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Strategy for Decision-Making on Old Age Security (JHT) Benefit Claims at BPJS Ketenagakerjaan

Mei Lya Utami, Nimmi Zulbainarni, Asep Taryana
IPB University, Indonesia
Email: utamimeilya@gmail.com

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ABSTRACT

The phenomenon of high claims for Old Age Security (JHT) before retirement age poses a challenge to the sustainability of social security programs in Indonesia. This study aims to analyze the behavioral and policy factors that influence JHT claim decisions and formulate strategies for optimizing the claim mechanism. The research method was conducted through Structural Equation Modeling–Partial Least Squares (SEM-PLS) analysis of 232 respondents who were JHT participants who had made claims, as well as the Analytic Hierarchy Process (AHP) method involving 15 experts in the fields of social security, public policy, and financial behavior. The results show that the behavioral factors of loss aversion, present bias, and mental accounting have a significant effect on JHT claim decisions, supported by government regulations that reinforce the tendency for early claims. Meanwhile, the AHP results placed Effectiveness as the main criterion in determining strategy and produced optimal optimization strategy priorities in the form of increasing financial literacy and socializing mindset changes based on behavioral economics, followed by reformulating JHT disbursement policies and other supporting strategies. This study confirms that JHT claim behavior is influenced by psychological biases and prevailing policies, so optimization efforts need to be directed towards educational approaches, policy reforms, and sustainable service innovations.

INTRODUCTION

BPJS Ketenagakerjaan, formerly known as PT. Jamsostek (Persero), is a public legal entity tasked with managing employment social security in Indonesia. It offers five main programs: Old Age Security (JHT), Work Accident Security (JKK), Death Security (JKM), Pension Security (JP), and Job Loss Security (JKP). In this case, Old Age Security (JHT) is one of the social security programs in Indonesia managed by BPJS Ketenagakerjaan, which aims to provide financial protection to workers, especially when they reach retirement age, suffer permanent total disability, or pass away. As part of BPJS Ketenagakerjaan's flagship program, JHT is expected to maintain the welfare of workers in their old age (Meilarovasari, Miarsa, & Yahya, 2025). However, in its implementation, there are various challenges, particularly related to the mechanism for participants to make decisions on JHT benefit claims (Febriyanti, Putri, & Zubaidah, 2025; Purba, Tesalonika, & Pahlevi, 2025).

An interesting phenomenon in Indonesia is the large number of participants who choose to withdraw their JHT funds early, even though the maximum benefits of this program can only be obtained if the funds are held until the retirement age as intended. This decision often contradicts the original purpose of JHT as protection for workers' future (Mahendra, Styawati, & Wiryani, 2025). This phenomenon raises questions about the factors that influence JHT

claim decisions and how different participant behaviors can affect these decisions (Banerjee, Acharya, & Pradhan, 2025; Malegiannaki, Chatzopoulos, & Tsagkaridis, 2025).

Empirical data collected by BPJS Ketenagakerjaan shows that between 2020 and 2024, most JHT claims were due to resignation and termination of employment (PHK), with the number of claims being much higher than claims due to workers reaching retirement age, permanent disability, or death due to occupational diseases (PAK) (Figure 1). The following graph shows the distribution of JHT claims in Indonesia between 2020 and 2024, where claims due to resignation and termination of employment are the main reasons workers decide to withdraw their JHT funds.

In the graph, resignation claims reached very high numbers, especially in 2020 and 2024, indicating that many participants chose to withdraw their JHT funds early (Enersen, Løke, Roaldsen, & Sviland, 2025). This contradicts the main objective of JHT as a pension fund that should be used to support workers in their old age. Additionally, pension claims show a lower trend, indicating that fewer participants are utilizing JHT for their retirement in accordance with the original purpose of the JHT program (Giles, Joubert, & Tanaka, 2025; Jock et al., 2025).

Based on national recapitulation data, the value of claims due to resignation always dominates. In 2020, the amount of claims paid out due to resignation reached IDR 20.92 trillion, decreasing in 2021 to IDR 17.26 trillion, but rising again to IDR 20.32 trillion in 2022, IDR 20.20 trillion in 2023, and IDR 21.09 trillion in 2024. This means that every year, more than half of JHT disbursements are not due to reaching retirement age, but because participants choose to stop working before their time (Tjandra & Christina, 2025). A similar trend can be seen in claims due to layoffs, although the value fluctuates. In 2020, it was recorded at IDR 7.17 trillion, increasing sharply in 2021 to IDR 11.53 trillion, then decreasing in 2022 to IDR 8.44 trillion, in 2023 to IDR 8.63 trillion, and in 2024 to IDR 9.54 trillion. These figures indicate that job uncertainty and the risk of termination of employment are among the main triggers for early withdrawal of JHT (Basier & Hidayah, 2025; Pajunen, Saastamoinen, Rautiainen, & Oelrich, 2025).

Conversely, claims made in accordance with the program's objective, namely retirement, are much smaller (Becerra Camargo, Cavallo, & Guzmán Gutiérrez, 2025; Zhang & Zhu, 2025). Claims due to reaching retirement age during the 2020–2024 period only amounted to around 6.48 million cases or 5.87% of the total claims. In fact, claims due to retirement in accordance with the company's Collective Labor Agreement (PKB) only amounted to 0.67%. This figure confirms that JHT has not been optimally used for its intended purpose as a retirement protection fund.

The following table provides further details on the causes of JHT claims for the 2020–2024 period. This table shows the percentage of claims based on cause, with resignation being the main cause of JHT claims, accounting for 59.8% of claims cumulatively in 2020–2024. Meanwhile, claims due to reaching retirement age only contributed a small proportion of total claims, reflecting a mismatch between the objectives of the JHT program and the reality on the ground.

Another significant category claims due to the termination of employment contracts (PKWT/contracts), with a total of 1.82 million cases or 12.12%. These cases began to appear in 2022, in line with the increase in contract workers in various sectors. In contrast, claims in line with the main objective of the program, namely retirement, are relatively small. Claims due to reaching retirement age only amounted to 882,000 cases or 5.87%, while claims due to retirement in accordance with company collective labor agreements (PKB) amounted to only 101,000 cases or 0.67% of the total. These figures highlight the gap between the objective of the JHT program as a retirement savings scheme and the actual practice of disbursement in the field.

In addition, there are partial claims in the form of withdrawals of up to 10% and 30% of JHT balances. During the 2020–2024 period, there were 604,000 cases (4.02%) of 10% withdrawals, while there were only 3,419 cases (0.02%) of 30% withdrawals, so their contribution to the total claims was relatively small. Overall, the data in Table 1 confirms that nearly three-quarters of JHT withdrawals (around 77.4%) were made due to resignation, layoffs, and the end of employment contracts, not because of reaching retirement age. This shows that JHT is more often used as a short-term liquidity instrument to deal with employment emergencies, rather than as a retirement fund as was the original purpose of the program.

One relevant approach to analyzing seemingly irrational decisions in the context of JHT claims is behavioral economics. This approach emphasizes the influence of psychological, social, and emotional factors in economic decision-making, which often differ from traditional economic models that assume rational behavior. In traditional economic theory, individuals are considered to always make rational decisions to maximize profits. However, behavioral economics theory argues that humans often act based on cognitive and emotional limitations, which lead to decision-making that is not always optimal (Tversky & Kahneman, 1974).

Tversky & Kahneman (1974), through their Prospect Theory, developed one of the main pillars of behavioral economics, which explains how individuals tend to make decisions based on their perceptions of potential gains and losses, rather than solely on the final outcome. This theory shows that humans tend to fear losing something more than gaining an equivalent amount, a phenomenon known as loss aversion. In the context of JHT claims, participants facing economic difficulties may prefer to withdraw their JHT funds early, even though this sacrifices the potential for greater benefits in the future.

In addition, when making decisions, individuals are often influenced by present bias, which is the tendency to value immediate benefits more than future benefits. This can cause JHT participants to prefer to withdraw their funds to meet short-term needs even though this will be detrimental to them in retirement (Ainslie, 1992).

Mental accounting, as another concept in behavioral economics, explains how individuals group their money into certain categories, which can influence how they manage their funds, including JHT claims. In this case, JHT participants may consider their funds as "short-term savings" that can be withdrawn immediately to meet urgent needs, rather than as pension funds that should be used in the future (Thaler, 1999).

Previous studies have also shown that economic and social factors often influence JHT claim decisions. For example, research by Wijayanti & Jannah (2023) shows that there is a discrepancy between the design of the JHT policy, which was originally intended to provide retirement security, and its implementation in practice, where many participants withdraw their funds early due to economic pressures or job uncertainty. Furthermore, Maharani et al. (2024) found that JHT participants facing difficult situations often prefer to withdraw their funds as a way to avoid current economic losses, even if it means sacrificing future benefits.

Based on the perspective of behavioral economics, relevant concepts that may explain this phenomenon include loss aversion, present bias, and mental accounting, which are the main reasons why many participants choose to withdraw their JHT funds early, even at the expense of future pension benefits. Based on this background, this study aims to analyze the factors that influence JHT claim decisions in Indonesia and formulate strategies for decision-making on Old Age Security (JHT) benefit claims at BPJS Ketenagakerjaan that can reduce the impact of these cognitive biases and ensure that the JHT program provides maximum benefits for participants in their retirement. The study contributes theoretically by bridging behavioral decision-making theory with public sector strategic management, and practically by providing policy recommendations for BPJS Ketenagakerjaan to enhance financial literacy, strengthen participant retention, and promote sustainable use of social security funds.

METHOD

This study used quantitative and qualitative approaches. The quantitative approach involved distributing questionnaires to BPJS Ketenagakerjaan participants who had withdrawn their JHT benefits between January and May 2025 due to resignation, layoffs, or contract expiry. The questionnaire employed a 1–5 Likert scale to measure behavioral factors such as loss aversion, present bias, and mental accounting, along with policy and regulatory variables. The data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) to test relationships between variables.

The qualitative approach included focus group discussions with 15 experts in social security, public policy, and financial behavior. These discussions supported the Analytic Hierarchy Process (AHP) method, which assessed criteria weights and prioritized strategies to optimize the JHT claim mechanism.

Primary data consisted of questionnaires completed by 232 respondents who withdrew their JHT between January and May 2025, along with expert interviews for the AHP analysis. Secondary data came from BPJS Ketenagakerjaan's internal reports on JHT claim statistics, relevant regulations, and academic literature on behavioral economics and strategic management.

Several analysis techniques were applied based on the research objectives. First, descriptive analysis described respondent characteristics and their tendencies regarding loss aversion, present bias, mental accounting, and regulatory factors influencing JHT claim decisions. The 1–5 Likert scale responses were categorized from very low to very high (Hair et al., 2017; Sugiyono, 2017).

Second, SEM-PLS analysis tested the relationships between variables, analyzing both direct and indirect effects of behavioral economics factors on JHT claim decisions and assessing the validity and reliability of the instruments (Evi & Racbini, 2022).

Table 1. Definition of Variables and Research Indicators

Variable	Symbol Indicators	Indicator	Source
Loss Aversion (X1)	LA1 LA2 LA3 LA4 LA5 LA6 LA7 LA8 LA9	1. Concerns about losing JHT funds. 2. Feeling secure once the funds have been disbursed. 3. Fear of losing access to JHT funds. 4. Perception of loss if claiming is delayed. 5. Negative view of waiting until retirement. 6. Preference to use JHT funds now. 7. Concerns that inflation will reduce the value of the funds. 8. Assessment that the benefits of the funds will decrease if delayed. 9. Concerns about the economic situation hindering claims.	Kahneman & Tversky (1979); Maharani et al. (2024)
Present Bias (X2)	PB1 PB2 PB3 PB4 PB5 PB6 PB7 PB8 PB9	1. Preference for immediate benefits. 2. Impatience in waiting for retirement funds. 3. The perceived benefits are currently more valuable. 4. Prioritizing financial gain at present. 5. Greater appreciation for cash now. 6. Focus on short-term needs. 7. Influence of current economic needs. 8. Claims decisions made out	Ainslie (2001); Vitmiasih et al. (2021)

Variable	Symbol Indicators	Indicator	Source
		of necessity. 9. Personal economic pressure as a reason for claims.	
Mental Accounting (X3)	MA1 MA2 MA3 MA4 MA5 MA6 MA7 MA8 MA9	1. Perception of JHT as emergency funds. 2. JHT is viewed as flexible funds. 3. JHT as personal savings. 4. Understanding the function of JHT as a pension fund. 5. The view of holding JHT until retirement. 6. Awareness of JHT as protection for old age. 7. Utilization of JHT for daily needs. 8. JHT as the main source of funds after retirement. JHT used to cover income shortfalls.	Thaler (1985); Maharani et al. (2024)
Government Policies and Regulations (Z)	RP1 RP2 RP3 RP4 RP5 RP6 RP7 RP8 RP9	1. Regulations enable faster disbursement. 2. The impact of policy changes on claim decisions. 3. Perception that JHT disbursement is permitted due to regulations. 4. Knowledge of JHT disbursement rules earlier. 5. Access to the latest policy information. 6. Understanding of claim terms and conditions. 7. Perception of the ease of the claim procedure. 8. Effectiveness of regulations in expediting claims. 10. Minimal obstacles in the claim process.	Wijayanti & Jannah (2023)
JHT Claim Decision (Y)	KK1 KK2 KK3 KK4 KK5 KK6 KK7 KK8 KK9	1. Decision to cash out before retirement. 2. Withdrawal immediately after leaving work. 3. Withdrawal due to urgent needs. 4. Claims due to personal/family needs. 5. Claims decisions based on financial conditions. 6. Consideration of employment status in claims. 7. Willingness to defer claims if there is no need. 8. Desire to wait if the benefits are greater in retirement. 11. Preference to save JHT funds until needed.	Yohana et al. (2023); BPJS Ketenagakerjaan (2020)

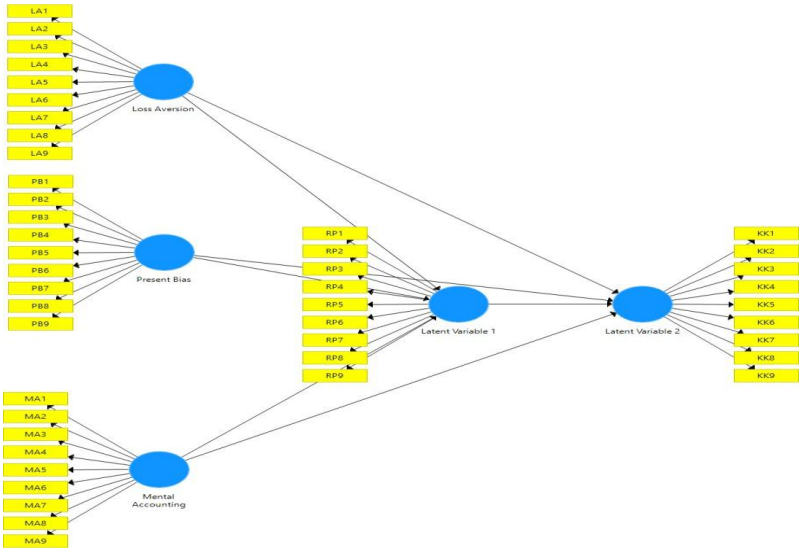

Figure 1. ***Structural Equation Modeling-Partial Least Square***

Based on the designed model reviewed from the operational description of variables and indicator definitions, the hypotheses of this study are as follows:

H_0: There is no influence between the factors of loss aversion, present bias, and mental accounting on JHT claim decisions, and government policies and regulations do not mediate the factors of loss aversion, present bias, and mental accounting on JHT claim decisions.

H_1: There is an influence between the factors of loss aversion, present bias, and mental accounting on JHT claim decisions, and government policies and regulations mediate the factors of loss aversion, present bias, and mental accounting on JHT claim decisions.

$H_1$1: There is a positive influence between the Loss Aversion variable and JHT Claim Decisions.

$H_1$2: There is a positive influence between the Present Bias variable and JHT claim decisions.

$H_1$3: There is a positive influence between the Mental Accounting variable and JHT Claim Decisions.

$H_1$4: Government policies and regulations mediate the variable of loss aversion on JHT claim decisions.

$H_1$5: Government policies and regulations mediate the present bias variable on JHT claim decisions.

$H_1$6 : Government policies and regulations mediate the mental accounting variable on JHT claim decisions.

$H_1$7: There is a positive influence between the Government Policy and Regulation variable and JHT Claim Decisions.

The criteria for the above hypotheses are that H_0 is rejected and H_1 is accepted if the significance is < 0.05, or H_0 is accepted and H_1 is rejected if the significance is ≥ 0.05.

Third, this study uses the Analytic Hierarchy Process (AHP) as a multi-criteria approach to determine the optimal strategy for optimizing the JHT claim mechanism. AHP involves pairwise comparisons by 15 experts on five main criteria: effectiveness, ease of implementation, participant acceptance, cost, and regulatory compliance. The priority weight calculation results show the most effective and consistent strategy (Saaty, 1980). With a combination of descriptive analysis, SEM-PLS, and AHP, this study not only identifies the

factors that influence JHT claim decisions but also produces priority strategies that BPJS Ketenagakerjaan can use to reduce early claims and strengthen the sustainability of the JHT program.

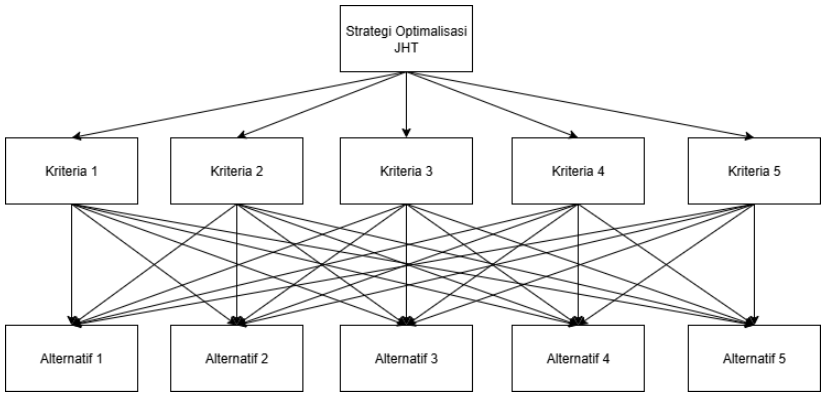

Figure 2. Hierarchy of Alternative Strategy Determination

RESULT AND DISCUSSION

Descriptive Analysis Results

This study involved 232 respondents who were participants of the Indonesian Social Security Administration Agency (BPJS Ketenagakerjaan) and had withdrawn their Old Age Security (JHT) funds early before reaching retirement age. Respondents were selected based on purposive criteria, namely participants who withdrew their JHT due to resignation, contract expiration, or layoffs. Descriptive analysis was conducted to provide an overview of the characteristics of the respondents and their perceptions of the research variables, namely loss aversion, present bias, mental accounting, government regulations, and JHT claim decisions.

Respondent Characteristics Age

The majority of respondents were in the 20–30 age group (54.31%), representing the younger generation in their early productive years. This shows that the age group that should be building their careers is instead using JHT as a source of short-term liquid funds. Respondents aged 31– 40 years (16.81%) and 41–50 years (12.07%) were also quite significant, indicating that the phenomenon of early claims is not limited to the younger generation. Meanwhile, the >50 age group (11.21%) is closer to the original function of JHT as a pension guarantee. An interesting finding emerged from 13 respondents (5.60%) aged <20 years, who are likely interns, short- term contract workers, or informal workers.

Gender

Male respondents dominated at 55.17%, while females accounted for 44.83%. This proportion shows that the phenomenon of early JHT claims is experienced equally by both genders. Men are generally associated with high job mobility and the risk of layoffs, while many women resign due to family reasons or transition to informal work.

Education

The majority of respondents had a high school/vocational school education (63.79%), followed by a D4/S1 degree (26.29%). Although the highly educated group is expected to have better financial literacy, in reality they also make early claims, generally for business capital or career transition. Respondents with junior high school (8.19%) and elementary school (1.72%) education, although small in number, reflect low financial literacy and limited understanding of the function of JHT as a retirement savings plan.

Type of Employment

The majority of respondents came from the private sector/state-owned enterprises (40.95%), followed by entrepreneurs (17.24%), the informal sector (4.74%), construction services (2.59%), and other categories (34.48%). This data confirms that early JHT claims occur across sectors, both formal and informal. Particularly among the self-employed, JHT funds are often used as business capital after leaving formal employment.

Reasons for Claims

The dominant reason was resignation (53.02%), followed by contract expiration (21.55%), layoffs (14.22%), and other reasons (11.21%). This indicates that early claims are more influenced by voluntary job mobility rather than solely by layoffs. In other words, JHT is now perceived as transition funds after leaving a job, rather than solely as retirement savings. Research Variable Analysis

Loss Aversion

A total of 51.72% of respondents had a very high level of loss aversion, while 21.12% were in the high category. Cumulatively, 72.84% of respondents were very concerned that their JHT balance would decrease or be lost if it was kept for too long. This tendency encourages them to withdraw funds early as a form of "securing assets." This is in line with Kahneman & Tversky's (1979) theory that individuals are more sensitive to potential losses than gains.

Present Bias

The majority of respondents (54.31% very high; 21.12% high) showed a strong tendency to prioritize short-term satisfaction over long-term benefits. With a total of 75.43%, this phenomenon illustrates a financial behavioral bias that makes participants prefer immediate claims even though the future benefits are greater.

Mental Accounting

A total of 51.72% of respondents fell into the very high category and 24.57% into the high category, meaning that 76.29% of respondents tended to treat JHT as "flexible funds" that could be reallocated according to personal needs (e.g., emergency savings or business capital). This finding supports Thaler's (1985) theory about grouping funds into "mental accounts" that influence financial decisions.

Government Regulations

Most respondents (53.02% very high; 23.71% high) considered regulatory ease to be an important factor in encouraging claims. Flexible rules, such as simple claim requirements and online access through Lapak Asik, have created the perception that JHT is easily accessible at any time.

JHT Claim Decisions

A total of 50.86% of respondents were in the very high category and 24.57% were in the high category. Overall, 75.43% of respondents had a strong tendency to withdraw their JHT before retirement. Only a small portion (12.07%) still maintained their JHT balance in accordance with the program's objectives. This data reinforces the argument that early claims have become a dominant trend, driven by a combination of psychological factors (loss aversion, present bias, mental accounting) and government regulations that facilitate access.

Factor Analysis – Factors Affecting JHT Benefit Claims Based on Behavioral Economics

After descriptive analysis, the next stage is model testing using Structural Equation Modeling – Partial Least Square (SEM-PLS). This method was chosen because it is suitable for complex models with many latent variables and indicators, and does not require normal distribution assumptions (Hair et al., 2017).

The research model involves the exogenous variables of Loss Aversion, Present Bias, and Mental Accounting, the mediating variable of Government Policy/Regulation, and the endogenous variable of JHT Claim Decisions. The analysis was conducted using SmartPLS in two stages:

1. Measurement Model Evaluation (Outer Model) – to assess construct validity and reliability.
2. Structural Model Evaluation (Inner Model) – to test the strength of the relationship between variables through path coefficients, R^2, and hypothesis testing.

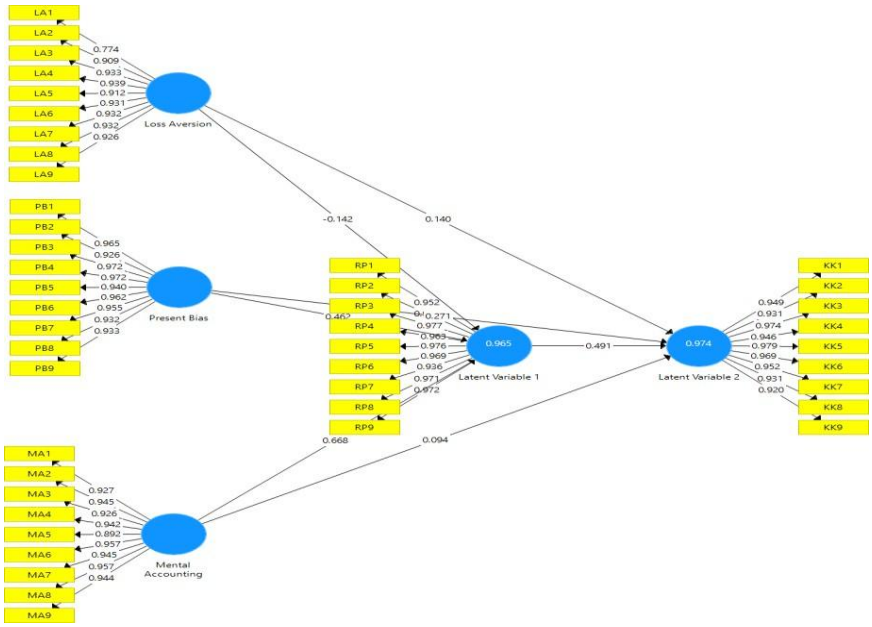

Figure 3. Outer Model SEM-PLS Path

Table 2. Results of Internal Consistency Testing AVE, Cronbach's Alpha, Composite Reliability

Variable	Average Variance Extracted (AVE)	Cronbach's Alpha	Composite Reliability
Loss Aversion	0.830	0.974	0.985
Present Bias	0.904	0.987	0.991
Mental Accounting	0.879	0.983	0.989
Government Regulation	0.928	0.990	0.993
Claims Decision	0.903	0.987	0.992

Table 3. HTMT Test Results

Variable	RP	KK	LA	MA	PB
Government Regulations		0.982	0.875	0.892	0.881
Claims Decision	0.982		0.887	0.889	0.890
Loss Aversion	0.875	0.887		0.890	0.802
Mental Accounting	0.892	0.889	0.890		0.886
Present Bias	0.881	0.890	0.802	0.886	

The outer model analysis results show:

1) The outer loading of all indicators is > 0.70 → convergent validity is fulfilled.
2) The AVE value of all constructs is > 0.50 (even > 0.70), indicating that the indicators represent the constructs very well.
3) Discriminant validity test (HTMT) < 0.90 → constructs are distinct from one another.
4) Reliability (CR and Cronbach's Alpha) of all variables > 0.70, even approaching 1.00, indicating very strong internal consistency.

Thus, the research instrument is declared valid and reliable, so it can proceed to the inner model stage.

Structural Model Analysis Results (Inner Model)

Model Goodness of Fit

The Goodness of Fit (GoF) test shows that the research model has a good level of suitability.

1) SRMR = 0.775 (<0.08) → the model is considered suitable.
2) d_ULS = 0.060 and d_G = 0.052 → supports model fit.
3) Chi-Square = 1.371 → low, indicating model fit with the data.
4) NFI = 0.928 (>0.90) → the model adequately represents the relationship between variables.

These results confirm that the research model is suitable for further interpretation.

Table 4. Hypothesis Testing Results

	T Statistics (|O/STDEV|)	P Values
Government Regulation -> JHT Claims	3.720	0.000
Loss Aversion -> Government Regulation	2.289	0.02
Loss Aversion -> JHT Claims	2,484	0.029
Mental Accounting -> Government Regulation	5,265	0.00
Mental Accounting -> JHT Claims	5,126	0
Present Bias -> Government Regulation	3,902	0
Present Bias -> JHT Claims	3,368	0.001
Loss Aversion -> Government Regulation -> JHT Claims	2.207	0.023
Mental Accounting -> Government Regulation -> JHT Claims	3.651	0.000
Present Bias -> Government Regulation -> JHT Claims	2,261	0.024

Testing with path coefficient, t-statistic, and p-value proves that all variables have a significant effect according to the hypothesis. Summary:

1) Loss Aversion → JHT Claim Decision t = 2.484; p = 0.029 → significant.
2) Participants who are afraid of loss (loss aversion) are more likely to withdraw their JHT early.
3) Present Bias → JHT Claim Decision t = 3.368; p = 0.001 → significant.
4) Participants with a short-term orientation prefer immediate benefits rather than waiting until retirement.
5) Mental Accounting → JHT Claim Decisions t = 5.126; p = 0.000 → significant.
6) Participants who consider JHT as a "separate account" or reserve fund are more likely to withdraw it sooner.
7) Government Policy/Regulation → JHT Claim Decision t = 3.720; p = 0.000

→ significant.

8) Ease of procedure and flexibility of rules encourage early withdrawal of JHT.
9) The Role of Government Regulatory Mediation
10) Regulations have been proven to mediate the influence of loss aversion, present bias, and mental accounting on JHT claim decisions:

(1) Loss Aversion → Regulation → JHT Claims (t = 2.207; p = 0.023)
(2) Present Bias → Regulation → JHT Claims (t = 2.261; p = 0.024)
(3) Mental Accounting → Regulation → JHT Claims (t = 3.651; p = 0.000)

Formulation of JHT Optimization Strategies

In this study, the Analytic Hierarchy Process (AHP) method was used to identify the most optimal strategy for reducing early claims on Old Age Security (JHT). AHP was chosen for its ability to break down complex problems into a hierarchical structure starting from the main objective → assessment criteria → alternative strategies. The use of the AHP method to determine strategy priorities in this study was based on the results of SEM analysis, which identified significant factors through the highest factor loading values and hypothesis testing, supplemented by expert input through Focus Group Discussions (FGD). This approach is in line with Saaty's (1980) view, which states that AHP is a multi-criteria decision-making method that can integrate quantitative data and qualitative considerations from experts.

The analysis process was carried out in the following stages:

1. Determination of criteria and alternative strategies through triangulation of SEM-PLS analysis results, followed by expert FGD.
2. Distribution of AHP questionnaires to 15 experts.
3. Completion of paired comparison questionnaires using the Saaty scale (1–9) A score of 1 means equal importance. A score of 9 means that the criteria/alternatives in the column are much more important than those in the row.
4. Aggregation of data using the geometric mean method to combine the experts' answers into a collective matrix.
5. Calculation of priority weights for criteria and alternative strategies.
6. Consistency test (Consistency Ratio, CR) to ensure the validity of the results.

According to Saaty (2008), CR ≤ 0.1 indicates an acceptable level of consistency. The results of this study show CR < 0.1, which means that the expert assessments are logical and consistent.

Strategy Assessment Criteria

Based on the results of the expert FGD, five main criteria were established to evaluate the optimal strategy for the JHT claim mechanism:

1. Effectiveness in Reducing Early Claims (0.3200)
2. Ease of Implementation (0.2000)
3. Acceptance by Participants (0.1800)
4. Implementation Costs (0.1500)
5. Alignment of Government Regulations with JHT Program Objectives (0.1500)

The consistency test results show CR ≈ 0.00006, which means that the comparison matrix between criteria is consistent and reliable.

Weighting of Alternative Strategies

Based on the synthesis of SEM-PLS results and expert FGDs, five main alternative strategies were determined**:**

(A1) – Improving Financial Literacy & Socializing Mindset Change based on Behavioral Economics

Educating participants on the role of JHT as retirement funds, using a behavioral economics approach to overcome behavioral biases such as loss aversion and present bias.

(A2) – Reformulation of JHT Disbursement Policy

Adjusting withdrawal regulations to be stricter while remaining responsive to participants' real needs.

(A3) – Incentives for Participants Who Do Not Withdraw JHT Early

Providing financial and non-financial rewards for participants who hold off on claims until retirement.

(A4) – Strengthening Needs-Based Digital Services (gamification)

Further development of JMO towards behavior personalization and gamification. For example, adding goal setting dashboard features, interactive reminders, and progress trackers based on behavioral data analytics to monitor participants' financial behavior.

(A5) – Post-Claim Monitoring and Evaluation

A system for monitoring the use of JHT funds after claims, to measure program effectiveness and improve accountability.

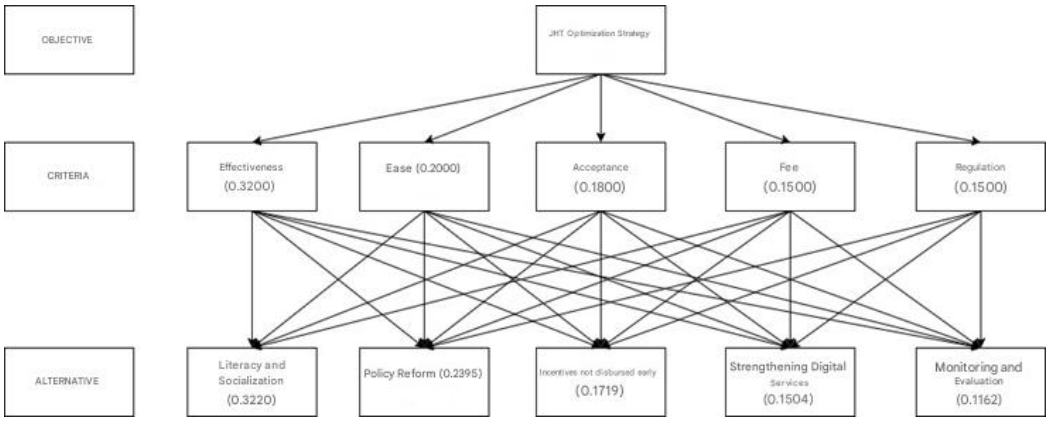

Figure 4. AHP Hierarchy Structure for JHT Claim Optimization Strategy

(a) Psychological factors (loss aversion, present bias, mental accounting) → explain early claim behavior.
(b) Government policies and regulations → proven to be mediators that reinforce the influence of psychological factors on claim decisions.
(c) The AHP results reinforce this finding by showing that the main strategy should combine behavioral interventions (A1) and regulatory reforms (A2)**.**

Thus, the results of this study provide empirical evidence that a combination of behavioral economics-based education and regulatory policy strengthening is the most effective strategy for reducing early JHT claims and ensuring the achievement of the program's objectives as a form of old-age security.

Managerial Implications

Based on the results of the analysis using SEM-PLS and AHP, this study provides strategic direction for BPJS Ketenagakerjaan in optimizing the Old Age Security (JHT) claim mechanism.

The SEM results show that behavioral factors (Loss Aversion, Present Bias, Mental Accounting) have a significant effect on claim decisions, both directly and through government policy. This means that participants' early claim behavior is not only triggered by financial needs, but also by risk perceptions and policy designs that provide flexibility in accessing funds.

Meanwhile, the AHP results produced the following five strategic priorities:

(A1) Improving Financial Literacy and Socializing Mindset Change based on Behavioral Economics.

Focus on education using nudging and framing principles to raise participants' awareness of deferring JHT claims. Implementation is through interactive digital campaigns, literacy modules based on participant profiles, and cross-functional and inter-company collaboration.

(A2) Reformulation of JHT Disbursement Policy.

Directing policy to balance social protection and fund sustainability, for example through vesting periods, gradual disbursement schemes, and integration of benefits with the Job Loss Insurance (JKP) program.

(A3) Incentives for Participants Who Do Not Withdraw Their JHT Early.

Encourage reward policies such as annual interest bonuses or non-financial rewards for participants who maintain their JHT balance until retirement, to foster motivation and engagement.

(A4) Strengthening Needs-Based Digital Services and Gamification.

Optimizing the JMO application through gamification features (points, badges, leaderboards, mini games) and personalized financial dashboards to increase participant engagement and awareness of long- term benefits.

(A5) Post-Claim Monitoring and Evaluation.

Building an integrated data-based evaluation system that not only records claim volumes but also analyzes participant behavior post-claim and policy effectiveness, as a basis for continuous policy feedback.

CONCLUSION

This study examined factors influencing participants' decisions to withdraw Old Age Security (OAS) benefits, highlighting how psychological factors—loss aversion, present bias, and mental accounting—drive a preference for short-term needs over long-term benefits. Government regulations were found to affect these biases, with flexible rules encouraging early withdrawals and stricter policies supporting program goals. Using the AHP method, key strategies were prioritized to optimize the JHT claim mechanism, including increasing financial literacy, reshaping mindsets through behavioral economics, reforming withdrawal policies, offering incentives, enhancing digital services through gamification, and instituting post-claim monitoring. These combined strategies, especially when integrated with the Job Loss Insurance (JKP) program, are expected to improve participant welfare while reducing early withdrawals and strengthening JHT fund sustainability. Future research could explore the long-term impacts of these strategic interventions on participants' financial behavior and program sustainability.

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