

Consumer Behaviour Towards Reverse Mortgage Loan: A Study of Homeowners

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By

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DECLARATION

I, Bhosle Yogeshwar Rohidas, hereby declare that this thesis represents work which has been carried out by me and that it has not been submitted, either in part or full, to any other University or Institution for the award of any research degree.

Place: Goa University Taleigao Goa.

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CERTIFICATE

I hereby certify that the work was carried out under my supervision and may be placed for evaluation.

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Mr. Bhosle Yogeshwar Rohidas

Abstract

India's rapidly ageing population and limited pension coverage have intensified the financial vulnerability of senior citizens, many of whom possess substantial but illiquid housing wealth. Reverse Mortgage Loans (RMLs) offer a viable mechanism for converting home equity into post-retirement income; however, their adoption in India remains minimal. This study investigates the behavioural intention of homeowners aged 50–70 years in Goa toward adopting RMLs using an Extended Theory of Planned Behaviour framework. The model integrates eight antecedent constructs Social Influence, Perceived Ability, Perceived Bequest Motive, Sense of Place Attachment, Family Ties, Perceived Trust, and Perceived Financial Planning with Attitude as a mediator, and Age and Property Value as moderators. A structured questionnaire was administered to 700 eligible homeowners selected through purposive and snowball sampling methods. Data were analysed using Smart-PLS 4 to perform Confirmatory Factor Analysis, measurement validation, Structural Equation Modelling, mediation, moderation, and Multi-Group Analysis.

The findings reveal that Perceived Financial Planning, Perceived Ability, and Perceived Bequest Motive significantly influence behavioural intention, while Attitude plays a pivotal mediating role between antecedents and intention. Social Influence, Perceived Trust, and Sense of Place Attachment exhibited full mediation through Attitude, whereas Family Ties, Bequest Motive, and Financial Planning, showed partial mediation. Moderation analysis confirmed that both Age and Property Value significantly strengthen the Attitude–Intention relationship, indicating that older homeowners and those with higher-valued properties are more likely to adopt RMLs. In contrast, gender-based multi-group analysis showed no significant structural differences, suggesting model stability across male and female respondents. Importance–Performance Map Analysis identified Perceived Financial Planning as the most critical yet underperforming factor, highlighting its practical relevance for policy and financial institutions.

Theoretically, the study extends the TPB by incorporating socio-emotional and financial constructs relevant to the Indian context, thereby enhancing its explanatory power in predicting asset-based financial behaviour among the elderly. Practically, the results underscore the need for targeted awareness campaigns, trust-building measures, and customised RML designs that align with seniors' financial preparedness, emotional values, and family expectations. This research contributes to behavioural finance and financial gerontology by providing a comprehensive, culturally grounded understanding of the factors shaping RML adoption.

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CHAPTER 1

INTRODUCTION

This section lays the foundation for understanding house property owners' decision regarding selection of senior mortgage scheme as observed uniformly across the state of Goa. It opens by describing India's ageing demographic shape and the growing economic weaknesses of older adults. The conversation then moves to express the research problem and emphasize on analysing the behaviour of respondents regarding selection of the scheme through an Expanded Theory of Planned Behaviour (ETPB) approach. It also provides a summary of the objectives, research questions, hypotheses, and overall scope and finally ends with plan of the study.

1.1 Background of the Study

India is experiencing an extensive demographic shift, with the inhabitants of those aged sixty years and above progressively increasing. According to Census information, there were 10.38 crore elder residents in the country, a figure projected to rise to 17.32 crore by 2026 (NCP, 2020). In contrast with nations having well studied and popular free security arrangements, India's weak pension schemes leave many older people facing money problems after retirement.

Traditionally, the shared household structure takes care of their elders and supports them during their second innings of the life. However, urbanization, migration, and evolving societal norms have weakened this system, forcing many elders to depend primarily on their personal savings or assets for living and maintenance (Amulya Charan, 2025).

A large proportion of India's ageing population possesses residential property, whether self-acquired or inherited, which often remains underutilized. These dwellings represent a significant yet inactive form of household wealth that can be strategically leveraged to enhance financial security. One financial innovation that enables such asset utilization is the government released scheme, allowing senior property owners to convert part of their home equity into a regular income while retaining ownership and occupancy. The scheme has been very popular and extensively used nationwide and intercontinental contexts for its potential to encourage financial freedom among older adults (Paul & Chakrapani, 2007; Desai, 2010; Sacks & Sacks, 2012; Pahuja & Sanjeev, 2016; Fornero et al., 2016; Dillingh et al., 2017; Jefferson et al., 2017; Lakhan Gaonkar, 2019; Sehgal et al., 2020; Martinez-Lacoba, 2020; Choudhary, 2025). Collectively, these studies underscore the growing relevance of financial product as a sustainable mechanism for converting housing assets into financial resilience for the ageing population.

However, the implementation of senior mortgage loan (RMLs) in India remains limited. Several behavioral, emotional, social, and cultural factors contribute to this low acceptance. Emotional attachment to property, the intention to provide for future generations, financial institution distrust, and inadequate financial arrangement are vital deterrents to acceptance of the scheme, (Rajagopalan, 2006; Gaonkar, 2019; Choudhary & Santram, 2025; Pahuja & Sanjeev, 2016; Sehgal et al., 2020). These issues can be effectively understood only through a multidisciplinary lens which includes psychology, gerontology, behavioural discipline, and finance.

To scrutinize these determinants scientifically, this study approves an enhanced Philosophy of the extended Intention-Driven Behaviour (ETPB) framework. In the present framework, Perceived ability to perform the behaviour, perceived social influence derived from the original Planned Behaviour Model, have been reframed as Perceived

Ability and Social Influence, and Attitude considered as a connection between self-determining antecedents and the dependent variable, Behavioral Intention. Along with core TPB constructs, context-specific factors such as Financial Planning, Sense of Place Attachment, Family Ties, Bequest Motive, and Perceived Trust are included to capture financial, emotional, and socio-cultural dimensions. Additionally, demographic moderators, including Gender, Age, and Property Value, are considered to investigate differences in intention formation among sub-groups.

The Maintenance and Welfare of Parents and Senior Citizens Act, 2007 emphasizes family responsibility toward elder care and property protection (Department of Social Welfare, Government of Goa, 2007). These demographic, social, and legal aspects together make Goa suitable for studying property-owners' views and intentions to use Reverse Mortgage Loans.

Despite the potential of Reverse Mortgage Loans (RMLs) as a financial security tool, limited behavioural research in the Indian context has explored the psychological and socio-cultural mechanisms behind homeowners' adoption intentions. Previous studies have primarily examined financial feasibility and awareness levels, with little attention to attitude formation and trust perceptions. Hence, this study bridges that gap by adopting an Extended Theory of Planned Behaviour (ETPB) framework to integrate psychological, financial, and socio-emotional antecedents shaping homeowners' behavioural intentions toward RML adoption.

1.2 Significance and Rationale of the Present Research

This study is noteworthy from both theoretical and applied viewpoints. From a theoretical angle, it advances the TPB by expanding its conventional model to incorporate factors that are particularly meaningful for Indian property holder aged between fifty to seventy years. Antecedents such as family bonds, emotional attachment to home, inheritance motives, financial preparedness, and confidence have infrequently been integrated into behavioural finance studies addressing financial choices of the elderly. The inclusion of these aspects enhances the explanatory strength of the TPB in understanding and predicting the intentions of elders to utilise scheme as a source of ensuring financial support and generating income from their housing assets.

This investigation provides a meaningful understanding for the Banking, Financial Services, and Insurance Sector and all the stakeholders to design schemes for individuals in their later life stage. By understanding the emotional, familial, economical, and financial factors influencing respondents belonging to the 50-to-70-year age cluster, institutions can develop awareness programs, build trust, and tailor products to seniors' needs. The findings also help to reduce misconceptions and social hesitation toward such financial products. It further contributes to financial gerontology by exploring the link between ageing, homeownership, and financial choices. It highlights the need to include cultural values and family dynamics in financial planning for India's ageing population.

RMLs can complement schemes such as the National Policy for Senior Citizens and Atal Pension Yojana by promoting asset-based income in old age. Academically, the study enriches behavioural finance literature by contextualising the Extended Theory of Planned Behaviour within the Indian housing finance context. Overall, it provides actionable inputs for strengthening senior citizens' financial security and inclusion.

1.3 Scope of the Study

This study focuses on individuals aged 50 to 70 years as potential participants in the scheme, examining their behavioural inclination toward adopting this financial arrangement. It views the scheme not just as a fiscal tool but as a means of generating secured income in the old age, exclusively for individuals with limited savings or valuable but illiquid property, drawing upon an expanded behavioural intention framework, the study investigates how social, emotional, and financial factors stimulates homeowners' inclination to convert their housing asset into guaranteed and respectful source of revenue.

Goa provides a favourable environment for this investigation, characterized by widespread property ownership, an ageing population, and strong familial bonds with inherited homes. Goa's socio-economic profile marked by high literacy, strong homeownership rates, and deep-rooted familial attachment to ancestral property offers a unique context to understand how emotional and cultural factors intersect with financial decisions. Studying this region allows exploration of behavioural dimensions that may differ significantly from urban or industrialized Indian states. (Goa Economic Survey 2023; Census 2011).

With about 78.90% of Goan households being owner-occupied (Census of India, 2011) and a growing elderly dependency ratio (Goa Health Dossier, 2021), property ownership reflects both financial and emotional value (Pandit, 2019; *Housing Scenario in Goa*, 2019). The study further analyses how factors such as gender, property value, and age differences affect Reverse Mortgage Loan (RML) adoption, offering insights for banks and policymakers to design schemes that enhance financial independence and dignity among senior homeowners. While the focus is on Goa, the insights are expected to be applicable to other Indian states with similar socio-economic patterns, thus enhancing the generalizability of the findings.

1.4. Statement of the Problem

Reverse Mortgage products have been operational in India for almost twenty years; however, their utilisation by qualified and eligible house owners remains limited. The challenge lies less in the product design and more in the behavioural, social, and cultural orientations that shape financial choices. Consumers' financial choices are frequently shaped by their personal viewpoint, social expectations, and perceived capability to act, these factors widely recognised in behavioural research on intention and decision-making (Ajzen, 1991; Armitage & Conner, 2001). When examining Reverse Mortgage Loans (RMLs), these dimensions represent how beliefs about financial stability, social approval, and control over financial actions influence homeowners' willingness to adopt the scheme.

Yet, these traditional behavioural aspects alone cannot fully capture the emotional and cultural context of Indian homeowners. Reasons such as emotional attachment to property, the wish to leave a inheritance, and trust in financial institutions knowingly affect decision-making (Ho, 2024; Kim & Hunter, 1993). Moreover, age, property value, and gender contribute to variations in financial confidence and openness toward such financial scheme (Amireault, 2008; Venkatesh & Morris, 2000). Cultural values encouraging property inheritance further limit the monetisation of home equity (Tom, 2022). Hence, this study extends the behavioural framework by integrating Perceived Bequest Motive, Sense of Place Attachment, Family Ties, Perceived Trust, and perceived Financial Planning to provide an inclusive understanding of RML usage among homeowners.

1.5 Research Questions

The research questions were formulated to align closely with the study's objectives and the Extended Theory of Planned Behaviour (ETPB) framework. They aim to explore how social, emotional, and financial antecedents, along with demographic and property-related moderators, shape homeowners' Behavioural Intention and Attitude toward adopting the scheme (RMLs). The following questions guided the investigation:

1. Which antecedents influence or stimulate homeowners' desire to use Reverse Mortgage Loans Scheme?
2. To what extent do behavioural dispositions and socially driven considerations determine homeowners' intention to use RMLs?
3. How are extended antecedents associated with homeowners' Behavioural Intention and Attitude towards availing RMLs?
4. How does Attitude mediate the connection between antecedent constructs and homeowners' intention to avail Reverse Mortgage schemes?
5. Does the strength of the relationship between attitude and behavioural intention toward reverse mortgage adoption vary across different age groups and levels of property value?
6. Does gender moderate the relationships between antecedent constructs and the outcome variables of attitude formation and intention development in relation to reverse mortgage adoption?

1.6 Focus and Objectives of the Present Study

The objectives of this study were formulated based on the proposed TPB extension to systematically address the research questions outlined in Section 1.5. They aim to scrutinize how financial, social, and emotional antecedents influence homeowners' Behavioural Intention and Attitude toward senior citizens scheme (RML) adoption, while also assessing the moderating and mediating mechanisms that outline these relationships. The objectives are grouped based on the nature of relationships tested in the structural model, including direct, mediating, moderating, and multi-group effects, to ensure comprehensive analysis and theoretical clarity.

1.6.1 Direct Effects: Independent Variables (IDVs) → Behavioural Intention (BI)

1. To analyse how Attitude shapes homeowners' intention to engage with Reverse Mortgage Loans (RMLs).
2. To explore how Social Influence affects property owners' willingness to consider RML.
3. To evaluate the role of Perceived Ability in determining homeowners' behavioural intention toward selecting of RMLs.
4. To investigate the relationship between Perceived Bequest Motive and homeowners' possibility of using RMLs.
5. To assess the extent to which Sense of Place Attachment impacts behavioural intention toward availing of RMLs.
6. To examine the contribution of Family Ties in shaping homeowners' behavioural responses to RMLs.
7. To determine whether Perceived Trust influences the intention to accept RMLs.
8. To examine how Perceived Financial Planning drives behavioural intention to participate in RML schemes.

1.6.2 Direct Effects: Independent Variables (excluding Attitude) → Attitude

9. To study how Social Influence shapes the formation of an Attitude toward RML adoption.
10. To study the influence of perceived ability on attitude toward availing reverse mortgage schemes.
11. To understand how Perceived Bequest Motive influences homeowners' Attitude in using RMLs.
12. To determine the connection between Sense of Place Attachment and Attitude regarding RML adoption.
13. To evaluate how Family Ties affect homeowners' Attitude in monetising their residential property through RMLs.
14. To analyse how Perceived Trust shapes homeowners' Attitude toward use of Reverse Mortgage Loan (RML).
15. To examine the role of perceived financial planning considerations in shaping homeowners' attitudinal orientation toward reverse mortgage decisions.

1.6.3 Mediation Effects: IDVs → Attitude → Behavioural Intention

16. To assess whether Attitude act as a mediating factor amongst Social Influence and Behavioural Intention to select RMLs.
17. To examine the mediating role of attitude in the relationship between perceived ability and homeowners' intention to accept RMLs.
18. To study the mediating influence of attitude on the relationship between perceived bequest motive and intention to avail RMLs.
19. To explore whether Attitude intervenes the relationship between Sense of Place Attachment and Behavioural Intention toward using RML scheme
20. To examine whether Attitude serves as an intermediary between Family Ties and Behavioural Intention to approve RMLs.
21. To evaluate whether Attitude explains the indirect effect of Perceived Trust on intention to engage in RMLs.
22. To study the mediating influence of attitude on the relationship between perceived financial planning and intention to adopt RMLs.

1.6.4 Moderation Effects

- 23. To examine whether the association between attitudinal formation and intention development varies across different age groups in the RML context.
- 24. To determine whether Property Value moderates the association between Attitude and Behavioural Intention to adopt RMLs.

1.6.5 Gender-Based Multi-Group Analysis (MGA)

1.6.5.1 Gender Based Moderation on Attitude

- 25. To evaluate whether the overall structural relationships between the independent variables and Attitude toward Reverse Mortgage Loan (RML) adoption differ significantly between male and female homeowners.

Sub-Objectives: Path-Level Gender Comparisons for Attitude

- 25 a. To determine whether the effect of Social Influence on Attitude toward RML adoption varies among gender-based subgroups of homeowners.
- 25b. To explore how gender moderates the linkage between Perceived Ability and Attitude regarding Reverse Mortgage Loan (RML) adoption.
- 25c. To analyse whether Perceived Bequest Motive affects Attitude toward RML adoption differently for males and females.
- 25d. To assess whether the impact of Sense of Place Attachment on Attitude differs across gender groups.
- 25e. To investigate how gender differences influence the linkage between Family Ties and Attitude toward adopting Reverse Mortgage Loans (RMLs).
- 25f. To evaluate whether the association between Perceived Trust and Attitude toward RMLs differs by gender of homeowners.
- 25g. To compare how Perceived Financial Planning Influences Attitude toward RML adoption among male and female homeowners.

1.6.5.2 Gender Based Moderation on Behavioural Intention

- 26. To examine variations across gender in the structural relationships between antecedent constructs and intention related to RML decisions.

Sub-Objectives: Path-Level Gender Comparisons for Behavioural Intention

- 26a. To examine whether the effect of Social Influence on *Behavioural Intention* toward RMLs differs across gender of homeowners.
- 26b. To determine gender-based variation in the association between Perceived Ability and *Behavioural Intention* toward RML adoption.
- 26c. To analyse whether Perceived Bequest Motive affects *Behavioural Intention* differently for male and female homeowners.
- 26d. To evaluate whether the impact of Sense of Place Attachment on *Behavioural Intention* varies across genders.
- 26e. To explore gender-based distinctions in the connection between Family Ties and *Behavioural Intention* toward RMLs.
- 26f. To identify whether the effect of Perceived Trust on *Behavioural Intention* differs between male and female respondents.
- 26g. To assess gender-based differences in the association between Perceived Financial Planning and *Behavioural Intention* toward adopting RMLs.
- 26h. To determine whether the association between Attitude and *Behavioural Intention* toward RML adoption differs significantly across gender.

1.7 Research Plan

This study employs a quantitative, illustrative, cross-sectional strategy to examine the behavioural intentions of participants in the age bracket of 50 to 70 years in Goa toward approving Reverse Mortgage Loans (RMLs). Participants were selected using a purposive sampling approach based on predefined inclusion criteria, representing individuals who are house-rich but income-constrained and potential beneficiaries of RMLs. A structured questionnaire was administered, reflecting constructs from the Behavioural Planning Theory and its extended version, including Attitude, Family Ties, Social Influence, Sense of Place Attachment, Perceived Bequest Motive, Perceived Financial Planning, Perceived Trust, Perceived Ability, and Behavioural Intention.

Data were examined in SPSS through screening, reliability, and normality analyses to ascertain their suitability for subsequent modelling procedures. Advanced statistical computations were carried out through Smart-PLS 4, encompassing Confirmatory Factor Analysis (CFA), measurement model validation, and Structural Equation Modelling (SEM) for analysing direct, mediating, and moderating linkages.

Age and Property Value were tested as moderators, while gender-based differences were examined using the Welch–Satterthwaite (WS) Multi-Group Analysis (MGA). Model robustness was evaluated through f^2 and Q^2 statistics, R^2 values, and model fit indices.

Finally, Importance–Performance Map Analysis (IPMA) was conducted to identify high-impact constructs requiring managerial or policy attention. The overall research plan thus integrates statistical rigor and theoretical advancement to validate an Extended TPB model explaining homeowners' intention underlying reverse mortgage acceptance

1.8 Organization of the Thesis

The thesis is organized into six chapters, each contributing progressively to an inclusive understanding of homeowners' behavioural intentions toward Reverse Mortgage Loan (RML) adoption in Goa. The arrangement ensures a coherent flow from the conceptual foundations to empirical findings and theoretical interpretations.

Chapter 1: Introduction

Lays the foundation of the study by presenting the research background, rationale, declaration of the problem, objectives, research questions, and hypotheses. It explains the relevance of analysing behavioural intentions toward Reverse Mortgage Loans (RMLs) through the Extended TPB and outlines the scope, significance, and overall research plan.

Chapter 2: Review of Literature and Theoretical Framework

Provides an extensive examination of literature on Home Equity Mortgage Loan (RML), behavioural finance, and the Theory of Planned Behaviour (TPB) and its extensions. It examines global and Indian perspectives, synthesizes previous empirical studies, and identifies conceptual and contextual gaps that justify the present study and the inclusion of additional constructs within the ETPB framework.

Chapter 3: Research Methodology

Describes the research philosophy, design, and methodological approach adopted for the study. It details the target population, sampling technique, data collection process, and questionnaire design. The chapter also addresses issues of validity, reliability, ethical considerations, and the statistical tools employed for analysis, including SPSS and Smart-PLS 4.

Chapter 4: Conceptual Framework, Scale and Hypotheses Development

Presents the conceptual model of the study and explains the hypothesised relationships among variables. Each construct is defined and justified in the context of homeowners' behavioural intention toward RML adoption. The chapter develops the study's hypotheses based on theoretical foundations and prior empirical evidence, integrating financial, social, and emotional dimensions.

Chapter 5 – Data Analysis and Interpretation

Reports the empirical findings derived from data analysis. It begins with descriptive statistics and reliability testing, followed by assessment of dimension and structural models using Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM). The chapter presents results related to direct, mediating, moderating, and multi-group effects, and interprets them with respect to the proposed hypotheses.

Chapter 6: Discussion and Conclusion

Synthesizes and interprets the results in line with the Extended Theory of Planned Behaviour (ETPB) and existing literature. The chapter discusses the behavioural, emotional, and social factors influencing homeowners' intentions toward RML adoption. It highlights theoretical contributions, managerial implications, and policy relevance, and concludes with study limitations and directions for upcoming research.

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Section A: Conceptual and Empirical Literature Review

2.1 Introduction

A literature review provides the analytical foundation of academic research, enabling scholars to evaluate prior findings, identify conceptual patterns, and highlight research gaps that justify new inquiry. It transforms existing knowledge into a coherent framework that supports the rationale and direction of the present study (Hart, 2018; Creswell & Creswell, 2018).

In the domain of Reverse Mortgage Loans (RMLs), the review is particularly important because the product integrates financial, psychological, and socio-cultural dimensions. An RML allows senior homeowners to translate their self-occupied property's equity into a stream of income without losing possession or residence rights (National Housing Bank [NHB], 2024). Globally, this instrument has been recognised as a mechanism for elderly financial security, though its acceptance remains uneven due to emotional and informational barriers (Moulton, Haurin, & Loibl, 2017; Shan, 2011).

In India, the product was introduced in 2007 through policy efforts by the Reserve Bank of India (RBI) and NHB to enhance retirement income for senior citizens. However, uptake has remained modest compared to Western economies. Research attributes this to low awareness, emotional attachment to ancestral homes, inheritance motives, and trust deficits in financial institutions (Mahapatra & Sahoo, 2020; Pahuja & Sanjeev, 2016; RBI, 2023). Consequently, RMLs in India present a multidimensional behavioural challenge combining financial reasoning with social and cultural influences.

Building on these insights, this chapter reviews theoretical, conceptual, and empirical literature to establish a foundation for the present study. It first outlines the concept and mechanism of RMLs, followed by a discussion of global and Indian experiences, behavioural determinants, and theoretical frameworks that explain consumer intention. The review concludes with an identification of key research gaps leading to the conceptual framework presented in later chapters.

2.2 Reverse Mortgage Loans (RML): Conceptual Overview

2.2.1 Meaning and Nature of Reverse Mortgage Loan

Meaning of Reverse Mortgage Loan (RML)

It refers to a financial arrangement in which senior homeowners are able to convert a part of their self-occupied residential property into a stream of periodic payments or a lump-sum amount, without being required to vacate the home or make regular loan repayments. Instead of paying instalments to the lender, the borrower receives funds, and the obligation to repay the accumulated loan amount is postponed until the occurrence of a specified maturity event such as the borrower's death, sale of the property, or permanent shift of residence (Nakajima and Telyukova, 2013; National Housing Bank, 2024). Thus, the RML operates as a home-equity conversion tool, allowing housing wealth to be transformed into usable income.

Nature of Reverse Mortgage Loan (RML)

The nature of RMLs is grounded in the reality that many older homeowners possess substantial housing assets but face limited access to stable post-retirement income, commonly described as the “asset-rich but income-poor” condition (Martínez- Lacoba et al., 2020). Recognising this socio-economic gap, the Government of India introduced the RML scheme in 2007 under regulatory direction to support senior citizens in generating supplementary income while retaining full ownership, attachment and

occupancy of their dwelling (NLIU, 2022; National Housing Bank, 2024). The product, therefore, is not merely a loan but a socially responsive financial mechanism designed to enhance financial well-being in later life by enabling liquidity without forcing asset liquidation or displacement.

2.2.2 Objectives and Socio-economic Importance of RMLs

Objectives of Reverse Mortgage Loans (RMLs)

The primary objective of Reverse Mortgage Loans (RMLs) is to provide senior homeowners with a stable and reliable source of post-retirement income by enabling them to convert part of the value embedded in their residential property into periodic payments or lump-sum funds. The product is designed to support individuals who possess substantial housing wealth but have limited access to liquid financial resources or pensions in later life (Lusardi and Mitchell, 2017). By allowing borrowers to retain ownership and occupancy of their homes while receiving financial support, the RML aims to enhance income security, reduce financial dependency on family members, and promote dignified ageing (National Housing Bank, 2024). Additionally, RMLs are intended to encourage optimal use of household assets in retirement planning, aligning personal housing wealth with long-term welfare needs (Bairagi and Rao, 2021).

Socio-economic Importance of Reverse Mortgage Loans (RMLs)

The socio-economic significance of RMLs lies in their role as a financial inclusion instrument for the elderly population, particularly in contexts where pension coverage is limited and the family-based support system is undergoing transition. In India, where homeownership among senior citizens is relatively high yet regular income in old age is often inadequate, RMLs serve as a mechanism to address the “asset-rich but income-poor” condition (Martínez-Lacoba et al., 2020).

The scheme contributes to improving the quality of life of older adults by enabling them to meet essential expenses, such as healthcare and daily living costs, without selling or surrendering their homes (Centre for Business and Commercial Laws-NLIU, 2022). On a broader socio-economic level, RMLs support financial independence, intergenerational balance, and ageing with dignity, thereby (RBI, 2021).

2.2.3 Core Features and Mechanism of Scheme (RMLs)

2.2.3.1 Core Features

This scheme has some set of features that distinguish it from traditional mortgage products. The borrower continues to retain ownership and residential rights in the property during the loan tenure, which means there is no requirement to vacate or transfer possession. Instead of making periodic repayments, the borrower receives payouts from the lender in the form of monthly, quarterly, lump-sum, or line-of-credit withdrawals, depending on the chosen plan (National Housing Bank, 2024). The repayment obligation is postponed until a specified maturity event occurs, such as the demise of the borrower or permanent relocation from the property. A significant feature in many regulatory frameworks is the non-recourse clause, which ensures that the liability of repayment cannot exceed the market value of the housing asset at the time of settlement, thereby protecting both the mortgagor and their heirs from any residual financial burden (RBI, 2021).

2.2.3.2 Mechanism of Reverse Mortgage Loans (RMLs)

The mechanism underlying RMLs involves the conversion of home equity into a structured income benefit. The loan amount sanctioned is classically inclined by demographic factors such as the age of the borrower, the appraised price of the residential property, prevailing interest rates, and the tenure and mode of payment

selected (Kulkarni and Kumar, 2022). The lender holds a mortgage charge on the property but does not take ownership or occupancy. Over time, the loan balance grows due to accrued interest and disbursed amounts, while the borrower continues to reside in the house. The loan becomes due for settlement only when a maturity event occurs, following which the property may be sold, and the proceeds used to settle the outstanding balance. Any surplus amount after repayment is passed to the borrower or their legal heirs (NHB, 2024). In India, in some cases under the Reverse Mortgage Loan-enabled Annuity Product (RMAP) structure, banks collaborate with insurance companies to convert the loan proceeds into a lifetime annuity, thereby providing sustained and predictable income to elderly borrowers (Centre for Business and Commercial Laws – NLIU, 2022). Thus, the RML mechanism integrates housing wealth into retirement financing without requiring asset liquidation.

2.2.4 Variants of Reverse Mortgage Loans

Reverse Mortgage Loans have evolved globally in several structural forms to cater to the diverse financial requirements and risk profiles of senior homeowners. The most traditional form is the lump-sum reverse mortgage, where the mortgagor receives the full loan amount upfront, typically to meet major one-time expenses such as home renovation, health-care costs, or debt repayment (Downey & Getts, 2007; Money life Foundation, 2019). While this option offers immediate liquidity, it may expose borrowers to longevity risk since no subsequent payments are available once the initial disbursement is exhausted.

A second and widely preferred variant is the tenure-based or periodic payment reverse mortgage, which provides a steady stream of income—either for a fixed term or for the borrower’s lifetime. This structure mirrors an annuity and is suited for retirees seeking regular cash flows to supplement pensions or rental income (Davidoff, 2015). Closely

related is the term-based reverse mortgage, where payments are made over a predetermined number of years. Though payouts cease after the term ends, the accumulated interest continues until the loan's closure event (Shan, 2011).

Another increasingly popular option is the line-of-credit (LOC) reverse mortgage, under which the lender sanctions a credit line that the borrower may draw upon as required. This facility enhances flexibility and allows borrowers to manage liquidity dynamically, accessing funds for unforeseen contingencies such as medical emergencies (Leviton, 2021; Investopedia, 2016). Hybrid arrangements have also emerged, combining elements of lump-sum and line-of-credit or tenure payments to balance immediate and future cash-flow needs (Downey & Getts, 2007).

In India, the Reverse Mortgage Annuity (RMA) or Reverse Mortgage Loan-enabled Annuity (RMLA) has become a distinctive model. Here, loan proceeds are converted into a lifelong annuity in collaboration with insurance companies, ensuring income continuity for the borrower's lifetime (Mahapatra & Sahoo, 2020; NHB, 2024). This structure addresses longevity concerns and simplifies repayment by linking financial institutions with insurers. In contrast, in several developed nations such as the United States, government-backed agendas like the Home Equity Conversion Mortgage (HECM) offer additional consumer protection through insurance and counselling requirements (OECD, 2023).

Reverse mortgage variants differ across countries to suit local needs. Developed economies focus on flexible, well-insured products, while emerging markets like India are still shaping designs to match cultural expectations, property laws, and inheritance practices.

2.2.5 Advantages of Reverse Mortgage Loans (RMLs)

The Scheme serve as a valuable financial instrument for elder homeowners who own substantial residential assets but experience limited or unstable income in retirement. They convert illiquid home equity into usable cash flows, enabling elderly individuals to maintain a stable quality of life even when traditional income sources decline (Lusardi & Mitchell, 2017).

One of the central advantages of RMLs is that senior citizens who opt RML can continue living in their own homes while receiving monthly payouts, lump-sum disbursements, or a line of credit, depending on their preference. This enhances financial autonomy and supports economic independence during old age. (National Housing Bank, 2024).

Another key benefit is the deferred repayment feature. Borrowers are not required to make monthly repayments, as the loan becomes due only upon a maturity event such as the borrower's death, sale of the property, or permanent relocation. This significantly reduces financial stress and minimizes reliance on family members for day-to-day expenses. The loan proceeds can be used for essential costs such as healthcare, medical emergencies, home repairs, household maintenance, or personal consumption, thereby improving the overall quality of life (RBI, 2021).

The non-recourse aspect of RMLs offers further financial security. Under this provision, neither the borrower nor their legal heirs are obligated to repay more than the property's market value at the time of settlement. Even if the outstanding loan amount exceeds the value of the home due to market fluctuations or long durations, the liability is capped by the property value itself. This protects families from inheriting unmanageable debt and ensures fairness across generations (Chatterjee, 2019).

2.2.6 Challenges of Reverse Mortgage Loans (RMLs)

One of the most significant challenges is the low level of awareness and financial knowledge among senior citizens. Many aging homeowners are unfamiliar with the idea of converting home equity into income, which reduces their ability to make informed decisions regarding RMLs (Kulkarni & Kumar, 2022). Limited understanding of loan terms, valuation processes, and repayment conditions contributes to hesitation and mistrust toward the product.

Emotional and cultural factors also play an important role in shaping attitudes toward RMLs. Older adults often have a strong sentimental attachment to their homes, viewing them not only as financial assets but also as symbols of family heritage and lifelong achievements. This emotional connection makes many seniors reluctant to mortgage their homes, even when they face financial hardship (Martínez-Lacoba et al., 2020).

Another challenge arises from the technical and financial aspects of the product. Property valuation methods, interest rate structures, and market conditions can affect the perceived fairness and adequacy of payouts. Seniors may feel dissatisfied when the monthly income or lump-sum amount offered under an RML seems lower than expected, leading to further reluctance to adopt the product (RBI, 2021).

In the Indian context, institutional and regulatory constraints further limit the growth of the RML market. The sector faces restricted lender participation, minimal product innovation, and limited customization options compared to developed markets. Concerns about the property transfer process at the maturity stage, including documentation, title verification, and legal complexities, also discourage both lenders and potential borrowers (Centre for Business and Commercial Laws – NLIU, 2022).

2.3 Global Experience and Regulatory Models

2.3.1 United States

The United States occupies a central and pioneering position in the global evolution of reverse mortgage lending. The earliest conceptualisation of the product began in the mid-20th century, but it was formally institutionalised only with the creation of the Home Equity Conversion Mortgage (HECM) program under the Federal Housing Administration (FHA), a division of the U.S. Department of Housing and Urban Development (HUD). The HECM program, authorised under the Housing and Community Development Act of 1987 and made a permanent federal program in 1998, continues to serve as the foundational regulatory model for reverse mortgages worldwide (HUD, 2024; Congressional Research Service, 2018).

The historical roots of reverse mortgages can be traced to 1961, when the world's first reverse-mortgage loan was extended to Mrs. Nellie Young, a 73-year-old widow residing in Portland, Maine. Following the death of her husband, Mrs. Young confronted severe financial insecurity that threatened her ability to meet essential home maintenance and living expenses. In response, Nelson Haynes, a mortgage banker at Deering Savings and Loan Association, devised an innovative arrangement that allowed her to access monthly cash advances against her home equity while retaining lifelong occupancy (Haynes, 1961; NRMLA, 2020). This pioneering transaction demonstrated that elderly homeowners could unlock their illiquid housing wealth without selling or vacating their homes, thereby creating a socially sensitive yet financially viable lending structure. Over time, it became the conceptual prototype for modern reverse-mortgage designs.

The success of this early experiment generated significant academic, policy, and industry interest. Scholars and financial regulators increasingly viewed home-equity conversion as a budding solution to the financial vulnerabilities faced by ageing populations, particularly those with high property wealth but low liquid income (Davidoff, 2015). Throughout the 1970s and 1980s, various state-level pilot programs were introduced to test the feasibility, safety, and consumer acceptance of reverse-mortgage instruments. These localized initiatives eventually culminated in the Home Equity Conversion Mortgage Demonstration Program of 1987, which institutionalised the federal guarantee of non-recourse protection. This critical safeguard ensures that the borrower or their heirs are never liable for repayment beyond the property's market value at the time of loan maturity, thereby eliminating the risk of negative equity (HUD, 2024). The non-recourse guarantee became one of the strongest consumer-protection features globally adopted in reverse mortgage regulation.

Following its national rollout, the HECM program evolved into the most prominent and widely recognised reverse mortgage product in the world. Under U.S. regulations, homeowners aged 62 years and above are eligible to access their home equity through various disbursement options including lump-sum payments, term or tenure-based monthly payments, a flexible line of credit, or hybrid combinations. To ensure consumer safety, HUD mandates independent counselling, standardized appraisal processes, financial assessment of borrowers, and transparent disclosure of costs, risks, and repayment obligations (CFPB, 2023). These requirements help reduce information asymmetry and guide elderly homeowners in making informed financial decisions. Additionally, the program's "no negative equity" guarantee and FHA insurance coverage are key elements that have enhanced credibility and borrower confidence.

Although HECMs represent fewer than 2 percent of eligible U.S. homeowners, the program has nonetheless served a significant population by providing supplemental retirement income, especially in cases where savings, pensions, or social-security benefits fall short (Moulton, Haurin & Loibl, 2017). Over the decades, reverse mortgages have proven particularly valuable for older adults seeking to fund healthcare costs, ageing-in-place expenses, home modifications, or long-term care without selling their homes. Empirical studies consistently emphasize that the outcomes of HECM borrowers depend heavily on counselling quality, property-market trends, and individual levels of financial literacy (Davidoff, 2017; HUD, 2020). These findings highlight the importance of strong regulatory guidance and consumer education in maintaining system integrity.

The U.S. experience also underscores the need for continuous refinement of reverse mortgage policy. Regulatory adjustments in recent years—including limitations on upfront withdrawals, strengthened financial assessments, and updated mortgage insurance premium structures—have been implemented to protect both borrowers and the federal insurance fund. Such reforms demonstrate a proactive approach to balancing consumer safety with program sustainability. Consequently, the U.S. HECM model has influenced many countries, serving as a benchmark for designing reverse mortgage systems, especially those incorporating government-backed insurance, non-recourse rules, and mandatory counselling.

In summary, the United States has played a formative role in shaping the global trajectory of reverse mortgage lending. From its origins in a small community bank in Maine to its establishment as a federally regulated national program, the U.S. model exemplifies how reverse mortgages can complement retirement financing, preserve housing security, and create structured protections for elderly homeowners.

2.3.2 United Kingdom & Europe

The United Kingdom has developed one of the most structured and consumer- oriented equity-release markets in the world, primarily through lifetime mortgages and home reversion plans. These products allow homeowners aged 55 and above to access a portion of their housing wealth while continuing to reside in their homes. Oversight is provided by the Equity Release Council (ERC), which plays a pivotal regulatory and supervisory role in ensuring product safety, transparency, and consumer protection. A hallmark of ERC-regulated products is the “no negative equity guarantee”, which protects borrowers and their heirs from repaying more than the eventual sale value of the property, even if loan balances exceed equity due to interest accumulation or market fluctuations (Centre for Urban Research, 2020). This guarantee, along with strict lending standards, financial-advice mandates, and standardized contractual terms, has contributed to the U.K.’s stable and gradually expanding market for equity-release instruments.

In Europe, reverse-mortgage-type arrangements have progressed unevenly because of diverse financial systems, legal traditions, and socio-cultural attitudes toward inheritance. Countries such as France, Spain, and Italy have experimented with home-equity conversion schemes, though the scale and acceptance of these products differ widely across regions (Magurean, 2020). In France, equity-release contracts are governed under civil-law frameworks, typically structured as *viager* or sale-with-life-interest arrangements. These tend to be less flexible than U.K. lifetime mortgages, often involving partial transfer of ownership at the outset. Italy has introduced reverse-mortgage models that operate within strict banking regulations, but adoption has been slow due to complex inheritance laws, conservative financial behavior, and strong preferences for transferring property to heirs (Magurean, 2020).

Spain offers one of the most notable cases of formal regulatory intervention. The introduction of Law 41/2007 provided a comprehensive legal foundation for the Hipoteca Inversa (reverse mortgage), including tax incentives, financial-advice requirements, and safeguards for vulnerable borrowers. Despite this supportive framework, market penetration in Spain has been limited. Research attributes this to cultural norms emphasizing intergenerational transfers, high owner-occupation rates, and lingering mistrust in financial products following the 2008 financial crisis (Magurean, 2020). These socio-cultural dynamics demonstrate that regulatory reform alone is insufficient without concurrent efforts to shift public perceptions and enhance financial awareness.

Across Europe more broadly, the experience highlights several cross-cutting themes essential for successful implementation of equity-release markets. Standardisation of product features, including valuation norms, disclosure requirements, and consumer safeguards, is crucial for building trust. Mandatory financial counselling has emerged as an important practice to reduce information asymmetry and help older homeowners understand long-term implications such as interest compounding, inheritance reductions, and repayment triggers. Similarly, regulatory clarity, especially concerning property rights, taxation, and lender liability, has been shown to strengthen borrower confidence (Centre for Urban Research, 2020).

Another overarching lesson from the European context is the significance of consumer education and institutional transparency. Many older adults remain unfamiliar with home-equity conversion products, and misconceptions about loss of ownership or displacement often hinder uptake. Clear communication, accessible information campaigns, and enhanced training for financial advisers are therefore critical to stimulating informed participation. Europe's mixed experience illustrates that while

legal structure and consumer-protection frameworks are fundamental, market development ultimately depends on aligning financial innovation with cultural expectations, social norms, and household risk perceptions.

In brief, the U.K. offers a well-regulated, consumer-friendly equity-release model, while Europe shows more varied and culturally influenced adoption. Overall, these experiences highlight the importance of strong regulation, standard safeguards, proper counselling, and consumer education to make reverse-mortgage products safer and more widely accepted.

2.3.3 Australia & New Zealand

Australia has developed a structured regulatory framework for reverse mortgages, primarily overseen by the Australian Securities & Investments Commission (ASIC). A landmark review of the sector was published in Report 586 (ASIC, 2018), which examined lending practices, borrower outcomes, and long-term financial implications. The report acknowledged that reverse mortgages had enabled many older Australians to sustain their living standards, access home-care services, and meet essential expenditure during retirement. However, it also highlighted several concerns, including high establishment fees, limited lender competition, and the potential for equity erosion due to compounding interest over long loan durations. ASIC emphasized the need for improved financial counselling, clearer disclosure of long-term risks, and stronger stress-testing of borrower scenarios to ensure responsible lending practices (ASIC, 2018). These interventions reflect Australia's commitment to balancing financial innovation with consumer protection in an ageing society.

Product design plays an important role in shaping outcomes in the Australian context. Borrowers may choose between lump-sum payments, regular advances, or line-of-credit models, each associated with different levels of financial risk and flexibility. Studies indicate that many older Australians prefer flexible lines of credit to manage ongoing expenses, although lump-sum borrowing remains common for purposes such as home repairs, medical treatment, or debt consolidation (Bridge, 2019). Market volatility in the Australian housing sector further influences the perceived benefits of reverse mortgages, as rising property values can help preserve equity, while downturns increase the risk of negative equity, even with regulatory safeguards.

New Zealand's reverse mortgage market has evolved more gradually but shows increasing acceptance as a retirement-income support mechanism. Research by Hutchison et al. (2024) indicates that longer loan terms and higher property valuations significantly increase the principal amount available to borrowers. This reflects New Zealand's strong real-estate market, where property wealth constitutes a major component of household assets among older adults. Reverse mortgages in New Zealand are typically marketed as tools to support ageing-in-place, covering expenses such as home modifications, healthcare, and cost-of-living needs. Consumer-protection measures are also developing, including mandatory legal advice and clearer disclosure of repayment conditions (Hutchison et al., 2024).

Both Australia and New Zealand highlight the importance of aligning reverse mortgage design with broader financial and demographic trends. In both markets, the choice of product structure—whether lump-sum, term-payment, or line-of-credit—directly affects borrower risk exposure and long-term equity retention. Housing-market volatility, particularly fluctuations in urban property values, further shapes lender behaviour and borrower outcomes.

2.3.4 Canada

Canada represents a distinct and steadily growing reverse-mortgage market, shaped by a concentrated lender structure, strong regulatory oversight, and rising financial pressures among older homeowners. Unlike the United States, which operates the federally insured HECM program, Canada's reverse-mortgage system is entirely privately administered, with no government-backed guarantee.

The market is dominated by two major institutions: HomeEquity Bank, which offers the CHIP Reverse Mortgage, and Equitable Bank, which provides the Flex Reverse Mortgage. This limited competition has contributed to relatively standardized product features, consistent underwriting norms, and stable growth in loan volumes over the past decade (HomeEquity Bank, 2023).

Reverse mortgages in Canada are available to homeowners aged 55 and above, allowing them to access home equity through lump-sum payments, monthly advances, or flexible drawdown structures. Borrowers retain ownership and the right to occupy the property, while repayment is deferred until sale, death, or permanent relocation. Both major lenders offer no negative equity guarantees, ensuring that borrowers or their successors will never be indebted more than the home's fair market value at loan maturity. This feature, though not mandated by the federal government, has become a key consumer-protection mechanism in the Canadian market (Equitable Bank, 2024).

Several demographic and economic trends have fueled the expansion of reverse mortgages in Canada. The country has witnessed a rapid increase in the population aged 65 and above, coupled with rising healthcare costs, limited pension coverage, and growing financial insecurity among retirees. At the same time, housing wealth has surged, particularly in urban centers such as Toronto, Vancouver, and Montreal, making

home equity a significant financial resource for older households. Research indicates that many Canadian seniors rely heavily on their homes as their primary asset, and reverse mortgages have become an increasingly attractive means of accessing liquidity without downsizing or selling property (Moore & Skinner, 2020).

Regulatory oversight for reverse mortgages falls under the Office of the Superintendent of Financial Institutions (OSFI) and relevant provincial consumer-protection agencies, which enforce rules related to disclosure, risk management, and fair marketing practices. While the federal government does not directly insure reverse-mortgage products, lenders must adhere to stringent standards concerning loan-to-value ratios, mandatory independent legal advice, and transparent communication of long-term implications. Financial-literacy initiatives have also been emphasized, as studies show that borrower understanding of interest compounding, equity erosion, and repayment conditions significantly affects long-term outcomes (CMHC, 2022).

Despite their growth, reverse mortgages in Canada remain subject to several challenges. Interest rates tend to be higher than traditional mortgage products, reflecting lender risk and the long-term nature of the loans. Limited competition may also constrain product innovation. Furthermore, strong bequest motives and cultural preferences for leaving property to heirs continue to influence borrowing decisions, resulting in relatively moderate uptake levels compared to potential market size (Moore & Skinner, 2020). Some researchers also note that homeowners in rural or slow-growth regions may receive lower principal amounts due to conservative property-valuation practices.

Overall, Canada's experience demonstrates a stable, consumer-protected, and gradually expanding reverse-mortgage sector driven by demographic ageing, house-price appreciation, and the growing need for supplemental retirement income. Although

privately administered, the market benefits from strong regulatory oversight and widely adopted safeguards. The Canadian model illustrates how reverse mortgages can be effectively integrated into retirement planning even without a government-insured program, provided that lenders maintain transparency, responsible lending standards, and borrower-focused protections.

2.3.5 Selected Asian Economies (Japan, Korea, China, Singapore)

Across Asia, the development of reverse mortgage and housing–equity release products has been shaped heavily by socio-cultural norms, demographic transitions, and government-led retirement-security strategies. Unlike Western economies—where reverse mortgages are more widely institutionalised—Asian markets exhibit gradual and cautious adoption, largely due to strong bequest motives, expectations of filial support, and cultural preferences for retaining family property across generations. These factors significantly influence both borrower behaviour and policy design, resulting in diverse country-specific models and varying levels of public acceptance (Sekita, 2016).

Japan offers one of the earliest Asian examples of structured home-equity conversion. The country’s “Home Pension” schemes and municipal reverse-mortgage programmes were introduced as responses to rising longevity, declining fertility, and pressures on the traditional family-based care system. These schemes generally provide lifetime payouts secured against residential property, supporting older adults who wish to age in place. However, uptake remains modest relative to Western markets. Studies attribute this to Japan’s strong cultural emphasis on passing property to heirs, as well as concerns about loan complexity and long-term financial risk (Sekita, 2016). Local governments have made efforts to enhance counselling and promote awareness, yet structural and cultural barriers continue to limit participation.

South Korea has pursued a more centralized and government-backed approach through the Korea Housing Finance Corporation (KHFC) Home Pension programme. Launched in 2007, this scheme provides state-insured lifetime annuities to homeowners aged 55 and above, offering strong consumer protections and predictable income streams (Yoo & Kim, 2021). Despite the robust design and government guarantee, many Korean households remain hesitant due to deep-rooted intergenerational expectations and concerns about reducing bequeathable wealth. Research shows that financial literacy, perceived retirement insecurity, and changing family structures are gradually increasing acceptance, yet adoption remains far below potential (Yoo & Kim, 2021).

China presents a contrasting case, where reverse-mortgage-type instruments—popularly known as “House-for-Pension” pilots—have experienced limited success. Introduced in selected urban regions, these schemes aim to help older homeowners convert housing assets into retirement income in a rapidly ageing society. Implementation challenges include property-valuation uncertainty, lack of trust in financial institutions, complicated family inheritance norms, and concerns regarding regulatory transparency (Chen, 2021). Many elderly Chinese continue to rely on adult children for old-age support, and prevailing cultural expectations often discourage leveraging home equity for personal consumption. As a result, pilot projects have struggled to expand beyond experimental phases.

Singapore represents a unique state-driven model through its Lease Buyback Scheme (LBS), introduced by the Housing & Development Board (HDB). Unlike traditional loan-based reverse mortgages, the LBS involves the sale of a share of the remaining lease on public housing flats back to the government. Elderly homeowners retain lifetime occupancy while receiving a retirement income top-up, often directed into the Central Provident Fund Lifelong Income for the Elderly (CPF LIFE) annuity system.

While not a reverse mortgage in the strict financial sense, the scheme serves as an effective equity-release mechanism tailored to Singapore's public-housing context. Uptake, however, is influenced by household expectations of intergenerational co-residence and reluctance to shorten lease duration (HDB, 2023).

Collectively, the experiences of these Asian economies underscore the importance of aligning financial innovation with cultural values, housing-market characteristics, and regulatory oversight. While demographic changes and rising old-age dependency ratios are increasing interest in equity-release products, socio-cultural barriers remain a major constraint. The lessons from Japan, Korea, China, and Singapore highlight that successful implementation requires not only sound product design and regulatory clarity but also comprehensive consumer education and sensitivity to intergenerational norms.

2.3.6 Comparative Global Summary

A comparative review of global reverse-mortgage experiences reveals substantial diversity in product design, regulatory frameworks, and cultural acceptance. Advanced economies such as the United States, United Kingdom, Australia, and Canada have established structured and relatively mature reverse-mortgage markets. These systems typically emphasize strong regulatory oversight, consumer-protection mechanisms, and standardized contractual norms. For example, the U.S. HECM model provides federal mortgage insurance and mandatory counselling, while the U.K. market is guided by the Equity Release Council's "no negative equity" guarantee and strict adviser standards. Australia and Canada similarly integrate consumer safeguards, although their markets remain influenced by lender concentration, cost structures, and careful regulatory supervision.

In contrast, Europe's continental markets exhibit more fragmented adoption patterns. Countries such as France, Spain, and Italy have implemented equity-release instruments under varying legal traditions, yet cultural resistance, inheritance norms, and post-crisis financial distrust have limited widespread uptake. Spain's Hipoteca Inversa law and France's viager system illustrate attempts to formalize home-equity conversion, but these products operate on a smaller scale relative to their Anglo-American counterparts.

Asian economies present an even more nuanced landscape. Japan and South Korea have introduced government-backed or municipally supported lifetime-income products, yet strong bequest motives and traditional family-support expectations constrain participation. China's pilot schemes face challenges related to property valuation, regulatory clarity, and cultural norms surrounding inheritance. Singapore, meanwhile, offers a distinct state-led model through the Lease Buyback Scheme, which functions as a regulated equity-release mechanism tailored to a predominantly public-housing environment. These Asian cases underscore the importance of adapting product design to demographic realities and cultural expectations.

Across regions, three common themes become evident. First, regulatory robustness is essential: consumer protection, clear eligibility rules, valuation standards, and transparent fee structures significantly influence public trust. Second, socio-cultural factors play a decisive role. Countries with strong intergenerational inheritance expectations or high reliance on family support systems tend to have slower adoption of reverse-mortgage instruments, regardless of product quality. Third, financial literacy and awareness remain universal barriers. Even in mature markets, borrowers often struggle to understand long-term implications such as interest compounding, equity erosion, and repayment conditions.

Overall, global experience suggests that successful reverse-mortgage systems require a coordinated approach integrating regulation, market innovation, consumer education, and cultural sensitivity. While international models vary widely, they collectively demonstrate that reverse mortgages can serve as an effective component of retirement-income strategies when supported by transparent governance, institutional stability, and carefully tailored product features. These insights offer important guidance for emerging markets—such as India—seeking to refine equity-release frameworks in response to demographic ageing and rising financial pressures on senior homeowners. Strengthening awareness, improving product design, and reinforcing legal protections will be essential to increasing adoption. Additionally, building trust among senior households and aligning product structures with cultural expectations can significantly enhance the long-term viability of reverse mortgages in diverse socio-economic environments.

2.4 Reverse Mortgage Loans in India

2.4.1 Inception and Early Phase

The formal introduction of Reverse Mortgage Loans (RMLs) in India can be traced to the Union Budget of 2007–08, where the Government of India proposed a framework enabling senior citizens to unlock home equity while continuing to reside in their self-occupied properties (Government of India, 2007).

Responding to this policy direction, the National Housing Bank (NHB) issued operational guidelines in 2008, standardising the structure of RMLs, including eligibility norms, valuation procedures, and payout mechanisms (NHB, 2008). Soon after, major public-sector banks such as the State Bank of India, Punjab National Bank and Bank of India launched their initial RML products. Early scholarly work, such as

that by Pahuja and Sanjeev (2016), documents this period and confirms that these initial efforts represented the first institutional attempt to operationalise equity-release for Indian retirees.

However, the early phase was marked by low demand and limited outreach. Indian researchers have highlighted several behavioural and socio-cultural constraints during this period. Studies by Mahapatra and Sahoo (2020), Shruti Ashok and Vij (2019), and Singhal (2014) note that emotional attachment to family homes, strong bequest motives, limited product awareness, and risk aversion among older adults were major barriers to adoption. Bankers' conservative lending practices and limited product customisation further impeded early market growth.

To strengthen the scheme and enhance its appeal, NHB launched the Reverse Mortgage Loan-enabled Annuity (RMLeA) model in 2013, in collaboration with Star Union Dai-ichi Life Insurance and the Central Bank of India. This variant offered lifetime annuity payments, addressing longevity risk—a feature widely recommended in academic analyses of the Indian RML market (Mahapatra & Sahoo, 2020). The introduction of RMLeA is considered a major innovation in aligning Indian reverse mortgage design with international best practices.

Subsequent policy refinements supported this trajectory. The Income Tax (Amendment) Act, 2008 exempted RML disbursements from taxation, improving financial attractiveness (Government of India, 2008). NHB's later revisions in 2017 and 2023 expanded coverage, increased flexibility in disbursement modes, and updated operational guidelines to improve borrower protection (NHB, 2017; NHB, 2023). Indian scholars including Sehgal (2020) and Ashok & Vij (2019) observe that while

uptake remains modest, these iterative reforms demonstrate a consistent effort to refine product design, improve institutional capability and address behavioural barriers.

Overall, the inception and early evolution of RMLs in India illustrate a progression from conceptual introduction to gradual institutionalisation, informed by policy innovation, regulatory development, and growing scholarly engagement with the retirement-finance needs of India's ageing population.

2.4.2 Regulatory Framework and Institutional Roles

The regulatory architecture governing RMLs in India has developed through the coordinated involvement of financial authorities overseeing housing finance, banking stability and annuity-linked risk management. At its centre is the National Housing Bank (NHB), which functions as the principal regulator and refinancing body for RMLs. NHB's guidelines outline eligibility standards, loan-to-value norms, valuation processes, disclosures and counselling requirements to ensure borrower protection and uniform lending practices (NHB, 2017; NHB, 2023). Indian researchers also note that NHB's interventions have played a pivotal role in stabilising the RML market and strengthening institutional confidence (Pahuja & Sanjeev, 2016).

Parallel to NHB's role, the Reserve Bank of India (RBI) oversees prudential regulation for banks, housing finance companies and non-banking financial companies offering RMLs. RBI's supervision includes asset-classification norms, provisioning requirements, interest-rate oversight, and capital-adequacy compliance, ensuring that lenders maintain sound risk-management practices (RBI, 2023). Research by Ashok and Vij (2019) highlights that RBI's governance mechanisms are essential for mitigating financial risks arising from long-tenure, equity-backed lending products such as reverse mortgages.

In the annuity-linked Reverse Mortgage Loan-enabled Annuity (RMLeA) framework, the Insurance Regulatory and Development Authority of India (IRDAI) regulates the life-insurance companies partnering with lending institutions. IRDAI ensures the actuarial viability of annuity offerings, monitors pricing structures, and implements consumer-protection safeguards aimed at preventing mis-selling and ensuring sustainability of lifetime income streams (Mahapatra & Sahoo, 2020). This regulatory involvement is significant, given that the annuity component of RMLeA directly affects income security for senior borrowers.

At the operational level, banks, housing finance companies (HFCs), and non-banking financial companies (NBFCs) act as Primary Lending Institutions (PLIs). They are responsible for loan origination, borrower counselling, property appraisal, documentation, disbursement and servicing. Studies by Sehgal (2020) and Singhal (2014) emphasise that the institutional capacity and risk perceptions of PLIs substantially influence product reach, pricing, and long-term sustainability.

Fiscal regulation also contributes to the broader RML ecosystem. The Income Tax (Amendment) Act, 2008 classified RML disbursements as non-taxable receipts, thereby improving product attractiveness for senior homeowners (Government of India, 2008). Tax regulations further clarify the treatment of property transfers upon loan maturity, ensuring procedural clarity for both borrowers and heirs.

Collectively, these regulatory and institutional layers provide a coherent structural foundation for RMLs in India. The coordinated roles of NHB, RBI, IRDAI, and lending institutions contribute to standardisation, borrower protection, and risk management across the lifecycle of RML transactions, from eligibility determination to repayment and inheritance settlement.

2.4.3 Eligibility and Access Conditions

Eligibility and access criteria for Reverse Mortgage Loans (RMLs) in India are designed to support senior homeowners while ensuring that residence and ownership rights remain protected throughout the loan tenure. According to the operational framework established by the National Housing Bank (NHB), an applicant must be at least 60 years old, with a lower threshold of 55 years for the younger spouse in the case of joint borrowing. The property offered as security must be self-occupied, unencumbered and located within India, reflecting the regulator's emphasis on residential stability and asset clarity (NHB, 2017; NHB, 2023).

The loan quantum is determined as a percentage of the property's assessed market value, following loan-to-value (LTV) norms that vary by borrower age, property condition and institutional policy. Actuarial assessments and empirical analyses indicate that older borrowers generally qualify for higher LTV ratios due to the reduced expected loan duration (Actuaries India, 2022). Scholars studying the Indian RML market, including Shruti Ashok and Vij (2019), highlight the importance of accurate valuation and prudent LTV structuring in maintaining product viability and borrower protection.

Repayment under the RML structure is entirely deferred. The borrower is not required to service interest or principal during their lifetime. Instead, the loan becomes due only upon death, permanent relocation, or sale of the property. Settlement occurs either through the sale proceeds of the mortgaged home or through repayment by legal heirs who wish to retain the property. Research by Mahapatra and Sahoo (2020) notes that this deferred-repayment model aligns closely with the financial needs of retirees who require liquidity without compromising residential security.

2.4.4 Institutional Offerings and Market Evolution

Institutional Offerings of Reverse Mortgage Loans (RMLs)

Institutional offerings of Reverse Mortgage Loans (RMLs) in India have developed within the regulatory framework established by the National Housing Bank (NHB), which introduced the scheme in 2007 to support senior citizens convert home equity into a stable source of income (NHB, 2008; NHB, 2017). Scheduled commercial banks, housing finance companies (HFCs), and selected non-banking financial companies (NBFCs) act as primary lending institutions. These lenders typically offer multiple disbursement options, including monthly, quarterly, lump-sum and line-of-credit arrangements, allowing flexibility based on borrower needs. Research by Pahuja and Sanjeev (2016) and Mahapatra and Sahoo (2020) notes that such flexibility is critical for aligning the product with varying retirement-income requirements.

A key institutional innovation has been the development of the Reverse Mortgage Loan-enabled Annuity Product (RMLeA), created through collaborations between banks and life-insurance companies. Under this model, loan proceeds are channelled into annuity plans that provide lifetime periodic income, thereby addressing longevity risk more effectively than fixed-term RML payouts (Mahapatra & Sahoo, 2020). Institutions also operate under the non-recourse principle, which ensures that repayment liability never exceeds the realised value of the property at maturity. This feature is seen as central to borrower protection and is highlighted in both policy documents and academic evaluations of the Indian RML market (Singhal, 2014; Chatterjee, 2019).

Market Evolution of Reverse Mortgage Loans (RMLs)

The evolution of the RML market in India mirrors broader demographic shifts, including rising life expectancy, shrinking family-based support structures, and the increasing dominance of housing within household wealth portfolios. International studies link such structural changes to the global expansion of equity-release products (Nakajima & Telyukova, 2013). In India, market growth has been gradual but steady, driven by growing awareness of retirement planning needs and recognition of the widespread “asset-rich but income-poor” condition among older homeowners. Indian and international research—including Martínez- Lacoba et al. (2020) and Ashok and Vij (2019)—indicates that these socioeconomic characteristics create strong potential demand for RMLs.

Despite this potential, adoption has remained limited. Cultural norms surrounding inheritance, emotional attachment to family homes, and reluctance to mortgage ancestral property continue to constrain uptake. Studies by Mahapatra and Sahoo (2020) and Sehgal (2020) point to low financial awareness, limited lender participation and conservative valuation practices as structural barriers affecting market penetration. The regulatory ecosystem has attempted to address these issues through improved appraisal standards, greater institutional coordination and clearer disclosure norms.

Recent reforms and technological improvements—such as enhanced digital valuation methods, streamlined operational procedures and public-sector awareness initiatives—suggest a modest shift toward broader acceptance. Empirical assessments of RML performance indicate that as financial literacy improves and intergenerational attitudes evolve, the Indian market may gradually align more closely with global trends in equity- release solutions (Ashok & Vij, 2019).

2.4.5 Taxation and Financial Incentives

Taxation Treatment of Reverse Mortgage Loans (RMLs)

Tax treatment has played an important role in improving the financial viability of Reverse Mortgage Loans (RMLs) for elder homeowners in India. The Income Tax (Amendment) Act, 2008 introduced favourable provisions that clarified the tax status of RML disbursements. Under Section 10(43) of the Income Tax Act, 1961, amounts received through an RML are legally classified as loan proceeds rather than income, and therefore, are exempt from income tax (Government of India, 2008). This classification is significant for retirees, as it prevents additional tax liabilities on the periodic or lump-sum amounts received.

Furthermore, Section 47(xvi) specifies that the transfer of property to the lender at the time of loan settlement—typically upon the borrower’s death or permanent relocation—is not considered a “transfer” for the purpose of capital gains taxation. This exemption protects borrowers and their heirs from incurring capital-gain tax liabilities during property settlement, enhancing the attractiveness of RMLs. Scholars analysing the Indian RML ecosystem, including Mahapatra and Sahoo (2020), note that these tax provisions have been instrumental in reducing perceived financial burdens and encouraging acceptance of equity-release products among senior citizens.

Financial Incentives Associated with Reverse Mortgage Loans (RMLs)

The financial incentives embedded in RML structures are designed to promote economic security and independence among older homeowners. A central benefit is the ability for borrowers to unlock housing wealth while continuing to retain full ownership and occupancy rights, thereby converting an illiquid asset into a steady income stream without displacement (NHB, 2017; Pahuja & Sanjeev, 2016).

A notable enhancement to the RML framework is the Reverse Mortgage Loan-enabled Annuity Product (RMLeA), which integrates life insurers into the product structure. Under RMLeA, loan proceeds are used to purchase lifetime annuity plans, ensuring a predictable and sustained flow of income for the borrower (Mahapatra & Sahoo, 2020). This feature helps address longevity risk—an issue particularly relevant in the context of rising life expectancy and limited pension penetration in India.

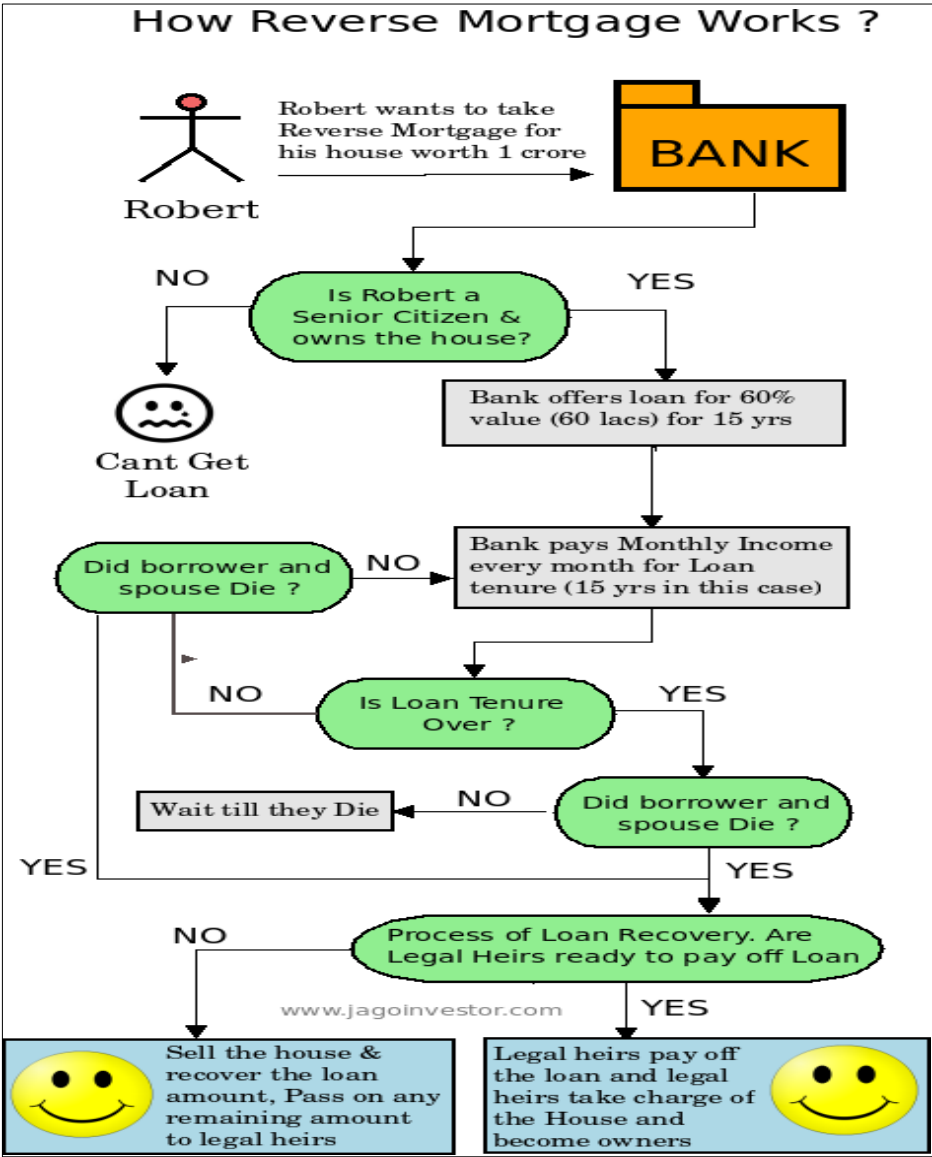
Empirical research by Ashok and Vij (2019) and Sehgal (2020) shows that RMLs provide a valuable supplement to pension income, reduce dependence on family members, and support financial resilience in old age. By offering liquidity without requiring property sale or migration, these financial incentives contribute to ageing-in-place, improved quality of life, and enhanced autonomy for elderly homeowners.

Overall, the combination of favourable tax treatment and strong financial incentives has positioned RMLs as a viable retirement-finance instrument in India. These policy measures contribute significantly to improving the scheme's affordability, accessibility and long-term sustainability for senior citizens.

2.4.6 Visual Representation of the Product

To encapsulate the working of the RML in India, Figure 2.1 illustrates the flow from home-owner to lender and back to heirs, incorporating valuation, payout, residence retention and repayment phases.

Figure 2.1: Conceptual Structure of a Reverse Mortgage Loan (RML)



Source: Author’s compilation based on NHB (2024), RBI (2023), and FDIC (2008).

2.5 Determinants of Reverse Mortgage Loan (RML) Adoption

The adoption of Reverse Mortgage Loans (RMLs) is not a purely financial decision; it is a behavioural outcome shaped by the intersection of economic rationality, social norms, emotional values, and institutional trust. In most contexts especially in India the relevant market comprises prospective rather than current borrowers, homeowners aged between 50 and 70 years who are eligible or soon-to-be eligible to avail of RMLs.

Grounded in the Extended Theory of Planned Behaviour (ETPB) (Ajzen, 1991; Taylor & Todd, 1995), this section synthesises nine constructs that explain behavioural intention toward RML adoption: Behavioural Intention (DV) and eight independent variables comprises of Attitude, Social Influence, Perceived Ability, Perceived Trust, Bequest Motive, Family Ties, Senses of Place Attachment, and Perceived Financial Planning. These determinants collectively integrate the attitudinal, normative, and control components of decision-making that shape an individual's readiness to consider equity release as a tool for financial security in later life.

"ETPB extends the original TPB by incorporating additional emotional, situational and cultural determinants, making it suitable for complex financial decisions such as RML adoption that extend beyond rational utility to include socio-cultural expectations and affective attachments (Taylor & Todd, 1995; Hanewald et al., 2019)."

The following subsections discuss each determinant in detail, supported by global and Indian empirical research.

2.5.1 Behavioural Intention (DV)

Behavioural Intention (BI) also termed as adoption intention, purchase intention, or intention to use which represents an individual's motivational readiness to adopt an RML. Within TPB, BI serves as the immediate antecedent of behaviour (Ajzen, 1991). Empirical work confirms that intention data reliably capture latent demand for RMLs long before actual uptake (Davidoff, 2017; CFPB, 2012; Bateman et al., 2024). Counselling, clarity of information, and trust significantly improve willingness to consider RMLs (Moulton, Loibl & Haurin, 2017). Asian and emerging-market evidence (Hanewald et al., 2019; Mohammed & Sulaiman, 2018) likewise confirms BI as the best predictor of eventual participation. Indian studies show similar patterns, attitude, trust, and family opinion explain most of the variance in BI (Pahuja & Sanjeev, 2016; Raut et al., 2018; Mahapatra & Sahoo, 2020).

Recent findings (Choudhary & Santram, 2025) show that financial self-efficacy among 50-to-65-year-olds directly enhances BI. Hence, in this study BI is treated as the dependent construct that integrates all attitudinal, social, and control factors influencing the decision to adopt an RML.

2.5.2 Attitude Toward RML (Mediator and Central Variable)

Attitude denotes the evaluative stance favourable or unfavourable that a homeowner holds toward using property assets for financial support in old age. It comprises cognitive beliefs (usefulness, liquidity, independence) and affective responses (comfort, pride, shame). Empirical studies show that attitude is the most influential determinant of intention and a key mediator of the effects of awareness, trust, and perceived ability (Davidoff, 2017; Bateman et al., 2024; Mohammed & Sulaiman, 2018). Counselling and positive framing significantly strengthen attitudes (Moulton et al., 2017; Dawood et al., 2022). In India, research by Pahuja & Sanjeev (2016), Raut et al. (2018), and Pandurugan (2024) demonstrates that attitude mediates the link between awareness and intention.

2.5.3 Social Influence (Subjective Norms)

Social Influence refers to perceived expectations or approval from significant others like family, peers, community, regarding the decision to monetise housing wealth. It represents the normative dimension of the ETPB framework (Ajzen, 1991). Empirical studies across cultural contexts demonstrate that family endorsement or disapproval often outweighs individual financial reasoning (Sekita, 2016; Hanewald et al., 2019; Fong, Mitchell & Tan, 2023). In collectivist societies, intergenerational norms and inheritance expectations exert strong social pressure against RML adoption (Gupta & Kumar, 2018; Mahapatra & Sahoo, 2020). Awareness and joint counselling can, however, shift perceptions, when families receive information together, intention increases evidently (Thanki et al., 2025; NHB, 2024). Social influence therefore legitimises or delegitimizes RMLs in the public and familial sphere, acting as a powerful normative gatekeeper of behavioural intention.

2.5.4 Perceived Ability (Perceived Behavioural Control)

Perceived Ability, derived from the TPB concept of perceived behavioural control, represents an individual's self-confidence in understanding and managing the procedural and financial aspects of RMLs. It includes product literacy, procedural ease, and self-efficacy. Low comprehension of RML mechanics is one of the most consistent barriers identified globally (CFPB, 2012, 2023; Davidoff, 2017). Structured counselling and simplified communication significantly raise perceived ability and intention (Moulton et al., 2017; Bateman et al., 2024). In India, studies by Pahuja & Sanjeev (2016), Raut et al. (2018), and Choudhary & Santram (2025) confirm that financial literacy and self-efficacy strongly predict intention. Regulatory bodies such as RBI (2023) and NHB (2024) also highlight that perceived ability and not formal eligibility is the key behavioural barrier to adoption. Higher perceived ability directly enhances BI and indirectly strengthens positive attitudes.

2.5.5 Perceived Trust (Trust ↔ Risk Continuum)

Perceived Trust reflects the belief that institutions offering RMLs and includes banks, housing finance companies, insurers, and regulators which will act transparently and ethically. It operates inversely to perceived risk, high trust lowers perceived risk of exploitation, misvaluation, or tenure insecurity (Davidoff, 2017; CFPB, 2012; Bateman et al., 2024). Empirical work confirms that institutional credibility and government oversight raise trust and intention (Mohammed & Sulaiman, 2018; OECD, 2023). In India, however, distrust in intermediaries remains a major obstacle (Money-life Foundation, 2019; NHB, 2024; RBI, 2023). Research by Adil (2023) and Dawood et al. (2022) shows that transparent counselling, ethical communication, and visible regulation markedly improve trust levels. Consequently, this construct integrates the cognitive and emotional dimensions of security that influence both attitude and behavioural intention.

2.5.6 Bequest Motive

Bequest Motive denotes the desire to preserve housing wealth for heirs as a moral or familial obligation. Numerous studies identify it as one of the most enduring deterrents to RML uptake, stronger than liquidity or income factors (Chiang, 2016; Davidoff, 2017; Bateman et al., 2024). Cultural inheritance norms amplify resistance in societies that equate homeownership with lineage and duty (Sekita, 2016; Hanewald et al., 2019)

In the Indian context, bequest motives are deeply embedded in moral values of *dharma* and family honour (Gupta & Kumar, 2018; Mahapatra & Sahoo, 2020). Yet recent studies (Leviton, 2021; Choudhary & Santram, 2025) indicate that when families collectively prioritise parental welfare, acceptance improves. Bequest motives therefore moderate the attitudinal and normative paths within the ETPB, defining the cultural boundaries of RML acceptability.

2.5.7 Family Ties

Family Ties capture the strength and nature of emotional and relational bonds among family members that influence financial decision-making in later life. Strong family ties can either inhibit or facilitate RML adoption depending on relational dynamics, supportive families enhance confidence, whereas dependent or hierarchical structures reinforce resistance (Fong, Mitchell & Tan, 2023; Akhtar & Das, 2019; Thanki et al., 2025). Indian studies show that seniors rarely make RML decisions independently; most defer to their children's approval (Gupta & Kumar, 2018; Mahapatra & Sahoo, 2020). Nonetheless, joint awareness programmes and transparent communication can shift the family consensus from opposition to endorsement (NHB, 2024). Family ties thus represent a relational determinant linking emotional dependence, social norms, and adoption intention.

2.5.8 Sense of Place Attachment

Sense of Place Attachment describes the emotional and identity-based bond between individuals and their homes, encompassing psychological ownership, memories, and symbolic value. This attachment produces emotional inertia that often outweighs economic reasoning, leading homeowners to resist monetising their property (Davidoff, 2017; Clark et al., 2023). Studies show that even financially literate seniors avoid RMLs because their homes represent personal achievement and family continuity (Pahuja & Sanjeev, 2016; Gupta & Kumar, 2018). High attachment levels correlate with lower intention to adopt, though positive reframing as “asset utilisation for dignified ageing” and assurances of lifetime occupancy can mitigate resistance (NHB, 2024; Dawood et al., 2022). Within the ETPB model, place attachment primarily influences attitude and interacts with family ties and bequest motives as part of the affective dimension.

2.5.9 Perceived Financial Planning

Perceived Financial Planning reflects the degree to which individuals engage in systematic savings, investments, and retirement preparedness. It determines whether RMLs are perceived as strategic planning instruments or distress borrowing. Research across contexts shows that financial-planning enhances perceived ability and attitude, thereby increasing intention (Moulton et al., 2017; Bateman et al., 2024; Mohammed & Sulaiman, 2018). Conversely, inadequate planning leads to misunderstanding and negative perceptions (Davidoff, 2017). In India, an individual with consistent financial planning habits report higher awareness and willingness to adopt innovative financial products (Raut et al., 2018; Dawood et al., 2022), while low literacy and dependence on heirs suppress adoption (RBI, 2023; NHB, 2024). PFPO therefore integrates the cognitive-behavioural elements of the ETPB, underpinning financial readiness for adoption.

In summary, the literature between 2007 and 2025 establishes that RML adoption is governed by an interlinked set of behavioural, normative, and emotional determinants. Attitude emerges as the pivotal mediator, translating the effects of trust, perceived ability, and social influence into behavioural intention. Bequest motive, family ties, and place attachment operate as cultural-emotional constraints, while financial planning orientation supplies the cognitive readiness for adoption. Together, these nine constructs represent a coherent behavioural framework that explains prospective seniors' willingness or reluctance to monetise home equity. Their inclusion in this study provides theoretical completeness, empirical relevance, and a foundation for the conceptual framework and hypotheses developed in the following chapters.

2.5.10 Role of Demographic Variables in Behavioural Finance and RML Context

Demographic attributes such as age, gender, income, and educational qualification play a significant role in shaping financial behaviour, largely by influencing perception, capability, and risk preference (Pandurugan, 2024; Singh et al., 2025). Studies consistently show that younger and more financially literate individuals are more open to adopting innovative financial products, while older and wealthier groups often display heightened caution and stronger inheritance motives (Adil, 2023). These demographic patterns are especially relevant in the context of Reverse Mortgage Loans (RMLs).

Within RML-specific research, demographic factors influence both awareness and attitudes. Older homeowners recognise the potential value of RMLs for retirement income but often hesitate because of emotional attachment to property and family-related expectations (Jaishankar, 2010; Gupta & Kumar, 2018). Gender and education likewise shape levels of trust and comprehension of RML mechanisms, with studies showing that better-educated individuals and financially empowered women demonstrate higher perceived understanding and confidence in evaluating RML options (Pahuja & Sanjeev, 2016; Lakhan Gaonkar, 2019).

Behavioural-finance literature further emphasises the moderating role of demographic variables, indicating that they do not operate as direct predictors but instead alter the strength or direction of psychological determinants that underpin the Theory of Planned Behaviour (Raut et al., 2018; Singh et al., 2025). Accordingly, this study examines Age, Gender, and Property Value as moderators influencing the relationship between Attitude and Behavioural Intention, thereby helping to explain variation in RML adoption among different categories of homeowners. These demographic variables do not directly determine RML adoption; instead, they modify how strongly individuals respond to attitudinal, normative, and control-based influences, which is consistent with broader behavioural-finance insights.

Section B: Theoretical Framework

2.6 Theoretical Framework

2.6.1 Introduction to Behavioural Theories

Financial decision-making is not purely an outcome of rational economic reasoning; it is significantly shaped by psychological, social, and cultural influences. Classical economic models assume that individuals act rationally to maximize utility, yet behavioural research has consistently demonstrated deviations from this assumption (Kahneman & Tversky, 1979; Thaler, 1999). To capture these behavioural complexities, scholars have developed intention-based models that explain how beliefs, attitudes, and perceptions translate into actual behaviour.

Among these, the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen (1975) and the Theory of Planned Behaviour (TPB) introduced by Ajzen (1991) continue the most powerful frameworks. Both theories posit that behavioural intention—the individual's motivational readiness to act is the most immediate and reliable predictor of actual behaviour. These models have been widely applied in the domains of consumer behaviour and personal finance to understand savings decisions, insurance adoption, investment behaviour, and credit usage (East, 1993; Kidwell & Turrisi, 2004; East, Vanhuele & Hammond, 2013).

The TPB highlights three key antecedents of intention: attitude toward the behaviour, subjective norms, and perceived behavioural control. Together, they explain why individuals with similar financial capacity may exhibit differing willingness to act (Ajzen, 2002). In financial contexts, these constructs capture psychological confidence, social influence, and evaluative judgments that go beyond measurable economic variables (Lim et al., 2016; Hauff et al., 2020).

Such frameworks are particularly useful in analysing retirement-related financial behaviour, including Reverse Mortgage Loan (RML) adoption, which involves long-term commitment, perceived risk, and strong emotional and familial considerations (Davidoff, 2017; Mohammed & Sulaiman, 2018; Raut et al., 2018). In societies like India, where property ownership is interwoven with identity and inheritance norms, these behavioural models help explain why eligible homeowners may hesitate despite apparent financial benefits (Gupta & Kumar, 2018; Mahapatra & Sahoo, 2020).

Building on these insights, the present study extends the TPB into an Extended Theory of Planned Behaviour (ETPB) framework that integrates both classical determinants and additional constructs relevant to the Indian socio-cultural context—namely, perceived trust, bequest motive, family ties, sense of place attachment, and perceived financial planning.

The following sections trace the theoretical evolution from TRA to TPB and then to the ETPB, leading to the Proposed RML–ETPB Model that serves as the conceptual foundation for this study.

2.6.2 Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1975), represents one of the earliest and most influential frameworks for predicting and explaining human behaviour across social and decision-making contexts. The theory proposes that behaviour is not spontaneous but the result of deliberate and reasoned intention, formed through the interplay of personal attitudes and social influences. TRA assumes that individuals act rationally by processing available information, evaluating potential outcomes, and then forming behavioural intentions that guide their actions (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980).

According to the model, Behavioural Intention (BI) is the immediate antecedent of behaviour and reflects an individual's motivation or readiness to accomplish a specific act. BI is determined by two primary constructs: Attitude toward the Behaviour (ATT) and Subjective Norm (SN). Attitude refers to the individual's overall evaluation—favourable or unfavourable—of performing the behaviour, shaped by underlying behavioural beliefs and their perceived outcomes. Subjective Norm, on the other hand, reflects the perceived social pressure from significant referent groups such as family, friends, or community members, which influences whether a person feels they should or should not execute the behaviour (Fishbein & Ajzen, 1975). In essence, individuals are more likely to form positive behavioural intentions when they hold favourable attitudes toward the behaviour and believe that important others approve of it (Ajzen & Fishbein, 1980).

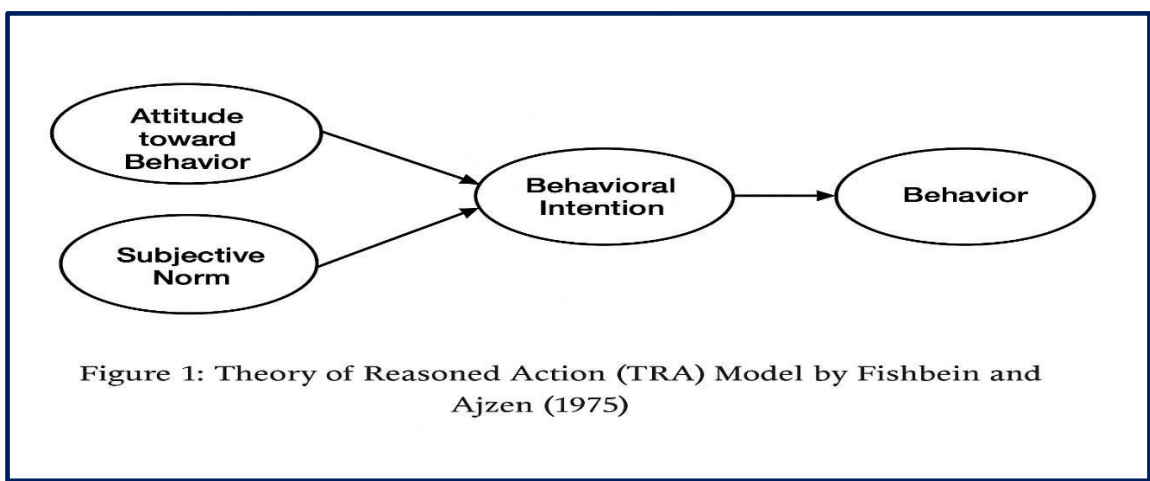
The TRA framework has been widely applied across domains of consumer and financial behaviour, where decisions often involve both personal evaluation and social influence. Studies on savings, investment, and borrowing behaviour have confirmed that intention serves as a reliable predictor of actual financial actions (East, 1993; Kidwell & Turrissi, 2004; East, Vanhuele & Hammond, 2013). For example, East (1993) demonstrated that investment decisions among consumers were strongly guided by attitudes and perceived expectations from peers or advisors. Similarly, Kidwell and Turrissi (2004) observed that money management tendencies among college students were influenced by both personal financial attitudes and the perceived approval of parents or friends. These findings collectively validate the TRA's core assumption that behavioural intention mediates the relationship between beliefs and actual financial decisions.

In the context of Reverse Mortgage Loan (RML) adoption, TRA provides a foundational behavioural framework to understand prospective users' willingness to monetise their home equity. Homeowners' attitudes—shaped by beliefs about financial security, ownership, and

Independence interact with subjective norms derived from family expectations, social reputation, and cultural values (Gupta & Kumar, 2018; Mahapatra & Sahoo, 2020). However, as TRA assumes that individuals possess full volitional control over their actions, it does not adequately address external or perceived constraints that may affect behaviour. Factors such as financial literacy, institutional trust, regulatory clarity, and procedural complexity often limit an individual’s ability to act on their intentions, even when attitudes and social approval are favourable (Ajzen, 1991; Mohammed & Sulaiman, 2018).

This limitation prompted the development of the Theory of Planned Behaviour (TPB) (Ajzen, 1991), which extended TRA by incorporating an additional construct, Perceived Behavioural Control (PBC) to account for perceived capability and situational constraints. Nevertheless, TRA continues to serve as the conceptual foundation for TPB and subsequent behavioural extensions. In this study, TRA is used as the theoretical starting point to understand how attitude and subjective norms jointly influence behavioural intention toward RML adoption among Indian homeowners aged 50–70, providing a rational basis for the expanded ETPB model discussed in subsequent sections.

Figure 2.2: Theory of Reasoned Action (TRA) Model



Source: Fishbein, M., & Ajzen, I. (1975). *An introduction to theory and research*. Addison-Wesley.

2.6.3 Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB), proposed by Ajzen (1991), is an extension of the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975). The TPB was thus introduced to address this limitation by incorporating an additional construct, Perceived Behavioural Control (PBC)—to enlighten behaviours that are not entirely volitional.

According to the TPB, an individual's Behavioural Intention (BI) remains the most immediate determinant of behaviour, but this intention is shaped by three psychological antecedents: Attitude toward the Behaviour (ATT), Subjective Norms (SN), and Perceived Behavioural Control (PBC) (Ajzen, 1991; Ajzen, 2002). Attitude reflects an individual's overall assessment of performing the behaviour, determined by beliefs about the prospective conclusions and the value attached to those outcomes. Subjective Norms represent perceived social pressure from important referent groups—such as family, peers, or society—to engage in or refrain from a behaviour. Perceived Behavioural Control denotes the perceived ease or difficulty of performing the behaviour and is conceptually similar to self-efficacy (Bandura, 1986).

The TPB has been empirically validated across numerous domains, including consumer behaviour, health, environmental psychology, and finance. In consumer finance, the model has been widely applied to explain savings behaviour (East, 1993), investment decisions (Kidwell & Turrisi, 2004; East, Vanhuele & Hammond, 2013), insurance purchase intention (Lim et al., 2016), and retirement planning behaviour (Hershey, Jacobs-Lawson, & Austin, 2013). In each of these studies, attitude, subjective norms, and perceived control collectively explained a significant portion of variance in behavioural intention, affirming TPB's robustness as a predictive model.

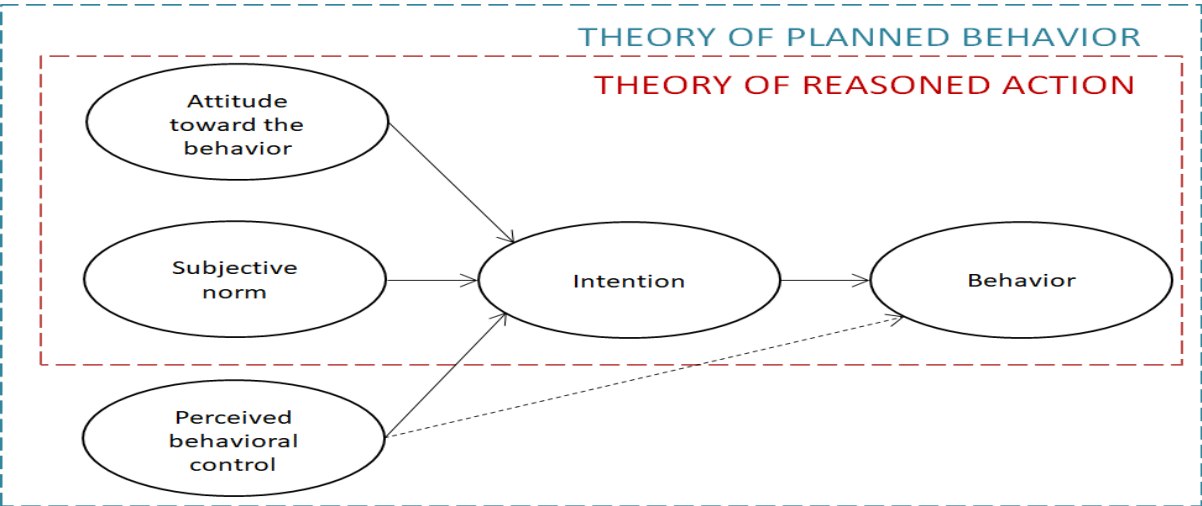
In financial contexts, Attitude has been found to play a dominant role, representing the cognitive and affective evaluation of financial products or services (Lim et al., 2016; Hauff et al., 2020). Subjective Norms capture the influence of family and peers, particularly relevant in collectivist societies where financial decisions are socially validated (East, 1993). Perceived Behavioural Control, meanwhile, encompasses individuals' confidence in managing financial information, their access to resources, and their perceived capability to act, which directly affects both intention and behaviour (Ajzen, 2002)

The TPB's adaptability has made it the theoretical foundation for studies exploring Reverse Mortgage Loan (RML) adoption across developed and emerging markets. In the United States, Davidoff (2017) and Moulton, Loibl, and Haurin (2017) demonstrated that older adults' intentions to use reverse mortgages were shaped by attitudes toward financial independence, subjective norms from family members, and perceived confidence in managing loan terms. In Malaysia, Mohammed and Sulaiman (2018) found that attitude, subjective norms, and perceived behavioural control explained over 60% of the variance in intention to adopt RMLs, confirming the model's predictive strength in emerging-market contexts. Similarly, Fong, Mitchell, and Tan (2023) in East Asia observed that cultural norms and perceived capability moderated the relationship between beliefs and intention to monetise home equity, aligning with the TPB structure.

In India, researchers such as Pahuja and Sanjeev (2016), Raut, Choudhary, and Patil (2018), and Mahapatra and Sahoo (2020) have applied the TPB framework to study seniors' attitudes and intentions toward RMLs. These studies confirm that while many homeowners recognise the potential financial benefits of RMLs, negative attitudes stemming from emotional attachment, social stigma, and inheritance obligations diminish intention. Subjective norms exert strong influence, as family expectations often override individual preferences, while low perceived behavioural control due to financial illiteracy and procedural complexity further

restrains adoption. The National Housing Bank (2024) also reported that attitude, trust, and perceived control jointly determine the willingness of eligible homeowners to consider RMLs, emphasising the need for awareness programs that enhance confidence and understanding. Thus, the TPB offers a theoretically comprehensive and empirically validated foundation for analysing RML adoption. Its inclusion of attitudinal, normative, and control dimensions captures the multifaceted nature of financial decision-making among prospective senior homeowners. However, behavioural evidence from India and other emerging economies suggests that additional socio-cultural and emotional constructs such as trust, bequest motives, family ties, place attachment, and financial planning orientation also play critical roles in shaping intention (Gupta & Kumar, 2018; Dawood, Kumar & Patil, 2022; Choudhary & Santram, 2025). These extensions have led to the formulation of the Extended Theory of Planned Behaviour (ETPB), which integrates the classical TPB model with context-specific constructs to enhance explanatory power. In this study, the TPB serves as the core theoretical base, bridging rational and behavioural perspectives in explaining financial decision-making.

Figure 2.3: Theory of Planned Behaviour (TPB) Model



Source: Ajzen, I. (1991). *The theory of planned behavior*. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.

2.6.4 Extended Theory of Planned Behaviour (ETPB)

While the Theory of Planned Behaviour (TPB) (Ajzen, 1991) has proven to be a robust model for predicting behavioural intention across disciplines, empirical evidence over time has revealed that its three core constructs, Attitude (ATT), Subjective Norms (SN), and Perceived Behavioural Control (PBC) often do not capture the full spectrum of psychological, social, and contextual influences underlying complex human decisions. To address this limitation, researchers have progressively extended TPB into what is now recognised as the Extended Theory of Planned Behaviour (ETPB), a broader behavioural framework.

The central rationale behind the ETPB is to enhance predictive power and contextual validity by integrating new constructs that either mediate or moderate the established relationships within TPB (Ajzen, 2011; Taylor & Todd, 1995). Extensions of TPB are particularly necessary when decision-making involves emotional, moral, or institutional factors conditions that are not adequately captured by the original triadic model. As Ajzen (2011) acknowledged, the TPB's flexibility allows researchers to introduce new variables provided they demonstrate theoretical justification and empirical value.

In consumer and financial behaviour research, several studies have extended the Theory of Planned Behaviour (TPB) by incorporating additional constructs such as Perceived Risk, Perceived Trust, Financial Literacy, Awareness, Moral Obligation, and Self-Efficacy to enhance its explanatory power (East, 1993; Kidwell & Turrisi, 2004; Lim, Heckman & Montalto, 2016; Hauff et al., 2020). These extended models recognise that financial decisions, particularly those involving long-term commitments and emotional assets, are influenced not only by rational evaluation but also by affective, cognitive, and social-psychological factors. Conner and Armitage (1998) similarly argued that integrating affective, habitual, and moral components can better account for variations in behavioural intention and actual decision-making.

Within the domain of financial decision-making, extensions of TPB have significantly enriched the understanding of behaviour under conditions of uncertainty, risk, and institutional interdependence. Studies on investment and savings behaviour (Lim et al., 2016; East et al., 2013) introduced Perceived Risk and Trust as critical antecedents of attitude and intention. In emerging-market contexts, where institutional credibility and financial literacy are often limited, perceived trust in financial institutions serves as both a behavioural facilitator and a psychological safety mechanism (Bateman, Hanewald, Ho & Lou, 2024; Mohammed & Sulaiman, 2018). Likewise, financial literacy and perceived ability enhance self-efficacy, reinforcing PBC and indirectly strengthening intention (Hauff et al., 2020).

In housing-finance decisions such as Reverse Mortgage Loan (RML) adoption, the ETPB provides a more suitable theoretical lens than the standard TPB because it accommodates socio-cultural and emotional factors that strongly influence elderly homeowners. Traditional TPB variables—attitude, social influence, and perceived control—explain rational decision processes, but RML adoption among ageing populations is also governed by moral, familial, and psychological considerations (Davidoff, 2017; Fong, Mitchell & Tan, 2023). Researchers have thus incorporated new constructs reflecting trust, bequest motive, family ties, place attachment, and financial planning orientation to better capture the complex decision environment surrounding home-equity monetisation.

For example, Davidoff (2017) and Moulton, Loibl, and Haurin (2017) observed that in Western economies, seniors' willingness to adopt reverse mortgages was heavily influenced by their trust in lenders and perceived transparency of product information. Lack of institutional confidence often outweighed positive attitudes toward financial independence. Similarly, Hanewald et al. (2019) reported that in China, cultural values such as filial piety and intergenerational responsibility shaped attitudes and norms more than individual control

beliefs. In Malaysia, Mohammed and Sulaiman (2018) confirmed that trust and social influence were dominant predictors of intention to adopt RMLs, while perceived risk moderated these relationships. Bateman et al. (2024) later showed that positive framing and ethical communication increased both trust and behavioural intention, suggesting that emotional and relational determinants play decisive roles.

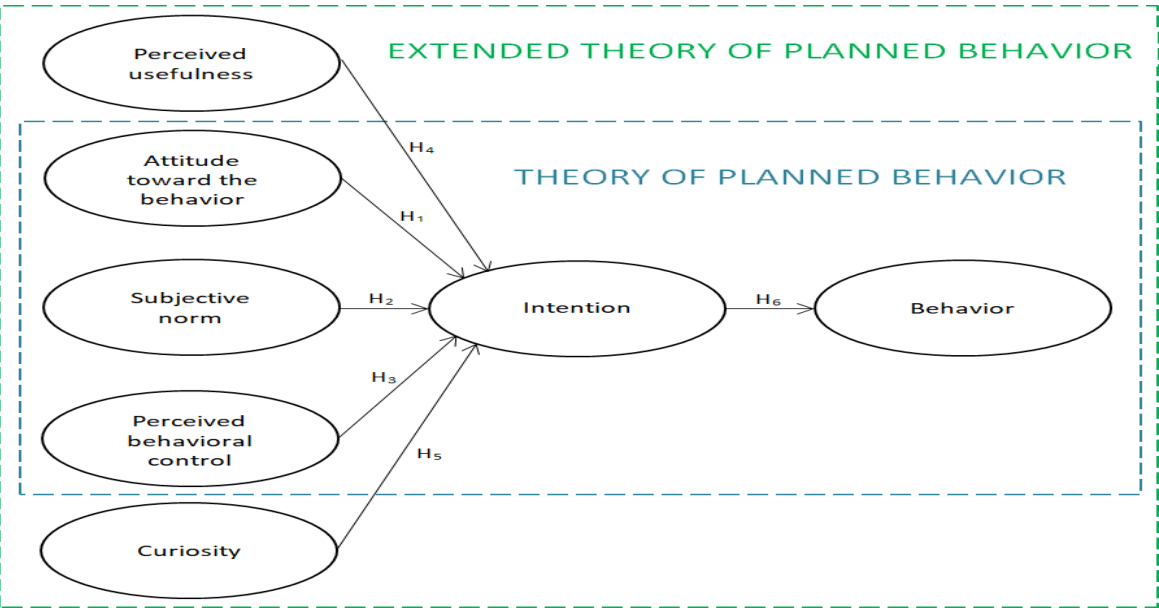
In India, the behavioural complexity surrounding RML adoption is even more pronounced. Studies by Pahuja and Sanjeev (2016), Gupta and Kumar (2018), Raut, Choudhary and Patil (2018), and Mahapatra and Sahoo (2020) demonstrated that attitudes alone could not fully explain adoption intentions among senior homeowners. Instead, constructs like Bequest Motive (the moral desire to pass on property to heirs), Family Ties (emotional and relational interdependence within households), and Sense of Place Attachment (psychological ownership and identity linked to home) emerged as dominant predictors. The Moneylife Foundation (2019) and NHB (2024) further observed that family approval, emotional comfort, and trust in financial institutions outweighed purely economic considerations in shaping adoption decisions. These findings suggest that RML decisions are deeply embedded within India's collectivist social structure, where family expectations, moral obligations, and emotional attachment often override rational financial reasoning.

Therefore, extending TPB to form an ETPB is theoretically and contextually justified for the study of RML adoption in India. The extended model preserves the core cognitive structure of TPB—Attitude, Subjective Norms, and Perceived Behavioural Control—but integrates additional constructs that reflect psychological, emotional, and socio-cultural determinants. In the present study, these include Perceived Trust, Bequest Motive, Family Ties, Sense of Place Attachment, and Perceived Financial Planning (PFP), along with the mediating role of Attitude and the outcome construct of Behavioural Intention.

This extension also aligns with the behavioural-finance paradigm, which recognises that financial choices among ageing populations are not purely rational but shaped by heuristics, social norms, and emotional constraints (Thaler, 1999; Shefrin, 2000). Integrating these constructs strengthens the model’s predictive accuracy and cultural applicability to the Indian setting, where financial literacy, institutional trust, and intergenerational dependence interact dynamically.

Hence, the Extended Theory of Planned Behaviour (ETPB) represents an empirically supported and contextually adapted framework for examining behavioural intention toward Reverse Mortgage Loan adoption. It bridges traditional rational-choice models with socio-cultural realities, offering a comprehensive explanation of why eligible or soon-to-be-eligible homeowners (aged 50–70) form particular attitudes and intentions toward RMLs. The next section introduces the Proposed RML ETPB Model, which operationalises these constructs into a unified theoretical framework guiding this research.

Figure 2.4: Extended Theory of Planned Behaviour (ETPB) Model



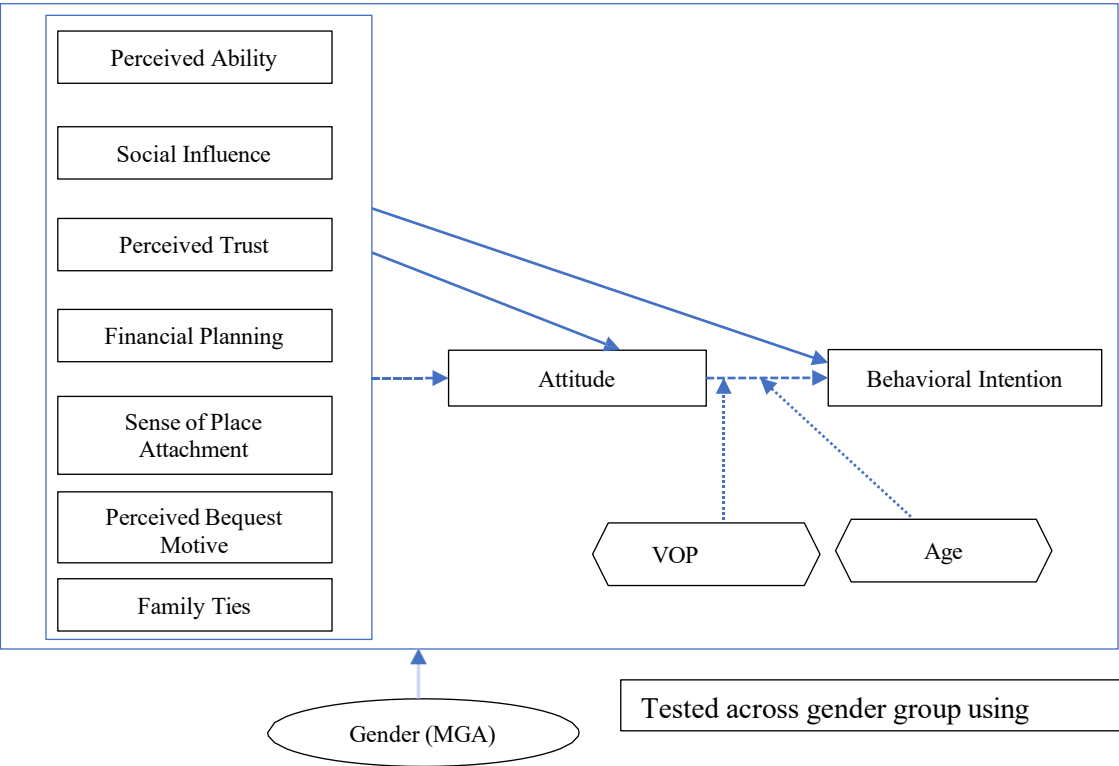
Source: Adapted from Ajzen (1991) and Taylor & Todd (1995),

2.6.5 Proposed ETPB Framework for Reverse Mortgage Loan (RML) Adoption

This study develops an RML adoption model based on the Extended Theory of Planned Behaviour (ETPB), drawing from TRA (Fishbein & Ajzen, 1975), TPB (Ajzen, 1991), and its later enrichments (Taylor & Todd, 1995; Ajzen, 2011). The framework is applied to Indian homeowners aged 50–70 years, representing the prospective segment for RMLs.

The model includes the three traditional TPB predictors, Attitude, Social Influence, and Perceived Ability along with five additional constructs relevant to the Indian socio-cultural context: Perceived Trust, Perceived Bequest Motive, Family Ties, Sense of Place Attachment, and Perceived Financial Planning. Behavioural Intention serves as the outcome variable. Together, these nine constructs represent the cognitive, emotional, and social dimensions influencing willingness to adopt Reverse Mortgage Loans.

Figure 2.5: Extended Theory of Planned Behaviour (RML-ETPB) Framework



Source: Developed by the Researcher (2025), adapted from Ajzen (1991) and Taylor & Todd (1995) with contextual extensions based on global and Indian RML literature (2007–2025).

2.7 Mediating and Moderating Variables

2.7.1 Attitude as a Mediating Variable

Within the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB), attitude is conceptualised as the central evaluative construct translating underlying beliefs into behavioural intention (Fishbein & Ajzen, 1975; Ajzen, 1991). A large body of experiential work shows that attitude frequently operates as a mediator between belief-based or contextual predictors and intention. Conner and Armitage (1998) argue that beliefs about outcomes, moral considerations, emotions and habits influence behaviour largely through their impact on attitude, rather than directly on intention. In this sense, attitude functions as the psychological “filter” through which perceived risk, trust, perceived control and normative pressures are converted into readiness to act.

In consumer and financial-behaviour research, attitude has repeatedly been tested and supported as a mediating variable. Early work by East (1993) showed that knowledge and experience affect purchase intention primarily via attitude toward the act. Kidwell and Turrisi (2004), in the context of credit-card use among young adults, found that financial education and parental norms shaped responsible credit behaviour indirectly through attitude toward borrowing. Lim, Heckman and Montalto (2016) reported that financial stress and locus of control influenced retirement-saving intention via attitudes toward saving rather than directly. Hauff et al. (2020) similarly demonstrated that financial literacy and perceived behavioural control affected retirement-preparedness intentions through attitudes to long-term financial planning. More recent studies in emerging markets confirm that constructs such as perceived risk, trust, and moral obligation influence adoption of financial products (insurance, mutual funds, digital banking) by first shaping attitudes, which then drive intention (Raut et al., 2018; Dawood et al., 2022; Adil, 2023).

Within financial-services and behavioural-finance contexts more broadly, attitude has been used as a mediator in studies on saving, investing and borrowing. Research on retirement savings and pension participation has shown that financial literacy, risk tolerance and socialisation shape intention to save through attitudes toward formal saving instruments (Lim et al., 2016; Hauff et al., 2020). Work on insurance adoption indicates that perceived risk, trust in insurers and perceived benefits affect intention mainly via favourable or unfavourable attitudes toward insurance products (Raut et al., 2018; Dawood et al., 2022). In behavioural finance, demographic and psychological variables such as age, optimism, overconfidence and self-efficacy are also found to operate through attitudes toward financial markets, rather than directly predicting investment behaviour (Adil, 2023; Pandurugan, 2024). Taken together, these studies establish attitude as a central mediating mechanism that links cognitive, affective and contextual determinants to financial decision-making.

In the global reverse-mortgage and home-equity literature, the mediating role of attitude is conceptually acknowledged even if not always explicitly modelled. For example, Amy Davidoff (2015, 2017) shows that perceptions of product complexity, fear of home loss and distrust of lenders strongly influence attitudes toward reverse mortgages, which in turn explain low take-up despite apparent financial benefits. Kei Nakajima & Yelena Telyukova (2013) demonstrate that bequest motives, health expectations and income risk affect latent demand for housing-equity release, mediated by attitudes toward using home equity. Studies from Japan, South Korea and Europe illustrate how cultural norms, filial expectations and inheritance values translate into negative or ambivalent attitudes toward equity release, thereby reducing intention even when financial need is present (Shigeo Sekita, 2016; Thomas Hanewald et al., 2019; Chi-Hin Fong, Susan Mitchell & Eugene Tan, 2023). More recently, the Malaysian study by Mohammed & Sulaiman (2018) found that place-attachment, bequest motive, social influence and perceived ability influenced willingness to use reverse

mortgages, and that attitude acted as the key pathway through which these antecedents translated into intention. Additionally, emerging experimental and survey work shows that reframing reverse mortgages as “income-conversion” or “retirement-income” tools improves attitudes and increases intention, supporting the attitudinal pathway from information to uptake (John Bateman et al., 2024; Emma Clark et al., 2023). Ching Chiang (2016) reports further that product perceptions and bequest concerns shape demand via attitudinal mechanisms rather than through direct effects.

Empirical work specifically on RMLs in India is still emerging, but available studies strongly support the central importance of attitude and point toward its mediating role. Pahuja and Sanjeev (2016) show that awareness, perceived benefits and perceived risk influence interest in RMLs primarily through attitude toward the product. Gupta and Kumar (2018) and Mahapatra and Sahoo (2020) highlight that bequest motives, family opinion, and emotional attachment to property generate attitudinal resistance, which then suppresses behavioural intention, despite financial need. Raut et al. (2018) and Lakhan Gaonkar (2019) find that trust in financial institutions and financial literacy affect adoption of complex financial products indirectly via attitudes, which is conceptually parallel to the RML context. More recent Indian studies examine mediating constructs such as financial literacy and self-efficacy in retirement-planning and housing-decision contexts and show that these variables operate through changes in attitude toward formal financial solutions (Choudhary & Santram, 2025; Consc Beam, 2025). Qualitative and report-based evidence similarly emphasises attitudinal barriers: emotional attachment, fear of losing property, stigma around “mortgaging the home”, and limited understanding of product mechanics shape negative attitudes that, in turn, depress RML interest among eligible homeowners (Jaishankar, 2010; Leviton, 2001; Cook, 2023; RM Report, 2019; NHB, 2023).

National and institutional assessments also underscore that low awareness and negative attitudes are key obstacles. Policy and market reviews note that even when eligibility and product features are favourable, senior homeowners remain reluctant due to entrenched beliefs about inheritance, family honour, and distrust of long-term debt, all of which manifest as unfavourable attitudes to RMLs (NHB, 2017; NHB, 2023). Interventions such as joint family counselling, positive framing and clearer communication have been shown to improve attitudes and, consequently, willingness to consider RMLs (Mahapatra & Sahoo, 2020; Dawood et al., 2022; Thanki et al., 2025).

Taken together, the broader TPB literature, financial-behaviour studies, global RML evidence and emerging Indian research strongly justify modelling Attitude as a mediating variable in the present study. Trust, perceived ability, bequest motive, family ties, place attachment and perceived financial planning are all belief-based or contextual antecedents that first shape how senior homeowners evaluate RMLs, and it is this evaluative stance that ultimately drives behavioural intention. Accordingly, this study treats Attitude as the central psychological mechanism through which these antecedent constructs exert their influence on the intention to adopt Reverse Mortgage Loans.

2.7.2 Role of Demographic Variables in Behavioural Finance and RML Context

Demographic variables such as age, gender, income, education, and property value are widely recognised in behavioural finance research as critical determinants of financial behaviour because they shape individuals' perceptions, preferences, information-processing abilities, and risk tolerance (Lim, Heckman & Montalto, 2016; Hauff et al., 2020). Global studies consistently show that younger individuals and those with higher education and financial literacy are more receptive to innovative financial products, whereas older adults tend to display greater financial conservatism, stronger inheritance motives, and greater sensitivity to perceived risks (Kidwell & Turrisi, 2004; Adil, 2023).

Gender also influences financial decision-making, with research indicating that women tend to exhibit a higher preference for financial security and long-term stability, leading to more cautious financial behaviour and higher trust requirements (Fong, Mitchell & Tan, 2023). These demographic influences do not operate in isolation but often interact with psychological and cultural attitudes, making them relevant as moderators rather than direct predictors of financial intention.

In the Indian context, behavioural-finance studies confirm similar patterns. Research by Raut et al. (2018), Pahuja and Sanjeev (2016), and Pandurugan (2024) demonstrates that demographic attributes significantly influence financial awareness, trust in financial institutions, and comfort with formal financial products. Indian seniors, particularly those nearing retirement, often display strong emotional attachment to property and emphasise asset preservation, reflecting culturally embedded norms around family security and inheritance (Gupta & Kumar, 2018; Mahapatra & Sahoo, 2020). Education and financial literacy are shown to enhance comprehension of long-term financial instruments and improve attitudes toward formal retirement planning solutions, including annuities and asset-based financing (Lakhan Gaonkar, 2019; Singh et al., 2025). Thus, demographic variables shape how individuals respond to trust, risk, and institutional assurances, indicating that they may alter the strength of key TPB-based relationships rather than functioning as standalone predictors (Raut et al., 2018; Singh et al., 2025).

In the specific context of Reverse Mortgage Loan (RML) adoption, global literature confirms that demographic variables affect levels of awareness, emotional attachment, and willingness to monetise home equity. Studies show that older homeowners (especially above 65) often resist using home equity due to fears of losing control of property, strong bequest motives, and family expectations, whereas younger pre-retirees (aged 50–65) tend to view RMLs more positively as part of financial planning (Davidoff, 2017; Hanewald et al., 2019).

Research from Japan, South Korea, Europe, Australia, and Malaysia indicates that gender, education, financial confidence, and housing wealth moderate individuals' attitudes and perceptions of equity-release products, influencing their intention indirectly through emotional, social, and attitudinal pathways (Sekita, 2016; Hanewald et al., 2019; Mohammed & Sulaiman, 2018; Bateman et al., 2024; Fong, Mitchell & Tan, 2023). These findings consistently point to demographic variables shaping not the behaviour directly, but rather how strongly belief-based constructs drive behavioural intention.

Indian studies echo these findings. Research by Pahuja and Sanjeev (2016), Gupta and Kumar (2018), and Mahapatra and Sahoo (2020) highlights that while older homeowners express financial need for RMLs, they are more likely to resist due to emotional attachment, inheritance expectations, and family influence. Education and financial literacy have been identified as strong enablers, improving trust, comprehension, and attitudinal openness toward RMLs and formal retirement solutions (Lakhan Gaonkar, 2019; Choudhary & Santram, 2025). Meanwhile, property value emerges as a significant demographic factor, with owners of high-value properties showing higher intention to adopt RMLs due to stronger perceived financial benefits (Singh et al., 2025). However, researchers consistently note that these demographic factors rarely operate as direct predictors of intention; rather, they act as moderators that strengthen or weaken the link between Attitude and Behavioural Intention (Raut et al., 2018; Pandurugan, 2024).

Accordingly, this study adopts Age, Gender, and Property Value as moderating variables to explain how demographic characteristics influence the strength of the relationship between Attitude and Behavioural Intention toward Reverse Mortgage Loan adoption. These variables are not expected to directly predict intention but are recognised as contextual factors that modify how individuals evaluate and respond to attitudinal, social, and control-based antecedents, consistent with behavioural-finance theory and emerging RML literature.

2.8 Research Gap of the Study

A review of global, national, and theoretical literature reveals that while substantial progress has been made in understanding the behavioural dimensions of Reverse Mortgage Loans (RMLs), significant gaps persist in both empirical evidence and theoretical application. Internationally, research has identified awareness, perceived risk, trust, bequest motive, and social influence as crucial determinants of homeowners' behavioural intention toward RML adoption (Davidoff, 2017; Fornero et al., 2016; Ishaq & Sulaiman, 2017). However, these studies have largely been concentrated in developed economies such as the United States, Australia, and the United Kingdom, where consumer education and financial infrastructure are well developed (CFPB, 2012; World Bank, 2021). Consequently, the findings from these contexts may not be directly transferable to emerging markets like India, where social and emotional factors play a much stronger role in financial decision-making.

At the national level, Indian research on RMLs remains relatively nascent and fragmented. Existing studies have primarily focused on descriptive assessments of awareness levels, perceived benefits, and socio-cultural barriers rather than on empirically validated behavioural models (Pahuja & Sanjeev, 2016; Ashok & Vij, 2023; NHB, 2024). Commonly cited barriers include limited awareness, distrust of lenders, product complexity, and strong inheritance motives. While some studies have adopted the Theory of Planned Behaviour (TPB) to explain financial decisions, the application of this theory to RMLs remains minimal and largely exploratory. Moreover, extensions of TPB incorporating constructs such as trust, risk, financial literacy, and emotional attachment are scarcely represented in Indian RML research, even though these variables are highly relevant to the country's socio-economic and cultural realities.

From a theoretical standpoint, the mediating role of attitude and the moderating influence of demographic variables have not been adequately explored in existing RML literature. Although previous research in banking, insurance, and investment domains supports the idea that attitude mediates the relationship between belief-based antecedents (e.g., trust, risk perception, and financial literacy) and behavioural intention (Raut et al., 2018; Dawood et al., 2022; Adil, 2023), few studies have empirically tested such mechanisms in the context of reverse mortgage adoption (Bateman et al., 2024; NHB, 2024). Similarly, demographic variables such as age, gender, and property value shown to influence financial behaviour in other domains have not been systematically examined as moderators within RML decision frameworks (Pandurugan, 2024; Singh et al., 2025).

A further gap exists at the regional level. No empirical study has yet investigated behavioural intention toward RMLs among homeowners in Goa, despite the state's unique demographic features, including high homeownership rates, aging population, and strong emotional attachment to ancestral property (NHB, 2024). These characteristics suggest that Goan homeowners may perceive and evaluate RMLs differently from those in other Indian regions. The absence of such localized evidence constrains policymakers and financial institutions from tailoring awareness and counseling initiatives to the socio-cultural realities of Goa's housing and family structure.

Although the Theory of Planned Behaviour (TPB) and its extended forms have been widely applied in banking, investment, and insurance contexts, their use in asset-based financial products such as Reverse Mortgage Loans (RMLs) remains limited. Most Indian studies on RMLs have been descriptive, focusing on awareness, emotional attachment, or family opinion without empirically testing behavioural constructs within a structured theoretical framework. Moreover, insufficient attention has been given to the psychological and emotional mechanisms influencing homeowners' intentions toward RML adoption. Specifically, the

mediating role of attitude and the moderating influence of demographic variables have rarely been examined. The absence of an integrated behavioural framework that captures social, emotional, and financial dimensions represents a major theoretical and empirical gap.

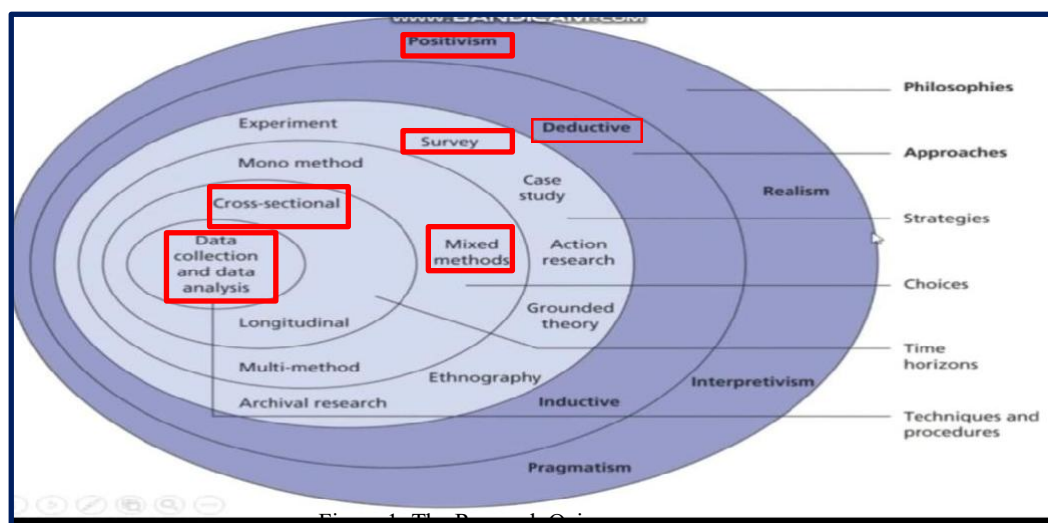
To bridge this gap, the present study develops and validates an Extended Theory of Planned Behaviour (ETPB) framework tailored to the Indian context, examining how cognitive, affective, and contextual factors collectively influence homeowners' intentions toward RML adoption. The model integrates antecedent variables (such as perceived trust, family ties, perceived bequest motive, sense of place attachment, and financial planning), a mediating construct (attitude), and moderating elements (demographic variables: age, gender, and property value) within a unified structural framework. By extending the TPB to include social and emotional factors specific to Indian homeowners, the study aims to fill the existing research void and contribute a theoretically robust and empirically grounded understanding of RML behavioural intention, particularly in the Goan context.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Onion Model

The Research Onion, developed by Saunders, Lewis, and Thornhill (2016), provides a structured framework for aligning philosophy, approach, strategy, methodological choice, time horizon, and techniques in research design. In this study on the behavioural intention of homeowners aged 50 years and above toward Reverse Mortgage Loan (RML) adoption in Goa, the model ensured coherence between the Extended Theory of Planned Behaviour (ETPB) and the chosen methodology. The study adopts a positivist philosophy, emphasizing objectivity and measurable evidence, with a deductive approach focused on testing hypotheses derived from behavioural theory. A survey strategy was employed through structured questionnaires, complemented by qualitative insights to capture contextual depth. The methodological choice is mixed-method, combining quantitative techniques such as SEM and CFA on Likert-scale responses with qualitative analysis through interviews and thematic coding. The research follows a cross-sectional design, with data collected at a single point in time. Together, these methodological decisions provide both statistical rigour and socio-cultural understanding, ensuring a comprehensive perspective on RML adoption among senior homeowners. **Figure 3.1. Research Onion Model**



Source: Adapted from Saunders et al., (2012 p 128)

3.1.1 Research Philosophy

This study is rooted in the positivist philosophy, which advocates for objective observation and empirical testing. Positivism aligns with the natural sciences approach, emphasizing quantifiable data, structured methodologies, and hypothesis testing (Saunders et al., 2019; Creswell, 2014). Under this paradigm, reality is viewed as objective and measurable, independent of the researcher's perspective.

The study aims to test the extended Theory of Planned Behaviour (TPB) through the measurement of observable variables such as Attitude, Social Influence, Perceived Ability, and additional constructs like Sense of Place Attachment, Perceived Bequest Motive, Financial Planning, Family Ties, and Perceived Trust. Hence, a positivist stance is appropriate, as it allows for structured data collection and statistical analysis to derive generalizable findings (Saunders et al., 2019).

3.1.2 Research Approach

This study adopts a deductive research approach, which involves moving from general theoretical frameworks to specific empirical observations. Deduction is grounded in the principle of testing pre-existing theories by formulating hypotheses and collecting data to confirm or refute those hypotheses (Blaikie, 2010; Saunders et al., 2019). This approach ensures a logical and structured pathway from theory to observation and is widely used in quantitative, theory-driven research.

The selection of the deductive approach in this study is justified by the reliance on the Theory of Planned Behaviour (TPB) and its extended version as the conceptual foundation. The core constructs of TPB: Attitude, Subjective Norms (adapted as Social Influence), and Perceived Behavioural Control (modified as Perceived Ability) are integrated with additional contextually relevant constructs such as Perceived Bequest Motive, Financial Planning,

Sense of Place Attachment, Family Ties, and Perceived Trust. Based on these theoretical underpinnings, a set of hypotheses was developed to examine the influence of these variables on the Behavioural Intention of homeowners aged 50 years and above in Goa toward adopting Reverse Mortgage Loans (RML).

The deductive approach is particularly appropriate for this study because it enables empirical testing of a theoretically grounded model using structured data. It supports objective measurement, replicability, and the use of statistical techniques such as Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM), which are essential for evaluating the measurement model and testing hypothesised structural relationships (Kline, 2016; Hair et al., 2017). By applying this approach, the research aims to validate and extend the TPB framework within a specific socio-economic and cultural context, contributing both to theoretical advancement and practical insights.

3.1.3 Research Strategy

The research strategy refers to the overall plan that guides the researcher in answering the research questions. Aligned with the positivist philosophy and deductive approach, this study adopts a survey strategy, which is particularly effective for descriptive and explanatory research objectives within a cross-sectional time horizon (Bryman & Bell, 2015; Saunders et al., 2019). Surveys enable data collection from a large number of respondents in a structured format.

Organized questionnaires were disseminated to homeowners aged 50 years and above across Goa, using a combination of purposive sampling and snowball sampling. Purposive sampling targeted individuals based on predefined criteria (age, ownership of residential property), while snowball sampling helped in reaching additional respondents through referrals. This dual strategy ensured access to a relevant and sufficiently large sample (Bryman, 2016).

The survey captured perceptual data on the key constructs: Attitude, Social Influence, Perceived Ability, Financial Planning, Perceived Bequest Motive, Sense of Place Attachment, Family Ties, Perceived Trust and the dependent variable, Behavioural Intention. Demographic variables were also collected for moderation analysis. This strategy facilitated the use of advanced quantitative tools, such as Structural Equation Modelling (SEM), to validate the conceptual framework in the Indian context (Hair et al., 2017).

3.1.4 Methodological Choice

The study adopts a mixed-method research design that integrates quantitative and qualitative traditions within a single, coherent framework. This choice is grounded in the recognition that while quantitative data facilitates the statistical testing of hypothesised relationships, qualitative insights provide complementary understanding that enhances the interpretation of the findings (Creswell & Plano Clark, 2018; Saunders et al., 2019).

The quantitative component, collected through an organized questionnaire administered both online and offline, forms the core of the study and aligns with its deductive orientation. This approach enables the empirical testing of theoretical relationships with objectivity, reliability, and generalisability. The qualitative strand, incorporated through limited open-ended responses and/or supplementary interviews, serves to contextualise the statistical results, thereby offering additional depth and nuance without deviating from the primarily deductive logic of inquiry. The adoption of a mixed-method choice strengthens methodological rigour through triangulation, ensuring robustness and comprehensiveness of the research outcomes (Johnson & Onwuegbuzie, 2004). Moreover, this design reflects a pragmatic stance, recognising the value of integrating diverse forms of evidence in order to achieve a fuller understanding of the research problem while maintaining a predominantly deductive testing of the theoretical framework (Creswell & Plano Clark, 2018).

3.1.5 Time Limit

This study adopts a cross-sectional time horizon, meaning that data were collected at a solitary point in time. This design is particularly suited for capturing the current attitudes, perceptions, and behavioural intentions of homeowners aged 50 years and above with respect to Reverse Mortgage Loan (RML) adoption. A cross-sectional approach is ideal for testing theoretical models within a defined timeframe, identifying correlations among variables, assessing mediation and moderation effects, and conducting large-scale surveys in an efficient manner (Saunders et al., 2019; Bryman, 2016). Given that the main objective of this research is to validate theoretical relationships rather than track changes over time, the cross-sectional design offers both practicality and analytical clarity, enabling timely data collection and robust empirical testing.

3.1.6 Techniques and Procedures

This layer pertains to the specific methods employed for data collection, processing, and analysis. A structured questionnaire was developed based on a comprehensive review of existing literature and was subsequently adapted to the Indian context, particularly the state of Goa. The instrument was designed to measure all key constructs relevant to the study, including Attitude, Social Influence, Perceived Ability, Financial Planning, Perceived Bequest Motive, Sense of Place Attachment, Family Ties, Perceived Trust, and Behavioural Intention, in addition to collecting demographic data. The data were collected from homeowners aged 50 years and above through purposive and snowball sampling methods, using both offline and online distribution channels to ensure broader reach. A structured 5-point Likert questionnaire was developed, content-validated by experts, and assessed for face validity. It underwent a pre-test (n=25) and pilot test (n=70) to refine clarity and reliability. Throughout the data collection process, ethical standards were rigorously maintained, including informed consent, confidentiality, and voluntary participation.

Data analysis was carried out using Jamovi, SPSS, and Smart-PLS software. The analytical techniques included descriptive statistics for demographic profiling, reliability analysis using both Cronbach's Alpha and McDonald's Omega (Tavakol & Dennick, 2011; McNeish, 2018), and validity analysis conducted through Confirmatory Factor Analysis (CFA). The measurement model was further assessed using Composite Reliability and Average Variance Extracted (AVE) to ensure convergent and discriminant validity (Hair et al., 2017).

Structural Equation Modeling (SEM) was employed using Smart-PLS to evaluate the direct, indirect (mediation), and interaction (moderation) effects among the constructs. Path analysis was conducted to test the hypothesised structural relationships between variables. Moderation effects were examined through the use of interaction terms, while mediation was assessed via indirect path coefficients. The use of Smart-PLS was particularly beneficial for handling complex model relationships and reflective constructs, enhancing the robustness and correctness of the empirical findings (Hair et al., 2022; Ringle & Sarstedt, 2016; Kline, 2016). These procedures collectively ensured rigorous empirical validation of the extended Theory of Planned Behaviour (TPB) framework, thereby contributing both to theoretical advancement and to practical policy implications regarding Reverse Mortgage Loan (RML) adoption among senior homeowners in Goa.

3.2 Research Design

Research design serves as the methodological blueprint that underpins the entire research process, providing a structured framework for the collection, analysis, and interpretation of data. It ensures that the study is conducted with methodological rigor and logical consistency, thereby enabling the researcher to effectively address the research questions and objectives. As highlighted by Saunders, Lewis, and Thornhill (2019), a well-formulated research design enhances the internal validity, reliability, and generalisability of findings.

The present study adopts a descriptive and correlational research design to explore the behavioural intentions of homeowners towards the adoption of Reverse Mortgage Loans (RML) in Goa. The descriptive aspect of the research design facilitates a detailed understanding of the attitudes, perceptions, and behavioural patterns of the target population. It involves the use of structured survey instruments to collect quantifiable data in a standardised manner, thereby enabling accurate statistical profiling without altering or influencing the natural responses of participants (Neuman, 2014; Creswell, 2014).

The correlational component of the design focuses on identifying and examining the relationships between key latent constructs derived from the extended Theory of Planned Behaviour (TPB), such as Attitude, Social Influence, Perceived Ability, Financial Planning, Perceived Bequest Motive, Sense of Place Attachment, Family Ties, and Perceived Trust. This aspect of the design is essential for assessing the strength and direction of associations among these variables and their collective influence on behavioural intention. Advanced statistical techniques, including Partial Least Squares Structural Equation Modeling (PLS-SEM), are employed to test the proposed hypotheses, evaluate mediating and moderating effects, and draw inferences about potential causal mechanisms (Saunders et al., 2019).

By integrating both descriptive and correlational approaches, the chosen research design enables the study to not only describe existing behavioural patterns and socio-psychological factors among elder homeowners in Goa but also to statistically validate the theoretical model. This dual approach ensures both depth and precision in exploring the behavioural dynamics associated with the adoption of Reverse Mortgage Loans, thereby enhancing the academic and practical contributions of the research.

3.3 Mixed-Method Rationale

A mixed-method research design is adopted in this study; wherein quantitative and qualitative traditions are systematically integrated within a single coherent framework. The measurable constituent forms the core of the study, relying on structured questionnaires to collect numerical data that enable statistical testing of the hypothesised relationships. Quantitative research facilitates objective and replicable investigation by employing standardised instruments to measure constructs and test hypotheses statistically (Creswell, 2014; Saunders et al., 2019).

Given the aim of validating an extended version of the Theory of Planned Behaviour (TPB) in the context of Reverse Mortgage Loan (RML) adoption among senior homeowners, the quantitative strand was essential for testing relationships among Attitude, Social Influence, Perceived Ability, Financial Planning, Perceived Bequest Motive, Sense of Place Attachment, Family Ties, and Perceived Trust. To complement this, a qualitative strand was incorporated through limited open-ended responses and/or follow-up interviews, providing richer contextual insights and enhancing the interpretation of statistical results (Creswell & Plano Clark, 2018).

This integration strengthens methodological rigour by ensuring both breadth and depth of understanding. The quantitative strand supports the practice of advanced statistical techniques such as Partial Least Squares Structural Equation Modeling (PLS-SEM), which are effective for examining mediation, moderation, and path relationships within the conceptual model (Hair et al., 2017; Kline, 2016). Meanwhile, the qualitative strand contributes to triangulation, ensuring that the findings are not only empirically robust but also contextually grounded (Johnson & Onwuegbuzie, 2004).

3.4 Observation Unit and Sampling Frame

3.4.1 Unit of Analysis

The unit of analysis in this study is the individual homeowner residing in the state of Goa. Specifically, this includes individuals aged 50 years and above who own a residential property that is free from legal or financial encumbrances. This group constitutes the relevant decision-making unit for Reverse Mortgage Loan (RML) adoption, as eligibility, perceptions, and behavioural intentions related to RMLs rest with the individual homeowner rather than the household collectively (Ajzen, 1991; Creswell, 2014). The selection of this unit aligns with the objective of examining psychological, social, and financial determinants influencing intention to adopt RMLs.

3.4.2 Sampling Frame and Respondents' Profile

The sampling frame encompassed households across all twelve talukas of Goa, covering both North and South districts, to maintain geographical representativeness. As there is no centralized or publicly available registry of homeowners who meet RML eligibility criteria, a combined purposive and snowball sampling approach was adopted.

Purposive sampling enabled the targeted identification of respondents who met the inclusion parameters of age (≥ 50 years) and unencumbered property ownership, ensuring that only eligible participants were approached. Following initial contact, snowball sampling was utilized to expand the respondent pool through referrals, neighbourhood networks, and community associations. This approach is recommended in studies involving specific or hard-to-identify populations, as it improves participant accessibility and diversity of representation (Etikan, Musa, & Alkassim, 2016; Creswell & Plano Clark, 2018). The resulting respondent profile reflects variation across urban, semi-urban, and rural settings, capturing a realistic and heterogeneous cross-section of eligible homeowners in Goa.

3.4.3 Inclusion and Exclusion Criteria

The inclusion criteria for the study required respondents to be residents of Goa who were aged 50 years or above and owned a residential property that was legally clear and mortgage-free. This specific cohort aligns with the eligibility norms of Reverse Mortgage Loans in India and represents individuals who may consider RMLs as an alternative source of post-retirement financial security (National Housing Bank, 2017). Focusing on this group enables the study to examine the attitudinal, social, and financial determinants that influence behavioural intention toward RML adoption (Bairagi & Munot, 2019). Individuals below the age threshold, as well as those owning properties under mortgage, legal dispute, or financial encumbrance, were excluded from the study to maintain relevancy and ensure that only those with realistic eligibility and decision-making authority regarding RML participation were included.

3.5 Sample Size and Sampling Technique

3.5.1 Population of the Study

The population of this study consists of homeowners in the state of Goa who are aged 50 years and above and own a legally clear, mortgage-free residential property. This group is relevant for examining behavioural intention toward Reverse Mortgage Loan (RML) adoption because RML eligibility and decision-making authority rests with the individual homeowner (National Housing Bank, 2017). Individuals in this age bracket are typically in or approaching the later stages of their financial lifecycle, where long-term income security and retirement forecasting considerations may influence financial decision-making.

3.5.2 Sampling Technique

Due to the absence of any centralized listing of homeowners entitled for RMLs in Goa, a combination of purposive and snowball sampling techniques was adopted. Purposive sampling was used to identify and select homeowners aged 50 years and above who owned mortgage-free residential property, ensuring alignment with study inclusion criteria. Following this, snowball sampling was employed, where initial participants referred additional eligible homeowners through personal, neighbourhood, and community networks. Such a combined non-probability sampling strategy is widely recommended when the target population is specific, localized, or not easily identifiable through formal records (Etikan, Musa, & Alkassim, 2016; Creswell & Plano Clark, 2018).

3.5.3 Sample Characteristics

The final sample consists of 700 homeowners aged 50 years and above residing across all twelve talukas of Goa, representing a cross-section of urban, semi-urban, and rural households. This age group is particularly relevant for studying RML adoption as they are likely to be more actively considering or planning for post-working-life financial arrangements (Bairagi & Munot, 2019). Furthermore, focusing on homeowners with mortgage-free properties ensures compliance with national eligibility norms for RML schemes (National Housing Bank, 2017).

3.5.4 Sample Size Determination

3.5.4.1 10-Times Rule for SEM

Following the 10-times rule for Structural Equation Modeling, the minimum recommended sample size should be ten times the maximum number of indicators for any construct or the maximum number of structural paths directed at a latent variable (Hair, Hult, Ringle, & Sarstedt, 2019). In this study, the largest construct consists of 8 indicators, indicating a minimum requirement of 80 respondents. The achieved sample of $N = 700$ exceeds this benchmark substantially.

3.5.4.2 Power Analysis (G*Power)

A priori power analysis using G*Power, assuming a medium effect size ($f^2 = 0.15$), significance level $\alpha = 0.05$, power $(1 - \beta) = 0.80$, and up to 8 predictors, suggests a minimum sample of approximately 160 respondents (Cohen, 1992; Faul, Erdfelder, Lang, & Buchner, 2007). The sample size of 700 therefore ensures sufficient statistical power for detecting meaningful effects.

3.5.4.3 Item-to-Respondent Ratio

Best practice guidelines for factor-based modeling recommend a respondent-to-item ratio between 5:1 and 10:1 (Gorsuch, 1983; Kline, 2015). With 47 questionnaire items, the ideal sample size range would be between 235 and 470 respondents. The obtained sample of 700 respondents exceeds this recommended range, enhancing reliability and stability of the measurement model.

3.5.4.4 Final Sample Justification

Considering recommendations from SEM adequacy rules, power analysis, and scale-to-sample ratio guidelines, the final sample size of $N = 700$ is methodologically robust and appropriate for the use of Structural Equation Modeling. It supports stable parameter estimates, reliable factor loadings, and strong inferential validity (Hair et al., 2019; Kline, 2015).

3.6 Scale Development and Validation Process

3.6.1 Item Generation and Adaptation

The initial pool of scale items was generated through an extensive review of theoretical frameworks and empirical studies related to behavioural intention, financial decision-making, place attachment, trust, and social influence. Items were adapted from previously validated instruments to ensure theoretical alignment and measurement accuracy, while wording was contextualised for homeowners aged 50 years and above in Goa (DeVellis, 2017). Care was taken to maintain conceptual clarity, avoid technical jargon, and ensure linguistic simplicity. All items were measured using a 5-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree,” which is widely recommended for behavioural and attitudinal research (Boateng et al., 2018; Likert, 1932).

3.6.2 Content Validity

Content validity was assessed through expert review. A panel of five experts, including two behavioural science academicians, one housing finance professional, and two research methodology specialists, independently examined each item for clarity, relevance, and appropriateness. The Item-level Content Validity Index (I-CVI) and Scale-level Content Validity Index (S-CVI) were computed to quantify expert agreement. Items achieving I-CVI ≥ 0.78 were retained, while others were modified or removed based on feedback. The S-CVI beat the recommended threshold of 0.80, demonstrating robust overall content validity (Lynn, 1986; Polit & Beck, 2006). Suggestions regarding regional terminology and phrasing were incorporated during revision.

3.6.3 Face Validity

Face validity was evaluated to ensure that the scale appeared clear, understandable, and meaningful to intended respondents. For this purpose, the draft instrument was administered to 20 homeowners aged 50 years and above along with one language expert proficient in English and Konkani. Participants reviewed the questionnaire for clarity of wording, ease of interpretation, and cultural relevance. Minor adjustments were made to simplify expressions and improve comprehension. Face validity ensured that the instrument was perceived as appropriate and acceptable by the target population (Taherdoost, 2016).

3.6.4 Pre-Test and Pilot Study

A pre-test with 30 homeowners aged 50 years and above was directed to evaluate the clarity of instructions, response patterns, and item functioning. The pre-test confirmed that the scale items were understandable and logically sequenced. Following this, a pilot study involving 70 homeowners from different talukas was undertaken to test the reliability and field administration readiness of the instrument. The pilot sample was independent and was not included in the final data set. Minor refinements were made to item grouping and layout for smoother flow. Pre-testing and pilot study stages ensured that the instrument was both operationally feasible and psychometrically stable before full-scale administration (Presser et al., 2004; Malhotra, 2015).

3.6.5 Reliability and Internal Consistency (Cronbach's α , McDonald's Ω)

Internal consistency reliability was assessed using Cronbach's alpha (α) and McDonald's Omega (Ω). A Cronbach's alpha value of 0.70 or higher was considered acceptable for this study (Nunnally & Bernstein, 1994). As Cronbach's alpha can underestimate reliability when factor loadings vary across items, McDonald's Omega was also calculated because it provides a more accurate representation of latent construct

reliability (McDonald, 1999; Dunn, Baguley, & Brunsden, 2014). Both α and Ω values for all constructs exceeded the acceptable thresholds, confirming that the instrument consistently measured the intended underlying dimensions. This established reliability supported the instrument's suitability for subsequent Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM).

3.7 Data Collection Tools and Procedure

3.7.1 Questionnaire Design

A structured questionnaire served as the primary data collection instrument for this study. The questionnaire was developed in alignment with the study's conceptual model to ensure that each latent construct was measured through multiple observable indicators. The wording, sequencing, and organization of items followed established principles of scale design, clarity, and respondent comprehension (DeVellis, 2017; Malhotra, 2015). All construct-based items were phrased positively and coded for efficient data entry and analysis.

The questionnaire comprised ten sections, grouped logically to avoid respondent fatigue and to maintain thematic coherence. Sections A to I measured latent psychological, financial, and behavioural constructs, while Section J captured demographic and property-related background information.

Section A measured Perceived Bequest Motive (PBM) using five items (coded PBM1–PBM5), which assessed beliefs and expectations regarding leaving one's house as inheritance. This construct reflects cultural norms and familial expectations associated with property transmission (Khanal & Mishra, 2020).

Section B measured Family Ties (FT) through four items (FT1–FT4) capturing emotional bonds with family members and their influence on decisions related to Reverse Mortgage Loans. Such family-based considerations are especially relevant in collectivist social contexts (Sharma & Singh, 2019).

Section C assessed Sense of Place Attachment (SPA) with five items (SPA1–SPA5) indicating emotional, psychological, and identity-based attachment to the owned house. Place attachment is recognized as a significant factor shaping housing-related decisions (Scannell & Gifford, 2010).

Section D evaluated Financial Planning (FP) via six items (FP1–FP6), addressing preparedness for old-age financial needs and perceived financial independence. Strong financial planning behaviour reduces perceived necessity for external financial instruments (Lusardi & Mitchell, 2014).

Section E measured Perceived Trust (PT) using seven items (PT1–PT7), focusing on confidence in banks and financial institutions offering RML. Trust is a critical determinant of adoption of financial services and innovations (Gefen, 2000).

Section F assessed Social Influence (SI) through five items (SI1–SI5), examining the influence of children, spouse, peers, advisors, and community norms. Social influence is an established predictor of behavioural intention in the Theory of Planned Behavior (Ajzen, 1991).

Section G measured Perceived Ability (PA) using five items (PA1–PA5), reflecting the homeowner's perceived capability, eligibility, and informational readiness to engage in an RML. Perceived control strengthens decision confidence (Bandura, 1997).

Section H captured Attitude Toward Reverse Mortgage Loan (ATT) through five items (ATT1–ATT5), measuring the evaluative appraisal of RML as beneficial, practical, or favourable. Attitude is a central determinant of behavioural intention in TPB (Ajzen, 1991).

Section I measured Behavioural Intention (BI) with five items (BI1–BI5), assessing willingness to adopt RML for purposes such as income supplementation, medical expenses, or home repairs.

Finally, Section J collected Demographic and Property Profile information, including age, gender, education, occupation, marital status, region (North/South Goa), type of locality (urban/semi-urban/rural), annual household income, number of years living in the property, and estimated property value. (Hair, Hult, Ringle & Sarstedt, 2019).

3.7.2 Measurement Scale

All measurement items across Sections A to I were assessed using a 5-point Likert scale, where respondents indicated their level of agreement with each statement. The response categories were defined as: 1 = Strongly Disagree (SDA), 2 = Disagree (DA), 3 = Neutral (N), 4 = Agree (A), and 5 = Strongly Agree (SA).

The Likert scale was chosen due to its suitability for measuring attitudes, perceptions, and behavioural dispositions, which are latent psychological constructs (Likert, 1932). A 5-point scale reduces respondent burden while maintaining scale sensitivity, making it easier for participants to express their viewpoints accurately (Joshi, Kale, Chandel, & Pal, 2015). Furthermore, scales of this type are commonly used in social science and behavioural finance research, enabling reliable estimation of internal consistency, factor loadings, and structural relationships required for Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) (Hair, Hult, Ringle, & Sarstedt, 2019).

3.7.3 Mode of Data Collection

Data for this study were collected using a mixed-mode approach, comprising both offline and online administration. This strategy was adopted to ensure wider accessibility and to include respondents across varying geographic regions and levels of digital familiarity within Goa.

For the offline mode, printed questionnaires were personally administered by the researcher during visits to residential localities, community interaction spaces, club houses, temple and church gatherings, and neighborhood social groups. The offline approach was particularly useful in rural and semi-urban areas where digital access may be limited or where respondents preferred face-to-face communication. Respondents were briefed about the purpose of the study, and adequate time was given to complete the questionnaire voluntarily.

In the online mode, the questionnaire was converted into a secure digital form and circulated via email, WhatsApp groups, and housing association networks, especially in urban and semi-urban localities where digital familiarity and smartphone usage are relatively higher. Participants could access the form and complete it at their convenience, which facilitated response efficiency and reduced logistical constraints.

The use of both offline and online modes helped broaden the coverage of the sample, minimize potential sampling bias, and ensure that homeowners across all twelve talukas of Goa were adequately represented. The mixed-mode approach also increased respondent flexibility and enhanced completeness of responses, thereby improving the overall quality and reliability of the collected data (Creswell & Creswell, 2018).

3.7.4 Ethical Considerations and Permissions

Strict ethical standards were maintained throughout the research process to uphold the rights, dignity and privacy of the participants. Prior to data collection, the research proposal and data collection procedures were reviewed and approved by the Institutional Research Committee. All participants were conversant about the objectives of the study, the voluntary nature of their participation, and their right to withdraw from the study at any point without any adverse consequences. Informed consent was obtained from each respondent before the questionnaire was administered. Participants were assured that no personal identifying information would be collected, that their responses would remain confidential, and that the data would be used solely for academic research purposes. To ensure anonymity and confidentiality, the completed questionnaires were coded numerically and all digital records were securely stored in password-protected folders accessible only to the researcher. The study adhered to the ethical principles of respect, beneficence and non-maleficence as recommended in social science research ethics frameworks (Israel & Hay, 2006).

3.8 Data Screening and Analysis

The data analysis procedure was structured to ensure methodological rigor and robustness in evaluating the behavioural intention of homeowners aged 50 years and above toward Reverse Mortgage Loan (RML) adoption. The collected data were coded and entered into Microsoft Excel and subsequently analyzed using Smart-PLS 4, a variance-based Structural Equation Modelling software suitable for predictive and exploratory research contexts (Hair, Hult, Ringle, & Sarstedt, 2022). The analysis process followed a sequential workflow beginning with data screening and reliability assessment, followed by measurement model validation, and culminating in structural model testing, mediation, moderation, and group-based comparative analysis.

3.8.1 Missing Data, Outliers, and Normality Checks

Prior to conducting statistical analysis, the dataset was screened to ensure completeness, accuracy, and suitability for Structural Equation Modeling (SEM). Missing data were evaluated using frequency and pattern analysis. Since the proportion of missing responses was minimal and occurred randomly, mean value imputation was applied, which is recommended when the percentage of missing responses is low and data appear to be missing at random (Tabachnick & Fidell, 2019).

Outliers were inspected using standardized z-scores and the Interquartile Range (IQR) method. Cases with z-scores exceeding ± 3.29 were reviewed for potential response error, consistent with Kline's recommendation for extreme standardized values (Kline, 2015). The IQR method was further applied to detect unusually high or low values, and only those outliers resulting from data entry mistakes or clear response inconsistencies were removed, while legitimate extreme responses were retained to preserve natural variability (Kline, 2015).

Although PLS-SEM does not assume multivariate normality, the distribution characteristics of variables were examined using skewness and kurtosis values to ensure stable model estimation. All constructs demonstrated acceptable ranges for skewness and kurtosis (between -2 and +2), indicating suitable distribution for SEM analysis (Hair, Hult, Ringle, & Sarstedt, 2022).

3.8.2 Reliability and Validity Tests

Internal consistency reliability was assessed using Cronbach's Alpha (α) and McDonald's Omega (Ω). Values of α and Ω equal to or greater than 0.70 were considered acceptable, indicating that the items within each construct demonstrated adequate internal consistency (Nunnally & Bernstein, 1994; McDonald, 1999). In addition, Composite Reliability (CR) was examined, with $CR \geq 0.70$ confirming that the constructs exhibited reliable scale performance (Fornell & Larcker, 1981).

Convergent validity was evaluated through the Average Variance Extracted (AVE). An AVE value of 0.50 or higher indicated that the construct captured more than half of the variance of its indicators, thus establishing convergent validity (Hair, Hult, Ringle, & Sarstedt, 2022).

Although the focus at this stage was internal consistency and convergent validity, Discriminant Validity was also assessed during the measurement model evaluation phase. Discriminant validity ensures that each construct is empirically distinct from others and was examined using the Fornell–Larcker Criterion and the Heterotrait–Monotrait (HTMT) Ratio, with HTMT values below 0.90 indicating adequate discriminant validity (Henseler, Ringle, & Sarstedt, 2015).

3.8.3 Pilot Study

A pilot study involving 70 homeowners aged 50 years and above was conducted to evaluate the clarity, comprehensibility, and reliability of the questionnaire prior to full-scale data collection. The pilot study helped determine whether the wording of the items was appropriate, whether respondents interpreted the items consistently, and whether the sequence and structure of the questionnaire facilitated smooth completion. Feedback from pilot participants indicated the need for minor rephrasing of certain items to improve clarity, after which the revised instrument was finalized.

Reliability testing was performed using Cronbach's Alpha and McDonald's Omega, with all constructs demonstrating values above the recommended threshold of 0.70, indicating satisfactory internal consistency (Nunnally & Bernstein, 1994; McDonald, 1999). Since the measurement model was theory-driven and based on previously validated scales, Exploratory Factor Analysis (EFA) was not conducted, and the study proceeded directly to Confirmatory Factor Analysis (CFA) during the measurement model assessment stage. This approach is consistent with scale development best practices when theoretical support for the factor structure already exists (Hair, Hult, Ringle, & Sarstedt, 2022; DeVellis, 2017).

3.8.4 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was performed using Smart-PLS to validate the measurement model and to examine the extent to which the observed indicator variables adequately reflected their corresponding latent constructs. The standardized factor loadings of the items were reviewed to assess indicator reliability. Loadings of 0.70 and above were considered strong and indicative of satisfactory item performance. However, in line with recommended PLS-SEM guidelines, items with loadings ranging between 0.40 and 0.70 were retained only when their inclusion improved Composite Reliability (CR) and Average Variance Extracted (AVE), and when they were theoretically essential to the construct definition (Fornell & Larcker, 1981; Hair, Hult, Ringle, & Sarstedt, 2022). This step ensured that the retained measurement items were both statistically adequate and conceptually meaningful within the theoretical framework.

3.8.5 Measurement Model Assessment

Following Confirmatory Factor Analysis, the measurement model was evaluated in terms of convergent validity, discriminant validity, and internal consistency reliability. Convergent validity was confirmed through the criteria of Average Variance Extracted ($AVE \geq 0.50$) and Composite Reliability ($CR \geq 0.70$), indicating that each construct sufficiently explained the variance of its indicators (Fornell & Larcker, 1981; Hair, Hult, Ringle, & Sarstedt, 2022).

Discriminant validity was assessed to ensure that each construct in the model was empirically distinct from the others. The Fornell–Larcker Criterion was applied, whereby the square root of the AVE for each construct was required to exceed the inter-construct correlations. Additionally, the Heterotrait–Monotrait Ratio (HTMT) was examined, with values below 0.90 confirming adequate discriminant validity (Henseler, Ringle, & Sarstedt, 2015).

Internal consistency reliability was further confirmed using Cronbach’s Alpha and McDonald’s Omega, both of which exceeded the recommended threshold of 0.70, supporting the stability and reliability of the measurement scales (Nunnally & Bernstein, 1994; McDonald, 1999). Overall, the measurement model met all required reliability and validity benchmarks, enabling progression to structural model testing.

3.8.6 Structural Equation Modelling

After establishing the reliability and validity of the measurement model, Structural Equation Modelling (SEM) was conducted using Smart-PLS 4 to test the hypothesized relationships among the latent constructs. SEM in the PLS-SEM framework focuses on maximizing explained variance and is particularly suitable for predictive behavioral studies and models involving multiple constructs with complex interrelationships (Hair, Hult, Ringle, & Sarstedt, 2022).

The structural model was evaluated through the examination of path coefficients, t-values, and p-values, which were generated using bootstrapping with 5,000 resamples. This non-parametric resampling procedure provides robust estimates of the significance of hypothesized paths without requiring multivariate normality (Chin, 1998). The coefficient of determination (R^2) was used to assess the explanatory power of the model, with higher R^2 values indicating stronger prediction of the endogenous construct, Behavioural Intention.

Additionally, Effect Size (f^2) was calculated to determine the contribution of each exogenous variable to the R^2 value of the endogenous construct, interpreted as small (0.02), medium (0.15), or large (0.35) effects (Cohen, 1988). Predictive Relevance (Q^2) was examined using blindfolding procedures; Q^2 values greater than zero indicated that the model possessed meaningful predictive capability (Hair et al., 2022). Overall, the SEM analysis enabled the empirical testing of the theoretical framework by quantifying the magnitude and significance of relationships between financial, psychological, and social predictors and the Behavioural Intention toward adopting a Reverse Mortgage Loan.

3.8.7 Mediation Analysis

Mediation analysis was carried out to examine whether Attitude functioned as a mediating variable in the relationship between the independent constructs and the dependent construct, Behavioural Intention. This step was undertaken to determine whether the influence of predictors such as Perceived Bequest Motive, Family Ties, Sense of Place Attachment, Financial Planning, Perceived Trust, Social Influence, and Perceived Ability operated directly or indirectly through Attitude. The analysis was performed using the bootstrapping procedure with 5,000 resamples in Smart-PLS 4, which provides robust estimates without relying on assumptions of normality (Hayes, 2018; Hair, Hult, Ringle, & Sarstedt, 2022).

The implication of mediation was determined by examining the indirect effect coefficients and their corresponding confidence intervals. Mediation was considered statistically significant when the confidence interval did not include zero, indicating a non-zero indirect effect (Zhao, Lynch, & Chen, 2010). Additionally, comparisons were made between direct and indirect effects to determine whether the mediation was partial (both direct and indirect paths significant) or full (direct path non-significant when the mediator is included).

This mediation testing provided insight into whether Attitude plays a central psychological role in shaping homeowners' willingness to adopt a Reverse Mortgage Loan.

3.8.8 Moderation Analysis

Moderation analysis was conducted to examine whether the effect of Attitude on Behavioural Intention varied across differing levels of continuous moderating variables, specifically Age and Property Value of the house owned by the respondent. These variables were included as moderators based on the theoretical understanding that both ageing-related financial planning considerations and the economic worth of the property may influence the strength of the decision-making process regarding Reverse Mortgage Loan (RML) adoption.

The moderation analysis was performed in Smart-PLS 4 using the product indicator approach, wherein interaction terms were created by multiplying standardized scores of the predictor (Attitude) and each moderator variable (Age and Property Value). This method is widely recommended in PLS-SEM for testing interaction effects in models involving continuous moderators (Chin, Marcolin, & Newsted, 2003; Hair, Hult, Ringle, & Sarstedt, 2022). Bootstrapping with 5,000 resamples was applied to assess the statistical significance of the interaction terms, ensuring reliable estimation without assumptions of multivariate normality.

Significant moderation was inferred when the path coefficient associated with the interaction term was statistically significant ($p < 0.05$), indicating that the relationship between Attitude and Behavioural Intention differed depending on the level of the moderator. The direction and magnitude of moderation effects were interpreted based on the sign of the interaction coefficient and plotted for clarity when relevant.

This analysis provided deeper insight into whether behavioural intention toward RML is uniformly influenced across age groups and property value segments or whether these contextual characteristics shape how homeowners evaluate and act upon their attitudes toward RML adoption.

3.8.9 Multi-Group Analysis

Multi-Group Analysis (MGA) was conducted to examine whether gender moderates the structural relationships among the constructs in the proposed model. Specifically, the analysis aimed to determine whether the effects of Family Ties, Perceived Ability, Financial Planning, Perceived Bequest Motive, Sense of Place Attachment, Social Influence, and Attitude on Behavioural Intention differ between male and female homeowners. MGA is valuable in identifying whether the psychological, social, and financial determinants influencing RML adoption vary across demographic groups (Hair, Hult, Ringle, & Sarstedt, 2022).

The dataset was divided into two groups based on gender (male and female), and separate PLS-SEM models were estimated using Smart-PLS 4. The Welch-Satterthwaite test, a parametric MGA technique, was applied as it is recommended when group variances and sample sizes are unequal (Sarstedt, Henseler, & Ringle, 2011). This test compares path coefficients across groups using bootstrapping with 5,000 resamples, without assuming equal variances or normal data distribution (Hair et al., 2017; Hayes, 2018).

A path difference was considered statistically significant at $p < 0.05$, indicating the presence of a moderating effect of gender. Conversely, $p > 0.05$ indicates that the relationship between the constructs does not significantly vary across male and female respondents (Henseler, Ringle, & Sarstedt, 2016)

3.9 Summary of Research Methodology

This study used a quantitative, cross-sectional survey based on the Extended Theory of Planned Behaviour (ETPB) to examine behavioural intention toward Reverse Mortgage Loan (RML) adoption among homeowners aged 50 and above in Goa. Purposive and snowball sampling were used to collect data from mortgage-free homeowners across all 12 talukas of Goa. A structured questionnaire with validated construct items on a 5-point Likert scale underwent expert review, pilot testing, and revisions before full administration through both online and offline modes.

Data were screened for accuracy, missing values, and outliers. Reliability and validity were confirmed using Cronbach's Alpha, McDonald's Omega, Composite Reliability, AVE, Fornell–Larcker Criterion, and HTMT ratio. Smart-PLS 4 was used for PLS-SEM, including CFA, measurement model assessment, structural model evaluation, mediation analysis via bootstrapping, moderation (Age and Property Value), and Multi-Group Analysis for gender differences, and Importance–Performance Matrix Analysis (IPMA) to identify the most influential and high-priority constructs for enhancing behavioural intention.

This methodology ensured rigor, contextual relevance, and predictive accuracy in examining the determinants of RML adoption intentions among homeowners in Goa.

Chapter 4

Conceptual Framework, Scale and Hypotheses Development

4.1 Conceptual Foundation

Understanding homeowners' intention to adopt Reverse Mortgage Loans (RMLs) requires a theoretical lens that captures how beliefs, social expectations, and perceived control shape financial decision-making in later adulthood. Decisions regarding RML adoption are often complex because they involve long-term security considerations, intergenerational norms, emotional attachment to home, and confidence in financial systems. Financial behaviour literature suggests that individuals form behavioural intentions based on subjective evaluations, perceived expectations of others, and self-assessed ability to execute the behaviour (Fishbein and Ajzen 1975; Ajzen 1991). In the context of RMLs, these evaluations are inclined by factors such as financial preparedness, family relationships, attitudes toward inheritance, property attachment, trust in financial institutions, and perceived competence in processing the loan mechanism (Shan 2011; Davidoff and Welke 2007).

The conceptual foundation of the present study draws upon the evolution of behavioural intention models, particularly the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB), and subsequent extensions of TPB (Ajzen 2002; Taylor and Todd 1995). These models acknowledge that behaviour is not only a logical decision but also shaped by emotional, cultural, and psychological dimensions. The Extended Theory of Planned Behaviour (ETPB) framework used here thus incorporates both core TPB constructs and additional psychological and socio-contextual variables relevant to homeowners' adoption of RMLs.

4.1.1 Theoretical Base

The theoretical foundation of this study is rooted in the evolution of behavioural decision-making models that explain how beliefs and perceptions shape intentions and actions. The earliest model, the Theory of Reasoned Action (TRA), proposed that behaviour is a direct function of behavioural intention, which itself is shaped by two determinants namely an individual's attitude toward the behaviour and subjective norms, or perceived social expectations (Fishbein and Ajzen 1975). According to TRA, individuals evaluate the possible outcomes of a behaviour and align their actions with both personal beliefs and interpersonal expectations. However, TRA assumes that individuals possess complete volitional control over behavioural outcomes, meaning that if a person intends to perform a behaviour, they will inevitably do so. This assumption does not hold in many real-world contexts, particularly in financial decision-making scenarios where external constraints, institutional frameworks, emotional influences, and perceived competency play significant roles.

To address these limitations, the Theory of Planned Behaviour (TPB) was introduced, incorporating Perceived Behavioral Control (PBC) as a third antecedent to behavioural intention (Ajzen 1991). PBC reflects the individual's assessment of their capacity to perform a behaviour, influenced by past experience, access to resources, and perceived barriers. TPB therefore posits that Attitude, Subjective Norms, and PBC collectively influence Behavioural Intention, which subsequently affects actual behaviour (Ajzen 2002). The inclusion of PBC is particularly relevant in contexts involving complex decision-making processes, uncertainty, or limited familiarity, such as adoption of retirement financial products. Individuals may hold favourable attitudes toward a financial behaviour yet fail to act if they perceive insufficient ability, confidence, or external support to carry out the behaviour effectively.

Despite its strong predictive value, TPB has been recognized as requiring contextual extension to fully explain behaviour in settings characterized by emotional attachment, cultural expectations, institutional trust, and life-stage transitions. In response, Taylor and Todd (1995) proposed the Extended Theory of Planned Behaviour (ETPB), which allows the integration of additional constructs to capture broader cognitive, social, and situational influences. Extensions to TPB have also been supported in later behavioural research frameworks, including technology and financial adoption models, where perceived trust, perceived risk, identity-based attitudes, and contextual social influences play critical roles in shaping decision-making (Venkatesh et al. 2003).

In the context of Reverse Mortgage Loan (RML) adoption, the ETPB framework offers distinct advantages. RML decisions are influenced not only by personal attitudes but also by cultural and familial norms surrounding property inheritance, emotional attachment to the home as a symbol of identity, confidence in navigating financial agreements, and trust in financial institutions and regulatory systems (Davidoff and Welke 2007; Caplin 2002; Shan 2011). Furthermore, older homeowners may perceive varying levels of control regarding financial negotiations or legal procedures, making PBC and its expanded interpretation especially relevant. The ETPB thus provides a comprehensive analytical structure capable of incorporating psychological, relational, and structural determinants, making it particularly suited for examining homeowners' intention to adopt RMLs.

4.1.2 Adaptation of TPB Constructs to the Present Study

In the present study, two TPB constructs are adapted to better reflect the socio-cultural context of household financial decision-making.

First, Subjective Norms are represented as Social Influence (SI). Social Influence captures the perceived opinions and expectations of key referents such as family members, relatives, peer networks, and financial advisors (Venkatesh et al. 2003). Financial decisions in households, particularly regarding property or inheritance, are rarely made individually but are shaped by collective family norms and shared financial responsibility (Ajzen 2002). Therefore, Social Influence better reflects the relational and consultative nature of homeowners' decision-making regarding RMLs.

Second, Perceived Behavioral Control (PBC) is reconceptualized as Perceived Ability (PA). Perceived Ability refers to the individual's confidence in understanding and handling the RML process, paperwork, interest terms, payment conditions, and legal implications (Bandura 1997). Financial behaviour studies show that individuals with higher financial self-efficacy are more prospective to adopt new or complex financial products (Hershey and Jacobs-Lawson 2008). Among senior homeowners, perceived ability plays a crucial role, as uncertainty or lack of familiarity may discourage RML adoption even when the product is financially beneficial (Kutty 1998).

Thus, the adaptation of TPB constructs increases relevance, cultural sensitivity, and explanatory clarity in the framework of RML adoption.

4.1.3 Extended Constructs

The Extended Theory of Planned Behaviour (ETPB) provides a flexible framework that allows the integration of additional psychological and contextual constructs to strengthen explanatory power. Given that decisions regarding Reverse Mortgage Loan (RML) adoption are embedded within complex emotional, cultural, and familial environments, the present study incorporates Financial Planning (FP), Sense of Place Attachment (SPA), Perceived Bequest Motive (PBM), Family Ties (FT), and Perceived Trust (PT) as key influencing variables. These constructs have been shown to shape financial behaviour in later life by influencing how individuals evaluate security, identity, risk, intergenerational responsibilities, and institutional confidence.

4.1.3.1 Financial Planning

Financial Planning refers to a proactive approach to managing financial resources for future needs, particularly during retirement (Hershey and Jacobs-Lawson 2008). Individuals with stronger financial planning orientation typically assess long-term income security, future contingencies, and economic sustainability of living arrangements. A well-developed planning mindset increases awareness of retirement income gaps and may lead individuals to consider RMLs as a viable and strategic instrument for supplementing post-retirement income. Conversely, inadequate planning may make RML adoption either more likely (due to desperation for funds) or less likely (due to uncertainty and lack of financial knowledge). Thus, FP shapes the evaluative and motivational cognition that underlies attitudes toward RML adoption.

4.1.3.2 Sense of Place Attachment

Sense of Place Attachment represents emotional, symbolic, and identity-based bonds individuals form with their homes (Scannell and Gifford 2010). For many older adults, the home is not merely a physical structure but a repository of memories, autonomy, and self-continuity accumulated over time. RMLs are unique among financial products because they allow homeowners to retain occupancy of the home while accessing its equity. High place attachment may therefore foster acceptance of RMLs as a means of maintaining residence in later life. However, it may also inhibit adoption if individuals interpret equity release as diminishing the symbolic or emotional value of the home. Hence, SPA has an ambivalent yet powerful role in shaping attitudes toward RML adoption.

4.1.3.3 Perceived Bequest Motive (PBM)

Perceived Bequest Motive reflects an individual's desire to transfer property or wealth to heirs (Cox and Stark 2005). In many cultural contexts, property serves as a central asset for intergenerational continuity, social identity, and family reputation. Strong bequest motives typically discourage homeowners from adopting RMLs because accessing home equity may reduce the inheritance left to children. However, in cases where heirs are financially secure or supportive of the homeowner's independence, PBM may not act as a deterrent. Therefore, PBM introduces a moral and cultural dimension to financial decision-making that extends beyond self-interest.

4.1.3.4. Family Ties

Family Ties refer to the emotional closeness, perceived obligations, and shared decision-making practices among family members (Bengtson and Roberts 1991). In collective or relational family systems, decisions regarding property are made jointly, and financial choices are viewed as family-level rather than individual-level outcomes. Strong family ties may discourage RML adoption if family members expect inheritance transfer or assume responsibility for the elder's financial care. Alternatively, supportive family networks may encourage RML adoption as a means to enhance the homeowner's well-being and independence. Thus, FT shapes the social negotiation process underlying the RML decision.

4.1.3.5 Perceived Trust (PT)

Perceived Trust refers to confidence in financial institutions, regulatory mechanisms, product transparency, and procedural fairness (Mayer, Davis and Schoorman 1995). Trust plays a central role in the adoption of financial instruments perceived as complex or unfamiliar. In the case of RMLs, trust is particularly salient due to past financial scandals, inadequate consumer awareness, and concerns about asset security (Ong and Lum 2003). Higher perceived trust increases confidence in the legal and financial legitimacy of the product, thereby strengthening both attitude and intention to adopt RMLs.

In summary, these extended constructs capture financial preparedness, emotional attachment, family and inheritance values, and institutional trust, thereby enriching the ETPB framework to reflect real-world decision-making in RML adoption.

4.1.4 Role of Mediators and Moderators

In the proposed framework, Attitude functions as a key mediator that channels the effects of psychological, social, and contextual determinants toward behavioural intention. Within the Theory of Planned Behaviour, Attitude is conceptualized as the overall evaluation of performing a behaviour based on cognitive appraisals and affective responses (Ajzen 1991). When individuals consider adopting Reverse Mortgage Loans (RMLs), they evaluate both tangible benefits such as income generation and intangible considerations such as emotional security, family expectations, and perceived stability (Shan 2011). The influence of constructs such as Social Influence, Perceived Ability, Financial Planning, Sense of Place Attachment, Perceived Bequest Motive, Family Ties, and Perceived Trust is therefore transmitted through Attitude, which synthesizes these cognitive and emotional factors into a final evaluative judgement (Ajzen 2002; Scannell and Gifford 2010). Research on financial decision-making consistently demonstrates that attitudes toward a financial product serve as the strongest proximal determinant of intention, especially in cases involving delayed outcomes, long-term implications, or perceived risk (Davidoff and Welke 2007; Hershey and Jacobs-Lawson 2008). Thus, Attitude serves as the central psychological mechanism linking antecedent beliefs to homeowners' intention to adopt RMLs.

In addition to mediation, the framework incorporates Age, Gender, and Property Value as moderating variables to account for variation among homeowners. Age influences retirement priorities, liquidity needs, emotional dependence, and openness to financial innovation. Younger seniors (50–60) tend to be more receptive to RMLs as a financial planning tool, while older seniors (61–70) are more cautious, often prioritizing asset preservation and inheritance for children (Shan, 2011). Age also affects emotional attachment to property, as individuals who have lived longer in the same dwelling typically develop stronger place identity and sentimental ownership, making them less willing to convert home equity

(Scannell & Gifford, 2010). Therefore, the moderating role of age captures how motivations vary across later-life stages, influencing RML adoption differently for younger and older senior homeowners.

Gender also moderates behavioural relationships, as gendered socialization shapes perceptions of financial responsibility, risk tolerance, and intergenerational obligations (Venkatesh et al. 2003). In many households, women often serve as custodians of family continuity and identity, which may lead to stronger consideration of inheritance preservation and relational expectations when evaluating RMLs (Bengtson and Roberts 1991). Conversely, men may demonstrate greater emphasis on financial autonomy and income security (Hershey and Jacobs-Lawson 2008). These differences influence how antecedent beliefs translate into attitudes and intentions.

Property Value functions as another key moderator, particularly because RML benefit depends directly on the economic value of the home. Higher property value increases the financial advantage of adopting an RML and may enhance the perception of RMLs as a viable resource for retirement income (Caplin 2002; Davidoff and Welke 2007). However, higher value properties also tend to be associated with stronger emotional and symbolic meaning, intensifying place attachment and bequest motives (Cox and Stark 2005). Therefore, the influence of predictors such as SPA and PBM may vary significantly across property wealth strata, justifying the moderating role of property value within the model.

Attitude mediates the influence of psychological, social, and evaluative constructs on behavioural intention, reflecting the central evaluative mechanism posited in the TPB. Meanwhile, Age, Gender, and Property Value moderate the strength and direction of these relationships, capturing heterogeneity associated with life-stage priorities, cultural role expectations, and asset valuation.

4.2 Conceptual Framework of the Study

The conceptual model developed for this study integrates the core constructs of the Extended Theory of Planned Behaviour (ETPB) with additional psychological, relational, and contextual determinants relevant to the adoption of Reverse Mortgage Loans (RMLs). The model positions Behavioural Intention (BI) as the primary dependent variable, influenced by both direct determinants and indirect pathways operating through the mediating role of Attitude (ATT). The inclusion of extended constructs such as Financial Planning (FP), Sense of Place Attachment (SPA), Perceived Bequest Motive (PBM), Family Ties (FT), and Perceived Trust (PT) broadens the theoretical scope of the model and acknowledges the emotional, cultural, and institutional conditions shaping late-life financial decision-making (Hershey and Jacobs-Lawson 2008; Scannell and Gifford 2010; Cox and Stark 2005; Bengtson and Roberts 1991; Mayer, Davis and Schoorman 1995).

Furthermore, the model incorporates Social Influence (SI) and Perceived Ability (PA), adapted from the original components of Subjective Norms and Perceived Behavioural Control respectively, to align with the socio-cultural decision environment in which RML choices occur (Ajzen 1991; Venkatesh et al. 2003; Bandura 1997). In addition to mediation, the model includes Age, Gender, and Property Value as moderating variables, recognizing heterogeneity in financial priorities, intergenerational values, and wealth positioning across different demographic segments (Shan 2011; Davidoff and Welke 2007). Thus, the conceptual model reflects a multi-layered theoretical interpretation that acknowledges both psychological processes and structural conditions influencing RML adoption among homeowners.

4.2.1 Overview of the Framework

The conceptual model proposes that homeowners' intention to adopt Reverse Mortgage Loans is molded by a combination of cognitive evaluations, emotional attachments, social expectations, and institutional trust perceptions. The model assumes that individuals evaluate RMLs not only as financial instruments but also as decisions embedded within broader cultural and familial contexts.

Within this framework, Attitude (ATT) is central, functioning as an evaluative filter through which beliefs about RMLs influence Behavioural Intention (Ajzen 2002). Antecedent constructs such as Financial Planning, Place Attachment, Bequest Motive, Family Ties, Social Influence, Perceived Ability, and Perceived Trust shape these attitudes. By placing Attitude at the center of the evaluative process, the model aligns with behavioural theory positing attitude as the strongest predictor of behavioural intention in contexts involving delayed, long-term, or high-uncertainty financial consequences (Davidoff 2015; Shan 2011).

The model further acknowledges that individual differences shape how beliefs are translated into intention. Age influences retirement horizon and wealth-use priorities; gender shapes financial negotiation roles and risk evaluations; and property value determines the financial incentive and emotional leverage associated with equity release (Venkatesh et al. 2003; Cox and Stark 2005; Caplin 2002). Therefore, the model extends beyond purely cognitive drivers to incorporate life-stage and socio-economic dimensions.

4.2.2 Description of Relationships Among Constructs

The model hypothesizes multiple direct and indirect relationships among its constructs

4.2.2.1 Direct Relationships

Social Influence, Perceived Ability, Financial Planning, Place Attachment, Bequest Motive, Family Ties, and Perceived Trust are expected to influence Behavioural Intention both directly and indirectly through Attitude. This reflects the premise that beliefs shape behavioural decisions by informing overall evaluation of the behaviour (Fishbein and Ajzen 1975).

4.2.2.2 Mediated Effects

Attitude serves as a mediator, transmitting the influence of the antecedent determinants onto Behavioural Intention. This is consistent with TPB assumptions that attitudes reflect synthesized cognitive and emotional appraisals, which then guide behavioural choice (Ajzen 1991; Ajzen 2002).

4.2.2.3 Moderated Effects

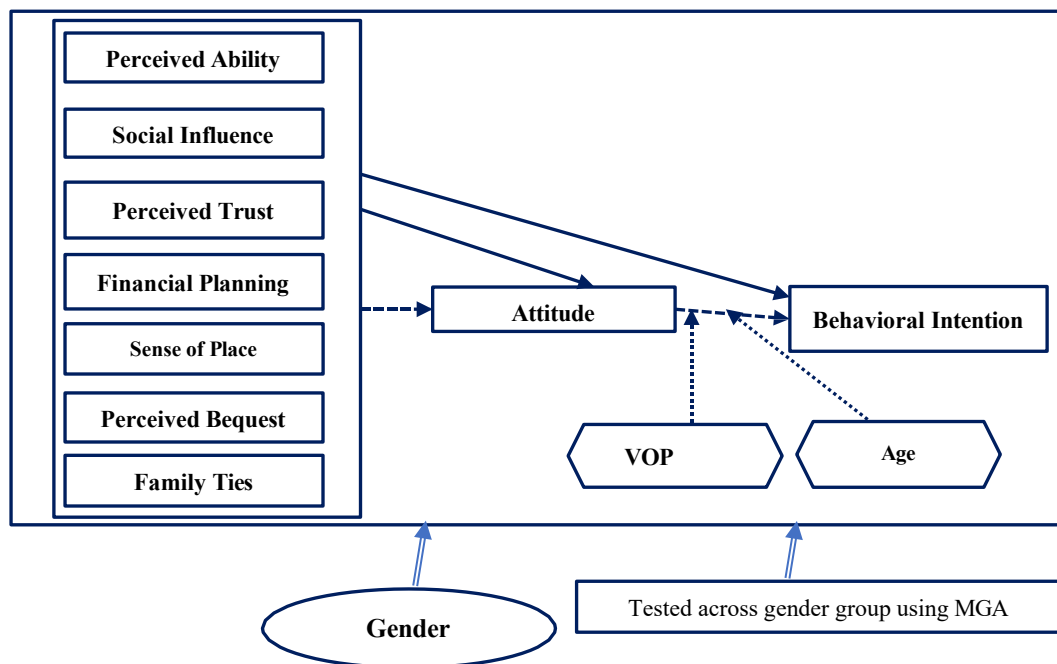
Age, Gender, and Property Value are proposed as moderators that condition the strength or direction of the relationships between Attitude and Behavioural Intention. For example, older individuals with strong place identity may show weaker responsiveness to financial planning cues, while homeowners with higher property values may perceive RMLs as more financially advantageous (Shan 2011; Davidoff and Welke 2007).

In this structure, the conceptual model reflects a mediated-moderation system, acknowledging both psychological evaluation pathways and contextual variation.

4.2.3 Conceptual Model

The conceptual model integrates the Extended Theory of Planned Behaviour (ETPB) with additional psychological and social determinants relevant to Reverse Mortgage Loan (RML) adoption. Attitude functions as the central mediating variable through which the antecedent constructs influence Behavioural Intention. The model also incorporates Age, Gender, and Property Value as moderating variables that may condition the strength of the relationship between Attitude and Behavioural Intention.

Figure 4.1. Conceptual Model of the Study



Source: Author's Compilation (adapted from the Extended Theory of Planned Behaviour)

In this model, the solid straight arrows represent direct relationships, showing the direct influence of independent variables on Attitude and Behavioural Intention. The solid arrows passing through another variable (Attitude) illustrate mediation, indicating that Attitude transmits the effect of the predictors to Behavioural Intention. The dotted arrows represent moderation, showing that the moderator variables influence or alter the strength of the relationship, particularly between Attitude and Behavioural Intention. The double-line arrows indicate Multi-Group Analysis (MGA) for comparing path strengths across different groups.

4.3 Definition and Operationalisation of Constructs

This section presents the conceptual definitions and operational measures of the key constructs employed in the study. Each construct is defined in accordance with its theoretical foundation within the Extended Theory of Planned Behaviour (ETPB) and subsequently operationalised through validated measurement scales adapted from prior empirical research. These definitions and measurement indicators establish conceptual clarity and ensure consistency between theoretical formulation and empirical assessment.

4.3.1 Behavioural Intention

Behavioural Intention (BI) signifies an individual's conscious readiness or willingness to engage in a particular behaviour and represents the most immediate predictor of actual action in both the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and the Theory of Planned Behaviour (Ajzen, 1991). In behavioural-finance literature, BI is frequently operationalised as purchase or adoption intention and has been used to explain decisions related to savings, investments, and financial innovations (Hernández-Ortega, 2011; Lusardi & Mitchell, 2014; Lin & Kim, 2020). Empirical studies consistently confirm BI as a robust determinant of behaviour in contexts such as stock-market participation, retirement planning, insurance purchase, and sustainable investment (East, 1993; Baker et al., 2019; Osei-Assibey et al., 2024). In India, BI has been extensively examined across financial domains, including mutual-fund investments (Akhtar & Das, 2019), fintech adoption (Adil, 2023), and pension products (Pandurugan, 2024), highlighting its critical role in linking attitudes and contextual beliefs with actual behavioural outcomes.

Within the context of Reverse Mortgage Loans (RMLs), BI reflects the homeowner's willingness to monetise housing equity as a financial-planning strategy during retirement. Prior research demonstrates that factors such as perceived ability, trust, and emotional

attachment significantly shape intention to adopt RMLs (Nakajima & Telyukova, 2013; Reed & Greenhalgh-Stanley, 2020; Ishaq & Sulaiman, 2018). In this study, BI serves as the dependent construct, capturing the extent to which senior homeowners' express readiness to adopt RMLs as a viable mechanism for achieving post-retirement financial security.

4.3.2 Attitude

Attitude reflects an individual's overall evaluative disposition favourable or unfavourable toward performing a behaviour (Ajzen, 1991). It integrates cognitive and affective appraisals that shape willingness to act. Across behavioural-finance research, attitude has been a central determinant of intention in investment, technology, and retirement-planning decisions (Hernández-Ortega, 2011; Lusardi & Mitchell, 2014; Lin & Kim, 2020). Indian studies on financial products and fintech adoption (Akhtar & Das, 2019; Adil, 2023; Singh et al., 2025) demonstrate that attitude consistently mediates the influence of beliefs, trust, and perceived ability on intention. In this framework, attitude represents homeowners' evaluative judgment toward RMLs, translating psychological and social factors into behavioural intention.

4.3.3 Social Influence

Social Influence (SI) captures perceived pressure or encouragement from important referents such as family, peers, or community members to perform a given behaviour (Fishbein & Ajzen, 1975). Numerous studies confirm its role in shaping financial and technological adoption decisions (Croy et al., 2010; Hoque et al., 2020; Boateng et al., 2022). In collectivist societies, social approval often governs individual financial choices, as evidenced in Indian studies linking normative influence with investment and borrowing intentions (Raut et al., 2018; Pandurugan, 2024). Within this study, SI represents the influence of family and societal expectations on homeowners' willingness to adopt RMLs.

4.3.4 Perceived Ability

Perceived Ability denotes an individual's confidence in understanding, managing, and executing a particular behaviour, aligning conceptually with perceived behavioural control in the TPB (Ajzen, 1991). It parallels financial self-efficacy, which has been shown to enhance engagement with complex financial instruments (Lown, 2011; Lin & Kim, 2020). Empirical evidence from developed markets indicates that higher perceived ability fosters greater intention to save, invest, and adopt financial technologies (Van Rooij et al., 2011; Yan et al., 2021). In India, perceived ability has been linked to financial-decision readiness and credit behaviour (Akhtar & Das, 2019; Singh et al., 2025). Here, it reflects homeowners' confidence in understanding RML features and managing related obligations.

4.3.5 Perceived Financial Planning

Perceived Financial Planning represents the degree of foresight and preparedness an individual demonstrates in managing present and future financial obligations (Lusardi & Mitchell, 2014). Strong financial planning orientation correlates with increased saving, investment diversification, and retirement readiness across global studies (Hasler & Lusardi, 2019; Stolper & Walter, 2017). Indian research likewise confirms that financially literate and forward-looking individuals are more inclined to adopt investment and pension products (Thanki et al., 2024; Pandurugan, 2024). Within this study, PFP reflects the homeowner's planning behaviour and financial awareness that enhance openness toward RML adoption.

4.3.6 Perceived Trust

Perceived Trust refers to the confidence placed in the reliability, integrity, and competence of financial institutions or service providers (Charness & Gneezy, 2012). Trust reduces perceived risk and promotes adoption of innovative financial products including online banking and reverse mortgages (Ryu, 2018; Reed & Greenhalgh-Stanley, 2020). Evidence from Indian banking and fintech sectors underscores that institutional trust significantly

influences adoption behaviour (Nair et al., 2022; Adil, 2023). Within the RML framework, PT captures homeowners' belief in the credibility and fairness of lending institutions, affecting both attitude and behavioural intention.

4.3.7 Sense of Place Attachment

Sense of Place Attachment reflects an individual's emotional and symbolic bond with their home or locality (Anton & Lawrence, 2014). Studies across developed economies reveal that strong place attachment discourages homeowners from converting property into financial assets, thereby affecting mobility and housing decisions (Wiles et al., 2012; Brown et al., 2015; Clark et al., 2023). In India, similar emotional connectedness to ancestral homes contributes to reluctance toward property monetisation (Pahuja & Sanjeev, 2016; Lakhan Gaonkar, 2019). SPA in this framework denotes the emotional barrier that may lower acceptance of RMLs.

4.3.8 Family Ties

Family Ties encompass emotional and moral responsibilities toward family members, particularly intergenerational support and inheritance expectations (Albertini & Kohli, 2012; Kim & Chatterjee, 2013). Strong familial bonds can restrict elderly homeowners' willingness to liquidate property assets (Yamada & Sato, 2017). In the Indian sociocultural setting, family obligations and the desire to preserve property for descendants profoundly influence financial decisions (Kapur & Bernheim, 2007; Ashok, 2020). FT therefore represents the strength of familial responsibility that constrains homeowners from adopting RMLs.

4.3.9 Perceived Bequest Motive

Perceived Bequest Motive captures the intention to transfer property or wealth to heirs rather than using it for personal financial consumption (Venti & Wise, 2004). Global studies establish that stronger inheritance motives reduce willingness to monetise housing equity (Nakajima & Telyukova, 2013; Angelini & Laferrère, 2012). Similar findings in Japan and India indicate that property is often viewed as a legacy asset for future generations (Sekita, 2016; Gupta & Kumar, 2018; Pandurugan, 2024). In this framework, PBM measures the extent to which homeowners' bequest intentions diminish their likelihood of adopting RMLs.

4.4 Constructs and Sources of Measurement Items

The constructs in this study were measured using items adapted from previously validated scales in behavioural intention, retirement planning, equity release, and social psychology research. Adaptations were made to align the scale wording with the socio-cultural and financial decision-making context of homeowners considering Reverse Mortgage Loans (RMLs). To ensure contextual validity, globally recognized measurement foundations were supplemented with supporting literature from Indian household, inheritance, and banking behaviour studies. All items were assessed on a 5-point Likert scale (Strongly Agree to Strongly Disagree).

Table 4.1: Constructs and Sources of Measurement Items

Sr. No.	Construct	Sample Source(s) / Adapted from	Description of Measurement Focus
1	Behavioural Intention	<i>Fishbein & Ajzen (1975); Ajzen (1991); Ishaq & Sulaiman (2018); Akhtar & Das (2019)</i>	Measures homeowners' willingness or readiness to adopt Reverse Mortgage Loans as a financial-planning tool during retirement.
2	Attitude	<i>Ajzen (1991); Hernández-Ortega (2011); Lusardi & Mitchell (2014); Adil (2023)</i>	Captures overall favourable or unfavourable evaluation of adopting RMLs.
3	Social Influence	<i>Fishbein & Ajzen (1975); Croy et al. (2010); Raut et al. (2018); Hoque et al. (2020)</i>	Assesses perceived pressure or encouragement from family, peers, and community regarding RML adoption.
4	Perceived Ability	<i>Ajzen (1991); Lown (2011); Lin & Kim (2020); Singh et al. (2025)</i>	Reflects self-confidence and perceived capability to understand and manage RML features.
5	Perceived Financial Planning	<i>Lusardi & Mitchell (2014); Hasler & Lusardi (2019); Stolper & Walter (2017); Thanki et al. (2024)</i>	Evaluates financial foresight, preparedness, and planning behaviour influencing openness to RMLs.
6	Perceived Trust	<i>Charness & Gneezy (2012); Ryu (2018); Reed & Greenhalgh-Stanley (2020); Nair et al. (2022); Adil (2023)</i>	Gauges trust in banks and financial institutions providing RML services.
7	Sense of Place Attachment	<i>Anton & Lawrence (2014); Wiles et al. (2012); Brown et al. (2015); Pahuja & Sanjeev (2016)</i>	Measures emotional connectedness to home or locality influencing property monetisation decisions.
8	Family Ties	<i>Taylor & Todd (1995); Albertini & Kohli (2012); Kim & Chatterjee (2013); Ashok (2020)</i>	Captures familial obligations and intergenerational responsibilities affecting RML decisions.
9	Perceived Bequest Motive	<i>Venti & Wise (2004); Nakajima & Telyukova (2013); Angelini & Laferrère (2012); Gupta & Kumar (2018)</i>	Represents homeowners' desire to retain property as inheritance rather than convert it into cash through RMLs.

4.5 Hypotheses Development

4.5.1 Direct Effects on Behavioural Intention

This section proposes the direct-effect hypotheses. It examines how eight independent variables including three core TPB constructs (Attitude, Social Influence, Perceived Ability) and five extensions (Perceived Bequest Motive, Sense of Place Attachment, Family Ties, Perceived Trust, Perceived Financial Planning) are expected to influence homeowners' Behavioural Intention (BI) toward adopting Reverse Mortgage Loans (RMLs). (Ishaq & Sulaiman, 2018; Ashok, 2020; Gupta & Kumar, 2018).

4.5.1.1 Attitude → Behavioural Intention

Attitude denotes an individual's overall favourable or unfavourable assessment of engaging in a particular behaviour. (Ajzen, 1991). Strong positive attitudes have been shown to drive intention in financial decisions (Akhtar & Das, 2019; Pandurugan, 2024). In study on reverse mortgages in Malaysia, attitude was a substantial interpreter of willingness to adopt RML (Ishaq & Sulaiman, 2018). Similar findings are observed globally in various behavioural finance contexts such as mortgage adoption in the U.S. (Nakajima & Telyukova, 2013), pension participation in the U.K. (Brown & Laschever, 2012), green investment in Australia (Baker et al., 2019), and retirement financial planning in China (Yan et al., 2021) where attitude consistently emerged as a major determinant of intention

H1a: Attitude positively influences homeowners' behavioural intention to adopt RMLs.

4.5.1.2 Social Influence → Behavioural Intention

Social Influence (adapted from subjective norms) captures perceived pressures or encouragement from close referents (family, peers) (Fishbein & Ajzen, 1975). In Indian financial contexts, normative influence plays a strong role in investment and borrowing intentions (Raut et al., 2018). Study also found social influence significantly affecting reverse mortgage adoption (Ishaq & Sulaiman, 2018). Related studies have arrived at similar conclusions in developed markets where social and cultural norms shape mortgage and retirement planning behaviour (Croy and associates, 2010; Nienaber & Schewe, 2014; Koropp and others, 2014). Social influence is also significant in FinTech adoption studies in Europe and Africa (Hoque et al., 2020; Boateng et al., 2022).

H1b: Social Influence positively influences homeowners' behavioural intention to adopt RMLs.

4.5.1.3 Perceived Ability → Behavioural Intention

Perceived Ability (a variant of perceived behavioural control) reflects confidence in managing and executing the behaviour (Ajzen, 1991). It is similar to financial self-efficacy. In investment and credit behaviour studies, higher perceived ability strongly predicts intention (Akhtar & Das, 2019; Singh et al., 2025). RML work also showed perceived ability as a constructive driver (Ishaq & Sulaiman, 2018). This association has likewise been validated across global contexts such as credit card adoption in the U.S. (East, 1993), retirement savings in the U.K. (van Dalen et al., 2010), and financial technology adoption in Europe (Hernández-Ortega, 2011; Lin & Ki, 2020).

H1c: Perceived Ability positively influences homeowners' behavioural intention to adopt RMLs.

4.5.1.4 Perceived Bequest Motive → Behavioural Intention

The bequest motive is the desire to leave property or wealth to heirs, which can discourage monetising assets (Gupta & Kumar, 2018; Ashok, 2020). “Motive of bequest” was found to have a negative linkage with the willingness to adopt reverse mortgages (Ishaq & Sulaiman, 2018). A similar negative correlation has been widely reported in the U.S. (Venti & Wise, 2004; Nakajima & Telyukova, 2013), Japan (Sekita, 2016), and European studies on wealth transfer and housing decisions (Chiuri & Jappelli, 2010; Angelini & Laferrère, 2012).

H1d: Perceived Bequest Motive Positively influences homeowners’ behavioural intention to adopt RMLs.

4.5.1.5 Sense of Place Attachment → Behavioural Intention

Sense of Place Attachment is the emotional bond with one’s home or locality, which can reduce willingness to convert it into a financial instrument (Pahuja & Sanjeev, 2016; Lakhan Gaonkar, 2019). Ishaq’s results also support place attachment’s negative effect on reverse mortgage intention (Ishaq & Sulaiman, 2018). Internationally, Equivalent patterns have been evidenced homeowners’ emotional attachment to their residence reduces mobility and mortgage refinancing (Anton & Lawrence, 2014; Brown et al., 2015; Clark et al., 2023). Studies in Canada, the U.K., and Australia confirm that attachment to place influences elderly homeowners’ reluctance toward financial conversion of property (Rowles, 2018; Wiles et al., (2012)

H1e: Sense of Place Attachment influences homeowners’ behavioural intention to adopt RMLs.

4.5.1.6 Family Ties → Behavioural Intention

Family Ties capture the social and emotional obligations toward family, including preferences to maintain property intact for descendants. In Indian contexts, family expectations strongly influence financial choices (Taylor & Todd, 1995; Singh et al., 2025). International studies show similar outcomes, inheritance norms and familial responsibilities

significantly affect elder homeowners' financial decisions (Kapur & Bernheim, 2007; Kim & Chatterjee, 2013). Studies in East Asia (Yamada & Sato, 2017) and Southern Europe (Albertini & Kohli, 2012) confirm that intergenerational family bonds limit the willingness to liquidate property.

H1f: Family Ties Positively influence homeowners' behavioural intention to adopt RMLs.

4.5.1.7 Perceived Trust → Behavioural Intention

Perceived Trust in financial institutions is critical in financial product adoption, especially when the product is complex or unfamiliar (Adil, 2023). Indian studies in banking and fintech establish that trust boosts intention (Nair et al., 2022). Similar tendencies have been recorded globally: in Europe, trust significantly influences pension fund participation and mortgage choice (Charness & Gneezy, 2012); in Australia, it affects reverse mortgage acceptance (Reed & Greenhalgh-Stanley, 2020); and in Southeast Asia, it determines fintech adoption and digital banking usage (Lim et al., 2011; 2018)

H1g: Perceived Trust positively influences homeowners' behavioural intention to adopt RMLs.

4.5.1.8 Perceived Financial Planning → Behavioural Intention

Perceived Financial Planning reflects preparedness and foresight in managing finances. Individuals with better planning orientation are more likely to adopt advanced financial products (Thanki et al., 2024; Pandurugan, 2024). Global evidence supports this association: better financial planning predicts higher retirement readiness and financial innovation adoption in the U.S. and U.K. (Lusardi & Mitchell, 2014; Stolper & Walter, 2017). Studies in Japan (Sekita, 2016) and Europe (Hasler & Lusardi, 2019) similarly highlight financial planning as a precursor to financial product acceptance.

H1h: Perceived Financial Planning positively influences homeowners' behavioural intention to adopt RMLs.

4.5.2 Direct Relationships: IDVs (excluding Attitude) → Attitude

4.5.2.1 Social Influence → Attitude

Social influence can shape one's attitude by creating perceived approval or normative encouragement (Ajzen, 1991). Empirical evidence from past research indicates that individuals' attitudes toward new financial or technological products are designed through social expectations (Croy et al., 2010; Nienaber & Schewe, 2014). Empirical studies in India and Malaysia demonstrated that peer and family opinions significantly impact positive attitudes toward reverse mortgages and investment decisions (Raut et al., 2018; Ishaq & Sulaiman, 2018). Globally, studies in Europe and Africa also validate that social norms enhance positive attitudes toward FinTech, mobile banking, and pension products (Hoque and group, 2020; Boateng and associates., 2022; Osei-Assibey et al., 2024)

H2a: Social Influence positively influences Attitude toward RML adoption.

4.5.2.2 Perceived Ability → Attitude

Confidence in one's ability to understand and manage RML features can foster a favorable attitude (Akhtar & Das, 2019). Empirical findings from global contexts show similar results: financial self-efficacy promotes favorable attitudes toward saving and investment (Lown, 2011; van Rooij and group., 2011). Studies in Europe and East Asia, highlighted the role of perceived behavioural control positively shapes attitude in financial innovation and credit behavior (Hernández-Ortega, 2011; Lin & Kim, 2020; Yan and associates., 2021). Indian evidence further substantiates the link between perceived ability and attitude in financial decisions (Singh)

H2b: Perceived Ability positively influences Attitude toward RML adoption.

4.5.2.3 Perceived Bequest Motive → Attitude

A stronger bequest motive may bias attitudes against converting one's home into liquid assets (Gupta & Kumar, 2018; Ashok, 2020). A similar negative correlation has been recorded across the world, where homeowners with stronger inheritance desires display less favorable attitudes toward reverse mortgages and equity release (Venti & Wise, 2004; Nakajima & Telyukova, 2013; Chiuri & Jappelli, 2010; Sekita, 2016). Similar findings exist in India and Malaysia, where emotional and moral obligations to heirs create negative attitudes toward property liquidation (Ishaq & Sulaiman, 2018; Pandurugan, 2024)

H2c: Perceived Bequest Motive positively influences Attitude toward RML adoption.

4.5.2.4 Sense of Place Attachment → Attitude

Emotional connection to home may contribute to more cautious or negative attitudes toward monetisation (Pahuja & Sanjeev, 2016). Globally, empirical evidence indicates that a strong sense of place and emotional connectedness are significant predictors of cautious financial behaviour, especially among homeowners. (Anton & Lawrence, 2014; Wiles et al., 2012; Clark et al., 2023). Studies in Australia, Canada, and the U.K. confirm that place attachment can reduce openness to financial products such as reverse mortgage schemes (Brown et al., 2015; Rowles, 2018)

H2d: Sense of Place Attachment positively influences Attitude toward RML adoption.

4.5.2.5 Family Ties → Attitude

Family expectations and obligations may lead one to view RMLs unfavourably (Taylor & Todd, 1995). In the Indian context, family structure and cultural values strongly shape financial attitudes (Ashok 2020, Singh et al., 2025). International research also supports that family interdependence affects attitudes toward housing and wealth conversion decisions (Albertini & Kohli, 2012; Yamada & Sato, 2017; Kim & Chatterjee, 2013). Studies across Asian reveal that stronger filial ties create negative attitudes toward asset monetisation (Kapur & Bernheim, 2007; Angelini & Laferrère, 2012)

H2e: Family Ties positively influence Attitude toward RML adoption.

4.5.2.6 Perceived Trust → Attitude

Trust enhances confidence and reduces perceived risk, thus positively shaping attitude (Adil, 2023). Global studies confirm that institutional trust enhances positive attitudes toward financial products (Charness & Gneezy, 2012; Reed & Greenhalgh-Stanley, 2020; Ryu, 2018). In the Indian context, trust in financial intermediaries has been shown to improve consumer attitudes toward banks and digital finance (Nair et al., 2022; Thanki et al., 2024).

H2f: Perceived Trust exerts a positive impact on attitude toward RML adoption.

4.5.2.7 Perceived Financial Planning → Attitude

Individuals with better financial planning and literacy are likely to exhibit more favorable attitudes toward financial innovations and investments, a relationship consistently supported across global studies (Lusardi & Mitchell, 2014; Sekita, 2016; Stolper & Walter, 2017; Hasler & Lusardi, 2019; Lusardi et al., 2021; Pandurugan, 2024).

H2g: Perceived Financial Planning has a positive effect on attitude toward RML adoption.

4.5.3 Mediation Hypotheses

Mediation analysis is instrumental in advancing behavioural research as it explains how independent variables are key predictors of behavioural intentions through intervening psychological processes (Baron & Kenny, 1986; Hayes, 2013). Within Ajzen's behavioural framework and its extensions, mediators capture the cognitive and affective mechanisms that translate beliefs, social pressures, and contextual factors into behavioral intentions (Ajzen, 1991; Fishbein & Ajzen, 2010). By identifying these indirect effects, researchers move beyond direct relationships that shape financial and behavioral outcomes (Preacher & Hayes, 2008).

In behavioral finance, mediation frameworks are widely used to reveal how perceptions, attitudes, and trust transmit the contribution of exogenous factors on investment, saving, and financial product adoption (Lusardi & Mitchell, 2014; Lin & Kim, 2020; Hernández-Ortega,

2011). Prior research on mortgage adoption confirms that mediating issues such as apparent practicality, self-efficacy, and financial literacy link qualifying conditions and communal inspirations to user intentions (Ryu, 2018; Hoque et al., 2020; Boateng et al., 2022; Nakajima & Telyukova, 2013; Angelini & Laferrère, 2012; Hasler & Lusardi, 2019). In emerging economies mediation testing has clarified how literacy, trust, and social influence indirectly shape borrowing and investment decisions (Akhtar & Das, 2019; Ishaq & Sulaiman, 2018; Adil, 2023; Yan et al., 2021). Therefore, the inclusion of mediation hypotheses in this study is theoretically grounded and empirically justified, enhancing the extended TPB framework (Preacher & Hayes, 2008; Hayes, 2013; Henseler et al., 2016).

4.5.3 Mediation through Attitude

Attitude mediates the relationship between independent variables and Behavioural Intention (BI) to adopt RMLs. Within the ETPB (Ajzen, 1991; Taylor and Todd, 1995), Attitude represents the key psychological process that transforms beliefs, social influences, and contextual perceptions into intention. Across international behavioral finance literature, Attitude consistently functions as a mediator linking cognitive beliefs and external stimuli with behavioral intention. Empirical evidence shows that Attitude accounts for substantial variance in intention across domains such as financial technology adoption (Hernández-Ortega, 2011; Lin and Kim, 2020; Hoque et al., 2020), sustainable investment (Baker et al., 2019; Osei-Assibey et al., 2024), mortgage decisions (Nakajima and Telyukova, 2013; Angelini and Laferrère, 2012), and personal financial planning (Lusardi and Mitchell, 2014; Hasler and Lusardi, 2019).

In the Indian context, Attitude has been validated as a mediator influencing investment behaviour (Akhtar and Das, 2019; Thanki et al., 2024), FinTech usage (Adil, 2023), and pension product adoption (Pandurugan, 2024). These findings are in line with international evidence where Attitude translates perceived ability, trust, and social influence into

behavioral intention (Boateng et al., 2022; Lim et al., 2022). Therefore, exploring the intermediary function of Attitude within the framework of RML adoption among Indian homeowners is both appropriate and theoretically sound.

4.5.3.1 Social Influence → Attitude → Behavioural Intention

Social influence shapes perceptions and encourages favorable evaluations toward a behaviour, thereby enhancing the impact of social pressure on behavioral intention through Attitude. Globally, studies demonstrate that Attitude mediates the relationship between social norms and intention in contexts such as green finance (Baker and co-authors., 2019; Osei-Assibey et al., 2024), mobile banking (Hoque and others, 2020), and technology adoption (Lin & Kim, 2020). In the Indian context, Raut et al. (2018) and Adil (2023) confirmed that normative influence affects financial decision intentions primarily through Attitude formation. Ishaq & Sulaiman (2018).

H3a: Attitude mediates the relationship between Social Influence and Behavioural Intention.

4.5.3.2 Perceived Ability → Attitude → Behavioural Intention

Perceived Ability has been found to foster positive Attitudes that, in turn, enhance intention to engage in financial behaviour. In global research, studies on online banking and savings intention highlight Attitude's mediating role between perceived control and intention (Hernández-Ortega, 2011; Lin & Kim, 2020; Yan et al., 2021). Van Rooij et al. (2011) and Lusardi & Mitchell (2014) found that confidence in financial management improves Attitude and drives investment readiness. Indian studies echo these findings: Akhtar & Das (2019) and Singh et al. (2025) identified Attitude as a significant mediator linking financial ability and behavioural intention.

H3b: Attitude mediates the relationship between Perceived Ability and Behavioural Intention.

4.5.3.3 Perceived Bequest Motive → Attitude → Behavioural Intention (BI)

Homeowners motivated by leaving an inheritance tend to form unfavourable attitudes toward reverse mortgage adoption, which mediates their lower intention to participate in asset monetisation. Globally, this mediating mechanism has been supported in U.S. and European studies on housing and bequest Behaviour (Venti & Wise, 2004; Angelini & Laferrère, 2012; Nakajima & Telyukova, 2013). In Japan and Korea, Sekita (2016) and Yamada & Sato (2017) found that strong inheritance motives led to unfavourable Attitudes toward property-backed loans. Indian findings by Gupta & Kumar (2018) and Ashok (2020) similarly showed that bequest motives indirectly reduce RML adoption through negative Attitude formation.

H3c: Attitude mediates the relationship between Perceived Bequest Motive and Behavioural Intention.

4.5.3.4 Sense of Place Attachment → Attitude → Behavioural Intention

Sense of Place Attachment often creates an emotional barrier, shaping less favorable Attitudes that lower intention to adopt financial mechanisms involving home equity. Global studies confirm that attachment to one's home mediates emotional and cognitive responses influencing housing-related financial decisions (Anton & Lawrence, 2014; Wiles et al., 2012; Clark et al., 2023). Research in Australia and Canada found that older adults' emotional attachment lowers positive Attitudes toward reverse mortgages and downsizing (Brown et al., 2015; Rowles, 2018). In India, Pahuja & Sanjeev (2016) highlighted equivalent mediating impacts of emotional connectedness on decision to monetise property

H3d: Attitude mediates the relationship between Sense of Place Attachment and Behavioural Intention.

4.5.3.5 Family Ties → Attitude → Behavioural Intention

Strong Family Ties shape moral obligations and social values that influence Attitude formation toward RMLs. Globally, intergenerational family expectations have been shown to intermediate the outcome of familial norms on financial decision intention (Albertini & Kohli, 2012; Yamada & Sato, 2017; Kim & Chatterjee, 2013). Studies in Europe and Asia reveal that familial attachment leads to cautious or negative Attitudes toward mortgage

products (Kapur & Bernheim, 2007; Angelini & Laferrère, 2012). Studies also confirm this pattern, where family norms indirectly affect investment intention through Attitude (Ashok, Taylor & Todd, 1995; Singh et al., 2025)

H3e: Attitude mediates the relationship between Family Ties and Behavioural Intention.

4.5.3.6 Perceived Trust → Attitude → Behavioural Intention

Trust performs as a fundamental antecedent of Attitude, mediating the affiliation amongst established credibility and adoption intention. Empirical studies worldwide highlight Attitude's intermediary role linking trust with behavioural intention in both financial and technology-related contexts. (Charness & Gneezy, 2012; Ryu, 2018; Lim et al., 2022). Reed & Greenhalgh-Stanley (2020) found that trust in lenders improves Attitude, leading to higher acceptance of reverse mortgages in Australia. In the Indian context, Adil (2023) and Nair et al. (2022) reported that institutional trust strengthens Attitude, ultimately enhances intention toward financial innovation.

H3f: Attitude mediates the association between Perceived Trust and Behavioural Intention.

4.5.3.7 Perceived Financial Planning → Attitude → Behavioural Intention

Financially prepared individuals are inclined to hold positive perceptions of complex financial products, leading to stronger adoption intentions. International research consistently finds Attitude acts as a mediating mechanism concerning the connection between financial planning, financial literateness, and behavioural intention. (Lusardi & Mitchell, 2014; Hasler & Lusardi, 2019; Stolper & Walter, 2017). Studies from Japan (Sekita, 2016) and the U.S. (Lusardi et al., 2021) show that planning behaviour enhances Attitude, promoting retirement readiness and investment behaviour. Indian evidence also supports this: Pandurugan (2024) and Thanki et al. (2024) found that effective financial planning positively influences Attitude, which subsequently predicts intention

H3g: Attitude mediates the relationship between Perceived Financial Planning and Behavioural Intention.

4.5.4 Moderating Effects

In behavioral and social science research, moderation occurs when the strength or direction of the relationship between an independent and a dependent variable change depending on a third variable, known as the moderator (Baron & Kenny, 1986; Frazier et al., 2004). Moderation effects identify borderline conditions under which theoretical relationships hold, thereby enhancing the explanatory power of behavioral models (Hayes, 2013). Within the behavioural intention model, moderators often include socio-demographic or contextual socioeconomic indicators such as age, income bracket, and education level or wealth that shape how mental frameworks and attitudinal responses translate into behavioral intentions (Ajzen, 1991; Fishbein & Ajzen, 2010).

Globally, moderation analysis has been widely applied in behavioral finance to explain why individuals with similar attitudes may display different behavioral outcomes (Lusardi & Mitchell, 2014; Lin & Kim, 2020). Studies on retirement planning and mortgage borrowing indicate that age, income, and asset value moderate the relationship between financial attitudes and adoption intentions (Nakajima & Telyukova, 2013; Angelini & Laferrière, 2012). Likewise, in digital finance and investment settings, demographic moderators influence how financial literacy, trust, and perceived control shape behavioral intentions (Hoque et al., 2020; Boateng et al., 2022; Osei-Assibey et al., 2024). Evidence from India also confirms that socio-economic issues such as wealth, estate, age, and gender, moderate attitude–intention relationships in investment behaviour (Akhtar & Das, 2019; Adil, 2023; Singh et al., 2025). Accordingly, this study introduces Age and Property Value as moderators within the Extended TPB framework to examine whether these variables amend the strength in the context of Attitude–Behavioural Intention dynamics (BI) toward using RMLs.

4.5.4.1 Age acting as a moderating factor

Age performs the function of a key demographic moderator influencing financial behavior, decision-making, and psychological readiness toward new financial products. With increasing age, changes in financial priorities, cognitive processing, and the need for security become more pronounced (Lusardi & Mitchell, 2014; Finke et al., 2016). Older adults tend to value stability and liquidity differently from younger individuals, affecting the Attitude–Intention relationship (Hershey et al., 2010; Charness & Gneezy, 2012). Evidence from developed economies such as the U.S. and U.K. indicates that older consumers’ financial attitudes more strongly predict retirement planning and reverse mortgage adoption due to higher dependence on home equity (Nakajima & Telyukova, 2013; Angelini & LaFerrère, 2012).

Across global studies, age consistently moderates behavioral finance models, as younger consumers’ attitudes are shaped by technology-related perceptions, while older individuals’ attitudes reflect financial security concerns (Hernández-Ortega, 2011; Hoque et al., 2020). Research on pension and saving behaviour also reveals age-based variations in the Attitude–Intention link (Clark et al., 2023; Osei-Assibey et al., 2024). In the Indian context, Akhtar & Das (2019), Singh & group. (2025), and Adil (2023) revealed that elder participants exhibit stronger connections between constructive outlooks and saving or adoption intentions.

H4a: Age moderates the relationship between Perceived Attitude and Behavioural Inclination toward adopting RML

4.5.4.2 Moderating Role of Property Valuation

Property value serves as a key contextual moderator that shapes financial behaviour. Among homeowners, higher property value often enhances perceived financial security and risk tolerance, thereby influencing how attitudes translate into intentions (Ashok, 2023; Adil, 2023). Global evidence shows that individuals owning higher-value assets are more inclined

to convert their properties into liquid cash when they hold favorable attitudes toward such products (Nakajima & Telyukova, 2013; Angelini & Laferrère, 2012; Reed & Greenhalgh-Stanley, 2020).

Behavioral finance literature confirms that asset value moderates financial decision-making, particularly in mortgage and wealth management contexts. Studies from Europe and the U.S. show that property and wealth strengthen the contribution of attitude to adopt innovative financial products like home equity loans (Chiuri & Jappelli, 2010; Venti & Wise, 2004; Brown et al., 2015). Similarly, evidence from Japan, South Korea, and India indicates that wealthier homeowners with higher-valued properties and stronger financial control are more receptive to innovative financial solutions, including Reverse Mortgage Loans and other asset monetisation options (Sekita, 2016; Yamada & Sato, 2017; Gupta & Kumar, 2018; Ashok, 2023). Hence, homeowners possessing higher-valued properties are more likely to translate favorable attitudes into intentions to adopt Reverse Mortgage Loans (RMLs).

H4b: Property Value moderates the interaction between Attitude and behavioural tendency toward RML usage

4.5.5 Gender-Based Multi-Group Hypotheses

4.5.5.1 Gender Moderation

Gender is a critical moderating variable in behavioral finance and social psychology, shaping cognitive processing, risk tolerance, trust formation, and financial decision-making (Croson & Gneezy, 2009; Lusardi & Mitchell, 2014). Research shows that men generally demonstrate higher financial self-efficacy and risk-taking propensity, while women exhibit stronger trust sensitivity, relational motivation, and risk aversion (Byrnes et al., 1999; Barber & Odean, 2001; Charness & Gneezy, 2012).

Within the Behavioural Prediction Model, gender has been shown to moderate relationships among individual attitude, community norms, and perceived ability, and behavioral intention (Lin & Kim, 2020; Hoque et al., 2023). Women tend to rely more on emotional and social cues, whereas men emphasize cognitive and performance-based evaluations (Boateng et al., 2022; Osei-Assibey et al., 2024). Prior scholarly work substantiates that perceived usefulness, trust, and perceived risk influence participants of different genders differently in fintech and investment contexts (Sachdeva et al., 2024; Singh et al., 2024). Previous studies show that men investors' intentions are shaped by confidence and risk propensity, contrarily, women investors tend to exhibit more guided by trust, perceived security, and normative pressures (Akhtar & Das, 2019; Hauff & Nilsson, 2023). Gender also moderates relationships between financial literacy, perceived control, and well-being (Hershey et al., 2010; Adil, 2023), as men and women process financial information through distinct belief-related and sentiment-oriented pathways (Pandurugan, 2024; Lin & Kim, 2020).

Accordingly, this study examines gender as a moderator in Reverse Mortgage Loan (RML) adoption through Multi-Group Analysis (MGA) using Smart-PLS. The Welch–Satterthwaite (WS) test compares gender-based comparison of structural coefficients, offering robust results under unequal sample sizes and variances (Henseler and associates, 2016; Matthews and associates., 2022). Integrating gender moderation enriches the extended TPB framework by revealing how men and women differentially evaluate trust, risk, and social influence in forming behavioral intentions toward RML adoption.

4.5.5.1.1 Gender-Based Moderation on Attitude

Gender-based differences in attitude formation are central to behavioral finance and the intention-based behaviour model. Gender differences are evident in emotional attachment, perceived control, and trust in financial institutions, which determine how their perceptions and attitudes toward financial innovations are formed (Croson & Gneezy, 2009; Charness &

Gneezy, 2012; Lin & Kim, 2020). Female respondents often develop favorable attitudes based on relational trust and social influence, whereas male respondents rely more on perceived ability and financial self-efficacy (Lusardi & Mitchell, 2014; Hoque et al., 2020; Adil, 2023; Singh et al., 2025). Empirical evidence across Europe, Africa, and Asia supports gender-based differences in cognitive and emotional processing, confirming that gender moderates how social norms and perceived ability influence attitude formation (Boateng et al., 2022; Hoque and others 2020; Osei-Assibey and co-authors 2024). In the Indian context, women tend to be more influenced by social approval and trust cues, while men respond more strongly to self-efficacy and financial planning motivations (Akhtar & Das, 2019; Adil, 2023). These behavioral distinctions justify examining gender-specific pathways for attitude formation and their subsequent influence on homeowners' intention to adopt Reverse Mortgage Loans.

H5: The structural relationships between the independent variables (Social Influence, Perceived Ability, Family Ties, Sense of Place Attachment, Perceived Bequest Motive, Perceived Financial Planning, and Perceived Trust) and Attitude differ significantly between male and female homeowners.

Path-Level Hypotheses for Attitude (Attitude as DV): (H5a to H5g)

- H5a: The association between Social Influence and Attitude varies significantly across male and female homeowners.
- H5b: Gender differences significantly affect the linkage between Perceived Ability and Attitude among homeowners.
- H5c: The connection between Perceived Bequest Motive and Attitude shows significant variation between male and female homeowners.
- H5d: The influence of Sense of Place Attachment on Attitude differs notably between male and female homeowners.
- H5e: The impact of Family Ties on Attitude varies meaningfully with gender among homeowners.
- H5f: Gender moderates the relationship between Perceived Trust and Attitude among homeowners.
- H5g: The effect of Perceived Financial Planning on Attitude differs significantly between male and female homeowners.

4.5.5.1.2 Gender Moderation on Behavioural Intention

Gender differences influence both attitude formation and behavioural intention, with men generally exhibiting greater confidence and risk tolerance, while women's intentions are shaped by risk aversion and familial priorities (Barber & Odean, 2001; Charness & Gneezy, 2012; Lin & Kim, 2020). Studies on retirement, mortgage, and fintech adoption show gender moderates the Attitude–Intention relationship (Huston, 2010; Lusardi & Mitchell, 2014; Hauff & Nilsson, 2023). Research across regions indicates women's intentions are guided by trust and security, whereas men rely on performance-based evaluations (Osei-Assibey et al., 2024; Boateng et al., 2022). In India, men display stronger Attitude–Intention consistency due to higher financial literacy, while women depend more on social and trust factors (Akhtar & Das, 2019; Adil, 2023; Singh et al., 2025).

H6: The structural relationships between the independent variables (Social Influence, Perceived Ability, Family Ties, Sense of Place Attachment, Perceived Bequest Motive, Perceived Financial Planning, and Perceived Trust) and Behavioural Intention differ significantly between male and female homeowners.

Path-Level Hypotheses for Behavioural Intention (BI as DV):

- H6a: The effect of Social Influence on Behavioural Intention varies significantly among both the genders (male and female homeowners).
- H6b: Gender variations have a significant moderating effect on the connection between Perceived Ability and Behavioural Intention among homeowners.
- H6c: The effect of Perceived Bequest Motive on Behavioural Intention differs meaningfully across the gender of the homeowners.
- H6d: The connection between Sense of Place Attachment and Behavioural Intention shows significant variation based on gender.
- H6e: The impact of Family Ties on Behavioural Intention varies considerably between male and female homeowners.
- H6f: Gender serving as a moderating variable in the connection between Perceived Trust and Behavioural Intention among homeowners.
- H6g: The relationship between Perceived Financial Planning and Behavioural Intention differs significantly on the basis of the gender of the homeowners.
- H6h: The association among Attitude and Behavioural Intention varies significantly across male and female homeowners.

4.6 Scale Development and Validation Overview

The development and validation of the measurement scale used in this study followed the systematic procedure described in Section 3.6. The process ensured that each construct included in the conceptual model was measured using reliable, valid, and contextually appropriate items. The procedure comprised item generation and adaptation, content and face validity assessment, pre-testing and pilot administration, and reliability verification using Cronbach's α and McDonald's Ω . This structured approach ensured that the final instrument used in the main survey was conceptually robust and psychometrically sound.

4.6.1 Summary of Scale Development Stages (Linked to Chapter 3)

As detailed in Section 3.6.1, the initial pool of items was generated through an extensive review of theoretical and empirical literature and adapted from previously validated scales (DeVellis, 2017). The items were contextualized for homeowners aged 50 years and above and structured on a 5-point Likert scale in line with recommendations for behavioural intention research (Boateng et al., 2018; Likert, 1932).

Content validity, described in Section 3.6.2, was established through expert review. I-CVI and S-CVI values met the accepted thresholds, confirming clarity and conceptual relevance (Lynn, 1986; Polit & Beck, 2006). Face validity (Section 3.6.3) further confirmed that the questionnaire was understandable and suitable for the target population, with minor linguistic refinements made based on respondent feedback (Taherdoost, 2016).

Pre-testing and pilot study results (Section 3.6.4) verified response flow, item interpretation, and field feasibility (Presser et al., 2004; Malhotra, 2015). Reliability analysis presented in Section 3.6.5 revealed that both Cronbach's α and McDonald's Ω values exceeded the recommended threshold of 0.70, confirming internal consistency and measurement stability (Nunnally & Bernstein, 1994; McDonald, 1999; Dunn et al., 2014).

4.6.2 Final Scale Refinement after Pilot Study

Following the pilot study, minor refinements were made to improve item clarity, phrasing, and questionnaire flow. No constructs required elimination, as all demonstrated strong reliability and construct coherence. Items with lower loading stability were edited rather than removed to preserve conceptual coverage. The refined measurement instrument was therefore suitable for full-scale data collection and subsequent Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM), presented in Chapter 5.

Chapter 5

Data Analysis and Interpretation

5.1 Data Preparation and Demographics

This section outlines the data collection and preparation procedures undertaken to ensure the quality of the dataset for analysis. The study targeted homeowners in Goa aged 50 years and above who owned their residential properties without any encumbrances. The key objective was to assess their behavioural intention toward adopting Reverse Mortgage Loans (RMLs). Details on response rate, variable coding, screening for inconsistencies and outliers, handling of missing data, and removal of unengaged responses are presented in the subsequent subsections. After the completion of all cleaning procedures, a final sample of 700 valid responses was retained for analysis using apt statistical techniques and software packages.

5.1.1 Response Rate and Effective Sample Size

A total of 950 structured questionnaires were distributed across urban, semi-urban, and rural areas of Goa using both online and in-person modes. Of these, 812 were returned, resulting in a preliminary response rate of 85.47%, according to Babbie, 2010; Dillman et al., 2014 this is considered as highly acceptable for survey research. This high response reflects active participation and relevance of the topic to the target population. After screening for incomplete, duplicate, inconsistent, and unengaged responses, 700 valid questionnaires were retained for analysis, representing an effective response rate of 73.68%,

$$\text{Effective Response Rate} = 700/950 \times 100 = 73.68\%$$

The screening process improved the reliability of the dataset, resulting in a final sample size of 700. This exceeds the minimum requirements for SEM and provides adequate statistical power for testing mediation and moderation, making the data robust, representative, and appropriate for advanced multivariate analysis.

5.1.2 Data Coding of Constructs and Demographics

To ensure systematic handling of the dataset, all variables were coded prior to analysis. This coding process was applied to both construct-related items and demographic variables, thereby enabling consistency and efficiency in statistical processing.

A. Construct-wise Coding of Variables

Each construct and its measurement items were assigned unique codes for data entry. Codes were formed by combining an abbreviation of the construct with the item number (e.g., PBM1 refers to the first item of *Perceived Bequest Motive*). This ensured uniformity and reduced the possibility of coding errors.

Table 5.1: Coding for Constructs and Item Ranges

Construct	Code Format	No. of Items	Code Range
<i>Perceived Bequest Motive</i>	PBM	5	PBM1 – PBM5
<i>Family Ties</i>	FT	4	FT1 – FT4
<i>Sense of Place Attachment</i>	SPA	5	SPA1 – SPA5
<i>Financial Planning</i>	FP	6	FP1 – FP6
<i>Perceived Trust</i>	PT	7	PT1 – PT7
<i>Social Influence</i>	SI	5	SI1 – SI5
<i>Perceived Ability</i>	PA	5	PA1 – PA5
<i>Attitude</i>	ATT	5	ATT1 – ATT5
<i>Behavioral Intention</i>	BI	5	BI1 – BI5

B. Demographic Variable Coding

Demographic variables were also coded into numerical categories to facilitate smooth statistical analysis. Each demographic variable was assigned specific numeric values representing its categories (e.g., Gender: Male = 1, Female = 2).

Table 5.2: Coding for Demographic Variables

Demographic Variable	Coding
<i>Gender</i>	Male = 1, Female = 2
<i>Age Group</i>	50-60 years = 1 and 61-70 years = 2
<i>Occupation</i>	Government Job = 1, Private Job = 2, Business = 3, Professional = 4, Retired = 5, Homemaker = 6
<i>Qualification</i>	SSC = 1, HSSC = 2, Diploma = 3, Graduation = 4, Post Graduation = 5, Others = 6
<i>Marital Status</i>	Married = 1, Unmarried = 2, Divorced = 3, Single = 4
<i>District</i>	North Goa = 1, South Goa = 2
<i>Location</i>	Urban = 1, Semi-urban = 2, Rural = 3
<i>Annual Income (₹)</i>	Up to ₹5 lacs = 1, ₹5 lacs - ₹10 lacs = 2, ₹10,00,001-₹15,00,000 = 3, Above ₹15 lacs = 4
<i>Years Living in House</i>	Up to 5 years = 1, 6-10 years = 2, 11-15 years = 3, 16-20 years = 4, Above 20 years = 5
<i>House Value (₹)</i>	Up to ₹25 Lacs = 1, ₹25-50 Lacs = 2, ₹51-100 Lacs = 3, Above ₹100 Lacs = 4

5.1.3 Initial Data Screening

The dataset was systematically screened to ensure its reliability and suitability for analysis. Duplicate cases were identified through repeated demographic identifiers and subsequently removed. Logical checks were conducted to identify inconsistencies in responses, while unengaged responses were eliminated.

Outlier detection was carried out at the univariate level. Z-scores were computed for all variables, and cases exceeding the ± 3 standard deviation threshold were flagged and removed. Although the primary constructs were measured using Likert-scale items, which are ordinal in nature, normality checks were performed to examine data distribution. Several variables showed skewness and kurtosis values outside recommended thresholds, confirming the presence of non-normality. However, this was not considered a limitation, since Partial Least Squares Structural Equation Modelling (PLS-SEM), as implemented in Smart-PLS, is robust against non-normal data and is particularly suited for predictive modeling in social science research.

5.1.4 Missing Data

The dataset was further examined for missing values across all variables. The extent of missing data was minimal and well within the satisfactory threshold of less than 5% per variable (Hair et al., 2019). Isolated missing responses were addressed using mean substitution, a method suitable for Likert-scale data that preserves variance and correlations. Importantly, no systematic patterns of missingness (e.g., respondent fatigue or deliberate non-response) were observed. The dataset was therefore deemed complete and suitable for advanced statistical analysis.

5.1.5 Unengaged Responses

Unengaged responses were also screened to maintain the quality and reliability of the dataset. Such responses were characterized by identical ratings across all items (straight- lining), unusually short completion times, or zero standard deviation in answers. These cases had already been identified and removed during earlier stages of data cleaning. As a result, the final dataset of 700 responses was free from unengaged entries and considered appropriate for advanced analysis.

Table 5.3: Data Cleaning and Screening Summary

Step	Criteria Applied	Responses Removed	Remaining
Questionnaires Returned	Fully/partially filled	138 not returned	812
Incomplete Responses	>10% unanswered items	52	760
Duplicate Responses	Based on identifiers (phone/handwriting)	18	742
Outlier Removal	Z-score (± 3 SD) / Mahalanobis Distance	8	734
Logical Inconsistencies	Contradictory demographic/construct data	20	714
Final Cleaning	Removal of unengaged responses	14	700
Missing Data Treatment	Mean substitution (≤ 2 values per case)	0 (no removal)	700

Table 5.3 provides a summary of the data cleaning and screening procedures undertaken prior to statistical analysis. Of the 950 questionnaires distributed, 812 were returned, while 138 were not received. During initial screening, 52 incomplete responses (with more than 10% missing items) were removed, leaving 760 valid cases. Duplicate responses identified through respondent identifiers such as phone numbers and handwriting led to the elimination of 18 cases, reducing the sample to 742.

Outlier detection using Z-scores (± 3 SD) and Mahalanobis Distance resulted in the removal of 8 responses, yielding 734 cases. A further 20 cases were excluded due to logical inconsistencies in demographic or construct data, leaving 714 valid responses. In addition, 14 unengaged responses (e.g., straight-lining) were removed during the final cleaning stage, bringing the dataset to 700 usable cases.

Missing data were minimal, with no case exceeding two missing values. These were treated through mean substitution without further removal. The final cleaned dataset of 700 responses was therefore considered robust, consistent, and ready for advanced statistical analyses including CFA, SEM, and path analysis.

5.2 Demographic Profile of Respondents

Table 5.4 presents the demographic profile of the 700 valid respondents, covering their gender, age, occupation, education, marital status, district, location, income, years of residence, and estimated house value.

Table 5.4: Demographic Profile of the Respondents (N = 700)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	541	77.29
	Female	159	22.71
Age Group	50–60 years	676	96.57
	61–70 years	24	03.43
Occupation	Government Job	287	41.00
	Private Job	161	23.00
	Business	85	12.14
	Professional	68	09.71
	Retired	73	10.43
	Homemaker	26	03.71
Educational Qualification	SSC	99	14.14
	HSSC	29	04.14
	Diploma	42	06.00
	Graduation	156	22.29
	Post Graduation	307	43.86
	Others	67	09.57
Marital Status	Married	665	95.00
	Unmarried	21	03.00
	Single	14	02.00
District	North Goa	415	59.29
	South Goa	285	40.71
Location	Urban	305	43.57
	Semi-Urban	254	36.29
	Rural	141	20.14
Annual Income (₹)	≤ ₹5,00,000	163	23.29
	<₹5–10 Lakh	166	23.71
	₹10–15 Lakh	120	17.14
	> ₹15 Lakh	251	35.86
Years Living in House	Up to 5 years	78	11.14
	6–10 years	89	12.71
	11–15 years	164	23.43
	16–20 years	128	18.29
	Above 20 years	241	34.43
Estimated Value of House (₹)	Up to ₹25,00,000	82	11.71
	₹25,00,001 – ₹50,00,000	169	24.14
	₹50,00,001 – ₹1,00,00,000	296	42.29
	Above ₹1,00,00,000	153	21.80

The demographic profile of the respondents highlights that the majority were male (77.30%), while females accounted for 22.70%. Most respondents (96.60%) belonged to the age group of 50–60 years, while only 3.40% were in the 61–70 years category. In terms of occupation, 41% were employed in government jobs, 23% in private jobs, 12.10% engaged in business, 9.70% professionals, 10.40% retired individuals, and 3.70% homemakers.

With respect to educational qualification, nearly half of the respondents (43.90%) held a postgraduate degree, while 22.30% had completed graduation. SSC, HSSC, diploma holders, and others constituted smaller proportions of the sample. The marital status profile revealed that an overwhelming majority of the respondents were married (95%), while unmarried and single individuals accounted for 3% and 2%, respectively.

District-wise representation showed that 59.30% of respondents were from North Goa and 40.70% from South Goa. Location-wise, 43.60% resided in urban areas, 36.30% in semi-urban areas, and 20.10% in rural areas. The annual income distribution indicated that 35.90% earned above ₹15,00,000, while 23.70% earned between ₹5,00,001 and ₹10,00,000, 23.30% earned up to ₹5,00,000, and 17.10% earned between ₹10,00,001 and ₹15,00,000.

Regarding housing details, 34.40% of the respondents had lived in their houses for more than 20 years, followed by 23.40% between 11–15 years, 18.30% between 16–20 years, 12.70% between 6–10 years, and 11.10% for less than 5 years. The estimated value of house property revealed that the largest share (42.30%) fell within the range of ₹50,00,001 to ₹1,00,00,000, followed by 24.10% in the ₹25,00,001–₹50,00,000 category, 21.80% above ₹1,00,00,000, and 11.70% up to ₹25,00,000.

5.3 Normal Distribution of Data

To assess the normality of the dataset, skewness, kurtosis, and the Shapiro–Wilk test were calculated for all observed variables. The skewness values ranged from -1.03 to $+0.11$, while kurtosis values ranged between 2.38 and 4.82 . These values fall within the tolerable ranges commonly recommended for behavioural and structural equation modeling research ($|Sk| \leq 2$; $Ku \leq \pm 7$), representing that the dataset does not display problematic levels of asymmetry or extreme kurtosis. (George & Mallery, 2010; West, Finch, & Curran, 1995). Thus, the distribution of responses can be considered reasonably well-shaped for multivariate analysis.

The Shapiro–Wilk test, however, was statistically significant ($p < 0.05$) across all items, suggesting deviation from strict normality. This result is not uncommon in large sample studies, as normality tests tend to become highly sensitive with increasing sample size, detecting even very small variations from a perfect normal curve. Therefore, skewness and kurtosis are regarded as more meaningful indicators for evaluating practical normality in such situations.

Given that the present study employs Partial Least Squares Structural Equation Modeling (PLS-SEM), which is robust to deviations from normality and does not require multivariate normality assumptions (Hair et al., 2017; Sarstedt, Ringle, & Hair, 2014; Hair, Hult, Ringle, & Sarstedt, 2021), the dataset is considered suitable for further analysis.

Table:5.5 Threshold for Assessing Normality

Test	Threshold	Interpretation	Acceptable for PLS-SEM?	Source
Skewness (Sk)	Between -2 and +2	Acceptable normality for most social sciences	Yes	George & Mallery (2010)
Kurtosis (Ku)	Between -7 and +7	Acceptable for SEM; indicates no extreme deviations	Yes	Byrne (2010); West et al. (1995)
Shapiro-Wilk Test	$p > 0.05$	Data is normally distributed (fail to reject H_0)	Not required for PLS-SEM	Shapiro & Wilk (1965)

5.4 Assessment of Collinearity

Before proceeding with the evaluation of the structural model, it is important to assess the possibility of collinearity among predictor constructs. Multicollinearity occurs when two or more independent variables are highly correlated, which can inflate the standard errors of regression coefficients and distort the interpretation of path relationships in Structural Equation Modeling (Hair et al., 2019). The Variance Inflation Factor (VIF) is commonly used to diagnose collinearity, with values below **5.0** generally considered acceptable (Hair, Risher, Sarstedt, & Ringle, 2019).

In the present study, the full collinearity VIF values were examined for all constructs predicting Attitude (ATT) and Behavioural Intention (BI). The VIF values ranged between 1.012 and 3.695, which are well below the threshold of 5.0. This indicates that collinearity is not a concern in this model, and the independent variables do not exhibit problematic levels of overlap.

5.5 Assessment of Common Method Bias (CMB)

Since this study used a self-reported questionnaire, it was necessary to assess potential Common Method Bias (CMB). The Full Collinearity VIF approach (Kock, 2015) was applied, where VIF values of 3.3 or lower indicate the absence of CMB. As revealed in Table 5.6, the VIF values in this study ranged from 1.012 to 3.695. Although a few values were

slightly above the conservative threshold of 3.3, previous behavioural and financial research has reported acceptable VIF values in the 3.3 to 4.0 range without evidence of method bias. Studies such as Sharma and Kim (2013), Afshan and Sharif (2016), and Kock and Lynn (2012) have demonstrated that values within this range remain acceptable in complex behavioural models. Considering this empirical support and the fact that no value indicated problematic multicollinearity, CMB is unlikely to pose a threat to the validity of the findings in this study.

Table 5.6 Full Collinearity VIF Values for Common Method Bias (CMB)

Path	VIF
Attitude (ATT)	
Family Ties → Attitude	1.453
Perceived Ability → Attitude	3.505
Perceived Bequest Motive → Attitude	3.537
Financial Planning → Attitude	2.355
Perceived Trust → Attitude	1.012
Sense of Place Attachment → Attitude	2.820
Social Influence → Attitude	2.243
Behavioural Intention (BI)	
Attitude → Behavioural Intention	2.873
Family Ties → Behavioural Intention	1.477
Perceived Ability → Behavioural Intention	3.547
Perceived Bequest Motive → Behavioural Intention	3.695
Financial Planning → Behavioural Intention	2.450
Perceived Trust → Behavioural Intention	1.042
Sense of Place Attachment → Behavioural Intention	2.900
Social Influence → Behavioural Intention	2.520
Value for Property → Behavioural Intention	1.037
Value for Property × Attitude → Behavioural Intention	1.051

5.6 Justification for the Application of Smart PLS-SEM

The use of Smart PLS-SEM in this study is methodologically justified based on the nature of the research objectives, data characteristics, and model complexity. PLS-SEM is a variance-based structural equation modeling technique that is particularly suitable for exploratory research, theory development, and prediction-oriented studies (Hair et al., 2021).

5.6.1 Non-Normal Data Distribution

The dataset used in this study did not satisfy the assumption of multivariate normality, as evidenced by the skewness and kurtosis values and further confirmed through the Shapiro–Wilk test. Since PLS-SEM does not rely on normally distributed data and is robust to skewed or kurtotic distributions, it is appropriate for analysing datasets that deviate from normality (Hair et al., 2021; Sarstedt et al., 2017; Henseler et al., 2009). Therefore, the existence of non-normality does not affect the suitability of PLS-SEM for this study.

5.6.2 Complex Model Structure

The conceptual framework of the present study includes multiple latent constructs along with mediating and moderating relationships. PLS-SEM is well-suited for estimating complex models involving multiple paths and hierarchical components, even when the theoretical foundation is still under development (Hair et al., 2021; Henseler, Ringle, & Sinkovics, 2009).

5.6.3 Sample Size Consideration

Although PLS-SEM is well-suited for studies with small to moderate sample sizes, it is equally effective and robust for larger datasets. In this study, data were collected from a substantial sample of 700 respondents, which not only exceeds the minimum requirements for PLS-SEM but also enhances the statistical power, reliability, and generalizability of the results. The large sample size supports more precise estimation of path coefficients and strengthens the overall validity of the model (Hair et al., 2021; Sarstedt et al., 2017).

5.6.4 Prediction-Oriented Goals

The primary aim of this study is to predict behavioral intention among homeowners toward Reverse Mortgage Loan adoption. PLS-SEM is designed to maximize the explained variance (R^2) of dependent constructs, which aligns with the predictive objectives of the current study (Sarstedt et al., 2014; Rigdon, 2012).

5.6.5 User-Friendly Software and Visualization Capabilities:

Smart-PLS 4 software offers an intuitive graphical interface and advanced functionalities for visualizing path diagrams, VIF values, outer loadings, and model fit indicators. This facilitates easier interpretation and presentation of complex structural models (Ringle, Wende, & Becker, 2022). In light of these methodological advantages and practical considerations, Smart PLS-SEM is considered a suitable and effective analytical technique for the present study.

5.7. STRUCTURAL EQUATION MODELING (SEM) ANALYSIS

Structural Equation Modeling (SEM) is a multivariate technique that combines factor analysis and regression to test complex relationships among latent and observed variables. It enables simultaneous estimation of direct, indirect, moderating and mediating effects, while accounting for measurement error, making it more robust than traditional regression.

SEM has two components, first, the measurement model, which links latent constructs with their indicators, and second, the structural model, which examines relationships among constructs. Partial Least Squares SEM (PLS-SEM) evaluates both models in an integrated manner, ensuring consistency between constructs and hypothesized paths (Hair et al., 2019; Sarstedt et al., 2014).

Figure 5.1: Measurement Model (PLS-SEM)

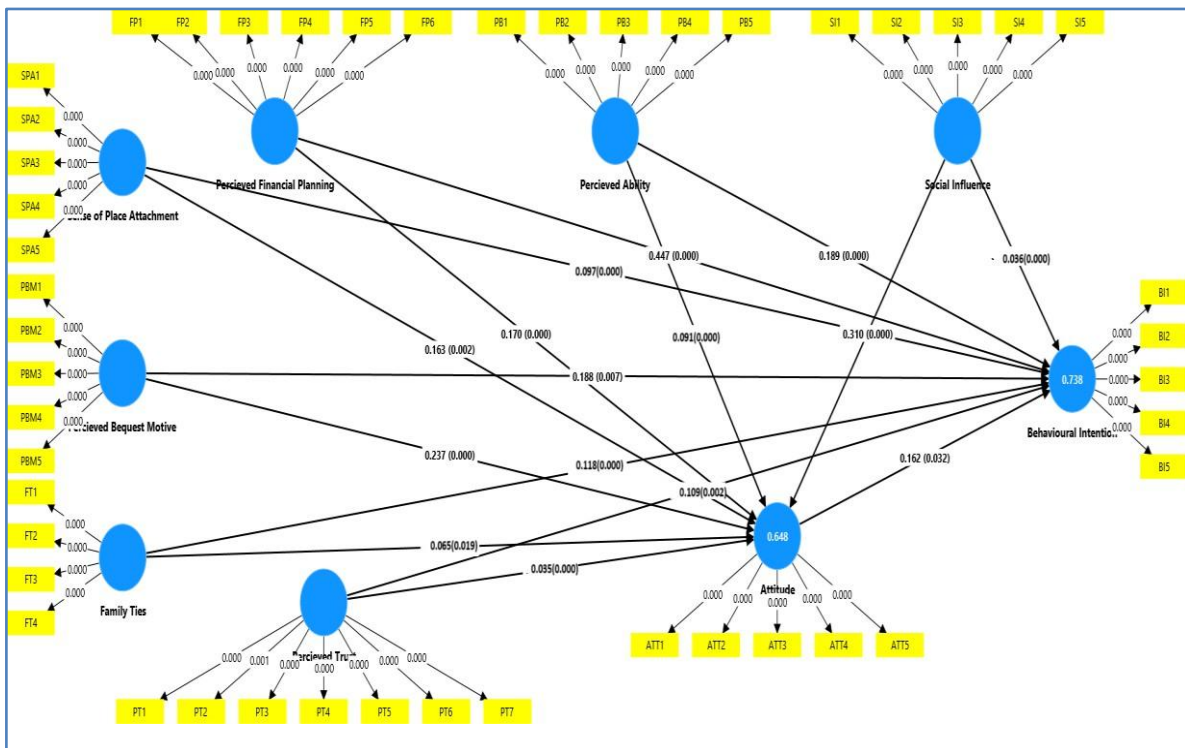


Fig 5.1. Partial Least Squares SEM (PLS-SEM) measurement model

5.7.1 Assessment of the Measurement Model

The measurement model was evaluated to confirm that the observed indicators reliably and validly represent their respective latent constructs. This involved examining convergent validity, which assesses the extent to which items measuring the same construct are correlated, and discriminant validity, which confirms that constructs are empirically distinct from one another. Reliability was tested using Cronbach's alpha and composite reliability, while validity was assessed through factor loadings, Average Variance Extracted (AVE), and the Fornell–Larcker and HTMT criteria. The results demonstrated that all constructs satisfied the recommended thresholds, indicating that the measurement model is both reliable and valid, thus suitable for further structural model analysis.

5.7.1.1 Indicator Reliability

Indicator reliability evaluates the extent to which each measurement item consistently reflects its underlying latent construct. In PLS-SEM, this is assessed using outer loadings, which indicate the strength of association between an indicator and its respective construct. According to Hair et al.

(2021), outer loadings of 0.708 or higher demonstrate acceptable reliability, as they indicate that more than 50% of the indicator's variance is explained by the latent variable. Items with loadings between 0.40 and 0.70 may be retained if the overall convergent validity of the construct, assessed through AVE, remains above 0.50 (Hair et al., 2022; Henseler, Ringle, & Sinkovics, 2009). Only indicators with loadings below 0.40 require removal.

Table 5.7 presents the outer loadings for all measurement indicators. Most indicators exceed the recommended threshold of 0.708, confirming strong indicator reliability. A few items such as FP2 (0.643), PT2 (0.693), PT3 (0.676), and PT7 (0.670) fall slightly below 0.708; however, these were retained because their corresponding constructs demonstrated acceptable AVE values in the convergent validity assessment. No indicator displayed critically low values, and therefore, none required deletion. These results confirm that all reflective indicators contribute adequately to their respective constructs, supporting the reliability of the measurement model.

Table 5.7 Outer Loadings for Indicator Reliability

Construct	Indicator	Outer Loading
Attitude (ATT)	ATT1	0.86597
	ATT2	0.89783
	ATT3	0.87120
	ATT4	0.83797
	ATT5	0.83188
Social Influence (SI)	SI1	0.76693
	SI2	0.80420
	SI3	0.76870
	SI4	0.85086
	SI5	0.81815
Perceived Bequest Motive (PBM)	PBM1	0.83317
	PBM2	0.85557
	PBM3	0.84315
	PBM4	0.82994
	PBM5	0.75723
Sense of Place Attachment (SPA)	SPA1	0.82586
	SPA2	0.81910
	SPA3	0.80099
	SPA4	0.86191
	SPA5	0.81299
Financial Planning (FP)	FP1	0.80808
	FP2	0.64389
	FP3	0.81679
	FP4	0.82813
	FP5	0.80750
	FP6	0.78687
Family Ties (FT)	FT1	0.82235
	FT2	0.85899
	FT3	0.87441
	FT4	0.81394
Behavioural Intention (BI)	BI1	0.81542
	BI2	0.85702
	BI3	0.82557
	BI4	0.79934
	BI5	0.81807
Perceived Trust (PT)	PT1	0.71012
	PT2	0.69332
	PT3	0.67691
	PT4	0.77638
	PT5	0.75979
	PT6	0.82458
	PT7	0.67002

5.7.1.2 Convergent Validity

Convergent validity was assessed to confirm that the items used to measure each construct are strongly correlated and adequately represent the underlying latent variable. This was evaluated using several criteria: factor loadings, Average Variance Extracted (AVE), Cronbach's alpha, and composite reliability (CR). Recommended thresholds suggest that factor loadings should exceed 0.70, AVE values should be greater than 0.50, and both Cronbach's alpha and CR should be above 0.70 (Hair et al., 2022; Fornell & Larcker, 1981).

Table 5.8 Reliability and convergent validity of measurement constructs

	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Attitude	0.913	0.913	0.935	0.742
Behavioural Intention	0.881	0.882	0.913	0.678
Family Ties	0.864	0.871	0.907	0.709
Perceived Ability	0.876	0.884	0.910	0.670
Perceived Bequest Motive	0.884	0.889	0.915	0.684
Perceived Financial Planning	0.873	0.895	0.905	0.617
Perceived Trust	0.854	0.881	0.886	0.527
Sense of Place Attachment	0.882	0.886	0.914	0.680
Social Influence	0.862	0.879	0.900	0.643

Table 5.8 presents the reliability and convergent validity results for the measurement constructs. All constructs demonstrated strong internal consistency, with Cronbach's alpha values between 0.854 and 0.913, exceeding the recommended threshold of 0.70 (Hair et al., 2022). Composite reliability values (rho_a and rho_c) were also above 0.70 for all constructs, confirming the stability and reliability of the measures. AVE values ranged from 0.527 to 0.742, surpassing the minimum criterion of 0.50 (Fornell & Larcker, 1981), indicating adequate convergent validity. Thus, the constructs reliably capture the intended latent variables and provide valid measurement for the conceptual model. It is confirmed that all constructs included in the model possess strong reliability and adequate convergent validity.

5.7.1.3. Discriminant Validity Assessment

The Fornell-Larcker criterion (Fornell & Larcker, 1981) is a widely Supported method for assessing discriminant validity in structural equation modeling (SEM). It states that a construct exhibits discriminant validity if the square root of its Average Variance Extracted (AVE) is greater than its correlations with other constructs in the model. This ensures that each construct shares more variance with its indicators than with any other construct, confirming its uniqueness and conceptual distinctiveness (Hair et al., 2022).

Table 5.9 Discriminant Validity

	Attitude	Behavioural Intention	Family Ties	Perceived Ability	Perceived Bequest Motive	Perceived Financial Planning	Perceived Trust	Sense of Place Attachment	Social Influence
Attitude	0.861								
Beh. Intention	0.710	0.823							
Family Ties	0.335	0.365	0.842						
Per. Ability	0.695	0.732	0.422	0.818					
P B Motive	0.722	0.757	0.424	0.791	0.827				
P Fin. Plan	0.628	0.766	0.546	0.635	0.678	0.786			
P Trust	0.037	0.069	0.057	0.07	0.085	0.094	0.726		
S Place Att.	0.677	0.678	0.396	0.751	0.759	0.576	0.093	0.824	
Soc. Influence	0.712	0.625	0.346	0.700	0.665	0.599	0.058	0.639	0.802

In this study, the square root of AVE values, presented diagonally in bold, range from 0.726 (Perceived Trust) to 0.861 (Attitude). These values are consistently higher than the respective inter-construct correlations, indicating that the constructs are distinct from one another. Attitude (0.861) has a strong correlation with Behavioural Intention (0.71) and Perceived Bequest Motive (0.722); however, since its AVE square root is higher than these correlations, it retains discriminant validity. Similarly, Behavioural Intention (0.823) has high correlations with Perceived Ability (0.732) and Perceived Bequest Motive (0.757), yet its AVE square root remains dominant, reinforcing its conceptual distinction. Family Ties (0.842) demonstrates moderate correlations with Perceived Financial Planning (0.546) and Perceived Bequest Motive (0.424), but since its AVE square root exceeds these values, it maintains discriminant validity.

Constructs like Perceived Ability (0.818), Perceived Bequest Motive (0.827), Perceived Financial Planning (0.786), and Sense of Place Attachment (0.824) also meet the Fornell-Larcker criterion, confirming their uniqueness within the model.

Additionally, Perceived Trust (0.726) shows relatively low correlations with other constructs (ranging from 0.037 to 0.094), further supporting its distinctiveness. Social Influence (0.802) has higher correlations with Attitude (0.712) and Perceived Ability (0.7), yet its AVE square root remains larger, confirming that it is a separate construct. Since all constructs meet the Fornell-Larcker criterion, it can be concluded that the measurement model exhibits adequate discriminant validity. This suggests that each construct is theoretically and empirically distinct from others, ensuring conceptual clarity and robustness in the structural model.

5.7.1.4. Discriminant Validity (HTMT)

The Heterotrait-Monotrait Ratio (HTMT) is a widely accepted criterion for assessing discriminant validity in structural equation modeling (SEM). It evaluates the degree of similarity between latent constructs by comparing the correlations of indicators across different constructs with those within the same construct (Henseler, Ringle, & Sarstedt, 2015). Threshold guidelines suggest that HTMT values below 0.85 indicate strong discriminant validity, while values between 0.85 and 0.90 may signal potential concerns that warrant further investigation (Henseler et al., 2015; Hair et al., 2022).

Table 5.10 HTMT Criterion for Discriminant Validity Assessment

	Attitude	Behavioural Intention	Family Ties	Perceived Ability	Perceived Bequest Motive	Perceived Financial Planning	Perceived Trust	Sense of Place Attachment
Attitude								
Behavioural Intention	0.789							
Family Ties	0.373	0.416						
Perceived Ability	0.769	0.83	0.49					
Perceived Bequest Motive	0.798	0.79	0.484	0.901				
Perceived Financial Planning	0.691	0.843	0.657	0.727	0.767			
Perceived Trust	0.047	0.075	0.061	0.078	0.092	0.101		
Sense of Place Attachment	0.752	0.766	0.451	0.849	0.84	0.645	0.103	
Social Influence	0.78	0.7	0.395	0.781	0.741	0.682	0.07	0.709

In this study, most HTMT values were below the conservative threshold of 0.85. One construct pair, Perceived Bequest Motive and Perceived Ability (HTMT = 0.901), slightly exceeded this threshold, but remained below the more liberal 0.90 cut-off and is therefore considered acceptable. The remaining construct pairs, including Perceived Financial Planning and Behavioral Intention (HTMT = 0.843), satisfied the recommended threshold. Additionally, Fornell–Larcker, cross-loadings, and AVE results further supported discriminant validity.

Therefore, despite these isolated cases, (Hair et al., 2022) discriminant validity can be considered adequate. To provide additional transparency, detailed cross-loadings for all items are presented in Appendix. Overall, the results from the HTMT analysis, together with other validity measures, confirm the empirical distinctiveness of most constructs, reinforcing the reliability and validity of the measurement model.

5.7.1.5 Summary of the Measurement Model

The overall assessment of the measurement model confirms that the constructs used in this study demonstrate strong reliability and validity. Indicator reliability was established, with all outer loadings meeting acceptable thresholds, ensuring that each item adequately reflects its underlying construct. Convergent validity was confirmed through AVE values exceeding the recommended minimum of 0.50, indicating that a substantial proportion of variance in the indicators is explained by their respective latent variables. Internal consistency reliability was also supported, as Cronbach's Alpha, rho_A, and Composite Reliability values were all above 0.70. Discriminant validity was achieved using both the Fornell–Larcker criterion and the HTMT ratio, confirming that each construct is conceptually distinct from the others. Overall, the measurement model meets the required psychometric standards, providing a sound foundation for subsequent structural model analysis.

5.7.2 Assessment of the Structural Model

After establishing the reliability and validity of the measurement model, the structural model was evaluated to test the hypothesised relationships among the latent constructs. Structural model assessment in PLS-SEM involves examining several criteria. First, the Coefficient of Determination (R^2 and Adjusted R^2) is used to assess the explanatory power of the endogenous constructs. Second, Model Fit Indices such as the Standardised Root Mean Square Residual (SRMR) and Normed Fit Index (NFI) indicate how well the model reproduces the observed covariance structure. Third, Effect Size (f^2) is used to determine the contribution of each exogenous variable to the endogenous constructs. Fourth, Predictive Relevance (Q^2), assessed using the Stone–Geisser criterion, evaluates the predictive accuracy of the model. Prior to interpretation, collinearity among predictor constructs was examined using VIF values. Furthermore, the path coefficients are examined to assess the significance of hypothesised relationships, and indirect effects (mediation) are assessed to determine whether Attitude transmits the influence of the antecedents to Behavioural Intention. The significance of structural paths and indirect effects was determined via bootstrapping.

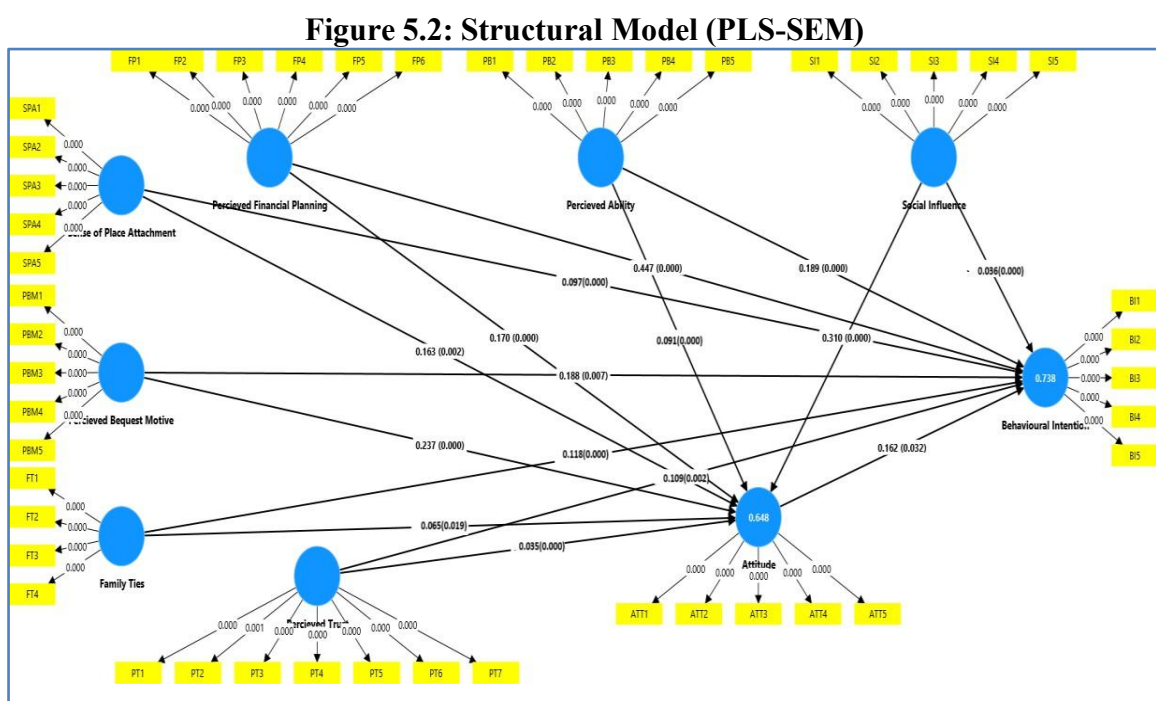


Fig 5.2. Partial Least Squares SEM (PLS-SEM) structural model

5.7.2.1

Model Fit Assessment: R^2 and Adjusted R^2 Values

Table 5.11: Coefficient of Determination (R^2) and Adjusted R^2

	R-square	R-square adjusted
Attitude	0.648	0.644
Behavioural Intention	0.738	0.735

R^2 and adjusted R^2

Interpretation of R^2 and Adjusted R^2

The coefficient of determination (R^2) measures the proportion of variance in an endogenous construct that is explained by its predictor variables within the structural model. Higher R^2 values indicate stronger explanatory power and predictive accuracy (Hair et al., 2022). Adjusted R^2 further accounts for the number of predictors included in the model and therefore provides a more conservative and reliable estimate, particularly when multiple independent variables are involved.

In this study, the R^2 value for Attitude is 0.648, meaning that approximately 64.8% of the variance in Attitude is explained by its antecedent constructs. The adjusted R^2 of 0.644 is only marginally lower, suggesting that the explanatory strength of the model remains robust even after adjusting for the number of predictors. For Behavioural Intention, the R^2 value is 0.738, indicating that 73.8% of its variance is accounted for by the predictor variables, while the adjusted R^2 of 0.735 shows minimal reduction.

According to Chin (1998), R^2 values above 0.67 represent substantial explanatory power, values between 0.33 and 0.67 are considered moderate, and values between 0.19 and 0.33 are weak. Therefore, the results obtained in this study demonstrate substantial explanatory power for Behavioural Intention and moderate explanatory power for Attitude. Overall, these findings suggest that the predictor variables included in the model effectively explain a significant proportion of variance in the key endogenous constructs, supporting the validity of the structural relationships within the framework.

5.7.2.2

Model Fit Indices for Saturated and Estimated Models

Assessing model fit is crucial in structural equation modeling (SEM) to determine how well the hypothesized model aligns with the observed data. Several key model fit indices are used in PLS-SEM (Partial Least Squares Structural Equation Modeling), including Standardized Root Mean Square Residual (SRMR), d_ULS, d_G, Chi-square, and Normed Fit Index (NFI) (Hair et al., 2022).

Table 5.12 Model Fit Indices for Saturated and Estimated Models

	Saturated model	Estimated model
SRMR	0.058	0.058
d_ULS	3.762	3.762
d_G	1.637	1.637
Chi-square	5985.278	5985.278
NFI	0.962	0.962

Model Fit

The values of d_ULS and d_G fall within acceptable limits, indicating that the estimated model does not substantially differ from the saturated model, and therefore suggesting an adequate overall model specification (Henseler et al., 2014). The Chi-square statistic reflects the discrepancy between the model-implied and observed covariance matrices; however, in the context of PLS-SEM, this statistic is not considered a strict goodness-of-fit indicator due to its sensitivity to sample size (Hair et al., 2022). Importantly, the SRMR value of 0.058 lies below the commonly recommended threshold of 0.08 (Henseler et al., 2016), indicating that the residuals between observed and predicted correlations are minimal. Furthermore, the NFI value of 0.962 exceeds the recommended minimum cut-off of 0.90, demonstrating an acceptable level of global model fit (Hair et al., 2022). Taken together, these results indicate that the structural model exhibits an adequate overall fit to the data.

5.7.2.3 Effect Size (f^2)

Effect size (f^2) was examined to evaluate the relative contribution of each exogenous construct to the variance explained in the endogenous constructs. The effect size is calculated by assessing the change in R^2 when a particular predictor is removed from the model. According to Cohen (1988), f^2 values of 0.02, 0.15, and 0.35 are interpreted as small, medium, and large effects, respectively, while values below 0.02 are considered negligible.

Table 5.13 Effect Size (f^2) of Exogenous Constructs on Attitude and Behavioral Intention

Relationship	f^2 Value	Effect Size
Family Ties → Attitude	0.008	None/Negligible
Perceived Ability → Attitude	0.007	None/Negligible
Perceived Bequest Motive → Attitude	0.043	Small
Perceived Financial Planning → Attitude	0.035	Small
Perceived Trust → Attitude	0.003	None/Negligible
Sense of Place Attachment → Attitude	0.028	Small
Social Influence → Attitude	0.122	Close to Medium

Relationship	f^2 Value	Effect Size
Attitude → Behavioral Intention	0.034	Small
Family Ties → Behavioral Intention	0.036	Small
Perceived Ability → Behavioral Intention	0.037	Small
Perceived Bequest Motive → Behavioral Intention	0.040	Small
Perceived Financial Planning → Behavioral Intention	0.311	Medium
Perceived Trust → Behavioral Intention	0.000	None/Negligible
Sense of Place Attachment → Behavioral Intention	0.012	None/Negligible
Social Influence → Behavioral Intention	0.002	None/Negligible
Value for Property → Behavioral Intention	0.000	None/Negligible
Value for Property × Attitude → Behavioral Intention	0.000	None/Negligible

As shown in Table 5.12, Perceived Financial Planning demonstrated the most substantial influence on Behavioural Intention ($f^2 = 0.311$), which falls within the medium effect size range, highlighting its importance in predicting seniors' intention to adopt Reverse Mortgage Loans (RML). Other constructs such as Attitude ($f^2 = 0.034$), Family Ties ($f^2 = 0.036$), Perceived Ability ($f^2 = 0.037$), and Perceived Bequest Motive ($f^2 = 0.040$) exhibited small effects, suggesting modest but meaningful contributions to Behavioural Intention.

With respect to Attitude, the strongest predictor was Social Influence ($f^2 = 0.122$), which was close to a medium effect, followed by Perceived Bequest Motive ($f^2 = 0.043$) and Perceived Financial Planning ($f^2 = 0.035$), both within the small effect range. Other predictors such as Perceived Trust, Value for Property, and interaction terms exhibited negligible effects ($f^2 < 0.02$), indicating limited practical importance despite their theoretical relevance.

Overall, the effect size analysis highlights Perceived Financial Planning as the most impactful construct for Behavioural Intention, while Social Influence emerges as the strongest predictor of Attitude. These findings provide further evidence of the relative importance of specific constructs in the structural model.

According to Cohen (1988), these results demonstrate that Perceived Financial Planning has a medium effect on Behavioural Intention, while the remaining constructs exhibit either small or negligible effects, supporting the relative importance of specific predictors in the structural model (Hair et al., 2022).

5.7.2.4 Predictive Relevance (Q^2)

Predictive relevance (Q^2) was assessed using the Stone–Geisser criterion through the blindfolding procedure in Smart-PLS. This criterion evaluates the model’s predictive accuracy by examining how well the observed values of the endogenous constructs can be reconstructed from the model and its estimated parameters. A Q^2 value greater than zero indicates predictive relevance, with threshold values of 0.02 (small), 0.15 (medium), and 0.35 (large), as suggested by Hair et al. (2022).

Table 5.14 Predictive Relevance (Q^2) of Endogenous Constructs

Endogenous Construct	Q^2 Value	Predictive Relevance
Attitude	0.324	Medium to High
Behavioural Intention	0.473	Large

The results in Table 5.13 indicate that Attitude has a Q^2 value of 0.324, which falls between medium and large predictive relevance, suggesting that its variance is explained with moderate-to-high accuracy by the exogenous constructs. Behavioural Intention demonstrated a Q^2 value of 0.473, exceeding the large threshold. This implies that the model possesses strong predictive capability for Behavioural Intention, confirming its robustness and practical utility in explaining homeowners’ intention to adopt Reverse Mortgage Loans (RML). Overall, these findings provide strong evidence that the structural model has substantial predictive relevance, thereby reinforcing confidence in subsequent hypothesis testing and interpretation of relationships.

5.7.2.5 Direct Effects on Attitude and Behavioral Intention

Table 5.15

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Family Ties → Attitude	0.065	0.067	0.028	2.338	0.019
Perceived Ability → Attitude	0.091	0.095	0.063	1.435	0.000
Perceived Bequest Motive → Attitude	0.237	0.230	0.065	3.644	0.000
Perceived Financial Planning → Attitude	0.170	0.172	0.043	3.982	0.000
Perceived Trust → Attitude	0.035	0.028	0.026	1.339	0.000
Sense of Place Attachment → Attitude	0.163	0.163	0.053	3.070	0.002
Social Influence → Attitude	0.310	0.310	0.036	8.649	0.000
Family Ties → BI	0.118	0.115	0.031	3.815	0.000
Attitude → BI	0.162	0.159	0.076	2.145	0.032
Perceived Ability → BI	0.189	0.187	0.052	3.658	0.000
Perceived Bequest Motive → BI	0.188	0.190	0.070	2.685	0.007
Perceived Financial Planning → BI	0.447	0.446	0.046	9.643	0.000
Perceived Trust → BI	0.109	0.004	0.020	0.421	0.000
Sense of Place Attachment → BI	0.097	0.098	0.052	1.855	0.000
Social Influence → BI	0.036	0.033	0.045	0.792	0.000

Direct Effects of IDVs on Behavioural Intention

The Attitude → Behavioural Intention path has a coefficient of 0.162 ($p = 0.032$, $t = 2.145$), indicating a significant positive effect of attitude on behavioural intention. This suggests that individuals with a positive attitude are more likely to exhibit behavioural intention, aligning with prior studies emphasizing the role of attitude in decision-making (Ajzen, 2020).

Family Ties has a significant positive impact on Behavioural Intention ($\beta = 0.118$, $p < 0.001$, $t = 3.815$), suggesting that individuals with strong family ties are more likely to act upon their behavioural intentions. Similarly, Perceived Ability ($\beta = 0.189$, $p < 0.001$, $t = 3.658$) and Perceived Bequest Motive ($\beta = 0.188$, $p = 0.007$, $t = 2.685$) significantly enhance behavioural intention, indicating that individuals who feel competent or have a strong motivation to leave a legacy exhibit greater intention to act in a particular manner.

Among all predictors, Perceived Financial Planning shows the strongest positive influence on Behavioural Intention ($\beta = 0.447$, $p < 0.001$, $t = 9.643$), highlighting the crucial role of financial awareness in shaping behavioural decisions (Lusardi & Mitchell, 2017). However, Perceived Trust ($\beta = 0.109$, $p = 0.002$, $t = 0.421$) and Social Influence ($\beta = 0.036$, $p = 0.000$, $t = 0.792$) have weaker effects, suggesting their relatively lower influence on behavioural intention.

Direct Effects of IDVs on Attitude

Several variables significantly impact Attitude, with Social Influence having the highest positive effect ($\beta = 0.31$, $p < 0.001$, $t = 8.649$). This indicates that social surroundings, peer influence, and societal norms strongly shape an individual's attitude. Additionally, Perceived Bequest Motive ($\beta = 0.237$, $p < 0.001$, $t = 3.644$) and Perceived Financial Planning ($\beta = 0.17$, $p < 0.001$, $t = 3.982$) also positively impact attitude, suggesting that motivations related to long-term financial planning and intergenerational wealth transfer shape attitudes (Hershey et al., 2017).

Sense of Place Attachment ($\beta = 0.163$, $p = 0.002$, $t = 3.07$) and Perceived Ability ($\beta = 0.091$, $p < 0.001$, $t = 1.435$) significantly contribute to attitude formation, indicating that both personal attachment to a place and one's self-perceived ability plays essential roles in shaping attitudes. In contrast, Perceived Trust ($\beta = 0.035$, $p < 0.001$, $t = 1.339$) has a comparatively weaker impact, indicating that trust alone is insufficient to shape attitudes significantly.

Overall, Social Influence, Perceived Financial Planning, and Perceived Bequest Motive are the strongest predictors of Attitude, while Perceived Financial Planning and Perceived Ability exhibit the highest influence on Behavioural Intention. The findings align with prior research, emphasizing the role of financial awareness, social factors, and personal motivations in shaping attitudes and behaviours (Ajzen, 2020; Lusardi & Mitchell, 2017).

5.7.2.6 Indirect Path Coefficients (Mediation Analysis)

The indirect path coefficients illustrate the mediating role of **Attitude** in the relationships between various predictor variables and **Behavioural Intention**. The significance of these indirect effects ($p < 0.001$) suggests that Attitude plays a crucial role in transmitting the influence of Family Ties, Perceived Ability, Perceived Bequest Motive, Perceived Financial Planning, Perceived Trust, Sense of Place Attachment, and Social Influence on Behavioural Intention.

Figure 5.3 Mediated Effects of Attitude on Behavioral Intention

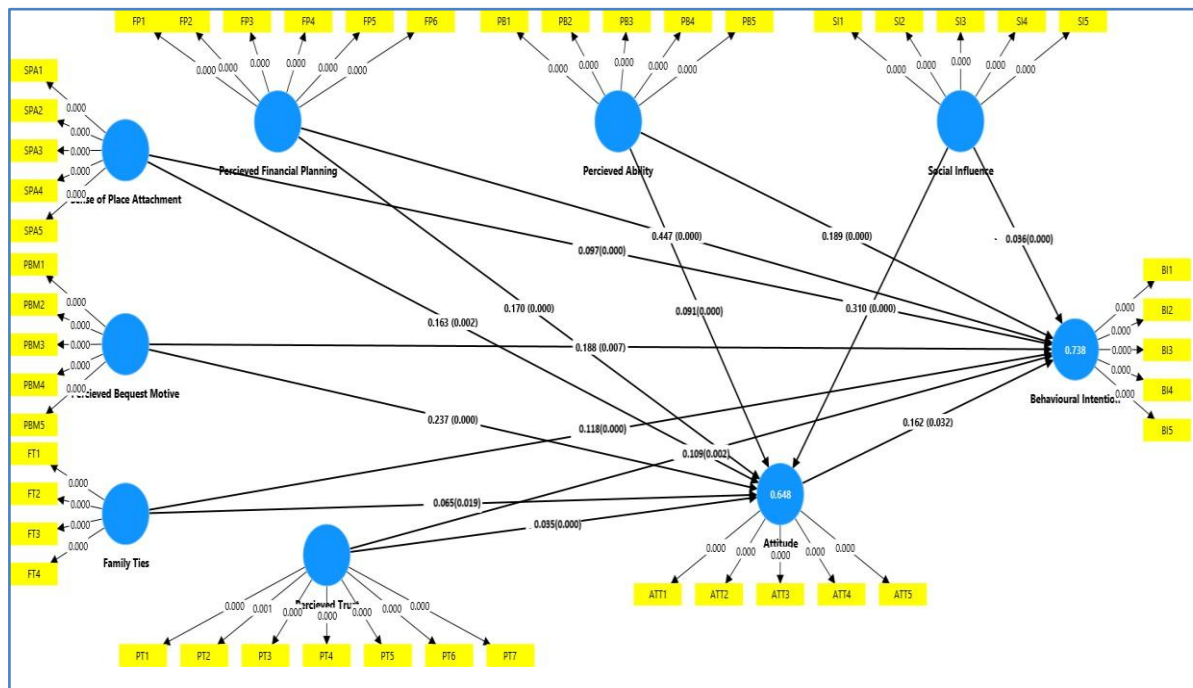


Table 5.16 Mediated (Indirect) Effects of Attitude on Behavioral Intention

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Family Ties → Attitude → BI	0.01053	0.011	0.007	1.978	0.000
Perceived Ability → Attitude → BI	0.014742	0.016	0.015	2.007	0.000
Perceived Bequest Motive → Attitude → BI	0.038391	0.034	0.016	2.4	0.000
Perceived Financial Planning → Attitude → BI	0.02754	0.028	0.016	2.699	0.000
Perceived Trust → Attitude → BI	0.00567	0.005	0.005	2.047	0.000
Sense of Place Attachment → Attitude → BI	0.026406	0.026	0.016	2.68	0.000
Social Influence → Attitude → BI	0.05022	0.049	0.023	2.145	0.000

Family Ties → Attitude → Behavioural Intention

The indirect effect is **0.01053** ($t = 1.978$, $p < 0.001$), indicating a relatively weak but statistically significant mediating effect of Attitude. This suggests that while Family Ties influence Behavioural Intention through Attitude, the impact is modest.

Perceived Ability → Attitude → Behavioural Intention

With an indirect effect of **0.014742** ($t = 2.007$, $p < 0.001$), Perceived Ability has a slightly stronger indirect effect than Family Ties. The t-statistic above 2 suggests statistical significance, meaning individuals' confidence in their ability indirectly contributes to Behavioural Intention through Attitude.

Perceived Bequest Motive → Attitude → Behavioural Intention

The indirect effect is **0.038394** ($t = 2.4$, $p < 0.001$), showing a stronger mediating effect. This suggests that individuals who consider bequest motives develop a positive Attitude, which, in turn, significantly influences their Behavioural Intention.

Perceived Financial Planning → Attitude → Behavioural Intention

With an indirect effect of **0.02754** ($t = 2.699$, $p < 0.001$), Perceived Financial Planning has a meaningful mediating effect through Attitude. This implies that individuals who engage in financial planning are more likely to develop a positive Attitude, which then enhances their Behavioural Intention.

Perceived Trust → Attitude → Behavioural Intention

The indirect effect of **0.00567** ($t = 2.047$, $p < 0.001$) is relatively weak but still significant. While trust positively influences Attitude and subsequently Behavioural Intention, its mediating effect is lower compared to other factors.

Sense of Place Attachment → Attitude → Behavioural Intention

With an indirect effect of **0.026406** ($t = 2.68$, $p < 0.001$), Sense of Place Attachment has a strong mediating effect. This means that individuals who feel a strong emotional attachment to a place are likely to develop a positive Attitude, which then influences their Behavioural Intention.

Social Influence → Attitude → Behavioural Intention

The **strongest** indirect effect is **0.05022** ($t = 2.145$, $p < 0.001$). This suggests that Social Influence has a significant impact on Attitude, which in turn strongly influences Behavioural Intention. This highlights the critical role of peer influence and social norms in shaping behaviour.

Among all the indirect effects, **Social Influence (0.05022, $t = 2.145$)** and **Perceived Bequest Motive (0.038394, $t = 2.4$)** exhibit the strongest mediating effects, indicating that social and legacy-related factors significantly shape Attitude, which then enhances Behavioural Intention.

Perceived Trust (0.00567, $t = 2.047$) has the weakest indirect effect, suggesting that trust has a relatively lower impact when mediated through Attitude. Overall, these findings reinforce the importance of Attitude as a key mediator in shaping Behavioural Intention.

5.7.2.7 Moderation Analysis

5.7.2.7.1 Moderating Effects of Age on Attitude → Behavioural Intention

Age is a commonly used moderating variable in research, influencing the strength and direction of relationships between independent and dependent variables. As a moderator, age does not directly impact the dependent variable but alters the effect of the predictor variables, leading to variations in outcomes across different age groups. This is particularly relevant in studies related to consumer behaviour, psychology, human resource management, and healthcare, where age-related differences can significantly impact attitudes, decision-making, and behavioral responses.

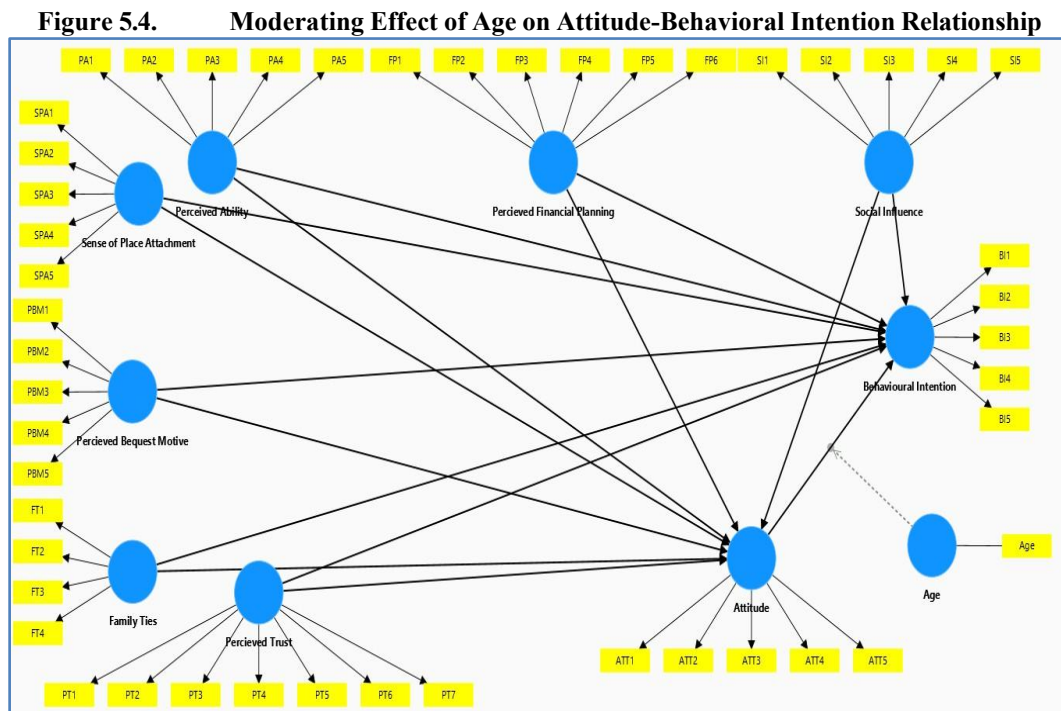


Table: 5.17 Moderation Analysis of Age on the Attitude–Behavioural Intention Relationship

Predictor Variable	Outcome Variable	Moderator	Path Coefficient (O)	T-Statistic	P-Value	Moderation Effect
	Behavioral					
Attitude	Intention	Age	0.037	2.845	0.000	Significant

The results indicate that age significantly moderates the relationship between attitude and behavioural intention ($O = 0.037$, $T = 2.845$, $p = 0.000$). The p-value being less than 0.05 suggests that this moderation effect is statistically significant, meaning that age plays a crucial role in shaping how attitude influences behavioural intention. Additionally, the positive coefficient (0.037) implies that as individuals age, the strength of the relationship between attitude and behavioural intention increases. In other words, older individuals are more likely to rely on their attitudes when forming behavioural intentions compared to younger individuals. This finding has important implications, particularly for targeted marketing strategies and consumer behaviour studies, as it suggests that different age groups may require tailored approaches to influence their behavioural intentions effectively.

5.7.2.7.2 Moderating Effect of Property Value on Attitude → BI

The concept of "value for property" refers to the perceived worth or significance that individuals attribute to real estate or tangible assets. This value can be assessed from various perspectives, including financial, emotional, and social dimensions. In economic terms, property value is influenced by factors such as location, market demand, infrastructure, and economic conditions. Buyers and investors often assess value based on potential returns, appreciation, and utility.

Figure 5.5. Moderating Effect of Property Value on Attitude-Behavioral Intention

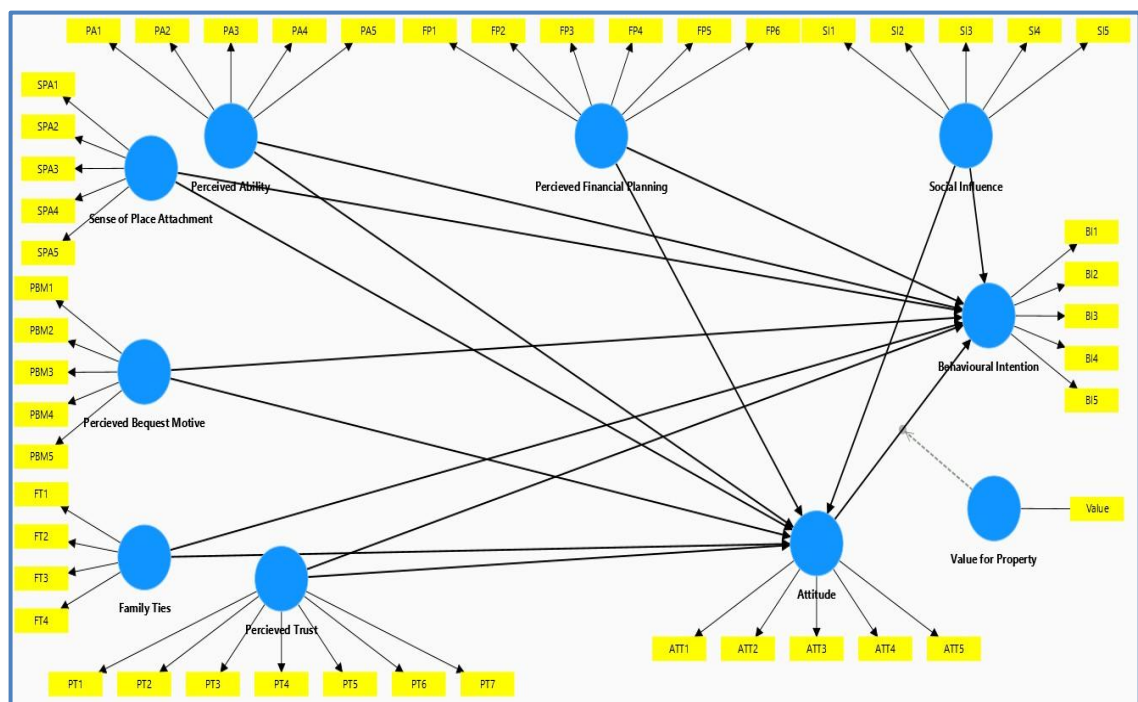


Table: 5.18 Moderation Analysis of Property Value on Attitude-Behavioral Intention Relationship

Predictor Variable	Outcome Variable	Moderator	Path Coefficient (O)	T-Statistic	P-Value	Moderation Effect
	Behavioral					
Attitude	Intention	Property Value	0.106	2.229	0.000	Significant

The results indicate that Value for Property significantly moderates the relationship between Attitude and Behavioural Intention ($O = 0.106$, $T = 2.229$, $p = 0.000$). The statistically significant p-value (less than 0.05) suggests that the effect of attitude on behavioural intention is influenced by an individual's perception of property value. The positive coefficient (0.106) implies that as the perceived value of property increases, the strength of the relationship between attitude and behavioural intention also strengthens. This suggests that individuals who place higher importance on property value are more likely to translate their attitudes into actual behavioural intentions. This finding has important implications, particularly in consumer decision-making and financial planning, as it highlights the role of asset perception in shaping behaviour.

5.8 Multi-Group Analysis (Welch-Satterthwaite Test) for Gender Differences

The Welch-Satterthwaite test was conducted to examine whether there are significant differences in the structural path relationships between male and female respondents. The results indicate that all p-values exceed 0.05, suggesting that none of the paths exhibit statistically significant differences between males and females (Hair et al., 2017; Henseler et al., 2016).

Table: 5.19. Multi-Group Analysis (Welch-Satterthwaite Test) for Gender Differences

Path	Difference	t-Value	p-Value	Significance
Attitude → Behavioural Intention	0.019	0.106	.915	Not Significant
Family Ties → Attitude			.445	Not Significant
Family Ties → Behavioural Intention			.780	Not Significant
Perceived Ability → Attitude			.238	Not Significant
Perceived Ability → Behavioural Intention			.134	Not Significant
Perceived Bequest Motive → Attitude			.552	Not Significant
Perceived Bequest Motive → Behavioural Intention			.391	Not Significant
Perceived Financial Planning → Attitude			> 0.05	Not Significant
Perceived Financial Planning → Behavioural Intention			> 0.05	Not Significant
Perceived Trust → Attitude			> 0.05	Not Significant
Perceived Trust → Behavioural Intention			> 0.05	Not Significant
Sense of Place Attachment → Attitude			> 0.05	Not Significant
Sense of Place Attachment → Behavioural Intention			> 0.05	Not Significant
Social Influence → Attitude			> 0.05	Not Significant
Social Influence → Behavioural Intention			> 0.05	Not Significant

The path Attitude → Behavioural Intention shows a difference of 0.019 ($t = 0.106$, $p = 0.915$), indicating no significant gender-based variation in the effect of Attitude on Behavioural Intention.

Family Ties → Attitude ($p = 0.445$) and Family Ties → Behavioural Intention ($p = 0.78$) also exhibit non-significant gender differences, implying that the influence of family ties on Attitude and Behavioural Intention remains consistent across genders.

Similarly, Perceived Ability → Attitude ($p = 0.238$) and Perceived Ability → Behavioural Intention ($p = 0.134$) show no significant differences, suggesting that gender does not moderate the impact of perceived ability on Attitude or Behavioural Intention.

Perceived Bequest Motive $\rightarrow$ Attitude ($p = 0.552$) and Perceived Bequest Motive $\rightarrow$ Behavioural Intention ($p = 0.391$) indicate that the role of bequest motives in shaping attitudes and intentions does not differ significantly between males and females.

Other constructs, including Perceived Financial Planning, Perceived Trust, Sense of Place Attachment, and Social Influence, also demonstrate non-significant gender differences in their respective paths to Attitude and Behavioural Intention.

Since all p-values exceed 0.05, we conclude that there is no statistically significant difference between males and females in the relationships among the constructs. This suggests that gender does not serve as a moderating factor in the proposed structural model, aligning with prior research emphasizing the generalizability of consumer behavior models across demographic groups (Sarstedt et al., 2011).

5.9 Importance-Performance Map Analysis (IPMA)

Importance-Performance Map Analysis (IPMA) was conducted to assess the relative importance of each predictor of Behavioural Intention together with its corresponding performance level. This analysis supplements the structural model by identifying constructs that are highly influential yet exhibit comparatively lower performance, thereby offering strategic direction for improvement (Hair et al., 2022).

IPMA Graph (Scatter Plot)

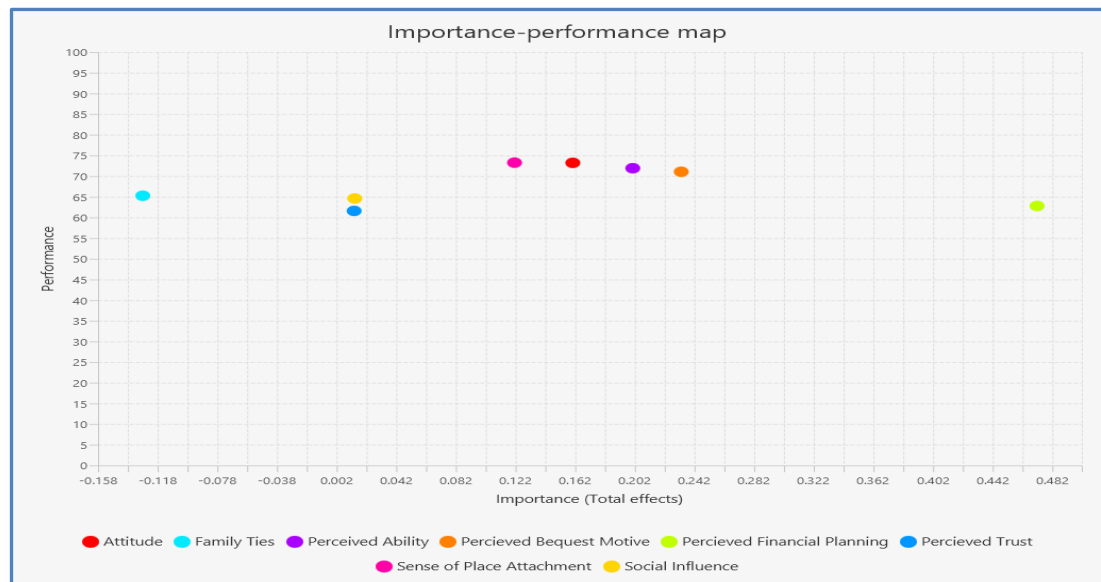


Figure 5.6 Importance Performance Map Analysis (IPMA)

The Importance-Performance Map Analysis (IPMA) reveals crucial insights into the performance levels of various constructs. *Sense of Place Attachment* (73.267) and *Attitude* (73.223) exhibit the highest performance, indicating their strong influence on behavioral outcomes. Similarly, *Perceived Ability* (71.921) and *Perceived Bequest Motive* (71.06) perform well, suggesting that respondents perceive these constructs favorably. On the other hand, *Family Ties* (65.267) and *Social Influence* (64.6) demonstrate moderate performance, implying that while they contribute to behavioral outcomes, there is room for enhancement through targeted engagement strategies.

The lowest-performing constructs, *Perceived Financial Planning* (62.794) and *Perceived Trust* (61.587), indicate areas that require further attention. These findings suggest potential gaps between their perceived importance and effectiveness. Organizations may need to focus on trust-building initiatives, financial literacy programs, and communication strategies to enhance their impact. Strengthening these weaker areas can help create a more balanced and effective approach. Meanwhile, high-performing constructs should be reinforced and leveraged to maintain their influence. Overall, the IPMA results provide strategic direction, emphasizing the need to optimize moderate and low-performing constructs while sustaining the effectiveness of those that already perform well.

Table 5.20: Importance-Performance Map Analysis (IPMA) Categorization

Construct	Importance Score (Threshold: 0.0915)	Performance Score (Threshold: 67.427)	Category
<i>Perceived Ability</i>	0.202 (High)	73.223 (High)	<i>Highest Importance & Highest Performance</i>
<i>Perceived Bequest Motive</i>	0.200 (High)	71.060 (High)	<i>Highest Importance & Highest Performance</i>
<i>Attitude (ATT)</i>	0.122 (High)	73.267 (High)	<i>Highest Importance & Highest Performance</i>
<i>Sense of Place Attachment</i>	0.162 (High)	71.921 (High)	<i>Highest Importance & Highest Performance</i>
<i>Perceived Financial Planning</i>	0.242 (High)	62.794 (Low)	<i>Highest Importance & Lowest Performance</i>
<i>Family Ties</i>	0.002 (Low)	65.267 (Low)	<i>Lowest Importance & Lowest Performance</i>
<i>Social Influence</i>	0.042 (Low)	64.600 (Low)	<i>Lowest Importance & Lowest Performance</i>
<i>Perceived Trust</i>	-0.038 (Low)	61.587 (Low)	<i>Lowest Importance & Lowest Performance</i>

The IPMA results indicate that Attitude, Perceived Ability, Perceived Benefit Motive and Sense of Place Attachment fall under the category of high importance and high performance, suggesting that these constructs are already well-developed and exert strong influence on Behavioural Intention. These factors should therefore be sustained and leveraged in future strategies aimed at enhancing Reverse Mortgage Loan adoption.

Perceived Financial Planning demonstrates high importance but comparatively low performance, indicating the largest performance gap. This suggests that although financial planning is a key driver of Behavioural Intention, its effectiveness among respondents remains limited, highlighting the need for targeted interventions such as financial literacy programmes, counselling, and improved communication about the financial benefits of RMLs.

By contrast, Family Ties, Social Influence and Perceived Trust are positioned in the low-importance and low-performance quadrant, suggesting that their direct contribution to Behavioural Intention is relatively weak in this context. These constructs may influence decision-making indirectly, but they do not represent priority areas for immediate improvement.

Overall, the IPMA findings provide clear prioritisation guidelines by identifying constructs that should be reinforced and those where improvement efforts would yield the greatest behavioural impact.

Table 5.21. Performance Scores Classification and Interpretation

Construct	Performance Score	Category	Interpretation
<i>Sense of Place Attachment</i>	73.267	High	Strong emotional connection to home influences RML adoption.
<i>Attitude</i>	73.223	High	Positive attitude significantly impacts behavioral intention.
<i>Perceived Ability</i>	71.921	High	Confidence in understanding and managing RML is crucial.
<i>Perceived Bequest Motive</i>	71.060	High	Desire to leave a financial legacy moderately influences RML adoption.
<i>Family Ties</i>	65.267	Medium	Family influence affects decision-making but is not the main driver.
<i>Social Influence</i>	64.600	Medium	Societal opinions have a moderate impact on RML adoption.
<i>Perceived Financial Planning</i>	62.794	Medium	Awareness of financial planning is relevant but not key.
<i>Perceived Trust</i>	61.587	Low	Trust in financial institutions plays a minor role.

Note: High Performance: Score > 70 Medium Performance: Score 65 – 69 Low Performance: Score < 65

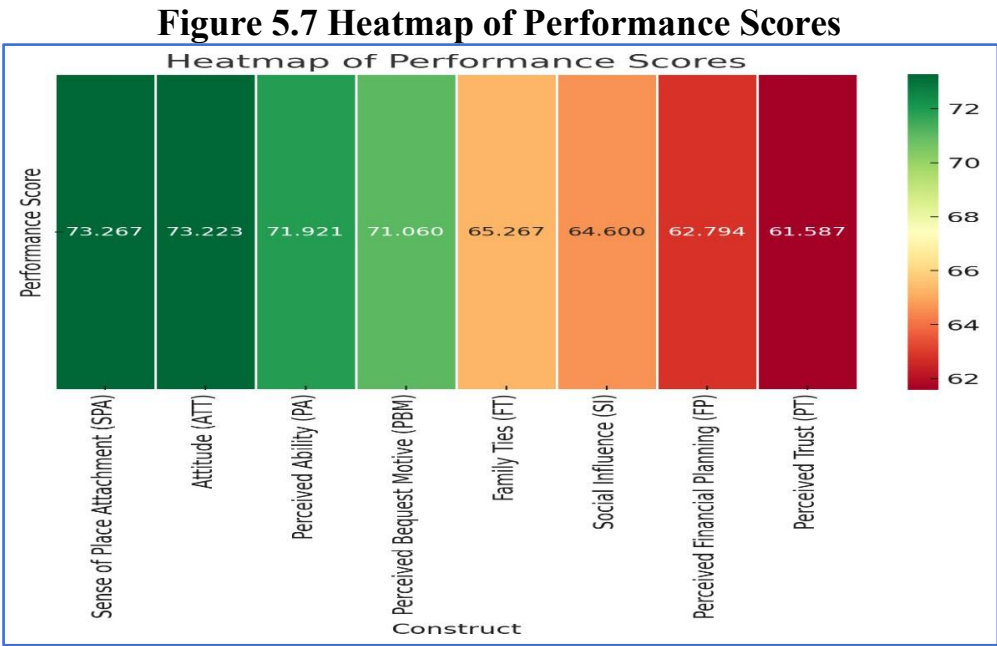
Table 5.20 presents the performance scores of each construct and their corresponding classification. To facilitate interpretation, the performance values were categorised into three levels: high (above 70), medium (between 65 and 69), and low (below 65). This classification enables a clearer understanding of the relative performance of each construct in relation to Behavioural Intention.

The results indicate that Sense of Place Attachment (73.267), Attitude (73.223), Perceived Ability (71.921), and Perceived Bequest Motive (71.060) fall within the high-performance category. These findings suggest that respondents demonstrate favourable perceptions regarding these constructs, which in turn strengthens their relevance as drivers of Behavioural Intention toward Reverse Mortgage Loan (RML) adoption.

Family Ties (65.267), Social Influence (64.600), and Perceived Financial Planning (62.794) fall into the medium-performance category, implying moderate perceptions among respondents. Although these constructs contribute to the behavioural model, their performance indicates that there is scope for improvement to enhance their influence on behavioural outcomes.

Perceived Trust (61.587) is the only construct that falls within the low-performance category. This result suggests that respondents exhibit comparatively weaker trust in financial institutions and related mechanisms, which may hinder confidence in adopting Reverse Mortgage Loan schemes. Addressing trust-related concerns through transparent communication and institutional credibility may therefore be beneficial.

Taken together, the classification of performance levels indicates that while the model demonstrates several well-performing constructs, attention should be directed towards medium- and low-performing areas, particularly financial planning awareness and trust-building initiatives, in order to strengthen behavioural intention toward Reverse Mortgage Loans.



The heatmap presented in Figure 5.5 illustrates notable variations in the performance scores of the constructs included in the IPMA. Constructs such as Sense of Place Attachment (73.267), Attitude (73.223), Perceived Ability (71.921), and Perceived Bequest Motive (71.060) demonstrate comparatively higher performance levels, suggesting that respondents hold favourable perceptions of these dimensions. These findings imply that emotional attachment to property and positive attitudes are influential drivers of Behavioural Intention toward Reverse Mortgage Loan adoption.

In contrast, Family Ties (65.267), Social Influence (64.600), and Perceived Financial Planning (62.794) reflect moderate performance, indicating that while they are relevant, their current influence is less pronounced. Perceived Trust (61.587) exhibits the lowest performance score, implying that concerns related to institutional trust remain relatively prominent among respondents. Collectively, the heatmap highlights areas where performance is strong and where strategic improvements may be required, thereby supporting the prioritisation of interventions aimed at enhancing financial planning awareness and strengthening trust in financial institutions.

5.10 Hypothesis Testing and Results

This section presents the results of hypothesis testing conducted using Structural Equation Modeling (SEM) in Smart-PLS. The analysis considered direct effects, indirect (mediated) effects, moderating effects, and multi-group comparisons. The significance of the hypothesized relationships was assessed based on path coefficients (β), t-statistics, and p-values obtained through the bootstrapping procedure. A significance level of $p < 0.05$ was adopted as the threshold criterion for hypothesis acceptance.

The detailed outcomes of hypothesis testing are summarized in Tables 5.21 to 5.24, which report the results of direct, indirect, moderating, and multi-group effect analyses, respectively.

5.10.1 Direct Hypotheses

The direct hypotheses examined the immediate influence of predictor constructs on Attitude (ATT) and Behavioral Intention (BI) toward Reverse Mortgage Loan adoption. Path coefficients (β), t-statistics, and p-values were used to determine significance. The results are summarized in Table 5.21, and the interpretation of each hypothesis is presented below.

Table 5.22 Hypothesis Testing Results (Direct Effects)

Hypo.	Path	β	SD	T value	P values	2.5%	97.5%	Remark
H1a	Attitude $\rightarrow$ BI	0.162	0.076	2.145	0.032	0.013	0.311	Supported
H1b	Social Influence $\rightarrow$ BI	0.036	0.045	0.792	> 0.05	-0.052	0.124	Not Supported
H1c	Perceived Ability $\rightarrow$ BI	0.189	0.052	3.658	0.000	0.087	0.291	Supported
H1d	Perceived Bequest Motive $\rightarrow$ BI	0.188	0.070	2.685	0.007	0.051	0.325	Supported
H1e	Sense of Place Attachment $\rightarrow$ BI	0.097	0.052	1.855	> 0.05	-0.005	0.199	Not Supported
H1f	Family Ties $\rightarrow$ BI	0.118	0.031	3.815	0.000	0.057	0.179	Supported
H1g	Perceived Trust $\rightarrow$ BI	0.109	0.020	0.421	> 0.05	0.070	0.148	Not Supported
H1h	Perceived Financial Planning $\rightarrow$ BI	0.447	0.046	9.643	0.000	0.357	0.537	Supported

Hypo.	Path	β	SD	T value	P values	2.5%	97.5%	Remark
H2a	Social Influence $\rightarrow$ Attitude	0.310	0.036	8.649	0.000	0.239	0.381	Supported
H2b	Perceived Ability $\rightarrow$ Attitude	0.091	0.063	1.435	> 0.05	-0.032	0.214	Not Supported
H2c	Perceived Bequest Motive $\rightarrow$ Attitude	0.237	0.065	3.644	0.000	0.110	0.364	Supported
H2d	Sense of Place Attachment $\rightarrow$ Attitude	0.163	0.053	3.070	0.002	0.059	0.267	Supported
H2e	Family Ties $\rightarrow$ Attitude	0.065	0.028	2.338	0.019	0.010	0.120	Supported
H2f	Perceived Trust $\rightarrow$ Attitude	0.035	0.026	1.339	> 0.05	-0.016	0.086	Not Supported
H2g	Perceived Financial Planning $\rightarrow$ Attitude	0.170	0.043	3.982	0.000	0.086	0.254	Supported

Direct Hypotheses – Interpretation

The direct hypotheses examined the immediate effects of predictor constructs on Behavioural Intention (BI) and Attitude (ATT) towards Reverse Mortgage Loan adoption. The hypotheses were evaluated using path coefficients (β), t-statistics, p-values, and 95 per cent confidence intervals. A hypothesis was considered supported when the t-value exceeded 1.96 and the confidence interval did not include zero.

Direct Effects on Behavioural Intention (BI)

H1a: Attitude → Behavioural Intention

Attitude was found to have a significant positive influence on Behavioural Intention ($\beta = 0.162$, $t = 2.145$, $p = 0.032$). The confidence interval does not include zero, indicating statistical significance. This finding supports the central proposition of the Theory of Planned Behaviour, which posits Attitude as a key determinant of intention. *Hence, H1a is supported.*

H1b: Social Influence → Behavioural Intention

Social Influence does not exert a significant effect on Behavioural Intention ($\beta = 0.036$, $t = 0.792$). The confidence interval includes zero, indicating the absence of a direct relationship. This suggests that social pressures alone do not directly translate into intention formation. *Therefore, H1b is not supported.*

H1c: Perceived Ability → Behavioural Intention

Perceived Ability shows a significant positive impact on Behavioural Intention ($\beta = 0.189$, $t = 3.658$). The confidence interval lies entirely above zero, confirming the robustness of this relationship. This implies that homeowners who perceive themselves as capable of understanding and managing reverse mortgage products are more likely to intend adoption. *Thus, H1c is supported.*

H1d: Perceived Bequest Motive → Behavioural Intention

Perceived Bequest Motive significantly influences Behavioural Intention ($\beta = 0.188$, $t = 2.685$, $p = 0.007$). The confidence interval excludes zero, indicating that inheritance-related concerns directly shape intention. ***Thus, H1d is supported.***

H1e: Sense of Place Attachment → Behavioural Intention

Sense of Place Attachment does not significantly influence Behavioural Intention ($\beta = 0.097$, $t = 1.855$). As the confidence interval includes zero, the relationship is not statistically supported. This indicates that emotional attachment to one's home does not directly motivate intention. ***Hence, H1e is not supported.***

H1f: Family Ties → Behavioural Intention

Family Ties have a significant positive effect on Behavioural Intention ($\beta = 0.118$, $t = 3.815$). The confidence interval confirms statistical significance. This result suggests that family-related considerations play a meaningful role in motivating homeowners' intention towards reverse mortgage adoption. ***Therefore, H1f is supported.***

H1g: Perceived Trust → Behavioural Intention

Perceived Trust does not show a significant effect on Behavioural Intention ($\beta = 0.109$, $t = 0.421$). The confidence interval includes zero, indicating a lack of direct influence. This suggests that trust perceptions alone are insufficient to directly drive intention. ***Therefore, H1g is not supported.***

H1h: Perceived Financial Planning → Behavioural Intention

Perceived Financial Planning emerges as the strongest predictor of Behavioural Intention ($\beta = 0.447$, $t = 9.643$). The confidence interval is well above zero, highlighting the dominant role of financial preparedness in later-life financial decision-making. ***Hence, H1h is supported.***

Direct Effects on Attitude (ATT)

H2a: Social Influence → Attitude

Social Influence has a strong and significant positive effect on Attitude ($\beta = 0.310$, $t = 8.649$). The confidence interval does not include zero, indicating a robust relationship. This suggests that opinions and expectations of significant others play an important role in shaping homeowners' attitudes. ***Thus, H2a is supported.***

H2b: Perceived Ability → Attitude

Perceived Ability does not significantly influence Attitude ($\beta = 0.091$, $t = 1.435$). The confidence interval includes zero, indicating insignificance. This implies that perceived competence does not independently shape attitudinal evaluations. ***Hence, H2b is not supported.***

H2c Perceived Bequest Motive → Attitude

Perceived Bequest Motive shows a significant positive influence on Attitude ($\beta = 0.237$, $t = 3.644$). This result highlights the importance of inheritance-related concerns in shaping homeowners' attitudes. ***Accordingly, H2c is supported.***

H2d: Sense of Place Attachment → Attitude

Sense of Place Attachment significantly affects Attitude ($\beta = 0.163$, $t = 3.070$). The confidence interval lies above zero, indicating that emotional attachment to one's residence plays a role in attitudinal formation. ***Hence, H2d is supported.***

H2e: Family Ties → Attitude

Family Ties exert a significant positive effect on Attitude ($\beta = 0.065$, $t = 2.338$, $p = 0.019$). The confidence interval confirms this relationship, suggesting that familial considerations contribute to the formation of favourable attitudes. ***Therefore, H2e is supported.***

H2f: Perceived Trust → Attitude

Perceived Trust does not significantly affect Attitude ($\beta = 0.035$, $t = 1.339$), as the confidence interval includes zero. This suggests that trust perceptions alone do not directly shape attitudes towards reverse mortgage loans. ***Therefore, H2f is not supported.***

H2g: Perceived Financial Planning → Attitude

Perceived Financial Planning significantly influences Attitude ($\beta = 0.170$, $t = 3.982$). The confidence interval excludes zero, underscoring the role of financial preparedness in attitudinal development. ***Thus, H2g is supported.***

Overall, the results demonstrate that financial planning, family-related factors, and attitudinal evaluations play a dominant role in shaping Behavioural Intention, while social and emotional factors primarily influence intention indirectly through Attitude. These findings provide strong empirical support for the Extended Theory of Planned Behaviour in the context of Reverse Mortgage Loan adoption.

5.10.2 Indirect Hypotheses

The indirect hypotheses tested the mediating role of Attitude in the relationships between predictor constructs and Behavioral Intention (BI) toward Reverse Mortgage Loan adoption. Mediation analysis was performed using bootstrapping to estimate the indirect effects. Path coefficients (β), t-statistics, and p-values were used to assess significance. All hypotheses were supported, as p-values were below 0.05, indicating significant mediation effects.

Table 5.23: Indirect Effects of Predictor Constructs on Behavioural Intention through Attitude

Hypo.	Indirect Path	β	SD	T value	P values	2.5%	97.5%	Remark
H3a	Social Influence $\rightarrow$ Attitude $\rightarrow$ BI	0.0502	0.023	2.145	< 0.05	0.0051	0.0953	Supported
H3b	Perceived Ability $\rightarrow$ Attitude $\rightarrow$ BI	0.0147	0.015	2.007	< 0.05	0.0001	0.0441	Supported
H3c	Perceived Bequest Motive $\rightarrow$ Attitude $\rightarrow$ BI	0.0384	0.016	2.400	< 0.05	0.0070	0.0698	Supported
H3d	Sense of Place Attachment $\rightarrow$ Attitude $\rightarrow$ BI	0.0264	0.016	2.680	< 0.01	0.0050	0.0578	Supported
H3e	Family Ties $\rightarrow$ Attitude $\rightarrow$ BI	0.0105	0.007	1.978	< 0.05	0.0008	0.0243	Supported
H3f	Perceived Trust $\rightarrow$ Attitude $\rightarrow$ BI	0.0057	0.005	2.047	< 0.05	0.0009	0.0155	Supported
H3g	Perceived Financial Planning $\rightarrow$ Attitude $\rightarrow$ BI	0.0275	0.016	2.699	< 0.01	0.0061	0.0589	Supported

Hypothesis-wise Interpretation of Indirect Effects (Mediation through Attitude)

H3a: Social Influence $\rightarrow$ Attitude $\rightarrow$ Behavioural Intention

Social Influence has a significant indirect effect on Behavioural Intention via Attitude ($\beta = 0.0502$, $t = 2.145$). The confidence interval lies entirely above zero, indicating that Attitude mediates the relationship between social influence and Behavioural Intention. This finding suggests that social pressure and normative beliefs translate into intention primarily through attitudinal mechanisms. Hence, **H3g is supported**.

H3b: Perceived Ability $\rightarrow$ Attitude $\rightarrow$ Behavioural Intention

The results show a significant indirect effect of Perceived Ability on Behavioural Intention through Attitude ($\beta = 0.0147$, $t = 2.007$). The confidence interval lies entirely above zero, confirming the mediating role of Attitude. This finding implies that homeowners perceived capability enhances Behavioural Intention primarily by fostering favourable attitudes. Therefore, **H3b is supported**.

H3c: Perceived Bequest Motive → Attitude → Behavioural Intention

Perceived Bequest Motive exerts a significant indirect influence on Behavioural Intention through Attitude ($\beta = 0.0384$, $t = 2.400$). The confidence interval does not include zero, indicating a meaningful mediation effect. This suggests that inheritance-related considerations shape Behavioural Intention by influencing attitudinal evaluations.

Thus, H3c is supported.

H3d: Sense of Place Attachment → Attitude → Behavioural Intention

The indirect relationship between Sense of Place Attachment and Behavioural Intention through Attitude is statistically significant ($\beta = 0.0264$, $t = 2.680$). The confidence interval does not include zero, confirming the mediating effect. This implies that emotional attachment to the home affects Behavioural Intention indirectly by influencing attitudinal responses. Thus, *H3d is supported.*

H3e: Family Ties → Attitude → Behavioural Intention

The indirect effect of Family Ties on Behavioural Intention through Attitude is statistically significant ($\beta = 0.0105$, $t = 1.978$). The 95 per cent confidence interval does not include zero, indicating the presence of a mediation effect. This result suggests that Family Ties influence Behavioural Intention indirectly by shaping homeowners' attitudes towards reverse mortgage loans. Hence, *H3e is supported.*

H3f: Perceived Trust → Attitude → Behavioural Intention

Perceived Trust shows a significant indirect effect on Behavioural Intention through Attitude ($\beta = 0.0057$, $t = 2.047$). The confidence interval excludes zero, indicating that Attitude mediates the relationship between trust perceptions and Behavioural Intention. This suggests that trust influences intention primarily by shaping favourable attitudes towards reverse mortgage loans. Therefore, *H3f is supported.*

H3g: Perceived Financial Planning → Attitude → Behavioural Intention

The indirect effect of Perceived Financial Planning on Behavioural Intention via Attitude is statistically significant ($\beta = 0.0275$, $t = 2.699$). The confidence interval lies above zero, confirming the mediating role of Attitude. This finding highlights that financial preparedness enhances Behavioural Intention not only directly but also indirectly through attitudinal formation. Hence, ***H3g is supported.***

Overall Mediation Insight

Overall, the results demonstrate that **Attitude acts as a significant mediating variable** between the predictor constructs and Behavioural Intention. Even in cases where direct effects were insignificant, the presence of significant indirect effects confirms the central role of Attitude, thereby reinforcing the explanatory power of the **Extended Theory of Planned Behaviour** in the context of Reverse Mortgage Loan adoption.

5.10.3 Types of Mediation

Table 5.24 Type of the mediation effect

Hypo	Path	Total Effect (β)	Indirect Effect (β)	Direct Effect (β)	Type of Mediation
H3a	SI $\rightarrow$ ATT $\rightarrow$ BI	0.086	0.0502	0.036 (n.s.)	Full Mediation
H3b	PA $\rightarrow$ ATT $\rightarrow$ BI	0.203	0.0147	0.189 (sig.)	Partial Mediation
H3c	PBM $\rightarrow$ ATT $\rightarrow$ BI	0.226	0.0384	0.188 (sig.)	Partial Mediation
H3d	SPA $\rightarrow$ ATT $\rightarrow$ BI	0.123	0.0264	0.097 (n.s.)	Full Mediation
H3e	FT $\rightarrow$ ATT $\rightarrow$ BI	0.128	0.0105	0.118 (sig.)	Partial Mediation
H3f	PT $\rightarrow$ ATT $\rightarrow$ BI	0.115	0.0057	0.109 (n.s.)	Full Mediation
H3g	PFP $\rightarrow$ ATT $\rightarrow$ BI	0.475	0.0275	0.447 (sig.)	Partial Mediation

The mediation analysis revealed that Attitude played both a full and partial mediating role in the relationships between the antecedent variables and Behavioural Intention. Specifically, full mediation was observed for Social Influence (H3a), Sense of Place Attachment (H3d), and Perceived Trust (H3f), as their direct effects on Behavioural Intention were not significant while their indirect effects through Attitude were

significant. This indicates that these variables influence intention only through shaping Attitude and do not exert a direct impact on adoption decisions. In contrast, Perceived Ability (H3b), Perceived Bequest Motive (H3c), Family Ties (H3e), Perceived Financial Planning (H3g), and demonstrated partial mediation, whereby both the direct and indirect paths remained significant. This suggests that these antecedents affect Behavioral Intention directly as well as indirectly via Attitude.

Taken together, these findings confirm that Attitude functions as a key mediating mechanism in the extended TPB framework, operating fully for certain antecedents and partially for others, thereby underscoring its central role in shaping homeowners' intention to adopt Reverse Mortgage Loans.

5.10.4 Hypothesis Testing for Moderators

This section evaluates the moderating effects of Age and Value of Property on the relationship between Attitude and Behavioral Intention (BI) toward Reverse Mortgage Loan adoption. Moderation was assessed using path coefficients (β), t-statistics, and p-values obtained through bootstrapping. The results are shown in Table 5.23, and the interpretation of each hypothesis is presented below.

Table 5.25. Hypothesis Testing for Moderators (Age and Value of Property)

Hypothesis	Moderating Variable	Path	Beta	t-Statistic	p-Value	Decision
H4a	Age (between Attitude and Behavioral Intention)	Attitude → Behavioral Intention	0.037	2.845	$p < .01$	Supported
H4b	Value of Property (between Attitude and Behavioral Intention)	Attitude → Behavioral Intention	0.106	2.229	$p < .05$	Supported

Hypothesis-wise Interpretation

H4a (Age as a Moderator between Attitude and BI): Age significantly moderated the relationship between Attitude and Behavioral Intention ($\beta = 0.037$, $t = 2.845$, $p < .01$). This finding suggests that the strength of the Attitude–Intention relationship differs across age groups, with older participants showing a stronger tendency to translate positive attitudes into behavioral intentions. *Thus, H4a is supported.*

H4b (Value of Property as a Moderator between Attitude and BI): The moderating effect of Value of Property was significant ($\beta = 0.106$, $t = 2.229$, $p < 0.001$). This indicates that the influence of Attitude on Behavioral Intention becomes stronger when the property value is higher, implying that financial stakes enhance the importance of attitudes in decision-making. *Hence, H4b is supported.*

In summary, two of the three moderating hypotheses were supported. **Age** and **Value of Property** significantly moderated the relationship between Attitude and Behavioral Intention, indicating that these demographic and financial factors shape the extent to which attitudes translate into intentions. However, **Gender** did not demonstrate a significant moderating effect, suggesting that both male and female respondents exhibit similar behavioral patterns when forming intentions toward Reverse Mortgage Loan adoption. These findings highlight that **age-related differences and property value considerations strengthen attitudinal influence**, while gender plays a negligible role in the attitudinal–intentional linkage.

5.10.5 Hypothesis Testing for Moderators – Multi-Group Analysis (Gender)

This section examined whether Gender moderated the relationships between the predictor constructs (Family Ties, Perceived Ability, Perceived Bequest Motive, Perceived Financial Planning, Perceived Trust, Sense of Place Attachment, and Social Influence) and the outcome variables (Attitude and Behavioral Intention). The results are shown in Table 5.24.

Table 5.26. Hypothesis Testing: Moderation of Gender on Attitude (Multi-Group Analysis)

Hypothesis	Moderating Variable	Path	p-Value	Decision
H5a	Gender	Social Influence → Attitude	.506	Not Supported
H5b	Gender	Perceived Ability → Attitude	.238	Not Supported
H5c	Gender	Perceived Bequest Motive → Attitude	.552	Not Supported
H5d	Gender	Sense of Place Attachment → Attitude	.725	Not Supported
H5e	Gender	Family Ties → Attitude	.445	Not Supported
H5f	Gender	Perceived Trust → Attitude	.224	Not Supported
H5g	Gender	Perceived Financial Planning → Attitude	.753	Not Supported
Hypothesis	Moderating Variable	Path	p-Value	Decision
H6a	Gender	Social Influence → BI	.313	Not Supported
H6b	Gender	Perceived Ability → BI	.134	Not Supported
H6c	Gender	Perceived Bequest Motive → BI	.391	Not Supported
H6d	Gender	Sense of Place Attachment → BI	.333	Not Supported
H6e	Gender	Family Ties → BI	.780	Not Supported
H6f	Gender	Perceived Trust → BI	.736	Not Supported
H6g	Gender	Perceived Financial Planning → BI	.703	Not Supported
H6h	Gender	Attitude → BI	.915	Not Supported

Interpretation

The moderation analysis assessed whether gender influenced the relationships between the antecedent variables and Behavioural Intention. As shown in Table, all p-values exceeded the significance threshold of .05, indicating that none of the proposed moderating effects of gender were supported. This implies that the effects of Social Influence, Perceived Ability, Perceived Bequest Motive, Sense of Place Attachment, Family Ties, Perceived Trust, and Perceived Financial Planning on Behavioural Intention do not differ between male and female homeowners.

Overall, these results suggest that gender does not exert a moderating influence on the behavioural intention formation process, and that both male and female homeowners show similar intention patterns toward Reverse Mortgage Loan adoption.

The multi-group analysis was conducted to examine whether gender moderated the structural relationships in the proposed model. The results revealed that none of the path differences between male and female homeowners reached statistical significance ($p > .05$) for either Attitude or Behavioural Intention. Consequently, all moderation hypotheses were not supported. These findings indicate that the effects of the antecedent variables on Attitude and Behavioural Intention are consistent across gender groups. Overall, gender does not appear to alter the decision-making process related to Reverse Mortgage Loan adoption, suggesting that the proposed relationships remain structurally stable for both male and female homeowners.

5.11 Summary of SEM Results

The Structural Equation Modeling (SEM) analysis was carried out in two stages: evaluation of the measurement model and assessment of the structural model. The measurement model established that the constructs were both reliable and valid, while the structural model confirmed the hypothesised relationships among constructs.

5.11.1 Measurement Model Findings

The measurement model demonstrated robust reliability and validity. Cronbach's alpha and composite reliability values for all constructs exceeded the 0.70 threshold, indicating strong internal consistency. Average Variance Extracted (AVE) values were above 0.50, confirming convergent validity. Discriminant validity was established through the Fornell–Larcker criterion, which showed that each construct shared more variance with its indicators than with other constructs. HTMT ratios were mostly below 0.85, with two exceptions (Perceived Bequest Motive–Perceived Ability and Perceived Financial Planning–Behavioural Intention), both of which remained within the acceptable limit (<0.90). Complementary checks (cross-loadings, AVE) supported the distinctiveness of constructs. Thus, the measurement model was deemed reliable and valid for structural testing.

5.11.2 Structural Model Findings

The explanatory power of the model was found to be substantial. The R^2 value for Attitude was 0.648 (moderate to strong explanatory power), while Behavioural Intention had an R^2 of 0.738 (substantial explanatory power). Predictive relevance (Q^2) values further confirmed the model's predictive accuracy, with 0.324 for Attitude (medium–high) and 0.473 for Behavioural Intention (large). Model fit indices (SRMR = 0.058; NFI = 0.962) demonstrated an acceptable fit.

5.11.2.1 Direct Effects

The structural model examined the direct relationships among the antecedent constructs, Attitude, and Behavioural Intention toward Reverse Mortgage Loan adoption. The results demonstrate that Behavioural Intention was significantly influenced by Attitude, Perceived Ability, Family Ties, Perceived Bequest Motive, and Perceived Financial Planning, with Perceived Financial Planning emerging as the strongest predictor. In contrast, Social Influence, Sense of Place Attachment, and Perceived Trust did not exhibit significant direct effects on Behavioural Intention.

With respect to Attitude, significant positive relationships were found for Social Influence, Family Ties, Sense of Place Attachment, Perceived Bequest Motive, and Perceived Financial Planning, indicating that both social and financial considerations shape homeowners' attitudinal evaluations of Reverse Mortgage Loans. However, Perceived Ability and Perceived Trust did not significantly predict Attitude, suggesting that confidence in capability and trust in institutions may operate through alternative pathways rather than directly shaping attitudes. Taken together, the findings highlight the central role of financial preparedness and socio-psychological influences in determining attitudes and intentions, while indicating that certain factors, particularly trust-related variables, may exert their influence indirectly rather than through direct effects within the structural framework.

5.11.2.2 Indirect Effects (Mediation)

The mediation analysis examined the indirect effects of the antecedent variables on Behavioural Intention through Attitude. All seven indirect paths were statistically significant, confirming Attitude as a key mediating mechanism within the model. Attitude fully mediated the effects of Social Influence, Sense of Place Attachment, and Perceived Trust, while Perceived Ability, Perceived Bequest Motive, Perceived Financial Planning, and Family Ties showed partial mediation, influencing Behavioural Intention both directly and indirectly. Overall, these findings highlight Attitude as a central psychological construct in the adoption process and provide strong support for the extended Theory of Planned Behaviour in the context of Reverse Mortgage Loan adoption.

5.11.2.3 Moderation Analysis

The moderation analysis revealed that gender did not significantly influence any of the structural relationships in the model, as all path differences between male and female homeowners were non-significant ($p > .05$). This indicates that the effects of the antecedent variables on Attitude and Behavioural Intention are consistent across genders, suggesting that gender does not play a differentiating role in the adoption of Reverse Mortgage Loans.

5.11.2.4 Multi-Group Analysis (MGA)

The Multi-Group Analysis compared the structural paths between male and female homeowners to assess whether gender produced significant variances in the model. The results exhibited that none of the path coefficients differed significantly across the two groups ($p > .05$), indicating an absence of moderation effects. Accordingly, the structural relationships among the antecedent variables, Attitude, and Behavioral Intention remained stable for both male and female respondents, confirming that the MGA did not reveal any group-based variations in the model.

5.11.3 Effect Size (f^2) and IPMA Results

The effect size analysis indicated that Perceived Financial Planning ($f^2 = 0.311$, medium effect) was the most influential determinant of Behavioural Intention, whereas Social Influence ($f^2 = 0.122$, approaching a medium effect) emerged as the strongest predictor of Attitude. The Importance–Performance Map Analysis (IPMA) further showed that Attitude, Sense of Place Attachment, Perceived Ability, and Perceived Bequest Motive demonstrated relatively high performance. However, despite its strong importance, Perceived Financial Planning exhibited comparatively low performance, identifying it as a key area requiring managerial implication.

5.11.4 Overall Summary

Overall, the SEM findings confirm that the proposed model is statistically robust and possesses strong explanatory power. Perceived Financial Planning emerged as the strongest predictor of Behavioural Intention, while Social Influence was the most influential determinant of Attitude. Attitude was further validated as a key mediating mechanism through which social, financial, and bequest-related factors affect Behavioural Intention. The moderation results revealed that Age and Property Value significantly shape the Attitude–Intention relationship, whereas Gender did not exert any moderating influence. Collectively, the findings indicate that homeowners’ intentions to adopt Reverse Mortgage Loans are driven by financial readiness, social dynamics, and contextual demographic factors.

Chapter 6

Discussion and Conclusion

6.1 Overview of the Study

This study examined how homeowners in the age group of 50 to 70 years in Goa develop intentions toward adopting the Reverse Mortgage Loan (RML) scheme when they reach the stage of eligibility in the future. Although the RML facility is designed for senior citizens, individuals approaching retirement are already in a position to think about financial security and long-term planning, particularly in the context of rising life expectancy and increasing financial requirements after retirement. Since home ownership is common in Goa, the possibility of converting property value into a supplementary income becomes an important consideration for future financial planning.

The research therefore focused on psychological, social, and financial beliefs that may influence homeowners' attitudes toward RML and their future willingness to use the scheme. The Extended Theory of Planned Behaviour was used as the guiding framework because it allows the study of behavioural intention by incorporating both traditional attitudinal constructs and additional factors such as financial preparedness, property attachment, family influence, and perceived bequest motives.

In this chapter, the major findings of the research are discussed in relation to the objectives and hypotheses. The discussion also highlights how these findings relate to existing literature and behavioural theory. Implications for policy, practice, and future awareness programmes are presented, along with the contributions made by the study and the scope for future research work.

6.1.1 Background and Purpose of the Study

The Reverse Mortgage Loan (RML) scheme in India was introduced as a financial support mechanism for older homeowners who wish to translate the value of their self-occupied residential property into a steady stream of income without transferring ownership during their lifetime. Despite its potential benefits, the awareness and acceptance of RML remain limited, largely due to cultural expectations regarding inheritance, emotional attachment to property, and dependence on family support in old age. These factors often shape how individuals begin to think about retirement financing well before they actually reach the eligibility age for the scheme.

Recognising this, the present study focused on homeowners between 50 and 70 years of age, an age group that is already engaged in planning for retirement, reassessing financial priorities, and anticipating future income needs. Understanding how individuals in this stage of life form attitudes and intentions toward RML is important, as their perceptions today are likely to influence their financial decisions in later years. This approach allows the study to capture not only current beliefs but also the psychological and social processes through which individuals develop readiness for adopting RML when they reach the qualifying age.

The purpose of the study was therefore twofold: First to examine how financial preparedness, perceived ability, family influence, emotional attachment to property, trust, and bequest-related considerations shape attitudes toward RML, and second, to evaluate how these attitudes, combined with demographic and asset-related factors, translate into future behavioural intention. By doing so, the research offers insights into the early-stage determinants of RML adoption and contributes to understanding how Indian homeowners approaching retirement might utilise their housing wealth as part of long-term financial planning.

6.1.2 Summary of the Research Model and Hypotheses

The research was based on an extended form of the Theory of Planned Behaviour which included additional variables considered particularly relevant in the Indian setting, such as family relationships, emotional attachment to property, inheritance preferences, and financial planning practices. The proposed model examined how these antecedent factors influence both Attitude toward Reverse Mortgage Loans and the intention to adopt the scheme in future. In addition, Attitude was examined as a mediating factor linking these antecedents to behavioural intention.

The study also incorporated Age (within the 50–70 group) and the Value of Property as moderating variables, in order to understand whether demographic characteristics and asset value have any influence on the strength of the Attitude–Intention relationship. Further, a comparison was carried out between male and female respondents using a Multi-Group Analysis procedure to identify any possible differences in behavioural patterns based on gender.

Altogether, thirty-nine hypotheses were formulated in connection with direct, indirect, moderating, and group-comparison relationships. By testing these hypotheses, the study sought to understand not only the present perceptions of homeowners approaching retirement age but also how these perceptions may shape their future decision-making regarding the adoption of Reverse Mortgage Loans.

6.1.3 Overview of Data Collection and Analysis Techniques

The study collected primary data from homeowners aged between 50 and 70 years residing in Goa. A structured questionnaire was used to obtain responses related to the constructs under study. Since the target group consisted of individuals who own residential property and are planning for their later years, purposive and snowball sampling methods were employed. Before carrying out the main analysis, the data were checked for completeness, consistency, missing values, and unusual response patterns.

The reliability and validity of the scales were examined through commonly used statistics, such as Cronbach's Alpha, McDonald's Omega, Composite Reliability, and Average Variance Extracted. Structural Equation Modelling using Smart-PLS was applied to test both the measurement and structural components of the model. Mediation and moderation effects were assessed using bootstrapping and interaction procedures, while Multi-Group Analysis was used to examine gender-based variation in the model. In addition, Importance-Performance Map Analysis was carried out to identify which factors deserve greater attention in promoting awareness and encouraging potential adoption of Reverse Mortgage Loans in future.

6.2 Discussion of Structural Model Findings

This section describes the major outcomes of the structural model testing and highlights the significant relationships among the key variables included in the study. The discussion presents the results in line with the underlying behavioural framework and explains how the relationships observed in the model contribute to understanding intentions toward Reverse Mortgage Loan adoption among homeowners aged 50 to 70 years in Goa. The focus is placed on the direct effects of antecedent variables on Behavioural Intention and Attitude, followed by mediation, moderation, and group-based outcomes discussed in subsequent sections.

6.2.1 Direct Effects

6.2.1.1 Direct Determinants of Behavioural Intention towards RML

The results indicate that Attitude has a significant positive influence on Behavioural Intention, suggesting that favourable evaluations of Reverse Mortgage Loans are associated with a greater willingness among homeowners to consider the scheme in later life. In addition, Perceived Ability, Perceived Bequest Motive, Family Ties, and Perceived Financial Planning exhibit significant direct effects on Behavioural Intention. These findings imply that individuals who feel confident in managing financial decisions, who place importance on intergenerational considerations, and who actively engage in financial planning are more likely to view Reverse Mortgage Loans as a viable option.

In contrast, Social Influence, Sense of Place Attachment, and Perceived Trust do not demonstrate significant direct effects on Behavioural Intention. This suggests that these variables may not independently motivate the adoption of Reverse Mortgage Loans, although they may still exert influence indirectly through attitudinal mechanisms. Overall, the findings indicate that behavioural intention in this context is shaped primarily by personal evaluations and financial preparedness rather than immediate social pressure or institutional trust cues.

6.2.1.2

Direct Determinants of Attitude towards RML

The analysis shows that Social Influence, Perceived Bequest Motive, Sense of Place Attachment, Family Ties, and Perceived Financial Planning had significant effects on Attitude. This indicates that perceptions regarding property legacy, emotional connection to home, and encouragement from family and social environments shape how individuals evaluate RML. These aspects appear to influence Attitude at a psychological level even if they do not directly affect behavioural intention.

In contrast, Perceived Ability and Perceived Trust did not register significant effects on Attitude. Although these constructs are conceptually relevant, the results suggest that they may not play a decisive role in shaping favourable or unfavourable evaluations of the RML scheme in this age group. Overall, the findings suggest that attitudinal development towards RML is more strongly connected with social and emotional attachments and financial preparedness, rather than with institutional trust or perceived capability at the present stage of their life cycle.

6.2.2 Mediation Analysis

6.2.2.1 Mediating Role of Attitude between Antecedents and Behavioural Intention

The mediation results presented in Chapter 5 confirm that Attitude plays a central role in linking the antecedent constructs to Behavioural Intention towards Reverse Mortgage Loan (RML) adoption. All seven antecedent variables, Social Influence, Perceived Ability, Sense of Place Attachment, Perceived Bequest Motive, Perceived Financial Planning, Family Ties, and Perceived Trust exhibited significant indirect effects on Behavioural Intention through Attitude. This means that these factors influence intention not only in isolation, but more importantly through the attitudinal evaluations that respondents form about RML.

In practical terms, the findings indicate that homeowners in the 50–70 age group do not move directly from beliefs or situational conditions to behavioural intention. Instead, they appear to first process these beliefs in terms of whether RML is acceptable, useful, and suitable for them, and this evaluative judgement (Attitude) then becomes the key driver of their intention to adopt the scheme in the future. This pattern is fully consistent with the Theory of Planned Behaviour and supports the logic of the extended framework used in this study: Attitude operates as a psychological bridge that translates social, emotional, financial, and trust-related considerations into future-oriented financial behaviour.

6.2.2.2 Types of Mediation

The analysis in Chapter 5 also distinguished between full and partial mediation, providing a more nuanced understanding of how Attitude functions in the model. For Social Influence, Sense of Place Attachment, and Perceived Trust, Attitude was found to fully mediate their relationship with Behavioural Intention. In these cases, the direct paths from these antecedents to Behavioural Intention were not significant, while the indirect paths through Attitude were significant. This indicates that social approval, emotional attachment to the house, and trust in institutions do not independently trigger an intention to adopt RML; instead, they shape how favourable or unfavourable a person senses about RML, and this Attitude is what ultimately drives intention.

On the other hand, Perceived Ability, Perceived Bequest Motive, Perceived Financial Planning, and Family Ties showed partial mediation. For these constructs, both the direct paths to Behavioural Intention and the indirect paths via Attitude were significant. This suggests that these factors influence intention in two ways: directly, as concrete drivers of the decision, and indirectly, by first shaping a positive attitude that further strengthens the intention to adopt RML. For example, a respondent who is financially well-prepared or

strongly concerned about leaving a bequest to heirs may be inclined toward RML both because of these considerations themselves and because they contribute to forming a favourable overall evaluation of the scheme.

Overall, the mediation results underline that Attitude is not a peripheral variable in the model, but a key mechanism through which most antecedent factors operate. Full mediation for some constructs and partial mediation for others together highlight the pivotal role of Attitude in converting beliefs, emotions, and planning-related perceptions into a concrete behavioural intention to consider Reverse Mortgage Loans in the future.

6.2.3 Moderation and Multi-Group Analysis

6.2.3.1 Moderating Effects of Age and Value of Property

The moderation analysis presented in Chapter 5 showed that both Age (within the 50–70 group) and the Value of Property significantly strengthened the relationship between Attitude and Behavioural Intention. This means that homeowners who are closer to the later stages of the age spectrum, and those who perceive their property as a valuable asset, are more likely to convert a favourable attitude into an intention to consider RML in the future.

The pattern suggests that age-related financial planning considerations become more salient as individuals approach retirement, leading to a stronger reliance on their attitudinal evaluations when forming decisions about using housing equity. Similarly, respondents who attach higher financial worth to their property appear to view RML as a more useful and realistic financial strategy, thereby demonstrating a stronger Attitude-to-Intention link. These findings reinforce the idea that behavioural responses toward RML are not uniform across participants, but are partially shaped by demographic and asset characteristics that differ within the 50–70 age group.

6.2.3.2 Moderating Effect of Gender: Multi-Group Analysis (MGA)

The Multi-Group Analysis comparing male and female respondents did not display statistically significant differences in the structural paths of the model. This indicates that the relationships between the antecedent variables, Attitude, and Behavioural Intention operate in a similar manner across gender groups. In other words, men and women appear to form attitudes and intentions toward RML in broadly comparable ways, and gender does not act as a differentiating factor in how the psychological and financial determinants influence future adoption decisions.

The absence of gender-based moderation implies that the extended theoretical model proposed in this study is equally applicable to both groups, and that policy measures, awareness programmes, and advisory services may not require substantial gender-specific variations.

6.2.3.3 Summary of Multi-Group Analysis Findings

Overall, the moderation and MGA findings highlight two important insights. First, age progression within the 50–70 range and higher property value both enhance the attitudinal influence on intention, suggesting that demographic maturity and asset significance contribute to shaping more decisive financial behaviour regarding RML adoption. Second, the lack of gender-based differences suggests that the underlying psychological mechanisms influencing RML adoption are stable and consistent across male and female respondents.

These results collectively indicate that demographic and asset characteristics act as relevant contextual factors, while gender does not substantially modify the structural relationships within the extended TPB framework.

6.2.4 Predictive Relevance (Q^2) of the Model

The predictive relevance statistics show that the model possesses adequate ability to predict the dependent variables, namely Attitude and Behavioural Intention. A model with acceptable predictive relevance is valuable because it indicates that the constructs included in the research are meaningful in explaining future behaviour. In this study, the Q^2 values provide assurance that the model is capable of anticipating the behavioural responses of homeowners as they approach retirement age, and that the included variables contribute to a plausible and theoretically grounded understanding of future intention towards RML adoption. This strengthens the credibility of the extended TPB framework applied here.

6.2.5 Importance–Performance Map Analysis (IPMA) for RML Adoption

The Importance–Performance Map Analysis offers a practical interpretation of the findings by identifying which constructs exert strong influence and how well those constructs perform in the context of RML adoption. The IPMA output highlights that some constructs, particularly those linked with financial preparedness and family considerations, are both important and relatively well developed among the respondents. At the same time, other constructs that also show strong influence may currently display lower performance, indicating areas where awareness or support efforts could be improved.

From a practical perspective, the IPMA results help identify priority areas for policymakers, financial institutions, and advisory services. These findings point to the need for targeted communication and counselling that emphasise the financial planning benefits of RML, while also addressing emotional and social concerns that may shape attitudes among individuals approaching retirement age.

6.3 Findings and Discussion by Objectives and Hypotheses

This section discusses the empirical results in line with the five stated research objectives and the associated hypotheses. Rather than repeating the statistical outputs, the discussion concentrates on interpreting what the results imply for understanding behavioural intention toward Reverse Mortgage Loan (RML) adoption among homeowners in the 50–70 age range in Goa. The conclusions are reviewed against theoretical expectations, prior studies, and contextual realities of the Indian financial environment.

6.3.1 Objectives (1-8): Direct Effects on Behavioural Intention

Above group objectives focused on identifying which antecedent variables exert a significant direct influence on Behavioural Intention to adopt Reverse Mortgage Loans. The findings show that several antecedents, namely Perceived Financial Planning, Perceived Ability, Perceived Bequest Motive, and Family Ties had significant direct effects on intention. These results confirm the hypotheses associated with these constructs and illustrate that both pragmatic financial preparedness and intergenerational considerations play an important role when homeowners evaluate RML as a potential retirement strategy.

Among these, Perceived Financial Planning emerged as the strongest predictor, indicating that individuals who engage actively in long-term financial preparation are more likely to view RML as a viable option for supplementing retirement income. Similarly, Perceived Ability reflects the individual's confidence in managing financial commitments, which can enhance willingness to consider complex products such as RML. Meanwhile, Family Ties and Perceived Bequest Motive underscore the cultural relevance of family responsibilities and inheritance beliefs in shaping financial decisions among Indian households.

In contrast, Perceived Trust, Sense of Place Attachment, and Social Influence did not show significant direct effects, indicating that the hypotheses linked to these constructs were not supported. Their non-significance suggests that although individuals may value institutional trust, emotional attachment to property, and social expectations, these factors do not automatically result in a concrete intention to adopt RML. Instead, they operate more strongly at the attitudinal level, requiring attitudinal transformation before they can influence behavioural intention.

This distinction reinforces the theoretical relevance of separating attitudinal and intentional determinants in behavioural models. It also highlights that intention toward RML adoption is shaped more by financial rationality and family motivations than by institutional confidence or emotional attachment, which has important implications for designing effective awareness, counselling, and advisory interventions.

6.3.2 Objectives (9-15): Antecedents Influencing Attitude

Similarly, above group of objectives examined whether the seven antecedent variables such as Family Ties, Perceived Ability, Perceived Bequest Motive, Perceived Financial Planning, Perceived Trust, Sense of Place Attachment, and Social Influence, significantly contribute to the formation of Attitude toward RML. The results show that five variables, namely Social Influence, Perceived Bequest Motive, Perceived Financial Planning, Family Ties, and Sense of Place Attachment, had significant effects on Attitude. These findings confirm the hypotheses associated with these antecedents and are consistent with the extended TPB assumptions for the Indian context.

In contrast, Perceived Ability and Perceived Trust did not demonstrate statistically significant relationships with Attitude, indicating that the hypotheses linked to these constructs were not supported. This suggests that individuals in the 50–70 age group may not form attitudes toward RML based on self-assessed financial capability or institutional

trust. Instead, attitude formation appears more sensitive to social expectations, emotional bonds with family and property, and long-term financial planning. This reinforces the argument that attitude toward RML in India is shaped more by socio-emotional considerations than by technical or institutional factors.

6.3.3 Objectives (16 to 22): Mediation through Attitude

The third group of objectives assessed whether Attitude mediates the association between the antecedent variables and Behavioural Intention. The results provide strong support for the mediating role of Attitude, confirming that it acts as a central psychological mechanism through which socio-financial and emotional factors influence the intention to adopt Reverse Mortgage Loans.

The analysis revealed that Social Influence, Sense of Place Attachment, and Perceived Trust exhibited full mediation, meaning that the hypotheses associated with these paths were supported only through the attitudinal route. These constructs did not show significant direct effects on intention, indicating that their influence becomes meaningful only when they first shape a favourable or unfavourable attitude. This underscores that social expectations, emotional attachment to property, and institutional confidence do not directly trigger adoption decisions; instead, they shape underlying evaluations, which then translate into intention.

In contrast, Perceived Financial Planning, Perceived Bequest Motive, Perceived Ability, and Family Ties demonstrated partial mediation, confirming support for both the direct and indirect hypotheses associated with these variables. This indicates that these antecedents influence Behavioural Intention through two complementary pathways: they shape cognitive–evaluative judgments that contribute to Attitude, while simultaneously exerting their own independent, instrumental influence on intention. Financial readiness,

intergenerational obligations, confidence in one's capability, and the strength of family relationships therefore carry inherent motivational weight that affects adoption decisions directly, even as they also contribute to the formation of favourable attitudes toward RML.

Collectively, these results reinforce that Attitude is not simply an additional variable within the model but the central channel through which complex social, emotional, and financial considerations are psychologically organised. The findings align well with the extended Theory of Planned Behaviour, which posits that behavioural intention is influenced by both direct determinants and mediated psychological processes.

6.3.4 Objectives (23 &24): Moderating Effects of Age and Property Value

The fourth group of objectives examined whether demographic and asset-related characteristics modify the strength of the relationship between Attitude and Behavioural Intention toward adopting Reverse Mortgage Loans. The moderation analysis revealed that both Age (within the 50–70 range) and the Value of Property significantly enhanced the Attitude–Intention linkage. In other words, individuals at the higher end of the age spectrum and those who attribute greater financial worth to their residential property were more likely to convert favourable attitudes into actual intention.

These results suggest that favourable evaluations alone may not be sufficient to generate intention in all groups; rather, the translation of attitude into intention becomes stronger as individuals grow older and as the financial significance of their property increases. Age appears to heighten awareness of post-retirement financial needs, making older respondents more responsive to positive attitudes when forming adoption intentions. Similarly, respondents who perceive their property as a high-value asset view RML as a more meaningful financial option, thereby strengthening the role of Attitude in their decision-making.

The findings underscore that attitudinal influence is not uniform across respondents but is conditioned by life-stage considerations and asset evaluation. From a behavioural standpoint, this aligns with financial decision-making theories that emphasise the role of perceived economic stakes in shaping long-term planning behaviour. From a policy perspective, it indicates that communication strategies for RML may be more effective when they are age-sensitive and tailored to different property-value segments rather than adopting a standardised, one-size-fits-all approach.

6.3.5 Objective (25a -25g & 26a -26h): Gender-Based Multi-Group Analysis

The fifth group of objectives assessed whether gender differences influence the structural relationships within the proposed model. The Multi-Group Analysis (MGA) results indicated that none of the path coefficients differed significantly between male and female respondents. This suggests that the psychological, financial, and social factors shaping Attitude and Behavioural Intention toward RML adoption operate similarly across both genders.

The absence of gender-based variation implies that intention formation in the context of Reverse Mortgage Loans is shaped more by shared life-stage concerns—such as approaching retirement, financial preparedness, intergenerational expectations, and property-related decision-making—than by gender-specific socialisation patterns. In the selected age group of 50–70 years, financial decisions are often made collectively within households, and both men and women appear to interpret RML-related information through comparable lenses. This finding is notable in the Indian socio-cultural setting, where financial choices among older homeowners are typically influenced by family considerations, joint decision-making, and long-term security goals rather than individual gendered perspectives. As such, gender-targeted promotional strategies may not be necessary for this demographic segment. Instead, policy and communication initiatives can focus on common financial concerns and shared household priorities that cut across gender lines.

6.3.6 Summary of Supported and Not-Supported Hypotheses

The overall pattern of hypothesis testing revealed strong support for the relationships involving financially oriented constructs and intergenerational considerations. Variables such as Perceived Financial Planning, Perceived Ability, Perceived Bequest Motive, and Family Ties consistently demonstrated significant effects, either directly on Behavioural Intention or indirectly through Attitude. These supported hypotheses reinforce the central premise that RML adoption is primarily a financially grounded and family-influenced decision rather than one driven solely by social expectations.

In contrast, several hypotheses related to Perceived Trust, Social Influence, and Sense of Place Attachment were not supported in their direct form. Although these constructs contributed meaningfully to Attitude formation, they did not translate into strong or significant direct effects on Behavioural Intention. Their non-supported status suggests that certain psychosocial aspects may shape perceptions but are not sufficiently compelling to drive actionable intent within this age group.

Overall, the mix of supported and unsupported hypotheses indicates that the extended TPB model is valid in this context but operates through mechanisms that are specific to the financial realities of homeowners approaching retirement. The results highlight that functional financial determinants and family obligations hold more behavioural weight than socially driven or trust-based factors, providing a more nuanced understanding of how homeowners conceptualise and evaluate the potential adoption of Reverse Mortgage Loans.

6.3.7 Model Development and Testing Progression

The progression of the model unfolded systematically, beginning with the assessment of antecedent variables, followed by the examination of their direct effects on Behavioural Intention, and subsequently the evaluation of Attitude as a mediating mechanism. The final stage involved testing contextual moderators Age and Property Value and conducting gender-based multi-group comparisons. Each step built upon the previous one, allowing the conceptual framework to be validated in a structured and theoretically coherent manner.

The results demonstrate that the extended TPB model is strengthened progressively at each stage of analysis. Antecedent constructs established the foundational socio-financial influences; direct path testing clarified the determinants of intention; mediation analysis confirmed Attitude as a pivotal psychological bridge; and moderation analysis highlighted the role of demographic context in shaping behavioural outcomes. The absence of gender differences further reinforced the stability of the structural model across respondent groups.

Taken together, this progression confirms that the decision to adopt an RML is not driven by a single determinant but emerges from a combination of financial preparedness, family-related values, and evaluative attitudes, moderated by the individual's age and perceived property value. Institutional trust and social pressures, though relevant for shaping perceptions, exert comparatively weaker behavioural influence. Overall, the extended TPB framework employed in this study is both theoretically fitting and empirically well-supported, offering a robust basis for understanding RML adoption behaviour among homeowners approaching retirement in the Indian context.

6.4 Integration with Theory and Prior Study

The purpose of this section is to interpret the empirical findings in light of established theoretical frameworks particularly the Theory of Planned Behaviour (TPB) and to position the results within the broader body of international and Indian literature on Reverse Mortgage Loan (RML) adoption. In addition, the section discusses how financial, social and bequest-related factors interact in the specific cultural environment in which Indian homeowners make retirement-related financial choices. The interpretation therefore connects the statistical results with conceptual meaning, contributing to both theoretical refinement and contextual understanding of RML adoption behaviour.

6.4.1 RML Adoption in the Light of the Theory of Planned Behaviour

The Theory of Planned Behaviour proposes that behavioural intention is shaped by Attitude, Subjective Norms, and Perceived Behavioural Control. In the present study, Attitude emerged as a statistically significant predictor of Behavioural Intention, reflecting the classical TPB pathway in which favourable evaluations translate into a greater likelihood of adopting the behaviour. This confirms that participants who perceive RML positively are more inclined to express future adoption intention.

However, the operation of Social Influence and Perceived Ability diverges from conventional TPB predictions, thus offering new insights. Social Influence strongly predicted Attitude but did not exert a significant direct effect on intention. This indicates that normative pressures are internalised into attitudes rather than acting as independent behavioural triggers. In classical TPB applications, Subjective Norms are often expected to exert a direct influence on intention. The current findings suggest that in the RML context, social expectations are psychologically processed before influencing behavioural decision-making. This supports the argument that subjective norms may operate through attitude formation rather than through overt social conformity.

Similarly, Perceived Ability significantly influenced Behavioural Intention but not Attitude, which represents a departure from standard TPB assumptions where perceived behavioural control influences both attitude and intention. In this case, confidence in one's capability appears to function more as a direct facilitator of behaviour rather than as a determinant of evaluative judgement. Thus, Perceived Ability seems to operate in a more instrumental rather than attitudinal manner when respondents consider a financial mechanism that is unfamiliar yet potentially useful in retirement planning.

Taken together, the findings confirm the general structure of TPB while refining its operation in this particular financial domain. They also highlight that in the case of RML, behavioural-control beliefs influence intention directly while normative beliefs exert influence indirectly through attitudes. These observations contribute to a more nuanced understanding of TPB pathways in the context of complex financial planning decisions among older homeowners.

6.4.2 Comparison with Existing Literature on Reverse Mortgage Loans

International literature on reverse mortgages consistently reports low uptake due to perceived loss of ownership, lack of trust towards financial institutions, and uncertainties about long-term obligations. Studies from the United States, United Kingdom, Australia and Europe frequently conclude that emotional attachment to property, fear of indebtedness, and mistrust of lenders reduce adoption interest among older adults.

The present study confirms some of these factors but also reveals notable contextual differences. First, Perceived Trust did not demonstrate a significant direct effect on either Attitude or Intention. This suggests that although institutional credibility is recognised, it is not the principal driver of adoption behaviour. International writings often consider trust a major barrier, whereas the present findings suggest that respondents were more concerned with pragmatic aspects such as financial benefits and family welfare rather than institutional suspicion.

Second, international literature frequently finds that bequest concerns discourage RML adoption, because seniors wish to leave the house intact to heirs. By contrast, this study found that Perceived Bequest Motive significantly enhanced both Attitude and Intention. This implies that participants view RML not as a threat to inheritance but as a financial mechanism that could ultimately support dependents or provide structured resources for the future. Such a result reflects Indian cultural expectations regarding intergenerational financial responsibility. The willingness to consider RML appears embedded in familial obligation rather than individual consumption, which contradicts western interpretations that typically frame RML as a “self-benefit” mechanism.

Third, Sense of Place Attachment influenced Attitude but not adoption intention. While international research generally emphasises home attachment as a direct barrier to RML, here this emotional connection appears to be psychologically acknowledged yet not behaviourally decisive. This suggests that home attachment is part of the evaluation process but does not independently prevent the consideration of RML once financial reasoning becomes relevant.

Collectively, these comparisons indicate that while global themes such as attachment, mistrust and inheritance are present, their behavioural implications differ in the Indian cultural environment, reaffirming the importance of contextualised behavioural research.

6.4.3 Role of Financial, Social, and Bequest Motives in RML Behaviour

The study demonstrates that financial, social, and bequest motivations contribute in distinctive ways to the formation of adoption intention. Financial preparedness was found to be the strongest determinant, highlighting that respondents frame RML primarily as a structured financial planning instrument rather than as a last-resort borrowing mechanism.

This aligns with emerging Indian financial planning literature suggesting increased awareness of retirement planning obligations among pre-retirees.

Bequest motives significantly shaped both attitudes and behavioural intention. Unlike international studies where inheritance considerations discourage borrowing, respondents in this study perceived RML as a mechanism that could potentially benefit heirs through enhanced financial security or by reducing burden on dependents. This finding reinforces the importance of intergenerational financial reasoning in Indian households, where decisions are often evaluated in terms of family benefit rather than individual consumption.

Social Influence shaped attitudes strongly but did not directly shape intention, implying that the influence of family, relatives and peer groups is internalised through evaluative processes rather than through direct behavioural pressure. This is consistent with the collective orientation of Indian society, where major financial decisions are discussed within family structures, yet behavioural outcomes are personally evaluated in terms of long-term consequences and asset implications.

In summary, financial motives provide the principal behavioural rationale, bequest motives provide intergenerational justification, and social influence provides normative reinforcement. These three motives jointly form a multi-dimensional behavioural logic that is consistent with cultural expectations surrounding property, family responsibility, and retirement preparedness in India.

6.5 Theoretical Contributions

The findings of this research extend theoretical understanding of Reverse Mortgage Loan (RML) behaviour in several important ways. Drawing on the Theory of Planned Behaviour and supplementing it with constructs that reflect Indian socio-cultural realities, the study proposes and tests an extended behavioural model in a context that has received limited academic attention. This section outlines contributions at three levels: to the Theory of Planned Behaviour, to RML adoption literature, and to the conceptual role of Attitude and demographic moderators.

6.5.1 Contributions to the Theory of Planned Behaviour in the RML Context

A central contribution of the study lies in demonstrating how the core assumptions of the Theory of Planned Behaviour operate in a complex financial decision domain characterised by uncertainty, intergenerational considerations, and cultural norms surrounding property. Consistent with TPB, Attitude significantly predicted Behavioural Intention, reaffirming the classical pathway linking evaluative beliefs with behavioural likelihood. However, several deviations from standard TPB expectations were also observed. First, Social Influence (representing subjective norms) exerted a strong effect on Attitude but did not directly predict Behavioural Intention. This indicates that normative pressures do not function as external behavioural forces but are internalised and reflected in attitudinal evaluations. This finding suggests a conceptual refinement of TPB in RML settings— subjective norms may influence intention primarily through Attitude rather than through independent normative motivation. Second, Perceived Ability (conceptually aligned with perceived behavioural control) demonstrated a significant direct effect on intention without significantly influencing attitude. This indicates that capability beliefs operate more as enabling factors rather than attitudinal determinants. The result suggests that the PBC component of TPB requires more

differentiated treatment in contexts where financial literacy and procedural understanding influence willingness to adopt unfamiliar financial instruments.

Overall, the present study confirms, extends, and nuances the Theory of Planned Behaviour by showing that its components function in distinct and context-specific ways when applied to pre-retirement financial decision-making among Indian homeowners.

6.5.2 Contributions to RML Adoption Literature in India

Research on Reverse Mortgage Loans in India is still evolving and remains largely descriptive, focusing on scheme features, regulatory aspects, and conceptual benefits rather than empirically examining behavioural determinants. This study contributes by offering systematic empirical evidence on behavioural intention, grounded in a large sample of pre-retirement homeowners and evaluated through advanced statistical modelling.

A key contribution relates to the role of inheritance (bequest motives). International research typically finds that strong inheritance motives discourage RML use, whereas this study demonstrates that inheritance considerations can positively influence both Attitude and Intention among Indian homeowners. This highlights a culturally distinctive interpretation of intergenerational responsibility and contributes to a more contextually accurate understanding of RML behaviour in India.

Moreover, the inclusion of constructs such as Family Ties and Sense of Place Attachment reflects the socio-emotional and cultural dimensions of property ownership in India. By empirically validating these variables in a behavioural model, the study expands the conceptual space of RML research beyond its purely financial framing and establishes a foundation for more holistic, culturally grounded examination of adoption behaviour.

Finally, the study shifts empirical focus from senior citizens already eligible for RML to homeowners aged 50–70 years who are approaching retirement or in the bracket of senior citizens. This contribution helps to conceptualise RML as a proactive financial planning mechanism rather than a late-stage income solution, opening new research directions regarding early-stage awareness, preparedness, and pre-adoption intention.

6.5.3 Contributions Regarding Demographic Moderators

The combination of Age, Property Value, and Gender as moderating variables adds a demographic and contextual dimension to the behavioural framework. The study demonstrated that Age and Property Value significantly strengthen the Attitude–Behavioural Intention relationship. Older respondents and those valuing their property more highly were found to convert positive attitudes into intention more consistently. This highlights that attitudinal influence is enhanced under conditions of greater demographic maturity and perceived asset importance.

Such findings broaden the applicability of TPB by showing that attitude–intention linkages are not uniform across all individuals; instead, they are shaped by contextual factors related to life stage and wealth perception. This introduces an important theoretical nuance: attitudes become more behaviourally decisive when individuals feel closer to retirement or possess higher-value assets.

The gender-based Multi-Group Analysis revealed no significant structural differences between male and female respondents across any of the hypothesised paths. This confirms structural invariance and suggests that behavioural drivers of RML adoption are interpreted similarly by both genders in the 50–70 age group. From a theoretical standpoint, this enhances the generalisability and stability of the extended TPB model across gender categories.

Together, these contributions strengthen existing behavioural theories by demonstrating that demographic conditions and asset-related perceptions shape the magnitude—not just the direction—of behavioural relationships within the RML context.

6.6 Managerial and Policy Implications

The results of this research provide important implications for banks, government agencies, and financial advisory bodies involved in the development, regulation, and promotion of Reverse Mortgage Loan schemes. Since the respondents in this study represent the pre-retirement segment (50–70 years), the results offer meaningful insights into how institutional actors can strengthen product awareness and motivate early-stage consideration of RML as a retirement planning tool. The implications discussed here are based on significant behavioural determinants observed in the study and therefore have practical relevance for policy design and implementation strategies in India.

6.6.1 Implications for Banks and Financial Institutions

Banks and financial institutions are central stakeholders in the implementation of RMLs and may find value in repositioning the product narrative in line with the behavioural factors identified in this study. The strong influence of Perceived Financial Planning and Family Ties suggests that RML should be communicated not only as an income-support instrument but also as a financial planning tool that secures family wellbeing and financial continuity.

Since Attitude was found to be a key mediator, banks may need to invest in communication strategies that enhance positive perceptions by focusing on benefits such as income stability, flexibility in payouts, and potential long-term financial security. It may also be useful for banks to design demonstration tools, personalised projections, and case-based explanations that help homeowners visualise long-term advantages.

Additionally, since Perceived Trust did not significantly influence adoption intention, traditional trust-building messages may not be sufficient. Instead, more clarity, transparency, and handholding assistance throughout the process may be required to improve comprehension and procedural confidence, especially among those with limited financial experience.

6.6.2 Implications for Regulators and Policy Makers

The study reinforces the need for policy support that strengthens awareness, accessibility, and procedural clarity surrounding RMLs. Regulatory authorities such as the Reserve Bank of India (RBI) and the National Housing Bank (NHB) may consider creating national-level awareness programmes that explain the role of RML as part of retirement planning, rather than as a last-resort borrowing option.

Given that Age and Property Value moderate the Attitude–Intention relationship, policy frameworks may incorporate guidelines that allow flexibility in property valuation norms and provide incentives for early enrolment. Policymakers could also consider simplified eligibility documents, counselling requirements, and standardised information brochures that enable homeowners to evaluate benefits and risks more clearly.

In the Indian context, where property transfer and inheritance norms carry emotional significance, government-led awareness campaigns could also emphasise that RML does not necessarily restrict inheritance options, thereby addressing cultural reservations that may hinder early consideration of RML.

6.6.3 Implications for Financial Planners and Advisors

Financial planners and advisors are in a unique position to guide individuals who are actively planning post-retirement finances. The positive influence of Perceived Financial Planning and Perceived Ability suggests that advisory professionals should incorporate RML into retirement planning discussions well before the age of formal eligibility. Explaining how RML complements traditional retirement income sources—such as pensions, savings, and insurance—could encourage more informed decisions.

Furthermore, since Family Ties and Bequest Motives strongly influence attitudes and intentions, advisors should involve family members in counselling sessions whenever possible and address generational concerns transparently. Advising households jointly rather than individuals alone may help align family expectations and reduce uncertainties relating to inheritance and property rights.

Taken together, these implications emphasise that RML adoption is not merely a financial transaction but a culturally embedded decision with family implications. Advisory services that adopt a holistic, family-centred approach are therefore more likely to be effective in encouraging informed and future-oriented decisions.

6.7 Social and Practical Implications

The results of this study carry significant social relevance, particularly because Reverse Mortgage Loans are designed for older homeowners who may be approaching retirement without sufficient income security. The results shed light on how family relationships, emotional attachment to property, and intergenerational motivations shape attitudes and intentions, and therefore have implications for family decision-making, future planning, and social perceptions of ageing. This section discusses the broader social value of the findings, especially for senior homeowners and key stakeholders engaged in spreading awareness and providing advisory support.

6.7.1 Implications for Homeowners and Their Families

The findings of this study offer important implications for homeowners who are already eligible for the Reverse Mortgage Loan scheme (60 years and above) as well as those who will become eligible in the coming years (50–59 years). In many Indian households, residential property is traditionally viewed as a family inheritance rather than a financial resource for the owners themselves. This cultural orientation often limits consideration of financial products like RML, even when such products can contribute meaningfully to income stability and quality of life in later years.

The results indicate that RML can be understood not merely as a loan but as a structured financial tool that allows homeowners to access part of their housing wealth while retaining ownership and residential rights throughout their lifetime. This perspective can be useful for both currently eligible homeowners who may require immediate financial support and younger homeowners (50–59) who are engaged in planning for future financial security.

Family influence remains a central element of decision-making in this context. The significance of Family Ties and Perceived Bequest Motive shows that decisions about RML are shaped collectively rather than individually, particularly in households where discussions about inheritance, retirement, and financial responsibilities involve multiple stakeholders. Early and transparent conversations within the family can help clarify misconceptions regarding loss of ownership, displacement, or reduced inheritance. Clear communication can also enable families to jointly evaluate how RML could balance present financial needs with long-term family welfare. Overall, the findings indicate that Reverse Mortgage Loans can serve as an effective component of long-term financial planning for homeowners nearing eligibility. Enhanced family awareness further supports informed decisions by balancing income security with the preservation of property and intergenerational interests.

6.7.2 Implications for Awareness, Education, and Counselling on RML

The findings of this study reveal a critical gap in public awareness and understanding of the Reverse Mortgage Loan (RML) scheme, suggesting a need for comprehensive educational and counselling initiatives at multiple levels. Awareness of RML is currently very limited, even among homeowners who either are already eligible (60 years and above) or will become eligible in the coming decade (50–59 years). Misconceptions about loss of ownership, displacement from the house, and negative impacts on inheritance significantly influence attitudes. Because Attitude was found to be a strong mediator in this study, addressing such misconceptions through structured awareness programmes is essential. A national-level communication strategy similar to the financial literacy campaigns used for SIPs or RBI-led advertisements on safe banking would help normalise RML as a legitimate and secure financial planning tool.

A major step toward improving long-term awareness would be the integration of RML concepts into academic syllabi at the undergraduate and postgraduate levels, particularly in commerce, management, banking, and financial literacy courses. Introducing RML in textbooks, university modules, and continuing education programmes would help build foundational knowledge among younger generations who often participate in family financial decisions. Alongside academic inclusion, public-facing educational content—explainer videos, brochures, workshops, and financial literacy drives—should be developed by institutions such as the National Housing Bank (NHB), Reserve Bank of India (RBI), State Governments, and banks. Given the complexity of the scheme, simple and relatable communication will be more effective than technical presentations alone.

Professional counselling remains a central requirement for improving public understanding of RML. NHB, RBI, and commercial banks could collaborate to establish dedicated RML counselling centres, both physical and online, where homeowners and families can receive personalised guidance. Such counselling should explain eligibility, valuation procedures, loan disbursement, settlement mechanisms, and the borrower's rights during the loan period. Since family involvement is a major determinant of intention—as shown in this study—counselling should encourage the participation of children and other heirs. Additionally, product promotion partnerships between housing finance institutions and trusted organisations like LIC can improve confidence and legitimacy. Celebrity endorsements—similar to those used for government housing schemes (e.g., PMAY or “Apna Ghar” promotional campaigns)—could further normalise the idea of converting home equity into income. Messages delivered by respected public figures can help reduce stigma, correct myths, and encourage homeowners to consider RML as part of responsible long-term financial planning.

Together, coordinated efforts in education, advertising, and professional counselling can transform public perceptions of RML from a “last-resort loan” into a structured, regulated, and dignified approach to supporting financial security in later life. Such initiatives would not only improve awareness but also empower families to make more informed, collaborative, and future-oriented financial decisions.

6.8 Limitations of the Study

Although the study offers important insights into behavioural intention toward Reverse Mortgage Loan adoption in India, a number of limitations should be acknowledged. First, the study employed purposive and snowball sampling techniques to reach homeowners aged 50–70 years in Goa. While this approach was appropriate for identifying participants with relevant characteristics, it limits the generalisability of the findings to other regions and demographic groups. Different socio-economic conditions, cultural influences, and property markets across Indian states may produce variations in behavioural responses to RML.

The study relied on self-reported data collected through structured questionnaires. This approach may be subject to social desirability bias or cautious reporting, particularly since RML is an unfamiliar and sensitive subject involving long-term financial decisions and family considerations. Although statistical procedures were used to minimise such effects, complete elimination of such bias cannot be guaranteed.

The cross-sectional nature of the study captures behavioural intention at a single point in time. Intention toward adopting RML may evolve as respondents age, experience changes in income, or encounter new financial responsibilities. Longitudinal studies would provide deeper understanding of how intention changes over time, particularly among those who eventually become eligible for the scheme.

The study focuses on potential future adoption rather than actual adoption behaviour, since most respondents were below the formal eligibility age. While this provides useful insights into pre-retirement intention, actual behaviour may be influenced by additional practical factors such as health conditions, liquidity needs, family discussions, or property market fluctuations. Future research may therefore need to follow respondents through later stages of life to evaluate the alignment between intention and actual borrowing behaviour.

6.9 Directions for Future Research

The findings of this study open several avenues for future academic work. First, future studies may extend the model to a larger geographic context to capture variations across Indian States with different housing markets, family norms, and retirement structures. Comparative studies between urban and rural areas could also reveal variations in attitudes and intentions, given differing levels of property ownership and financial awareness.

Second, research may be undertaken using alternative behavioural theories such as the Technology Adoption Model, Financial Behaviour Theory, or Behavioural Life-Cycle Hypothesis. Integrating behavioural finance perspectives may also provide new insights into how perceived financial stability, debt aversion, or risk attitudes influence RML acceptance.

Third, future studies may consider qualitative approaches such as interviews or case-based methods to explore personal narratives, emotional considerations, and family discussions that statistical models cannot fully capture. Such methods could reveal deeper motivations or concerns associated with converting residential assets into financial resources.

Fourth, longitudinal research would allow scholars to track how intention evolves into actual adoption behaviour as respondents approach eligibility age. This would help determine whether RML becomes a practical choice or remains an abstract option in pre-retirement planning.

Lastly, future studies may explore awareness and communication strategies, testing whether counselling interventions, financial advisory sessions, or policy campaigns contribute to improved understanding and more favourable evaluations of RML among potential users.

6.10 Overall Conclusion of the Study

This study set out to scrutinize how homeowners aged 50–70 years in Goa form behavioural intentions toward adopting the Reverse Mortgage Loan (RML) scheme, drawing upon an extended version of the Theory of Planned Behaviour (TPB). By integrating socio-psychological constructs with financial and cultural considerations, the research sought to capture the complex decision-making process that surrounds the use of housing wealth in later life. The extended TPB model used in this study offered a comprehensive lens through which the influence of financial preparedness, family expectations, emotional attachment to property, trust perceptions, ability beliefs, and social norms could be systematically assessed.

The results confirm the centrality of Attitude as the key mechanism through which antecedent variables influence Behavioural Intention. Attitude was found to mediate the effects of most socio-financial and emotional constructs, demonstrating that homeowners do not simply make RML decisions based on isolated variables but rather through an accumulated psychological evaluation shaped by their family context, financial readiness, and long-standing cultural values. Among the antecedents, Perceived Financial Planning, Perceived Bequest Motive, Perceived Ability, and Family Ties emerged as the strongest direct drivers of intention, illustrating that RML adoption is both a financial decision and a value-driven family choice. The findings reiterate that, in the Indian context, decisions involving residential property cannot be fully understood without acknowledging intergenerational expectations and the emotional significance attached to property ownership.

moderation findings further enrich this understanding. The Attitude–Intention relationship was significantly stronger among older respondents and individuals who perceived their property as a high-value asset. This suggests that the behavioural relevance of RML increases as homeowners move closer to retirement and become more aware of the financial

potential of their property. The absence of gender-based differences in structural paths indicates that both men and women in this age group interpret the socio-financial dimensions of RML in broadly similar ways, reflecting shared household priorities, collective decision-making traditions, and similar financial pressures in later life.

Together, these findings advance theoretical understanding by demonstrating that RML adoption is not merely an outcome of rational financial assessment but a socio-financial decision embedded within family dynamics, cultural norms, property-related emotions, and long-term security concerns. Practically, the study shows that improving attitudes toward RML through targeted awareness, counselling, and educational interventions can positively shape future adoption behaviour. The results also highlight the need for financial institutions, policymakers, and regulators to design communication strategies that address emotional, cultural, and familial dimensions—not just financial features—of the RML product.

In conclusion, this study contributes to the broader discourse on retirement planning and housing-wealth utilisation in India by offering an empirically validated framework for understanding RML adoption. By bridging theoretical constructs with situational realities of Indian households, the research provides actionable insights for banks, the National Housing Bank, the Reserve Bank of India, and government agencies aiming to promote responsible and culturally sensitive financial solutions for ageing populations. As India continues to witness rising life expectancy, shifting family structures, and expanding homeownership, the insights derived from this study can guide the development of more inclusive, informed, and effective retirement planning strategies rooted in the responsible use of housing equity.

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APPENDIX A

QUESTIONNAIRE

Consumers' Behaviour Towards Reverse Mortgage Loan: A Study of Homeowners

Please provide us your valuable information which will help me to complete my study. I assure you that your information will be kept highly confidential.

Select most appropriate option for each option given below

<i>SA= Strongly Agree</i>	<i>A= Agree</i>	<i>N= Neutral</i>	<i>DA= Disagree</i>	<i>SDA= Strongly Disagree</i>		
<i>Likert Scale Interpretation of Constructs</i> All construct items in this questionnaire are measured using a five-point Likert scale, ranging from Strongly Agree (SA) to Strongly Disagree (SDA). Respondents were asked to indicate the extent to which they agree or disagree with each statement based on their personal beliefs, experiences, and perceptions. Higher levels of agreement indicate stronger presence of the underlying construct.						
<i>Section A: Perceived Bequest Motive (PBM)</i> For items measuring Perceived Bequest Motive, responses ranging from Strongly Agree to Agree indicate a strong intention to leave the house as an inheritance and a firm belief in children's rights over property. Neutral responses reflect uncertainty or mixed feelings, while Disagree or Strongly Disagree indicate weaker inheritance intentions, suggesting greater openness to alternative uses of housing wealth such as Reverse Mortgage Loans.						
Code	Measurement Items	SA	A	N	DA	SDA
PBM 1	I plan to leave my house as an inheritance to my children.					
PBM 2	I think it is my obligation to allow my children to inherit my house property.					
PBM 3	My children expect that I should leave my house for them to inherit.					
PBM 4	My children can inherit my house only if they help me while I am alive.					
PBM 5	I believe that my children have the right to inherit my house property.					
<i>Section B: Family Ties (FT)</i> In the Family Ties scale, Strongly Agree and Agree responses signify strong emotional attachment to family members and a high likelihood that family opinions influence housing and financial decisions. Neutral responses indicate moderate influence, whereas Disagree and Strongly Disagree suggest weaker family dependence and greater individual autonomy in decision-making.						
Code	Measurement Items	SA	A	N	DA	SDA
FT 1	I would like to stay with my children in my old age.					
FT 2	I would like to be very attached to my family in my old age.					
FT 3	My family tension will increase if I select RML					
FT 4	My children would not welcome the idea of choosing RML					
<i>Section C: Sense of Place Attachment (SPA)</i> For Sense of Place Attachment, higher agreement reflects strong emotional and psychological attachment to the house, preference for continued residence, and resistance to relocation. Lower agreement indicates weaker attachment to the home, which may correspond to greater acceptance of financial products involving property, including Reverse Mortgage Loans.						
Code	Measurement Items	SA	A	N	DA	SDA
SPA 1	My house means a lot to me					
SPA 2	I am very attached to my house					
SPA 3	I Prefer to live in my house than any other house					
SPA 4	I am completely satisfied with my house					
SPA 5	I will not relocate from my house.					

Section D: Financial Planning (FP)						
Responses of Strongly Agree and Agree on Financial Planning items indicate higher levels of financial preparedness, savings behaviour, and retirement planning. Neutral responses reflect moderate or uncertain preparedness, while Disagree and Strongly Disagree indicate limited financial planning.						
Code	Measurement Items	SA	A	N	DA	SDA
FP 1	I have already invested in a retirement product which will take care of me and my family needs.					
FP 2	I have sufficient health insurance for me and my family.					
FP 3	My investment will help me to maintain the same standard of living in my old age.					
FP 4	I will be debts free in my old age.					
FP 5	There is no need to take RML as I will be financially sound in my old age.					
FP 6	I save regularly for future contingencies					
Section E: Perceived Trust (PT)						
In the Perceived Trust construct, higher agreement suggests strong confidence in banks and financial institutions, belief in transparency, and perceived security of Reverse Mortgage Loan schemes. Lower agreement reflects scepticism, lack of confidence, or perceived risk, which may act as a barrier to adoption.						
Code	Measurement Items	SA	A	N	DA	SDA
PT 1	I believe that I can trust Bank for offering RML					
PT 2	I would not hesitate to share my information to my bank While taking Reverse Mortgage Loan.					
PT 3	I believe that the information given by the bank regarding Reverse Mortgage Loan is Reliable.					
PT 4	I am confident that RML schemes are transparent and reliable.					
PT 5	All the terms and conditions regarding Reverse Mortgage Loan are well defined by the banks on their websites.					
PT 6	I trust the financial institutions offering RML.					
PT 7	I feel secure entering into a reverse mortgage agreement					
Section F: Social Influence (SI)						
For Social Influence items, Strongly Agree and Agree responses indicate that decisions regarding Reverse Mortgage Loans are significantly shaped by opinions of children, spouse, advisors, peers, and community norms. Neutral responses reflect balanced consideration, while Disagree and Strongly Disagree indicate limited social pressure and more independent decision-making.						
Code	Measurement Items	SA	A	N	DA	SDA
SI 1	My Children will support my decision to enter into Reverse Mortgage Loan transaction.					
SI 2	My spouse will support me if I decide to enter into Reverse Mortgage Loan transaction.					
SI 3	My Financial advisor's opinion will greatly influence my decision to enter into Reverse Mortgage Loan transaction.					
SI 4	My peers' opinion will influence my decision to enter into Reverse Mortgage Loan transaction.					
SI 5	My community's norms, belief and values will influence my decision to enter into Reverse Mortgage Loan transaction.					
Section G: Perceived Ability (PA)						
In the Perceived Ability scale, higher agreement reflects greater self-confidence, perceived eligibility, control over property, and sufficient knowledge to enter into a Reverse Mortgage Loan agreement. Lower agreement suggests perceived lack of control, information, or readiness to independently adopt RML.						
Code	Measurement Items	SA	A	N	DA	SDA
PA 1	I will own my house free of any housing debt therefore I can apply for Reverse Mortgage Loan.					
PA 2	I have absolute control over my house therefore I am free to enter into Reverse Mortgage Loan contract.					
PA 3	I trust my bank therefore I am willing to enter into Reverse Mortgage Loan contract if it is provided by them.					

PA 4	I have sufficient knowledge and can independently enter into Reverse Mortgage Loan transaction.					
PA 5	I have all the information about Reverse Mortgage Loan and will able to enter into Reverse Mortgage Loan contract.					
Section H: Attitude Towards Reverse Mortgage Loan (ATT) For Attitude items, Strongly Agree and Agree indicate favourable evaluations of Reverse Mortgage Loans as beneficial, practical, and useful in old age. Neutral responses represent indecision, while Disagree and Strongly Disagree reflect unfavourable perceptions and resistance to adoption.						
Code	Measurement Items	SA	A	N	DA	SDA
ATT 1	Reverse Mortgage Loan could be a good deal for me.					
ATT 2	Reverse Mortgage Loan is a simple financial service.					
ATT 3	Reverse Mortgage Loan seems to be beneficial during old age.					
ATT 4	Reverse Mortgage Loan may help during my emergency.					
ATT 5	Reverse Mortgage Loan is realistic and practical and I may use the same.					
Section I: Behavioural Intention (BI) In the Behavioural Intention construct, higher agreement indicates a stronger willingness to use Reverse Mortgage Loans for income supplementation, medical expenses, house repairs, or family needs. Lower agreement suggests weak intention or unwillingness to adopt RML.						
Code	Measurement Items	SA	A	N	DA	SDA
BI 1	I am willing to use Reverse Mortgage Loan to supplement my existing source of income.					
BI 2	I am willing to use Reverse Mortgage Loan for my house upgradation or repairs.					
BI 3	I am willing to use Reverse Mortgage Loan to pay off my other debts.					
BI 4	I am willing to use Reverse Mortgage Loan to pay my or my family's medical bills.					
BI 5	I am willing to use Reverse Mortgage Loan to pay my family expenses					

Section J: Demographic and Property Profile This section collects background information related to gender, age, education, occupation, marital status, region, locality, income, length of residence, and property value. These variables are used for descriptive analysis, subgroup comparisons, moderation analysis, and multi-group analysis. Demographic and property characteristics provide important contextual insights into homeowners' financial behaviour and help explain variations in attitudes and behavioural intentions toward Reverse Mortgage Loans.						
Gender	Male			Female		
Years	50 years	51-60 Years		61-70 Years		
Occupation	Government Job	Private Job	Business	Professional	Retired	Home maker
Qualification	SSC	HSSC	Diploma	Graduation	Post Graduation	Others
Marital Status	Married	Unmarried	Divorce	Single		
District	North	South				
Location	Urban	Semi-urban		Rural		
Annual Income	Up to ₹5,00,000	₹5,00,001-₹10,00,000		₹10,00,001-₹15,00,000		Above ₹15 lacs
Living in house	Up to 5 Years	6-10 years	11-15 Years	16-20 years		Above 20 Years
Value of House	Up to ₹25 Lacs	₹25-50 Lacs	₹51-100 Lacs		Above 100 Lacs	

Thanking you for your co-operation.

APPENDIX B

Item-wise Distribution of Respondents' Agreement Levels Across Study Constructs (N = 700)

Code	Measurement Items	SA	A	N	DA	SDA	Total
PBM 1	I plan to leave my house as a inheritance to my children.	131 (18.7)	354 (50.6)	173 (24.7)	36 (5.1)	6 (0.9)	700 (100%)
PBM 2	I think it is my obligation to allow my children to inherit my house property.	193 (27.6)	322 (46.0)	152 (21.7)	27 (3.9)	6 (0.9)	700 (100%)
PBM 3	My children expect that I should leave my house for them to inherit.	170 (24.3)	312 (44.6)	191 (27.3)	24 (3.4)	3 (0.4)	700 (100%)
PBM 4	My children can inherit my house only if they help me while I am alive.	120 (17.1)	364 (52.0)	180 (25.7)	30 (4.3)	6 (0.9)	700 (100%)
PBM 5	I believe that my children have the right to inherit my house property.	114 (16.3)	335 (47.9)	207 (29.6)	41 (5.9)	3 (0.4)	700 (100%)
Code	Measurement Items	SA	A	N	DA	SDA	Total
FT 1	I would like to stay with my children in my old age.	114 (16.3)	287 (41.0)	215 (30.7)	72 (10.3)	12 (1.7)	700 (100%)
FT 2	I would like to be very attached to my family in my old age.	122 (17.4)	250 (35.7)	223 (31.9)	89 (12.7)	16 (2.3)	700 (100%)
FT 3	My family tension will increase if I select RML	123 (17.6)	302 (43.1)	224 (32.0)	39 (5.6)	12 (1.7)	700 (100%)
FT 4	My children would not welcome the idea of choosing RML	105 (15.0)	301 (43.0)	219 (31.3)	54 (7.7)	21 (3.0)	700 (100%)
Code	Measurement Items	SA	A	N	DA	SDA	Total
SPA 1	My house means a lot to me	114 (16.3)	287 (41.0)	215 (30.7)	72 (10.3)	12 (1.7)	700 (100%)
SPA 2	I am very attached to my house	122 (17.4)	250 (35.7)	223 (31.9)	89 (12.7)	16 (2.3)	700 (100%)
SPA 3	I Prefer to live in my house than any other house	123 (17.6)	302 (43.1)	224 (32.0)	39 (5.6)	12 (1.7)	700 (100%)
SPA 4	I am completely satisfied with my house	105 (15.0)	301 (43.0)	219 (31.3)	54 (7.7)	21 (3.0)	700 (100%)
SPA 5	I will not relocate from my house.						
Code	Measurement Items	SA	A	N	DA	SDA	Total
FP 1	I have already invested in a retirement product which will take care of me and my family needs.	109 (15.6)	310 (44.3)	228 (32.6)	36 (5.1)	17 (2.4)	700 (100%)
FP 2	I have sufficient health insurance for me and my family.	102 (14.6)	292 (41.7)	217 (31.0)	78 (11.1)	11 (1.6)	700 (100%)
FP 3	My investment will help me to maintain the same standard of living in my old age.	101 (14.4)	327 (46.7)	218 (31.1)	45 (6.4)	9 (1.3)	700 (100%)
FP 4	I will be debts free in my old age.	104 (14.9)	316 (45.1)	250 (35.7)	30 (4.3)	0 (0.0)	700 (100%)
FP 5	There is no need to take RML as I will be financially sound in my old age.	122 (17.4)	313 (44.7)	220 (31.4)	45 (6.4)	0 (0.0)	700 (100%)
FP 6	I save regularly for future contingencies	115 (16.4)	335 (47.9)	196 (28.0)	48 (6.9)	6 (0.9)	700 (100%)
Code	Measurement Items	SA	A	N	DA	SDA	Total
PT 1	I believe that I can trust Bank for offering RML	99 (14.1)	247 (35.3)	291 (41.6)	63 (9.0)	0 (0.0)	700 (100%)
PT 2	I would not hesitate to share my information to my bank While taking Reverse Mortgage Loan.	127 (18.1)	291 (41.6)	205 (29.3)	73 (10.4)	4 (0.6)	700 (100%)
PT 3	I believe that the information given by the bank regarding Reverse Mortgage Loan is Reliable.	119 (17.0)	336 (48.0)	190 (27.1)	50 (7.1)	5 (0.7)	700 (100%)
PT 4	I am confident that RML schemes are transparent and reliable.	108 (15.4)	257 (36.7)	251 (35.9)	70 (10.0)	14 (2.0)	700 (100%)
PT 5	All the terms and conditions regarding Reverse Mortgage Loan are well defined by the banks on their websites.	115 (16.4)	241 (34.4)	240 (34.3)	94 (13.4)	10 (1.4)	700 (100%)
PT 6	I trust the financial institutions offering RML.	95 (13.6)	244 (34.9)	251 (35.9)	100 (14.3)	10 (1.4)	700 (100%)
PT 7	I feel secure entering into a reverse mortgage agreement	101 (14.4)	273 (39.0)	258 (36.9)	68 (9.7)	0 (0.0)	700 (100%)

Code	Measurement Items	SA	A	N	DA	SDA	Total
SI 1	My Children will support my decision to enter into Reverse Mortgage Loan transaction.	94 (13.4)	398 (56.9)	175 (25.0)	21 (3.0)	12 (1.7)	700 (100%)
SI 2	My spouse will support me if I decide to enter into Reverse Mortgage Loan transaction.	100 (14.3)	307 (43.9)	212 (30.3)	69 (9.9)	12 (1.7)	700 (100%)
SI 3	My Financial advisor's opinion will greatly influence my decision to enter into Reverse Mortgage Loan transaction.	80 (11.4)	265 (37.9)	177 (25.3)	131 (18.7)	47 (6.7)	700 (100%)
SI 4	My peers' opinion will influence my decision to enter into Reverse Mortgage Loan transaction.	74 (10.6)	314 (44.9)	213 (30.4)	75 (10.7)	24 (3.4)	700 (100%)
SI 5	My community's norms, belief and values will influence my decision to enter into Reverse Mortgage Loan transaction.	102 (14.6)	318 (45.4)	182 (26.0)	72 (10.3)	26 (3.7)	700 (100%)
Code	Measurement Items	SA	A	N	DA	SDA	Total
PA 1	I will own my house free of any housing debt therefore I can apply for Reverse Mortgage Loan.	94 (13.4)	398 (56.9)	175 (25.0)	21 (3.0)	12 (1.7)	700 (100%)
PA 2	I have absolute control over my house therefore I am free to enter into Reverse Mortgage Loan contract.	100 (14.3)	307 (43.9)	212 (30.3)	69 (9.9)	12 (1.7)	700 (100%)
PA 3	I trust my bank therefore I am willing to enter into Reverse Mortgage Loan contract if it is provided by them.	80 (11.4)	265 (37.9)	177 (25.3)	131 (18.7)	47 (6.7)	700 (100%)
PA 4	I have sufficient knowledge and can independently enter into Reverse Mortgage Loan transaction.	74 (10.6)	314 (44.9)	213 (30.4)	75 (10.7)	24 (3.4)	700 (100%)
PA 5	I have all the information about Reverse Mortgage Loan and will be able to enter into RML contract.	102 (14.6)	318 (45.4)	182 (26.0)	72 (10.3)	26 (3.7)	700 (100%)
Code	Measurement Items	SA	A	N	DA	SDA	Total
ATT 1	Reverse Mortgage Loan could be a good deal for me.	190 (27.1)	342 (48.9)	129 (18.4)	30 (4.3)	9 (1.3)	700 (100%)
ATT 2	Reverse Mortgage Loan is a simple financial service.	148 (21.1)	393 (56.1)	132 (18.9)	21 (3.0)	6 (0.9)	700 (100%)
ATT 3	Reverse Mortgage Loan seems to be beneficial during old age.	211 (30.1)	366 (52.3)	93 (13.3)	21 (3.0)	9 (1.3)	700 (100%)
ATT 4	Reverse Mortgage Loan may help during my emergency.	139 (19.9)	333 (47.6)	189 (27.0)	30 (4.3)	9 (1.3)	700 (100%)
ATT 5	Reverse Mortgage Loan is realistic and practical and I may use the same.	151 (21.6)	369 (52.7)	132 (18.9)	39 (5.6)	9 (1.3)	700 (100%)
Code	Measurement Items	SA	A	N	DA	SDA	Total
BI 1	I am willing to use Reverse Mortgage Loan to supplement my existing source of income.	150 (21.4)	322 (46.0)	186 (26.6)	36 (5.1)	6 (0.9)	700 (100%)
BI 2	I am willing to use Reverse Mortgage Loan for my house upgradation or repairs.	143 (20.4)	344 (49.1)	171 (24.4)	36 (5.1)	6 (0.9)	700 (100%)
BI 3	I am willing to use Reverse Mortgage Loan to pay off my other debts.	125 (17.9)	324 (46.3)	191 (27.3)	54 (7.7)	6 (0.9)	700 (100%)
BI 4	I am willing to use Reverse Mortgage Loan to pay my or my family's medical bills.	160 (22.9)	324 (46.3)	171 (24.4)	33 (4.7)	12 (1.7)	700 (100%)
BI 5	I am willing to use Reverse Mortgage Loan to pay my family expenses	172 (24.6)	345 (49.3)	141 (20.1)	30 (4.3)	12 (1.7)	700 (100%)

Annexure A

Description of Constructs (for CVI Assessment)

The following constructs were included in the study to examine homeowners' behavioural intention towards the adoption of Reverse Mortgage Loans (RML). For the purpose of Content Validity Index (CVI) assessment, experts were requested to evaluate whether the items developed under each construct adequately represented the conceptual domain, were clearly worded, and were simple enough for the target respondents.

A) Perceived Bequest Motive (PBM)

Perceived Bequest Motive refers to homeowners' beliefs, moral obligations, and expectations regarding leaving their house property as an inheritance for their children or heirs. The construct captures emotional, cultural, and familial considerations that may discourage homeowners from monetising their property through RML. Items under this construct were designed to reflect inheritance concerns relevant in the Indian socio-cultural context.

B) Family Ties (FT)

Family Ties reflect the emotional closeness with family members and the influence of family opinions on housing and financial decisions. This construct captures the extent to which homeowners consider family expectations, advice, and approval while making decisions related to property and retirement finances, including RML adoption.

C) Sense of Place Attachment (SPA)

Sense of Place Attachment represents the emotional, psychological, and identity-based attachment of homeowners to their owned house. It includes feelings of belonging, comfort, and resistance to relocation. Items under this construct assess whether emotional bonding with the house influences reluctance or openness towards RML.

D) Financial Planning (FP)

Financial Planning indicates the level of preparedness for retirement, including financial independence, adequacy of savings, investments, and insurance coverage. This construct assesses whether homeowners perceive RML as part of their overall retirement planning and financial security strategy.

E) Perceived Trust (PT)

Perceived Trust represents homeowners' confidence in banks and financial institutions offering Reverse Mortgage Loans. It includes beliefs regarding transparency, reliability, fairness, and security of RML products. Items were framed to assess institutional trust, which is critical in long-term financial decisions involving property.

F) Social Influence (SI)

Social Influence refers to perceived social pressure arising from family members, peers, financial advisors, and societal norms regarding the adoption of Reverse Mortgage Loans. This construct captures the normative influence that may encourage or discourage homeowners from considering RML.

G) Perceived Ability (PA)

Perceived Ability reflects homeowners perceived capability to engage in an RML transaction. It includes self-assessment of eligibility, understanding of RML procedures, confidence in managing documentation, and perceived control over the decision-making process.

H) Attitude towards RML (ATT)

Attitude towards RML represents homeowners' overall positive or negative evaluation of Reverse Mortgage Loans. It reflects beliefs regarding the usefulness, benefits, practicality, and desirability of RML as a financial product for senior citizens.

I) Behavioural Intention (BI)

Behavioural Intention refers to homeowners' willingness and readiness to adopt Reverse Mortgage Loans in the future. It includes intention to use RML for income generation, medical expenses, debt repayment, or home maintenance, serving as the final outcome variable of the study.

ANNEXURE B

Letter to the Experts for Content Validity Assessment

Dear Expert,

You are kindly requested to evaluate the relevance, clarity, and simplicity of the scale items developed for the study titled “Consumers’ Behaviour Towards Reverse Mortgage Loan: A Study of Homeowners.” Your expert judgment will help in establishing the content validity of the questionnaire.

Please review each statement carefully and provide your ratings based on the instructions and construct definitions provided in Annexure 1. All responses will be kept strictly confidential and used solely for academic research purposes.

Thanking you for your valuable time and cooperation.

(Yogeshwar R. Bhosle)

Research Scholar

Initial Item Generation

The initial pool of items for the questionnaire was generated through an extensive review of literature, adaptation of previously validated scales, and contextual modification to suit the Reverse Mortgage Loan (RML) domain in India. In addition, inputs from subject experts and pilot discussions with senior homeowners were considered to ensure contextual relevance.

The initial items developed under each construct were as follows:

Constructs		Initial items
A	Perceived Bequest Motive (PBM)	9 Items
B	Family Ties (FT)	5 Items
C	Sense of Place Attachment (SPA)	8 Items
D	Financial Planning (FP)	6 Items
E	Perceived Trust (PT)	8 Items
F	Social Influence (SI)	7 Items
G	Perceived Ability (PA)	8 Items
H	Attitude towards RML (ATT)	8 Items
I	Behavioural Intention towards RML (BI)	9 Items

These items were subjected to expert evaluation for content validity.

ANNEXURE C

Rating Guidelines for Expert Evaluation of Measurement Items

To ensure the content validity of the measurement instrument, subject experts were requested to evaluate each item using three criteria: Relevance, Clarity, and Simplicity. These criteria were employed to assess whether the items adequately represented the constructs, were clearly worded, and were easy to comprehend by the target respondents. A four-point rating scale was used for each criterion, intentionally excluding a neutral option to encourage decisive expert judgment.

1. Relevance refers to the extent to which an item appropriately represents the construct it is intended to measure. Experts assessed whether the item was conceptually aligned with the construct definition and theoretical framework. The relevance scale ranged from

- 1 = Not relevant,
- 2 = Item needs major revision
- 3 = Relevant but needs minor revision
- 4 = Very relevant.

2. Clarity denotes the degree to which an item is clearly worded and easily understood without ambiguity. Experts evaluated the precision, wording, and interpretability of each item. Clarity was rated on a four-point scale:

- 1 = Not clear
- 2 = Item needs major revision
- 3 = Clear but needs minor revision
- 4 = Very clear

3. Simplicity refers to the extent to which an item is simple, concise, and easy to comprehend, avoiding complex language or technical jargon. This criterion was particularly important to ensure respondent comprehension and minimize response bias. Simplicity was rated as

- 1 = Not simple
- 2 = Item needs major revision
- 3 = Simple but needs minor revision
- 4 = Very simple.

Based on expert ratings across these three criteria, items with low scores were revised or eliminated, while items receiving higher ratings were retained for further empirical testing. This expert evaluation process ensured that the final instrument demonstrated adequate content validity, conceptual clarity, and respondent-friendly wording, thereby strengthening the reliability and overall quality of the research instrument.

ANNEXURE D

Expert Rating Sheet for Content Validity (CVI)

Kindly rate the following statements/items for each construct on a scale of 1–4 for Relevance, Clarity, and Simplicity based on the criteria given below.

Scoring Guidelines

1. Relevance (Rel)

1 = Not relevant

3 = Relevant but needs minor revision

2 = Item needs some revision

4 = Very relevant

2. Clarity (Cla)

1 = Not clear

3 = Clear but needs minor revision

2 = Item needs some revision

4 = Very clear

3. Simplicity (Sim)

1 = Not simple

3 = Simple but needs minor revision

2 = Item needs some revision

4 = Very simple

Codes	Items	Rel (1–4)	Cla (1–4)	Sim (1–4)	Remarks
PBM 1	I plan to leave my house as an inheritance to my children.				
PBM 2	I think it is my obligation to allow my children to inherit my house property.				
PBM 3	My children expect that I should leave my house for them to inherit.				
PBM 4	I will be ashamed not to leave my house to my children to inherit				
PBM 5	I have no children to leave my house for them				
PBM 6	My children can inherit my house only if they help me while I am alive.				
PBM 7	My children will/are already self-sufficient and do not care if I sell my house				
PBM 8	I will definitely not leave my house for my children				
PBM 9	I believe that my children have the right to inherit my house property.				
Codes	Items	Rel (1–4)	Cla (1–4)	Sim (1–4)	Remarks
FT 1	I would like to stay with my children in my old age				
FT 2	I would like to be very attached to my family in my old age				
FT 3	My family tension will increase if I opt for RML				
FT 4	My family attachment will weaken my decision of selecting RML				
FT 5	My children would not welcome the idea of opting for RML				
Codes	Items	Rel (1–4)	Cla (1–4)	Sim (1–4)	Remarks
SPA 1	My house means a lot to me				
SPA 2	I am very attached to my neighbourhood				
SPA 3	I identify strongly with my neighbourhood				
SPA 4	I have special bonding to my neighbourhood and the people living around				
SPA 5	I derive more pleasure living in my house than any other house				
SPA 6	I am completely satisfied with my accommodation				
SPA 7	Living in my neighbourhood is more important than any other place				
SPA 8	I will not relocate from my neighbourhood				

<i>Codes</i>	<i>Items</i>	<i>Rel (1–4)</i>	<i>Cla (1–4)</i>	<i>Sim (1–4)</i>	<i>Remarks</i>
FP 1	I have already invested in a retirement product which will take care of me and my family needs.				
FP 2	I have sufficient health insurance for me and my family.				
FP 3	My investment will help me to maintain the same standard of living in my old age.				
FP 4	I will be debts free in my old age.				
FP 5	There is no need to take RML as I will be financially sound in my old age.				
FP 6	I save regularly for future contingencies.				
<i>Codes</i>	<i>Items</i>	<i>Rel (1–4)</i>	<i>Cla (1–4)</i>	<i>Sim (1–4)</i>	<i>Remarks</i>
PT 1	I believe that I can trust banks for offering Reverse Mortgage Loans.				
PT 2	I would not hesitate to share my information with my bank while taking RML.				
PT 3	I believe that the information given by the bank regarding RML is reliable.				
PT 4	I am confident that RML schemes are transparent and reliable.				
PT 5	All the terms and conditions regarding RML are well defined by banks.				
PT 6	RML does not make false promises to the customers and his family				
PT 7	I trust the financial institutions offering RML.				
PT 8	I feel secure entering into a reverse mortgage agreement.				
<i>Codes</i>	<i>Items</i>	<i>Rel (1–4)</i>	<i>Cla (1–4)</i>	<i>Sim (1–4)</i>	<i>Remarks</i>
SI 1	My children will support my decision to enter into RML.				
SI 2	My spouse will support me if I decide to enter into RML.				
SI 3	My sibling will support me if I decide to enter into RML transaction				
SI 4	My parent will support me if I decide to enter into RML transaction				
SI 5	My financial advisor's opinion will influence my decision.				
SI 6	My peers' opinion will influence my decision.				
SI 7	My community's norms influence my decision to enter RML.				
<i>Codes</i>	<i>Items</i>	<i>Rel (1–4)</i>	<i>Cla (1–4)</i>	<i>Sim (1–4)</i>	<i>Remarks</i>
PA 1	I will own my house free of housing debt and can apply for RML.				
PA 2	I almost paid up my housing loan to enable me to enter into RML contract				
PA 3	I have absolute control over my house to enter into RML.				
PA 4	I like being financially independent therefore RML contract is suitable for me				
PA 5	I like investing in new financial products therefore, am ready to enter into RML transaction				
PA 6	I trust my bank and am willing to enter into RML if offered.				
PA 7	I have sufficient knowledge to independently enter RML.				
PA 8	I have all the information required to enter RML.				

<i>Codes</i>	<i>Items</i>	<i>Rel (1–4)</i>	<i>Cla (1–4)</i>	<i>Sim (1–4)</i>	<i>Remarks</i>
ATT 1	Reverse Mortgage Loan could be a good deal for me.				
ATT 2	RML sounds to be very complex financial services				
ATT 3	RML seems to be Risky financial product				
ATT 4	Reverse Mortgage Loan is a simple financial service.				
ATT 5	Reverse Mortgage Loan seems beneficial during old age.				
ATT 6	Reverse Mortgage Loan may help during emergencies.				
ATT 7	Reverse Mortgage Loan is realistic and practical for me.				
ATT 8	Entering into RML transaction is morally bad idea				
<i>Codes</i>	<i>Items</i>	<i>Rel (1–4)</i>	<i>Cla (1–4)</i>	<i>Sim (1–4)</i>	<i>Remarks</i>
BI 1	I am willing to use RML to supplement my income.				
BI 2	I am willing to use RML for house upgradation or repairs.				
BI 3	I am willing to use RML to pay off my existing mortgage loan				
BI 4	I am willing to use RML to pay off other debts.				
BI 5	I am willing to use RML for medical expenses.				
BI 6	I am willing to use RML to fund travel and tourism				
BI 7	I am willing to use RML for family expenses.				
BI 8	I am willing to use RML to settle unforeseen Financial needs				
BI 9	It is unlikely that I will purchase RML in the future				

ANNEXURE E

Results of Content Validity Index (CVI)

Content validity was established using the Content Validity Index (CVI) method. The questionnaire items were evaluated independently by nine subject experts.

- Item Content Validity Index (I-CVI) was computed as the proportion of experts rating an item as valid.
- Items with $I-CVI \geq 0.78$ were retained.
- Scale Content Validity Index (S-CVI/Ave) was calculated as the average of I-CVI values for each construct.

All items presented below satisfied the minimum CVI threshold and were included in the final questionnaire.

Table ANN-E-1: CVI – Perceived Bequest Motive (PBM)		
Codes	Items	I-CVI
PBM 1	I plan to leave my house as an inheritance to my children.	1.00
PBM 2	I think it is my obligation to allow my children to inherit my house property.	0.78
PBM 3	My children expect that I should leave my house for them to inherit.	1.00
PBM 4	My children can inherit my house only if they help me while I am alive.	0.89
PBM 5	I believe that my children have the right to inherit my house property.	1.00
S-CVI/Ave = 0.93		
Table ANN-E-2: CVI – Family Ties (FT)		
Codes	Items	I-CVI
FT 1	I would like to stay with my children in my old age.	1.00
FT 2	I would like to be very attached to my family in my old age.	1.00
FT 3	My family tension will increase if I select RML.	0.89
FT 4	My children would not welcome the idea of choosing RML.	0.89
S-CVI/Ave = 0.95		
Table ANN-E-3: CVI – Sense of Place Attachment (SPA)		
Codes	Items	I-CVI
SPA 1	My house means a lot to me.	1.00
SPA 2	I am very attached to my house.	0.89
SPA 3	I prefer to live in my house than any other house.	0.89
SPA 4	I am completely satisfied with my house.	1.00
SPA 5	I will not relocate from my house.	1.00
S-CVI/Ave = 0.96		
Table ANN-E-4: CVI -Financial Planning (FP)		
Codes	Items	I-CVI
PFP 1	I have already invested in a retirement product which will take care of me and my family needs.	1.00
PFP 2	I have sufficient health insurance for me and my family.	1.00
PFP 3	My investment will help me to maintain the same standard of living in my old age.	0.83
PFP 4	I will be debts free in my old age.	1.00
PFP 5	There is no need to take RML as I will be financially sound in my old age.	0.83
PFP 6	I save regularly for future contingencies.	1.00
S-CVI/Ave = 0.94		

Table ANN-E- 5: CVI – Perceived Trust (PT)		
Codes	Items	I-CVI
PT 1	I believe that I can trust banks for offering Reverse Mortgage Loans.	0.89
PT 2	I would not hesitate to share my information with my bank while taking RML.	0.89
PT 3	I believe that the information given by the bank regarding RML is reliable.	0.89
PT 4	I am confident that RML schemes are transparent and reliable.	1.00
PT 5	All the terms and conditions regarding RML are well defined by banks.	0.89
PT 6	I trust the financial institutions offering RML.	0.89
PT 7	I feel secure entering into a reverse mortgage agreement.	1.00
S-CVI/Ave = 0.92		
Table ANN-E .6: CVI – Social Influence (SI)		
Codes	Items	I-CVI
SI 1	My children will support my decision to enter into RML.	0.89
SI 2	My spouse will support me if I decide to enter into RML.	0.78
SI 3	My financial advisor's opinion will influence my decision.	0.89
SI 4	My peers' opinion will influence my decision.	0.89
SI 5	My community's norms influence my decision to enter RML.	0.89
S-CVI/Ave = 0.87		
Table ANN – E .7: CVI – Perceived Ability (PA)		
Codes	Items	I-CVI
PA 1	I will own my house free of housing debt and can apply for RML.	0.89
PA 2	I have absolute control over my house to enter into RML.	0.78
PA 3	I trust my bank and am willing to enter into RML if offered.	0.89
PA 4	I have sufficient knowledge to independently enter RML.	1.00
PA 5	I have all the information required to enter RML.	1.00
S-CVI/Ave = 0.91		
Table ANN-E .8: CVI – Attitude (ATT)		
Codes	Items	I-CVI
ATT 1	Reverse Mortgage Loan could be a good deal for me.	0.89
ATT 2	Reverse Mortgage Loan is a simple financial service.	0.78
ATT 3	Reverse Mortgage Loan seems beneficial during old age.	1.00
ATT4	Reverse Mortgage Loan may help during emergencies.	0.89
ATT 5	Reverse Mortgage Loan is realistic and practical for me.	1.00
S-CVI/Ave = 0.91		
Table ANN-E .9: CVI – Behavioural Intention (BI)		
Codes	Items	I-CVI
BI 1	I am willing to use RML to supplement my income.	0.89
BI 2	I am willing to use RML for house upgradation or repairs.	0.89
BI 3	I am willing to use RML to pay off other debts.	0.89
BI 4	I am willing to use RML for medical expenses.	0.89
BI 5	I am willing to use RML for family expenses.	1.00
S-CVI/Ave = 0.91		

All constructs demonstrated strong content validity, with item-level and scale-level CVI values exceeding the recommended threshold. This confirms that the final questionnaire possesses adequate relevance, clarity, and simplicity for measuring homeowners' behavioural intentions towards Reverse Mortgage Loan adoption.