchase ELIP, they were asked to imagine a hypothetical situation where they plan to purchase an ELIP and have shortlisted six ELIPs with different combinations of attributes. Participants were randomly assigned to one of the four conditions: "yearly premium aggregated GMB", "monthly premium aggregated GMB", "yearly premium & segregated GMB", and "monthly premium & segregated GMB". Participants' intentions to purchase were asked on a five-point Likert scale for each choice, where response options ranged from "Would definitely not buy it" to "Would definitely buy it". The sequence of options was randomized for each participant to mitigate potential order effects. We conducted a pilot study with 50 participants from the Pilani town of Rajasthan to test our experimental design and the comprehensive coverage of the questionnaire.

4.6.1 Participants

299 policyholders residing in Rajasthan, India, participated in the experiment. Figure 4.3 represents the probability of death in a population of different age groups in India (SRS-based Abridged Life Table, 2014-18). For this experimental study, we have chosen respondents between 25 and 45 years of age to overcome the need to change the premiums, as the mortality rate in this range does not change much. The process of participant selection adopted for the experiment was similar to the process used in the experiment discussed in Chapter 3.

Approximately 62% of our participants were male, and 38% were female. Furthermore, most participants were Married (87%), whereas only 13% were Single. Also, our sample varied based on the participants' educational backgrounds, with 67% being graduates, 31% being postgraduates, and only 2% holding a doctorate degree. Approximately 41% of the participants were of the age group 30-35 years, followed by the age group 35-
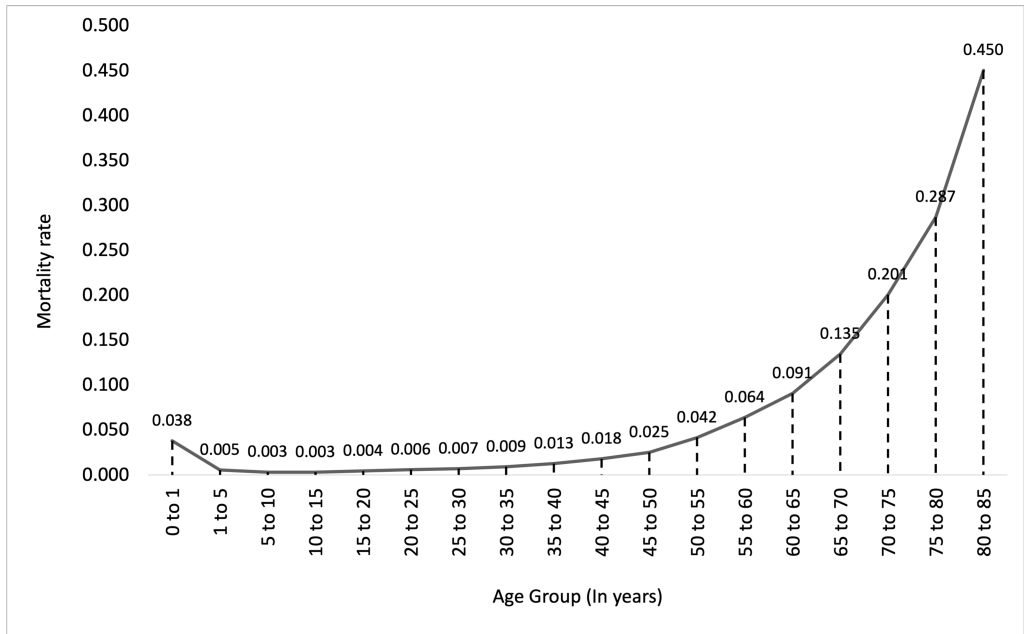
Figure 4.3: Age Group vs Mortality Rate

40 years (34%), 25-30 years (12%) and 40-45 years (13%). Finally, 58% of our sample had an annual income between INR 0.5-1 million, 18% with INR 1-1.5 million and 24% with INR 1.5-2.0 million.

Consumers' income level positively impacts their intention to purchase a policy (Lee et al., 2018; Kakar and Shukla, 2010). To test whether consumers' income level significantly moderates the framing effect of premium and GMB on consumers' purchase intention, we categorized the participants into two income levels – low (INR 0.5 to INR 1 million per year) and high (INR 1 to INR 2 million per year). The determination of the threshold points for distinguishing between low-income and high-income groups is influenced by the yearly premium amount and by considering the affordability and financial impact of premium payments on individuals. However, it is important to acknowledge that this approach deviates from the conventional low and high-income interpretation based on overall financial capacity and lifestyle factors.

In the specific context of a yearly premium of Rs. 50,000, the premium represents approximately 5-10% of the income for individuals in the low-income range (INR 0.5 - 1 million) and 2.5-5% for those in the high-income range (INR 1 - 2 million). Iacobucci

et al. (2015) discussed issues with dividing samples into groups using median splits, as individuals slightly above or below the median are grouped regardless of the degree to which they differ, leading to a loss of information. The authors suggest that the median split is less likely to produce erroneous results when the number of discrete levels is low. In our case, the number of respondents in the overlapping income range of INR 1-1.5 million is less than that in the INR 1.5-2.0 million range, further reducing the possibility of erroneous conclusions.

4.6.2 Results of the attribute framing effect on purchase intention

We conducted a 3-way analysis of covariance (ANCOVA) (Rutherford, 2011) using the Statistical Package for the Social Sciences (SPSS) software to explore whether attribute framing impacts purchase intention, with consumers' perceived risk due to COVID-19 as a covariate.

The ANCOVA result in Table 4.4 and Figure 4.4 shows that the interaction between premium and GMB is significant at p=0.042 ($F_{1,290} = 3.910, \eta^2 = 0.013$). This means consumers' intention to purchase the policy depends on both premium and GMB. Purchase intention varies more across premiums for the segregated GMB frame than the aggregated GMB frame. For segregated GMB, purchase intention was considerably higher for monthly premium (Mean=3.28) than yearly premium (Mean=2.74). For aggregate benefit, purchase intention was significantly higher for monthly premium (Mean=2.91) than yearly premium (Mean=2.66). The main effect of premium and GMB on purchase intention are significant with values $F_{1,290} = 10.98, p = 0.001, \eta^2 = 0.04$ and $F_{1,290} = 11.06, p = 0.001, \eta^2 = 0.034$ respectively. The result demonstrates a significant effect of perceived risk due to COVID-19 on purchase intention ($F_{1,290} = 16.56, p = 0.00$).

4.6.3 Results of the moderating effect of income on attribute framing effect

In this section, we investigate the moderating effect of income on the main and interaction effects of premium and GMB framing on consumers' purchase intention. ANCOVA
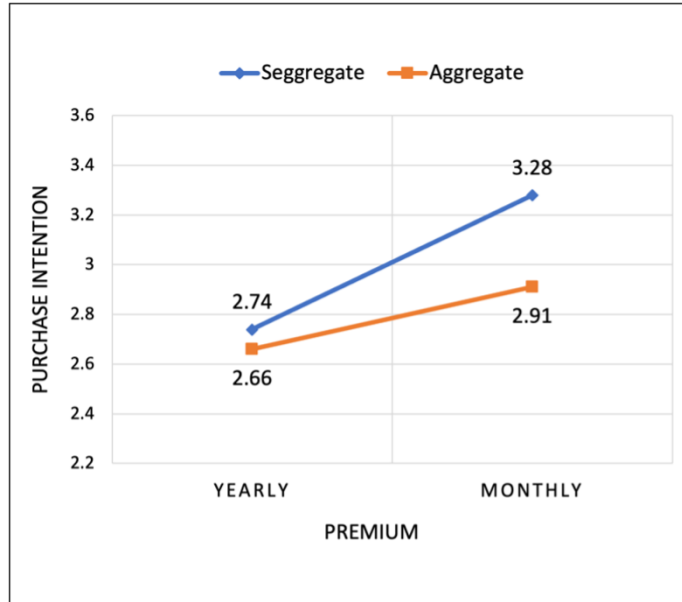
Figure 4.4: Effect of framing of premium and GMB on intention to purchase ELIP

results show that the interaction between premium and income ($F_{1,290}$ = 2.389, p = .123, η^2 = .008) was not statistically significant, whereas the interaction between GMB and income ($F_{1,290}$ = 10.348, p = .001, η^2 = .034) was significant. This inference does not reveal the effect of premium and GMB across both income groups. So, we performed the data split analysis across two income groups to examine the interaction effect between income and the other variables (premium and GMB).

Table 4.4: Descriptive Statistics of 3-way ANCOVA

	Yearly premium	**Monthly premium**	**GMB Mean**
Aggregated GMB	2.66 (0.73) n = 73	2.91 (0.75) n = 75	2.78 (0.75)
Segregated GMB	2.74 (0.69) n = 78	3.28 (0.67) n = 73	3.01 (0.74)
Premium Mean	2.70 (0.72) n = 151	3.09 (0.74) n = 148	

The study found that income moderates the interaction effect between premiums and GMB. Specifically, the interaction effect was not statistically significant for the high-income group (p = .997) but was significant for the low-income group ($F_{1,168}$ = 9.59, p = .002). Figure 4.5 illustrates the moderating effect of income on the interaction between premium and GMB. The descriptive statistics for high and low-income groups are presented in Table 4.5 .
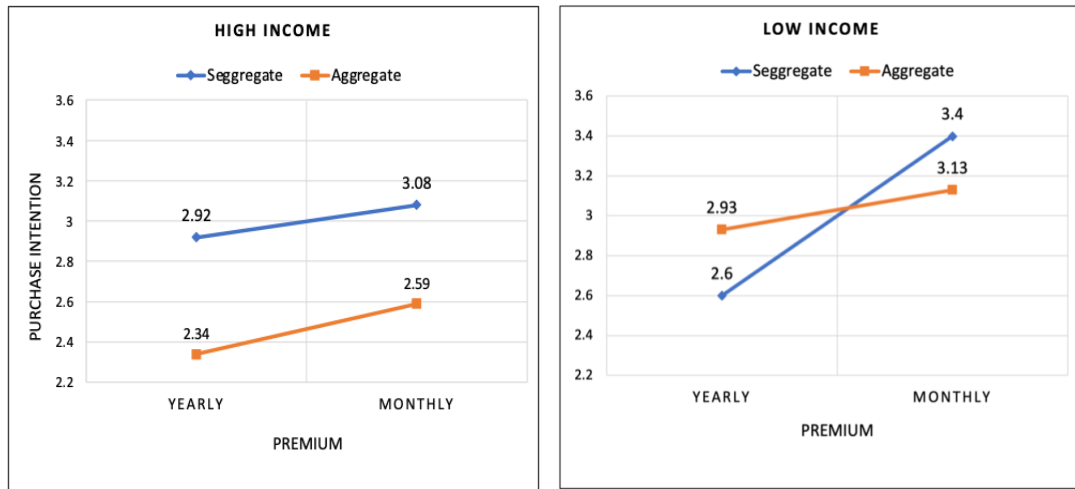
Figure 4.5: Premium and GMB interaction graph across low and high-income groups

Table 4.5: Descriptive Statistics of 3-way ANCOVA across income groups

		Yearly premium	Monthly premium	GMB Mean
High Income	**Aggregated GMB**	2.34 (0.60) n = 33	2.59 (0.81) n = 31	2.46 (0.72) n = 64
	Segregated GMB	2.92 (0.63) n = 35	3.08 (0.75) n = 27	2.99 (0.69) n = 62
	Premium Mean	2.63 (0.68) n = 68	2.82 (0.82) n = 58	
Low Income	**Aggregated GMB**	2.93 (0.78) n = 40	3.13 (0.63) n = 44	3.03 (0.71) n = 84
	Segregated GMB	2.60 (0.72) n = 43	3.40 (0.61) n = 46	3.01 (0.77) n = 89
	Premium Mean	2.76 (0.76) n = 83	3.27 (0.63) n = 90	

We used Hayes PROCESS - Model 1 (Hayes, 2012) to examine the moderating effect of income on the main effects of premium and GMB separately. Our findings indicate that income moderates the main effect of GMB on purchase intention significantly (p=0.0036). The negative coefficient value (-0.48) in the result suggests that the relationship between GMB and purchase intention is weaker for low-income than high-income consumers. Specifically, the change in purchase intention when low-income consumers are presented with a segregated option is less than the change in purchase intention for

high-income consumers. Moreover, the income did not significantly moderate the main effect of the premium on purchase intention (p=0.091). This suggests that switching from yearly to monthly premium options does not greatly impact purchase intention for low and high-income customers.

4.6.4 Discussion

Experiment 1 results show that monthly premiums positively affect the intention to purchase ELIP. This confirms findings from other researchers beyond ELIPs (Hershfield et al., 2020; Bauchet and Morduch, 2019). Monthly framing may reduce the perceived cost of ELIP, thus reducing the pain of paying. Additionally, monthly premiums result in lower opportunity costs than yearly premiums. With monthly payments, consumers may have other expenses of similar magnitude, resulting in lower opportunity costs. However, with yearly premiums, consumers may feel more restricted in compromising other expenses. Consumers prefer monthly premium options due to the effort and time required to calculate the equivalent yearly premium, considering the time value of money. Studies have found that consumers often use heuristics like multiplication or addition, resulting in a deviation from the expected value (Jain et al., 2020; Morwitz et al., 1998).

The results showed that participants' purchase intention of the ELIP was higher when the GMB was framed in segregated terms than aggregated ones. This supports our hypothesis and may be due to the perceived high benefit of segregated framing and the concave nature of the gain-value function. Another reason for preferring segregated GMB could be the self-generated anchor (or reference point) of 6% to 7% of the fixed deposit interest rate and comparing it with 9% or 10% of the yearly benefit used in this study. Therefore, the participants may have perceived the percentage benefit received in ELIP as higher than other traditional bank instruments (saving bank account, recurring deposit) for saving. Moreover, consumers often lack accuracy in calculating the future value of their money. As a result, they either underestimate or overestimate the interest when calculating the future value of the money, resulting in exponential growth bias (Mckenzie and Liersch, 2011; Stango and Zinman, 2009).

The income moderates the interaction effect between premiums and GMB; specifically, the interaction effect was not statistically significant for the high-income group and significant for the low-income group. Moreover, high-income individuals prefer segregated GMB irrespective of payment options and monthly premiums irrespective of GMB options. One possible reason for this preference difference is that high-income individuals may have greater financial stability and a higher tolerance for long-term financial commitments. In contrast, low-income individuals, who often face more variable financial circumstances, may prefer the combination of segregated maturity payments with a monthly premium option as it provides a long-term savings plan and a more flexible, manageable approach to their finances.

Income emerged as a moderating factor for the main effect of GMB on purchase intention. In the case of the low-income group, the relationship between GMB and purchase intention is weaker compared to the high-income group. This can be because low-income group individuals purchasing decisions might be more influenced by immediate financial constraints rather than long-term benefits.

4.7 Experiment 2

We conducted Experiment 2 to test the hypothesis that financial literacy intervention moderates the main and interaction effects of premium and GMB on purchase intention. We used a 2 (yearly premium, monthly premium) x 2 (aggregate GMB, segregate GMB) x 2 (with intervention, without intervention) between-subject experimental design.

For the "with intervention" condition, we introduced a financial literacy intervention using a TVM concept to examine if financial literacy influences the relationship between attribute framing and purchase intention. This intervention informed participants about the total payments and maturity amounts they would receive through traditional bank recurring and fixed deposit accounts for the same deposited amount. We chose recurring and fixed deposit accounts as our intervention for imparting financial literacy about the TVM concept due to their widespread recognition in India (SEBI, 2015). The intervention is designed to improve accuracy in predicting future money value and manage the

anchoring effect. This is achieved by giving participants detailed information on where money grows at a 5.5% interest rate (FD and RD rate during the experiment).

4.7.1 Design of Financial Literacy Intervention

We designed the intervention to focus the participants' attention on the future value of money when the premium is paid monthly or yearly and the total benefit received after 10 or 15 years. The intervention also helps compare the benefits received when equivalent amounts are deposited in the bank's traditional instrument (recurring and fixed deposit) and an ELIP.

Two intervention tables were designed, each depicting the growth of monthly and yearly premiums deposited in the recurring account (for PPT duration) and later in the fixed deposit account (for PT-PPT) at a 5.5% annual interest rate. First, a recurring deposit plan of the premium amount is considered for a period equal to the PPT. Then, the fixed deposit for the amount equal to the maturity value of the recurring deposit is considered for a period equal to the difference in the PT and PPT.

Calculation of maturity amount for the monthly payment

The intervention table designed for the monthly payment is shown to the participants who were given the choice sets with the monthly premium and aggregated or segregated benefits in the experiment. The future value of annuity due formula used to calculate the maturity amount of the recurring deposit at the end of PPT is

$$FV = A \left[\frac{(1 + r/t_1)^{n_1 t_1} - 1}{r/t_1} \right] * (1 + r/t_1)$$

where A is the monthly premium amount, r is the annual interest rate, t_1 is 12 (compounded monthly), and n1 is the number of years i.e. PPT. For example, when A = INR 4270, r = 5.5 %, $n_1 = 5, t_1 = 12$, we get FV = INR 0.295 million.

Then, the final maturity amount (FMV) is calculated considering that the FV is fixed-deposited for the remaining PT-PPT duration. The formula used to calculate the final maturity amount (FMV) is calculated considering that the FV is fixed-deposited for the re-

maining PT-PPT duration. The formula used to calculate the $FMV = FV(1+r/t_2)^{(n_2t_2)}$, where r is the annual interest rate, t_2 is 4 (compounded quarterly), and n is the number of years, i.e., PT-PPT. Continuing with the previous example, when FV = INR 0.295 million, r = 5.5 %, n_2 = 5, t_2 = 4, we get FMV = INR 0.388 million.

Calculation of maturity amount for the yearly payment

The intervention table designed for the yearly payment is shown to the participants who were given the choice sets with yearly premiums and aggregated or segregated benefits in the experiment. For yearly payments, the recurring deposit maturity amount for PPT duration is calculated by summing the future value of each year, where the future value for each year is calculated using the formula

$$FV = \sum_{i=0}^{n-1} A(1 + r/t_1)^{(n_1-i)*t_1}$$

where A is the yearly premium amount, r is the annual interest rate, t is 4 (compounded quarterly), and n is the number of years i.e. PPT. For example, when A = INR 50000, $r = 5.5\%, n_1 = 5, t_1 = 4$, we get FV = INR 0.295 million.

And then, the final maturity amount (FMV) is calculated considering that the FV is fixed-deposited for the remaining PT-PPT duration. The formula used to calculate the $FMV = FV(1 + r/t_2)^{n_2t_2}$, where r is the annual interest rate, t2 is 4 (compounded quarterly), and n is the number of years i.e., PT-PPT. For example, when FV = INR 0.295 million, $r = 5.5\%, n_2 = 5, t_2 = 4$, we get FMV = INR 0.388 million.

4.7.2 Participants

In Experiment 2, participants were assigned randomly to the "with intervention" condition of 2 (yearly premium, monthly premium) X 2 (aggregated GMB, segregated GMB) X 2 (with intervention, without intervention) between-subject experimental design. We collected the data from 287 policyholders residing in Rajasthan, India, aged between 25 and 45 years, in March 2022 (after the third wave of COVID-19 in India). Notably, the participants were from a disjoint set of participants from Experiment 1. The 287 partic-

ipants were asked to refer to the time value of the money intervention table (see Tables in Appendix E) before indicating their intention to purchase six insurance policy choices. The experiments were closely administered to ensure that the participants understood the financial literacy intervention table well and did not use any heuristics approach.

4.7.3 Results

The results of 3-way ANCOVA performed on the combined dataset obtained from Experiment 1 (without intervention) and 2 (with intervention) showed a significant interaction effect between premium, GMB, and intervention ($F_{1,577} = 12.11, p = 0.001, \eta^2 = 0.021$). However, there is no significant interaction between premium and GMB ($F_{1,577} = 0.203, p = .653, \eta^2 = .001$). Similarly, the interaction between intervention and premium is insignificant ($F_{1,577} = 0.984, p = .322, \eta^2 = .002$). However, in contrast, there is a significant interaction between intervention and GMB ($F_{1,577} = 44.05, p = .000, ^2 = .071$). The results also suggest that intervention ($F_{1,577} = 11.79, p = 0.001, \eta^2 = .020$), premium ($F_{1,577} = 36.83, p = .000, \eta^2 = .060$), and GMB ($F_{1,577} = 5.51, p = .019, \eta^2 = .009$) individually had a significant impact on purchase intention. Additionally, the main effect of COVID-19 ($F_{1,577} = 34.18, p = .000, \eta^2 = .056$) was also found to be significant.

The ANCOVA results discussed above do not reveal the interaction effect of premium and GMB across intervention groups. Therefore, we performed a data split analysis across two intervention groups. The results reveal that for the "with intervention" group, the interaction effect between premium and GMB was significant ($F_{1,282} = 7.37, p = .007, \eta^2 = .025$). Similarly, a significant interaction effect was observed ($F_{1,294} = 4.79, p = .029, \eta^2 = .016$) for the "without intervention" group. Figure 4.6 demonstrates the changes in the interaction between premium and GMB across with and without intervention conditions, indicating the moderating effect of the intervention on the interaction of premium and GMB on purchase intention.

Furthermore, in the "without-intervention" group, the effect of GMB on purchase intention was positive, meaning that GMB positively influenced the participants' purchase intention. However, in the case of the "with intervention" group, the effect of GMB on
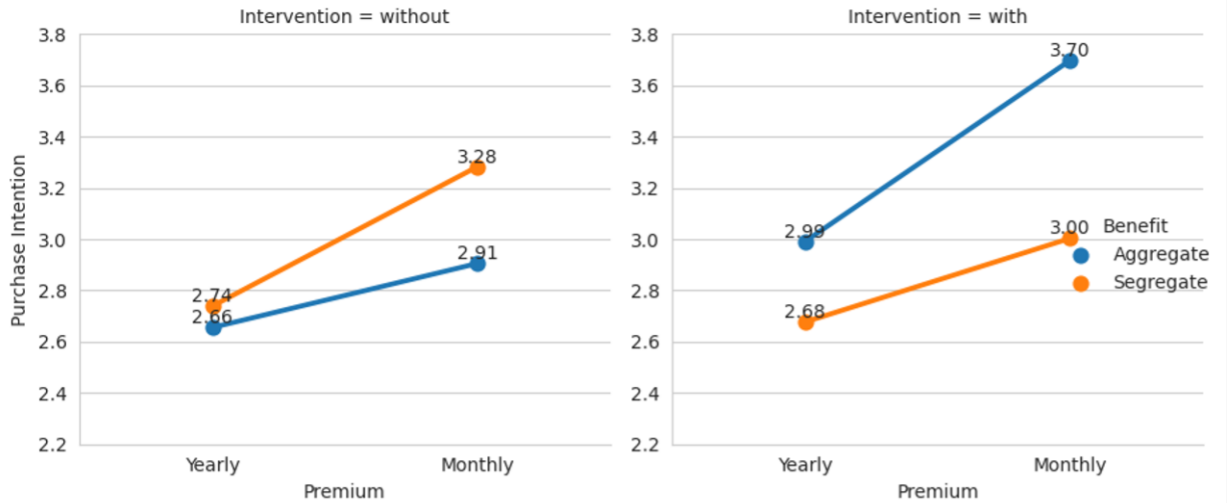
Figure 4.6: Premium and GMB interaction graph across with and without intervention groups

purchase intention is reversed, suggesting that the GMB had a negative impact on the participants' purchase intention. The descriptive statistics for with and without intervention groups are presented in Table 4.6 .

Table 4.6: Descriptive Statistics of 3-way ANCOVA for Experiment 2

		Yearly premium	Monthly premium	GMB Mean
Without Intervention	Aggregated GMB	2.66 (0.73) n = 73	2.91 (0.75) n = 75	2.78 (0.75) n = 148
	Segregated GMB	2.74 (0.69) n = 78	3.28 (0.67) n = 73	3.01 (0.74) n = 151
	Premium Mean	2.70 (0.72) n = 151	3.09 (0.74) n = 148	
With Intervention	Aggregated GMB	2.99 (0.69) n = 73	3.70 (0.67) n = 75	3.34 (0.77) n = 148
	Segregated GMB	2.67 (0.72) n = 71	3.00 (0.70) n = 68	2.84 (0.73) n = 139
	Premium Mean	2.84 (0.72) n = 144	3.37 (0.77) n = 143	

To examine the moderating effect of the intervention on the main effects of GMB on purchase intention, we performed Hayes PROCESS analysis using Model 1 with intervention as a moderator, purchase intention as a dependent variable and GMB as an

independent variable. The results reveal that the intervention significantly moderates the main effect of GMB on purchase intention with p=0.001. The negative coefficient value (-0.75) in the Hayes process result suggests that the relationship between the GMB and purchase intention is weaker in the case of intervention than without intervention. The change in purchase intention in case of intervention is negative, and without intervention is positive. Leading to aggregate GMB along with the intervention becoming the most preferred policy by the consumers. In the case of premiums, Hayes's PROCESS result shows that intervention does not significantly moderate the main effect of the premium on purchase intention, with p = 0.264.

4.7.4 Discussion

The results reveal that in both the "with intervention" and "without intervention" groups, there was a statistically significant interaction effect between premium and GMB. The interaction effect could be significant because the perceived value of a product is not simply determined by the absolute price or benefits alone. Instead, it is influenced by how consumers weigh the price against the benefits. Consumers often engage in a mental trade-off between the price they pay and the benefits they will receive when evaluating a product. Additionally, the results suggest that the financial literacy intervention moderated the main effect of GMB on purchase intention. The intervention impacts participants' estimation of the GMB, improves accuracy in predicting future money, removes the anchoring bias due to self-generated fixed deposit interest rate anchor, and compares it with the yearly benefit rate used in this study. Interestingly, the financial literacy intervention's impact extended beyond a primary moderating role. In the 'with intervention' group, the positive effect of GMB on purchase intention noted in the 'without intervention' group was reversed, implying a more dynamic role of the intervention. This suggests that interventions not only modulate the magnitude of a relationship but also its direction.

4.8 Contributions to the Literature

The study makes a significant contribution to the literature by exploring the relationship between financial literacy and the attribute-framing effect. While prior research has explored factors influencing consumers' susceptibility to framing effects (Basu and Ng, 2021; Bambauer-Sachse and Grewal, 2011; Gourville, 2003), this study is the pioneer in investigating the moderating impact of financial literacy intervention on attribute framing effect. The study enriches the literature on financial literacy by revealing the potential for effective interventions to mitigate biases stemming from heuristics that consumers often employ in financial decision-making.

Additionally, the present research extends the current knowledge by accounting for the influence of consumers' income level on the attribute framing effect in the context of ELIP. While studies like Bauchet and Morduch (2019) have examined the impact of payment modes on demand for micro-insurance policies in the term life insurance context, they explained this phenomenon through liquidity and saving constraints.

4.9 Practical Implications of the Study

For insurance companies, the study suggests exploring income-based insurance plans, tailoring offerings and pricing structures for diverse income groups to address varying financial needs. Insurers can incorporate educational resources into customer interactions by recognising the impact of financial literacy interventions. This investment in financial literacy empowers customers to make informed choices, building trust and loyalty. Lastly, clear and transparent communication of premium and benefit options is crucial. Insurers should present their products straightforwardly, emphasizing the future value of premiums and policy benefits. This fosters informed decision-making, boosting profitability for ELIPs compared to traditional savings products and promoting consumer trust, which is vital in the insurance industry.

The study's findings have significant implications for insurance regulatory bodies. Firstly, regulators should consider providing guidelines encouraging insurance companies

to offer monthly premium payment options. Secondly, recognizing the impact of financial literacy interventions, regulators should prioritize and support initiatives to improve financial literacy among consumers. Enforcing regulations that mandate transparent presentation of premium and benefit options is crucial. Regulators can stipulate standardized product disclosure practices and the use of comparative tools to empower consumers to make well-informed choices.

4.10   Conclusion

Our findings unveiled that purchase intentions exhibited a notable increase when considering monthly premiums over yearly premiums, aligning with existing research on framing effects (Hershfield et al., 2020; Bauchet and Morduch, 2019). Additionally, the interplay between premium and GMB significantly shaped purchase intentions. The observed preference for monthly payments might stem from their perceived lower cost and reduced opportunity costs compared to yearly premiums. This drew parallels to the findings of Thaler and Johnson (1990), who supported the application of quasi-hedonic editing rules to scenarios involving gains and losses.

The study found that income levels and the application of financial literacy interventions play pivotal roles in moderating the relationship between premium-GMB interaction and the main effect of GMB on purchase intention. However, it is noteworthy that these moderating factors did not affect the main effect of premium on purchase intention. Premium offers more influence on low-income individuals and prioritises basic coverage, while high-income individuals find policies with both premium and policy maturity amounts attractive for their financial goals. This suggests that insurance providers should tailor their offerings to cater to different income groups' preferences and priorities.

A rather exciting finding of the study is that the financial literacy intervention not only moderated the relationships between attribute framing and purchase intention but also exhibited a dynamic influence, altering the direction of the GMB framing effect in the presence of the intervention, making aggregate GMB option more preferable than segregate GMB option. This could be because the financial literacy intervention helped

participants remove anchoring bias due to self-generated anchor. This finding strengthens the foundational understanding that financial literacy shapes individuals' decision-making processes, which was already acknowledged by Li et al. (2023) and Ling et al. (2023) in different contexts.

In future research, exploring a broader range of premium price levels and examining more granular framing, like weekly premiums, could enhance our understanding. Investigating GMB framing in absolute and relative terms may provide valuable insights into purchase decisions for endowment life insurance. Additionally, performing within and between-subject experiments for analyzing purchase intentions across different attribute combinations could offer a more comprehensive perspective.

Chapter 5

Understanding Policyholders' Life Insurance Lapse Behavior: A Model Building Approach

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5.1 Introduction

The fourth objective of this thesis is to investigate the relationship between policyholders' perceptions, beliefs and their life insurance lapse behavior. This chapter is focused on examining this link.

Life insurance policies have been available in the market for almost two centuries. However, even today, only a few people purchase these policies, and some lapse them subsequently. In India, the life insurance penetration and density for 2021-22 are 4.2% and USD 91, respectively, according to the IRDAI Annual Report. This means that only 3 out of 100 people in India have a life insurance policy, as stated in the Economic Survey by the Ministry of Finance. Additionally, the average persistency ratio for public and private life insurance companies in India for 2020-21 is 41.17% for the 61st month or five years and 69% for the 13th month or one year, according to the Handbook on Indian

Insurance Statistics.

The act of a policy lapsing can have significant economic consequences, as noted by Eling and Kochanski in 2013. Within the updated Solvency II regulatory framework of the European Union, lapse risk stands out as the most significant subcomponent in the context of solvency capital requirements within the life underwriting risk module. It contributes to nearly 40 per cent of the capital requirement within this module, as documented in the European Insurance and Occupational Pensions Authority (EIOPA)'s 2011 report (pp. 77-78). Moreover, policy lapsation lowers insurers' liquidity, resulting in the selling of assets and a decrease in potential future benefits (Kuo et al., 2003). This can also lead to adverse selection if a policy can be cancelled without a significant lapse fee and harm the insurer's reputation (Yu et al., 2019), further impacting their business. To better manage policies, reduce lapses (cancellation or termination of the policy due to non-payment of premium), and help policyholders make informed decisions about their life insurance coverage, insurance companies need to understand policyholders' life insurance lapse behavior.

Analyzing aggregate secondary data on life insurance is a common approach among industry and researchers to understand policyholders' life insurance lapse behavior. Using aggregate data analysis from different sources, researchers have found unemployment and interest rates to be critical factors influencing policyholders' lapse behavior based on the emergency fund hypothesis and interest rate hypotheses, respectively (Outreville, 1990; Dar and Dodds, 1989). Furthermore, Russell et al. (2013) proposed a policy replacement hypothesis according to which policyholders prefer to lapse the old policy when they get a better policy and other features.

In addition to these three lapse hypotheses, the literature identifies primary factors that drive the lapsation of life insurance policies, including environmental factors such as macroeconomic factors and company characteristics (Kiesenbauer, 2011; Cox and Lin, 2006; Kim, 2005a; Kim, 2005b). Macroeconomic factors significantly affecting lapse behavior include seasonal effects, economic growth rates, capital markets development, and gross domestic product (GDP). In contrast to aggregate data analysis, research regarding

individual policyholders and contract details obtained from the insurer is limited, as this information is generally considered confidential (Shamsuddin et al., 2022). The studies in the literature analyzed the individual policy data available from the insurer to assess the effect of policyholders' and product characteristics on life insurance lapse behavior (Eling and Kiesenbauer, 2014; Pinquet et al., 2011; Milhaud et al., 2010; Cerchiara et al., 2008; Kagraoka, 2005; Renshaw and Haberman, 1986). The product and policyholders' characteristics studied in the literature include age, gender, premium payment option (single vs. regular), contract age, supplementary cover, calendar year, and product type.

The above-discussed studies based on aggregate and individual policyholder data used quantitative research to identify the factors responsible for the lapsation of life insurance policies. The statistical modeling approach used in studies based on individual policy-holder data includes a Generalized Linear Model (GLM), Logistic Regression, Classification and Regression Tree (CART) Model, Binomial Model, Poisson model, and Proportional Hazard Model.

These quantitative models rely heavily on numerical data and statistical analysis to identify patterns and relationships, often neglecting the complex and nuanced nature of consumer behavior. To gain a more comprehensive understanding of consumers' life insurance lapse behavior, a qualitative approach providing a theoretical lens that considers the fundamental beliefs of policyholders is necessary. Interestingly, none of the studies in the literature used qualitative research to understand policyholders' life insurance lapse behavior.

Using the grounded theory approach allowed us to deeply investigate policyholders' fundamental beliefs responsible for their lapse behavior. Belief systems are essential to human experience as they shape our thoughts, emotions, and actions. They also play a significant role in influencing consumer attitudes and behaviors towards different products and services. Adequate research has been conducted in the literature to comprehend how consumer beliefs, such as health beliefs, power distance beliefs, religious beliefs, industry-specific beliefs, karmic beliefs and brand-specific beliefs, can impact their attitude and behavior across different contexts (Shai, 2022; Yin et al., 2022; Esch et al.,

2023; Mo et al., 2022; Qin and Wang, 2023; Punj, 2011; Champion and Skinner, 2008; Finch, 2006; Chan and Cui, 2002).

This study explores the beliefs of policyholders and how they impact their intention to lapse on life insurance policies. The research aims to answer two critical questions: What specific core beliefs are responsible for policyholders lapsing their policies? What are the policyholders' perceptions that lead to developing their core beliefs that affect their behavior regarding lapsing life insurance policies? This study introduces an extended Theory of Planned Behavior (TPB) model called a Life Insurance Lapse Belief (LLB) Model to understand these questions better and gain a more comprehensive perspective on consumer behaviour. The LLB model improves upon existing literature by considering consumer beliefs and perceptions, providing a deeper understanding of psychology, and offering a multidimensional approach to decision-making. This research is unique because it is the first to create an LLB model about consumer behavior regarding lapsing life insurance policies. Understanding the perception-belief-lapse relationships through the LLB model will help design better educational and communication strategies for life insurance, enabling insurers to address policyholders' diverse beliefs and ultimately reduce policy lapse rates.

5.2 Literature Review

Research on lapse behavior used three hypotheses, namely the Interest Rate Hypothesis (IRH), Emergency Fund Hypothesis (EFH), and Policy Replacement Hypothesis (PRH), to understand lapse behavior. The EFH emphasizes that policyholders lapse their policy due to financial shortage and use the surrender value to accomplish their financial needs (Outreville, 1990). According to Dar and Dodds (1989), the interest rate hypothesis states that the lapse rate is positively related to the market interest rate and negatively related to surplus participation. The policy replacement hypothesis stresses that when a policyholder gets a better policy in terms of policy and other features, they prefer to lapse the old policy (Russell et al., 2013). In their study, Kuo et al. (2003), Adams et al. (2020), and Barucci et al. (2020) supported the IRH and EFH. Kiesenbauer (2011) and Kim (2005a,

2005b) focused on the IRH and concluded that the lapsation of the policy depends on environmental variables other than the interest rate and unemployment rates.

Fier and Liebenberg (2013) examined the micro-economic factors responsible for the policy lapsation. The author identified income shocks as a key determinant of life insurance lapsation specifically for the younger policyholder, thus supporting the emergency fund hypothesis. The study also supported the policy replacement hypothesis, in which policyholders lapse a life insurance policy to purchase a different one. Age was identified as the moderating factor in the study. Fang and Kung (2021) explained policy lapsation using a discrete choice model. They pointed out that for young policyholders, life insurance lapsation is significantly driven by their income and health status. However, the bequest motive significantly influences older policyholders' lapse behaviour against younger policyholders. Gottlieb and Smetters (2021) stated that the two primary reasons for the policy lapsation are (I) policyholders forgetting to pay the premium and (II) underestimation of the future need for money.

Another study in 2020 by Cole and Fier supported the emergency fund hypothesis and found that policyholders surrender their policy to meet long-term financial needs. However, they prefer taking loans over policy surrender for short-term financial needs. Kiesenbauer (2011) analyzed the lapsation of the policy in the German life insurance market and identified macroeconomic factors and company characteristics such as company age and size as the key indicators of lapse behavior. Yu et al. (2019) performed a panel study and found support for the emergency fund and interest rate hypotheses in the Chinese life insurance industry. The authors identified that the unemployment rate positively affected the lapse rate and proposed a reputation hypothesis that states the insurer's reputation negatively affects the lapse rates. Knoller et al. (2016) analyzed the surrender behavior of Japanese policyholders towards variable annuity policies. They derived a moneyness hypothesis, in which the significant influence of the embedded financial options and guarantee value primarily explains the surrender rate.

These hypotheses have several limitations regarding understanding the consumers' life insurance lapse behavior. These hypotheses primarily concentrate on external factors

such as market interest rates, insurer's reputation, financial shortages, and policy features. They focus on a single aspect influencing lapse behavior, such as interest rates, financial emergencies, or policy features. This one-dimensional approach does not comprehensively view life insurance lapse behavior.

Poufinas and Michaelide (2018) examined the macroeconomic variables influencing life insurance policy terminations in a European Union member country. They analyzed four product categories: whole life, term life, pension savings, and unit-linked policies. The study found that policy termination is linked to the consumer confidence index, short-term and long-term interest rates, unemployment, inflation, Gross domestic product (GDP) and Consumer Price Index.

Existing literature on lapse behavior showed the following results concerning the impact of microeconomic factors like age, marital status, gender, education, and the number of dependents. For instance, Curak et al. (2015) observed a significant effect of the duration of the policies, the number of children, income level, and policyholder's financial status on policy lapsation in Croatia. Likewise, Gemmo and Götz (2016) found a positive effect of the number of dependents in case of childbirth or divorce and unemployment on policy lapsation. Sirak (2015) found no significant effect of the age and gender of the policyholder on the lapse rate when controlling for unemployment, household income and wealth proxies.

Subashini and Velmurugan (2015) identified key factors leading to lapsation in the life insurance industry and proposed mitigating measures. The study revealed that lapsation was driven by factors such as limited awareness about policy features and benefits, insufficient financial planning, and inadequate customer service by insurers. To decrease lapsation rates, the authors recommend focusing on policyholder education regarding life insurance's importance and benefits, offering flexible payment options, and enhancing customer service quality. Behavioral factors, including financial advice, decision heuristics and financial literacy, also resulted in the policy surrender, where financial advice and financial literacy reduce surrender. In contrast, policyholders' decision heuristics lead to an increase in the policy surrender rate (Nolte and Schneider, 2017).

In their study, Nithiyalakshmi et al. (2016) proposed a unique approach using fuzzy cognitive maps and overlaps block clustering to identify key influencing factors behind life insurance policy lapsation. The findings revealed that the policyholder's financial situation, satisfaction with the policy, and the quality of services offered by the insurance company were the most significant factors influencing lapsation. The authors further classified policyholders into three distinct clusters based on their characteristics: financially stable and satisfied, dissatisfied, and financially unstable individuals. Mulholland and Finke (2014) emphasized the significance of understanding policyholders' numerical abilities in making informed decisions about life insurance policies. They highlighted that individuals with lower numerical abilities might find in-force ledger illustrations confusing and consequently perceive policy lapsation as their optimal choice. To address this, the study suggested providing policyholders and advisors with educational and protection tools tailored to their cognitive abilities.

As indicated by theoretical models and empirical research, the decision to lapse a life insurance policy is influenced by macroeconomic conditions, insurer-related factors, demographic and economic attributes of the policyholder, and specific features inherent to the life insurance policy itself. These studies provide limited psychological insights as they do not directly address the role of policyholders' perceptions and beliefs in shaping their lapse behavior. The subsequent section elaborates on the research methodology, followed by a presentation of results in section 4. Sections 5 and 6 explore the study's outcomes and restrictions, respectively. The final segment concludes the investigation and outlines its implications.

5.3   Method

In the following sections, we will detail the methodology used in our study, comprising two key stages: data collection and data analysis. We will first elucidate our data collection process, centered around grounded theory and semi-structured interviews, providing an in-depth understanding of our selection and sampling strategies. This will be followed by a comprehensive discussion of our data analysis procedures, highlighting how we em-

ployed thematic analysis and coding to uncover meaningful patterns and insights. This process ensured the emergence of an authentic and robust theory directly rooted in our collected data.

5.3.1 Data Collection

We adopted the grounded theory approach to collect and analyze the data. The grounded theory is a research method that focuses on paying careful attention to the actual daily events happening in the study and the interpretations of those events by the key actors in the context (Glaser and Strauss, 2017). Thus, grounded theory involves systematic data collection for theory development, depicting the actors' interpretation of the realities in the social setting. The grounded theory approach emphasizes the discovery of new knowledge through the collection and analysis of data rather than testing preconceived ideas or hypotheses. The resulting theory is intended to apply to a wide range of similar situations and to have a high degree of generalizability. The grounded theory research approach distinguishes itself from other qualitative research methodologies by building a theory based on data after its collection and analysis instead of attempting to confirm or refute a pre-existing theory.

In contrast to grounded theory approach, quantitative models rely heavily on numerical data and statistical analysis to identify patterns and relationships, often neglecting the complex and nuanced nature of human beliefs, attitudes, and decision-making processes. While these models provide valuable insights into the impact of macro and microeconomic variables on lapse rates, they may fail to capture the intricate interplay of psychological, social, and personal factors that drive individual policyholder behavior.

In summary, while quantitative models can provide valuable information about how economic factors affect policy lapse behavior, they cannot fully capture the complex and diverse nature of this behavior.

The data were collected through semi-structured interviews with the policyholders and policy advisors. In-depth interviews were undertaken from various parts of Rajasthan, India. The participants for the interview were selected based on theoretical sampling

methods. Theoretical sampling is a prevalent technique in qualitative research, particularly within the grounded theory discipline. It entails choosing and accumulating data according to the evolving theories and concepts derived from the ongoing examination of previously gathered data (Glaser and Strauss, 2017; Strauss and Corbin, 1990). Instead of selecting participants based on pre-set or random criteria, theoretical sampling entails purposefully picking individuals and groups that supply abundant and varied data pertinent to the emerging theoretical structure. We select new participants capable of providing additional data anticipated to contribute to forming theoretical concepts or categories, assist in uncovering variations and anomalies, or present divergent perspectives. For instance, after interviewing several advisors serving less educated clients in relatively rural regions, we received similar responses to our inquiries. At this point, we transitioned to advisors who engage with a more educated customer base in urban locales. A similar reasoning applies to the process of selecting policyholders to be interviewed.

Eleven life insurance consultants with over a year of experience were chosen in the initial data collection phase. These eleven agents epitomize a blend of both the rural and urban sectors of Rajasthan and belong to government and private insurance firms. Interviews were conducted individually with each of the advisors. The interview lasted from 45 minutes to 1 hour. Since the interviews were semi-structured, the sequence and precise phrasing of these predetermined sets of open-ended questions may vary depending on the interview's course. Once the data had been collected, we transcribed them and read through interviews several times. The data were then thematically analyzed and coded (Braun and Clarke, 2006; Joffe, 2011; Joffe and Yardley, 2004; Joffe et al., 2011; Clarke et al., 2015). After subsequent reading of the data and input from other authors, the initial codes were further revised.

Grounded on the insights procured from the first data collection phase from advisors, the interview queries were adapted for the second stage involving policyholders. To delve into the lapse behavior of policyholders, data were amassed from forty-two policyholders who had allowed their life insurance policies to lapse at least once. Each interview lasted between 30 to 45 minutes. The data secured from the second phase were subjected to

thematic analysis and coding. Collecting data from the policy advisors and policyholders helps to gain better insight into the policyholders' lapse behavior. This will help to identify the diverse list of the policyholders' perceptions and beliefs from both perspectives. Data from multi-faceted perspectives and different groups allows for diverse data collection (Glaser and Strauss, 2017).

Whenever feasible, the interviews were recorded using audio recording equipment, and field notes were promptly recorded within two days. This approach was employed to preserve the essential observed cues. Subsequently, the recorded interviews were transcribed, and a meticulous review for errors was conducted by the researcher. Following the guidance of Strauss and Corbin (1990), the recorded tapes were attentively listened to, and necessary corrections were applied.

The participants in this study, representing life insurance policyholders in Rajasthan, India, exhibited a diverse demographic profile. They ranged from 25 to 50, and all had dependents. Occupationally, they were engaged in various roles, including small business owners, teachers, and employees in private organizations. The largest age segment was between 30-35 years, followed by 35-40 years, with smaller proportions in the 25-30 and 40-45 age groups. Male participants constituted 62%, while females accounted for 38%. Most participants were married (87%), with a smaller fraction being single (13%). Education-wise, the majority were graduates (67%) and postgraduates (31%), with a minor percentage holding doctorates (2%). Regarding annual income, different brackets were represented, with 35% earning between INR 0.5 to 1 million per annum, 23% between INR 1.0 to 1.5 million per annum, and 32% earning between INR 1.5 to 2 million per annum. This diverse demographic makeup ensures a rich and comprehensive dataset for the study.

5.3.2 Data Analysis

The thematic analysis primarily identifies and reports patterns (themes) within qualitative data. It focuses on understanding the content's meaning and identifying recurring concepts, themes, or patterns. Thematic analysis is inherently qualitative and often used

to interpret subjective data, such as interviews, focus groups, or open-ended survey responses. The following steps were followed to perform the thematic analysis of interview transcripts.

1. Collect and compile all the responses from the interviews. Organize the data in a structured manner, making it easier to work with during analysis.

2. Systematically code the data by identifying meaningful units (segments of texts or contents) and assigning codes representing these contents.

3. Codes are grouped into themes based on similarities and patterns. Themes are generated based on the content of the data. Notably, we identified overarching perceptions shared by the majority of policyholders. These perceptions encapsulate the central ideas expressed by the participants.

4. A deeper dive into the perceptions and explore the underlying factors or motivations that drive these perceptions. This analysis aims to uncover the fundamental core beliefs that shape policyholders' attitudes and behaviors.

5. Look for patterns within the data that reveal why certain perceptions exist. Analyze the connections between core beliefs and the broader context, such as personal experiences, societal influences, or economic factors.

6. Compare the perceptions and core beliefs derived from different interviews to ensure they align. Assess the consistency of these findings across the interviews.

7. Share the interpretations with fifteen interviewees you could contact to obtain a sense of being faithful to their accounts.

5.4   Results

Table 5.1 shows the coding of policyholders' different perceptions and beliefs as indicated by the policyholders and policy advisors. The demographic information of the

interviewees (i.e., policyholders) is not analyzed in this study due to less diversity in the small sample. The thematic analysis of the interview data elicited nine policyholders' perceptions and five core beliefs to help understand their life insurance lapse behavior.

Table 5.1: Coding of policyholders' lapse behavior based on interview data

Items	Perceptions	Beliefs
Life insurance is a product used to save for the family's future needs (children's education and marriage) after a premature death or income shock.	**Perceived Objective:** Life insurance provides the life cover and saving benefit; Misperception about the life insurance product	Life Insurance Belief
Life insurance is a product used to safeguard the standard of living of the family after a premature death or income shock.		
Life insurance is a product used to save for the future needs of the family (children's education and marriage).		
Life insurance is a product used to safeguard the family's standard of living due to fear of COVID-19.		
Life insurance is considered similar to chit-fund fraud.		
Life insurance is a short-term plan.		
Life insurance is a wealth creation plan. Policyholders believe that their money should be in their control.		
Life insurance is a policy with a high lock-in period.		
Life insurance provides low returns.		
Policyholders prefer purchasing assets such as land or property over a life insurance policy.	**Perceived Utility:** Life insurance is not essential, and policyholders prefer other investments plans for pure investment purposes	

Continued on the next page

Items	Perceptions	Beliefs
Policyholders with firmer beliefs in their family support system don't prefer purchasing the policy.		
Policyholders prefer policy in case of a bad experience of a family member without life cover		
Policyholders say it is their son's responsibility to care for family members financially.		
Policyholders prefer other investment plans such as post office or recurring or fixed deposits.		
Policyholders purchase life insurance policies to help the agent meet their target. Policyholders keep life insurance premium payments as the last priority.		
Policyholders purchase life insurance policies to meet tax benefit motives.		
Policyholders say, "Why purchase a policy when returns are received only after death."		
Policyholders say, "What if nothing happens to me?"	**Perceived Risk:** There is no risk	
Policyholders don't perform the address change procedure	**Perceived Accessibility:** Tedious documentation related issues and technical issues in digital payment of life insurance premium	**Process Belief**
Claim process of sum assured is tedious.		
Policyholders lost the documents of life insurance policy they own.		
Policyholders could not link the policy with the Aadhar card due to wrong spelling of the name.		
The policyholder didn't update the mobile number in the documents.		
The documentation process at the time of purchase is easy.		
The automatic deduction facility in premium payment is not working.		

Items	Perceptions	Beliefs
The technical error in the premium payment site leads to a delay in the payment.		
Premium payment delay locked the online payment mode.		
Policyholders don't trust the advisors	**Perceived Trust:** Advisors don't perform their job well; Government-owned life insurance policy is more trustworthy compared to the private companies	**Insurer Belief**
Policyholders don't trust part-time advisors.		
Advisors perform target-based sale.		
Advisors sell the policy to meet their target.		
Advisors don't sell the life insurance policy based on consumer need analysis.		
Advisors don't sell the policy based on how much policyholders can afford.		
Policyholders used web aggregators to compare the policies available in the market.		
Advisors do mis-selling of products.		
Policyholders faced terrible experiences with advisors.		
Existence of communication gap between the advisors and the policyholder.		
Policyholders prefer paying the premium to the company instead of the advisors		
Policyholders trust government-owned companies more than any private companies in the insurance market		
Policyholders believe that there is a higher probability of fraud in private companies		
Policyholders consider experience with the company for the claim process		
Advisors don't pursue the policy well.		

Items	Perceptions	Beliefs
Advisors don't hold proper knowledge about the policy	**Perceived Advisor's Knowledge:** Agents don't hold proper knowledge about the policy	
No proper training is provided to the advisors.		
Policyholders face significant issues in case of relocation of the advisors due to a job change.		
Advisors did not explain the features and advantages of the policy well.		
Advisors don't check for the financial condition of the policyholder before setting the premium amount.		
Advisors pay the first premium amount of the policyholder.		
Policyholders have high trust in advisors who perform their job through an office		
Advisors did not update the mobile number of the policyholder in the company		
Advisors are less educated.		
Change in the priority between life insurance and other investments leads to lapsation of the policy	**Perceived Domain-Specific Self-Efficacy:** Financial & Insurance Literacy	**Personal Belief**
Policyholders have less understanding of mutual funds & stock market		
Policyholders have less knowledge about the diversification of money.		
Policyholder has no knowledge about the child plan.		
Policyholders are not aware of the tax benefit from life insurance.		
Policyholder compares the return of life insurance with bank fixed deposit return.		
Policyholder did not read the life insurance policy document carefully.	**Perceived General Self-Efficacy:** Detail oriented	

Items	Perceptions	Beliefs
Policyholders do not know which policy they own.		
Policyholders don't make goal-oriented purchases.		
Policyholders prefer purchasing a policy from relatives or friends who are advisors of the life insurance companies.	**Perceived Social Influence:** Relative, friends, and family influence life insurance purchase	**Social Norms Belief**
Policyholders rely upon government-owned companies because their family members also own the policy from them.		

The thematic analysis of the interview data identified five core beliefs: life insurance beliefs, insurer beliefs, process beliefs, personal beliefs and social norms beliefs. Life insurance beliefs align with how policyholders consider life insurance policies and the risks they cover. It includes policyholders' perceived objectives, perceived risk and perceived utility. Process beliefs are related to the perceived accessibility of life insurance services and the different processes involved in purchasing the life insurance policy. Insurer beliefs are beliefs towards the advisors related to how they perform their job and policyholders' trust in the advisor and life insurance company. It is expressed by the combination of perceived trust and perceived advisor's knowledge. Personal beliefs describe the ability of the policyholders to understand the life insurance product and perform financial planning according to their future needs. It also involves their beliefs towards their ability to perform the need-based purchase of life insurance policies. Perceived general self-efficacy and perceived domain-specific self-efficacy explain the personal beliefs of the policyholder. Finally, social norm beliefs encompass the policyholder's beliefs about how the people around them influence their behavior, choices, and decisions. Perceived social influence of the policyholder leads to the development of social norm beliefs in them.

5.5 Theoretical Model Development

In the theory of reasoned action proposed by Ajzen in 1980, the author emphasized that an individual's attitude towards a behavior is shaped by their perception of the potential outcomes and their belief that important others expect them to engage in that behavior. Ajzen expanded upon this theory in 1985 by introducing the Theory of Planned Behavior (TPB), which included the concept of perceived behavioral control. This concept relates to an individual's beliefs about their access to resources and the opportunities required to carry out a specific behavior. These factors, which are non-motivational, encompass considerations such as time, financial resources, skills, and the cooperation of others.

Ajzen further elaborated on human behavior in 1991, identifying three key considerations or subjective probabilities that influence it: behavioral beliefs (beliefs about the likely outcomes of a behavior), normative beliefs (beliefs about the expectations of others), and control beliefs (beliefs about factors that facilitate or hinder behavior). These beliefs draw from various background factors and collectively contribute to forming attitudes, subjective norms, and perceived behavior control. Together, these elements culminate in the development of behavioral intentions, representing an individual's motivation and conscious plan to exert effort in performing a behavior.

The Theory of Planned Behavior posits that the likelihood of a specific behavior can be predicted by evaluating an individual's assessment of the behavior (attitudes), the social pressure they perceive (subjective norms), and their perceived ability to carry out the behavior (perceived behavioral control). Behavioral intention serves as a precursor to actual behavior, with the expectation that individuals will act on their intentions when they have sufficient control over the behavior.

Figure 5.1 shows the proposed life insurance lapse belief (LLB) model based on the derived nine perceptions and TPB describing the policyholders' lapse behavior. In the LLB model, behavioral belief encompasses the policyholder's life insurance and the insurer's beliefs, as identified in this study. Similarly, normative belief pertains to social norms beliefs, and control belief covers both process and personal beliefs. The LLB ex-

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tends TPB by including the policyholders' perceptions in the model, working as factors influencing their beliefs. The nine perceptions of the policyholders identified by thematic analysis of the qualitative data include perceived objective, perceived utility, perceived risk, perceived trust, perceived advisor's knowledge, perceived social influence, perceived domain-specific self-efficacy, perceived general self-efficacy and perceived accessibility. The LLB model offers a more comprehensive understanding of policyholders' lapse behavior than the insights attainable solely through the TPB model. It facilitates an understanding of the underlying reasoning behind the beliefs held by policyholders.

Next, we extensively examine and analyze the interviewee's answers. Our objective is to scrutinize the influence of intricate beliefs and perceptions on policyholders' decisions to lapse their policies. This discussion is structured around the policyholders' core beliefs and their perceptions that shape these beliefs. Ultimately, informed by this analysis, we formulate a series of propositions that link the policyholders' perceptions and beliefs to the components of the TPB, affirming the soundness of the proposed LLB model.

5.5.1 Life Insurance Belief

The perceived objective of life insurance products is interpreted differently by different interviewees. The perceived objective here refers to how individuals perceive or understand the objective or goal of the life insurance policy. It relates to the subjective interpretation and understanding of what an objective intends for the policyholder. In other words, perceived objectives are the policyholders' understanding of what needs to be achieved in a life insurance context. Some interviewees mentioned it as a pure protection plan, aiming only to meet the family's financial needs in case of the premature death of the family's bread earner. Most of them considered life insurance to be a combination of protection and saving products that help to meet the future needs of child education and marriage in addition to the life cover. The interviews indicate that people purchase life insurance for saving purposes, with life cover as an additional benefit. One of the interviewees articulated this:
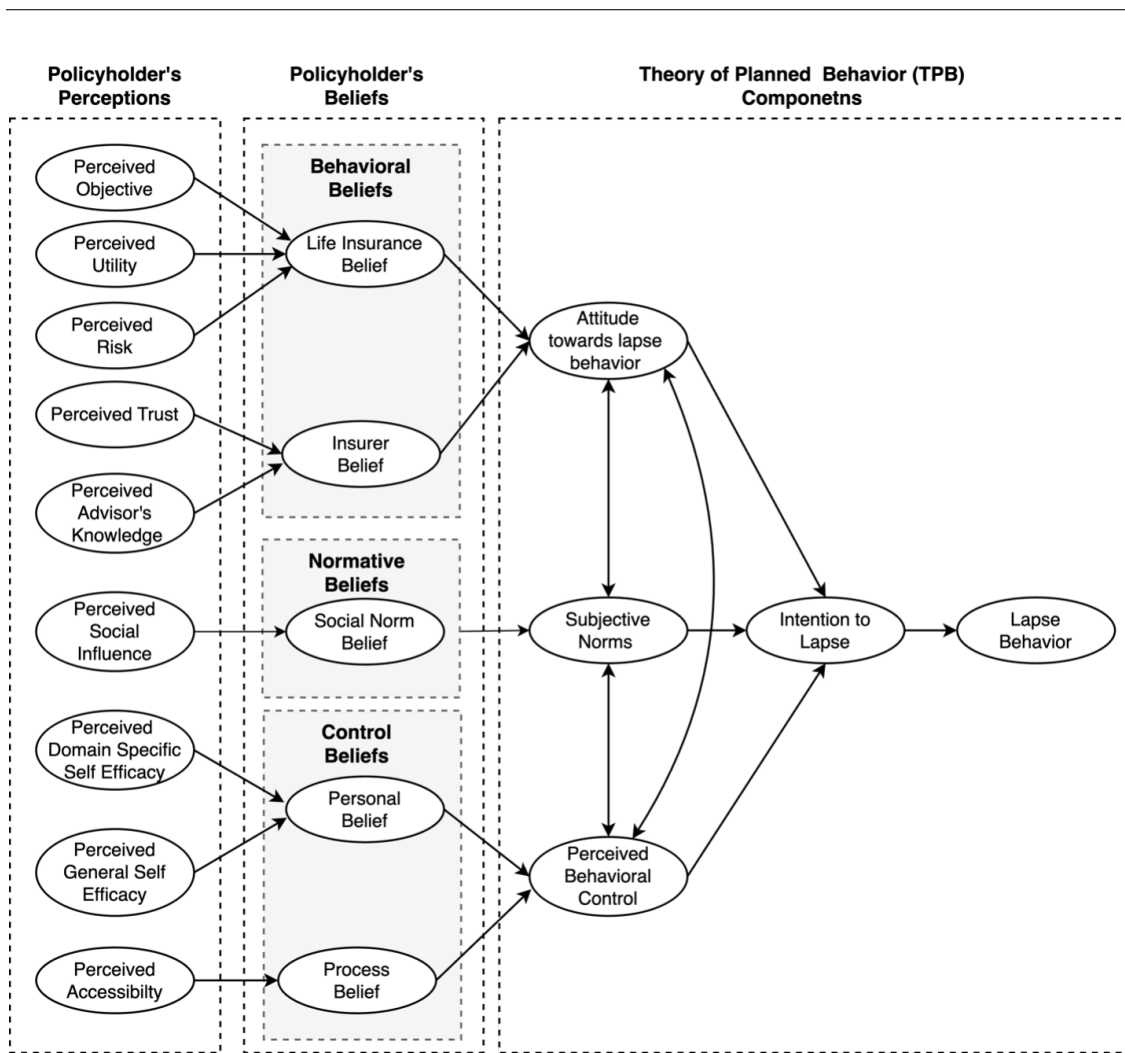
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Figure 5.1: Life Insurance Lapse Belief (LLB) model extending the theory of planned behavior (TPB) to understand policyholders" lapse behavior

> *What do you understand by life insurance?*
>
> *Life insurance is a product in which the family gets the sum assured in case of the policyholder's casualty before the policy's term.*

Policyholders also lapse their policy if they misperceive the life insurance products and consider them pure investment plans. Based on the qualitative data, we found that policyholders believe life insurance is a short-term wealth-creation investment plan with a high lock-in period and low returns. Many considered it a chit-fund policy. One of the interviewees said that he lapsed the policy as life insurance does not provide the flexibility of depositing money, like the Sukanya Samriddhi Account Scheme. Sukanya Samriddhi

Account Scheme is a Government of India-backed saving scheme for the parents of a girl child. The misperception of the life insurance policy objective eventually led to the dissatisfaction of the people who consider it a short-term pure investment plan, which resulted in the lapsation of the policy.

Secondly, the life insurance beliefs that encouraged lapsation include believing life insurance is not essential and misperceptions about the life insurance product to persist in the premium payment of a life insurance policy. This is measured by the perceived utility of a life insurance policy, as indicated in Table 5.1. Perceived utility relates to an individual's subjective assessment of the value or usefulness they believe they will derive from a life insurance product. It indicates how people make choices based on their perception of the benefits and costs of a particular option. A key aspect found in this study is that if people understand the significance of life insurance, then there is a high possibility that they will not lapse their policy. This was reflected in the statement by the people, "Why purchase a policy when returns are received only after death".

Another aspect of life insurance's perceived utility is that people prefer other investments over life insurance purchases and prefer life insurance for receiving tax benefits only. For instance, one of the interviewees mentioned that she believes in investing in assets such as land and property. Similarly, another interviewee said he would deposit money in the post office, make recurring bank deposits for future needs, and purchase a life insurance policy to receive the tax benefit. Policyholders also lapse their policy if they purchased it to help the advisors meet their target of selling "n" number of policies in the specified period.

Moreover, the qualitative data indicates that few policyholders who lapse their policy firmly believe they have a robust family support system to help their wives and children in their time of need. In some cases, they also believe that it is their son's responsibility to take care of their family members financially. Interviewees provided an example of how a belief in a family support system can positively affect the lapsation of the policy.

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> *I think taking care of my family members in my absence is my son's responsibility, and spending money to make him independent is more important so that he can take care of us during our senility.*

Additionally, some policyholders think that purchasing life insurance is essential, but they give the last priority to the premium payment at regular intervals. They believe they can pay the premium on time, but due to the low importance, many of them either forget or reach the threshold of the funds to pay the life insurance premium on time. Another prime reason for individuals to lapse their policy is that over a period, the policyholder has developed a perception that there is no or less risk. They now consider purchasing a life insurance policy as a loss. One of the interviewees mentioned, "What if nothing happens to me?"

5.5.2 Process Belief

Based on the interview data analysis, perceived accessibility encourages policy lapsation. Perceived accessibility refers to a policyholder's subjective perception of how easily they can access or engage with the documentation or payment processes online and offline. It is a multidimensional concept encompassing various aspects of accessibility, such as physical access, convenience, and ease of use. Negative perceived accessibility involves difficulty in the documentation process of life insurance purchases and technical issues during the premium payment process. According to the interview data, negative perceived accessibility leads to the lapsation of life insurance policies.

The policy advisors think that the lapsation of the life insurance policy involves the carelessness of the policyholders about the life insurance documents. According to them, the policyholder does not remember which policy they own and sometimes loses their document papers. On the other hand, most policyholders believe that applying for the address change procedure and linking the Aadhar card to the life insurance policy involves lots of time and energy. Some also thought that the documentation at the time of purchase was accessible and user-friendly. However, policyholders mentioned that the policy advisors often do not update the policyholders' mobile numbers in the company, so they do

not receive any alert or update on the premium payment.

Another aspect many policyholders pointed out is the presence of technical issues in life insurance companies' digital premium payment methods. In the digital transformation era, the automatic premium payment deduction from the policyholder's account facility involves various technical issues. Policyholders found it difficult to link their bank account with the policy and provide their consent to the insurer to deduct premiums automatically from their account every month or year. Moreover, re-activation is tedious in the case of temporal policy lapsation due to non-payment of premiums, which involves filling out a personal health declaration form again. The interviewee described her reasoning:

> *Have you availed of an automatic premium deduction facility for your life insurance policy?*
> *Yes, but I could not pay my premium due to technical reasons. It worked for the first premium payment, but for the next month, there were some technical issues, and I needed help to pay the premium online, resulting in the lapsation of the policy.*

5.5.3 Insurer Belief

Insurer beliefs encompass the policyholders' perceptions of trust in the policy advisor and the life insurance company and their perception of the advisor's knowledge. Policyholders perceive that advisors sell life insurance to meet their targets, where advisors pay the first premium of the policyholders' life insurance policy. In such cases, the possibility of lapsation is very high as the life insurance is not purchased based on the customers' needs but instead to meet their target. Regarding trust in policy advisors, policyholders said they prefer purchasing life insurance policies from their friends or relatives. One interviewee pointed out that they trust full-time advisors more than part-time advisors, specifically if they own an office and are available during office hours. For life insurance companies, many interviewees considered government-owned life insurance policies more reliable than private companies. Based on experience and word-of-mouth from other people in the

community, most of the policyholders in this study believed that the chances of fraud are higher in the case of private companies. Thus, they trust government-owned life insurance companies more. One of the interviewees directly stated that he trusts government-owned life insurance more compared to privately owned companies:

> *I trust government-owned life insurance companies because of a bad experience with a private company agent. I always gave the premium amount to him on time to be deposited in the company. However, after a few months, I learned he was not depositing my premiums. Moreover, he still needs to update my mobile number in the company, so I did not receive any information.*

Some policyholders identified that perceived advisor's knowledge plays a significant role in policy lapsation. They believe that the advisors need to perform their job better (e.g., they do not pursue the policy well, sell the policy to complete their target, perform mis-selling of the products, and lack knowledge about the life insurance products). Also, they linked the policy lapsation to policy advisors' incapability or avoidance of performing the need analysis of the customers. They informed that policy advisors do not check for the disposable income of the policyholder for suggesting the policy type or premium be paid at regular intervals, which eventually leads to the policy's lapsation due to the policyholders' low income. Interviewee captures this belief:

> *Life insurance companies should hire more educated policy advisors because they could not explain the different life insurance policies to me. When I asked a question, he called his senior officer.*

5.5.4 Personal Belief

The interview analysis identified a link between the policyholder's personal beliefs and policy lapsation. Perceived general self-efficacy and perceived domain-specific self-efficacy are the key components of personal beliefs. Policyholders with lower perceived domain-specific and lower perceived general self-efficacy are likelier to lapse their life

insurance policy. Perceived domain-specific self-efficacy refers to an individual's perception of their ability to perform life insurance-related tasks. It is a concept rooted in Albert Bandura's social cognitive theory and is crucial in determining how people approach and accomplish tasks within their perceived competence areas. It applies to a particular area of expertise. For example, one may have high self-efficacy in financial or insurance areas but lower self-efficacy in stock market-related tasks. Perceived domain-specific self-efficacy includes policyholders' perception of their ability to understand the benefits of their life insurance policy. It also includes the policyholder's perception of their ability to perform the need-based purchase of a life insurance policy and do financial planning and diversification of money. Moreover, it includes their perception of their ability to understand the tax benefits provided by the life insurance policy.

In contrast, perceived general self-efficacy refers to an individual's belief in their ability to perform various tasks effectively. It represents a person's confidence in their competence across diverse domains, not limited to a specific area or task. It includes policyholders' awareness of the policy they own and people's overestimation of their ability (i.e. overconfidence) to perform the goal-oriented purchase and understand the key features of life insurance on their own. Some interviewees also said they were confident about their future income flow while purchasing the life insurance policy. However, they lapsed their policy due to the income shock, resulting in non-payment of the premium.

5.5.5 Social Norm Belief

Social norm belief is explained by the perceived social influence of others on policyholders' life insurance lapse behavior. It refers to a policyholder's subjective perception of the impact and pressure others exert in their social environment. It involves the awareness of social norms, expectations, and values prevalent within a particular social group. Due to perceived social influence, people may adjust their behavior to conform to these norms. It includes policyholders' preference towards purchasing a policy from relatives or friends who are advisors of the life insurance companies and purchasing the policy from the life insurance company from which the family members own the policy. Perceived social

influence may sometimes lead to the lapsation of the policy.

Drawing from examinations and discussions of the qualitative data, we derive the following eight propositions. These propositions assert the validity of our proposed LLB model.

Proposition 1: Policyholders' life insurance beliefs and insurer beliefs influence their attitude towards lapse behavior.

Proposition 2: Policyholders' social norm beliefs influence their subjective norms towards lapse behavior.

Proposition 3: Policyholders' personal beliefs and process beliefs influence their perceived behavioral control.

Proposition 4: Policyholders' perceived objective of life insurance policy, perceived utility of life insurance policy and perceived risk of income shock or premature death develop life insurance belief.

Proposition 5: Policyholders' perceived trust in life insurance companies or advisors and their perceived advisor's knowledge develops insurer belief.

Proposition 6: Policyholders' perceived social influence develops social norm belief.

Proposition 7: Policyholders' perceived domain-specific self-efficacy and their perceived general self-efficacy develop personal beliefs.

Proposition 8: Policyholders' perceived accessibility develops process belief.

5.6   Discussion

This research delves into the policyholders' beliefs and perceptions leading to the lapsation of policy, which occurs when policyholders fail to make periodic premium payments, leading to policy termination. On the other hand, policy surrender involves lapsation but with a cash value returned upon regular premium payments (Russo et al., 2017; Cheng and Li, 2018; Campbell et al., 2014). Through a grounded theory approach and thematic analysis of 42 interviews, this study aims to identify policyholders' beliefs and perceptions influencing life insurance policy lapsation and establish a life insurance lapse belief (LLB) model.

Based on the LLB model, the policyholders' attitude towards the lapse behavior is influenced by policyholders' life insurance beliefs and insurer beliefs. The key factors influencing life insurance belief are policyholders' perceived objective, perceived risk and perceived utility. Those viewing life insurance as unnecessary or misunderstanding its objectives were likelier to lapse policies. Reduced risk perception over time and misconceptions about it being a short-term investment plan contributed to lapsation. Moreover, policyholders with a firmer belief in their family support system and those who prefer investing in other investment plans lapse their policy. Educating policyholders about life insurance's true purpose and benefits is vital. Insurers should communicate the long-term protection and financial security aspects effectively, helping policyholders grasp the value of maintaining their policies.

Insurer beliefs, including the perceived advisor's knowledge and perceived trust in policy advisors and insurance companies, also contributed to policy lapsation. Policyholders' perception of advisors as inadequately knowledgeable or primarily focused on meeting sales targets negatively affected their trust in advisors and insurance companies. This finding underscores the importance of selecting and training policy advisors who can understand and address policyholders' needs, establish trust, and foster long-term relationships. Furthermore, the study revealed that policyholders tend to trust government-owned life insurance companies more than private companies. This implies that private insurers should build trust and credibility by emphasizing transparency, customer-centricity, and effective communication.

The study also highlighted perceived accessibility, such as the tedious documentation process and technical issues related to digital premium payment methods leading to process beliefs that influenced perceived behavioral control responsible for the policyholders' intention to lapse the policy. Improving the user experience and addressing policyholders' concerns about the ease of documentation and digital payment processes could reduce lapsation rates. Insurance companies should invest in simplifying procedures, streamlining documentation processes, and enhancing digital payment platforms to offer a more seamless experience for policyholders. In addition, insurers should pro-

vide better support and training to policy advisors to ensure they can effectively assist policyholders with these processes.

Personal beliefs, resultant of policyholders' perceived domain-specific self-efficacy and their perceived general self-efficacy, influenced perceived behavioral control responsible for the intention to lapse. The results suggest that enhancing policyholders' financial literacy through education and tailored advice could reduce the likelihood of lapsation due to misconceptions and overconfidence.

Previous research has identified various microeconomic and macroeconomic factors that influence policy lapsation. However, none of the studies focused on identifying the individual policyholder's beliefs and perceptions, resulting in policy lapsation. This study proposed the life insurance lapse belief model by concentrating on policyholders' attitudes towards lapse behavior, subjective norms, and perceived behavioral control. Perceived social influence leads to the development of social norm beliefs affecting subjective norms of the TPB model. This involves policyholders' perception towards their inclinations regarding obtaining a policy from acquaintances or friends who work as advisors for life insurance companies and obtaining a policy from the same insurance company where their family members have policies. Social norms are essential for mitigating the lapse behavior. For example, even if the best education program is designed and is very effective in influencing the retention of the life insurance policy, however, the individuals may still lapse the policy if the life insurance retention behavior is against the prevailing social norms.

This study provided a comprehensive picture of life insurance policyholders' lapse behavior, which will help the insurers develop an excellent strategy to avoid lapsation of the policy. These strategies will provide a competitive advantage to the insurer and their competitors. As such, this study offers an extensive list of the policyholders' beliefs and perceptions, leading to the development of the theoretical model to predict policy lapsation.

To mitigate lapse behavior, insurers can focus on providing accurate, comprehensive, and easily understandable information about life insurance products, benefits, and po-

tential risks. They can also invest in improving their relationship with policyholders, ensuring transparency, trustworthiness, and efficient claim processes. Policyholders can be educated on the importance of financial planning, understanding their needs, and the relevance of life insurance in securing their family's future.

5.7   Limitations and Future Work

Limitations of this study include its focus on India, which may affect generalizability due to potential differences between collectivist and individualist countries. There may need to be more than a qualitative approach for establishing causality or strong relationships between variables, as Maxwell (2012) suggested. Additionally, while offering rich and context-specific insights and helping develop theories, the grounded theory methodology requires these theories to be validated through quantitative methods.

Future work should expand the study's scope to include other countries and contexts to address these limitations. Comparing lapse rates with other insurance policy types and non-insurance products, investigating the impact of market evolution on life insurance products, and examining the effects of mis-selling and consumer behavior on other industries would be beneficial. Future studies can also consider employing a mixed-methods approach to address causality and relationship concerns raised by the qualitative analysis, in line with Maxwell's recommendations. Alternative research methodologies that can address the limitations of grounded theory, such as mixed methods research, should be explored.

While the LLB model includes five core beliefs that influence life insurance lapse behavior, it may have specific limitations in comprehensively understanding the consumers' life insurance lapse behavior. The LLB model focuses primarily on identified core beliefs and does not cover all aspects of policyholders' decision-making processes. Additionally, other factors, such as emotions and feelings, could also play a significant role in influencing lapse behavior, which is not fully addressed in the LLB model. Future research can focus on the factors, including emotions and feelings, that may influence the development of policyholders' beliefs.

Finally, the LLB model needs to be empirically validated through further research. It can involve testing its accuracy in predicting lapse behavior and evaluating the relative importance of the different perceptions and beliefs in driving the intention to lapse the life insurance policy. This validation will provide a solid foundation for understanding lapse behavior and designing effective interventions to minimize policy lapsation.

5.8   Conclusion

This study fills a significant gap in the academic literature on life insurance lapse behavior. It uses a grounded theory approach to identify policyholders' core beliefs and perceptions responsible for their lapse behavior. We also propose a life insurance lapse belief (LLB) model, which extends TPB to establish the relationship between identified policyholders' nine perceptions and five core beliefs with the policyholders' attitude towards lapse behavior, subjective norm and perceived behavioral control components of TPB, thus helping to understand the intention to lapse the policy. The LLB model lays the foundation for future empirical research to assess the effect of policyholders' perceptions and beliefs on lapse behavior.

In addition, the study provides several insights about perceptions and beliefs influencing policyholders' lapse behavior. For instance, policyholders who strongly believe life insurance is unimportant tend to perceive no risk in lapsing their policy. This often occurs with individuals who initially purchase a policy based on a friendly advisor's request but later lapse due to their belief in the insignificance of life insurance. Process beliefs stemming from the tedious documentation process and technical difficulties in digital premium payment also contribute to lapsation. Furthermore, insurer beliefs, encompassing views of the advisors and life insurance companies, impact policy lapsation. The personal beliefs of policyholders, including their preferences, financial literacy, and attention to detail, play a crucial role in policy lapsation. Lastly, social norm beliefs developed due to perceived social influence sometimes lead to the lapsation of the policy.

The derived perception, core beliefs, LLB model and the insights gained from this study can assist companies in designing more effective mechanisms to retain customers.

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Additionally, regulators can utilize the findings to develop educational programs and communication strategies to encourage policyholders to maintain their policies.

Chapter 6

Discussion and Conclusion

This chapter serves as a conclusion to our thesis, where we will delve into the broader implications, limitations, and potential for future research based on the overall findings of our study.

We conducted a literature review to fill the gap in comprehensive analysis of consumers' life insurance purchasing behavior. The systematic literature utilizing ADO and TCM frameworks identified a total of 136 unique antecedents. These antecedents were classified into eight broad categories, and a relationship map was created to demonstrate the connections between antecedents, decisions, and outcomes.

Further, we explored the impact of framing on consumers' purchase behavior, and the relation between consumers' beliefs and life insurance lapse behavior. Based on these objectives, we formulated three research questions: 1) How does framing affect life insurance purchase intention? 2) How does financial literacy moderate the attribute-framing effect? 3) What beliefs lead to policy lapses? We used experimental and qualitative methods to explore these questions. The former investigated framing effects, while the latter provided insight into consumer belief systems underlying policy lapses. To investigate research question 1, a set of hypotheses was formulated by drawing from various theories, such as hedonic editing rules, quasi-hedonic editing rules and the pennies-a-day strategy.

Subsequently, we conducted multiple experiments to examine these hypotheses.

The results of the study indicate that attribute framing has a significant impact on consumers' purchase intention for endowment life insurance policies. Specifically, framing the premium price and guaranteed maturity benefit positively influenced consumers' purchase intention. By framing the premium price on a monthly basis, consumers perceived a reduced cost and pain of paying, leading to increased purchase intention. Similarly, framing the guaranteed maturity benefit as an segregated amount also had a positive impact on purchase intention. Participants perceived an illusion of a larger benefit, leading to higher purchase intention. These findings are consistent with previous research that has highlighted the importance of framing effects on decision-making behavior. Moreover, the study found that there was a significant main effect of perceived COVID-19 risk on purchase intention. This finding is not surprising since the COVID-19 pandemic has caused significant economic hardship globally. However, it is possible that participants perceived the risk of COVID-19 as a significant factor in their endowment life insurance purchase decision-making process. Alternatively, participants may have believed that life insurance policies are an effective solution to mitigate the financial impact of the pandemic.

Furthermore, the present study investigated the role of financial literacy in moderating the attribute-framing effect in the context of endowment life insurance policy. The study found that participants who received a time value of money (TVM) intervention demonstrated a higher purchase intention for endowment life insurance policies with aggregated guaranteed maturity benefit and monthly premium. The TVM intervention aimed to educate participants about the future value of money and its impact on purchasing decisions. These findings suggest that enhancing participants' financial literacy can lead to more informed decision-making behavior and help mitigate the impact of behavioral biases.

Finally, the study investigated the beliefs of life insurance consumers that lead to policy lapses. The grounded theory approach was used to analyze data from semi-structured interviews with policyholders and advisors. Four core beliefs among policyholders were identified: life insurance, process, insurer, and personal. Life insurance beliefs reflected

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policyholders' perspectives on life insurance policies, while process beliefs related to the purchasing processes and perceived need-based selling. Insurer beliefs pertained to trust in policy advisors and life insurance companies. Personal beliefs related to policyholders' ability to understand the product, perform financial planning, and make need-based purchase decisions.

This study constructs a Life Insurance Lapse Belief (LLB) model focusing on consumer behavior in the context of lapsed life insurance policies. By elucidating the connections between perception, belief, and lapses using the LLB model, it opens avenues for the development of more effective educational and communication strategies in the life insurance sector. This, in turn, empowers insurers to cater to the varied beliefs of policyholders and, ultimately, mitigate the incidence of policy lapses.

The LLB model enhances the Theory of Planned Behavior (TPB) by incorporating policyholders' perceptions as influential factors shaping their beliefs. Thematic analysis of qualitative data identified nine key perceptions held by policyholders, including perceptions of objectivity, usefulness, risk, trust, advisor's knowledge, social influence, domain-specific self-efficacy, general self-efficacy, and accessibility. The LLB model provides a more holistic comprehension of policyholders' lapse behavior compared to what can be gleaned from the TPB model alone. It enables a deeper understanding of the rationale underlying policyholders' beliefs.

Overall, the present study provides a comprehensive understanding of consumers' life insurance purchase behavior and the factors that influence their decision-making process. The study highlights the importance of framing techniques and financial literacy in mitigating the impact of behavioral biases on decision-making behavior. Furthermore, the study emphasizes the importance of understanding consumers' beliefs related to life insurance policies to develop effective marketing strategies and reduce policy lapsation rates. The findings of the present study have important implications for life insurance companies, policymakers, and financial advisors in developing effective communication strategies and designing policy features that align with consumers' beliefs and preferences.

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6.1 Novel Contributions

Besides presenting the primary outcomes of the research, we have also introduced some innovative insights to the existing body of literature.

Our study is unique in that it combines two extensively researched domains - financial literacy and attribute framing - into an experimental investigation. We utilized a financial literacy intervention to educate our subjects about the future value of money. Moreover, we illustrated how the framing of premium prices and benefits could influence consumers' intent to purchase.

The thesis puts forth a novel contribution in the form of the Life Insurance Lapse Belief (LLB) Model, which is developed by considering the policyholders' perceptions, core beliefs, and lapse behavior of policyholders. This model extends Theory of Planned Behavior to understand lapse behavior.

6.2 Research Implications

The implications of this comprehensive research study are manifold, both theoretically and practically, extending to various stakeholders including researchers, policyholders, policymakers, and insurance regulators.

6.2.1 Theoretical Implications

This research enriches our theoretical comprehension of consumer behavior in the context of life insurance purchasing decisions through a multifaceted approach. By conducting an exhaustive literature review, the study systematically maps the array of factors influencing such decisions, focusing on antecedents, the decision-making process itself, and its resultant outcomes. This strategy illuminates gaps in the extant research and provides a holistic foundation for further scholarly endeavors. The study extends the theoretical boundaries by focusing on both micro and macro-level antecedents of life insurance purchase decisions, surpassing the limitations of previous reviews. The use of Theory-Context-Method (TCM) and Antecedents-Decisions-Outcomes (ADO) frameworks lends structure and or-

ganization to the analysis of the literature, thereby deepening our theoretical grasp of life insurance research.

In a significant theoretical leap, the study demonstrates the potential of well-timed financial literacy interventions in mitigating irrational purchase decisions among consumers. This understanding also moderates the effect of attribute framing on consumers' purchase intentions, which is a novel contribution to the literature. The research further enriches the theoretical discourse by demonstrating the relevance of behavioral economic theories, such as prospect theory and mental accounting principles, in the context of endowment life insurance.

A unique contribution of this study lies in the development of the Life Insurance Lapse Belief (LLB) Model. This model explores the intricate interplay between policyholders' perceptions, core beliefs and lapse decisions, introducing a fresh lens through which to view the influence of consumer beliefs on policy lapse decisions. This model complements existing theories on lapse behavior and opens up new avenues for theoretical growth in this domain.

6.2.2 Practical Implications

On the practical front, this research provides valuable insights for a range of stakeholders, including policymakers, customers, policy regulators, and society at large.

For policymakers and marketers, the study provides strategies for effectively guiding consumers towards purchasing endowment policies. It suggests that framing premium prices on a monthly basis and showcasing GMB in an aggregated form could nudge consumers towards making a purchase. The study also highlights the effectiveness of a Time Value of Money (TVM) intervention in endowment policies, helping consumers to focus on the future value of their premium payments and easing the complexity of calculations involved.

For policymakers and insurance companies, the research emphasizes the significance of aligning communication strategies and policy features with consumers' beliefs and preferences. The proposed LLB model can serve as an invaluable tool in deciphering

policyholders' beliefs and their correlation with lapse decisions, which can guide the development of effective feedback mechanisms and customer retention strategies.

Regulators are encouraged to design educational programs and communication strategies that motivate policyholders to retain their policies. Such initiatives could lower policy lapsation rates, thereby contributing to the overall stability of the life insurance market.

Customers stand to gain from the research as it illuminates the framing biases and beliefs that shape their decision-making processes. This understanding can help consumers make decisions that are more in sync with their beliefs and preferences.

Lastly, the research underscores the importance of financial literacy and a nuanced understanding of consumer beliefs related to life insurance policies for society at large. Equipped with this knowledge, individuals can make more informed decisions when buying life insurance policies and minimize the sway of behavioral biases on their decision-making behavior. The innovative approach of the study, which merges financial literacy and attribute framing domains and employs a financial literacy intervention, paves the way for educating consumers about the future value of money, thereby fostering more informed and rational decision-making.

6.3 Limitations and Future Scope

This study has some limitations pertaining to to the experiments conducted to find the answers of research questions 1 and 2, that future research can address. Firstly, the choice sets generated for each experiment only used two price levels, INR 50000 and 75000 per year. To better understand the impact of attribute framing on purchase intention, future research could explore different price levels. Secondly, the premium price was framed at a monthly level, but investigating the effect of framing premium price at a more granular level, such as weekly, would be interesting. The data were collecting only from Rajathan, India which may not be sufficient to generalize the results considering the diversity of the country. In order to generalize the findings the data from more states can be collected.

Future research could examine the framing effect of guaranteed maturity benefit when

framed in absolute and relative terms. Thirdly, exploring participants' purchase intention through within and between-subjects experiments with various attribute combinations would be insightful. Lastly, other factors such as risk aversion level, education, number of children, survival probability, smart device acceptance, trust, and confidence in the insurance company also impact consumers' life insurance purchasing behavior. Therefore, future research could investigate the framing effect while controlling for these factors.

We conclude with the believe that the findings of this study will foster new research avenues in the area of understanding consumers' life insurance purchase and lapse behaviour and help all stakeholders, such as researchers, consumers, insurance providers, and regulatory agencies who can take steps to promote responsible and informed decision making in the life insurance market. The ultimate goal is to improve the economic well-being of individuals and society as a whole and to ensure that people have access to the financial protection they need to secure their future.

Bibliography

Abdullah, N., Roslan, A., Yusuf, R. Y. M., Rasid, M. F. R. M. (2020). Behavior of Malaysian iGeneration in Purchasing Life Insurance Policy.

Acharya, A., Vellakkal, S., Taylor, F., Masset, E., Satija, A., Burke, M., Ebrahim, S. (2013). The impact of health insurance schemes for the informal sector in low-and middle-income countries: A systematic review. The World Bank Research Observer, 28(2), 236–266.

Adams, M., Andersson, L. F., Lindmark, M., Eriksson, L., Veprauskaite, E. (2020). Managing policy lapse risk in Sweden's life insurance market between 1915 and 1947. Business History, 62(2), 222-239.

Adebayo, E. F., Uthman, O. A., Wiysonge, C. S., Stern, E. A., Lamont, K. T., Ataguba, J. E. (2015). A systematic review of factors that affect uptake of community-based health insurance in low-income and middle-income countries. BMC Health Services Research, 15(1), 543.

Agarwalla, S. K., Barua, S. K., Jacob, J., Varma, J. R. (2014). Effectiveness of financial literacy interventions in improving financial literacy among rural women in North India. Indian Institute of Management, Ahmedabad.

Ahmed, D., Xie, Y., Issam, K. (2023). Investor confidence and life insurance demand: can economic condition limit life insurance business?. International Journal of Emerging Markets, 18(7), 1537-1564.

Ajzen, I. (1980). Understanding attitudes and predicting social behavior. Englewood cliffs.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In Action control: From cognition to behavior (pp. 11–39). Berlin, Heidelberg: Springer Berlin Heidelberg.

Ajzen, I. (1991). The theory of planned behavior. Organizational behavior and human decision processes, 50(2), 179–211.

Alhassan, A. L., Biekpe, N. (2016). Determinants of life insurance consumption in Africa. Research in International Business and Finance, 37, 17–27.

Ampaw, S., Nketiah-Amponsah, E., Owoo, N. S. (2018). Gender perspective on life insurance demand in Ghana. International Journal of Social Economics, 45(12), 1631–1646.

Andersson, L.-F., Eriksson, L. (2015). The compulsory public pension and the demand for life insurance: The case of Sweden, 1884–1914. The Economic History Review, 68(1), 244–263.

Ankitha, S., Basri, S. (2019). The effect of relational selling on life insurance decision making in India. International Journal of Bank Marketing, 37(7), 1505–1524.

Aren, S., Aydemir, S. D. (2015). The moderation of financial literacy on the relationship between individual factors and risky investment intention. International Business Research, 8(6), 17.

Arena, M. (2008). Does insurance market activity promote economic growth? A cross-country study for industrialized and developing countries. Journal of Risk and Insurance, 75(4), 921–946.

Arun, T., Bendig, M., Arun, S. (2012). Bequest motives and determinants of micro life insurance in Sri Lanka. World Development, 40(8), 1700–1711.

Bah, M., Abila, N. (2024). Institutional determinants of insurance penetration in Africa. The Geneva Papers on Risk and Insurance-Issues and Practice, 49(1), 138-179.

Bambauer-Sachse, S., Mangold, S. C. (2009). Are temporally reframed prices really advantageous? A more detailed look at the processes triggered by temporally reframed prices. Journal of Retailing and Consumer Services, 16(6), 451-457.

Barucci, E., Colozza, T., Marazzina, D., Rroji, E. (2020). The determinants of lapse rates in the Italian life insurance market. European Actuarial Journal, 10, 149-178.

Bateman, H., Gerrans, P., Thorp, S., Zeng, Y. (2023). Explaining consumers' progress through life insurance decision states: The role of personal values and consumer characteristics. Journal of Consumer Affairs, 57(3), 1151-1182.

Bauchet, J., Morduch, J. (2019). Paying in pieces: A natural experiment on demand for life insurance under different payment schemes. Journal of Development Economics, 139, 69–77. 24

Beck, T., Webb, I. (2003). Economic, demographic, and institutional determinants of life insurance consumption across countries. The World Bank Economic Review, 17(1), 51–88.

Blanchard, S. J., Trudel, R. (2023). Life insurance, loss aversion, and temporal orientation: a field experiment and replication with young adults. Marketing Letters, 1-13.

Botzen, W. W., de Boer, J., Terpstra, T. (2013). Framing of risk and preferences for annual and multi-year flood insurance. Journal of economic psychology, 39, 357-375.

Boyle, P., Tan, K. S., Wei, P., Zhuang, S. C. (2022). Annuity and insurance choice under habit formation. Insurance: Mathematics and Economics, 105, 211-237.

Braun, V., Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77–101.

Brighetti, G., Lucarelli, C., Marinelli, N. (2014). Do emotions affect insurance demand? Review of Behavioral Finance, 6(2), 136–154.

Brown, J. R., Kling, J. R., Mullainathan, S., Wrobel, M. V. (2013). Framing lifetime income. The Journal of Retirement, 1(1), 27-37. http://doi.org/10.3905/jor.2013.1.1.027

Bubeck, P., Botzen, W. J. W., Aerts, J. C. (2012). A review of risk perceptions and other factors that influence flood mitigation behavior. Risk Analysis: An International Journal, 32(9), 1481–1495.

Buric, M. N., Bacovic, M., Cerovic, J., Bozovic, M. L. (2017). Factors influencing life insurance market development in Montenegro. Periodica Polytechnica Social and Management Sciences, 25(2), 141–149.

Burkovskaya, A., Teperski, A., Atalay, K. (2022). Framing and insurance choices. Journal of Risk and Insurance, 89(2), 311-337.

Camerer, C. F., Kunreuther, H. (1989). Decision processes for low probability events: Policy implications. Journal of policy analysis and management, 8(4), 565-592.

Campbell, Jason, Michael Chan, Kate Li, Louise Lombardi, Lucian Lombardi, Marianne Purushotham, and Anand Rao. (2014). Modeling of Policyholder Behavior for Life Insurance and Annuity Products.

Canabal, A., White III, G. O. (2008). Entry mode research: Past and future. International Business Review, 17(3), 267–284.

Çelik, S., Kayali, M. M. (2009). Determinants of demand for life insurance in European countries. Problems and Perspectives in Management, 7(3), 32–37.

Census of India. SRS based Abridged Life Table 2014-18.

Cerchiara, R. R., Edwards, M., Gambini, A. (2008, October). Generalized linear models

in life insurance: decrements and risk factor analysis under Solvency II. In 18th international AFIR colloquium.

Champion, V. L., Skinner, C. S. (2008). The health belief model. Health behavior and health education: Theory, research, and practice, 4, 45–65.

Chandran, S., Menon, G. (2004). When a day means more than a year: Effects of temporal framing on judgments of health risk. Journal of consumer research, 31(2), 375–389.

Chauhan, D. R. R., Dhami, J. K. (2021). Subjective variables of financial well-being and individual economic behavior: pre-and post financial literacy intervention. Journal of Contemporary Issues in Business and Government, 27(1).

Chang, F.-R. (2004). Life insurance, precautionary saving and contingent bequest. Mathematical Social Sciences, 48(1), 55–67.

Charness, G., Gneezy, U., Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. Journal of economic behavior organization, 81(1), 1–8.

Chen, P., Ibbotson, R. G., Milevsky, M. A., Zhu, K. X. (2006). Human capital, asset allocation, and life insurance. Financial Analysts Journal, 62(1), 97–109.

Chen, R., Wong, K. A., Lee, H. C. (2001). Age, period, and cohort effects on life insurance purchases in the US. Journal of Risk and Insurance, 68(2), 303–327.

Cheng, Chunli, and Jing Li. 2018. Early Default Risk and Surrender Risk: Impacts on Participating Life Insurance Policies. Insurance: Mathematics and Economics 78: 30–43.

Chow-Chua, C., Lim, G. (2000). A demand audit of the insurance market in Singapore. Managerial Auditing Journal, 15(7), 372–382.

Chui, A. C., Kwok, C. C. (2008). National culture and life insurance consumption. Journal of International Business Studies, 39(1), 88–101.

Clarke, V., Braun, V., Hayfield, N. (2015). Thematic analysis. Qualitative psychology: A practical guide to research methods, 222(2015), 248.

Clark, R. L. (2023). Effectiveness of employer-provided financial education programs. Journal of Financial Literacy and Wellbeing, 1-15.

Coe, N. B., Belbase, A., Wu, A. Y. (2016). Overcoming barriers to life insurance coverage: A behavioral approach. Risk Management and Insurance Review, 19(2), 307–336.

Cole, C. R., Fier, S. G. (2020). An examination of life insurance policy surrender and loan activity. Journal of Risk and Insurance.

Cole, S., Sampson, T., Zia, B. (2009, February). Valuing financial literacy training. In Conference on Measurement, Promotion, and Impact of Access to Financial Services, March (pp. 12-13).

Cook, D. J., Greengold, N. L., Ellrodt, A. G., Weingarten, S. R. (1997). The relation between systematic reviews and practice guidelines. Annals of Internal Medicine, 127(3), 210–216.

Cox, S.H. and Lin, Y. (2006). "Annuity lapse rate modeling: tobit or not tobit?", working paper, Society of Actuaries, Schaumburg, IL.

Curak, Marijana, Doris Podrug, and Klime Poposki. 2015. Policyholder and Insurance Policy Features as Determinants of Life Insurance ´ Lapse-Evidence from Croatia. Economics and Business Review 1: 58–77.

Dar, A. and Dodds, C. (1989). "Interest rates, the emergency fund hypothesis and saving through endowment policies: some empirical evidence for the UK", Journal of Risk and Insurance, Vol. 56 No. 3, pp. 415-433.

Dar, A., Dodds, C. (1989). Interest rates, the emergency fund hypothesis and saving through endowment policies: some empirical evidence for the UK. Journal of Risk and Insurance, 415-433.

Davis, F. D. (1986). A technology acceptance model for empirically testing new end-user information systems: Theory and results (Doctoral dissertation), MIT Sloan School of Management.

Di Matteo, L., Emery, J. H. (2002). Wealth and the demand for life insurance: Evidence from Ontario, 1892. Explorations in Economic History, 39(4), 446–469.

Donthu, N., Kumar, S., Pattnaik, D. (2020). Forty-five years of journal of business research: A bibliometric analysis. Journal of Business Research, 109, 1–14.

Dragos, S. L. (2014). Life and non-life insurance demand: The different effects of influence factors in emerging countries from Europe and Asia. Economic research-Ekonomska Istraživanja, 27(1), 169–180.

Dragos, S. L., Dragos, C. M. (2013). The role of institutional factors over the national insurance demand: Theoretical approach and econometric estimations. Transylvanian Review of Administrative Sciences, 9(39), 32–45.

Dragoş, S. L., Mare, C., Dragoş, C. M. (2019). Institutional drivers of life insurance consumption: A dynamic panel approach for European countries. The Geneva Papers on Risk and Insurance-Issues and Practice, 44(1), 36–66.

Dragos, S. L., Mare, C., Dragota, I.-M., Dragos, C. M., Muresan, G. M. (2017). The nexus between the demand for life insurance and institutional factors in Europe: New evidence from a panel data approach. Economic research-Ekonomska Istraživanja, 30(1), 1477–1496.

Dror, D. M., Hossain, S. S., Majumdar, A., Pérez Koehlmoos, T. L., John, D., Panda, P. K. (2016). What factors affect voluntary uptake of community-based health insurance schemes in low-and middleincome countries? A systematic review and meta-analysis. PLoS ONE, 11(8), e0160479.

Dryhurst, S., Schneider, C. R., Kerr, J., Freeman, A. L., Recchia, G., Van Der Bles, A. M., ... Van Der Linden, S. (2020). Risk perceptions of COVID-19 around the world. In COVID-19 (pp. 162-174). Routledge.

EIOPA Annual Report (2011). https://www.eiopa.europa.eu/publications/eiopa-annual-report-2011$_e n$

Eisenhauer, J. G. (1997). Risk aversion, wealth, and the Dara hypothesis: A new test. International Advances in Economic Research, 3(1), 46–53.

Eisenhauer, J. G., Halek, M. (1999). Prudence, risk aversion, and the demand for life insurance. Applied Economics Letters, 6(4), 239–242. Ejye Omar, O., Owusu-Frimpong, N. (2007).

Ekman, B. (2004). Community-based health insurance in low-income countries: A systematic review of the evidence. Health Policy and Planning, 19(5), 249–270.

Eling, M., Kiesenbauer, D. (2012). Does surplus participation reflect market discipline? An analysis of the German life insurance market. Journal of Financial Services Research, 42(3), 159–185.

Eling, M., Kiesenbauer, D. (2014). What policy features determine life insurance lapse? An analysis of the German market. Journal of Risk and Insurance, 81(2), 241-269.

Eling, M., Kochanski, M. (2013). Research on lapse in life insurance: what has been done and what needs to be done? The Journal of Risk Finance.

Eling, M., Pradhan, S., Schmit, J. T. (2014). The determinants of microinsurance demand. The Geneva Papers on Risk and Insurance-Issues and Practice, 39(2), 224–263.

Emamgholipour, S., Arab, M., Mohajerzadeh, Z. (2017). Life insurance demand: Middle East and North Africa. International Journal of Social Economics, 44(4), 521–529.

Epetimehin, F. M. (2011). A study of the factors enhancing the purchase of life insurance in Nigeria. International Business Management, 5(3), 124–128.

Esho, N., Kirievsky, A., Ward, D., Zurbruegg, R. (2004). Law and the determinants of property-casualty insurance. Journal of Risk and Insurance, 71(2), 265–283.

Fang, H., Kung, E. (2021). Why do life insurance policyholders lapse? The roles of income, health, and bequest motive shocks. Journal of Risk and Insurance, 88(4), 937-970.

Fier, S. G., Liebenberg, A. P. (2013). Life insurance lapse behavior. North American Actuarial Journal,17(2),153–167.

Finch, J. E. (2006). The impact of personal consumption values and beliefs on organic food purchase behavior. Journal of Food Products Marketing, 11(4), 63–76.

Fishbein, M., Ajzen, I. (1977). In I. Ajzen (Ed.), Belief, attitude, intention, and behavior: An introduction to theory and research. Addison-Wesley.

Freeman, J. D., Kadiyala, S., Bell, J. F., Martin, D. P. (2008). The causal effect of health insurance on utilization and outcomes in adults: A systematic review of US studies. Medical Care, 46(10), 1023–1032.

Frees, E. W., Sun, Y. (2010). Household life insurance demand: A multivariate two-part model. North American Actuarial Journal, 14(3), 338–354.

Gaganis, C., Hasan, I., Pasiouras, F. (2019). Cross-country evidence on the relationship between regulations and the development of the life insurance sector. Economic Modelling, 89, 256–272.

Gamliel, E., Herstein, R. (2011). To save or to lose: does framing price promotion affect consumers' purchase intentions?. Journal of Consumer Marketing, 28(2), 152-158.

Gandolfi, A. S., Miners, L. (1996). Gender-based differences in life insurance ownership. Journal of Risk and Insurance, 63(4), 683–693.

Gemmo, Irina, and Martin Götz. 2016. Life Insurance and Demographic Change: An Empirical Analysis of Surrender Decisions Based on Panel Data. 240. SAFE Sustainable Architecture for Finance in Europe.

Gilal, F. G., Paul, J., Gilal, N. G., Gilal, R. G. (2021). The role of organismic integration theory in marketing science: A systematic review and research agenda. European Management Journal.

Gilal, F. G., Zhang, J., Paul, J., Gilal, N. G. (2019). The role of selfdetermination theory in marketing science: An integrative review and agenda for research. European Management Journal, 37(1), 29–44.

Gill, A., Mand, H. S., Biger, N., Mathur, N. (2018). Influence of religious beliefs and spirituality on decision to insure. International Journal of Emerging Markets, 13(5), 780–800.

Gill, A., Bhattacharya, R. (2019). The effects of a financial literacy intervention on the financial and economic knowledge of high school students. The Journal of Economic Education, 50(3), 215-229.

Giri, M., Chatterjee, D. (2021). Factors affecting changes in insured status of rural and urban households: A study over two time periods in India. IIMB Management Review, 33(4), 360-371.

Glaser, B. G., Strauss, A. L. (2017). The discovery of grounded theory: Strategies for qualitative research. Routledge.

Gottlieb, D., Smetters, K. (2021). Lapse-based insurance. American Economic Review, 111(8), 2377-2416.

Gourville, J. T. (1998). Pennies-a-day: The effect of temporal reframing on transaction evaluation. Journal of Consumer Research, 24(4), 395-408.

Gourville, J. T. (1999). The effect of implicit versus explicit comparisons on temporal pricing claims. Marketing Letters, 10(2), 113-124. https://www.jstor.org/stable/40216526

Gourville, J. T. (2003). The effects of monetary magnitude and level of aggregation on the temporal framing of price. Marketing Letters, 14(2), 125-135. https://www.jstor.org/stable/40216476

Green, P. E., Srinivasan, V. (1978). Conjoint analysis in consumer research: issues and outlook. Journal of consumer research, 5(2), 103-123. https://www.jstor.org/stable/2489001

Hammond, J., Houston, D. B., Melander, E. R. (1967). Determinants of household life insurance premium expenditures: An empirical investigation. Journal of Risk and Insurance, 34(3), 397–408.

Han, N.-W., Hung, M.-W. (2017). Optimal consumption, portfolio, and life insurance policies under interest rate and inflation risks. Insurance: Mathematics and Economics, 73, 54–67.

Handbook on Indian insurance statistics, 2020-21. https://irdai.gov.in/handbook-of-indian-insurance

Hao, A. W., Paul, J., Trott, S., Guo, C., Wu, H. H. (2019). Two decades of research on nation branding: a review and future research agenda. International Marketing Review, 38(1), 46–69.

Hau, A. (2000). Liquidity, estate liquidation, charitable motives, and life insurance demand by retired singles. Journal of Risk and Insurance, 67(1), 123–141.

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling.

Hecht, C., Hanewald, K. (2012). Who responds to tax reforms? Evidence from the life insurance market. The Geneva Papers on Risk and Insurance-Issues and Practice, 37(1), 5–26.

Hershfield, H. E., Shu, S., Benartzi, S. (2020). Temporal reframing and participation in a savings program: A field experiment. Marketing Science, 39(6), 1039–1051.

Hilgert, M. A., Hogarth, J. M., Beverly, S. G. (2003). Household financial management: The connection between knowledge and behavior. Fed. Res. Bull., 89, 309.

Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions and organizations across nations. Sage.

Hubener, A., Maurer, R., Rogalla, R. (2014). Optimal portfolio choice with annuities and life insurance for retired couples. Review of Finance, 18(1), 147–188.

Huber, C., Schlager, T. (2018). Testing the risk as feeling and risk as analysis perspective for insurance: The antecedents of purchasing unit-linked life insurance products. Journal of Financial Services Marketing, 23(1), 25–37.

Huber, C., Gatzert, N., Schmeiser, H. (2015). How does price presentation influence consumer choice? The case of life insurance products. Journal of Risk and Insurance, 82(2), 401-432. https://www.jstor.org/stable/26482969

Hussels, S., Ward, D., Zurbruegg, R. (2005). Stimulating the demand for insurance. Risk Management and Insurance Review, 8(2), 257–278.

Hwang, T., Gao, S. (2003). The determinants of the demand for life insurance in an emerging economy—The case of china. Managerial Finance, 29(5/6), 82–96.

Iacobucci, D., Posavac, S. S., Kardes, F. R., Schneider, M. J., Popovich, D. L. (2015). Toward a more nuanced understanding of the statistical properties of a median split. Journal of Consumer Psychology, 25(4), 652-665.

Inkmann, J., Michaelides, A. (2012). Can the life insurance market provide evidence for a bequest motive? Journal of Risk and Insurance, 79(3), 671-695.

IRDAI Annual Report, 2020. https://irdai.gov.in/annual-reports

IRDAI. Consumer Education Website. https://www.policyholder.gov.in/ what_life insur-ance_to_buy.aspx

Jain, G., Gaeth, G. J., Nayakankuppam, D., Levin, I. P. (2020). Revisiting attribute framing: The impact of number roundedness on framing. Organizational Behavior and Human Decision Processes, 161, 109-119.

Jebarajakirthy, C., Das, M., Rundle-Thiele, S. and Ahmadi, H. (2023). "Communication strategies: encouraging healthy diets for on-the-go consumption", Journal of Consumer Marketing, Vol. 40 No. 1, pp. 27–43.

Joffe H, Washer P, Solberg, C. Public engagement with emerging infectious disease: The case of MRSA in Britain. Psychology and Health, 2011; 26:667–683.

Joffe H, Yardley L. Content and thematic analysis. Pp. 56– 68 in Research Methods for Clinical and Health Psychology. London: Sage, 2004.

Joffe H. Thematic analysis. Pp. 209–223 in Harper D, Thompson AR (eds). Qualitative Research Methods in Mental Health and Psychotherapy. Chichester: Wiley-Blackwell, 2011.

Johnson, E. J., Hershey, J., Meszaros, J., Kunreuther, H. (1993). Framing, probabil-ity distortions, and insurance decisions. Journal of risk and uncertainty, 7(1), 35-51. https://www.jstor.org/stable/41760693

Kagraoka, Y. (2005). Modeling insurance surrenders by the negative binomial model. In JAFEE International Conference (Vol. 1).

Kahiya, E. T. (2018). Five decades of research on export barriers: Review and future directions. International Business Review, 27(6), 1172– 1188.

Kairies-Schwarz, N., Rieger-Fels, M., Waibel, C. (2023). Cost-sharing or rebate: The impact of health insurance design on reducing inefficient care. Frontiers in Behavioral Economics, 2, 1043188.

Kakar, P., Shukla, R. (2010). The determinants of demand for life insurance in an emerg-ing economy—India. Margin: The Journal of Applied Economic Research, 4(1), 4 9– 7 7.

Kaufmann, D., Kraay, A., Mastruzzi, M. (2011). The worldwide governance indicators: Methodology and analytical issues. Hague Journal on the Rule of Law, 3(2), 220–246.

Kiesenbauer, D. (2011). "Main determinants of lapse in the German life insurance indus-try", North American Actuarial Journal, Vol. 16 No. 1, pp. 52-73.

Kim, C. (2005a). "Modeling surrender and lapse rates with economic variables", North American Actuarial Journal, Vol. 9 No. 4, pp. 56-70.

Kim, C. (2005b). Report to the Policyholder Behavior in the Tail Subgroups Project, Society of Actuaries, Schaumburg, IL.

Knoller, C., Kraut, G., Schoenmaekers, P. (2016). On the propensity to surrender a variable annuity contract: An empirical analysis of dynamic policyholder behavior. Journal of Risk and Insurance, 83(4), 979-1006.

Kozarevic, S., Hodzic, S. (2021). What drives life insurance purchasing decisions in Bosnia and Herzegovina? Risk Management and Insurance Review, 24(3), 263-278.

Kumar, A., Paul, J., Unnithan, A. B. (2020). 'Masstige' marketing: A review, synthesis and research agenda. Journal of Business Research, 113, 384–398.

Kuo, Weiyu, Chenghsien Tsai, and Wei-Kuang Chen. 2003. An Empirical Study on the Lapse Rate: The Cointegration Approach. Journal of Risk and Insurance 70: 489–508.

Lee, H.-S., Chong, S.-C., Sia, B.-K. (2018). Influence of secondary and tertiary literacy on life insurance consumption: Case of selected ASEAN countries. The Geneva Papers on Risk and Insurance-Issues and Practice, 43(1), 1– 15.

Lenten, L. J., Rulli, D. N. (2006). A time-series analysis of the demand for life insurance companies in Australia: An unobserved components approach. Australian Journal of Management, 31(1), 41–66.

Levin, I. P., Schneider, S. L., Gaeth, G. J. (1998). All frames are not created equal: A typology and critical analysis of framing effects. Organizational behavior and human decision processes, 76(2), 149-188.

Li, D., Moshirian, F., Nguyen, P., Wee, T. (2007). The demand for life insurance in OECD countries. Journal of Risk and Insurance, 74(3), 637–652.

Li, R., Wu, J., Zhang, S., Zhang, S., Wu, Y. (2023). Social Endowment Insurance and Inequality of the Household Portfolio Choice: The Moderating Effect of Financial Literacy. SAGE Open, 13(1).

Life insurance in Nigeria: An application of the theory of reasoned action to consumers' attitudes and purchase intention. The Service Industries Journal, 27(7), 963–976.

Lim, B. H., Kwak, M. (2019). The impact of a partial borrowing limit on financial decisions. Quantitative Finance, 19(5), 859–883.

Lim, C.-C., Tan, S.-S. (2019). Demographic profiling of life insurance ownership in

the northern regions of Malaysia. International Journal of Business Society, 20(3), 1022–1035.

Lim, W. M. (2020). A marketing mix typology for integrated care: The 10 Ps. Journal of Strategic Marketing, 1–17.

Lim, W. M., Weissmann, M. A. (2021). Toward a theory of behavioral control. Journal of Strategic Marketing, 29(2), 1–27.

Lim, W. M., Yap, S. F., Makkar, M. (2021). Home sharing in marketing and tourism at a tipping point: What do we know, how do we know, and where should we be heading? Journal of Business Research, 122, 534–566.

Lin, C., Hsiao, Y. J., Yeh, C. Y. (2017). Financial literacy, financial advisors, and information sources on demand for life insurance. Pacific-Basin Finance Journal, pp. 43, 218–237.

Lin, C., Hsiao, Y.-J., Yeh, C.-Y. (2017). Financial literacy, financial advisors, and information sources on demand for life insurance. PacificBasin Finance Journal, 43, 218–237.

Lin, Y., Grace, M. F. (2007). Household life cycle protection: Life insurance holdings, financial vulnerability, and portfolio implications. Journal of Risk and Insurance, 74(1), 141–173.

Ling, X., Wang, L., Pan, Y., Feng, Y. (2023). The Impact of Financial Literacy on Household Health Investment: Empirical Evidence from China. International Journal of Environmental Research and Public Health, 20(3), 2229.

Luca, D. (2018). Does prevention as an investment strategy explain the intention to purchase guarantees for unit-linked life insurance? Journal of Financial Services Marketing, 23(3–4), 153–167.

Luciano, E., Outreville, J. F., Rossi, M. (2016). Life insurance ownership by Italian households: A gender-based differences analysis. The Geneva Papers on Risk and Insurance-Issues and Practice, 41(3), 468–490.

Lusardi, A. (2012). Numeracy, financial literacy, and financial decision-making (No. w17821). National Bureau of Economic Research.

Lusardi, A., Mitchell, O. S. (2011). Financial literacy around the world: an overview. Journal of pension economics finance, 10(4), 497-508.

Lusardi, A., Mitchell, O. S. (2014). The economic importance of financial literacy. Journal of Economic Literature, 52(1), 5–44.

Lusardi, A., Mitchelli, O. S. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education: The problems are serious, and remedies are not simple. Business economics, 42, 35-44.

Mahdzan, N. S., Victorian, S. M. P. (2013). The determinants of life insurance demand: A focus on saving motives and financial literacy. Asian Social Science, 9(5), 274.

Mai, T. H., Nguyen, T. C., Vu, L. L., Bui, V. H., Nguyen, T. T. C., Do, D. T. (2020). A study on behaviors of purchasing life insurance in Vietnam. Management Science Letters, 10(8), 1693–1700.

Mandell, L., Klein, L. S. (2009). The impact of financial literacy education on subsequent financial behavior. Journal of Financial Counseling and Planning, 20(1).

Mare, C., Laura Dragos, S., Dragotă, I.-M., Dragos, C. M. (2019). Insurance literacy and spatial diffusion in the life insurance market: A subnational approach in Romania. Eastern European Economics, 57(5), 375–396.

Marmarosh, C. L., Forsyth, D. R., Strauss, B., Burlingame, G. M. (2020). The psychology of the COVID-19 pandemic: A group-level perspective. Group Dynamics: Theory, Research, and Practice, 24(3), 122.

Masud, M. M., Ismail, N. A., Rahman, M. (2020). A conceptual framework for purchase intention of sustainable life insurance: A comprehensive review. International Journal of Innovation and Sustainable Development, 14(3), 351–373.

Mathew, B., Sivaraman, S. (2017). Cointegration and causality between macroeconomic variables and life insurance demand in India. International Journal of Emerging Markets.

Maxwell, J. A. (2012). Qualitative research design: An interactive approach. Sage publications.

McGarry, B. E., Temkin-Greener, H., Chapman, B. P., Grabowski, D. C., Li, Y. (2016). The impact of consumer numeracy on the purchase of long-term care insurance. Health services research, 51(4), 1612–1631.

Meng, Q., Yuan, B., Jia, L., Wang, J., Yu, B., Gao, J., Garner, P. (2011). Expanding health insurance coverage in vulnerable groups: A systematic review of options. Health Policy and Planning, 26(2), 93–104.

Milhaud, X., Loisel, S., Maume-Deschamps, V. (2010). Surrender triggers in life insurance: classification and risk predictions. Laboratoire de Sciences Actuarielle et Financiere (Working Paper).

Moreira Costa, V., De Sá Teixeira, N. A., Cordeiro Santos, A., Santos, E. (2021). When

more is less in financial decision-making: financial literacy magnifies framing effects. Psychological Research, 85(5), 2036-2046.

Mitra, A. (2017). Influencers of life insurance investments—Empirical evidence from Europe. Australasian Accounting Business Finance Journal, 11(3), 87–102.

Mo, T., Cho, Y. N., Wong, N. (2022). "I must have done something good": Justifying luxury consumption with karmic beliefs. Journal of Business Research, 144, 193-200.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Prisma Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. PLoS Medicine, 6(7), e1000097.

Morwitz, V. G., Greenleaf, E. A., Johnson, E. J. (1998). Divide and prosper: consumers' reactions to partitioned prices. Journal of marketing research, 35(4), 453-463.

Mulholland, B. S., Finke, M. S. (2014). Does cognitive ability impact life insurance policy lapsation? Available at SSRN 2512076.

Mureşan, G.-M., Armean, G. (2016). Trust–the intangible asset of policyholder behavior on insurance market. Scientific Annals of Economics and Business, 63(Suppl. 1), 125–136.

Mutlu, Ü., Özer, G. (2021). The moderator effect of financial literacy on the relationship between locus of control and financial behavior. Kybernetes, 51(3), 1114-1126.

Nagy, B. Z., Alt, M. A., Benedek, B., Săplăcan, Z. (2019). How do loss aversion and technology acceptance affect life insurance demand? Applied Economics Letters, 27(12), 977–981.

Ndawula, Y. K., Mori, N., Nkote, I. (2023). Effects of behavioral biases on life insurance demand decisions in Uganda. International Journal of Social Economics.

Ndawula, Y. K., Neema, M., Nkote, I. (2024). Psychographic characteristics and demand decisions for life insurance products in Uganda. International Journal of Social Economics.

Nithiyalakshmi, A.K.V., Ramachandran, R. Gandhimathi, T., (2016). A Study on the cause for Lapsation of Life Insurance Policies Using Combined Overlap Block Fuzzy Cognitive Maps. International Journal of Current Trends in Engineering Research, 2(4), pp.162–169.

Nolte, Sven, and Judith C. Schneider. 2017. Do not Lapse into Temptation: A Behavioral Explanation for Policy Surrender. Journal of Banking and Finance 79: 12–27.

Novovic Buric, M., Kascelan, L., Kascelan, V. (2023). Economic and demographic determinants of premium reserve in Western Balkan countries during and after the crisis. International Journal of Finance Economics, 28(1), 1116-1136.

OECD INFE. (2016). International survey of adult financial literacy competencies. Paris: OECD Publishing. https://www.oecd.org/daf/fin/financial-education/OECD-INFE-International-Survey-of-Adult-Financial-Literacy-Competencies.pdf

Outreville, J. F. (1996). Life insurance markets in developing countries. Journal of Risk and Insurance, 63(2), 263–278.

Outreville, J. F. (2013). The relationship between insurance and economic development: 85 empirical papers for a review of the literature. Risk Management and Insurance Review, 16(1), 71–122.

Outreville, J. F. (2014). Risk aversion, risk behavior, and demand for insurance: A survey. Journal of Insurance Issues, 37(2), 158–186.

Outreville, J. F. (2015). The relationship between relative risk aversion and the level of education: A survey and implications for the demand for life insurance. Journal of Economic Surveys, 29(1), 97–111.

Outreville, Jean-Francois. 1990. Whole-Life Insurance Lapse Rates and the Emergency Fund Hypothesis. Insurance Mathematics and Economics 9: 249–55.

Pappas, G., Kiriaze, I. J., Giannakis, P., Falagas, M. E. (2009). Psychosocial consequences of infectious diseases. Clinical microbiology and infection, 15(8), 743-747.

Parasuraman, A., Zeithaml, V. A., Berry, L. L. (1988). Servqual: A multiple-item scale for measuring consumer perc. Journal of Retailing, 64(1), 12.

Park, S. C., Tokutsune, Y. (2013). Do Japanese policyholders care about insurers' credit quality? The Geneva Papers on Risk and Insurance Issues and Practice, 38(1), 1–21.

Paul, J. (2019). Marketing in emerging markets: A review, theoretical synthesis and extension. International Journal of Emerging Markets, 15(3), 446–468.

Paul, J., Benito, G. R. (2018). A review of research on outward foreign direct investment from emerging countries, including China: What do we know, how do we know and where should we be heading? Asia Pacific Business Review, 24(1), 90–115.

Paul, J., Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? International Business Review, 29(4), 101717.

Paul, J., Feliciano-Cestero, M. M. (2020). Five decades of research on foreign direct

investment by MNEs: An overview and research agenda. Journal of Business Research, 124(2021), 800–812.

Paul, J., Mas, E. (2020). Toward a 7-P framework for international marketing. Journal of Strategic Marketing, 28(8), 681–701.

Paul, J., Rosado-Serrano, A. (2019). Gradual internationalization vs born-global/international new venture models. International Marketing Review, 36(6), 830–858.

Paul, J., Singh, G. (2017). The 45 years of foreign direct investment research: Approaches, advances and analytical areas. The World Economy, 40(11), 2512–2527.

Paul, J., Parthasarathy, S., Gupta, P. (2017). Exporting challenges of SMEs: A review and future research agenda. Journal of World Business, 52(3), 327–342.

Pincus, J., Hopewood, K., Mills, R. (2017). Framing the decision to buy long-term care insurance: losses and gains in the context of statistical and narrative evidence. Journal of Financial Services Marketing, 22(1), 33-40.

Pinquet, J., M. Guillén, and M. Ayuso, (2011). Commitment and Lapse Behavior in Long-Term Insurance: A Case Study, Journal of Risk and Insurance, 78(4): 983-1002.

Pitthan, F., De Witte, K. (2021). Puzzles of insurance demand and its biases: A survey on the role of behavioural biases and financial literacy on insurance demand. Journal of Behavioral and Experimental Finance, 30, 100471.

Plakoyiannaki, E., Dimitratos, P., Chen, S. (2019). The qualitative case research in international entrepreneurship: A state of the art and analysis. International Marketing Review, 36(1), 164–187. https:// doi.org/10.1108/IMR-02-2017-0052

Pliska, S. R., Ye, J. (2007). Optimal life insurance purchase and consumption/investment under uncertain lifetime. Journal of Banking Finance, 31(5), 1307–1319.

Popovich, J. J., Loibl, C., Zirkle, C., Whittington, M. S. (2020). Community college students' response to a financial literacy intervention: An exploratory study. International Review of Economics Education, 34, 100182.

Poufinas, Thomas, and Gina Michaelide. 2018. Determinants of Life Insurance Policy Surrenders. Modern Economy 9: 1400–22.

Punj, G. (2011). Effect of consumer beliefs on online purchase behavior: The influence of demographic characteristics and consumption values. Journal of Interactive Marketing, 25(3), 134–144.

Qian, X. (2021). The impact of COVID-19 pandemic on insurance demand: the case of

China. The European Journal of Health Economics, 22(7), 1017-1024.

Qian, X. (2021). The impact of COVID-19 pandemic on insurance demand: the case of China. The European Journal of Health Economics, 22(7), 1017-1024.

Qin, Y., Wang, X. (2023). Power distance belief and the desire for uniqueness. Journal of Business Research, 160, 113766.

Rabbani, A. G. (2020). Cash value life insurance ownership among young adults: The role of self-discipline and risk tolerance. Journal of Behavioral and Experimental Finance, 27, 100385.

Rajput, N., Sharma, U., Kaur, B., Tongkachok, K., Dornadula, V. H. R., Sisodia, D. R. (2023). Ethical behavior a thought for defining loyalty in an offline. International Journal of System Assurance Engineering and Management, 14(6), 2088-2094.

Rana, J., Paul, J. (2020). Health motive and the purchase of organic food: A meta-analytic review. International Journal of Consumer Studies, 44(2), 162–171.

Rapp, A. (2022). Empirical evidence of attribute framing: the case of unsophisticated IPO investors. Review of Behavioral Finance.

RBI. (2019). Monetary statistics. https://m.rbi.org.in/Scripts/PublicationsView.aspx?id=9455

Renshaw, A. E., Haberman, S. (1986). Statistical analysis of life assurance lapses. Journal of the Institute of Actuaries, 113(3), 459-497.

Richter, A., Schiller, J., Schlesinger, H. (2014). Behavioral insurance: Theory and experiments. Journal of Risk and Uncertainty, 48(2), 85–96.

Rosado-Serrano, A., Paul, J., Dikova, D. (2018). International franchising: A literature review and research agenda. Journal of Business Research, 85, 238–257.

Russell, David T., Stephen G. Fier, James M. Carson, and Randy E. Dumm. (2013). An Empirical Analysis of Life Insurance Policy Surrender Activity. Journal of Insurance Issues 36: 35–57.

Russo, Vincenzo, Rosella Giacometti, and Frank J. Fabozzi. 2017. Intensity-Based Framework for Surrender Modeling in Life Insurance. Insurance: Mathematics and Economics 72: 189–96.

Rutherford, A. (2011). ANOVA and ANCOVA: a GLM approach. John Wiley Sons.

Salovey, P., Williams-Piehota, P. (2004). Field experiments in social psychology: Message framing and the promotion of health-protective behaviors. American Behavioral

Scientist, 47(5), 488-505.

Santini, F. D. O., Ladeira, W. J., Mette, F. M. B., Ponchio, M. C. (2019). The antecedents and consequences of financial literacy: a meta-analysis. International Journal of Bank Marketing, 37(6), 1462-1479.

Sauter, N. (2014). Bequest motives and the demand for life insurance in East Germany. German Economic Review, 15(2), 272–286.

Sauter, N., Winter, J. (2010). Do investors respond to tax reform? Evidence from a natural experiment in Germany. Economics Letters, 108(2), 193–196.

Sauter, N., Walliser, J., Winter, J. (2015). Tax incentives, bequest motives, and the demand for life insurance: Evidence from a natural experiment in Germany. Journal of Pension Economics Finance, 14(4), 525–553.

Sayinzoga, A., Bulte, E. H., Lensink, R. (2016). Financial literacy and financial behaviour: Experimental evidence from rural Rwanda. The economic journal, 126(594), 1571-1599.

Schmid, D., Morschett, D. (2020). Decades of research on foreign subsidiary divestment: What do we really know about its antecedents? International Business Review, 29(4), 101653.

Schneider, P. (2004). Why should the poor insure? Theories of decisionmaking in the context of health insurance. Health Policy and Planning, 19(6), 349–355.

Schwarcz, D. (2010). Insurance demand anomalies and regulation. Journal of Consumer Affairs, 44(3), 557–577.

SEBI (2015). https://www.sebi.gov.in/sebi$_data/attachdocs/1491452612271.pdf$

Sen, S., Madheswaran, S. (2013). Regional determinants of life insurance consumption: Evidence from selected Asian economies. AsianPacific Economic Literature, 27(2), 86–103.

Shai, O. (2022). Out of time? The effect of an infrequent traumatic event on individuals' time and risk preferences, beliefs, and insurance purchasing. Journal of Health Economics, 86, 102678.

Shamsuddin, S. N., Ismail, N., Roslan, N. F. (2022). What we know about research on life insurance lapse: A bibliometric analysis. Risks, 10(5), 97.

Sharku, G., Grabova, P., Vullnetari, D. (2021). Impact of economic factors on life and non-life insurance development in Albania–A VECM analysis. Universal Journal of Ac-

counting and Finance, 9, 1280.

Sharma, G. D., Thomas, A., Paul, J. (2021). Reviving tourism industry post-COVID-19: A resilience-based framework. Tourism Management Perspectives, 37, 100786.

Shi, X., Wang, H.-J., Xing, C. (2015). The role of life insurance in an emerging economy: Human capital protection, assets allocation and social interaction. Journal of Banking Finance, 50, 19–33.

Shirai, M. (2017). Effects of price reframing tactics on consumer perceptions. Journal of Retailing and Consumer Services, pp. 34, 82–87.

Sirak, Adjmal S. 2015. Income and Unemployment Effects on Life Insurance Lapse. Retrieved September 18, 2020

Sliwinski, A., Michalski, T., Roszkiewicz, M. (2013). Demand for life insurance—An empirical analysis in the case of Poland. The Geneva Papers on Risk and Insurance-Issues and Practice, 38(1), 62–87.

Song, I. J., Park, H., Park, N., Heo, W. (2019). The effect of experiencing a death on life insurance ownership. Journal of Behavioral and Experimental Finance, 22, 170–176.

SRS-based Abridged Life Table 2014-18. https://censusindia.gov.in/nada/index.php/ catalog/42517

Stango, V., Zinman, J. (2009). Exponential growth bias and household finance. The Journal of Finance, 64(6), 2807-2849.

Statista. (2019). Life insurance penetration. https://www.statista.com/ statistics/948633/ global-life-insurancepenetration-by-country/

Strauss AL, Corbin J. Basics of Qualitative Research: Grounded Theory Procedures and Techniques. Newberry Park, CA: Sage, 1990

Subashini, S. Velmurugan, R., 2015. Lapsation in Life Insurance Policies. International Journal of Advance Research in Computer Science and Management Studies, 3(4), pp.41-45.

Sun, Y., Li, X., Xie, Y. (2023). The Impact of a Public Health Emergency on the Demand for Life Insurance–An Empirical Analysis Based on Severe Acute Respiratory Syndrome. China World Economy, 31(3), 230-266.

Tan, H.-B., Wong, M.-F., Law, S.-H. (2009). The effect of consumer factors and firm efficiency on Malaysian life insurance expenditure. International Journal of Business and Society, 10(1), 59.

Tang, R. W., Buckley, P. J. (2020). Host country risk and foreign ownership strategy: Meta-analysis and theory on the moderating role of home country institutions. International Business Review, 29(4), 101666.

Thaler R. H., Johnson, E. J. (1990). Gambling with the house money and trying to break even: The effects of prior outcomes on risky choice. Management Science, 36(6), 643-660.

Thaler, R. (1980). Toward a positive theory of consumer choice. Journal of Economic Behavior Organization, 1(1), 39–60.

Thaler, R. (1985). Mental accounting and consumer choice. Marketing Science, 4(3), 199–214.

Torma, J., Barbić, D., Ivanov, M. (2023). Analyzing the Effects of Financial Education on Financial Literacy and Financial Behaviour: A Randomized Field Experiment in Croatia. South East European Journal of Economics and Business, 18(2), 63-86.

The life insurance market: Asymmetric information revisited. Journal of Public Economics, 93(9–10), 1090–1097.

Tranfield, D., Denyer, D., Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. British Journal of Management, 14(3), 207–222.

Tsang-Sing Chan and Geng Cui (2002). "Consumer Beliefs and Attitudes Toward Marketing: an Emerging Market Perspective", in AP - Asia Pacific Advances in Consumer Research Volume 5, eds. Ramizwick and Tu Ping, Valdosta, GA: Association for Consumer Research, Pages: 406-412.

Tversky, A., Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. Science, 185(4157), 1124–1131.

Tversky, A., Kahneman, D. (1981). The framing of decisions and the psychology of choice. science, 211(4481), 453-458.

Vallaster, C., Kraus, S., Lindahl, J. M. M., Nielsen, A. (2019). Ethics and entrepreneurship: A bibliometric study and literature review. Journal of Business Research, 99, 226–237.

Van Esch, P., Cui, Y. G., Sledge, A., Das, G., Pala, E. (2023). Preference for partner or servant brand roles depends on consumers' power distance belief. Journal of Business Research, 162, 113896.

Wang, N. (2019). The demand for life insurance in a heterogeneous-agent life cycle

economy with joint decisions. The Geneva Risk and Insurance Review, 44(2), 176–206.

Wangzhou, K., Khan, M., Hussain, S., Ishfaq, M., Farooqi, R. (2021). Effect of regret aversion and information cascade on investment decisions in the real estate sector: The mediating role of risk perception and the moderating effect of financial literacy. Frontiers in Psychology, p. 12, 736753.

Wong, E. S. (2015). Marital bargaining in the demand for life insurance: Evidence from the health and retirement study. Review of Economics of the Household, 13(2), 243–268.

World Population Review (2022). https://worldpopulationreview.com

World-Bank. (2018). GDP in current US$. https://data.worldbank.org/ indicator/ NY. GDP.MKTP.CD?locations=US

Yaari, M. E. (1965). Uncertain lifetime, life insurance, and the theory of the consumer. The Review of Economic Studies, 32(2), 137–150.

Yin, W., Dubinsky, A. J. (2004). Framing effects of coupon face value on coupon redemption: A literature review with propositions. Journal of Marketing Management, 20(7-8), 877-896.

Yin, Zhengqing, Bo Li, Shufei Li, Junqi Ding, and Lingxian Zhang. "Key influencing factors of green vegetable consumption in Beijing, China." Journal of Retailing and Consumer Services 66 (2022): 102907.

Yu, L., Cheng, J., Lin, T. (2019). Life insurance lapse behaviour: evidence from China. The Geneva Papers on Risk and Insurance-Issues and Practice, 44, 653-67.

Yuan, C., Jiang, Y. (2015). Factors affecting the demand for insurance in China. Applied Economics, 47(45), 4855–4867.

Zeithaml, V. A. (2011). Foundations for services marketing. In Services marketing. Tata McGraw-Hill Education.

Zeng, X., Wang, Y., Carson, J. M. (2015). Dynamic portfolio choice with stochastic wage and life insurance. North American Actuarial Journal, 19(4), 256–272.

Zerriaa, M., Noubbigh, H. (2016). Determinants of life insurance demand in the Mena region. The Geneva Papers on Risk and InsuranceIssues and Practice, 41(3), 491–511.

Zerriaa, M., Amiri, M. M., Noubbigh, H., Naoui, K. (2017). Determinants of life insurance demand in Tunisia. African Development Review, 29(1), 69–80.

Zheng, J. (2020). Optimal insurance design under narrow framing. Journal of Economic

Behavior Organization, pp. 180, 596–607.

Zhu, Y. (2007). One-period model of individual consumption, life insurance, and investment decisions. Journal of Risk and Insurance, 74(3), 613–636.

Zietz, E. N. (2003). An examination of the demand for life insurance. Risk Management and Insurance Review, 6(2), 159–191.

Appendix A

Design of Experiment

Table A.1: Eight choices by 2^3 factorial design

1	INR 50000 premium price paid for 5 years, when the policy term is 10 years
2	INR 50000 premium price paid for 5 years, when the policy term is 15 years
3	INR 50000 premium price paid for 7 years, when the policy term is 10 years
4	INR 50000 premium price paid for 7 years, when the policy term is 15 years
5	INR 75000 premium price paid for 5 years, when the policy term is 10 years
6	INR 75000 premium price paid for 5 years, when the policy term is 15 years
7	INR 75000 premium price paid for 7 years, when the policy term is 10 years
8	INR 75000 premium price paid for 7 years, when the policy term is 15 years

Table A.2: Final six choices presented to the participants in yearly premium & aggregate GMB condition

1	INR 50000 premium price paid for 5 years, when the policy term is 10 years, GMB is 72% of the total premium paid
2	INR 50000 premium price paid for 5 years, when the policy term is 15 years, GMB is 130% of the total premium paid
3	INR 50000 premium price paid for 7 years, when the policy term is 15 years, GMB is 120% of the total premium paid
4	INR 75000 premium price paid for 5 years, when the policy term is 10 years, GMB is 72% of the total premium paid
5	INR 75000 premium price paid for 5 years, when the policy term is 15 years, GMB is 130% of the total premium paid
6	INR 75000 premium price paid for 7 years, when the policy term is 15 years, GMB is 120% of the total premium paid

Table A.3: Final six choices presented to the participants in monthly premium & aggregate GMB condition

1	INR 4270 premium price paid for 5 years, when the policy term is 10 years, GMB is 72% of the total premium paid
2	INR 4270 premium price paid for 5 years, when the policy term is 15 years, GMB is 130% of the total premium paid
3	INR 4270 premium price paid for 7 years, when the policy term is 15 years, GMB is 120% of the total premium paid
4	INR 6410 premium price paid for 5 years, when the policy term is 10 years, GMB is 72% of the total premium paid
5	INR 6410 premium price paid for 5 years, when the policy term is 15 years, GMB is 130% of the total premium paid
6	INR 6410 premium price paid for 7 years, when the policy term is 15 years, GMB is 120% of the total premium paid

Table A.4: Final six choices presented to the participants in yearly premium & segregate GMB condition

1	INR 50000 premium price paid for 5 years, when the policy term is 10 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
2	INR 50000 premium price paid for 5 years, when the policy term is 15 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year.
3	INR 50000 premium price paid for 7 years, when the policy term is 15 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year.
4	INR 75000 premium price paid for 5 years, when the policy term is 10 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year .
5	INR 75000 premium price paid for 5 years, when the policy term is 15 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year.
6	INR 75000 premium price paid for 7 years, when the policy term is 15 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year.

Table A.5: Final six choices presented to the participants in monthly premium & segregate GMB condition

1	INR 4270 premium price paid for 5 years, when the policy term is 10 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year
2	INR 4270 premium price paid for 5 years, when the policy term is 15 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year.
3	INR 4270 premium price paid for 7 years, when the policy term is 15 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year.
4	INR 6410 premium price paid for 5 years, when the policy term is 10 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 9% of the total premium paid till that year .
5	INR 6410 premium price paid for 5 years, when the policy term is 15 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year.
6	INR 6410 premium price paid for 7 years, when the policy term is 15 years, Guaranteed Maturity Benefit = Sum of the yearly benefits calculated every year till policy term. The yearly benefit for a year is calculated as 10% of the total premium paid till that year.

Appendix B

Demographic information of the respondents

In this section following demographic information of respondents is collected.

1. Do you own a life insurance policy?

   - Yes

   - No

2. Gender

   - Female

   - Male

3. Age

   - 25-29

   - 30-34

   - 35-39

   - 40-45

4. Education

- Graduate

- Post Graduate

- Doctorate

5. Marital Status

- Single

- Married

6. Income

- lakh- 10 lakh

- 10 lakh-15 lakh

- 15 lakh-20 lakh

- 20 lakh-25 lakh

- 25 lakh-30 lakh

- > 30 lakh

The respondents are included in the experiment based on the following demographic criterion.

- Participants should be life insurance policyholder and thus is familiar with the life insurance policy.

- The ratio of the number of male and female participants in the experiment is approximately 60:40, which is decided based on the IRDAI report on the actual participation of women in life insurance in India (IRDAI Annual Report, 2020-21).

- The age of the participants should be 25 to 45 years based on mortality risk.

- To ratio of low-income and high-income participants should be balanced

Appendix C

Risk perception of COVID-19

In this section, participants were requested to rate their level of worry/agreement/likeliness with the given statements on a five-point Likert scale.

1. How worried are you personally about the coronavirus/COVID-19 situation at present?

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

2. How likely do you think it is that you will be directly and personally affected by the coronavirus/COVID-19 in the next six months?

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

3. How likely do you think it is that your friends and family in the country you are currently living in will be directly affected by the coronavirus/COVID-19 in the next six months?

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

4. How much do you agree or disagree with the following statement? The coronavirus/COVID-19 will not affect very many people in the country I am currently living in.

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

5. How much do you agree or disagree with the following statement? I will probably get sick with the coronavirus/COVID-19.

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

6. How much do you agree or disagree with the following statement? Getting sick with the coronavirus/COVID-19 can be serious?

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

Appendix D

Experiments to test attribute framing effect on consumers' purchase intention

In this section, the participants of the experiment were requested to read the following instructions and rate the six different policy options on a five-point scale based on their intention to purchase them. Participants were randomly assigned to the four conditions of the 2 X 2 between-subject framing effect. Appendix D1, D2, D3 and D4 contain the details of the information provided to the participants and the six endowment policy choice set given to the participants under each of the four conditions respectively.

Consider a hypothetical situation where you are planning to purchase an endowment life insurance policy. An endowment life insurance policy offers a combination of life cover and saving component i.e., in case of any causality during the policy term, your family would receive a lump sum of sum assured, otherwise you will receive a maturity benefit at the end of the policy term. You have to give a yearly premium for a certain number of years (premium payment term) which is usually less than the policy term.

Appendix D1

Below is the policy description and endowment policy choice set randomly assigned to participants to test condition 1 (yearly premium price aggregated GMB) of 2 X 2

between-subject framing effect

How much will my family receive in case of my absence?

The policy provides a sum assured equal to ten times the yearly premium paid.

How much will I receive on the maturity of the policy?

You will receive a guaranteed maturity benefit on the maturity of the policy. It is calculated by multiplying the guaranteed rate with the total premium paid till the maturity date.

The guaranteed rate depends on the policy term and premium payment term such that:

Policy Term(PT)	Premium Payment Term(PPT)	Guaranteed rate
10 years	5 years	72%
15 years	5 years	130%
15 years	7 years	120%

Please rate the six policies with different combinations of attributes on a five point Likert scale based on your intention to purchase the policy

1. Sum assured=500000 Rs., Premium=50000 Rs., Premium payment term=5 years, Policy term=10 years, Guaranteed rate=72%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

2. Sum assured=500000 Rs., Premium=50000 Rs., Premium payment term=5 years, Policy term=15 years, Guaranteed rate=130%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

3. Sum assured=500000 Rs., Premium=50000 Rs., Premium payment term=7 years, Policy term=15 years, Guaranteed rate=120%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

4. Sum assured=750000 Rs., Premium=75000 Rs., Premium payment term=5 years, Policy term=10 years, Guaranteed rate=72%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

5. Sum assured=750000 Rs., Premium=75000 Rs., Premium payment term=5 years, Policy term=15 years, Guaranteed rate=130%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

6. Sum assured=750000 Rs., Premium=75000 Rs., Premium payment term=7 years, Policy term=15 years, Guaranteed rate=120%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

Appendix D2

Below is the policy description and endowment policy choice set randomly assigned to participants to test condition 2 (monthly premium price aggregated GMB) of 2 X 2 between-subject framing effect

How much will my family receive in case of my absence?

The policy provides a sum assured equal to ten times of the yearly premium paid.

How much will I receive on the maturity of the policy?

You will receive a guaranteed maturity benefit on the maturity of the policy. It is calculated by multiplying guaranteed rate with total premium paid till the maturity date.

The guaranteed rate depends on the policy term and premium payment term such that

Policy Term(PT)	Premium Payment Term(PPT)	Guaranteed rate
10 years	5 years	72%
15 years	5 years	130%
15 years	7 years	120%

Please rate the six policies below with different combinations of attributes on a five-point Likert scale based on your intention to purchase the policy

1. Sum assured=500000 Rs., Premium=4270 Rs./month, Premium payment term=5 years, Policy term=10 years, Guaranteed rate=72%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

2. Sum assured=500000 Rs., Premium=4270 Rs./month, Premium payment term=5 years, Policy term=15 years, Guaranteed rate=130 %

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

3. Sum assured=500000 Rs., Premium=4270 Rs./month, Premium payment term=7 years, Policy term=15 years, Guaranteed rate=120 %

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

4. Sum assured=750000 Rs., Premium=6410 Rs./month, Premium payment term=5 years, Policy term=10 years, Guaranteed rate=72 %

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

5. Sum assured=750000 Rs., Premium=6410 Rs./month, Premium payment term=5 years, Policy term=15 years, Guaranteed rate=130 %

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

6. Sum assured=750000 Rs., Premium=6410 Rs./month, Premium payment term=7 years, Policy term=15 years, Guaranteed rate=120 %

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

Appendix D3

Below is the policy description and endowment policy choice set randomly assigned to participants to test condition 3 (yearly premium price & segregated GMB) of 2 X 2 between-subject framing effect.

Policy Description

Consider that you are planning to purchase a life insurance policy. You decided to go for buying an endowment life insurance policy. An endowment life insurance policy offers a combination of life cover and saving component i.e., in case of any causality during the policy term, your family would receive a lump sum of sum assured, otherwise you will receive a maturity benefit at the end of the policy term. You have to give a yearly premium for a certain number of years (premium payment term) which is usually less than the policy term.

How much will my family receive in case of my absence?

The policy provides a sum assured equal to ten times of the yearly premium paid.

How much will I receive on the maturity of the policy?

You will receive a guaranteed maturity benefit on the maturity of the policy. It is calculated as follows:

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1. A yearly benefit is calculated for every year till the policy term by multiplying the guaranteed rate with the sum of all premiums paid till the year.

2. Guaranteed maturity benefit is calculated by adding all the yearly benefits calculated in step 1. Please refer Table A1 for illustration.

The guaranteed rate depends on the policy term such that

Policy Term(PT)	Guaranteed rate
10 years	9 %
15 years	10%

For instance, a policy with an annual premium of Rs. 30000 paid for 5 policy premium term and for a policy term of 10 years, the guaranteed benefit will be calculated as follows:

Table D.1: Illustration of Segregated Guaranteed Maturity Benefit Calculation

Policy Year	Premium paid for the year (in INR)	Total premium paid till date (in INR)	Yearly Benefit= Guaranteed rate*sum of all premium paid (in INR)
1.	30,000	30,000	0.09*30,000=2700
2.	30,000	60,000	0.09*60,000=5400
3.	30,000	90,000	0.09*90,000=8100
4.	30,000	1,20,000	0.09*1,20,000=10,800
5.	30,000	1,50,000	0.09*1,50,000=13,500
6.	0	1,50,000	0.09*1,50,000=13,500
7.	0	1,50,000	0.09*1,50,000=13,500
8.	0	1,50,000	0.09*1,50,000=13,500
9.	0	1,50,000	0.09*1,50,000=13,500
10.	0	1,50,000	0.09*1,50,000=13,500

Please rate the six policies below with different combinations of attributes on a five-point Likert scale based on your intention to purchase the policy

1. Sum assured=500000 Rs., Premium=50000 Rs., Premium payment term=5 years, Policy term=10 years, Guaranteed rate= 9%

	1	2	3	4	5	
not at all worried	○	○	○	○	○	very worried

2. Sum assured=500000 Rs., Premium=50000 Rs., Premium payment term=5 years, Policy term=15 years, Guaranteed rate= 10%

	1	2	3	4	5	
not at all worried	○	○	○	○	○	very worried

3. Sum assured=500000 Rs., Premium=50000 Rs., Premium payment term=7 years, Policy term=15 years, Guaranteed rate=10%

	1	2	3	4	5	
not at all worried	○	○	○	○	○	very worried

4. Sum assured=750000 Rs., Premium=75000 Rs., Premium payment term=5 years, Policy term=10 years, Guaranteed rate= 9%

	1	2	3	4	5	
not at all worried	○	○	○	○	○	very worried

5. 5. Sum assured=750000 Rs., Premium=75000 Rs., Premium payment term=5 years, Policy term=15 years, Guaranteed rate=10%

	1	2	3	4	5	
not at all worried	○	○	○	○	○	very worried

6. Sum assured=750000 Rs., Premium=75000 Rs., Premium payment term=7 years, Policy term=15 years, Guaranteed rate=10%

	1	2	3	4	5	
not at all worried	○	○	○	○	○	very worried

Appendix D4

Below is the policy description and endowment policy choice set randomly assigned to participants to test condition 4 (monthly premium price segregated GMB) of 2 X 2 between-subject framing effect

Policy Description

Consider that you are planning to purchase a life insurance policy. You decided to go for buying an endowment life insurance policy. An endowment life insurance policy offers a combination of life cover and saving component i.e., in case of any causality during the policy term, your family would receive a lump sum of sum assured, otherwise you will receive a maturity benefit at the end of the policy term. You have to give a yearly premium for a certain number of years (premium payment term) which is usually less than the policy term.

How much will my family receive in case of my absence?

The policy provides a sum assured equal to ten times of the yearly premium paid.

How much will I receive on the maturity of the policy?

You will receive a guaranteed maturity benefit on the maturity of the policy. It is calculated as follows:

1. A yearly benefit is calculated for every year till the policy term by multiplying guaranteed rate with the sum of all premium paid till the year.

2. 2. Guaranteed maturity benefit is calculated by adding all the yearly benefits calculated in step 1. Please refer Table D1 for illustration.

The guaranteed rate depends on the policy term such that

Policy Term(PT)	Guaranteed rate
10 years	9 %
15 years	10%

For instance, a policy with an annual premium of Rs. 30000 paid for 5 policy premium

term and for a policy term of 10 years, the guaranteed benefit will be calculated as fol-
lows:

Table D.2: Illustration of Segregated Guaranteed Maturity Benefit Calculation

Policy Year	Premium paid for the year (in INR)	Total premium paid till date (in INR)	Yearly Benefit= Guaranteed rate*sum of all premium paid (in INR)
1.	30,000	30,000	0.09*30,000=2700
2.	30,000	60,000	0.09*60,000=5400
3.	30,000	90,000	0.09*90,000=8100
4.	30,000	1,20,000	0.09*1,20,000=10,800
5.	30,000	1,50,000	0.09*1,50,000=13,500
6.	0	1,50,000	0.09*1,50,000=13,500
7.	0	1,50,000	0.09*1,50,000=13,500
8.	0	1,50,000	0.09*1,50,000=13,500
9.	0	1,50,000	0.09*1,50,000=13,500
10.	0	1,50,000	0.09*1,50,000=13,500

Please rate the six policies below with different combinations of attributes on a five-point Likert scale based on your intention to purchase the policy

1. Sum assured=500000 Rs., Premium=4270 Rs./month, Premium payment term=5 years, Policy term=10 years, Guaranteed rate=9%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

2. Sum assured=500000 Rs., Premium=4270 Rs./month, Premium payment term=5 years, Policy term=15 years, Guaranteed rate=10 %

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

3. Sum assured=500000 Rs., Premium=4270 Rs./month, Premium payment term=7 years, Policy term=15 years, Guaranteed rate=10%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

4. Sum assured=750000 Rs., Premium=75000 Rs., Premium payment term=5 years, Policy term=10 years, Guaranteed rate= 9%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

5. Sum assured=750000 Rs., Premium=6410 Rs./month, Premium payment term=5 years, Policy term=15 years, Guaranteed rate=10%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

6. Sum assured=750000 Rs., Premium=6410 Rs./month, Premium payment term=7 years, Policy term=15 years, Guaranteed rate=10%

	1	2	3	4	5	
not at all worried	◯	◯	◯	◯	◯	very worried

Appendix E

Experiments to test attribute framing effect on consumers' purchase intention

The tables below show the future value of money when a recurring deposit (RD) of INR 4270 or INR 6410 (INR 50000 or INR 75000) is made in the bank monthly (or yearly) for different periods. In the table, the "Payment" column contains the amount of the money deposited on per month (or per year) basis, "Number of years of RD" column has the duration of recurring deposit in the bank, which is equivalent to the premium payment term (PPT) in the endowment policy and finally, "RD maturity value (=FV)" column contains the maturity amount at the end of the term of the RD. The RD maturity value is further deposited in the fixed account for a period equal to the number of years (= PT – PPT) mentioned in the "Number of years of FD" column and a "FD maturity amount (=FMV)" is received. In particular, the "RD maturity value" (=FV) is the final amount deposited in the bank during the premium payment term, and the "FD maturity value" (=FMV) is the final amount received at the end of the policy term.

Table E.1: TVM intervention administered to participants when the premium price is framed in monthly terms

Payment per month (in INR)	Number of years of RD(=PPT)	RD Maturity value (=FV) (in million)	Number of years of FD (= PT-PPT)	FD maturity value (= FMV) (in million)
4270	5	0.295	5	0.388
6410	5	0.444	5	0.583
4270	5	0.295	10	0.510
6410	5	0.444	10	0.766
4270	7	0.428	8	0.663
6410	7	0.643	8	0.995

Table E.2: TVM intervention administered to participants when the premium price is framed in monthly terms

Payment per month (in INR)	Number of years of RD(=PPT)	RD Maturity value (=FV) (in million)	Number of years of FD (= PT-PPT)	FD maturity value (= FMV) (in million)
50000	5	0.295	5	0.388
75000	5	0.443	5	0.582
50000	5	0.295	10	0.510
75000	5	0.443	10	0.765
50000	7	0.438	8	0.678
75000	7	0.657	8	1.017

List of research publications

Journal Publications

1. Bhatia, R., Bhat, A. K., & Tikoria, J. (2021). Life insurance purchase behaviour: A systematic review and directions for future research. International Journal of Consumer Studies, Wiley 45(6), 1149-1175. **[ABDC 'A', Scopus, SJR Quartile Q1]**

2. Bhatia Ritika, Anil K Bhat & Jyoti Tikoria (2023) "Moderating Effect of Financial Literacy Intervention on Attribute-Framing Effect in Life Insurance Context" Risk Management and Insurance Review", Wiley **[Under Review]**

3. Bhatia Ritika, Anil K Bhat & Jyoti Tikoria (2023) "Role of Policyholders' Beliefs in Life Insurance Lapses: A Model Building Approach", Qualitative research in Financial Markets, Emerald **[Revised Version Submitted]**

4. Bhatia Ritika, Anil K Bhat Jyoti Tikoria "Effect of Premium Price Framing on Consumers' Life Insurance Purchase Behavior", SCMS Journal of Indian Management **[Under Review]**

Paper Presentations in Conferences

1. Bhatia Ritika, Anil K Bhat & Jyoti Tikoria (2023) *"Effect of Financial Literacy Intervention on Attribute-Framing Effect in the Context of Life Insurance Product""*, **Behavioral Science in Management (BSIM) 2023**, Indian Institute of Management Ahmadabad, April 04 – 05, 2023

2. Bhatia Ritika, Anil K Bhat Jyoti Tikoria (2023) *"Policyholders' Beliefs Responsible for Life Insurance Lapse Behavior: A Qualitative Study "*, **Behavioral Science**

in Management (BSIM) 2023, Indian Institute of Management Ahmadabad, April 04 – 05, 2023

3. Bhatia Ritika, Anil K Bhat Jyoti Tikoria (2024), Understanding Policyholders' Life Insurance Lapse Behavior: A Model Building Approach, ACR ANNUAL CON-FERENCE PARIS, FRANCE **[Submitted]**

4. Bhatia Ritika, Anil K Bhat Jyoti Tikoria (2024), Financial Literacy Intervention as a Moderator of Attribute-Framing Effect in Life Insurance Context, ACR AN-NUAL CONFERENCE PARIS, FRANCE **[Submitted]**

Biography of the Candidate

Ms. Ritika Bhatia received her B.E degree in Electronics and Telecommunication Engineering and MBA with Marketing and Finance specialization from Sri Shankaracharya College of Engineering and Technology, Chattisgarh, India in 2004 and 2007 respectively. She worked as a research associate in the Department of management BITS Pilani, Pilani campus from 2017 for one year. In 2018, she joined as a full-time Ph.D. scholar in the Department of Management at Birla Institute of Technology and Science (BITS) Pilani, India under the supervision of Prof. Anil K. Bhat and Prof. Jyoti Tikoria. Her research interests include understanding consumer behavior from a behavioral economics perspective. She has also served as a teaching assistant for courses like Marketing Research, Marketing, Strategic Management, and Principles of management at BITS Pilani, Pilani Campus.

Biography of the Supervisor

Prof. Anil K. Bhat graduated in Mechanical Engineering in 1982 from REC, (now NIT) Srinagar and obtained his doctorate (fellowship) from IIM-Bangalore. His specialization is Marketing Research and his methodological contribution has been in the area of "Cluster analysis of rank order data". He is a member of the Academy of Management(AOM), American Marketing Association (AMA), Academy of International Business(AIB), British Academy of Management(BAM) and a Fellow of the Institution of Engineers (India). He has been trained at international workshops conducted by Haas School of Business, University of California, Berkeley, and STVP, Stanford has completed "10,000 Women Program: Tools for Growing your Business" organised by Goldman Sachs in partnership with London Business School. Prof. Bhat has worked in a managerial capacity for organizations before turning to academics and has headed the Department of Management at BITS Pilani for almost a decade. He has more than a hundred publications to his credit and has conceptualized, designed and conducted many MDPs both for private as well as for public sector companies. He has served as a management expert on the Union Public Service Commission expert panel. He has been certified as an Entrepreneur Educator by STVP Stanford, NEN, and IIMB. Besides guiding many Ph.D's, he has co-authored a book on management published by Oxford University Press. He is presently a Professor, at the Department of Management BITS Pilani, a Member Department Research Committee, and a Faculty Advisor at, the Center for Entrepreneurial Leadership (CEL) at BITS-Pilani. He believes that Business is a force for Good and his Management Philosophy is anchored around the Goal of Maximizing the Impact of Individual Actions for the Good of Society.

Biography of Co-Supervisor

Prof. Jyoti Tikoria is a highly accomplished Associate Professor in the Department of Management at BITS Pilani - Pilani Campus. With a primary focus on Strategy and entrepreneurship, Technology Management, RD Management, Intellectual Property Rights Management, and General Management, Dr. Jyoti is a leading expert in her field. Her extensive research interests include Strategy and entrepreneurship, Technology Management, RD Management, and Marketing. Some of her most notable research projects include the Development of a Framework for Knowledge Sharing Behavior: A Case of Indian Public Funded RD Organizations, and the Service Quality Index for In-house Medical Facilities: Case of Private and Public Higher Educational Institutions in India. Prof. Jyoti has already supervised 4 Ph.D theses and currently has 3 more underway. She has also taken on several administrative responsibilities in the past, including serving as Nodal Officer and Project Lead for the Gender Advancement for Transforming Institutions (GATI) Project at BITS Pilani, sponsored by WISE-KIRAN Division, Department of Science and Technology, GoI, from 1st August 2021 to 31st January 2023. In addition to her academic work, Dr. Jyoti has also served as the Head of the Department of Management twice, from 1st September 2020 to 9th October 2020 and from 1st September 2018 to 31st August 2020. She has also served as the Convener of the MHRD-Institute Innovation Council (IIC) from October 2018 to April 2019 and as a member of the Appraisal Committee for Non-Teaching Staff in 2022.