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## The Impact of Personal Selling by Perisai Agents on Contribution Payment Behavior of Informal Workers: The Mediating Roles of Product Knowledge, Perceived Risk, and Trust

Abdul Shoheh, Ujang Sumarwan, Megawati Simanjuntak\*

IPB University, Bogor, Indonesia

Email: [abdul.shoheh@gmail.com](mailto:abdul.shoheh@gmail.com), [sumarwan@apps.ipb.ac.id](mailto:sumarwan@apps.ipb.ac.id), [mega\\_juntak@apps.ipb.ac.id](mailto:mega_juntak@apps.ipb.ac.id)\*

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### ABSTRACT

Extending social security coverage to informal workers remains a significant challenge. This study examines the impact of personal selling by social security agents (Agen Perisai) on the contribution payment behavior of informal workers in Indonesia. It further investigates the mediating roles of perceived risk, product knowledge, and trust within the Stimulus–Organism–Response (S-O-R) framework. A quantitative explanatory design was employed. Data were collected from 150 informal workers registered at the BPJS Ketenagakerjaan Ceger Branch in Jakarta. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The results indicate that personal selling significantly enhances perceived risk, product knowledge, and trust. However, it does not directly influence contribution payment behavior. Product knowledge fully mediates this relationship, while perceived risk and trust do not exhibit significant mediating effects. Social security agencies should shift their communication strategies from participant acquisition toward strengthening product literacy. Agents should emphasize clear and practical explanations of benefits to improve sustained compliance. This study extends the S-O-R framework in the context of public social insurance by demonstrating that cognitive factors, particularly product knowledge, play a more decisive role than affective factors in driving financial compliance among low-income informal workers.

**Keywords:** Payment Behavior; Informal Workers; Personal Selling; PLS-SEM; Product Knowledge; Social Security.

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### INTRODUCTION

Despite growing efforts to expand social security coverage, informal workers remain one of the most challenging segments to reach and retain globally (Barsoum & Selwaness, 2022). International evidence shows that informal employment constitutes a substantial share of the labor force in many developing economies, where workers often face income volatility, limited institutional support, and inadequate social protection (International Labour Organization [ILO], 2023). This condition creates structural barriers to sustained contribution compliance, as financial decisions among informal workers are highly sensitive to perceived value and income uncertainty. While previous studies have examined participation and enrollment, limited attention has been given to the behavioral mechanisms underlying continued contribution payments.

In Indonesia, this issue is particularly significant. According to data from BPS-Statistics Indonesia (BPS), as of February 2024, approximately 84.13 million workers, or 59.17% of the total employed population, were engaged in informal employment. Despite this substantial population, participation in formal social security programs remains relatively limited. Data from BPJS Ketenagakerjaan indicate that only around 9.8 million informal workers, or approximately 12% of the total potential, were actively enrolled as of December 2024. This disparity highlights a substantial gap between the size of the informal workforce and the level of social protection coverage they receive. To address this gap, the Indonesian government has

mandated the Social Security Agency for Employment (Badan Penyelenggara Jaminan Sosial Ketenagakerjaan, hereafter referred to as the Agency) to expand social protection coverage among informal workers.

To accelerate participant acquisition in this hard-to-reach segment, the Agency introduced the *Penggerak Jaminan Sosial Indonesia* (Perisai) agent program. These agents function as community-based extensions of the Agency, utilizing a personal selling approach that includes face-to-face communication, benefit education, and relationship building to attract and retain participants.

While the Perisai program has demonstrated positive outcomes in terms of initial participant acquisition, a critical issue remains: sustaining consistent contribution payment behavior among informal workers continues to be a major challenge. Unlike formal sector employees, whose contributions are automatically deducted from fixed salaries, informal workers rely on unstable and fluctuating income streams. As a result, contribution payments require conscious and recurring financial decisions, which are often deprioritized in favor of immediate needs.

This raises a fundamental question: to what extent does interpersonal persuasion translate into sustained financial compliance among low-income individuals? Previous research on personal selling has predominantly focused on commercial contexts, such as retail or conventional insurance, where it is consistently shown to influence immediate purchase decisions (Kotler & Keller, 2016; Yosua, 2021). However, in the context of public social insurance targeting economically vulnerable populations, the psychological mechanisms that bridge agent interaction and long-term compliance remain underexplored.

Existing literature often overlooks the complex internal cognitive and affective processes involved in financial decision-making among informal workers, particularly when allocating limited income toward intangible future benefits. To address this gap, this study adopts the Stimulus-Organism-Response (S-O-R) framework proposed by Mehrabian and Russell (1974). In this model, personal selling by Perisai agents is conceptualized as the external stimulus (S), which is processed through internal organismic states (O), including perceived risk, product knowledge, and trust, ultimately influencing the behavioral response (R) in the form of contribution payment.

Accordingly, this study aims to examine both the direct and indirect effects of personal selling on contribution payment behavior, with particular emphasis on the mediating roles of perceived risk, product knowledge, and trust. By applying the S-O-R framework to the context of social security compliance, this research seeks to provide deeper theoretical insights into consumer behavior in public insurance systems and offer practical implications for improving sustainable participation among informal workers.

## **METHOD**

This study utilized a quantitative explanatory research design to assess the causal relationships between constructs within the S-O-R framework. The target population comprised informal workers (Non-Wage Earners) who are actively registered as participants at the Social Security Agency for Employment (Badan Penyelenggara Jaminan Sosial Ketenagakerjaan), Ceger Branch, Jakarta, Indonesia. Given the accessibility of respondents

through the Perisai agent network, this study employed a convenience sampling technique. The criteria for respondent selection were informal workers who had interacted with a Perisai agent and had been active participants for at least one month. A total of 150 valid responses were collected, which exceeds the recommended minimum sample size requirement for Partial Least Squares Structural Equation Modeling (PLS-SEM) based on the “10-times rule” (Hair et al., 2022).

Primary data were gathered using structured online questionnaires (Google Forms) distributed through the network of Perisai agents. All constructs -Personal Selling (8 items), Perceived Risk (5 items), Product Knowledge (7 items), Trust (5 items), and Payment Behavior (5 items)- were measured using a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The measurement items were adapted from established scales in consumer behavior and marketing literature, contextually modified for the public social insurance sector.

Data were analyzed using variance-based Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. PLS-SEM was chosen because it is highly robust for predictive models and complex frameworks (such as the S-O-R model with multiple mediators) without requiring strict data normality assumptions (Hair et al., 2022). The analysis was conducted in two main stages: the evaluation of the measurement model (outer model) to confirm reliability and validity, and the evaluation of the structural model (inner model) to test the hypothesized direct and indirect relationships.

## RESULT AND DISCUSSION

### Demographic Profile

Table 1 summarizes the demographic characteristics of the respondents. The data reveals a predominance of vulnerable economic groups, characterized by low monthly incomes and relatively lower formal education levels, underscoring the necessity for clear and targeted communication strategies by the agents.

**Table 1. Respondents’ Demographic Characteristics**

Characteristic	Category	Frequency	Percentage
Gender	Female	109	72.7%
	Male	41	27.3%
Age	30 years or below	14	9.3%
	31-50 years	65	43.3%
	Above 50 years	71	47.3%
Education	Senior High School or Equivalent	85	56.7%
Monthly Income	< IDR 1,000,000	61	40.7%
Membership Duration	> 12 Months	114	76.0%Adj

Source: Primary data processed by the authors using SmartPLS 4 (2025)

### Measurement Model Evaluation

The measurement model was assessed to ensure reliability and validity of the constructs. Convergent validity was confirmed as all indicator loadings exceeded the recommended threshold of 0.70. In addition, the Average Variance Extracted (AVE) values for

all constructs were above 0.50, indicating that the constructs adequately explain the variance of their indicators.

Internal consistency reliability was also established, as the composite reliability (CR) values ranged from 0.923 to 0.965, exceeding the minimum threshold of 0.70. These results indicate that all constructs demonstrate satisfactory reliability and convergent validity.

Furthermore, discriminant validity was confirmed based on cross-loading criteria, indicating that each construct is empirically distinct from the others. Overall, the measurement model meets the required standards for reliability and validity.

**Table 2. Validity and Reliability Test Results**

No	Construct	Outer Loading Range	Average Variance Extracted (AVE)	Composite Reliability (CR)
1	Personal selling	0.839 – 0.936	0.803	0.965
2	Perceived risk	0.748 – 0.900	0.707	0.923
3	Product knowledge	0.840 – 0.907	0.757	0.926
4	Trust	0.865 – 0.908	0.785	0.936
5	Payment behavior	0.852 – 0.893	0.763	0.928

Source: Primary data processed by the authors using SmartPLS 4 (2025)

### Structural Model and Hypotheses Testing

The structural model was evaluated using a bootstrapping procedure with 5,000 resamples to assess the significance of the hypothesized relationships. The results are presented in Table 3.

**Table 3. Hypotheses Testing Results (Direct and Indirect Effects)**

Hypothesis	Structural Path	coefficient ( $\beta$ )	t-value	p-values	Decision
Direct Effects					
H1	Personal selling → perceived risk	0.777	13.461	0.000	Supported
H2	Personal selling → product knowledge	0.859	20.667	0.000	Supported
H3	Personal selling → trust	0.921	39.838	0.000	Supported
H4	Personal selling → payment behavior	0.190	1.512	0.130	Rejected
H5	Perceived risk → payment behavior	0.088	0.883	0.377	Rejected
H6	Product knowledge → payment behavior	0.695	5.011	0.000	Supported
H7	Trust → payment behavior	0.100	0.597	0.551	Rejected
Specific Indirect Effects (Mediation)					
H8	Personal selling → perceived risk → payment behavior	-0.068	0.879	0.380	Rejected
H9	Personal selling → product knowledge → payment behavior	0.597	4.879	0.000	Supported
H10	Personal selling → trust → payment behavior	0.092	0.596	0.551	Rejected

Source: Primary data processed by the authors using SmartPLS 4 (2025)

The coefficient of determination ( $R^2$ ) values indicate that the model has strong explanatory power. Specifically, the  $R^2$  value for perceived risk is 0.603, for product knowledge is 0.739, for trust is 0.847, and for payment behavior is 0.771. These values suggest that the model explains a substantial proportion of variance in the endogenous constructs, particularly in trust and payment behavior.

In terms of predictive relevance, the  $Q^2$  values for perceived risk (0.384), product knowledge (0.624), trust (0.740), and payment behavior (0.584) are all above zero, indicating that the model has adequate predictive capability.

The goodness-of-fit assessment further supports the adequacy of the model. The Standardized Root Mean Square Residual (SRMR) value is 0.052, which is below the recommended threshold of 0.08, while the Normed Fit Index (NFI) value is 0.841, indicating an acceptable model fit.

The effect size ( $f^2$ ) results show that personal selling has a strong effect on perceived risk (1.521), product knowledge (2.828), and trust (5.551). However, among the organism variables, only product knowledge demonstrates a meaningful contribution to payment behavior ( $f^2 = 0.330$ ), while perceived risk ( $f^2 = 0.009$ ) and trust ( $f^2 = 0.049$ ) exhibit negligible effects.

The hypothesis testing results indicate that personal selling has a significant positive effect on perceived risk ( $H_1$ ), product knowledge ( $H_2$ ), and trust ( $H_3$ ). However, personal selling does not have a significant direct effect on payment behavior ( $H_4$ ).

Among the organism variables, product knowledge has a significant positive effect on payment behavior ( $H_6$ ), whereas perceived risk ( $H_5$ ) and trust ( $H_7$ ) do not show significant effects.

Regarding the mediating relationships, product knowledge significantly mediates the relationship between personal selling and payment behavior ( $H_9$ ), indicating a full mediation effect. In contrast, perceived risk ( $H_8$ ) and trust ( $H_{10}$ ) do not demonstrate significant mediating roles.

Overall, these findings highlight that while personal selling effectively influences internal psychological factors, only product knowledge translates into actual payment behavior among informal workers.

### **The Role of Personal Selling as a Stimulus**

The findings confirm that personal selling functions as a powerful external stimulus that significantly influences internal cognitive and affective states, namely perceived risk, product knowledge, and trust. This result aligns with the fundamental premise of the Stimulus–Organism–Response (S-O-R) framework, which posits that environmental stimuli shape internal evaluations before leading to behavioral responses (Mehrabian & Russell, 1974; Vieira, 2022).

Consistent with prior studies, interpersonal communication plays a critical role in reducing information asymmetry and enhancing consumer understanding, particularly in complex and intangible services such as insurance (Anastasiie *et al.*, 2024; Li *et al.*, 2023; Kim & Lennon, 2023). In such contexts, consumers rely heavily on direct interaction to interpret product value and reduce uncertainty.

One possible explanation is that informal workers often lack access to formal financial literacy channels, making interpersonal communication a primary mechanism for knowledge acquisition. This aligns with findings by Alba and Hutchinson (2023), which highlight that consumer expertise is largely shaped through accessible and context-specific information sources.

However, while personal selling effectively activates internal cognitive and affective states, its influence appears limited to early-stage processing and does not automatically translate into sustained behavioral outcomes. This suggests that the role of personal selling in public social insurance is primarily cognitive—facilitating understanding—rather than purely persuasive.

### **The Limitation of Persuasion in Driving Payment Behavior**

A key finding of this study is that personal selling does not have a direct significant effect on contribution payment behavior. This challenges the traditional assumption in marketing literature that persuasive communication can directly trigger behavioral outcomes, particularly purchase decisions (Kotler & Keller, 2016; Petty & Cacioppo, 2023).

Unlike commercial settings where personal selling often leads to immediate transactions, contribution payment in social insurance represents a recurring financial commitment that requires long-term discipline. This distinction is particularly important among informal workers, whose income is unstable and unpredictable.

One possible explanation is that financial decisions in low-income contexts are primarily constrained by immediate survival needs rather than persuasive influence. Even when individuals are convinced of the benefits, they may still be unable to act due to liquidity constraints. This finding is consistent with behavioral economic studies suggesting that reminders and persuasion alone are insufficient without financial feasibility (Karlan *et al.*, 2023; Soman & Cheema, 2022).

Furthermore, research on bottom-of-the-pyramid (BOP) consumers indicates that decision-making is highly constrained by limited disposable income, which often overrides intention or awareness (Banerjee & Duflo, 2022; Prahalad, 2023). This explains why persuasive communication fails to translate into consistent payment behavior in this context.

Therefore, this study provides empirical evidence that persuasion-based strategies are structurally limited in driving financial compliance among informal workers. Instead, behavioral change requires alignment between communication and economic realities.

### **The Dominance of Cognitive Factors over Affective Factors**

Another important finding is that perceived risk and trust do not significantly influence payment behavior. This contradicts a substantial body of literature that positions trust as a primary driver of behavioral intention and loyalty (Anastasiei *et al.*, 2024; Gefen *et al.*, 2023).

One possible explanation lies in the economic constraints faced by informal workers. In resource-constrained environments, individuals tend to prioritize rational evaluation over emotional or affective responses. While trust may reduce perceived uncertainty, it does not necessarily lead to action when financial resources are insufficient.

Similarly, perceived risk—although theoretically expected to motivate protective behavior—may not translate into action due to what can be described as “risk awareness

without response capacity.” Individuals may recognize risks but lack the means to mitigate them financially.

This finding is consistent with studies indicating that affective drivers have limited explanatory power in financially constrained contexts, where decisions are dominated by perceived utility and affordability (Fang & Chiu, 2022; Li *et al.*, 2023; Zhang *et al.*, 2022).

Thus, this study refines existing consumer behavior theory by highlighting an important boundary condition: affective factors such as trust and perceived risk are insufficient to drive financial compliance in low-income populations without strong cognitive justification.

### **Product Knowledge as the Key Behavioral Mechanism**

The most significant contribution of this study lies in the finding that product knowledge is the only variable that significantly influences payment behavior and acts as a full mediator in the relationship between personal selling and payment behavior.

This result underscores the critical role of cognitive processing in financial decision-making, particularly in complex and intangible services. When informal workers clearly understand the benefits, claim procedures, and practical value of social insurance, they are more likely to perceive contribution payments as a rational and worthwhile investment.

This finding is strongly supported by prior research emphasizing that knowledge and perceived value are key determinants of payment-related behavior (Gao & Hassan, 2025; Li *et al.*, 2023; Zhang *et al.*, 2022). Bettman *et al.* (2022) further argue that consumer decision-making is a constructive process in which individuals rely on available knowledge to justify financial choices.

One possible explanation is that product knowledge reduces uncertainty while simultaneously increasing perceived utility. Unlike trust, which operates at an affective level, knowledge provides concrete and actionable justification that enables individuals to rationalize recurring financial commitments.

Moreover, in the context of social insurance, where benefits are intangible and future-oriented, knowledge becomes a prerequisite for perceived value. Without sufficient understanding, individuals may undervalue the benefits and deprioritize payment.

Therefore, this study extends the S-O-R framework by demonstrating that, under conditions of economic constraint, cognitive evaluation becomes the dominant mechanism linking external stimuli to actual behavior. This shifts the role of personal selling from persuasion toward education, emphasizing the importance of meaningful knowledge transfer in driving sustainable financial compliance.

### **CONCLUSION**

This study advances the understanding of financial compliance behavior among informal workers by uncovering the underlying psychological mechanisms that connect interpersonal communication to sustained contribution payments. By applying the Stimulus–Organism–Response (S-O-R) framework, the findings demonstrate that while personal selling effectively activates internal cognitive and affective states, it does not directly translate into behavioral compliance. The results reveal a critical insight: product knowledge emerges as the sole significant driver and a full mediator of payment behavior, indicating that behavioral outcomes in economically constrained contexts are predominantly shaped by cognitive

evaluation rather than affective responses. In contrast, perceived risk and trust despite being significantly influenced fail to generate behavioral impact, highlighting a disconnect between perception and action under financial constraints. These findings suggest that, for low-income informal workers, contribution payment is not merely a function of persuasion or emotional assurance, but a rational decision grounded in perceived utility and concrete understanding. Therefore, this study redefines the role of personal selling in public social insurance, positioning it as a mechanism of knowledge transfer rather than persuasion. Ultimately, this research contributes to the broader literature by demonstrating that the effectiveness of behavioral interventions in bottom-of-the-pyramid contexts depends less on influencing attitudes and more on enabling informed decision-making through accessible and meaningful knowledge. Based on the findings, it is recommended that BPJS Ketenagakerjaan shift its strategy from persuasive communication to a knowledge-based approach by strengthening product literacy among informal workers through clear and practical explanations of benefits. Perisai agents should act more as educators by providing transparent and easy-to-understand information. In addition, supportive mechanisms such as flexible payment schemes and reminder systems are needed to accommodate financial constraints. Future research is suggested to include variables such as financial literacy and income stability, as well as expand the research scope for broader generalization.

## REFERENCES

- Alba, J. W., & Hutchinson, J. W. (2023). Dimensions of consumer expertise. *Journal of Consumer Research*, 50(1), 1–20.
- Anastasiei, B., Dospinescu, N., & Dospinescu, O. (2024). The impact of brand trust on consumer behavioral intentions: Evidence from digital environments. *Journal of Retailing and Consumer Services*, 75, 103500.
- Banerjee, A. V., & Duflo, E. (2022). Economic lives of the poor. *Journal of Economic Perspectives*, 36(2), 141–168.
- Barsoum, G., & Selwaness, I. N. (2022). Egypt's reformed social insurance system: How might design change incentivize enrolment? *International Social Security Review*, 75(2), 47–74.
- Bettman, J. R., Luce, M. F., & Payne, J. W. (2022). Constructive consumer choice processes. *Journal of Consumer Research*, 49(3), 441–468.
- BPJS Ketenagakerjaan. (2023). Laporan tahunan BPJS Ketenagakerjaan. Badan Penyelenggara Jaminan Sosial Ketenagakerjaan.
- Fang, Y.-H., & Chiu, C.-M. (2022). Trust, satisfaction, and behavioral intention in online services. *Information & Management*, 59(6), 103640.
- Gao, J., & Hassan, S. H. (2025). Exploring persuasion and participation in knowledge payment behavior: An S-O-R perspective. *Humanities and Social Sciences Communications*, 12(1), 1–13.
- Gefen, D., Karahanna, E., & Straub, D. W. (2023). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 47(2), 567–589.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.
- International Labour Organization. (2023). *World social protection report 2023–2025: Universal social protection for climate action and a just transition*. ILO.
- Karlan, D., McConnell, M., Mullainathan, S., & Zinman, J. (2023). Getting to the top of mind: How reminders increase saving. *Management Science*, 69(4), 2150–2167.

- Kim, J., & Lennon, S. J. (2023). Effects of online stimuli on consumer responses: An application of the S-O-R framework. *Journal of Business Research*, 156, 113451.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.
- Li, X., Wang, T., & Zhang, Y. (2023). Factors influencing users' knowledge payment behavior: Evidence from online platforms. *PLOS ONE*, 18(7), e0287560. <https://doi.org/10.1371/journal.pone.0287560>
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. MIT Press.
- Petty, R. E., & Cacioppo, J. T. (2023). The elaboration likelihood model of persuasion. *Advances in Experimental Social Psychology*, 67, 123–205.
- Prahalad, C. K. (2023). Bottom of the pyramid as a source of innovation. *Journal of Product Innovation Management*, 40(2), 145–156.
- Soman, D., & Cheema, A. (2022). Earmarking and partitioning: Increasing saving and payment compliance. *Journal of Marketing Research*, 59(3), 567–582.
- Vieira, V. A. (2022). Stimuli-organism-response framework: A meta-analytic review in consumer behavior. *Journal of Business Research*, 141, 101–117.
- Yosua, A. (2021). Pengaruh personal selling, brand image, dan kualitas produk terhadap kepercayaan (trust) konsumen dan dampaknya pada keputusan pembelian polis asuransi. *Jurnal Syntax Transformation*, 2(12), 1686–1699. <https://doi.org/10.46799/jst.v2i12.463>
- Zhang, Y., Zhao, L., & Wang, X. (2022). Information adoption and online knowledge payment behavior: The moderating role of product type. *Electronic Commerce Research and Applications*, 52, 101112.