



Strategy to Increase BPJS Ketenagakerjaan Membership: Integration of TPB and AHP Approaches

***Mansursyah**

Sekolah Bisnis Institut Pertanian
Bogor, Indonesia

Suhendi

Sekolah Bisnis Institut Pertanian
Bogor, Indonesia

Nimmi Zulbainarni

Sekolah Bisnis Institut Pertanian
Bogor, Indonesia

***Corresponding author:**

Mansursyah, Sekolah Bisnis Institut
Pertanian Bogor, Indonesia.

✉ mansursyah082@gmail.com

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Abstract

Background: Social security is a critical component of national social protection systems aimed at ensuring decent living standards. In Indonesia, BPJS Ketenagakerjaan administers five employment social security programs, yet its coverage remains at only 31.3% of the 144.64 million working population as of 2024, indicating a significant coverage gap particularly in the informal sector.

Objective: This research aims to formulate a strategy to increase BPJS Ketenagakerjaan membership by integrating individual behavioral perspectives and institutional support.

Methods: Using a mixed-methods approach, this study applies the Theory of Planned Behavior (TPB) analyzed through SEM-PLS to examine employee intentions, and the Analytical Hierarchy Process (AHP) to determine policy priorities. The study involved 350 respondents from various employment segments across Indonesia.

Results: SEM-PLS results indicate that attitude (path coefficient 0.360) and perceived behavioral control/PBC (0.268) are the main determinants that significantly influence employee intention to participate, while subjective norms also showed significant albeit weaker influence (0.144). Trust and knowledge as moderating variables showed no significant moderating effect. AHP analysis identified that the government regulation criterion has the highest priority weight of 0.321. The strategic priorities are: (1) contribution subsidy from national/regional budgets (0.220), (2) strengthening mandatory membership regulation (0.213), (3) massive education and literacy (0.201), (4) national data integration (0.185), and (5) service digitalization (0.183).

Conclusion: The integration of TPB and AHP provides a comprehensive analytical framework that contributes to both behavioral understanding and policy formulation for increasing BPJS Ketenagakerjaan membership towards inclusive universal coverage.

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INTRODUCTION

Social security is a form of protection organized by the state to ensure that all citizens can meet their basic needs for a decent life (Razavi, 2022; Tri et al., 2021). In the context of social protection, social security not only functions to assist individuals when facing social risks such as work accidents, job loss, old age, and death, but also serves as a strategic instrument in reducing poverty and social inequality (ILO, 2021). The basic principles of social security are mutual cooperation and social solidarity, where participants pay contributions to help others who experience risks while also protecting themselves.

Along with global developments, social security has become one of the important indicators in achieving the Sustainable Development Goals (SDGs). Based on the ILO report

(2020), more than 65% of the world's population is not yet fully protected by social security systems, so strengthening the coverage and quality of social security is a major agenda for many countries, including Indonesia.

In Indonesia, BPJS Ketenagakerjaan officially began operating on January 1, 2014, as a transformation of PT Jamsostek (Persero) based on Law No. 24 of 2011 concerning the Social Security Administering Body. This institution administers five main programs: Work Accident Insurance (JKK), Death Insurance (JKM), Old-Age Insurance (JHT), Pension Insurance (JP), and Unemployment Insurance (JKP). Membership increased from 16,791,397 participants in 2014 to 45,224,676 participants in 2024. This increase was mainly driven by the growth of formal participants/wage earners (PU) reaching 28,673,349 participants and the increase in informal sector/non-wage earner (BPU) membership to 9,899,338 participants.

However, when compared to the working population according to the Central Statistics Agency (BPS) of Indonesia in 2024, which reached 144.64 million people, active participants only reached about 31.3%. This very large gap indicates that there is still great potential that has not been tapped, especially in the informal sector. Various factors become obstacles to expanding membership: lack of worker awareness, suboptimal perception of BPJS benefits, distrust of fund management, limited financial capacity, as well as regulatory and policy challenges (Daely et al., 2025).

To understand this phenomenon comprehensively, the research uses the Theory of Planned Behavior (TPB) and the Analytic Hierarchy Process (AHP) approaches. TPB enables a deep understanding of the psychological and social factors that influence workers' decisions to become participants, while AHP facilitates the mapping of strategy priorities based on expert assessment. The combination of these two methods is expected to produce valid, applicable findings that are useful for the formulation of medium-term and long-term strategic policies.

Several previous studies have examined factors influencing social security participation. TPB to analyze intentions to register for employment social security, finding that attitude and perceived behavioral control were significant predictors (Hartono et al., 2025; Ngo & Nguyen, 2025). Social security literacy and institutional trust significantly influenced BPJS Ketenagakerjaan membership interest (Destyawan, 2026; Dinda, 2025). However, these studies predominantly used single-method approaches and did not integrate behavioral analysis with stakeholder-based strategic priority mapping. The World Bank (2022) emphasized that expanding social protection requires multi-stakeholder collaboration, yet empirical studies combining individual behavioral perspectives with institutional strategy prioritization remain scarce in the Indonesian context.

A notable gap in the existing literature lies in the absence of a cohesive analytical framework that simultaneously examines the behavioral determinants of participation and identifies strategic priorities for membership growth through stakeholder engagement. Previous studies have addressed these dimensions separately, thereby limiting the scope and applicability of resulting policy recommendations.

To address this gap, the present study introduces a dual-perspective analytical framework that integrates two methodologically complementary approaches: Structural Equation Modeling with Partial Least Squares (SEM-PLS), employed to examine behavioral antecedents within the theoretical lens of the Theory of Planned Behavior (TPB), and the Analytic Hierarchy Process (AHP), utilized to elicit and prioritize strategies based on stakeholder perspectives. The integration of these techniques enables a more holistic inquiry by bridging individual-level behavioral insights with institution-level strategic formulation. To the authors' knowledge, this methodological combination has not been previously applied in the context of expanding BPJS Ketenagakerjaan membership, thereby constituting a meaningful contribution to both the methodological and substantive dimensions of the field.

This research aims to analyze the factors influencing workers' intention to become BPJS Ketenagakerjaan participants based on the Theory of Planned Behavior (TPB), map stakeholder roles and priorities in optimizing membership expansion using the Analytic Hierarchy Process (AHP), and formulate strategic recommendations for increasing BPJS Ketenagakerjaan membership toward achieving universal coverage.

Theoretically, this research contributes to the expansion of TPB application in public policy contexts by integrating it with stakeholder analysis through AHP. Practically, the findings

provide actionable strategic recommendations for BPJS Ketenagakerjaan, government regulators, and related stakeholders in formulating evidence-based policies for universal coverage achievement. The research implications extend to social protection policy design in developing countries facing similar coverage expansion challenges.

LITERATURE REVIEW

Employment Social Security Program Participation

Although BPJS Ketenagakerjaan membership has experienced positive growth from 16.8 million participants (2014) to 45.2 million active participants at the end of 2024, the biggest challenge lies in the Non-Wage Earner (BPU/informal) segment whose coverage ratio is still far from the target. BPS data for August 2024 shows that the working population reached 144.64 million people, so the active participation rate is only 31.3%.

The participation rates of formal and informal workers also show disparities. BPS statistics for August 2024 recorded that only 42.0% of formal workers are active participants, while the informal sector has not been optimally utilized. This difference reflects the need for a more inclusive strategy, combining behavioral interventions (via TPB-SEM) and stakeholder mapping (via AHP) to reach non-formal worker segments that are still largely missed by the social protection system.

Attitude Formation

According to Schiffman (2019), the formation of consumer attitudes towards a product or service involves several factors. Attitudes are formed through cognitive, affective, and conative processes. Cognitively, consumers evaluate information about the product. Affectively, consumers feel positive or negative feelings towards the product. Conatively, consumers tend to behave in certain ways (e.g., buying or not buying) based on the attitudes formed.

Theory of Reasoned Action (TRA)

A concept developed by (Icek, 1991). This theory aims to explain how a person's attitudes and behaviors are interrelated in directing individual actions. TRA is used to predict how a person will behave based on prior attitudes and behavioral intentions. TRA aims to understand an individual's voluntary behavior by basing it on the basic motivations that drive that action. TRA states that an individual's intention to perform an action is a key factor determining whether they will actually carry out that behavior or not.

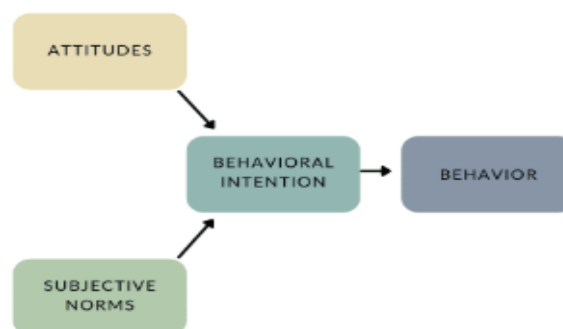


Figure 1. Model *Theory of Reasoned Action*

Theory of Planned Behavior (TPB)

A theory proposed by Ajzen (1991) which is a development of the Theory of Reasoned Action first introduced. The Theory of Planned Behavior explains that attitude towards behavior is an important point that can predict an action; however, it is also necessary to consider a person's attitude in examining subjective norms and measuring their perceived behavioral control. If there is a positive attitude, support from people around, and a perception of ease because there are no barriers to behaving, then a person's intention to behave will be higher (Ajzen, 1991). From the explanations of the theories above, it can be concluded that the Theory of Planned Behavior is a theory stating that the relationship between attitude, subjective norms, and

perception will influence an individual's behavioral intention to perform an action.

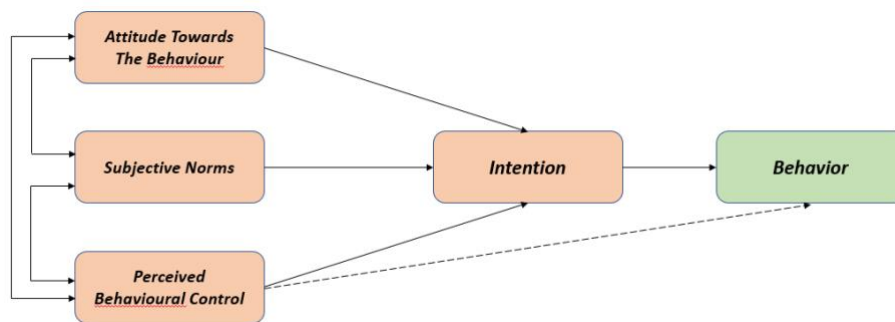


Figure 2. Theory of Planned Behavior Model

Collaborative Governance Theory

Collaborative governance is a governance approach that emphasizes the active involvement of various stakeholders in the policy formulation and implementation process, especially on complex public issues involving many parties (Ansell & Gash, 2018). This model views that solving public problems requires cross-sector collaboration between government, the private sector, civil society, and non-governmental organizations through participatory, transparent, and mutually beneficial mechanisms. In the context of employment social security, this collaboration becomes important because broad membership coverage cannot be achieved by government or BPJS Ketenagakerjaan intervention alone. According to Emerson & Gerlak (2014), collaborative governance involves three main components: (1) Inclusive governance principles, (2) Adaptive collaborative processes, and (3) Capacity for joint action.

Stakeholder Theory

Stakeholder Theory was first popularized by Freeman (1984), who emphasized that an organization's success depends not only on achieving its internal goals but also on its ability to meet the expectations and needs of various parties involved or affected by the organization's activities. In the context of BPJS Ketenagakerjaan, stakeholders include workers, employers, central and local governments, trade unions, and employer associations. This concept later developed through the power, legitimacy, and urgency typology model introduced by (Mitchell et al., 1997). This model explains that stakeholder engagement priorities can be identified based on their levels of power, legitimacy, and urgency. For example, the government has power in the form of regulations and policies, employers have power through administrative compliance and contributions, while workers have legitimacy because they are the main beneficiaries of the program.

Conceptual Framework

This research is built on the understanding that increasing BPJS Ketenagakerjaan membership requires a comprehensive approach, which not only focuses on individual behavior but also on strategic support from external stakeholders. The two theoretical approaches used to build this conceptual framework are the Theory of Planned Behavior (TPB) and Stakeholder Theory, which are then operationalized through the Structural Equation Modeling - Partial Least Squares (SEM-PLS) and Analytic Hierarchy Process (AHP) methods.

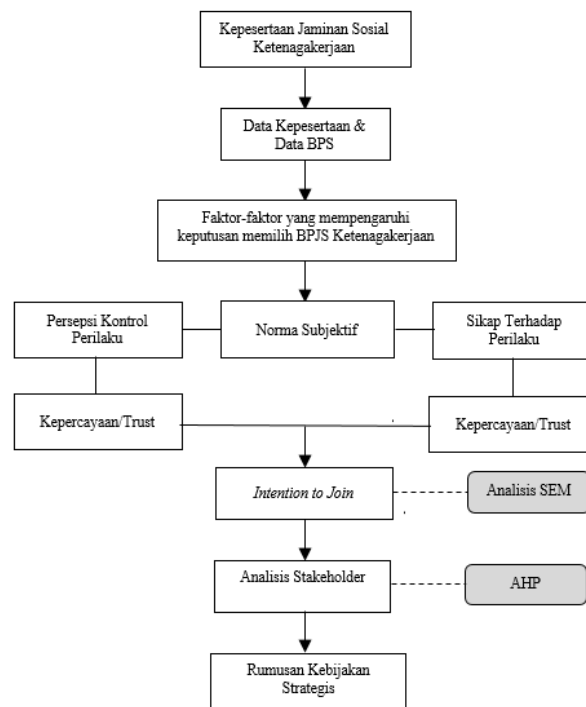


Figure 3. Conceptual Framework

METHOD

This research used a mixed-methods approach a sequential explanatory design that combines quantitative and qualitative methods in two sequential stages. The quantitative approach was used to test relationships between behavioral variables using SEM-PLS (Structural Equation Modeling - Partial Least Squares), while expert judgment was quantified through AHP pairwise comparison to generate priority weights.

The research population was all Indonesian workers who are already participants or potential participants of BPJS Ketenagakerjaan. The sample was selected using purposive sampling from formal sector workers, informal sector workers, construction services, and Indonesian migrant workers (PMI). The sample size was determined based on Hair et al. (2019) formula: Sample Size = Number of Indicators $\times$ 10, thus obtaining 350 representative respondents. Data were collected through an online questionnaire using a 5-point Likert scale (strongly disagree to strongly agree), as well as structured pairwise comparison assessments with 10 experts for AHP requirements. The number of experts was determined based on AHP methodological guidelines by Saaty (1980), which recommends a panel of 5–15 experts to ensure assessment diversity while maintaining consistency. Expert selection criteria included: (1) minimum 10 years of professional experience in employment social security, labor policy, or social protection; (2) active involvement in policy formulation or program implementation related to BPJS Ketenagakerjaan; and (3) representation of key stakeholder groups. The experts involved came from government/regulators (3 experts), BPJS Ketenagakerjaan practitioners (2 experts), Ministry of Manpower (2 experts), employer associations (2 experts), and trade unions (1 expert). Each variable was measured using 9 indicators on a 5-point Likert scale, as shown in Table 1.

Table 1

Research Variables and Indicators

Variable	Type	Example Indicator
Attitude (X1)	Independent	Provides important protection; reduces financial risk; value commensurate with contributions
Subjective Norms (X2)	Independent	Family encouragement; influence of colleagues; social pressure from community

Perceived Behavioral Control (PBC) (X3)	Independent	Ability to pay regular contributions; ease of registration; digital services facilitate
Behavioral Intention (Y)	Dependent	Desire to register; intention to maintain sustainability; commitment to active participation
Knowledge (Z1)	Moderation	Understanding of program types; knowledge of claim procedures; understanding of participant obligations
Trust (Z2)	Moderation	Trust in fund management; belief in timely benefits; trust in transparency

SEM-PLS analysis using SmartPLS 4 was conducted in two stages. First, outer model evaluation includes: (a) convergent validity, outer loading > 0.70 and AVE > 0.50; (b) discriminant validity, cross-loading and HTMT < 0.90; and (c) construct reliability, CR and Cronbach's Alpha > 0.70. Second, inner model evaluation includes R^2 values, coefficient of determination (R^2), and path coefficients along with their significance.

AHP analysis was conducted involving 10 experts to provide pairwise comparison assessments on a scale of 1-9 for five criteria and five alternative strategies. Assessment aggregation used geometric means to obtain expert consensus. Assessment consistency was verified through CR $\leq$ 0.1.

Based on the problem formulation, research objectives, and theoretical framework used, the following hypotheses are proposed:

H0: There is no significant effect of Attitude, Subjective Norms, Perceived Behavioral Control, Knowledge, and Trust on the intention to become a participant.

H1: There is a significant effect of Attitude, Subjective Norms, Perceived Behavioral Control, Knowledge, and Trust on the intention to become a participant.

H11: Attitude has a significant effect on the intention to become a participant.

H12: Subjective Norms have a significant effect on the intention to become a participant.

H13: Perceived Behavioral Control has a significant effect on the intention to become a participant.

H14: Knowledge moderates the effect of Attitude on the intention to become a participant.

H15: Knowledge moderates the effect of Subjective Norms on the intention to become a participant.

H16: Knowledge moderates the effect of Perceived Behavioral Control on the intention to become a participant.

H17: Trust moderates the effect of Attitude on the intention to become a participant.

H18: Trust moderates the effect of Subjective Norms on the intention to become a participant.

H19: Trust moderates the effect of Perceived Behavioral Control on the intention to become a participant.

RESULTS AND DISCUSSION

Results

Respondent Characteristics and Variable Distribution

The study involved 350 respondents with diverse and representative profiles. Based on employment type, Wage Earners (PU/formal) numbered 120 people (34.3%), Non-Wage Earners (BPU/informal) 115 people (32.9%), construction services 60 people (17.1%), and PMI 55 people (15.7%). In terms of membership status, 205 people (58.6%) were already active participants and 145 people (41.4%) were not yet registered.

The age composition was dominated by the productive group 25-35 years (46.0%), followed by 36-45 years (25.1%), 18-24 years (15.7%), and over 45 years (13.2%). Respondents were spread across Java (54.9%), Sumatra (19.4%), Sulawesi (11.4%), Kalimantan (8.0%), and Bali/NTB (6.3%). Education level was dominated by bachelor's degree (40.0%) and senior high school/vocational school (36.0%), with the largest income distribution in the group of Rp3-5 million per month (40.6%).

The diversity of respondent characteristics provides a strong basis for comprehensive analysis of membership behavior. The substantial proportion of non-participants (41.4%) provides an overview of the potential for membership expansion while enabling a deeper analysis

of participation barriers.

Distribution of Research Variables

The distribution of respondent answers on all variables shows diverse and informative tendencies.

Table 2

Distribution of Attitude Variable

Category	Score Interval	Respondents	Percentage
Very Low	1.00--1.80	18	5.2%
Low	1.81--2.60	42	12.0%
Medium	2.61--3.40	96	27.4%
High	3.41--4.20	124	35.4%
Very High	4.21--5.00	70	20.0%
Total		350	100%

The majority of respondents were in the high (35.4%) and very high (20.0%) categories, indicating generally positive attitudes towards BPJS Ketenagakerjaan. However, there are still 17.2% of respondents with low to very low attitudes; this group is generally associated with negative experiences or distrust of the institution. The medium attitude group (27.4%) is the most responsive strategic target for positive communication interventions.

Table 3

Distribution of Subjective Norms Variable

Category	Score Interval	Respondents	Percentage
Very Low	1.00--1.80	22	6.3%
Low	1.81--2.60	58	16.6%
Medium	2.61--3.40	110	31.4%
High	3.41--4.20	104	29.7%
Very High	4.21--5.00	56	16.0%
Total		350	100%

The distribution of subjective norms shows a more spread pattern compared to attitude. The majority of respondents were in the medium (31.4%) and high (29.7%) categories, reflecting the quite significant role of the social environment. The very high category group (16.0%) tends to be in environments that actively encourage participation, making social pressure a primary catalyst.

Table 4

Distribution of Perceived Behavioral Control (PBC) Variable

Category	Score Interval	Respondents	Percentage
Very Low	1.00--1.80	30	8.6%
Low	1.81--2.60	74	21.1%
Medium	2.61--3.40	118	33.7%
High	3.41--4.20	90	25.7%
Very High	4.21--5.00	38	10.9%
Total		350	100%

PBC shows more real challenges: 29.7% of respondents still feel significant barriers (very low and low categories). The main barriers relate to financial ability to pay regular contributions and the complexity of administrative procedures, especially for informal workers with irregular incomes.

Table 5

Distribution of Behavioral Intention Variable

Category	Score Interval	Respondents	Percentage
Very Low	1.00--1.80	16	4.6%
Low	1.81--2.60	44	12.5%
Medium	2.61--3.40	92	26.3%
High	3.41--4.20	128	36.6%
Very High	4.21--5.00	70	20.0%
Total		350	100%

The intention variable shows a positive tendency: high (36.6%) and very high (20.0%) categories dominate, indicating great potential for increasing membership. The medium category group (26.3%) represents workers who are still in the consideration phase, highly responsive to external factors such as ease of service access and positive experiences from others.

For the moderating variables, the distribution of Knowledge shows that 28.0% of respondents have high knowledge but another 28.0% are still in the low-very low category, confirming the need for more intensive and segmented literacy programs. Meanwhile, the Trust variable shows a relatively balanced pattern, with the majority in the medium (32.0%) and high (30.9%) categories, indicating that trust in BPJS Ketenagakerjaan as an institution is quite good, although there is still room for improvement, especially regarding transparency and service quality.

Measurement Model Evaluation (Outer Model)

At this stage, each latent construct in the research, including attitude, subjective norms, perceived behavioral control, knowledge, trust, and behavioral intention, is evaluated based on its constituent indicators. Through measurement model evaluation, the research ensures that the model used meets the statistical and methodological criteria required in SEM-PLS before proceeding to structural model testing.

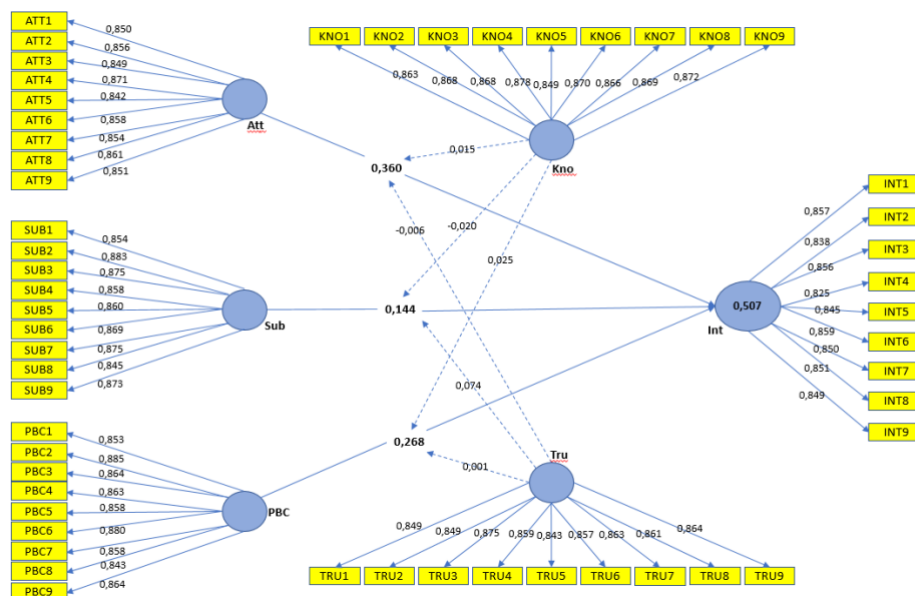


Figure 4. Outer Model Analysis

All latent constructs met the validity and reliability criteria. The outer loading values of all indicators ranged from 0.825 to 0.885, far exceeding the minimum threshold of 0.70. AVE values ranged from 0.719 to 0.752, all above the required 0.50.

Table 6

Summary of Measurement Model Evaluation

Construct	AVE	Cronbach's Alpha	CR	Discriminant Validity (HTMT max)
Attitude Towards Behavior	0.730	0.954	0.954	0.74
Subjective Norms	0.750	0.958	0.959	0.72

Perceived Behavioral Control	0.745	0.957	0.958	0.69
Trust	0.736	0.955	0.956	0.81
Knowledge	0.752	0.959	0.961	0.78
Intention	0.719	0.951	0.951	0.81

Discriminant validity testing using cross-loading and HTMT showed that each indicator had the highest loading on its original construct. All HTMT values were below 0.85, ensuring no conceptual overlap between constructs. Composite Reliability and Cronbach's Alpha values above 0.95 for all constructs indicate very good internal consistency. The measurement model is declared valid and reliable to proceed to structural model testing.

Structural Model Evaluation and Hypothesis Testing

The R^2 value for the intention variable was 0.507 (adjusted $R^2 = 0.493$), indicating that the exogenous variables in the model can explain 50.7% of the variation in membership intention. The results of the path coefficient testing are presented in Table 7.

Table 7

Path Coefficient Test Results

Path	Coefficient	T-Statistic	P-Value	Decision
Attitude → Intention	0.360	8.407	0.000	Accepted
PBC → Intention	0.268	6.580	0.000	Accepted
Subjective Norms → Intention	0.144	3.654	0.000	Accepted
Knowledge × Attitude → Intention	0.015	0.313	0.754	Rejected
Knowledge × Sub Norms → Intention	-0.020	0.519	0.604	Rejected
Knowledge × PBC → Intention	0.025	0.546	0.585	Rejected
Trust × Attitude → Intention	-0.006	0.141	0.888	Rejected
Trust × Sub Norms → Intention	0.074	1.443	0.149	Rejected
Trust × PBC → Intention	0.001	0.033	0.974	Rejected

Effect of Attitude on Membership Intention. Attitude toward behavior has the most dominant positive and significant effect ($\beta = 0.360$, $t = 8.407$, $p = 0.000$). This finding confirms that perceptions of program benefits, work risk protection, certainty of long-term benefits, program relevance, and value commensurate with contributions are the main determinants of membership intention. The indicators with the highest loadings were "Creates a sense of security in carrying out work" (0.871) and "Modern and relevant program for workers" (0.861), indicating that aspects of psychological security and program relevance most strongly shape attitudes.

The decision to become a BPJS Ketenagakerjaan participant is more driven by evaluative and rational considerations than merely social pressure or procedural ease. This finding aligns with TPB which places attitude as a key factor in explaining behavioral intentions, particularly for voluntary behaviors requiring long-term commitment. Public communication strategies emphasizing real benefits and program relevance are proven crucial.

This finding is consistent with previous studies indicating that attitude is the strongest predictor of social security registration intention and aligns with evidence from the broader Theory of Planned Behaviour literature on voluntary health-related behaviors.

(Ajzen et al., 2018). However, the magnitude of the attitude effect in this study ($\beta = 0.360$) is higher than that reported in previous research, suggesting that the employment social security context may amplify the role of rational benefit evaluation compared to general social program participation.

Effect of Perceived Behavioral Control on Membership Intention. PBC is the second strongest determinant ($\beta = 0.268$, $t = 6.580$, $p = 0.000$). The indicators with the highest loadings were "Ease of registration access" (0.885) and "Contribution payment process is not difficult" (0.880). This indicates that perceptions of financial ability, ease of registration procedures, access to digital service channels, and flexibility of the membership system directly affect intention.

For informal sector workers, contribution affordability and administrative ease are crucial factors given the income uncertainty they face daily. PBC works independently of respondents'

knowledge and trust levels, confirming that structural barriers (financial, procedural) need to be addressed regardless of individual psychological conditions. From a policy perspective, efforts to simplify procedures, digitize services, and flexibilize contribution payment mechanisms have the potential to increase perceived behavioral control.

Effect of Subjective Norms on Membership Intention. Subjective norms have a positive and significant although weaker effect ($\beta = 0.144$, $t = 3.654$, $p = 0.000$). The indicators with the highest loadings were "Recommendations from close people and social environment" (0.883) and "Influence of community or social group" (0.875). Social influence from family, colleagues, and community environment has an important complementary role in encouraging participation.

In the context of BPJS Ketenagakerjaan, decisions are often not purely individual but are influenced by social and institutional dynamics. Indonesian society, characterized by collectivism, makes social support a determining factor. Community-based approaches and the involvement of community leaders, religious leaders, and professional associations are therefore effective instruments in encouraging participation.

Moderating Role of Trust and Knowledge. Both moderating variables did not show statistically significant moderating effects. This finding can be understood conceptually: trust and knowledge are not variables that precede or strengthen TPB relationships with intention, but rather are consequences of the three main constructs. Positive attitudes formed towards BPJS benefits implicitly contain elements of trust in the institution. Knowledge about the program develops as a product of social interaction and experience using services, not an initial trigger of intention. This finding has important implications: literacy programs alone are insufficient without accompanying positive attitude formation and reduction of structural barriers.

The non-significant moderating effects of knowledge and trust can be explained by several theoretical and methodological considerations. First, in mandatory or semi-mandatory program contexts such as employment social security, the decision-making process may be more influenced by direct structural factors (ease of access, affordability) rather than cognitive moderators. Second, the high multicollinearity between trust and attitude constructs (HTMT = 0.81) suggests that trust may already be captured within the attitude construct itself, reducing its independent moderating capacity. Third, knowledge in this context may function as a threshold variable rather than a continuous moderator; once a minimum level of program awareness is achieved, additional knowledge does not proportionally strengthen the attitude-intention relationship. These findings suggest that future research should consider repositioning trust and knowledge as mediating or antecedent variables rather than moderators in the TPB framework for public program participation.

AHP Analysis: Priority Strategies for Increasing Membership

The formulation of strategies to increase membership in this study was conducted using the Analytical Hierarchy Process (AHP) method, a decision-making framework developed by Thomas L. Saaty to solve complex and unstructured problems into logical hierarchical groups.

This study involved 10 experts representing various main stakeholder elements in the employment social security ecosystem, namely regulators (policy makers), social security practitioners, BPJS Ketenagakerjaan, worker organizations, and employer organizations. This composition was chosen to reflect the multi-stakeholder principle in collaborative governance, so that the assessment process is not biased towards any particular perspective.

Table 8

AHP Hierarchical Structure

Kode Pakar	Kelompok Pakar	Latar Belakang/Jabatan
Pakar 1	Praktisi Jamsos	BPJS Watch
Pakar 2	Praktisi Jamsos	Analisis Labour Institute
Pakar 3	Policy Maker	Anggota DJSN
Pakar 4	Policy Maker	Anggota DJSN
Pakar 5	Unsur Pekerja	Pengurus SP/SB Nasional
Pakar 6	Unsur Pekerja	Pengurus SP/SB Nasional
Pakar 7	Unsur Pemberi Kerja	Pengurus Kadin
Pakar 8	Unsur Pemberi Kerja	Pengurus Apindo
Pakar 9	BPJS Ketenagakerjaan	Dewan Pengawas
Pakar 10	BPJS Ketenagakerjaan	Direktur Kepesertaan

Based on the exploratory stage, this study identified the main components required for developing strategies to increase BPJS Ketenagakerjaan membership. The primary focus is the formulation of strategies to expand BPJS Ketenagakerjaan participation. Five key factors were identified as determinants of membership growth, namely government regulation, the effectiveness of socialization and education, program benefits, stakeholder collaboration, and social influence, all of which play important roles in encouraging participation among formal and informal workers. The main actors involved in influencing and implementing these strategies include the Government, Ministries/Institutions, BPJS Ketenagakerjaan, Trade Unions, and Employer Associations. Furthermore, the strategic objectives consist of increasing membership, enhancing workers' awareness of social security, strengthening company compliance, ensuring the sustainability of social security programs, and accelerating the achievement of universal social security coverage. Based on these components, several strategic alternatives were formulated, including contribution subsidies for vulnerable workers, mandatory membership regulations, strengthening company compliance, massive education, literacy and socialization programs, digitalization and service simplification, as well as cross-stakeholder data integration. These alternatives provide a collaborative framework for stakeholders to improve the coverage and effectiveness of BPJS Ketenagakerjaan membership expansion.

Analysis of Factor Criteria towards Focus

Conducted to determine the most influential factors in supporting strategies to increase BPJS Ketenagakerjaan membership. These factors consist of government regulation, effectiveness of socialization and education, program benefits, social and environmental influence, and stakeholder collaboration.

Table 8

Priority Weights of Factor Criteria towards Focus

Factor	Weight	Priority
Government Regulation	0.321	1
Effectiveness of Socialization and Education	0.252	2
Program Benefits	0.182	3
Social and Environmental Influence	0.139	4
Stakeholder Collaboration	0.106	5
Total	1.000	-

Government regulation obtained the highest weight of 0.321 and became the top priority in strategies to increase BPJS Ketenagakerjaan membership. This result indicates that the success of membership expansion is strongly influenced by regulatory strength, compliance supervision, mandatory membership policies, and government support in expanding employment social protection. Regulation is seen as the main instrument in encouraging company compliance and accelerating the achievement of universal coverage for employment social security.

Analysis of Actor Criteria towards Factors

Conducted to determine the most influential actors in supporting each factor in the strategy to increase BPJS Ketenagakerjaan membership. The analysis results show the priority levels of each actor towards each factor influencing the strategy.

Table 9

Weights and Priorities of Actor Criteria towards Government Regulation Factor

Actor	Weight	Priority
Government	0.402	1
Ministries and Institutions	0.287	2
BPJS Ketenagakerjaan	0.171	3
Employers	0.087	4
Worker Associations	0.053	5
Total	1.000	-

The Government obtained the highest weight of 0.402 and is the most dominant actor for the government regulation factor. This result indicates that the success of increasing BPJS Ketenagakerjaan membership is strongly influenced by the government's ability to shape regulations, supervise compliance, and create policies that support universal coverage for employment social security.

Analysis of Objective Criteria towards Actors

This analysis was conducted to determine the strategic objectives that are the main priorities of each actor in supporting membership increase.

Table 10

Weights and Priorities of Objective Criteria towards Government

Objective	Weight	Priority
Universal Coverage Achievement	0.348	1
Increased Membership Coverage	0.268	2
Strengthened Company Compliance	0.188	3
Program Sustainability	0.124	4
Increased Worker Awareness	0.072	5
Total	1.000	-

Analysis of Strategy Criteria towards Objectives

Table 11

Weights and Priorities of Strategy Alternative Criteria towards Universal Coverage Achievement Objective

Strategy	Weight	Priority
Mandatory Membership Regulation	0.318	1
Contribution Subsidies for Vulnerable Workers	0.290	2
Cross-Stakeholder Data Integration	0.221	3
Digitalization and Service Simplification	0.119	4
Massive Education, Literacy and Socialization	0.052	5
Total	1.000	-

Table 12

Weights and Priorities of Strategy Alternative Criteria towards Increased Membership Coverage Objective

Strategy	Weight	Priority
Mandatory Membership Regulation	0.314	1
Contribution Subsidies for Vulnerable Workers	0.290	2
Cross-Stakeholder Data Integration	0.227	3
Massive Education, Literacy and Socialization	0.101	4
Digitalization and Service Simplification	0.068	5
Total	1.000	-

Table 13

Consistency Test Results of the Objective Criteria Pairwise Comparison Matrix

Criteria	Strategy Alt. towards Increased Membership Coverage	Strategy Alt. towards Increased Worker Awareness	Strategy Alt. towards Strengthened Company Compliance	Strategy Alt. towards Program Sustainability	Strategy Alt. towards Universal Coverage Achievement
λ_{max}	5.171	5.148	5.183	5.162	5.176
CI	0.043	0.037	0.046	0.041	0.044
RI	1.12	1.12	1.12	1.12	1.12
CR	0.038	0.033	0.041	0.037	0.039

Mandatory membership regulation is the most dominant strategy in supporting the objectives of increasing membership coverage and achieving universal coverage for employment social security with weights of 0.314 and 0.318 respectively. The contribution subsidy strategy for vulnerable workers obtained high weights for the objective of increasing membership coverage (0.290) and achieving universal coverage (0.290). These results show that the Mandatory Membership Regulation strategy and the Contribution Subsidy for Vulnerable Workers strategy are the highest priority strategies.

The relatively small Consistency Index (CI) values indicate that the deviation of expert assessments regarding the relationships between strategy alternatives is still within acceptable limits. Additionally, the Random Index (RI) value of 1.12 was used because all comparison matrices consist of five strategy elements according to the standard Random Index table developed by (Saaty, 1980).

Discussion

Table 14

Managerial Implications

INPUT	PROCESS	OUTPUT
Perceptions of BPJS Ketenagakerjaan Participant Selection Decisions Based on Individual Worker Behavior Analysis (Based on SEM Analysis)		
Factor	Insight	Output
Attitude Toward Behavior	Attitude toward behavior influences workers' intention to become BPJS Ketenagakerjaan participants. Workers' perceptions of program benefits, work risk protection, and economic benefits are important factors in shaping membership decisions.	BPJS Ketenagakerjaan needs to strengthen segmented education strategies on program benefits. Socialization should focus more on the real benefits of social protection against work risks and the economic sustainability of workers' families. Success stories of participants are needed as a persuasive communication approach to build positive public perception.
Subjective Norms	The social environment, worker communities, family, companies, and community leaders influence individuals' decisions to become participants. The stronger the social encouragement workers receive, the higher the tendency for workers to participate in the employment social security program.	BPJS Ketenagakerjaan needs to strengthen community-based approaches. Strengthening worker communities, trade unions, community leaders, and local influencers needs to be optimized to build a culture of social protection in society. Additionally, companies need to be encouraged to build internal campaigns regarding the importance of employment social protection.
Perceived Behavioral Control	Ease of service access, contribution payments, registration, and benefit claims affect workers' perceptions of ease in becoming participants.	The need to strengthen digitalization and service simplification through the development of the JMO application, integration of digital payment channels, simplification of registration processes, and mobile and community-based services. Expanding service access in remote areas through integration of digital services and proactive membership outreach.

Strategy to Increase BPJS Ketenagakerjaan Membership (Based on AHP Analysis)

Strategy	Initiatives (Actor)	Output
Mandatory Membership Regulation	1. Government strengthens mandatory coverage through integration of BPJS Ketenagakerjaan membership with OSS, business licensing services, government procurement of goods and services, and certain public services. 2. Ministry of Manpower strengthens supervision of company compliance and synchronization of labor regulations. 3. BPJS Ketenagakerjaan conducts data-based company compliance monitoring and strengthens joint inspection coordination.	1. Increased membership coverage and expanded national membership coverage. 2. Strengthened company compliance, and enhanced protection for formal and informal workers. 3. Accelerated achievement of universal coverage for national employment social security.
Contribution Subsidies for Vulnerable Workers	1. Central Government allocates contribution assistance for vulnerable workers through the State Budget (APBN) and strengthens integration of national social protection programs. 2. Ministry of Social Affairs and Ministry of Villages synchronize DTKS data and vulnerable workers receiving assistance and expand protection for informal workers and village workers through Regional Budgets (APBD) and village funds. 3. BPJS Ketenagakerjaan conducts membership verification and monitoring of participant sustainability post-subsidy.	1. Increased membership and achievement of universal coverage. 2. Improved access for informal workers and vulnerable groups to employment social protection. 3. Reduced social protection gaps in society.
Massive Education, Literacy and Socialization	1. BPJS Ketenagakerjaan strengthens segmentation-based worker education through social media, digital campaigns, community education, and strengthening Perisai agents. 2. Local Governments support social security literacy activities through regional programs and worker community forums. 3. Trade Unions build peer-to-peer education and discussion forums on social protection at the community level. 4. Community leaders and media are involved to build positive social influence towards BPJS Ketenagakerjaan membership and expand information reach as well as increase public awareness regarding the benefits of BPJS Ketenagakerjaan programs.	1. Increased worker awareness of the importance of social security protection. 2. Improved social security literacy, built a culture of social protection in society, strengthened workers' attitudes and subjective norms, and increased workers' intention to become BPJS Ketenagakerjaan participants.
Cross-Stakeholder Data Integration	1. Central Government builds data interoperability policies for national social protection and strengthens governance of a single national worker database. 2. BPJS Ketenagakerjaan develops a real-time membership monitoring dashboard and integrates data with relevant ministries/institutions. 3. Ministries/Institutions strengthen worker identity validation and population data synchronization, and integrate labor, social assistance, MSME, and informal	1. Maintains sustainability of employment social security programs. 2. Improves membership data accuracy, supervision effectiveness, subsidy targeting accuracy, and service efficiency. 3. Strengthens more transparent and sustainable governance of employment social security.

Digitalization and Service Simplification	worker data. 1. BPJS Ketenagakerjaan strengthens digital transformation through JMO application development, simplification of registration processes, contribution payments, and benefit claims. 2. Ministries and Institutions strengthen integration of BPJS services with national digital public service platforms.	1. Increased worker awareness and sustainability of employment social security programs. 2. Strengthened ease of service access. 3. Increased participant satisfaction and expanded participation in BPJS Ketenagakerjaan membership more inclusively and sustainably.
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Implemented Policy Recommendations

Based on the integrated findings from SEM-PLS and AHP analyses, the following implementative recommendations are proposed. For BPJS Ketenagakerjaan: (a) develop a tiered contribution scheme with flexible payment frequencies (daily, weekly, monthly) to accommodate informal workers with irregular incomes; (b) integrate BPJS registration into existing government digital platforms (OSS, Dukcapil) to reduce administrative barriers; and (c) implement segmented communication strategies targeting the medium-attitude group (27.4% of respondents) through digital campaigns and community-based testimonials. For the Government: (a) mandate BPJS Ketenagakerjaan membership as a prerequisite for business licensing and public procurement participation within 2 years; (b) allocate APBN/APBD contribution subsidies for vulnerable workers earning below regional minimum wage; and (c) establish a national interoperable worker database linking Dukcapil, DTKS, and BPJS membership data within 3 years. For Employers and Worker Associations: (a) integrate BPJS Ketenagakerjaan education into company onboarding programs; and (b) develop peer-to-peer social security advocacy networks within trade unions and worker communities.

Theoretical Contributions

This study contributes to the development of the Theory of Planned Behavior (TPB) by demonstrating its applicability in the public policy context of employment social security. The finding that trust and knowledge do not serve as significant moderators challenges the conventional assumption that these variables precede behavioral intention. Instead, the results suggest that trust and knowledge may function as outcomes of positive attitudinal formation and direct experience, rather than as antecedents or moderators within the TPB framework. This insight extends the theoretical understanding of TPB by proposing a revised conceptualization where trust and knowledge are positioned as consequential variables in mandatory public program participation contexts, distinguishing them from voluntary consumption decisions where these variables typically serve as precursors.

Furthermore, this research enriches the Collaborative Governance framework by providing empirical evidence on how multi-stakeholder collaboration can be operationalized through AHP-based priority mapping. The integration of behavioral analysis (SEM-PLS) with stakeholder strategy mapping (AHP) offers a methodological contribution to collaborative governance research by demonstrating how individual-level behavioral insights can inform institutional-level strategic priorities. This dual-level analytical approach aligns with the integrative framework proposed by Emerson et al. (2012), which emphasizes the need to connect principled engagement with capacity for joint action across governance systems.

CONCLUSION

This research demonstrates that workers' intention to participate in BPJS Ketenagakerjaan is primarily determined by attitude toward behavior ($\beta = 0.360$), followed by perceived behavioral control ($\beta = 0.268$) and subjective norms ($\beta = 0.144$), while trust and knowledge do not significantly moderate these relationships. These findings confirm that rational evaluation of program benefits and reduction of structural barriers are more critical than social pressure or cognitive enhancement alone in driving participation. The AHP analysis reveals that government regulation (weight 0.321) is the most influential factor, with mandatory membership regulation and contribution subsidies for vulnerable workers identified as the highest-priority strategies for achieving universal coverage. The integration of TPB and AHP

provides a comprehensive dual-perspective framework that bridges individual behavioral understanding with institutional strategy formulation for employment social security expansion.

This study has several limitations that should be acknowledged. First, the cross-sectional design limits causal inference; longitudinal studies are needed to examine how behavioral factors evolve over time and in response to policy interventions. Second, the sample, while diverse, was collected primarily through online questionnaires, which may underrepresent workers with limited digital access, particularly in rural and remote areas. Third, the AHP expert panel, though representative, was limited to 10 participants, and future studies could expand this panel to enhance assessment robustness. Future research should consider: (1) longitudinal designs to track behavioral changes pre- and post-policy implementation; (2) extending the TPB model with additional variables such as perceived risk and service quality; (3) comparative studies across ASEAN countries facing similar social security coverage challenges; and (4) qualitative deep-dive studies into the informal sector to better understand the unique barriers faced by non-wage earners.

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AUTHOR CONTRIBUTION STATEMENT

Mansursyah was responsible for conceptualization, methodology, data collection, and writing the original draft of the manuscript. Nimmi Zulbainarni contributed to the formal analysis, including SEM-PLS and AHP analyses, participated in validation, and edited the manuscript. Suhendi supervised the overall research process, contributed to project administration and validation, and edited the manuscript.

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