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Behavioral Intention and Trust as Key Drivers of Willingness to Pay for Complementary Health Insurance: Evidence from Indonesia

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Abstract: Healthcare financing sustainability has become a major challenge in countries implementing Universal Health Coverage (UHC). This study develops and empirically validates a behavioral model to explain willingness to pay (WTP) for Complementary Health Insurance (CHI) in Indonesia by integrating perceived service quality, knowledge, perceived benefit, trust, and purchase intention. Using survey data from 445 BPJS Kesehatan participants, the proposed model was estimated using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings indicate that perceived benefit and knowledge significantly influence trust and purchase intention, while purchase intention is the strongest predictor of WTP. Trust also positively affects WTP, although with a smaller effect. Mediation analysis confirms the roles of trust and purchase intention in translating perceptions into financial commitment. The model demonstrates substantial predictive capability and highlights the importance of behavioral factors in strengthening voluntary participation in CHI, providing practical implications for sustainable healthcare financing under Indonesia's UHC system.

Keywords: Complementary Health Insurance, Willingness to Pay, Trust, Purchase Intention, Universal Health Coverage.

INTRODUCTION

Healthcare financing sustainability has become a central concern for countries implementing Universal Health Coverage (UHC). As healthcare utilization increases alongside demographic aging and epidemiological transitions, reliance solely on public financing mechanisms may generate long-term fiscal pressure. While UHC systems aim to ensure equitable access to essential services, complementary financing instruments are increasingly recognized as potential mechanisms to enhance system resilience without undermining equity principles.

Complementary Health Insurance (CHI) represents one such instrument. Rather than replacing public coverage, CHI can function as an additional layer that improves service flexibility, expands provider choice, and enhances financial predictability for households. However, in many emerging economies, participation in complementary insurance schemes remains limited despite increasing healthcare demand. The challenge is therefore not merely financial but fundamentally behavioral.

Prior studies on health insurance adoption have predominantly focused on affordability, socioeconomic determinants, and adverse selection while giving comparatively less attention to the behavioral mechanism underlying voluntary participation. Yet growing evidence suggests that behavioral factors—such as trust, perceived benefits, and purchase intention—play a critical role in shaping individuals' willingness to participate in voluntary insurance mechanisms. In UHC contexts where basic coverage is already available, understanding these behavioral drivers becomes even more important.

Indonesia provides a relevant empirical setting. Through its national health insurance program (JKN), administered by BPJS Kesehatan, Indonesia has achieved near-universal coverage. Nevertheless, structural financing pressures persist, and complementary private insurance remains underdeveloped relative to system needs. This context raises an important question: What determines individuals' willingness to pay for complementary health insurance when basic coverage is already guaranteed?

This study develops and empirically validates a behavioral model explaining willingness to pay (WTP) for Complementary Health Insurance among individuals enrolled in Indonesia's national health insurance system. Using survey data from 445 participants, the proposed model was estimated using Partial Least Squares Structural Equation Modeling (PLS-SEM). The study examines how perceived service quality, knowledge, perceived benefit, trust, and purchase intention jointly shape willingness to pay.

By integrating behavioral constructs into the analysis of complementary insurance participation, this study contributes to the literature in three ways. First, it extends health insurance adoption research beyond financial capacity by incorporating psychological readiness and perceived value. Second, it identifies trust and purchase intention as critical mediating mechanisms linking perception and payment behavior. Third, it offers empirical evidence from one of the world's largest UHC systems, offering insights that may inform healthcare financing policies in emerging economies, enriching global discussions on sustainable healthcare financing architectures.

Literature Review and Hypothesis Development

Complementary Health Insurance in UHC Systems

Universal Health Coverage (UHC) aims to ensure equitable access to essential healthcare services while providing financial risk protection for the population. However, increasing healthcare utilization, demographic transitions, and rising medical costs have created growing fiscal pressure on publicly financed healthcare systems worldwide (World Health Organization, 2010; Agustina et al., 2019).

To maintain sustainability without compromising equity, many countries have introduced complementary financing mechanisms, including Complementary Health Insurance (CHI), to supplement publicly funded healthcare schemes (Thomson et al., 2016; OECD, 2023). Unlike substitutive insurance, CHI does not replace public protection but enhances service flexibility, comfort, and financial predictability for insured individuals.

Within UHC environments, participation in CHI is typically voluntary, making behavioral determinants central to understanding individuals' willingness to pay for additional coverage. Empirical evidence from emerging economies suggests that individuals' demand for

voluntary health insurance is influenced by perceived benefit, institutional trust, and knowledge of insurance mechanisms (Dong et al., 2009; Wang et al., 2005).

Perception-Based Determinants of Trust Formation

Trust plays a fundamental role in healthcare financing decisions by reducing uncertainty and facilitating individuals' willingness to engage in long-term financial commitments under conditions of risk (Mayer et al., 1995; Morgan & Hunt, 1994). In insurance markets characterized by information asymmetry, trust becomes a critical mechanism influencing participation decisions (McKnight et al., 2002).

Perceived Service Quality and Trust

Service quality perception reflects individuals' evaluation of reliability, responsiveness, and institutional competence in healthcare delivery (Parasuraman et al., 1988; Zeithaml, 1988). Positive service experiences strengthen confidence toward healthcare institutions and related insurance schemes. Empirical studies demonstrate that perceived service environments significantly influence trust formation and subsequent behavioral intentions (Harris & Goode, 2010). In the Indonesian healthcare context, perceived service quality within BPJS Kesehatan services has also been shown to influence attitudes toward private health insurance adoption (Sakti & Hidayat, 2021). Accordingly, higher perceived service quality is expected to strengthen individuals' trust toward complementary health insurance (CHI).

H_1: Perceived Service Quality influences Trust toward CHI.

Knowledge and Trust

Insurance products are inherently complex and characterized by information asymmetry. Adequate knowledge reduces ambiguity and enhances perceived transparency, thereby strengthening institutional trust (McKnight et al., 2002). Greater understanding of insurance mechanisms improves confidence in product reliability and reduces perceived risk in voluntary insurance participation (Ennew & Sekhon, 2007).

H_2: Knowledge of CHI influences Trust toward CHI.

Perceived Benefit and Trust

Perceived benefit represents the extent to which individuals believe that complementary insurance provides meaningful added value beyond public healthcare coverage. When insurance benefits are perceived as advantageous and relevant, individuals are more likely to develop trust toward the insurance scheme (Zeithaml, 1988; Harris & Goode, 2010).

H_3: Perceived Benefit of CHI influences Trust toward CHI.

Determinants of Purchase Intention

Beyond trust formation, purchase intention represents another key behavioral mechanism influencing voluntary insurance participation. According to the Theory of Planned Behavior, behavioral intention represents the immediate antecedent of actual decision-making behavior (Ajzen, 1991).

Knowledge and Purchase Intention

Understanding product mechanisms may directly influence individuals' readiness to engage in insurance transactions by reducing uncertainty and improving perceived decision control (Ajzen, 1991).

H_4: Knowledge of CHI influences Purchase Intention.

Perceived Benefit and Purchase Intention

When complementary insurance is perceived as offering tangible and relevant value, individuals are more likely to develop stronger purchase intention toward the product (Zeithaml, 1988; Harris & Goode, 2010).

H_5: Perceived Benefit of CHI influences Purchase Intention.

Trust, Purchase Intention, and Willingness to Pay

Willingness to Pay (WTP) reflects individuals' readiness to commit financially to insurance participation. In voluntary insurance systems, WTP is influenced by both relational confidence (trust) and behavioral intention (Mitchell & Carson, 2013).

Trust reduces perceived uncertainty in financial decision-making, while purchase intention translates perception into action-oriented readiness (Morgan & Hunt, 1994; McKnight et al., 2002).

H_6: Trust influences willingness to pay for Complementary Health Insurance (CHI).

The Influence of Purchase Intention on Willingness to Pay

Purchase intention is widely regarded as the most immediate determinant of behavior. Within the Theory of Planned Behavior, intention directly precedes action (Ajzen, 1991).

In the context of CHI, intention reflects individuals' readiness to commit financially. Empirical evidence consistently shows that stronger purchase intention leads to higher willingness to pay.

H_7: Purchase intention influences willingness to pay for Complementary Health Insurance (CHI).

Parallel Mediation Framework

This study proposes a parallel mediation model in which Trust toward CHI and Purchase Intention simultaneously mediate the influence of perception-based constructs—Perceived Service Quality, Knowledge, and Perceived Benefit—on Willingness to Pay.

By distinguishing relational confidence (trust) from behavioral readiness (purchase intention), the model captures dual psychological pathways shaping financial commitment in complementary health insurance participation (Hair et al., 2019; Henseler et al., 2015).

METHODS

Theoretical Framing

This study conceptualizes willingness to pay (WTP) as a behavioral outcome shaped by the interaction between cognitive evaluation, trust, and behavioral intention. Departing from classical economic models that emphasize income and risk (Cutler & Zeckhauser, 2000), this framework adopts a behavioral perspective in which financial participation is driven by psychological readiness (Ajzen, 1991).

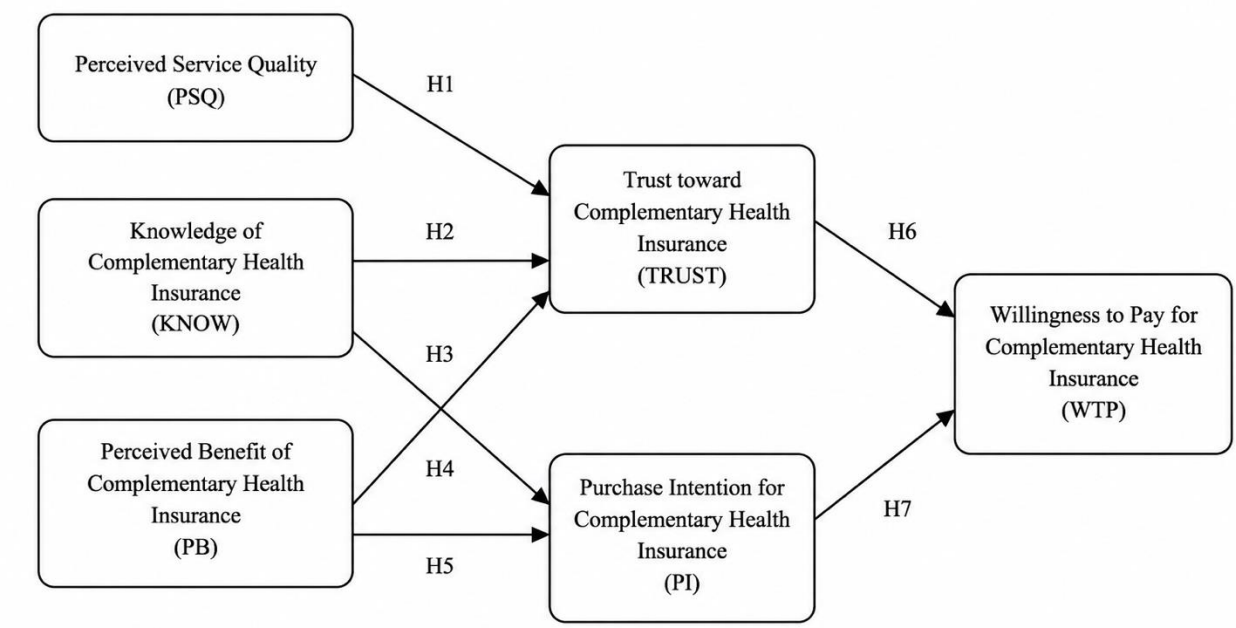


Figure 1. Conceptual Framework

Perceived service quality, knowledge, and perceived benefit function as cognitive antecedents that reduce uncertainty and shape value perceptions (Zeithaml, 1988). Among these, perceived benefit serves as the central evaluative mechanism linking cognition to both relational trust and behavioral intention (Savedoff & Smith, 2024).

Trust is conceptualized as a relational mechanism that mitigates uncertainty under information asymmetry (Mayer et al., 1995; McKnight et al., 2002), while purchase intention represents the proximal determinant of action (Ajzen, 1991). Consistent with recent evidence in health financing behavior, intention operates as the dominant pathway translating perception into financial commitment, whereas trust functions as an enabling condition (Greer et al., 2024).

Thus, willingness to pay emerges through a dual-pathway process, relational (trust) and behavioral (intention), providing an integrated explanation of voluntary participation in complementary health insurance within UHC systems.

Research Design

This study adopts a quantitative explanatory research design to examine behavioral determinants influencing Willingness to Pay (WTP) for Complementary Health Insurance (CHI) within Indonesia's Universal Health Coverage system. A survey-based approach was employed to measure perception-based and behavioral constructs associated with voluntary participation in complementary health insurance. The proposed conceptual framework was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM was selected due to its suitability for predictive-oriented research, complex mediation structures, and its robustness in handling reflective measurement models.

Population and Sample

The study population comprised individuals actively enrolled in Indonesia's national health insurance system (BPJS Kesehatan). Data were collected through a structured questionnaire distributed to BPJS Kesehatan participants across diverse demographic backgrounds. A total of 445 valid responses were obtained and included in the final analysis.

The sample size exceeds the minimum threshold recommended for PLS-SEM estimation and predictive assessment, ensuring adequate statistical power for structural model evaluation.

Measurement of Variables

All constructs were operationalized as reflective latent variables measured using multi-item indicators adapted from established literature in healthcare service quality, insurance behavior, and consumer decision-making research.

The constructs examined include: Perceived Service Quality, Knowledge of CHI, Perceived Benefit of CHI, Trust toward CHI, Purchase Intention, and Willingness to Pay.

Responses were collected using a six-point Likert scale, ranging from 1 ("strongly disagree") to 6 ("strongly agree"). The absence of a neutral midpoint was intended to reduce central tendency bias and encourage clearer attitudinal positioning among respondents.

Data Analysis Technique

Data were analyzed using SmartPLS 4 following a two-stage analytical procedure:

1. Measurement Model Evaluation
   The outer model assessment included: Indicator reliability (outer loadings), Internal consistency reliability (Composite Reliability), Convergent validity (Average Variance Extracted – AVE), and Discriminant validity using the Heterotrait-Monotrait (HTMT) ratio.
2. Structural Model Evaluation
   The inner model assessment examined: Path coefficients, Coefficient of determination (R^2), Effect size (f^2), Predictive relevance (Q^2_predict), Out-of-sample predictive performance using PLSpredict and Cross-Validated Predictive Ability Test (CVPAT).

Bootstrapping procedures with resampling techniques were applied to assess the statistical significance of direct and indirect effects.

Mediation Analysis

This study employs a parallel mediation framework, where Trust toward CHI and Purchase Intention simultaneously mediate the relationship between perception-based determinants (Perceived Service Quality, Knowledge, and Perceived Benefit) and Willingness to Pay. Indirect effects were assessed using bootstrapping procedures to determine mediation significance.

Ethical Consideration

Participation in the survey was voluntary. Respondents provided informed consent prior to completing the questionnaire. Data confidentiality and anonymity were maintained throughout the research process.

RESULTS AND DISCUSSION

Results

Measurement Model Assessment

The measurement model evaluation began with an assessment of indicator reliability based on outer loading values.

Table 1. Indicator Reliability

Construct	Indicator	Loading
Knowledge of Complementary Health Insurance	K1	0.872
(KNOW)	K2	0.916
	K3	0.896
	K4	0.887
	K5	0.876
Perceived Benefit of Complementary Health Insurance	PB1	0.800
(PB)	PB2	0.894
	PB3	0.886
	PB4	0.896
	PB5	0.854
Purchase Intention for Complementary Health Insurance	PI1	0.888
(PI)	PI2	0.898
	PI3	0.893
	PI4	0.813
	PI5	0.796
Perceived Service Quality	PSQ1	0.834
(PSQ)	PSQ2	0.829
	PSQ3	0.885
	PSQ4	0.873
	PSQ5	0.828
Trust toward Complementary Health Insurance	T1	0.873
(TRUST)	T2	0.889
	T3	0.931
	T4	0.909
	T5	0.916
Willingness to Pay for Complementary Health Insurance	WTP1	0.924
(WTP)	WTP2	0.851
	WTP3	0.946
	WTP4	0.914
	WTP5	0.902

All indicator loadings exceeded the recommended threshold of 0.70, ranging from 0.796 to 0.946, indicating satisfactory indicator reliability. Accordingly, all indicators were retained for subsequent analyses.

Table 2. Construct Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Knowledge of CHI	0.934	0.950	0.791
Perceived Benefit of CHI	0.917	0.938	0.751
Perceived Service Quality	0.904	0.929	0.723
Purchase Intention for CHI	0.910	0.933	0.737
Trust toward CHI	0.944	0.957	0.817
Willingness to Pay for CHI	0.947	0.959	0.825

Abbreviation: CHI = Complementary Health Insurance

Construct reliability and convergent validity were assessed using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE). As presented in Table 2, all constructs demonstrated satisfactory internal consistency, with Cronbach's alpha values ranging from 0.904 to 0.947 and composite reliability values ranging from 0.929 to 0.959 exceeding the recommended threshold of 0.70. Furthermore, AVE values ranged from 0.723 to 0.825, all exceeding the recommended threshold of 0.50, thereby confirming adequate convergent validity. Overall, these findings indicate that the measurement model demonstrates satisfactory reliability and validity, supporting subsequent structural model evaluation.

Discriminant Validity

Table 3. Discriminant Validity Assessment (HTMT)

	PSQ	Knowledge	Benefit	Trust	PI	WTP
PSQ	—					
Knowledge	0.182	—				
Benefit	0.150	0.801	—			
Trust	0.272	0.724	0.835	—		
PI	0.170	0.611	0.621	0.740	—	
WTP	0.174	0.592	0.607	0.672	0.884	—

Discriminant validity was assessed using the Heterotrait–Monotrait ratio (HTMT). All HTMT values were below the conservative criterion of 0.90, with the highest value observed between Purchase Intention and Willingness to Pay (0.884). Furthermore, the bias-corrected confidence intervals did not include the value of 1.0, confirming adequate discriminant validity among the constructs.

These findings confirm that the measurement model demonstrated adequate discriminant validity, supporting subsequent structural model evaluation.

Structural Model Assessment

Structural Path Coefficients

The structural model was evaluated to examine the hypothesized relationships among the study constructs. Bootstrapping procedures were applied to assess the statistical significance of the path coefficients.

Table 4. Structural Path Coefficients

Hypothesized Relationships	β	t-value	p-value
Knowledge → Purchase Intention	0.317	4.629	<0.001
Knowledge → Trust	0.206	3.711	<0.001
Perceived Service Quality → Trust	0.131	3.905	<0.001
Perceived Benefit → Purchase Intention	0.338	4.956	<0.001
Perceived Benefit → Trust	0.613	11.618	<0.001
Purchase Intention → WTP	0.736	18.087	<0.001
Trust → WTP	0.130	3.011	0.003

The structural model results reveal that Purchase Intention has the strongest direct effect on Willingness to Pay ($\beta = 0.736$, $p < 0.001$), indicating that behavioral intention plays a dominant role in shaping financial readiness for complementary health insurance participation.

Perceived Benefit significantly influences both Trust ($\beta = 0.613$, $p < 0.001$) and Purchase Intention ($\beta = 0.338$, $p < 0.001$), suggesting that perceived value is a key psychological driver in the model. In contrast, Perceived Service Quality demonstrates a relatively modest effect on Trust ($\beta = 0.131$, $p < 0.001$).

Although Trust significantly affects Willingness to Pay ($\beta = 0.130$, $p < 0.01$), its magnitude is substantially lower than that of Purchase Intention, supporting the mediating role of intention in translating trust into payment willingness.

Both Trust and Purchase Intention showed significant positive relationships with Willingness to Pay, confirming their roles as key behavioral determinants in voluntary complementary insurance participation.

Model Explanatory Power

Table 5. Coefficient of Determination (R^2)

Endogenous Construct	R^2	Interpretation
Purchase Intention toward CHI	0.374	Moderate
Trust toward CHI	0.654	Substantial
Willingness to Pay	0.690	Substantial

Table 5 presents the coefficient of determination (R^2) values used to assess the explanatory power of the structural model. The results indicate that perceived determinants explain 37.4% of the variance in purchase intention, 65.4% of trust toward complementary health insurance, and 69.0% of willingness to pay. According to recommended PLS-SEM evaluation criteria, the model demonstrates moderate to substantial explanatory power, particularly in predicting willingness to pay, indicating that behavioral and perception-based constructs meaningfully contribute to participation decisions in complementary health insurance.

Predictive Assessment

Table 6 - Effect Size (f^2) of Structural Relationships

Structural Relationship	f^2	Effect Size
Knowledge → Purchase Intention	0.072	Small
Knowledge → Trust	0.054	Small
Perceived Service Quality → Trust	0.048	Small
Perceived Benefit → Purchase Intention	0.082	Small
Perceived Benefit → Trust	0.486	Large
Purchase Intention → WTP	0.916	Large
Trust → WTP	0.029	Small

Table 6 presents the effect size (f^2) values, indicating the relative contribution of each exogenous construct to endogenous constructs. The results show that purchase intention exerts the strongest effect on willingness to pay ($f^2 = 0.916$), followed by perceived benefit on trust ($f^2 = 0.486$), both categorized as large effects.

In contrast, knowledge and perceived service quality demonstrate small effect sizes, suggesting that cognitive understanding alone may be insufficient to substantially influence willingness-to-pay decisions without behavioral intention and perceived value formation.

Predictive Relevance Assessment

Table 7. Predictive Relevance Assessment (PLSpredict Results)

Endogenous Construct	Q^2predict	RMSE	MAE	Predictive Relevance
Purchase Intention	0.366	0.803	0.586	Supported
Trust toward CHI	0.647	0.600	0.424	Supported
Willingness to Pay	0.360	0.805	0.613	Supported

The PLSpredict assessment indicates that all endogenous constructs yielded positive Q^2predict values, confirming the proposed model's predictive relevance. Trust toward complementary health insurance demonstrates the strongest predictive capability (Q^2predict = 0.647), followed by purchase intention (0.366) and willingness to pay (0.360).

Table 8. Out-of-Sample Predictive Power (CVPAT Results)

Construct	PLS Loss	IA Loss	Difference	p-value	Result
Purchase Intention	0.921	1.244	-0.323	0.000	Supported

Trust	0.414	0.863	-0.449	0.000	Supported
Willingness to Pay	0.942	1.333	-0.391	0.000	Supported

Note: Negative loss differences and significant p-values indicate superior predictive performance of the PLS-SEM model compared to the indicator average benchmark.

Furthermore, CVPAT results reveal that the PLS-SEM model consistently outperforms the indicator average benchmark, as evidenced by the negative loss differences and statistically significant p-values ($p < 0.001$). These findings confirm the model's robust out-of-sample predictive power, supporting its applicability for predicting voluntary participation behavior in complementary health insurance adoption.

Mediation Analysis

To further examine the behavioral mechanisms underlying willingness to pay for Complementary Health Insurance, mediation analysis was conducted using bootstrapping procedures. The results indicate that Trust toward CHI and Purchase Intention function as parallel mediators linking perception-based determinants to Willingness to Pay.

Trust toward CHI mediates the relationship between perception-related constructs and individuals' willingness-to-pay decisions. Positive perceptions regarding service quality, knowledge, and perceived benefits contribute to the development of trust, which subsequently enhances willingness to pay. Similarly, Purchase Intention demonstrates a significant mediating effect, translating cognitive evaluation and perceived value into behavioral readiness to participate in complementary insurance schemes.

The findings suggest that willingness to pay is not formed directly through perception alone but emerges through dual psychological pathways: relational confidence (trust) and behavioral intention (purchase intention). These results confirm the importance of distinguishing between attitudinal trust formation and action-oriented intention in explaining voluntary participation in complementary health insurance.

Discussion

The Dominant Role of Behavioral Intention in Driving Willingness to Pay

The results indicate that purchase intention is the strongest predictor of willingness to pay (WTP) for Complementary Health Insurance (CHI), with a substantially higher path coefficient ($\beta = 0.736$) than trust ($\beta = 0.130$). While trust provides a relational foundation, purchase intention is the primary mechanism translating favorable perceptions into financial commitment.

These findings extend the Theory of Planned Behavior (Ajzen, 1991) by showing that, in a Universal Health Coverage (UHC) setting, purchase intention not only predicts participation but also reinforces individuals' willingness to pay for Complementary Health Insurance (CHI). These findings suggest that financial commitment is increasingly driven by psychological readiness rather than economic necessity alone.

The findings also complement traditional insurance demand theory (Cutler & Zeckhauser, 2000) by demonstrating that, once basic healthcare is secured through UHC, willingness to pay is influenced more by behavioral intention than by financial considerations. This conclusion aligns with recent evidence identifying behavioral intention as the most proximal determinant of voluntary insurance participation (Zheng et al., 2025; Abdullah et al., 2025).

Perceived Benefit as the Primary Driver of Trust Formation

Perceived benefit demonstrates a substantial effect on trust ($\beta = 0.613$; $f^2 = 0.486$), indicating that perceived value is the primary psychological mechanism underlying trust in

Complementary Health Insurance. Interestingly, perceived service quality of BPJS exhibits only a modest effect on trust (β = 0.131). This implies that dissatisfaction with public service quality alone does not automatically translate into higher complementary insurance participation. Instead, individuals must perceive tangible and meaningful benefits from supplementary coverage. This finding contributes to healthcare financing literature by emphasizing value-based communication over service dissatisfaction narratives in promoting voluntary health insurance participation.

Trust as a Supporting but Not Dominant Predictor of Willingness to Pay

Trust significantly influences willingness to pay (β = 0.130), yet its effect size is small compared to purchase intention. This indicates that trust functions as an enabling condition rather than a primary driver. Individuals may trust the system, but without strong behavioral intention and perceived benefit, such trust does not substantially convert into payment willingness. The mediation structure confirms that trust and purchase intention jointly translate perception into financial commitment, reinforcing the importance of psychological readiness mechanisms.

Model Predictive Capability and Policy Implications

The predictive assessment using PLSpredict and CVPAT confirms that the model demonstrates substantial out-of-sample predictive power, particularly in explaining willingness to pay behavior. This strengthens the applicability of the framework for policy simulation and insurance market development strategies within universal health coverage systems. From a policy perspective, the findings suggest that strengthening complementary health insurance participation should prioritize: enhancing perceived benefit clarity, simplifying product communication to improve knowledge, and designing value-enhancing complementary schemes rather than duplicative coverage.

These strategies may improve voluntary participation without undermining the core public insurance system.

Theoretical Contributions

This study makes several important contributions to the literature on healthcare financing, insurance behavior, and universal health coverage.

First, the findings extend behavioral intention theory in the context of complementary health insurance adoption under a universal health coverage system. While prior studies frequently emphasize knowledge or service dissatisfaction as key determinants of voluntary insurance participation, this study demonstrates that behavioral intention is the most dominant predictor of willingness to pay. This highlights the mediating psychological mechanism between perception and financial commitment.

Second, the study identifies perceived benefit as the primary driver of trust formation, rather than perceived service quality of the public insurance system. This distinction refines the understanding of complementary insurance participation by shifting the focus from system dissatisfaction to value perception. The findings suggest that individuals are more likely to develop trust when they recognize meaningful added benefits, rather than merely reacting to perceived shortcomings of public services.

Third, by incorporating predictive assessment techniques such as PLSpredict and CVPAT, this study extends traditional explanatory modeling with predictive performance evaluation. The results demonstrate substantial out-of-sample predictive performance, positioning the proposed model as a practical forecasting framework for voluntary insurance behavior in mixed public–private healthcare systems.

Together, these contributions provide a unified behavioral explanation for complementary health insurance participation by integrating perception, trust formation, intention development, and willingness to pay into a single predictive framework.

Practical Implications

The findings offer actionable implications for policymakers, regulators, and private insurance providers operating within universal health coverage environments.

First, strategies aimed at increasing complementary health insurance uptake should prioritize strengthening perceived benefit communication. Clear articulation of added value—such as faster access, broader provider networks, and enhanced service experience—appears more effective than emphasizing weaknesses in public insurance systems.

Second, improving insurance literacy remains important, but informational campaigns alone are unlikely to significantly increase participation without simultaneously fostering behavioral intention. Educational efforts should therefore integrate benefit visualization tools, cost simulations, and simplified policy language.

Third, regulators may consider encouraging complementary scheme designs that enhance system efficiency rather than duplicate coverage. A value-enhancing, supplementary positioning can reduce moral hazard concerns while strengthening financial sustainability.

Finally, the model's predictive capability suggests that it may be used as a policy simulation tool to estimate potential participation changes under different communication or product design interventions.

CONCLUSION

This study develops and empirically validates a predictive behavioral framework explaining willingness to pay for complementary health insurance within Indonesia's universal health coverage system.

The results demonstrate that behavioral intention serves as the dominant pathway translating perceived benefit and trust into financial commitment. While knowledge and service quality perceptions contribute to the formation of trust and intention, their direct practical influence remains limited without strong intention development.

The predictive assessment further confirms that the model possesses substantial out-of-sample predictive power, supporting its application for strategic policy and insurance market development.

Overall, the findings underscore the importance of value-centered communication and behavioral readiness mechanisms in promoting sustainable complementary health insurance participation.

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