
**THE INFLUENCE OF SERVICE QUALITY AND PREMIUM AMOUNT ON
THE CONTRIBUTION COLLECTIBILITY OF PBPU PARTICIPANTS OF
BPJS HEALTH IN WEST JAKARTA CITY**

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Abstract

This study concludes that service quality and premium amount have a positive and significant effect on the contribution collectibility of PBPU participants in BPJS Health. Service quality is identified as the most dominant factor in improving contribution payment compliance. Practically, the findings indicate that strategies to improve contribution collectibility should not rely solely on premium adjustments, but must also be accompanied by improvements in service quality, particularly in terms of accessibility, service speed, and user experience. An integrated approach between service enhancement and tariff policy is expected to increase payment compliance and support the sustainability of the National Health Insurance (JKN) program.

Keywords: Service Quality, Premium Amount, Contribution Collectibility, BPJS Health, PBPU Participants, Payment Compliance, National Health Insurance (JKN).

INTRODUCTION

The National Health Insurance (JKN) program, administered by BPJS Kesehatan (Social Security Agency for Health) since 2014, has been Indonesia's primary instrument for achieving Universal Health Coverage (UHC), ensuring access to quality healthcare without financial hardship for the entire population. JKN membership is mandatory and covers all segments of society, including Non-Wage Workers (PBPJ) from the informal sector (Agustina et al., 2019; Dartanto et al., 2020). Although national coverage has reached over 80% of the population, the program's sustainability still faces serious challenges, particularly related to low contribution payment compliance among the PBPJ segment (Utami et al., 2024).

Table 1.
PBPJ Contribution Revenue

YEARS	Contribution Income
2014	Rp. 40,7 trillion
2015	Rp. 52,7 trillion
2016	Rp. 67,4 trillion
2017	Rp. 74,2 trillion
2018	Rp. 85,4 trillion
2019	Rp. 111,8 trillion
2020	Rp. 139,9 trillion
2021	Rp. 143,3 trillion
2022	Rp. 144,0 trillion
2023	Rp. 151,7 trillion
2024	Rp. 165,3 trillion
2025	Rp. 176,3 trillion

Source: BPJS Kesehatan Report

PBPJ (Unintelligible Beneficiaries) are a group characterized by irregular incomes, making them at high risk of non-compliance with regular premium payments. Various studies have shown that the contribution collectibility rate in this segment is relatively low and is a major contributor to arrears in the National Health Insurance (JKN) system, which impacts financing imbalances and potential program deficits (Sparrow et al., 2020; Maulana et al., 2022). Therefore, understanding the factors influencing PBPJ contribution collectibility is crucial for maintaining the sustainability of the national health insurance system.

In addition to economic factors, the quality of healthcare services perceived by participants also plays a role in shaping compliance behavior. The implementation of JKN has been shown to increase healthcare utilization, but various complaints remain regarding service quality, such as waiting times, administrative procedures, and user experience (Erlangga et al., 2019). In the era of digital transformation, service quality has evolved into service quality 4.0, encompassing aspects of digital accessibility, responsiveness, service integration, data security, and user experience, which are believed to influence participant satisfaction and behavior (Putra et al., 2024; Hossain & Kader, 2025).

Conversely, premium size is a crucial determinant of premium payment compliance. Participants' perceptions of premium affordability and fairness significantly influence their

willingness to pay, particularly among non-paying individuals (PBPU) who are sensitive to cost changes. A mismatch between their ability to pay and the premium structure can reduce compliance and increase the risk of delinquency (Maulana et al., 2022; Sparrow et al., 2020).

Although numerous studies have been conducted on compliance with JKN premium payments, several research gaps remain. First, most studies emphasize socioeconomic factors, while the role of digital-based service quality (service quality 4.0) in influencing contribution collectibility remains limited. Second, previous studies tend to examine variables partially, resulting in few simultaneous analyses of the influence of service quality and premium amounts on PBPU contribution collectibility. Third, there are inconsistencies in research results regarding the influence of service quality on payment compliance, indicating the need for further testing in different contexts. Fourth, research in dense urban areas such as West Jakarta, characterized by a high number of informal workers and high economic dynamics, is still relatively limited.

Based on these gaps, this study offers a novel approach by integrating the concept of service quality 4.0 into the analysis of PBPU contribution compliance, testing the simultaneous influence of service quality and premium amounts on contribution collectibility, and using a Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach to gain a more comprehensive understanding. Therefore, this study aims to analyze the influence of service quality and premium amounts on the contribution collectibility of PBPU BPJS Kesehatan participants in West Jakarta.

LITERATURE REVIEW

Service Quality

Service quality in the context of modern public services encompasses not only the traditional SERVQUAL dimensions but also must consider digital aspects, ease of access, data security, and user experience. According to (Hossain & Kader, 2025), digital era service quality, or Service Quality 4.0, consists of five main dimensions: (1) digital accessibility, namely the ease with which participants access digital services; (2) digital responsiveness, namely the speed of the system's response; (3) service integration, namely the system's ability to connect various services; (4) privacy and data security, namely the protection of participants' personal data; and (5) user experience, namely the comfort and convenience experienced by participants when using digital services.

Premium Amount

The premium amount is the cost paid by participants to obtain health insurance services and is influenced by the perceived value between costs and benefits (Rohman & Yanti, 2022). Participants' assessment of premiums is reflected through five main indicators: premium affordability, premium commensurate with benefits, fairness of the premium structure, clarity of premium information, and willingness to pay. Recent research shows that perceptions of premium affordability and fairness significantly influence participant payment compliance (Erinda., et al., 2025). Thus, the premium amount not only serves as a financial obligation but also as a participant's evaluation of the value and fairness of BPJS Kesehatan services.



Contribution Collectibility

Contribution collectibility is the level of participant compliance in paying contributions on time, which is influenced by economic conditions, perceived benefits, service utilization, and participant satisfaction (Siregar et al., 2025). Collectibility can be measured through five main indicators: payment timeliness, financial capability, perceived benefits, service utilization, and satisfaction with BPJS Kesehatan services.

Previous Research

Recent research has combined the variables of digital service quality, premium perception, satisfaction, and payment compliance, but has not been widely conducted in the context of BPJS Kesehatan in the West Jakarta region. This gap makes the research relevant theoretically and practically. Several studies relevant to this topic are shown in the following table:

Table 2.
Summary of Previous Research

No.	Researcher & Year	Research Title	Main Findings
1	Yuliani & Pramudito (2023)	The Influence of Service Quality on the Satisfaction and Loyalty of JKN Participants	Service quality has a significant effect on participant satisfaction and loyalty.
2	Sari & Putri (2022)	The Influence of Premium Amount on the Satisfaction of BPJS Health Participants	Premium amounts perceived as fair increase participant satisfaction.
3	Lestari (2021)	The Influence of Service Quality on Compliance in Paying BPJS Health Contributions	Good service quality improves participants' compliance in paying contributions.
4	Nugraha & Santoso (2020)	Analysis of Participant Satisfaction as a Mediating Variable	Participant satisfaction mediates the effect of service quality on loyalty and compliance.
5	Rahmawati (2019)	Factors Influencing the Contribution Collectibility of PBPJ Participants	Perceived benefits and ease of payment influence participants' collectibility levels.

Source: Processed by researchers based on previous summaries (2019-2023).

Based on previous theory and research, the relationships between variables in this study are described in the following conceptual framework:

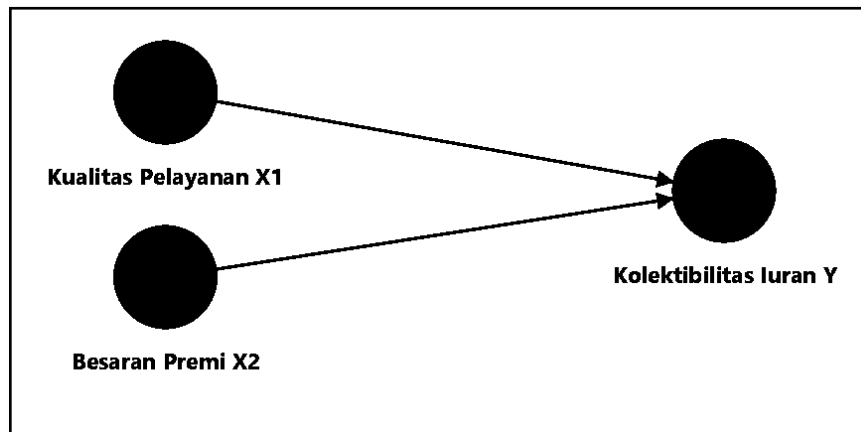


Figure 1.
Conceptual Framework

This figure shows the relationship between service quality and premium amount as independent variables that influence contribution collectibility as the dependent variable.

Research Hypothesis

Based on the theoretical foundation and conceptual framework, the research hypotheses proposed are as follows:

H1: Service quality has a positive and significant effect on contribution collectibility.

H2: Premium amount has a significant effect on contribution collectibility.

H3: Service quality and premium amount simultaneously have a significant effect on contribution collectibility.

RESEARCH METHOD

Research Type

This study uses a quantitative approach with explanatory research methods. Explanatory research was chosen because it aims to explain the causal relationship between service quality and premium amount on contribution collectibility. This approach allows for empirical hypothesis testing through statistical analysis based on a structural model.

Research Location and Subjects

The study was conducted in the service area of the West Jakarta Branch of BPJS Kesehatan. The research subjects were Non-Wage Receiving Workers (PBPU) participants, both currently active and those with a history of contribution arrears. This location was selected based on the high number of PBPU participants and the significant fluctuation in contribution collection in urban areas, particularly West Jakarta.

Research Variable Operational Table

Table 3.
Service Quality (X1)

No.	Indicator	Operational Statement
1	Digital Accessibility	BPJS Health digital services (such as the Mobile JKN application or website) are easily accessible at any time without obstacles.
2	Digital Responsiveness	BPJS Health digital services respond quickly to participants' requests or needs.
3	Service Integration	BPJS Health services (branch offices, JKN application, healthcare facilities, and payment channels) are well integrated, making administrative processes easier.
4	Privacy and Data Security	Participants' personal data feels secure when using BPJS Health digital services.
5	User Experience	The experience of using BPJS Health services, including the JKN application, is easy and enjoyable.

Source: Data Processed by Researchers

Table 4.
Premium Amount (X2)

No.	Indicator	Operational Statement
1	Premium Affordability	The amount of BPJS Health premiums is still affordable according to the participants' financial ability.
2	Premium–Benefit Suitability	The premiums paid are proportional to the benefits and services received from BPJS Health.
3	Fairness of Premium Structure	The premium amount is perceived as fair compared to other participants within the same category.
4	Clarity of Premium Information	Information regarding the determination and amount of BPJS Health premiums is conveyed clearly and is easy to understand.
5	Willingness to Pay Premiums	Participants are willing to pay BPJS Health premiums regularly because they consider the cost reasonable.

Source: Data Processed by Researchers

Table 5.
Contribution Collectibility (Y)

No.	Indicator	Operational Statement
1	Timeliness of Contribution Payment	Participants pay BPJS Health contributions on time every month (ideally between the 1st–10th of each month).
2	Financial Ability to Pay Contributions	Participants are financially capable of paying BPJS Health contributions every month.

3	Perceived Benefits of the JKN Program	The BPJS Health contributions paid are perceived as proportional to the benefits of JKN services received.
4	Utilization of Healthcare Services	Participants use BPJS Health services according to their healthcare needs.
5	Satisfaction with Services	Participants are satisfied with the services provided by BPJS Health.

Source: Data Processed by Researchers

Before being administered to the study respondents, the questionnaire was first pilot-tested to assess the validity and reliability of each item.

Population and Sample

The population in this study was all PBPJ participants registered with the West Jakarta Branch of the BPJS Kesehatan (Social Security Agency for Health). The exact population size is difficult to determine accurately and is very large, so the researcher used a sample size determination formula for large/unknown populations.

In this study, the researcher used the Rao Purba formula to calculate the sample size from a very large population with an unknown exact size. The precision level (error rate) used was 5%, as recommended by Sugiyono (2017), with a maximum margin of error (MOE) set at 10%.

$$n = \frac{z^2}{4 (MOE)x^2}$$

Rao Purba's formula:

n = sample size

z = normal distribution value at a 5% significance level ($z = 1.96$)

MOE = Maximum tolerable margin of error (10%)

Using Rao Purba's formula, the following calculation is obtained:

$$n = (1.96)^2 / (4 \cdot (0.10)^2)$$

$$n = (1.96)^2 / (4 \cdot (0.10)^2)$$

$$n = 3.8416 / (4 \cdot 0.01)$$

$$n = 3.8416 / (4 \cdot 0.01)$$

$$n = 3.8416 / 0.04$$

$$n = 3.8416 / 0.04$$

$$n = 96.04$$

Based on calculations using the Rao Purba formula, a minimum sample size of 96.04 respondents was obtained. To simplify the process and anticipate the possibility of incomplete or unusable questionnaires, the number was rounded up and increased to 100 respondents.

The sampling technique used was purposive sampling, with the following criteria:

1. PBPJ participants who were still active at the time of the study;
2. Those who had experienced or were potentially late in paying their premiums;
3. Residing in the service area of the West Jakarta BPJS Kesehatan Branch.

With these criteria, the sample was expected to represent the characteristics of PBPU participants relevant to the issue of premium collectibility.

Research Instrument

Data collection was conducted using a structured questionnaire with a Likert scale of 1–5, ranging from "strongly disagree" (1) to "strongly agree" (5). The instrument was developed based on theoretical indicators for each research variable, namely:

- Service Quality (X1): reliability, responsiveness, assurance, empathy, tangibles, and digital service quality.
- Premium Amount (X2): perceived cost fairness, suitability of benefits to premiums, and ability to pay.
- Contribution Collectibility (Y): timeliness of payments, frequency of arrears, and future payment intentions.

Before being used on research respondents, the questionnaire was first piloted to assess the validity and reliability of the statement items.

Data Analysis Techniques

This study used the Structural Equation Modeling - Partial Least Squares (SEM-PLS) approach with the assistance of SmartPLS 4 software. This method was chosen because it can analyze relationships between latent variables simultaneously and test the direct influence between research variables. The analysis stages include:

1. Evaluation of the measurement model (outer model):
 - Convergent validity test (factor loading, AVE),
 - Discriminant validity test (Fornier-Larcker, cross loading),
 - Construct reliability test (Cronbach's Alpha, Composite Reliability).
2. Evaluation of the structural model (inner model):
 - R-square value to assess the explanatory power of the independent variables on the dependent variable,
 - Effect size (f^2) to assess the influence of each variable,
 - Predictive relevance (Q^2) to test the model's predictive ability,
 - Overall goodness of fit of the model.
3. Path significance test (bootstrapping):
Conducted to determine the significance of the direct, indirect (mediation), and total effects between variables, based on the t-statistic and p-value.
4. Path coefficient analysis:

Assess the magnitude and direction of the effect of each variable (positive/negative), and interpret the practical implications for the collectibility of PBPU contributions.

RESULTS AND DISCUSSION

Respondent Characteristics

This study involved 100 respondents who were BPJS Kesehatan (BPJS Kesehatan) PBPU participants in West Jakarta. Based on gender, the majority of respondents were male

(56%), while the remaining were female (44%). Based on age, the majority of respondents were aged 26–35 (38%), followed by those aged 36–45 (27%). Based on occupation, the majority of respondents worked in the informal sector, such as traders, online motorcycle taxi drivers, and self-employed (62%).

Table 6.
Respondent Characteristics

Characteristics	Category	Frequency	Percentage (%)
Gender	Male	56	56%
	Female	44	44%
Age	17–25 years	18	18%
	26–35 years	38	38%
	36–45 years	27	27%
	>45 years	17	17%
	Entrepreneur	28	28%
Occupation	Online Motorcycle Taxi Driver	22	22%
	Trader	12	12%
	Temporary Employee	18	18%
	Others	20	20%

Source: Processed data (2026)

Measurement Model Evaluation (Outer Model)

Table 7.
Outer Loading

Variable	Indicator	Loading
Service Quality	X1.1	0.78
	X1.2	0.81
	X1.3	0.84
	X1.4	0.79
	X1.5	0.82
Premium Amount	X2.1	0.80
	X2.2	0.83
	X2.3	0.77
	X2.4	0.81
	X2.5	0.79
Contribution Collectibility	Y1	0.85
	Y2	0.82
	Y3	0.84
	Y4	0.80
	Y5	0.83

Source: Processed data (2026)

Based on the analysis results in Table 7, all indicators for each research variable have outer loading values above 0.70. For the service quality variable, outer loading values ranged from 0.78 to 0.84. The premium amount variable had an outer loading value between 0.77

and 0.83, while the contribution collectibility variable showed an outer loading value between 0.80 and 0.85.

Outer loading values above 0.70 indicate that each indicator has a strong correlation with the latent construct being measured. This indicates that these indicators adequately represent the research variables.

Thus, all indicators in this study meet convergent validity criteria and are suitable for further analysis in the structural model.

AVE & Reliability Test Results

Table 8.
AVE & Reliability

Variable	AVE	Cronbach's Alpha	Composite Reliability
Service Quality	0.62	0.88	0.91
Premium Amount	0.65	0.87	0.90
Contribution Collectibility	0.68	0.89	0.92

Source: Processed data (2026)

The Average Variance Extracted (AVE) values for each variable were above 0.50, with values of 0.62 for service quality, 0.65 for premium amount, and 0.68 for contribution collectibility. These values indicate that each construct is able to explain more than 50% of the variance in its indicator, thus meeting the criteria for convergent validity.

Furthermore, the Composite Reliability values for all variables were above 0.70, with values of 0.91 for service quality, 0.90 for premium amount, and 0.92 for contribution collectibility. Cronbach's Alpha values also showed results above 0.70, indicating that all constructs have a good level of internal consistency.

Thus, it can be concluded that all variables in this study meet the criteria for validity and reliability and are therefore suitable for use in further analysis.

Structural Model Evaluation (Inner Model)

The results of the structural model evaluation indicate that the R-square (R^2) value for the contribution collectibility variable is 0.58, meaning that the service quality and premium amount variables explain 58% of the variation in contribution collectibility, while the remaining 42% is influenced by other variables outside the research model.

The effect size (f^2) values indicate that:

- Service quality has an f^2 value of 0.29 (moderate category)
- Premium amount has an f^2 value of 0.21 (moderate category)

This indicates that both variables contribute significantly to explaining contribution collectibility. Furthermore, the predictive relevance (Q^2) value of 0.41 (>0) indicates that the model has good predictive ability. Thus, the structural model in this study is declared to have adequate explanatory and predictive power, making it suitable for use in hypothesis testing.

Hypothesis Test Results

Table 9.
Hypothesis Test Results

Hypothesis	Relationship	Beta	t-statistic	p-value	Result
H1	$X1 \rightarrow Y$	0.46	4.85	0.000	Accepted

H2	X2 → Y	0.39	3.92	0.000	Accepted
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Source: Processed Data (2026)

H1: The Influence of Service Quality on Contribution Collectibility

The test results indicate that service quality has a positive and significant effect on contribution collectibility ($\beta = 0.46$; $t = 4.85$; $p < 0.05$). This shows that the better the service quality perceived by participants, the higher the level of compliance in paying contributions.

These findings confirm that service experience is a key factor in encouraging payment behavior. Fast, easy, and responsive services enhance the perceived benefits, making participants more willing to fulfill their contribution obligations. Therefore, improving service quality becomes an important strategy for increasing contribution collectibility.

H2: The Influence of Premium Amount on Contribution Collectibility

The test results indicate that premium amount has a positive and significant effect on contribution collectibility ($\beta = 0.39$; $t = 3.92$; $p < 0.05$). This demonstrates that perceptions of premium affordability influence participants' compliance in paying contributions.

These findings suggest that the suitability between the contribution amount, participants' financial capability, and the benefits received is a major consideration for participants. Premiums perceived as reasonable will increase the willingness to pay, particularly among informal sector participants. Therefore, setting premiums that are adaptive to people's purchasing power is important for maintaining contribution collectibility.

H3: The Simultaneous Influence of Service Quality and Premium Amount

The analysis results show that service quality and premium amount simultaneously have a significant effect on contribution collectibility, as reflected by the R-square value of 0.58. This indicates that the combination of both variables is able to explain more than half of the variation in contribution collectibility among PBPU participants.

Thus, hypothesis H3 is accepted.

Discussion

The results of this study show that service quality has a positive influence on the contribution collectibility of PBPU participants. This indicates that the better the perceived quality of services, particularly in digital aspects such as ease of access, response speed, and user experience, the higher the likelihood that participants will pay contributions on time. These findings are consistent with the perceived value theory, where participants demonstrate compliant behavior when the benefits of the service are perceived to be proportional to the sacrifices made.

In the context of BPJS Health, service quality not only functions as a means of fulfilling administrative needs but also as a factor in building trust in the JKN system. When digital services operate optimally, participants perceive the system as more transparent, accessible, and reliable, thereby increasing their commitment to remain active in paying contributions.

Furthermore, premium amount has been proven to significantly influence contribution collectibility. This indicates that perceptions of affordability and fairness of premiums are crucial factors in determining payment compliance among PBPU participants. Participants with unstable incomes tend to be more sensitive to contribution amounts;

therefore, when premiums are perceived as inconsistent with their financial capability or the benefits received, the risk of arrears increases.

However, the findings of this study also indicate that the influence of premiums is not solely economic in nature, but also psychological, namely how participants perceive the fairness of the JKN financing system. In other words, participants consider not only whether they are financially capable, but also whether the premiums are considered reasonable.

Simultaneously, service quality and premium amount have a significant effect on contribution collectibility. This demonstrates that improving compliance among BPJS participants cannot be achieved partially, but instead requires an integrated approach that combines service quality improvement with more adaptive premium policy adjustments.

These findings reinforce that, within the context of the informal sector, structural factors (premiums) and service experience factors (service quality) complement each other in shaping participants' compliance behavior. Therefore, strategies to improve contribution collectibility should focus on more responsive service digitalization as well as more flexible and equitable premium schemes.

Practical Implications

The findings of this study imply that BPJS Health needs to:

1. Optimize digital services (Mobile JKN, payment systems, and service integration).
2. Improve transparency and communication regarding service benefits.
3. Reevaluate the premium structure based on the payment capacity of informal sector participants.
4. Strengthen participant education and literacy regarding the JKN program.

CONCLUSION

This study concludes that service quality and premium amounts have a positive and significant impact on the contribution collectibility of BPJS Kesehatan (Persero) participants. Service quality is the most dominant factor in increasing contribution payment compliance.

Practically, the results of this study indicate that strategies to increase contribution collectibility are not sufficient through premium adjustments alone; they must also be accompanied by improvements in service quality, particularly in aspects of ease of access, speed of service, and user experience. An integrated approach between service aspects and tariff policies is expected to improve payment compliance and maintain the sustainability of the JKN program.

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