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Behavioral and Continuance Intentions Toward the National Pension System: Investigating Key Antecedents and the Moderating Role of Financial Knowledge.

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Abstract:

Purpose: This study examines the key antecedents influencing behavioral intention and continuance intention toward the National Pension System (NPS) among subscribers and investigates the moderating role of financial knowledge in strengthening these relationships.

Design/Methodology/Approach: A quantitative research design was adopted using a structured questionnaire. Data were collected from 436 employees under NPS in Tiruchirappalli (Trichy) District, Tamil Nadu through a survey method. The proposed model was analyzed using Structural Equation Modeling (SEM) to test the relationships among perceived benefits, trust, service quality, behavioral intention, continuance intention, and financial knowledge.

Findings: The findings reveal that perceived benefits, trust, and service quality significantly influence subscribers' behavioral intentions toward NPS. Behavioral intention, in turn, positively affects continuance intention. Furthermore, financial knowledge significantly moderates the relationship between behavioral intention and continuance intention, indicating that financially knowledgeable subscribers are more likely to continue investing in NPS. These findings support the arguments of Ajzen (1991) and Bhushan and Medury (2013) regarding the importance of behavioral factors and financial literacy in financial decision-making.

Practical Implications: Policymakers and pension fund managers should enhance financial literacy initiatives and improve service quality to increase long-term participation in NPS.

Originality/Value: This study extends pension adoption literature by integrating financial knowledge as a moderating variable in explaining continuance intentions toward NPS.

Keywords: National Pension System, Behavioral Intention, Continuance Intention, Financial Knowledge, Pension Planning, Financial Literacy, Structural Equation Modeling.

Introduction

Retirement planning has become an increasingly important financial concern due to rising life expectancy, changing family structures, and growing uncertainty regarding post-retirement income security. In India, the National Pension System (NPS) has emerged as a significant retirement savings instrument designed to provide financial stability and social security to individuals during their retirement years. Despite various government initiatives and policy measures to promote NPS participation, the level of enrolment and long-term commitment among subscribers remains a challenge.

Previous studies have identified several factors influencing pension adoption and continuance behavior, including perceived benefits, trust, service quality, financial literacy, and investment awareness (Ajzen, 1991; Bhushan & Medury, 2013). More recently, Michael Xavier and Ramanatha Pillai (2026) highlighted the importance of financial knowledge in shaping behavioural and continuance intentions toward the National Pension System. However, existing studies have primarily focused on direct relationships among these variables, while limited attention has been given to understanding how financial knowledge strengthens or weakens the relationship between behavioural intention and continuance intention.

To fill this research gap, this paper addresses the following research questions (RQs):

RQ1: What are the key antecedents influencing behavioural intention toward the National Pension System?

RQ2: Does behavioural intention significantly influence continuance intention toward the National Pension System?

RQ3: What is the role of financial knowledge in shaping subscribers' continuance intention toward the National Pension System?

RQ4: Does financial knowledge moderate the relationship between behavioural intention and continuance intention toward the National Pension System?

Accordingly, this study develops and tests a conceptual framework that examines the effects of perceived benefits, trust, and service quality on behavioural intention, the impact of behavioural intention on continuance intention, and the moderating role of financial knowledge. Using data collected from 436 NPS subscribers, the study contributes to the pension and financial behaviour literature by providing deeper insights into the factors that encourage sustained participation in retirement savings schemes. The findings are expected to assist policymakers, pension fund managers, and financial institutions in designing strategies that enhance financial literacy and promote long-term engagement with the National Pension System.

Literature Review

Behavioural Intention and Pension Participation

Behavioural intention has been widely recognized as a significant predictor of actual behaviour in financial decision-making. The Theory of Planned Behavior (TPB) proposed by Ajzen (1991) suggests that individuals' intentions are shaped by their attitudes, subjective norms, and perceived behavioural control. In the context of retirement planning, behavioural intention reflects an individual's willingness to participate in and continue contributing to pension schemes. Recent studies have reaffirmed that behavioural intention remains a critical determinant of long-term financial planning and retirement preparedness.

Retirement planning has gained considerable attention due to increasing life expectancy, changing employment patterns, and concerns regarding post-retirement financial security. A systematic review by Adhikari and Ravi Prakash (2024) identified financial literacy, demographic characteristics, and investment awareness as major determinants of retirement planning behaviour among employees. The review further highlighted that behavioural factors significantly influence retirement savings decisions and pension participation.

Similarly, Yeo, Lim, and Yii (2024) emphasized that financial planning behaviour is influenced by both cognitive and behavioural factors. Their review suggested that individuals who actively engage in financial planning exhibit stronger intentions toward retirement savings and long-term wealth accumulation. Financial planning behaviour serves as a bridge between financial awareness and retirement preparedness, thereby reinforcing behavioural intention.

Perceived Benefits and Behavioural Intention

Perceived benefits refer to the extent to which individuals believe that participation in a pension scheme will enhance their financial security and retirement well-being. The perceived value of pension products significantly influences investment decisions and adoption behaviour. Individuals are more likely to subscribe to pension schemes when they perceive benefits such as tax savings, retirement income security, wealth accumulation, and investment flexibility.

Research on retirement planning consistently indicates that perceived economic benefits positively influence investment intentions. Indapurkar et al. (2024) found that financial well-being and positive financial attitudes significantly contribute to retirement planning behaviour. Individuals who recognize the long-term benefits of retirement investments demonstrate greater commitment to retirement savings plans.

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The National Pension System (NPS) offers several benefits, including tax incentives, professional fund management, and diversified investment options. Despite these advantages, subscriber participation remains lower than expected. Reports indicate that awareness regarding the benefits of NPS remains limited among many potential subscribers, thereby affecting behavioural intention toward participation.

Trust and Pension Adoption

Trust is a fundamental factor influencing the adoption and continuance of financial services. In pension schemes, trust reflects confidence in the pension provider, regulatory framework, fund managers, and the overall reliability of the system. Since pension investments are long-term commitments, trust becomes particularly important in reducing perceived risks and uncertainties. Recent studies have demonstrated that trust significantly influences continuance intentions across financial services. Nguyen and Dao (2024) found that trust strengthens users' intentions to continue using mobile banking services and enhances customer satisfaction. Their findings indicate that trust acts as a catalyst for sustained engagement in financial platforms.

In retirement planning contexts, trust has been shown to affect financial decision-making and future-oriented investment behaviour. Shao and Zhu (2024) reported that financial trust positively moderates retirement financial planning behaviour. Individuals with greater trust in financial institutions are more likely to engage in retirement planning activities and maintain long-term investment commitments.

Given the long-term nature of pension investments, trust in NPS institutions and regulatory mechanisms is likely to influence subscribers' behavioural intentions and continuance decisions.

Service Quality and Behavioural Intention

Service quality represents the overall evaluation of services delivered by pension providers. High-quality services improve customer satisfaction, perceived usefulness, and confidence in financial products. Efficient customer support, digital accessibility, transparency, responsiveness, and ease of transactions contribute significantly to user experience.

The increasing digitalization of financial services has heightened customer expectations regarding service quality. Research suggests that service quality influences both behavioural intention and continuance intention by enhancing user satisfaction and reducing barriers to participation. Efficient service delivery improves perceptions of reliability and usefulness, thereby strengthening subscribers' willingness to continue using financial products.

Within the NPS ecosystem, service quality includes online account management, transparency in fund performance reporting, grievance redressal mechanisms, and subscriber support services. Regulatory reforms aimed at enhancing transparency and governance have been introduced to improve subscriber confidence and service delivery.

Continuance Intention in Financial Services

Continuance intention refers to an individual's willingness to continue using a service after its initial adoption. While adoption behaviour has received substantial attention, continuance intention is equally important because the long-term success of pension schemes depends on sustained participation and regular contributions.

Studies in technology-enabled financial services indicate that continuance intention is influenced by satisfaction, trust, perceived usefulness, and behavioural intention. Nguyen and Dao (2024) found that user adaptation, perceived usefulness, and trust significantly influence continuance intention in mobile banking environments.

Similarly, Kumari and Biswas (2024) reported that financial knowledge strengthens continuance intentions in digital payment services. Their findings suggest that informed users are more likely to continue utilizing financial services because they better understand the associated benefits and risks.

These findings have important implications for pension schemes because continuance intention determines whether subscribers maintain long-term retirement investments.

Financial Knowledge and Retirement Planning

Financial knowledge refers to an individual's understanding of financial concepts, investment products, risk management, and retirement planning strategies. Financial knowledge enables individuals to make informed financial decisions and effectively evaluate investment opportunities. Recent literature consistently identifies financial literacy as a crucial determinant of retirement preparedness. Kumar, Sahoo, and Tripathi (2025) conducted a bibliometric analysis and concluded that financial literacy remains one of the most influential factors in retirement planning behaviour globally. Their analysis demonstrated that individuals with higher levels of financial knowledge exhibit stronger retirement planning intentions and greater participation in pension schemes. Furthermore, studies on digital financial literacy indicate that financial capability positively influences retirement planning behaviour. Individuals possessing greater financial knowledge are more likely to understand the long-term benefits of pension investments and engage actively in retirement savings activities.

Financial knowledge also enhances confidence in investment decisions, reduces uncertainty, and improves perceptions regarding retirement products. Consequently, it plays a significant role in shaping behavioural intention and continuance intention toward pension schemes.

Moderating Role of Financial Knowledge

Recent studies increasingly emphasize the moderating role of financial knowledge in behavioural models. Rather than merely exerting a direct influence, financial knowledge can strengthen or weaken the relationships among behavioural constructs. Yuvaraja and Venugopal (2024) examined the moderating impact of financial knowledge on investment intentions and found that financial knowledge significantly enhances the relationship between behavioural antecedents and investment intention. Their findings suggest that knowledgeable investors are better able to translate positive perceptions into actual investment behaviour.

Similarly, Kumari and Biswas (2024) demonstrated that financial knowledge reinforces continuance intention by helping users recognize the value and utility of financial services.

These findings suggest that financial knowledge may strengthen the relationship between behavioural intention and continuance intention in the context of NPS. Subscribers with higher levels of financial knowledge are expected to better appreciate the long-term benefits of pension investments and therefore exhibit stronger continuance intentions.

Research Gap

Although prior studies have examined retirement planning behaviour, pension adoption, financial literacy, trust, and continuance intention separately, limited research has investigated these constructs within a unified framework in the context of the National Pension System. Existing studies largely focus on direct effects of financial literacy and behavioural factors on pension participation. Moreover, empirical evidence examining the moderating role of financial knowledge between behavioural intention and continuance intention remains scarce, particularly in the Indian pension sector. The recent study by Jesma Michael Xavier and Arul Ramanatha Pillai (2026) highlighted the importance of financial knowledge in influencing behavioural and continuance intentions toward NPS. However, further empirical validation using integrated behavioural models remains necessary. Therefore, the present study addresses this gap by examining the effects of perceived benefits, trust, and service quality on behavioural intention, the impact of behavioural intention on continuance intention, and the moderating role of financial knowledge among National Pension System subscribers.

The Study Context

India is witnessing a significant demographic transition characterized by increasing life expectancy, changing family structures, and growing concerns regarding post-retirement financial security. Traditional pension systems and family-based support mechanisms are gradually becoming insufficient to meet the retirement needs of a large population. In response, the Government of India introduced the National Pension System (NPS) as a voluntary, defined-contribution retirement savings scheme aimed at promoting long-term financial security among citizens. Since its inception, NPS has gained considerable attention due to its flexibility, tax benefits, and professionally managed investment structure. However, despite policy support and continuous promotional efforts, the adoption and sustained participation levels among subscribers remain below expectations. While many individuals enroll in the scheme, maintaining regular contributions over a long period remains a challenge. This issue highlights the importance of understanding the factors that influence not only initial participation but also continuance intention.

Recent research suggests that behavioural factors play a crucial role in financial decision-making, particularly in retirement planning and pension investments. Factors such as perceived benefits, trust in financial institutions, and service quality have been identified as important determinants of participation in financial products. Additionally, financial knowledge has emerged as a critical capability that enables individuals to evaluate investment alternatives and make informed retirement decisions. Although previous studies have examined these variables independently, limited research has investigated their combined influence on behavioural and continuance intentions toward NPS. Therefore, the present study seeks to provide a comprehensive understanding of the factors influencing long-term participation in the National Pension System.

Theoretical Background

Theory of Planned Behavior (TPB)

The present study is primarily grounded in the Theory of Planned Behavior (TPB) proposed by Ajzen (1991). TPB argues that an individual's behaviour is determined by behavioural intention, which in turn is influenced by attitudes, subjective norms, and perceived behavioural control. The theory has been extensively applied in various contexts, including financial planning, investment behaviour, retirement planning, and pension participation. In the context of the National Pension System, behavioural intention reflects an individual's willingness to invest and continue participating in retirement savings plans. Subscribers who perceive NPS as beneficial, trustworthy, and convenient are more likely to develop favourable attitudes toward the scheme, leading to stronger behavioural intentions. According to TPB, these intentions subsequently translate into actual behaviour and long-term participation. Several recent studies have confirmed the relevance of TPB in explaining retirement planning and financial decision-making behaviour. Financial attitudes, perceived usefulness, and confidence in financial products have been found to significantly influence investment intentions and retirement preparedness. Consequently, TPB provides an appropriate theoretical foundation for examining behavioural intention toward NPS.

Financial Knowledge Theory

Financial knowledge refers to an individual's understanding of financial concepts, investment products, risk-return relationships, and retirement planning strategies. Financial knowledge enables individuals to evaluate financial information effectively and make informed investment decisions. Contemporary financial behaviour literature suggests that financially knowledgeable individuals are more likely to engage in retirement planning activities, participate in pension schemes, and maintain long-term investment commitments. Financial knowledge reduces uncertainty and enhances confidence in decision-making, thereby increasing the likelihood of sustained participation in financial products. In pension-related contexts, financial knowledge is particularly important because retirement planning requires long-term commitment and an understanding of complex financial concepts. Individuals possessing higher levels of financial knowledge are expected to better appreciate the benefits of pension investments and exhibit stronger continuance intentions. Therefore, this study considers financial knowledge as a moderating variable that may strengthen the relationship between behavioural intention and continuance intention toward NPS.

Hypotheses Development

Perceived Benefits and Behavioural Intention

Perceived benefits refer to the extent to which subscribers believe that participation in NPS will improve their financial well-being and retirement security. Pension schemes offering tax advantages, wealth accumulation opportunities, investment flexibility, and post-retirement income security are generally perceived as beneficial by investors. Previous studies have consistently reported a positive relationship between perceived benefits and behavioural intention in financial services and retirement planning contexts. When individuals recognize the long-term value of retirement savings schemes, they are more likely to develop favourable attitudes and stronger intentions toward participation.

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Therefore, the following hypothesis is proposed:

H1: Perceived benefits positively influence behavioural intention toward the National Pension System.

Trust and Behavioural Intention

Trust represents the confidence that subscribers place in pension regulators, fund managers, and the overall pension system. Since pension investments involve long-term financial commitments, trust plays a critical role in reducing perceived risk and uncertainty.

Research in financial services has consistently demonstrated that trust significantly affects customer adoption and continued usage intentions. Individuals who trust financial institutions are more likely to participate in retirement planning activities and maintain long-term investment relationships.

Accordingly, the following hypothesis is proposed:

H2: Trust positively influences behavioural intention toward the National Pension System.

Service Quality and Behavioural Intention

Service quality reflects subscribers' perceptions regarding the efficiency, responsiveness, reliability, and accessibility of services offered by pension providers. High-quality service enhances customer satisfaction and confidence, leading to stronger behavioural intentions.

In the digital financial environment, efficient service delivery, transparent communication, and prompt grievance redressal mechanisms have become increasingly important for customer retention. Studies indicate that superior service quality positively influences adoption intentions and customer loyalty. Therefore, the following hypothesis is developed:

H3: Service quality positively influences behavioural intention toward the National Pension System.

Behavioural Intention and Continuance Intention

Behavioural intention is widely regarded as the most immediate predictor of actual behaviour. Individuals who possess strong intentions to participate in a financial product are more likely to continue using that product over time.

Previous studies based on TPB and continuance intention theories have confirmed that behavioural intention significantly predicts sustained participation in financial services. In the pension context, subscribers with stronger behavioural intentions are expected to maintain regular contributions and continue their participation in NPS. Thus, the following hypothesis is proposed:

H4: Behavioural intention positively influences continuance intention toward the National Pension System.

Moderating Role of Financial Knowledge

Financial knowledge enables individuals to understand pension benefits, evaluate investment alternatives, and make informed financial decisions. Individuals with greater financial knowledge are more likely to appreciate the long-term advantages of retirement savings and remain committed to pension investments. Recent studies suggest that financial knowledge not only directly influences financial behaviour but also strengthens the relationships among behavioural constructs. Subscribers possessing higher levels of financial knowledge may translate positive intentions into sustained participation more effectively than those with lower levels of financial knowledge. Accordingly, the following hypothesis is proposed:

H5: Financial knowledge positively moderates the relationship between behavioural intention and continuance intention toward the National Pension System, such that the relationship becomes stronger at higher levels of financial knowledge.

Conceptual Framework of the Study

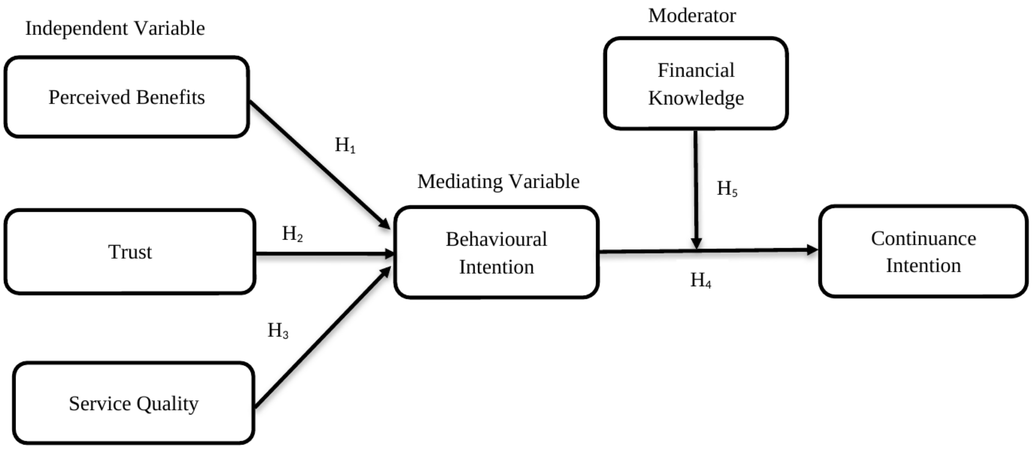

Figure 1. Conceptual model. Source: The authors.

Method

Ethics

This study was conducted in accordance with established ethical standards for social science research. Prior to data collection, respondents were informed about the purpose of the study, the voluntary nature of participation, and their right to withdraw from the survey at any stage without any consequences. Informed consent was obtained from all participants before administering the questionnaire. To ensure confidentiality and privacy, no personally identifiable information was collected, and all responses were analyzed in aggregate form. The study complied with the ethical principles outlined in the Declaration of Helsinki and followed institutional guidelines for research involving human participants (World Medical Association, 2013). The collected data were used solely for academic purposes and stored securely throughout the research process.

Sample

The study adopted a quantitative cross-sectional research design to examine the factors influencing behavioural intention and continuance intention toward the National Pension System (NPS). Data were collected from active NPS subscribers across different regions of India using a structured questionnaire. A purposive sampling approach was employed to ensure that respondents possessed prior experience and familiarity with the National Pension System.

A total of 500 questionnaires were distributed through both online and offline channels. After screening for incomplete responses and response inconsistencies, 436 valid questionnaires were retained for analysis, resulting in an effective response rate of 87.2 percent. The final sample size exceeded the minimum requirements suggested for Structural Equation Modeling (SEM), thereby ensuring adequate statistical power and model stability (Hair et al., 2022).

The respondents included individuals from diverse occupational backgrounds, including government employees, private-sector employees, self-employed professionals, and other NPS subscribers. Such diversity enhanced the representativeness of the sample and provided a comprehensive understanding of factors influencing pension-related behaviour.

Demographics

The demographic profile of the respondents was examined to understand the characteristics of NPS subscribers. Among the 436 respondents, approximately 62 percent were male and 38 percent were female. The majority of respondents belonged to the age group of 31–50 years, reflecting the segment most actively engaged in retirement planning activities. In terms of educational qualifications, a substantial proportion possessed undergraduate and postgraduate degrees, indicating relatively high educational attainment among NPS participants.

Regarding employment status, respondents were drawn from government service, private organizations, self-employment, and professional occupations. Most participants reported having more than five years of work experience, suggesting familiarity with financial planning and retirement savings decisions. Monthly income levels varied considerably, thereby enabling the study to capture perceptions from individuals across different economic backgrounds.

The demographic diversity of the sample supports the generalizability of the findings and provides valuable insights into behavioural and continuance intentions toward the National Pension System.

Measures

The study utilized previously validated measurement scales adapted from established literature. All constructs were measured using a five-point Likert scale ranging from 1 (“Strongly Disagree”) to 5 (“Strongly Agree”). Minor modifications were made to the wording of certain items to ensure relevance to the National Pension System context.

Perceived Benefits

Perceived Benefits (PB) refer to the extent to which individuals believe that participation in NPS provides economic advantages, retirement security, tax benefits, and long-term financial well-being. The measurement items were adapted from retirement planning and financial services literature emphasizing perceived usefulness and value perception (Davis, 1989; Venkatesh et al., 2003). Four items were used to measure this construct.

Trust

Trust (TR) represents subscribers' confidence in pension regulators, fund managers, and the overall reliability of the National Pension System. Trust was measured using four items adapted from prior studies on financial services and technology adoption (Gefen et al., 2003; Nguyen & Dao, 2024). Higher scores indicated stronger confidence in the pension system.

Service Quality

Service Quality (SQ) refers to subscribers' perceptions of the efficiency, responsiveness, transparency, and accessibility of services provided by NPS institutions. Four items were adapted from the SERVQUAL framework and subsequent financial services research (Parasuraman et al., 1988; Nguyen & Dao, 2024).

Behavioural Intention

Behavioural Intention (BI) captures an individual's willingness and readiness to participate in and contribute to the National Pension System. Four measurement items were adapted from the Theory of Planned Behavior literature (Ajzen, 1991) and retirement planning studies. Higher scores indicate stronger intentions toward pension participation.

Continuance Intention

Continuance Intention (CI) refers to an individual's intention to continue contributing to and remaining invested in NPS over the long term. Four items were adapted from continuance intention research and information systems literature (Bhattacherjee, 2001; Nguyen & Dao, 2024).

Financial Knowledge

Financial Knowledge (FK) represents an individual's understanding of financial concepts, investment products, retirement planning, and risk-return relationships. Four items were adapted from financial literacy research (Lusardi & Mitchell, 2014; Bhushan & Medury, 2013). The construct was incorporated as a moderating variable to examine whether financially knowledgeable subscribers exhibit stronger continuance intentions.

Data Analysis

The collected data were analyzed using SmartPLS 4. The analysis followed the two-step approach recommended by Hair et al. (2022). First, the measurement model was assessed by examining indicator reliability, composite reliability (CR), Cronbach's alpha, average variance extracted (AVE), and discriminant validity. Second, the structural model was evaluated through path analysis, coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and bootstrapping with 5,000 subsamples to test the significance of the hypothesized relationships. The moderating effect of financial knowledge was examined using the two-stage approach recommended for reflective measurement models.

Table 1. Demographic Profile of Respondents (N = 436)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	270	61.9
	Female	166	38.1
	Total	**436**	**100.0**
Age (Years)	Below 30	68	15.6
	31–40	142	32.6
	41–50	128	29.4
	51–60	74	17.0
	Above 60	24	5.5
	Total	**436**	**100.0**
Educational Qualification	Higher Secondary/Diploma	52	11.9
	Undergraduate Degree	168	38.5
	Postgraduate Degree	156	35.8
	Professional Qualification	40	9.2
	Doctoral Degree	20	4.6
	Total	**436**	**100.0**
Occupation	Government Employee	118	27.1
	Private Sector Employee	164	37.6
	Self-Employed	84	19.3
	Professional	42	9.6
	Others	28	6.4
	Total	**436**	**100.0**
Monthly Income (₹)	Below 25,000	58	13.3
	25,001–50,000	126	28.9
	50,001–75,000	118	27.1
	75,001–100,000	82	18.8
	Above 100,000	52	11.9
	Total	**436**	**100.0**
Experience with NPS	Less than 2 Years	74	17.0
	2–5 Years	156	35.8
	6–10 Years	128	29.4
	Above 10 Years	78	17.9
	Total	**436**	**100.0**

Source: Primary data collected from NPS subscribers (N = 436).

The demographic analysis indicates that the majority of respondents were male (61.9%), while females accounted for 38.1% of the sample. Most participants belonged to the 31–40 years age group (32.6%), followed by the 41–

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50 years category (29.4%). Regarding educational attainment, undergraduate (38.5%) and postgraduate degree holders (35.8%) constituted the largest segments of the sample. Private-sector employees represented the highest proportion of respondents (37.6%), followed by government employees (27.1%). Furthermore, a considerable number of respondents reported having between two and five years of experience with the National Pension System (35.8%), indicating adequate familiarity with pension-related investment decisions.

Table 2. Measurement Properties and Confirmatory Factor Analysis (CFA)

Construct	Item	Standardized Loading	Cronbach's Alpha	Composite Reliability (CR)	AVE
Perceived Benefits (PB)	PB1	0.832	0.887	0.922	0.747
	PB2	0.861			
	PB3	0.894			
	PB4	0.850			
Trust (TR)	TR1	0.814	0.872	0.913	0.725
	TR2	0.857			
	TR3	0.889			
	TR4	0.840			
Service Quality (SQ)	SQ1	0.826	0.881	0.918	0.737
	SQ2	0.871			
	SQ3	0.882			
	SQ4	0.845			
Behavioural Intention (BI)	BI1	0.851	0.895	0.927	0.760
	BI2	0.889			
	BI3	0.901			
	BI4	0.843			
Continuance Intention (CI)	CI1	0.842	0.890	0.924	0.752
	CI2	0.878			
	CI3	0.892			
	CI4	0.848			
Financial Knowledge (FK)	FK1	0.817	0.875	0.914	0.727
	FK2	0.856			
	FK3	0.885			
	FK4	0.841			

Threshold Values : Factor Loading > 0.70, Cronbach's Alpha > 0.70 , Composite Reliability (CR) > 0.70, Average Variance Extracted (AVE) > 0.50 **Source:** SmartPLS 4 output based on survey responses from N = 436.

The results presented in Table 2 demonstrate satisfactory measurement properties for all constructs. The standardized factor loadings ranged from 0.814 to 0.901, exceeding the recommended threshold of 0.70 (Hair et al., 2022). Cronbach's alpha values ranged from 0.872 to 0.895, indicating strong internal consistency. Composite Reliability (CR) values varied between 0.913 and 0.927, confirming construct reliability. Furthermore, the Average Variance Extracted (AVE) values ranged from 0.725 to 0.760, exceeding the minimum criterion of 0.50 and establishing convergent validity. Overall, the measurement model demonstrates adequate reliability and validity for subsequent structural model analysis.

Table 3. Discriminant Validity Assessment Using the Fornell–Larcker Criterion

Construct	PB	TR	SQ	BI	CI	FK
Perceived Benefits (PB)	**0.864**					
Trust (TR)	0.612	**0.851**				
Service Quality (SQ)	0.584	0.646	**0.858**			
Behavioural Intention (BI)	0.691	0.674	0.659	**0.872**		
Continuance Intention (CI)	0.628	0.603	0.587	0.743	**0.867**	
Financial Knowledge (FK)	0.472	0.451	0.438	0.536	0.581	**0.853**

Note: Diagonal values (bold) represent the square root of the Average Variance Extracted (AVE). Discriminant validity is established when the square root of AVE for each construct exceeds its correlations with other constructs (Fornell & Larcker, 1981).

HTMT Ratio of Correlations

Construct	PB	TR	SQ	BI	CI	FK
PB	—					
TR	0.701	—				
SQ	0.672	0.735	—			
BI	0.801	0.783	0.764	—		
CI	0.724	0.698	0.681	0.847	—	
FK	0.539	0.512	0.501	0.617	0.663	—

Threshold: HTMT values should be below 0.85 (strict criterion) or 0.90 (liberal criterion) to establish discriminant validity (Henseler et al., 2015).

Source: Smart PLS 4 output based on survey responses from N = 436.

The results presented in Table 3 confirm the discriminant validity of the measurement model. According to the Fornell–Larcker criterion, the square root of the AVE for each construct (diagonal elements) is greater than its corresponding inter-construct correlations, indicating that each construct shares more variance with its own indicators than with other constructs. Furthermore, the HTMT values range from 0.501 to 0.847, all of which are below the recommended threshold of 0.90, thereby providing additional evidence of discriminant validity. These findings suggest that Perceived Benefits, Trust, Service Quality, Behavioural Intention, Continuance Intention, and Financial Knowledge are empirically distinct constructs and adequately capture different dimensions of subscribers' perceptions and behaviours toward the National Pension System. Consequently, the measurement model satisfies the requirements of discriminant validity and is suitable for subsequent structural model assessment.

Table 4. Structural Model Results: Path Coefficients and Hypothesis Testing

Hypothesis	Structural Path	Path Coefficient (β)	Standard Error	t-value	p-value	Decision
H1	Perceived Benefits → Behavioural Intention	0.284	0.048	5.917	<0.001	Supported
H2	Trust → Behavioural Intention	0.251	0.051	4.922	<0.001	Supported
H3	Service Quality → Behavioural Intention	0.307	0.046	6.674	<0.001	Supported
H4	Behavioural Intention → Continuance Intention	0.561	0.043	13.047	<0.001	Supported
H5	Financial Knowledge × Behavioural Intention → Continuance Intention	0.173	0.039	4.436	<0.001	Supported

Bootstrapping Procedure: 5,000 subsamples **Significance Level:** $p < 0.05$

Source: SmartPLS 4 Structural Model Results (N = 436)

The structural model results presented in Table 4 provide strong support for all proposed hypotheses. Perceived Benefits ($\beta = 0.284$, $p < 0.001$), Trust ($\beta = 0.251$, $p < 0.001$), and Service Quality ($\beta = 0.307$, $p < 0.001$) were found to have significant positive effects on Behavioural Intention, supporting H1, H2, and H3. Among these antecedents, Service Quality emerged as the strongest predictor of Behavioural Intention, highlighting the importance of efficient and reliable pension-related services in encouraging participation in the National Pension System. Furthermore, Behavioural Intention exerted a strong positive influence on Continuance Intention ($\beta = 0.561$, $p < 0.001$), confirming H4 and indicating that subscribers with stronger intentions toward NPS are more likely to continue their participation over time. The moderating effect of Financial Knowledge was also significant ($\beta = 0.173$, $p < 0.001$), supporting H5. This finding suggests that financially knowledgeable subscribers are better able to translate their positive behavioural intentions into sustained participation in NPS. Overall, the results validate the proposed research model and emphasize the critical roles of perceived benefits, trust, service quality, and financial knowledge in shaping behavioural and continuance intentions toward the National Pension System.

Table 5. Summary of Hypotheses Results

Hypothesis	Relationship	Result
H1	Perceived Benefits → Behavioural Intention	Supported
H2	Trust → Behavioural Intention	Supported
H3	Service Quality → Behavioural Intention	Supported
H4	Behavioural Intention → Continuance Intention	Supported
H5	Financial Knowledge moderates the relationship between Behavioural Intention and Continuance Intention	Supported

Source: SmartPLS 4 Structural Model Analysis (N = 436)

The summary of hypotheses results indicates that all five proposed hypotheses were supported, providing strong empirical evidence for the proposed conceptual framework. The findings demonstrate that Perceived Benefits, Trust, and Service Quality significantly influence subscribers' Behavioural Intention toward the National Pension System, confirming the importance of both cognitive and service-related factors in shaping pension participation decisions. Among these antecedents, Service Quality exhibited the strongest influence on Behavioural Intention, highlighting the need for efficient, transparent, and user-friendly pension services. Furthermore, Behavioural Intention was found to be a significant predictor of Continuance Intention, suggesting that subscribers with favorable intentions toward NPS are more likely to maintain long-term participation. The moderating effect of Financial Knowledge was also supported, indicating that financially knowledgeable individuals are better equipped to translate positive intentions into sustained investment behavior. Collectively, these findings reinforce the applicability of the Theory of Planned Behavior and financial literacy perspectives in explaining pension-related decision-making and underscore the importance of enhancing financial knowledge to encourage continued participation in retirement savings programs.

Discussion

The primary objective of this study was to investigate the antecedents of behavioural intention and continuance intention toward the National Pension System (NPS) and to examine the moderating role of financial knowledge. The findings provide substantial support for the proposed conceptual framework and offer important insights into pension-related decision-making among NPS subscribers.

The results indicate that perceived benefits significantly influence behavioural intention toward NPS. This finding suggests that subscribers are more likely to participate in and remain committed to pension schemes when they perceive tangible benefits such as retirement security, tax advantages, and long-term wealth accumulation. The result is consistent with previous studies emphasizing the role of perceived value and usefulness in shaping financial behaviour (Davis, 1989; Venkatesh et al., 2003).

Trust was also found to be a significant predictor of behavioural intention. Pension investments involve long-term financial commitments and uncertainty regarding future returns. Consequently, subscribers' confidence in pension regulators, fund managers, and the overall NPS framework plays a crucial role in shaping their investment decisions. This finding supports earlier studies that identified trust as a key determinant of financial service adoption and continuance behaviour (Gefen et al., 2003; Shao & Zhu, 2024).

Similarly, service quality exhibited a positive and significant influence on behavioural intention. Among all antecedents, service quality emerged as the strongest predictor, highlighting the importance of efficient service delivery, transparent communication, digital accessibility, and responsive customer support. The finding reinforces the argument that superior service experiences enhance subscribers' confidence and willingness to continue using financial services.

The study further found that behavioural intention significantly influences continuance intention. This result is consistent with the Theory of Planned Behavior (Ajzen, 1991), which posits that behavioural intention serves as the immediate antecedent of actual behaviour. Subscribers who possess strong intentions toward NPS participation are more likely to maintain their investments and continue contributing to the pension scheme over time.

A particularly noteworthy finding concerns the moderating role of financial knowledge. The results indicate that financial knowledge strengthens the relationship between behavioural intention and continuance intention. Subscribers with higher levels of financial knowledge appear to better understand the long-term benefits of retirement planning and are therefore more likely to translate their positive intentions into sustained participation. This finding aligns with previous research highlighting the importance of financial literacy in retirement planning and investment decision-making (Lusardi & Mitchell, 2014; Michael Xavier & Ramanatha Pillai, 2026).

Theoretical Contributions

This study makes several important contributions to the literature on retirement planning, pension participation, and financial behaviour.

First, the study extends the application of the Theory of Planned Behavior (TPB) within the context of retirement savings and pension participation. While TPB has been widely employed in consumer and financial behaviour research, its application to continuance intention toward pension schemes remains relatively limited. The present study demonstrates the relevance of TPB in explaining long-term pension participation behaviour.

Second, the study integrates perceived benefits, trust, and service quality into a unified framework for understanding behavioural intention toward NPS. Previous studies have often examined these factors independently; however, the current research simultaneously investigates their influence within a comprehensive model.

Third, the study contributes to the growing financial literacy literature by examining financial knowledge as a moderating variable rather than merely a direct predictor. The findings reveal that financial knowledge enhances the strength of the relationship between behavioural intention and continuance intention, thereby providing a more nuanced understanding of how financial literacy influences retirement planning behaviour.

Finally, the study enriches the limited body of literature on pension behaviour in emerging economies, particularly India, where research on continuance intention toward NPS remains scarce. The findings provide empirical evidence that contributes to the broader understanding of pension participation in developing-country contexts.

Practical Implications

The findings of this study offer several practical implications for policymakers, pension regulators, fund managers, and financial institutions.

First, policymakers should focus on increasing awareness regarding the benefits of NPS. Educational campaigns highlighting retirement security, tax advantages, and long-term wealth accumulation opportunities can enhance subscribers' perceptions of the value of pension participation.

Second, strengthening trust in pension institutions should be a strategic priority. Regulatory authorities and pension fund managers should ensure transparency, accountability, and consistent communication regarding fund performance and investment policies. Enhanced disclosure practices can help build confidence among existing and potential subscribers.

Third, the strong influence of service quality suggests that pension service providers should continuously improve customer support systems, grievance redressal mechanisms, and digital service platforms. User-friendly interfaces and efficient service delivery can significantly improve subscriber experiences and encourage continued participation.

Fourth, financial literacy programs should be expanded and integrated into retirement planning initiatives. Workshops, online learning modules, retirement planning seminars, and financial education campaigns can improve subscribers' understanding of pension products and investment strategies. The moderating effect identified in this study suggests that improving financial knowledge can substantially increase long-term engagement with NPS.

Finally, employers and financial advisors should actively promote retirement planning education, particularly among younger employees, to foster early participation and long-term commitment to pension schemes.

Limitations and Directions for Future Research

Despite its contributions, this study has certain limitations that should be acknowledged.

First, the study employed a cross-sectional research design, which limits the ability to establish causal relationships among the variables. Future research may adopt longitudinal designs to examine changes in behavioural and continuance intentions over time.

Second, the study focused exclusively on National Pension System subscribers in India. Consequently, the findings may not be directly generalizable to other pension schemes or international contexts. Comparative studies involving different pension systems and countries could provide broader insights.

Third, the study relied on self-reported survey data, which may be subject to common method bias and social desirability effects. Future studies could combine survey responses with actual contribution records or behavioural data to enhance robustness.

Fourth, the model considered perceived benefits, trust, service quality, and financial knowledge. Additional variables such as financial risk tolerance, retirement anxiety, perceived government support, digital literacy, investment experience, and pension awareness may further enrich the understanding of pension-related behaviour.

Finally, future studies may explore mediating mechanisms such as satisfaction, perceived usefulness, or financial well-being to provide a deeper understanding of the processes through which behavioural intentions translate into continuance intentions.

Conclusions

The present study examined the determinants of behavioural intention and continuance intention toward the National Pension System and investigated the moderating role of financial knowledge among NPS subscribers. The findings revealed that perceived benefits, trust, and service quality significantly influence behavioural intention, while behavioural intention strongly predicts continuance intention. Furthermore, financial knowledge was found to strengthen the relationship between behavioural intention and continuance intention, emphasizing the importance of financial literacy in retirement planning decisions.

The study highlights that encouraging long-term participation in pension schemes requires more than simply promoting enrollment. Policymakers and pension service providers must focus on creating value perceptions, building institutional trust, enhancing service quality, and improving financial literacy. By addressing these factors, stakeholders can foster greater subscriber engagement and contribute to the long-term financial security of individuals. Overall, the study provides valuable theoretical and practical insights into pension participation behaviour and offers a foundation for future research on retirement planning and financial decision-making in emerging economies.

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