Chapter 6 - Financial Literacy and Retirement Financial Behaviour

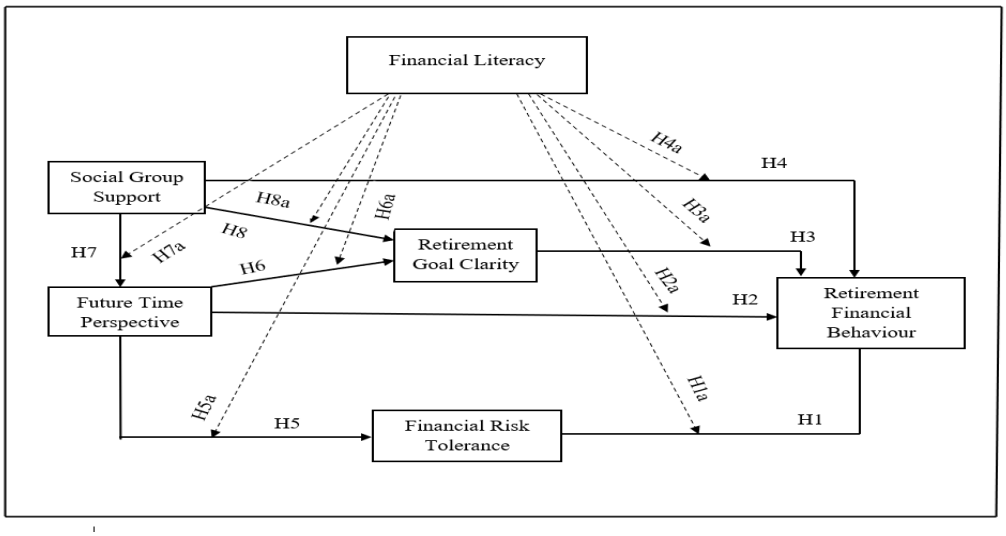
6.1 Introduction

In this chapter, the importance of financial literacy in retirement financial behaviour is highlighted, emphasizing that it is not just psychological factors that shape retirement behaviour. The shift toward individual responsibility in managing retirement finances makes financial literacy an essential tool for understanding and navigating increasingly complex financial markets and products. Financial literacy is defined as the ability to understand and apply financial knowledge to make informed decisions about saving, investing, and managing money (Lusardi and Mitchell, 2007). It includes knowledge of financial concepts such as interest rates, inflation, and risk diversification, which are fundamental to effective retirement financial behavour. Studies by Lusardi and Mitchell (2007, 2008, 2011) demonstrated that individuals with a strong understanding of these concepts are more likely to engage in retirement planning and accumulate wealth for retirement. Despite its recognized importance, there is a gap in research regarding how financial literacy interacts with psychological factors in shaping retirement behaviour. This research aims to fill this gap by examining how both psychological factors and financial literacy influence retirement financial behaviour in the BTR. In the model, financial literacy serves as a moderating variable, influencing the strength and direction of relationships among the constructs. Specifically, the hypothesis drawn for the purpose of the research is: *Financial literacy moderates the relationships among the model constructs.* To measure the influence of financial literacy on retirement financial behaviour, this study uses multigroup analysis, which allows the comparison of different subsamples based on their financial literacy levels. Multigroup analysis helps in identifying whether financial literacy moderates the relationship between various psychological factors and retirement financial behaviour. Financial literacy is assessed using a series of questions that evaluate numerical understanding, compound interest, inflation, and the time value of money. The set of questions drawn from previous research (Lusardi and Mitchell, 2017 and Tomar et al., 2021) is designed to assess an individual's financial literacy, which is essential for making informed decisions regarding savings, investments, and retirement planning. These questions address

various fundamental financial concepts, including numeracy, compound interest, inflation, time value of money, and money illusion. Based on their responses and guided by the study of Chen and Volpe (1998), individuals are categorized into two groups according to their financial literacy scores: those scoring above 60% are classified as having high financial literacy, demonstrating a solid understanding of key financial concepts and being better equipped to make sound financial decisions. Conversely, individuals scoring below 60% are considered to have low financial literacy, which suggests a lack of necessary financial knowledge to effectively manage money and plan for future needs, such as retirement savings. Each question (Q) is crafted to evaluate specific aspects of financial literacy. Q1 tests basic numeracy by asking about simple interest, helping individuals apply fundamental financial principles in everyday situations. Q2 assesses understanding of compound interest, an important concept for long-term savings and investment growth, especially in the context of retirement planning. Q3 addresses inflation and its impact on purchasing power, highlighting the need to account for inflation when managing savings. Q4 explores the time value of money, emphasizing that money today is worth more than the same amount in the future due to its potential for growth through interest or investment. Finally, Q5 evaluates the concept of money illusion, where individuals fail to recognize how inflation can erode real purchasing power, even when nominal income increases. These items help in assessing an individual's understanding of key financial concepts that influence their retirement financial behaviour.

The findings from this research are expected to underscore the critical role of financial literacy in shaping retirement financial behaviour. By integrating psychological factors, the study aims to provide a comprehensive understanding of retirement financial behaviour, particularly in regions with low financial education infrastructure like the BTR. It is anticipated that increasing financial literacy will improve retirement preparedness, leading to better financial security in retirement. This research will contribute to the broader literature by linking financial literacy with psychological factors in the context of retirement planning and savings, offering insights for policymakers and financial educators to improve retirement outcomes.

Figure 6.1 The Conceptual Model



Source: Researcher's Analysis

This research proposes the following hypotheses (H):

H1: Financial risk tolerance has a significant positive influence on retirement financial behaviour.

H2: Future time perspective has a significant positive influence on retirement financial behaviour.

H3: Retirement goal clarity has a significant positive influence on retirement financial behaviour.

H4: Social group support has a significant positive influence on retirement financial behaviour.

H5: Financial risk tolerance mediates the influence of future time perspective on retirement financial behaviour

H6: Retirement goal clarity mediates the influence of future time perspective on retirement financial behaviour

H7: Future time perspective mediates the influence of social group support on retirement financial behaviour.

H8: Retirement goal clarity mediates the influence of social group support on retirement financial behaviour.

H1a – H8a: Financial literacy moderates the relationships among the model constructs.

We provide details of the dataset used for the research and the data and methodology employed in our work in Section 6.2. It is followed by a discussion of the results of the study in Section 6.3. We conclude by summarizing our findings in Section 6.4.

6.2 Data and Methodology

As outlined in Section 3.1 of Chapter 3, the data was analyzed using SEM to examine the relationships between various variables, in accordance with the guidelines provided by Hair et al. (2019) and the approach used by Tomar et al. (2021). The dataset utilized for this analysis is detailed in Section 3.1 of Chapter 3. In the study, a total of 367 respondents were identified as high financial literacy (FL) participants, while 274 were categorized as low FL respondents. These groups were analyzed as subsamples drawn from the full sample of 641 participants. This stratified analysis facilitates a detailed examination of the distinct financial behaviour and retirement planning patterns exhibited by individuals with varying levels of financial literacy, enabling a nuanced understanding of how financial literacy influences these aspects within the broader dataset. An overview of the variables, items, and sources used to measure the constructs is presented in Table 5.1. Additionally, the financial literacy dimension was incorporated as an additional construct, and further details regarding this construct can be found in Table 6.1.

Table 6.1 Financial Literacy Construct

Variables	Items	References
Financial Literacy	Q1. Suppose you had Rs100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? (Numeracy)	Tomar et al. (2021).
	i. More than Rs 102	
	ii. Exactly Rs 102	
	iii. Less than Rs 102	
	iv. Don't know	
	Q2. Suppose you had Rs100 in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have in this account in total? (Compound Interest)	
	i. More than Rs 200	

	ii. Exactly Rs 200	
	iii. Less than Rs 200	
	iv. Don’t know	
	Q3. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account? (Inflation)	
	i. More than today	
	ii. Exactly the same	
	iii. Less than today	
	iv. Don’t know	
	Q4. Assume a friend inherits INR 10,000 today and his sibling inherits Rs 10,000 3 years from now. Who is richer because of the inheritance? (Time Value of Money)	
	i. My friend	
	ii. His sibling	
	iii. They are equally rich	
	iv. Don’t know	
	Q5. Suppose that in the current year your income has doubled and prices of all goods have doubled too. How much do you think you will be able to buy with your income? (Money Illusion)	
	i. More than today	
	ii. The same as today	
	iii. Less than today	
	iv. Don’t know	

Source: Researcher’s Compilation

6.3 Discussion of Results

6.3.1 Measurement Model Assessment

The preliminary measurement model results for the constructs related to retirement financial behaviour after introducing financial literacy as a moderator variable reveal varying levels of reliability and validity, as indicated by the item loadings, Cronbach's alpha (α), Composite

Reliability (CR), and Average Variance Extracted (AVE). These results, presented in Table 6.2, provide insights into the internal consistency, reliability, and convergent validity of each construct, helping to assess the overall quality and robustness of the measurement model.

The items presented in Table 6.2 are derived directly from Table 5.2, following the removal of certain items to enhance reliability and validity. Table 6.2 specifically showcases the reliability and validity results after the inclusion of financial literacy as a moderator variable.

Table 6.2 Preliminary Construct Reliability and Convergent Validity Outcomes

Items	Factor loadings			α			CR			AVE		
	Full Sample	High FL	Low FL	Full Sample	High FL	Low FL	Full Sample	High FL	Low FL	Full Sample	High FL	Low FL
FTP1	0.769	0.766	0.748	0.828	0.839	0.789	0.828	0.852	0.79	0.592	0.603	0.548
FTP2	0.821	0.808	0.822									
FTP3	0.825	0.803	0.839									
FTP4	0.79	0.822	0.727									
FTP5	0.623	0.674	0.523									
FRT2	0.876	0.902	0.827	0.807	0.842	0.736	0.82	0.854	0.744	0.719	0.759	0.653
FRT3	0.855	0.871	0.819									
FRT4	0.813	0.839	0.778									
RGC1	0.81	0.81	0.812	0.873	0.893	0.842	0.877	0.896	0.848	0.666	0.704	0.616
RGC2	0.844	0.877	0.792									
RGC3	0.861	0.887	0.822									
RGC4	0.851	0.875	0.826									
RGC5	0.705	0.735	0.658									
SGS2	0.9	0.923	0.868	0.784	0.835	0.708	0.787	0.836	0.712	0.822	0.858	0.774
SGS3	0.914	0.93	0.891									
ATR1	0.813	0.816	0.846	0.615	0.629	*0.301*	0.616	0.65	*0.32*	0.674	0.727	0.586
ATR2	0.828	0.888	0.675									
RFB1	0.615	0.631	0.576	0.884	0.897	0.857	0.888	0.902	0.869	0.555	0.587	0.506
RFB2	0.8	0.752	0.862									
RFB3	0.755	0.809	0.684									
RFB4	0.732	0.765	0.683									
RFB5	0.754	0.806	0.677									
RFB6	0.816	0.846	0.765									
RFB7	0.654	0.651	0.639									
RFB8	0.809	0.841	0.765									

Note: Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE). Attitude Towards Retirement (ATR), Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB), Retirement Goal Clarity (RGC) and Social Group Support (SGS).
Source: Researcher's Analysis

This table presents results from measurement model analysis, including factor loadings, α, CR, and AVE for various items under different constructs, divided into three sample groups: the full sample, high financial literacy (FL) group, and low financial literacy (FL) group. Each item, represented by codes like FTP1 and FTP2, reflects questions or statements used to measure specific constructs in the study. Factor loadings indicate how well each item represents its construct, with values close to or above 0.7 suggesting strong representation. For example, FTP1 has factor loadings of 0.769 for the full sample, 0.766 for the high FL group, and 0.748 for the low FL group, suggesting strong correlations with the construct across all samples. α values assess the internal consistency of items within each construct, with values typically above 0.7 indicating reliability. The α values for some constructs, like FTP, differ across groups: for the complete sample, it is 0.828; for the high FL group, 0.839; and for the low FL group, 0.789, showing slight variability in internal consistency across groups. The α values of all the constructs in all the groups are within threshold value of above 0.7 except for the ATR construct which is indicating very low α values in all the groups (Full sample=0.615, High FL=0.629 and Low FL=0.301). CR evaluates the overall reliability of each construct, where values over 0.7 are generally acceptable. CR values also vary across samples, with the high FL group often showing higher CR values compared to the low FL group. For instance, RFB has a CR of 0.888 in the full sample, 0.902 in the high FL group, and 0.869 in the low FL group, suggesting reliable measurement across items. AVE represents the average variance captured by the construct from its items, with values above 0.5 desired, indicating that the construct explains more than half of the variance in its items. In this table, AVE values of all the constructs in all the groups like full sample, high FL and low FL groups are above threshold i.e., 0.5 indicating convergent validity.

Differences between high and low FL groups highlight that financial literacy may influence how individuals respond to these items. This analysis supports differentiating groups based on financial literacy, showing that higher financial literacy is associated with stronger measurement properties. In the first step, after incorporating financial literacy (FL) subgroups into the final model for Objective 2, it was observed that the Cronbach's alpha (α) value for the ATR construct in the Low FL subgroup is too low to support its reliability. As a result, this construct cannot be considered for further analysis. Hence, we have assessed the measurement model again after deletion of the ATR construct.

The final measurement model results are presented in Table 6.3.

Table 6.3 Final Reliability and Convergent Validity Outcomes

Items	Factor loadings			α			CR			AVE		
	Full sample	High FL	Low FL	Full sample	High FL	Low FL	Full sample	High FL	Low FL	Full sample	High FL	Low FL
FTP1	0.768	0.753	0.75	0.828	0.839	0.789	0.827	0.86	0.794	0.592	0.599	0.549
FTP2	0.818	0.799	0.819									
FTP3	0.827	0.798	0.843									
FTP4	0.794	0.824	0.73									
FTP5	0.621	0.687	0.518									
FRT2	0.876	0.903	0.827	0.807	0.842	0.736	0.82	0.854	0.745	0.719	0.759	0.653
FRT3	0.855	0.871	0.819									
FRT4	0.812	0.839	0.778									
RGC1	0.834	0.842	0.824	0.879	0.9	0.847	0.879	0.901	0.847	0.733	0.769	0.686
RGC2	0.857	0.888	0.808									
RGC3	0.876	0.907	0.831									
RGC4	0.857	0.87	0.849									
SGS2	0.9	0.923	0.869	0.784	0.835	0.708	0.786	0.836	0.711	0.822	0.858	0.774
SGS3	0.913	0.93	0.89									
RFB1	0.618	0.632	0.58	0.884	0.897	0.857	0.889	0.902	0.869	0.555	0.587	0.506
RFB2	0.802	0.755	0.863									
RFB3	0.753	0.81	0.679									
RFB4	0.729	0.761	0.682									
RFB5	0.752	0.803	0.677									
RFB6	0.816	0.845	0.765									
RFB7	0.655	0.653	0.639									
RFB8	0.81	0.842	0.767									

Note: Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE). Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB), Retirement Goal Clarity (RGC) and Social Group Support (SGS).
Source: Researcher's Analysis

The analysis demonstrates the construct reliability and convergent validity outcomes of the measurement model after refining the model and by removing RGC5 to improve discriminant validity. The removal of RGC5 was a strategic decision, as this item showed high cross-loading on the RFB construct, which could undermine the model's ability to distinguish between constructs accurately.

Factor loadings across items of all constructs as indicated in table 6.3 are above 0.5 indicating reliability. For instance, FTP items exhibit strong loadings, with values above 0.75 in most cases, suggesting good construct representation. The absolute correlation or the factor loading of all the items and their constructs is between 0.518 and 0.930.

α values indicate internal consistency for each construct. For the RGC construct, removing RGC5 has improved α values across the sample groups, particularly for the high FL subgroup (α = 0.900). All constructs demonstrate reliability, with most α values above the acceptable threshold of 0.7. The FRT construct, for instance, shows consistent reliability across both high (α = 0.842) and low (α = 0.736) FL groups.

CR values assess overall construct reliability, where higher values (typically above 0.7) suggest that the constructs are measured consistently across items. In this table, all CR values surpass this threshold. This indicates enhanced consistency and reliability.

AVE values measure the extent to which constructs capture variance from their items, with a threshold of 0.5 indicating good convergent validity. The AVE values of all the constructs in all the groups are above threshold. Thus, it can be concluded that the items for each construct account for more than half of the variance.

The part A and part B of table 6.4 provided represents the HTMT (Heterotrait-Monotrait Ratio) and Fornell-Larcker criterion evaluation of the measurement model for assessing discriminant validity.

Table 6.4 Discriminant Validity

Part A: HTMT Evaluation						
Dataset	**Constructs**	**FRT**	**FTP**	**RFB**	**RGC**	**SGS**
Full Sample	FRT					
	FTP	0.183				
	RFB	0.501	0.487			
	RGC	0.586	0.474	0.804		
	SGS	0.562	0.500	0.709	0.861	
High Financial Literacy	FRT					
	FTP	0.175				
	RFC	0.434	0.436			
	RGC	0.522	0.454	0.758		
	SGS	0.521	0.466	0.627	0.810	
Low Financial Literacy	FRT					
	FTP	0.334				
	RFB	0.725	0.516			
	RGC	0.742	0.518	0.891		
	SGS	0.691	0.545	0.842	*0.946*	
Part B: Fornell- Larcker Evaluation						

Dataset	Constructs	FRT	FTP	RFB	RGC	SGS
Full Sample	FRT	0.848				
	FTP	0.174	0.769			
	RFB	0.433	0.438	0.745		
	RGC	0.500	0.429	0.710	0.856	
	SGC	0.454	0.422	0.591	0.715	0.907
High FL Subgroup	FRT	0.871				
	FTP	0.176	0.774			
	RFB	0.387	0.409	0.766		
	RGC	0.461	0.430	0.685	0.877	
	SGC	0.443	0.431	0.544	0.703	0.926
Low FL Subgroup	FRT	0.808				
	FTP	0.285	0.741			
	RFB	0.585	0.429	0.711		
	RGC	0.592	0.451	0.662	0.828	
	SGC	0.507	0.422	0.654	0.733	0.880

Note: Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB), Retirement Goal Clarity (RGC) and Social Group Support (SGS).
Source: Researcher's Analysis

The table presents the discriminant validity results of the measurement model, specifically using the HTMT (heterotrait-monotrait) ratio, which assesses how distinct the constructs are from one another. HTMT values less than 0.9 (Hair et al., 2017) supports discriminant validity. The table displays HTMT ratios across the complete dataset as well as for two financial literacy (FL) subgroups—high FL and low FL—highlighting potential differences in discriminant validity based on financial literacy levels. Part A of table 6.4 indicates that the HTMT values are less than 0.9 in full sample hence satisfying the HTMT criterion in full sample. In high FL group also all the values are below 0.9 hence satisfying the discriminant validity. But in case of low FL group, the HTMT ratio between SGS and RGC is 0.946 which is above the threshold of 0.9 indicating that SGS construct is similar to RGC in case of low FL subgroup as respondents in this group are viewing these two constructs as similar. This also indicates significant overlap that suggests low FL individuals may not perceive these constructs as distinctly as intended. But since the HTMT is meeting threshold in full sample we can infer that may be due to small sample size the value is higher. Thus, we accept the discriminant validity of all the three groups as presented in table 6.4.

The part B of the table presents the results of the Fornell-Larcker criterion for evaluating the discriminant validity of the measurement model. The provided table presents the Fornell-Larcker evaluation for FRT, FTP, RFB, RGC, and SGS across three datasets: the full dataset, high financial literacy subgroup, and low financial literacy subgroup. For the full dataset, the diagonal values (representing the AVE square root for each construct) are as follows: FRT = 0.848, FTP = 0.769, RFB = 0.745, RGC = 0.856, and SGS = 0.907. These values exceed the off-diagonal correlations, indicating that the constructs exhibit adequate discriminant validity for the full dataset. In the high financial literacy (FL) subgroup, the diagonal values are FRT = 0.871, FTP = 0.774, RFB = 0.766, RGC = 0.877, and SGS = 0.926. Again, the diagonal values are greater than the off-diagonal correlations, showing satisfactory discriminant validity for the high FL subgroup. For the low financial literacy (FL) subgroup, the diagonal values are FRT = 0.808, FTP = 0.741, RFB = 0.711, RGC = 0.828, and SGS = 0.880, with the diagonal values exceeding the off-diagonal correlations, suggesting good discriminant validity for this subgroup as well.

In evaluating both measures of discriminant validity—the Heterotrait-Monotrait Ratio (HTMT) and the Fornell-Larcker criterion—we observed that while the HTMT criterion shows some potential issues in the low financial literacy subgroup, the Fornell-Larcker criterion performs well across all datasets and subgroups. Specifically, the diagonal values are greater than the off-diagonal correlations, indicating that discriminant validity is upheld according to the Fornell-Larcker criterion. As a result, despite the issues identified by HTMT, we obtain sufficient evidence to proceed with further analysis in this study.

To assess the structural model's reliability, the first step is to examine multicollinearity to ensure that predictor variables do not excessively overlap, which could undermine model validity. Values closer to 3 or lower are ideal for reliable assessment (Hair et. al, 2019). The table 6.5 provided presents the VIF evaluation of the measurement model.

Table 6.5 VIF Evaluation

Dataset	Constructs	FRT	FTP	RFB	RGC	SGS
Full Sample	FRT			1.377		
	FTP	1.000		1.277	1.217	
	RFB					
	RGC			2.634		
	SGS		1.000	2.182	1.217	
High FL Subgroup	FRT			1.322		
	FTP	1.000		1.285	1.228	

	RFB					
	RGC			2.187		
	SGS			2.143	1.228	
Low FL Subgroup	FRT			1.567		
	FTP	1.000		1.285	1.217	
	RFB					
	RGC			2.634		
	SGS		1.000	2.250	1.217	

Note: Cronbach's Alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE). Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB), Retirement Goal Clarity (RGC) and Social Group Support (SGS).
Source: Researcher's Analysis

The table shows the collinearity statistics using VIF values for constructs across the full sample and two financial literacy (FL) subgroups: high FL and low FL. VIF values assess multicollinearity among predictor constructs, where lower values suggest minimal multicollinearity. Generally, VIF values below 3 indicate that multicollinearity is not a concern.

In the complete dataset, most VIF values are within acceptable limits, suggesting limited collinearity among constructs. Notably, the VIF value for RGC with respect to other constructs is the highest at 2.634, but it remains below the threshold, indicating that RGC has a moderate level of collinearity without posing a significant issue. FTP and SGS show lower VIF values (1.000 and 2.182, respectively) when combined with other constructs, further supporting the absence of problematic collinearity.

For the high FL subgroup, VIF values are slightly lower than those in the complete dataset, reflecting even lower collinearity in this subgroup. For instance, the VIF for RGC drops to 2.187, and FTP shows only mild collinearity with FRT and SGS (both at 1.285 and 2.143). These results indicate that the high FL subgroup has low levels of multicollinearity, promoting the stability of the model for this subgroup.

In contrast, the low FL subgroup shows a slight increase in some VIF values compared to the complete sample. For instance, FRT shows a higher VIF value of 1.567, indicating somewhat higher collinearity in the low FL subgroup. Similarly, the VIF for RGC remains at 2.634, consistent with the full sample. Although there is a minor increase in collinearity for the low FL subgroup, all VIF values stay within acceptable limits, suggesting no major collinearity concerns. This analysis implies that while collinearity is well-managed across all groups, high

FL respondents may exhibit slightly less multicollinearity in responses, contributing to the robustness of the model for this subgroup.

6.3.1 Model Fit

Table 6.6 presents the model fit estimates for the SEM analysis, showcasing results for the full sample, as well as the high and low financial literacy (FL) subgroups. These results provide insights into the alignment between the proposed model and the observed data, with several encouraging indications of the model's performance.

For the full sample, the SRMR is 0.070 for the saturated model and 0.073 for the estimated model, both falling below the threshold of 0.08, indicating a good model fit. In the high financial literacy (FL) subgroup, the SRMR is 0.075, demonstrating a good fit as shown in Table 6.6. Similarly, for the low FL subgroup, the SRMR value is 0.079, also below the 0.08 threshold, confirming that the model is a good fit for this subgroup as well.

Table 6.6 Model Fit Estimates

Dataset	Parameter	Saturated model	Estimated model
Full Sample	SRMR	0.070	0.073
High FL Subgroup	SRMR	0.075	0.075
Low FL Subgroup	SRMR	0.079	0.079

Note: Standardized root mean residual
Source: Researcher's Analysis

6.3.2 R^2 Values

The R-square and adjusted R-square values in Table 6.7 demonstrate the explanatory power of the independent variables in predicting the dependent variables across the complete model and its subgroups. The co-efficient of determination (R^2) measures the degree of variance explained in the dependent construct by predictor variables of the model of the study (Hair et al., 2017). Henseler et al. (2009) recommends the R^2 value of 0.67 as substantial, 0.33 as moderate, and 0.19 as weak.

For the full sample, the R^2 value of the dependent variable retirement financial behaviour is found to be 54.2 which implies that the independent predictor variables of our model is able to

explain 54.2% of the variance in dependent variable. Hence R^2 value of our model is moderate and close to the substantial level, implying that the model has a strong explanatory capacity for retirement financial behaviour. The model also explains 53.1% of variance in RGC, followed by 17.8 % of variance in FTP, and 3% of variance in FRT. These results indicate that FRT and FTP have weak variance whereas RGC explains moderate variance.

For the high FL subgroup, the R^2 value of the dependent variable retirement financial behaviour is found to be 49.5 which implies that the independent predictor variables of our model are able to explain 49.5% of the variance in dependent variable. Hence R^2 value of our model is moderate implying that the model has a medium explanatory capacity for retirement financial behaviour. The model also explains 51.4% of variance in RGC, followed by 18.6 % of variance in FTP, and 3.1% of variance in FRT. These results indicate that FRT and FTP have weak variance whereas RGC explains moderate variance.

For the low FL subgroup, the R^2 value of the dependent variable retirement financial behaviour is found to be 62.8 which implies that the independent predictor variables of our model are able to explain 62.8% of the variance in dependent variable. Hence R^2 value of our model is moderate and close to the substantial level, implying that the model has a strong explanatory capacity for retirement financial behaviour. The model also explains 56.2% of variance in RGC, followed by 17.8% of variance in FTP, and 8% of variance in FRT. These results indicate that FRT and FTP have weak variance whereas RGC explains moderate variance.

Table 6.7 R^2 Values

Dataset	Construct	R-square	R-square adjusted
Full Sample	FRT	0.030	0.029
	FTP	0.178	0.177
	RFB	0.542	0.539
	RGC	0.531	0.530
High FL Subgroup	FRT	0.031	0.028
	FTP	0.186	0.184
	RFB	0.495	0.489
	RGC	0.514	0.511
Low FL Subgroup	FRT	0.081	0.078
	FTP	0.178	0.175

	RFB	0.628	0.623
	RGC	0.562	0.558

Note: Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB) and Retirement Goal Clarity (RGC).
Source: Researcher's Analysis

6.3.3 Effect Sizes

The f-square values presented in Table 6.8 reflect the effect sizes of the paths in the model, with higher values indicating stronger effects. For the full sample, the path from FRT to RFB has a small effect size of 0.015, suggesting a minimal influence. FTP to FRT and FTP to RFB both show small effects, with f-square values of 0.031 and 0.040, respectively. FTP to RGC also has a small effect (0.042). The path from RGC to RFB has a medium effect size of 0.248, indicating a moderate influence. SGS to FTP and SGS to RGC show larger effect sizes, with values of 0.217 and 0.741, respectively, suggesting strong influences. SGS to RFB has a minimal effect with an f-square of 0.013.

In the high FL subgroup, the effect sizes are generally small. FRT to RFB has a very small effect (0.010), while FTP to FRT (0.032) and FTP to RFB (0.026) show slightly higher but still small effects. FTP to RGC and RGC to RFB have small to medium effects, with values of 0.041 and 0.265, respectively. The path from SGS to FTP (0.228) has a moderate effect, while SGS to RGC (0.676) indicates a strong influence. SGS to RFB has a very small effect (0.005).

In the low FL subgroup, the path from FRT to RFB has a moderate effect (0.059), while FTP to FRT (0.088) shows a relatively larger effect. FTP to RFB and FTP to RGC have smaller effects, with values of 0.015 and 0.056, respectively. The path from RGC to RFB (0.252) shows a moderate effect, and SGS to FTP remains moderate at 0.217. SGS to RFB has a small effect (0.031), while SGS to RGC shows a very strong effect (0.817). This suggests that SGS has a much stronger influence on RGC in the low FL subgroup compared to the other groups.

Table 6.8 Effect Sizes

Dataset	Path	f-square	Effect size Interpretation
Full Sample	FRT -> RFB	0.015	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP -> FRT	0.031	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP -> RFB	0.040	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP -> RGC	0.042	Weak Effect ($0.02 \leq f^2 < 0.15$)

	RGC -> RFB	0.248	Moderate Effect ($0.15 \leq f^2 < 0.35$)
	SGS -> FTP	0.217	Moderate Effect ($0.15 \leq f^2 < 0.35$)
	SGS -> RFB	0.013	Weak Effect ($0.02 \leq f^2 < 0.15$)
	SGS -> RGC	0.741	Strong Effect ($f^2 \geq 0.35$)
High FL Subgroup	FRT -> RFB	0.010	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP -> FRT	0.032	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP ->RFB	0.026	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP -> RGC	0.041	Weak Effect ($0.02 \leq f^2 < 0.15$)
	RGC -> RFB	0.265	Moderate Effect ($0.15 \leq f^2 < 0.35$)
	SGS -> FTP	0.228	Moderate Effect ($0.15 \leq f^2 < 0.35$)
	SGS -> RFB	0.005	Weak Effect ($0.02 \leq f^2 < 0.15$)
	SGS -> RGC	0.676	Strong Effect ($f^2 \geq 0.35$)
Low FL Subgroup	FRT -> RFB	0.059	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP -> FRT	0.088	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP -> RFB	0.015	Weak Effect ($0.02 \leq f^2 < 0.15$)
	FTP -> RGC	0.056	Weak Effect ($0.02 \leq f^2 < 0.15$)
	RGC -> RFB	0.252	Moderate Effect ($0.15 \leq f^2 < 0.35$)
	SGS -> FTP	0.217	Moderate Effect ($0.15 \leq f^2 < 0.35$)
	SGS -> RFB	0.031	Weak Effect ($0.02 \leq f^2 < 0.15$)
	SGS -> RGC	0.817	Strong Effect ($f^2 \geq 0.35$)

Note: Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB) , Retirement Goal Clarity (RGC) and Social Group Support (SGS).
Source: Researcher's Analysis

6.3.4 Predictive Relevance

To conclude this analysis of the structural models, the current study tested the model's predictive relevance presented in Table 6.9 using Stone–Geisser's Q^2 (Hair et al., 2019 and Caranzza et al., 2020). The Q^2 predict values provide a measure of how well each latent variable (LV) within the model is predicted for both the complete sample and the financial literacy (FL) subgroups. A Q^2 predict value above zero is an indicator that the model has predictive relevance, meaning the model is able to predict the corresponding construct (latent variable) with some degree of accuracy. Values greater than zero are meaningful. Values higher than 0 indicates small predictive accuracy, higher than 0.25 indicates medium predictive accuracy and higher than 0.50 indicates large predictive accuracy of the PLS path model (Hair et al., 2019).

In the context of the full sample, the Q^2 predict values demonstrate varying levels of predictive relevance for different constructs. For instance, FRT has a Q^2 predict value of 0.061, indicating modest predictive relevance, but still above zero, which implies that the model is able to predict FRT with a moderate degree of accuracy. Similarly, FTP has a slightly higher Q^2 predict value

of 0.173, suggesting it is more predictable than FRT, though still not as strong as other constructs in the model. RFB has a Q^2 predict value of 0.344, showing a stronger predictive relevance, and RGC stands out as the most predictable construct with a Q^2 predict of 0.510, indicating it is high predictive power in this model.

When breaking down the results by financial literacy (FL) subgroups, the pattern of predictability changes slightly. In the high FL subgroup, FRT shows a very modest predictive relevance with a Q^2 predict value of 0.060, indicating a slight drop in predictability compared to the complete sample. However, FTP increases to 0.178, showing a stronger prediction capability in the high FL subgroup. Interestingly, RFB drops to 0.289, suggesting that while still above zero and therefore predictive, it is less predictable in this group compared to the complete sample. RGC remains strong at 0.491, which is only slightly lower than its value for the complete sample, suggesting that individuals in the high FL subgroup have strong predictability for retirement goal clarity.

In the low FL subgroup, the Q^2 predict values indicate even stronger predictive relevance in certain constructs. FRT shows a relatively higher Q^2 predict of 0.105, while FTP slightly decreases to 0.168. RFB is more predictable in this subgroup, with a Q^2predict value of 0.417, and RGC reaches its highest predictive relevance at 0.533, the strongest among all groups. This indicates that individuals with lower financial literacy levels are more predictable in their retirement financial behaviour by their goals, suggesting that these constructs are more influenced by financial literacy in this subgroup.

The overall summary of the Q^2 predict values indicates that while all the constructs have predictive relevance (i.e., Q^2predict values above zero), the model's predictive power is moderated by financial literacy levels. Specifically, individuals with lower financial literacy (low FL subgroup) exhibit stronger predictability for constructs like FRT and RFB, while those with higher financial literacy (high FL subgroup) show strong predictability for RGC and FTP, although the prediction accuracy for RFB is somewhat lower. This suggests that the model is more effective at predicting retirement-related behaviour and goal-setting for individuals with lower financial literacy, while higher financial literacy individuals may be influenced by a broader set of factors not fully captured by the model. Thus, the model provides valuable insights into retirement financial behaviour but may need further refinement for those with higher financial literacy, where additional factors might come into play.

Table 6.9 Predictive Relevance

Dataset	Constructs	Q^2 predict
Full Sample	FRT	0.061
	FTP	0.173
	RFB	0.344
	RGC	0.510
High FL Subgroup	FRT	0.060
	FTP	0.178
	RFB	0.289
	RGC	0.491
Low FL Subgroup	FRT	0.105
	FTP	0.168
	RFB	0.417
	RGC	0.533

Note: Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB) and Retirement Goal Clarity (RGC).
Source: Researcher's Analysis

6.3.5 Model Estimates

The results presented in the table 6.10 examine the relationships between key constructs such as FRT, FTP, RGC, SGS and RFB across the entire dataset as well as within two subgroups based on financial literacy (high financial literacy and low financial literacy). The path analysis results offer valuable insights into the direct relationships between various constructs and their impact on retirement financial behaviour, as outlined in the hypotheses.

Table 6.10 Path Analysis Results

Path/ Hypothesis	Full Sample			High FL Subgroup			Low FL Subgroup		
	β	p value	Results	β	p value	Results	β	p value	Results
H1: FRT→RFB	0.09	0.014**	Supported	0.083	0.115	Not supported	0.186	0.001**	Supported
H2: FTP→RFB	0.15	0.000*	Supported	0.13	0.01*	Supported	0.084	0.111	Not supported
H3: RGC→RFB	0.51	0.000*	Supported	0.541	0.000*	Supported	0.497	0.000*	Supported
H4: SGS→RFB	0.11	0.029**	Supported	0.071	0.324	Not supported	0.161	0.025**	Supported
FTP→FRT	0.17	0.000*	Supported	0.176	0.001*	Supported	0.285	0.000*	Supported
FTP→RGC	0.15	0.000*	Supported	0.156	0.000*	Supported	0.173	0.000*	Supported
SGS→FTP	0.42	0.000*	Supported	0.431	0.000*	Supported	0.422	0.000*	Supported
SGS→RGC	0.65	0.000*	Supported	0.635	0.000*	Supported	0.66	0.000*	Supported

Note: Significance level of 1 percent (*), 5 percent (**) and 10 percent (***) respectively. Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB) and Retirement Goal Clarity (RGC).
Source: Researcher's Analysis

In case of full sample, FRT has a significant positive influence on RFB(H1). The path coefficient of this relation is 0.09, and a p-value of 0.014, confirming a significant positive relationship at the 5% significance level and thus supporting H1. This result is in line with the findings of Grable and Joo (1997) and Jacobs-Lawson and Hershey (2005). This suggests that individuals who are more willing to take financial risks are more likely to engage in proactive retirement financial behaviour. Risk tolerance is often a key predictor of how individuals approach investments and savings, and this finding highlights its relevance in shaping effective retirement financial behaviour. H2 is hypothesized as FTP has a significant positive influence on RFB. The path coefficient for this relationship is 0.15, and a p-value of 0.000, thereby supporting H2. The significant coefficient indicates that those who consider the future more seriously are more likely to exhibit responsible and planned financial behaviour regarding their retirement. This corroborates the findings of Kimiyagahlam et al., (2019) and Jacobs-Lawson and Hershey (2005). Additionally, H3 hypothesized as RGC positively influences RFB has a path coefficient of 0.51, and p-value of 0.000, which is highly significant. Hence H3 is also supported aligning with the prior findings of Tomar et al. (2021) and Moorthy et al. (2012). This strong relationship suggests that having clear, defined retirement goals plays a crucial role in shaping how individuals approach retirement preparedness. SGS also have a significant

direct effect on RFB (H4). The path coefficient for SGS -> RFB is 0.11, and a p-value of 0.029, which is statistically significant and thus accepting H4. This indicates that, social support also has direct effects on retirement financial behaviour which is consistent to the study results of Hershey et al. (2010).

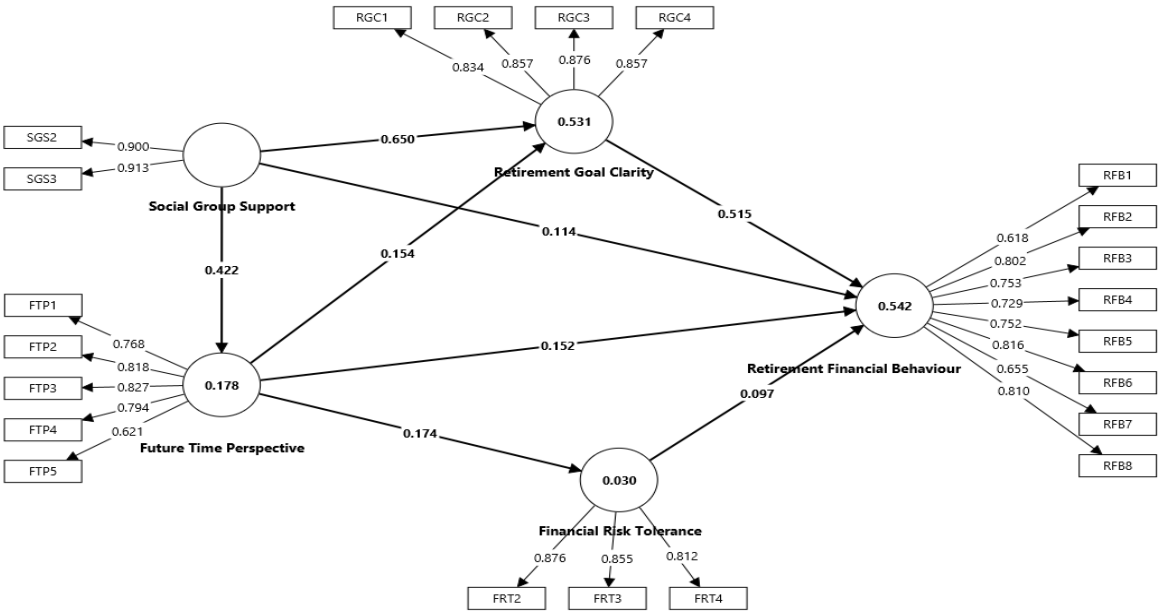
In case of high FL subgroup, the significant positive influence of FRT on RFB(H1) is not supported as the path coefficient here is 0.083, and a p-value is 0.115 thus rejecting H1. This implies that financially literate individuals are likely to make their retirement financial decisions based on careful analysis and logical planning rather than relying on their personal comfort with taking risks. They may also prefer to use professional advice, planning tools, or structured methods, which reduce the importance of their personal risk tolerance in decision making. H2 hypothesized as FTP has a significant positive influence on RFB has path coefficient of 0.13, and a p-value of 0.010, thereby supporting H2. This indicates that individuals who are future oriented and possess high financial knowledge are likely to have a favorable perspective on retirement. This is consistent to the findings of Hershey and Mowen (2000). Also, the relation RGC has significant positive influence on RFB (H3) has path coefficient of 0.541, and p-value of 0.000, which is highly significant. Hence H3 is also supported. This strong relationship suggests that having clear, defined retirement goals plays a crucial role in shaping how individuals approach retirement preparedness in case of individuals with high financial literacy. The influence of SGS on RFB (H4) is not supported here. The path coefficient for SGS -> RFB is 0.71, and a p-value of 0.324, which is statistically insignificant and thus rejecting H4. This indicates that, individuals with strong financial literacy may rely less on external social influences when making decisions related to retirement. Their knowledge and confidence in financial matters likely reduce their need for support or guidance from their social groups, as they may feel more self-reliant and capable of making informed decisions independently. In case of high FL subgroup, the strongest significant path was between RGC and RFB (β=0.541 and $p<0.001$).

In case of low FL subgroup, the influence of FRT on RFB(H1) is supported as the path coefficient here is 0.186, and a p-value of 0.001, thus accepting H1. This implies that risk tolerance plays a key role in driving retirement-related financial behaviour among illiterate or less financial literate individuals. This suggests that even when financial literacy is low, individuals with a high tolerance for risk are more likely to exhibit better retirement financial behaviour. The path coefficient for the relation FTP positively influences RFB (H2) is 0.084, and a p-value of 0.111, thereby rejecting H2. RGC also positively influences RFB (H3). The

path coefficient for RGC -> RFB is 0.161, and p-value is 0.025, which is significant. Hence H3 is also supported. The effect of SGS on RFB (H4) is also supported. The path coefficient for the relationship SGS -> RFB is 0.161, and a p-value of 0.025, which is statistically significant and thus accepting H4. This result indicates that individuals with low financial literacy often depend on social networks, including family, friends, or community groups, for guidance in financial decisions. This dependence may arise from their lack of knowledge or confidence in handling complex financial matters on their own.

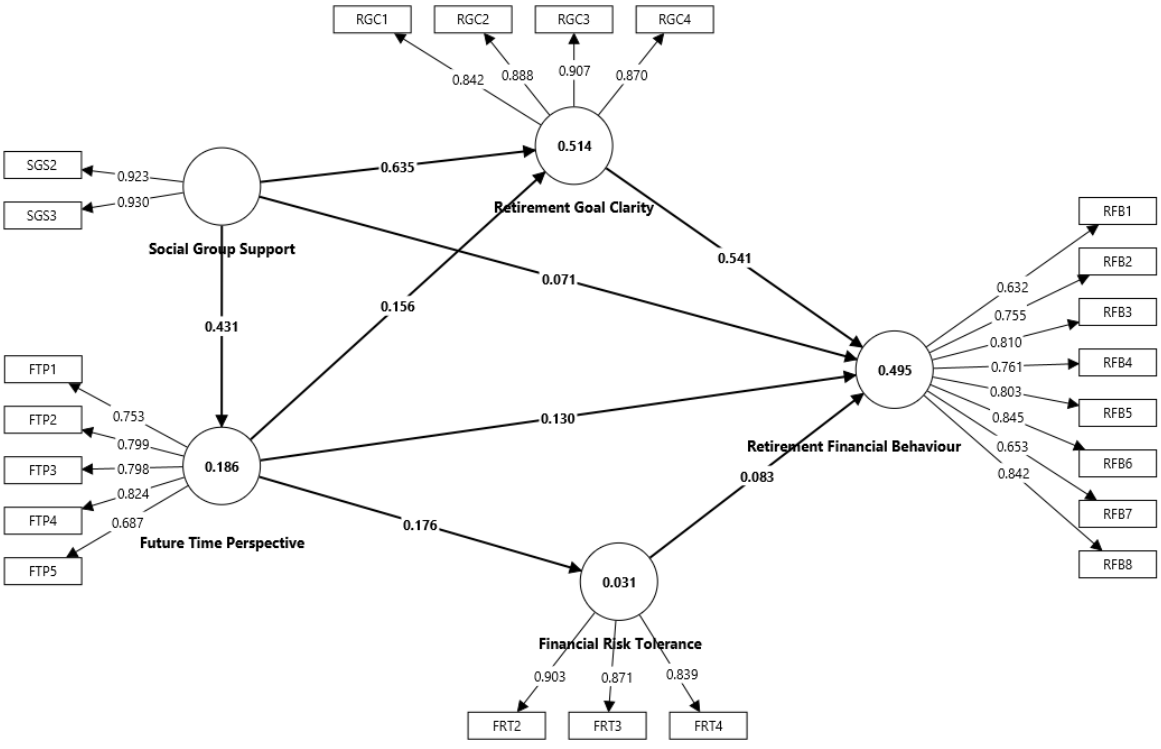
The structural model analysis provides a comprehensive view of the relationships between constructs within the full sample and the identified subgroups based on financial literacy (FL). Figure 6.1 illustrates the Structural Model Analysis for the full sample, depicting the overall relationships between constructs across the entire dataset and serving as a baseline by aggregating patterns of interaction without subgroup differentiation. Figure 6.2 focuses on the Structural Model Analysis for the high FL subgroup, highlighting how financial literacy moderates the relationships between constructs and revealing distinct patterns of behaviour and attitudes within individuals with higher financial literacy. Conversely, Figure 6.3 presents the Structural Model Analysis for the low FL subgroup, showcasing how differences in financial literacy influence the interactions among constructs and the explanatory power of the model. Collectively, these figures provide a nuanced understanding of how financial literacy impacts the relationships within the structural model, offering valuable insights for tailoring interventions and strategies to address the specific needs of different target groups.

Figure 6.2 Structural Model Analysis (Full Sample)



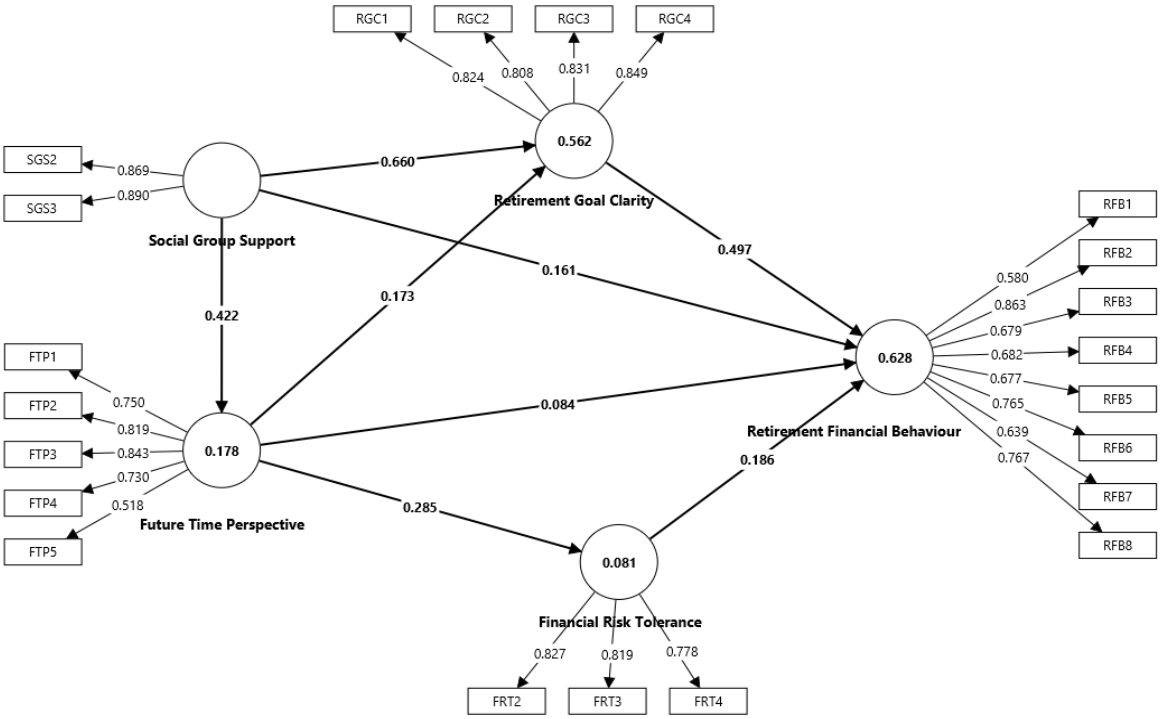
Source: Researcher's Analysis

Figure 6.3 Structural Model Analysis (High FL Subgroup)



Source: Researcher's Analysis

Figure 6.4 Structural Model Analysis (Low FL Subgroup)



Source: Researcher's Analysis

6.3.6 Indirect Path Analysis

The indirect path analysis in table 6.11 presents the relationships between various constructs and mediating variables that influence RFB. This table examines the specific indirect effects of various hypothesized pathways to understand how FTP, FRT, SGS, and RGC influence RFB across different levels of financial literacy. The pathways' significance varies among the full sample and subgroups with high or low financial literacy (FL).

For full sample, the results reveal that the path FTP -> FRT -> RFB (H5) is supported (β=0.01 and p=0.052). This result corroborates the findings of Jacobs-Lawson and Hershey (2005). And since the direct effect FTP->RFB is also significant, we can infer that the risk tolerance partially mediates the effect of Future Time Perspective on retirement financial behaviour. Similarly, the indirect path FTP -> RGC -> RFB (H6) is also supported (β=0.08 and p=0.000) as evident from the above table 6.11 which summarizes that retirement goal clarity partially mediates the effect of Future Time Perspective on retirement financial behaviour. Also, the path SGS -> FTP -> RFB(H7) is supported (β=0.06 and p=0.000), which shows a significant positive

indirect effect of social group support on retirement financial behaviour through future time perspective. This indicates that the support individuals receive from their social networks i.e., family and friends influence how they perceive and prioritize their future. A stronger and more optimistic future time perspective, in turn, motivates better financial planning and saving behaviour for retirement. Further, path SGS -> RGC -> RFB (H8) is also significant and supported (β=0.33 and p=0.000). And since the direct path SGS->RFB is also significant from the direct path results, we can infer that retirement goal clarity partially mediates the effect of social group support on retirement financial behaviour in case of full sample.

For high FL subgroup, the results reveal that the path FTP -> FRT -> RFB (H5) is not supported (β=0.015 and p=0.195) which implies that financial risk tolerance does not mediate the influence of future time perspective on retirement financial behaviour. The indirect path FTP -> RGC -> RFB (H6) is supported (β=0.085 and p=0.000) which summarizes that retirement goal clarity partially mediates the effect of future time perspective on retirement financial behaviour. Also, the path SGS -> FTP -> RFB(H7) and SGS -> RGC -> RFB (H8) is significant and supported in terms of high financial literacy individuals as evident from table 6.11.

For low FL subgroup, the results reveal that the path FTP -> FRT -> RFB (H5), FTP -> RGC -> RFB (H6) and SGS -> RGC -> RFB (H8) are significant and supported (β=0.053 and p=0.01; β=0.086 and p=0.001; β=0.328 and p=0.000). Supported H5 reveals that risk tolerance mediates the effect of future time perspective on financial behaviour. This indicates that in case of individuals with low financial literacy, high future outlook and orientation will lead to greater risk tolerant attitude and which in turn will lead to greater financial behaviour towards retirement. Whereas the indirect path SGS→FTP→ RFB(H7) is not significant in this subgroup (β=0.035 and p=0.128)

Overall, this analysis illustrates financial literacy's moderating role on the pathways between psychological variables and retirement financial behaviour, underscoring the nuanced influence of financial literacy on retirement financial behaviour.

Table 6.11 Indirect Path Analysis

Path/Hypothesis	Full			High FL Subgroup			Low FL Subgroup		
	β	p value	Results	β	p value	Results	β	p value	Results
H5: FTP→FRT→RFB	0.01	0.052**	Supported	0.015	0.195	Not supported	0.053	0.01**	Supported
H6: FTP→ RGC→RFB	0.08	0.000*	Supported	0.085	0.000*	Supported	0.086	0.001**	Supported
H7: SGS→FTP→ RFB	0.06	0.000*	Supported	0.056	0.015**	Supported	0.035	0.128	Not supported
H8: SGS→RGC→RFB	0.33	0.000*	Supported	0.344	0.000*	Supported	0.328	0.000*	Supported
SGS→ FTP→FRT	0.07	0.000*		0.076	0.004*		0.12	0.000*	
SGS→FTP→RGC→RFB	0.03	0.000*		0.037	0.001*		0.036	0.004**	
SGS→FTP→ RGC	0.06	0.000*		0.067	0.000*		0.073	0.000*	
SGS→FTP→FRT→RFB	0	0.059**		0.006	0.214		0.022	0.017**	

Note: Significance level of 1 percent (*), 5 percent (**) and 10 percent (***) respectively. Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB), Retirement Goal Clarity (RGC) and Social Group Support (SGS).

Source: Researcher's Analysis

6.3.1 Multi Group Analysis

Guided by Caranzza et al. (2020), multigroup analysis was conducted to assess the moderating effect of financial literacy (FL) on the relationships studied in this research. Specifically, financial literacy was categorized into two subgroups: high and low FL, and the impact of FL on the relationships between constructs was evaluated across these groups. Henseler et al. (2016) emphasize the importance of conducting Measurement Invariance of Composite Models (MICOM) prior to performing multigroup analysis. MICOM ensures that any observed variations between the subgroups are attributable to differences in the latent variables, rather than issues related to the measurement model or data processing. The MICOM procedure follows a two-stage approach to confirm measurement invariance. Firstly, the assessment of configural invariance is done to confirm that the measurement model considered for the study for both the subgroups has the same configuration which means that the same indicators are used for both models, identical data treatment has been done, and identical algorithm settings for both the subgroups. Second, compositional invariance is evaluated as demonstrated in Table 6.12. Table 6.12 reveals that all constructs (FRT, FTP, RFB, RGC, and SGS) have permutation p-value exceeding 0.05, indicating insignificance. This confirms that the compositional variance is achieved meaning the constructs are equivalently measured across the subgroups,

and any observed differences in subsequent analyses can be attributed to actual differences in the constructs, rather than measurement inconsistencies.

Table 6.12 MICOM Compositional Variance Assessment

Constructs	Original correlation	Correlation permutation mean	5.0%	p value
FRT	1.000	0.999	0.997	0.845
FTP	0.993	0.997	0.989	0.095
RFB	1.000	1.000	0.999	0.398
RGC	1.000	1.000	1.000	0.333
SGS	1.000	1.000	0.999	0.691

Note: Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB) , Retirement Goal Clarity (RGC) and Social Group Support (SGS).
Source: Researcher's Analysis

Table 6.13 presents the results of the multigroup analysis, which evaluates the differences between high and low financial literacy (FL) subgroups in terms of the relationships between key constructs. The table includes two key components: the Difference (High Financial Literacy - Low Financial Literacy), which represents the difference in the relationship strength between the constructs for high FL and low FL subgroups, and the p-value (High Financial Literacy - Low Financial Literacy), which tests whether this difference is statistically significant.

Table 6.13 Results of the Multigroup Analysis

Relationships	Difference (High Financial Literacy - Low Financial Literacy)	p-value
H1a: FRT -> RFB	-0.102	0.187
H2a: FTP -> RFB	0.047	0.522
H3a: RGC -> RFB	0.045	0.679
H4a: SGS -> RFB	-0.09	0.372
H5a: FTP -> FRT	-0.109	0.174
H6a: FTP -> RGC	-0.016	0.776
H7a: SGS -> FTP	0.009	0.897

H8a: SGS -> RGC	-0.025	0.677

Note: Financial Risk Tolerance (FRT), Future Time Perspective (FTP), Retirement Financial Behaviour (RFB), Retirement Goal Clarity (RGC) and Social Group Support (SGS).
Source: Researcher's Analysis

For H1a (FRT -> RFB), the difference is -0.102 with a p-value of 0.187, which suggests that the relationship between FRT and RFB does not significantly differ between the high and low FL subgroups, as the p-value is greater than the common significance threshold of 0.05.

Similarly, H2a (FTP -> RFB), the difference is 0.047 with a p-value of 0.522, suggesting that the relationship between FTP and RFB is not significantly different between the two subgroups.

In H3a (RGC -> RFB), the difference is 0.045 with a p-value of 0.679, showing no significant difference in the relationship between RGC and RFB between the subgroups

For H4a (SGS -> RFB) shows a -0.090 difference with a p-value of 0.372, suggesting no significant difference in the relationship between SGS and RFB across the subgroups

In H5a (FTP -> FRT) shows a -0.109 difference with a p-value of 0.174, indicating no significant difference in the relationship between FTP and FRT across the FL subgroups.

For H6a (FTP -> RGC), the difference is -0.016 and the p-value is 0.776, indicating no significant difference in the relationship between FTP and RGC across the high and low FL subgroups.

H7a (SGS -> FTP), the difference is 0.009 with a p-value of 0.897, which is also not significant, indicating no difference in the relationship between SGS and FTP between the subgroups.

Finally, H8a (SGS -> RGC) shows a -0.025 difference with a p-value of 0.677, indicating that the relationship between SGS and RGC does not significantly differ between high and low FL subgroups.

To conclude, the p-values for all relationships in the table exceed the 0.05 significance threshold, indicating that there are no statistically significant differences in the relationships between the constructs when comparing the high and low financial literacy subgroups. This suggests that the effect of the relationships studied is similar across both subgroups. But financial literacy is found to moderate the model relationships as discussed in table 6.10.

6.4 Conclusion

In this chapter, the nuanced findings from path and indirect effects analyses emphasize the complex and interrelated nature of these factors, highlighting the need for tailored financial education programs that consider both individual and societal influences on financial decision-making. The path analysis results offer significant insights into the varying effects of different factors on RFB across groups with complete, high, and low financial literacy. This finding highlights the role of financial risk tolerance, future time perspective, retirement goal clarity, and social support in shaping retirement financial behavior, with findings varying across the full sample and subgroups based on financial literacy.

In case of the full sample, financial risk tolerance, future time perspective, goal clarity and social group support significantly contribute to the proactive retirement financial behaviour. This aligns with prior research and underscores the importance of these factors in shaping proactive retirement financial behavior (Hershey et al., 2007, Hershey et al., 2010 and Moorthy et al.,2012). Notably, retirement goal clarity has the strongest impact.

In case of high financial literacy subgroup, the findings differ. While future time perspective and retirement goal clarity continue to show significant positive effects on retirement financial behaviour, the influence of risk tolerance and social group support is not supported. This suggests that financially literate individuals rely more on rational decision-making and structured methods, reducing the importance of personal risk tolerance and external social support in retirement preparedness. The strongest predictor of retirement financial behaviour for this group is retirement goal clarity, highlighting the centrality of clear, defined goals in their financial decision-making process.

In case of low financial literacy subgroup, the results show that risk tolerance, retirement goal clarity, and social group support significantly influence retirement financial behaviour, while future time perspective does not. This implies that individuals with lower financial knowledge depend more on their risk tolerance and social networks for guidance. Social support, in particular, plays a crucial role for this group, compensating for their limited financial expertise.

The analysis of indirect paths highlights the roles of future time perspective, financial risk tolerance, social group support, and retirement goal clarity in influencing retirement financial behavior across varying levels of financial literacy.

In case of full sample financial risk tolerance is found to partially mediates the relationship between future time perspective and retirement financial behaviour which corroborates the findings of Jacobs-Lawson and Hershey (2005). Also, retirement goal clarity partially mediates the effect of future time perspective on retirement financial behaviour. Also results found a significant positive indirect effect of social group support on retirement financial behavior through future time perspective. This suggests that support from social networks, such as family and friends, shapes individuals' perceptions and priorities regarding their future. A more optimistic and forward-looking perspective subsequently encourages improved financial planning and saving behavior for retirement. These results emphasize the importance of social networks, future orientation, and clear retirement goals in driving effective financial behavior for retirement. For those with high financial literacy, retirement goal clarity plays a dominant role in financial planning, while risk tolerance is less relevant as per the study's indirect path results. And low financial literacy individuals rely more on social support and risk tolerance to improve financial behavior, underscoring their dependence on external guidance and simpler mechanisms for effective retirement preparedness.

A comparison of high and low financial literacy subgroups reveals no significant differences in the relationships between various constructs as per the multigroup analysis results. But the impact of financial literacy on the model relationships were found to moderate the relationships. This consistency across subgroups reinforces the idea that financial literacy plays a critical role in shaping financial behaviour related to retirement. The evidence underscores the importance of integrating financial literacy, psychological perspectives, and social influences to enhance retirement financial behaviour. By addressing cognitive and social factors, policymakers can improve financial outcomes, ensuring greater financial security for individuals across different literacy levels.