

The Effect of Service Quality and Product Quality on Customer Satisfaction and Its Impact on Participant Loyalty in BPJS Ketenagakerjaan

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ABSTRACT

Implementation of the Social Security program is based on the Labor Law but BPJS Ketenagakerjaan continued to have a competitor that is national or foreign private insurance. In order to continue to grow and be able to protect all workers then BPJS Ketenagakerjaan must compensate and make various efforts and strategies include improving service quality, improve product quality so that the satisfaction of the participants remain loyal and choose BPJS Ketenagakerjaan as a solution to the transfer of risk faced by employers and workers. Formulation of the problem in this research is the extent to which the influence of Service Quality and Product Quality on Customer Satisfaction and Loyalty Impacts for Participants in BPJS Ketenagakerjaan. The aim of this study was to determine and analyze the influence of Service Quality and Product Quality and its Impact on Satisfaction to Loyalty Participants BPJS Ketenagakerjaan. The theory used is the theory that analyzes the dimensions of service quality services, and the factors that affect the quality of service or service as well as the theory of product quality and product dimensions, the theory of customer satisfaction that measures customer satisfaction and factors that influence satisfaction according to Kotler. This research approach is supported by a case study with a survey. This type of research is deskriptif and quantitative research, the nature of research just to get a picture of a situation and problems and interpret. The population in this study were 12.5 million workers, with a sample size of 100 respondents. Data were collected through questionnaires and documentation study. Hypothesis testing using multiple linear regression analysis, F test and t test to determine the effect of independent variables on the dependent variable on rate of 95 % ($\alpha = 0.05$). The results showed that the quality of service and product quality directly affect customer satisfaction and an impact on customer loyalty. The most dominant variable affecting satisfaction is the quality of service that is equal to 50.2 % and variable product quality that is equal to 32.2 % . The variable quality of the products also directly affects customer loyalty significant value amounted to 22.4 % , while the variable quality of service does not affect the loyalty due to the significant value of only 5.3% . The coefficient of determination (R^2) showed independent variables studied were able to explain 48.5 % overall at loyalty variable , while the remaining 51.5 % is explained by other independent variables that are not included in this study .

Keywords : Quality Service , Quality Products, Customer Satisfaction and Loyalty

JEL Classifications: JEL Classifications codes.

1. INTRODUCTION

Background of the Study

Rapid changes in the business environment have significantly influenced not only the economic sector but also various aspects of human life globally, including in Asia. These changes have shifted traditional paradigms of business management and control, particularly in relation to consumer behavior (Kotler et al., 2009). Technological advancements, political dynamics, socio-cultural transformations, economic fluctuations, and market changes have collectively reshaped how organizations compete and deliver value.

As a consequence, companies are required to continuously adapt their strategies to remain competitive. Strategies that were once effective may quickly become obsolete due to the dynamic nature of consumer preferences and market conditions (Kotler, 2019). Several major companies have experienced a decline in market share due to their inability to adapt to these changes (Kotler & Armstrong, 2009). Therefore, understanding consumer behavior has become a critical priority for organizations.

In this context, marketing plays a crucial role in determining organizational success. The evolution of marketing concepts—from production orientation to societal marketing—reflects the increasing importance of customer satisfaction as the ultimate goal (Kotler & Armstrong, 2009). In the era of globalization, quality is considered a key factor in achieving competitive advantage, as it directly influences consumer decision-making.

Empirical evidence indicates that customer satisfaction levels have increased over time, reflecting higher expectations from consumers (Djatmiko, 2010). This trend is particularly relevant in service industries, including insurance, where customer experience plays a central role. Negative experiences can easily spread among consumers due to advancements in information technology, influencing public perception and trust.

In Indonesia, social security for workers is administered by BPJS Ketenagakerjaan, which was transformed from PT Jamsostek (Persero) under Law No. 24 of 2011. This transformation aimed to expand coverage, improve services, and enhance organizational effectiveness. However, despite its strategic role, BPJS Ketenagakerjaan still faces competition from private insurance companies.

Empirical data from the Pulogadung branch indicate fluctuations in membership, where increases in new participants are often accompanied by high dropout rates. This phenomenon suggests that maintaining participant satisfaction and loyalty

remains a significant challenge. Factors such as service quality, product quality, and customer satisfaction are assumed to influence participant loyalty.

Therefore, this study seeks to analyze the relationships between service quality, product quality, customer satisfaction, and customer loyalty within BPJS Ketenagakerjaan.

Problem Identification

Based on the background, several research problems are identified. The study examines the level of service quality, product quality, customer satisfaction, and customer loyalty within BPJS Ketenagakerjaan. It also investigates whether service quality and product quality directly influence customer satisfaction, and whether customer satisfaction affects customer loyalty.

In addition, the study explores both direct and indirect effects of service quality and product quality on customer loyalty, particularly through the mediating role of customer satisfaction. This approach aligns with causal research models commonly used in service marketing studies.

Research Objectives

This study aims to analyze the level of service quality, product quality, customer satisfaction, and customer loyalty within BPJS Ketenagakerjaan. It also aims to examine the direct effects of service quality and product quality on customer satisfaction, as well as the impact of customer satisfaction on customer loyalty.

Furthermore, the study seeks to investigate the direct and indirect relationships between service quality, product quality, and customer loyalty, with customer satisfaction acting as a mediating variable.

Research Significance

This study provides both theoretical and practical contributions. From a theoretical perspective, it contributes to the development of knowledge in marketing and service management, particularly regarding factors influencing customer satisfaction and loyalty.

From a practical perspective, the findings are expected to provide insights for BPJS Ketenagakerjaan, especially the Pulogadung branch, in improving service quality and product offerings to enhance participant satisfaction and loyalty. Additionally, this study can serve as a reference for future research in similar contexts.

Conceptual Framework

This study is based on the premise that traditional marketing strategies alone are insufficient in highly competitive environments. While the marketing mix (product, price, place, promotion) remains important, service quality has become a key differentiator that is difficult for competitors to replicate (Kotler, 2011; Irawan, 2010).

Service quality is conceptualized through dimensions such as reliability, responsiveness, assurance, empathy, and tangibles (Tjiptono & Chandra, 2010). These dimensions influence customer satisfaction, which in turn affects customer loyalty.

Product quality also plays a significant role in shaping customer satisfaction. According to Garvin's framework, product performance is a primary determinant of customer satisfaction, as it reflects the core benefits received by customers.

Customer satisfaction is widely recognized as a key antecedent of customer loyalty. Satisfied customers are more likely to repurchase and recommend services to others (Tjiptono, 2010; Dharmesta, 2009). Furthermore, satisfied customers tend to develop long-term relationships with service providers, contributing to organizational sustainability (Hasan, 2010).

The conceptual model of this study assumes that service quality and product quality influence customer satisfaction, which subsequently affects customer loyalty. Additionally, both service quality and product quality are expected to have direct and indirect effects on customer loyalty.

Hypotheses

Based on the conceptual framework, this study proposes that service quality has a positive effect on customer satisfaction. Product quality is also expected to positively influence customer satisfaction. Furthermore, customer satisfaction is hypothesized to positively affect customer loyalty.

Service quality and product quality are also expected to directly influence customer loyalty. In addition, both variables are hypothesized to have indirect effects on customer loyalty through customer satisfaction as a mediating variable.

2. LITERATURE REVIEW

Service Quality

Service quality has become a crucial factor for companies to survive in an increasingly competitive business environment. In modern business practices, quality is no longer considered an added value but a necessity to maintain organizational

sustainability. According to Campanella (2009), quality refers to the overall characteristics of a product or service that enable it to meet specified or latent needs. This definition emphasizes that quality is closely related to the ability to satisfy customer expectations. Similarly, Tjiptono (2010) defines quality as a dynamic condition related to products, services, people, processes, and environments that meet or exceed expectations, while Sunardi (2009) views quality as an effort to satisfy customers.

Based on these definitions, service quality can be understood as the ability of a service to fulfill customer expectations and provide satisfaction. However, compared to product quality, service quality is more difficult to measure due to its intangible nature. Despite this limitation, customers still evaluate service quality based on their experiences and perceptions.

Service quality is largely determined by the comparison between expected service and perceived service. When the service received meets or exceeds expectations, customers perceive it as high quality; otherwise, it is considered poor quality (Kotler, 2009; Tjiptono, 2010). Therefore, service quality must be evaluated from the customer's perspective rather than the provider's viewpoint. Kotler (2009) states that quality should start from customer needs and end with customer perceptions, highlighting the importance of understanding customer expectations.

To better understand service quality, several dimensions have been proposed. Payne (1998) identifies key dimensions such as reliability, responsiveness, assurance, empathy, and tangibles. Reliability refers to the ability to deliver services accurately and consistently, responsiveness relates to the willingness to help customers promptly, assurance reflects employee knowledge and courtesy in building trust, empathy emphasizes individualized attention to customers, and tangibles refer to physical facilities and equipment.

In addition, Parasuraman, Zeithaml, and Berry (2009) developed the service quality gap model, which explains that service quality problems arise due to discrepancies between expectations and actual service delivery. These gaps may occur between management perceptions and customer expectations, between service specifications and delivery, and between service delivery and external communication. Such gaps ultimately influence customer perceptions of service quality.

Furthermore, service quality can also be evaluated through broader determinants, including reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding customers, and tangibles. These factors demonstrate that service quality is multidimensional

and influenced by both technical and functional aspects.

Service itself is defined as an intangible activity resulting from interactions between customers and service providers aimed at solving customer problems (Gronroos, 2009). This indicates that services do not result in ownership but focus on value creation through interaction. Similarly, Moenir explains that service is an activity carried out through specific procedures and systems to fulfill the needs of others.

Service characteristics differ significantly from those of goods. According to Tjiptono and Chandra (2009), services are characterized by intangibility, heterogeneity, inseparability, and perishability. Intangibility means services cannot be physically perceived before consumption, heterogeneity indicates variability in service delivery, inseparability shows that production and consumption occur simultaneously, and perishability implies that services cannot be stored.

These characteristics create challenges in managing and measuring service quality. Therefore, organizations must develop effective strategies to ensure service consistency and customer satisfaction. In this study, service quality is measured using five key dimensions: reliability, responsiveness, assurance, empathy, and tangibles, as proposed by Parasuraman, Zeithaml, and Berry (Tjiptono & Chandra, 2009), due to their relevance in capturing customer perceptions comprehensively.

Product Quality

Product quality is a fundamental element in marketing that determines the ability of a product to satisfy customer needs and expectations. According to Rampersad (2009), a product refers to anything that can be offered to a market to be noticed, acquired, used, or consumed to satisfy a need or want. This includes not only physical goods such as books or vehicles but also services, people, and places, indicating that products can be both tangible and intangible. From a conceptual perspective, a product represents the producer's interpretation of what can be offered to achieve organizational objectives through fulfilling consumer needs, considering organizational capabilities and market demand.

In marketing theory, product quality is not only defined by what is embedded in the product but also by what customers perceive and experience. Kotler (2011) emphasizes that quality is reflected in customer satisfaction and repeat usage rather than the physical attributes of the product itself. This perspective highlights that quality is determined by customer value rather than technical specifications

alone. Therefore, product quality is closely related to perceived benefits and customer reactions toward the product.

Products consist of core products and supplementary elements. The core product represents the main benefit sought by customers, while additional services enhance the overall value of the product (Lovelock et al., 2010). In service-based contexts, delivering the core benefit effectively, supported by additional services, is essential in improving perceived product quality.

Garvin identifies eight dimensions of product quality, including performance, reliability, features, durability, conformance, serviceability, aesthetics, and perceived quality (Purba, 2010). Performance refers to the primary function of the product, while reliability indicates consistency in performance. Features provide additional value, durability reflects product lifespan, and conformance relates to adherence to standards. Serviceability emphasizes ease of repair, aesthetics refers to visual appeal, and perceived quality reflects customer perceptions influenced by brand image and reputation. These dimensions collectively explain how product quality is evaluated from both functional and perceptual perspectives.

Customer Satisfaction

Customer satisfaction is a key concept in marketing that reflects the comparison between customer expectations and perceived performance. According to Kotler (2011), customer satisfaction arises when perceived service meets or exceeds expectations, while dissatisfaction occurs when performance falls below expectations. This concept highlights that satisfaction is a psychological response resulting from customer evaluation of product or service performance.

Several factors influence customer satisfaction. Irawan (2009) identifies five main drivers, namely product quality, price, service quality, emotional factors, and ease of access. Product quality plays a central role because customers tend to be satisfied when products meet their functional expectations. Price also influences satisfaction, particularly for price-sensitive customers who seek value for money. Service quality contributes significantly to satisfaction, especially in service industries where interactions between customers and employees are dominant. Emotional factors, such as pride and confidence, also shape satisfaction, particularly for lifestyle-related products. Lastly, convenience and accessibility affect satisfaction by influencing customer experience.

Customer satisfaction can be measured using several methods. Kotler (2011) proposes techniques such as complaint and suggestion systems, customer

satisfaction surveys, ghost shopping, and lost customer analysis. Among these methods, surveys are widely used because they provide direct feedback from customers and allow organizations to evaluate performance effectively (Gerson, 2009).

Furthermore, satisfaction is often defined as a function of the gap between perceived performance and expectations (Supranto, 2010). Engel, Blackwell, and Miniard (2010) also describe satisfaction as an evaluation of whether a product meets customer expectations. This indicates that satisfaction is not only influenced by objective performance but also by subjective perceptions.

Highly satisfied customers tend to become loyal customers. According to Kotler (2011), companies should aim to create not only satisfied but also delighted customers, as moderately satisfied customers are more likely to switch to competitors. Therefore, managing customer satisfaction is essential in maintaining long-term relationships.

Customer Loyalty

Customer loyalty represents a long-term relationship between customers and a company, characterized by repeat purchases and positive attitudes toward a product or service. Companies aim not only to satisfy customers but also to build loyalty, as loyal customers contribute to sustainable business growth. Research suggests that satisfied customers are more likely to become loyal customers (Olorunniwo et al., 2009; Kandampully et al., 2000).

Loyal customers exhibit several behavioral indicators. They tend to repurchase products, recommend them to others through word-of-mouth communication, and prioritize the same provider when making future purchases (Kotler & Keller, 2009). These behaviors reflect both attitudinal and behavioral loyalty.

Customer loyalty can be categorized into brand loyalty and store loyalty (Setiadi, 2009). Brand loyalty refers to consistent purchasing of a particular brand, while store loyalty refers to repeated visits to a specific store. Both forms of loyalty are influenced by customer experiences, including product quality and service quality.

Two main approaches are used to understand loyalty. The behavioral approach focuses on repeat purchases, while the cognitive approach emphasizes commitment and attitudes toward a brand. The cognitive approach suggests that loyalty is not solely reflected in repeated purchases, as customers may switch brands due to external factors such as price changes.

The relationship between customer satisfaction and loyalty has been widely studied. Hallowell (2009) states that customer satisfaction has a positive effect on customer loyalty, which ultimately impacts company profitability. However, satisfaction does not always guarantee loyalty, as customers may still switch to competitors despite being satisfied.

Lovelock et al. (2010) describe the relationship between satisfaction and loyalty in three zones: the defection zone, where low satisfaction leads to switching behavior; the indifference zone, where customers may switch if better alternatives exist; and the affection zone, where high satisfaction leads to strong loyalty and positive word-of-mouth. This framework highlights that achieving high levels of satisfaction is essential to building customer loyalty.

3. RESEARCH METHOD

Research Object

This study focuses on participants of BPJS Ketenagakerjaan at the Pulogadung branch who submitted claims for the Old Age Security (Jaminan Hari Tua) program after completing a minimum membership period of five years and one month and who had not returned to employment. These respondents were selected because they had direct experience with the services and products offered, making them relevant for evaluating service quality, product quality, satisfaction, and loyalty.

Research Location and Time

The research was conducted at BPJS Ketenagakerjaan Pulogadung Branch, located at Astra Agro Lestari Building, Pulo Gadung Industrial Area, East Jakarta. Data collection was carried out over a two-month period, from July to August 2014. This time frame was considered sufficient to obtain representative data from participants interacting with the institution.

Operational Variables

This study employs a causal quantitative approach to examine the relationships between variables. The independent variables consist of service quality (X1) and product quality (X2), while the dependent variables are customer satisfaction (Y1) and customer loyalty (Y2). The model assumes both direct and indirect relationships, where service quality and product quality influence satisfaction, which in turn affects loyalty.

Service quality is measured using five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Reliability reflects the ability

to deliver services accurately and consistently, responsiveness indicates promptness and willingness to help customers, assurance relates to employee competence and trustworthiness, empathy represents individualized attention, and tangibles refer to physical facilities and appearance. These dimensions are widely used in service quality measurement frameworks (Parasuraman et al.).

Product quality is defined as the ability of a product to perform its functions, including durability, reliability, accuracy, ease of use, and product variation. In this study, product quality is measured through dimensions such as performance, conformance, durability, and features, which reflect both functional and perceived aspects of the product.

Customer satisfaction is defined as the level of positive feeling experienced by participants after comparing perceived performance with expectations. It is measured through indicators such as overall satisfaction, pleasant experiences, and pride in being a participant. Customer loyalty is defined as a consistent behavioral intention to continue using services, recommend them to others, and prioritize the organization in future decisions.

All variables are measured using a Likert scale, allowing respondents to express their level of agreement with each statement.

Sampling Method

The population in this study consists of all BPJS Ketenagakerjaan participants at the Pulogadung branch who meet the specified criteria. Sampling is conducted using a probability sampling technique, ensuring that each member of the population has an equal chance of being selected. This approach enhances the representativeness and generalizability of the findings.

Data Collection Method

Data were collected using multiple techniques, including surveys, interviews, questionnaires, and observations. The primary method used was a structured questionnaire distributed to respondents, allowing for standardized data collection. Interviews and observations were used to support and validate the data, while literature review provided theoretical foundations for the study.

Research Instrument

The main research instrument used in this study is a questionnaire consisting of structured statements based on the operational definitions of each variable. The instrument was designed to capture

respondents' perceptions regarding service quality, product quality, satisfaction, and loyalty.

Data Analysis Method

Data analysis was conducted using quantitative statistical techniques. Descriptive analysis was first performed to summarize the characteristics of the data. Subsequently, inferential analysis was conducted using regression analysis to test the relationships between variables.

The multiple regression model used in this study is expressed as follows:

$$Y_1 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$
$$Y_2 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Y_1 + \varepsilon$$

Where:

Y_1 = Customer Satisfaction

Y_2 = Customer Loyalty

X_1 = Service Quality

X_2 = Product Quality

α = Constant

β = Regression Coefficient

ε = Error term

To ensure the validity of the model, classical assumption tests were conducted, including normality, multicollinearity, and heteroscedasticity tests (Ghozali, 2005). Hypothesis testing was performed using t-tests for partial effects and F-tests for simultaneous effects, with a significance level of 5% ($\alpha = 0.05$).

The coefficient of determination (R^2) was used to measure the proportion of variance in the dependent variable explained by the independent variables. In addition, correlation analysis was used to examine the strength and direction of relationships between variables.

Sampling Method

Data in this study were collected through a survey method using structured questionnaires distributed to respondents who were participants of BPJS Ketenagakerjaan at the Pulogadung branch and had met the requirements for Old Age Security claims. The survey approach was chosen because it enables the collection of standardized information from a large number of respondents and supports both descriptive and inferential analysis. This method is particularly useful for comparing existing conditions with predetermined criteria and evaluating relationships between variables.

The population in this study consists of all BPJS Ketenagakerjaan participants who have been registered for at least five years and meet the criteria for claim submission. A population is defined as a group of individuals sharing common characteristics

relevant to the research objectives (Sugiyono, 2002). From this population, a sample was selected to represent the overall characteristics of participants.

The sample is defined as a subset of the population selected for analysis (Arikunto, 2005). In this study, sampling was conducted using a probability sampling approach with a simple random sampling technique, ensuring that each member of the population had an equal opportunity to be selected (Sutrisno, 2002). This method enhances the representativeness and validity of the findings. Furthermore, following Roscoe's rule, the minimum sample size in multivariate analysis should be at least ten times the number of variables studied, ensuring sufficient data for reliable statistical analysis (Sugiyono, 2014).

Data Collection Method

This study employs a quantitative survey approach to examine relationships between service quality, product quality, customer satisfaction, and customer loyalty. Data were collected primarily using questionnaires designed based on the operational variables defined in the research model. Respondents were asked to evaluate statements using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), allowing the measurement of attitudes, perceptions, and satisfaction levels.

In addition to questionnaires, supporting data collection techniques included observation and interviews. Observation was conducted to directly examine service processes and environmental conditions, while interviews were used to gather additional insights from relevant stakeholders. These methods complement the survey data and enhance the robustness of the research findings.

Data Analysis Method

Data analysis was conducted using both descriptive and quantitative approaches. Descriptive analysis was used to summarize respondent characteristics and variable distributions, while quantitative analysis was used to test hypotheses and examine relationships between variables (Sugiyono, 2006).

This study employs Structural Equation Modeling (SEM) as the main analytical technique. SEM is a multivariate statistical method that integrates factor analysis and path analysis to examine causal relationships between variables (Jogiyanto, 2011). It allows for the simultaneous analysis of relationships between observed indicators and latent constructs, as well as relationships among constructs (Santoso, 2007). The analysis was conducted using LISREL 8.8, supported by SPSS for data tabulation.

The structural model can be expressed as follows:

$$Y_1 = \gamma_1 X_1 + \gamma_2 X_2 + \zeta_1$$

$$Y_2 = \gamma_3 X_1 + \gamma_4 X_2 + \beta Y_1 + \zeta_2$$

Where:

X_1 = Service Quality

X_2 = Product Quality

Y_1 = Customer Satisfaction

Y_2 = Customer Loyalty

γ = Direct effect coefficients

β = Mediation effect coefficient

ζ = Error term

This model reflects both direct and indirect relationships, where customer satisfaction acts as a mediating variable between independent variables and customer loyalty.

Validity and Reliability Test

Validity testing was conducted to measure the extent to which the questionnaire items accurately represent the constructs being studied. The validity test used the Pearson Product Moment correlation formula:

$$r_{xy} = \frac{n\sum XY - (\sum X)(\sum Y)}{\sqrt{(n\sum X^2 - (\sum X)^2)(n\sum Y^2 - (\sum Y)^2)}}$$

An item is considered valid if the calculated correlation coefficient exceeds the critical value (r-table) (Ridwan, 2005).

Reliability testing was conducted using Cronbach's Alpha to assess the consistency of the instrument:

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum S_i^2}{S_t^2} \right)$$

Where:

k = Number of items

S_i^2 = Variance of each item

S_t^2 = Total variance

An instrument is considered reliable if the alpha value exceeds 0.70 (Djaali & Muljono, 2004).

Classical Assumption Test

To ensure the robustness of the model, several classical assumption tests were conducted. Multicollinearity was tested by examining the correlation between independent variables, where a correlation value above 0.90 indicates potential multicollinearity (Ghozali, 2006). Heteroscedasticity was tested using scatterplot analysis to ensure that residual variance remains constant across observations.

Path Analysis and Correlation

Path analysis was used to evaluate both direct and indirect relationships between variables. This method allows the decomposition of effects into direct and mediated effects, which is essential in understanding the role of customer satisfaction as an intervening variable.

Correlation analysis was also conducted to measure the strength and direction of relationships between variables. The correlation coefficient ranges from -1 to +1, where values closer to +1 indicate a strong positive relationship, and values closer to 0 indicate a weak relationship.

4. RESULTS AND DISCUSSION

Respondent Characteristics

The analysis of respondent characteristics provides an overview of the demographic profile of participants involved in this study. Based on the survey results, the majority of respondents were aged between 28–38 years, accounting for 44% of the total sample. This indicates that most participants are within the productive age group, which is generally more active in employment and social security participation. Meanwhile, respondents aged 17–27 years accounted for 31%, followed by those aged 39–49 years (19%), and 50–59 years (6%). This distribution suggests that BPJS Ketenagakerjaan services are predominantly utilized by individuals in their prime working years.

In terms of gender, the data shows that male respondents dominate the sample, comprising 63%, while female respondents account for 37%. This reflects the labor market composition where male workers are still more represented in formal employment sectors covered by BPJS Ketenagakerjaan.

Regarding educational background, most respondents have a senior high school (SMU) level of education (69%), followed by junior high school (16%), bachelor's degree (13%), and elementary school (2%). This indicates that the majority of participants have a moderate level of education, which may influence their perception of service quality and product understanding.

From an occupational perspective, most respondents work in the private sector (56%), followed by other categories (25%), employees (17%), and entrepreneurs (2%). This suggests that BPJS Ketenagakerjaan services are largely accessed by private sector workers.

In terms of membership duration, the majority of respondents have been participants for more than five years (47%), followed by 3–5 years

(36%) and less than three years (17%). This indicates that most respondents have sufficient experience interacting with BPJS services, making their evaluations reliable for assessing satisfaction and loyalty.

Validity and Reliability Analysis

The validity test results indicate that all questionnaire items across all variables meet the required criteria. Using the corrected item-total correlation approach, each item shows a correlation value higher than the critical threshold ($r > 0.3061$), confirming that all measurement indicators are valid and capable of representing their respective constructs. This finding aligns with standard measurement theory, where valid instruments must accurately reflect the concept being measured (Ghozali, 2005).

Reliability testing using Cronbach's Alpha also shows strong internal consistency across variables. Service quality has an alpha value of 0.919, product quality 0.841, customer satisfaction 0.861, and customer loyalty 0.791. All values exceed the minimum threshold of 0.70, indicating that the instruments are reliable and produce consistent results (Nunnally, 1967; Sekaran, 2006). These results confirm that the data is suitable for further multivariate analysis using SEM.

Descriptive Analysis of Variables

The descriptive analysis reveals that respondents generally perceive all variables positively. For service quality, the majority of responses fall within the "agree" (61.07%) and "strongly agree" (34.67%) categories, indicating that participants perceive the quality of service provided by BPJS Ketenagakerjaan as good. Key strengths include employee friendliness, accuracy in service delivery, and professional appearance. However, some respondents noted that the number of service staff could be improved, suggesting a potential area for service enhancement.

Similarly, product quality is perceived positively, with 65.8% of respondents agreeing and 31.5% strongly agreeing that BPJS products meet their expectations. This suggests that the benefits and features of the social security programs are considered relevant and valuable to participants.

Customer satisfaction shows an even stronger positive perception, with 71.22% agreeing and 26.44% strongly agreeing. This indicates that most participants feel satisfied with the services and benefits provided. Satisfaction is reflected in trust, perceived transparency, and alignment between expectations and actual service delivery.

Discussion of Findings

The findings of this study support the theoretical framework that service quality and product quality significantly influence customer satisfaction, which in turn affects customer loyalty. High levels of perceived service quality—particularly in responsiveness, reliability, and empathy—contribute to positive customer experiences, ultimately increasing satisfaction levels (Parasuraman et al.).

Furthermore, product quality plays a crucial role in shaping satisfaction, as participants evaluate the relevance and usefulness of the benefits provided. When products meet or exceed expectations, customers are more likely to develop positive attitudes toward the organization.

Customer satisfaction acts as a mediating variable between service quality, product quality, and loyalty. This aligns with previous studies indicating that satisfied customers are more likely to remain loyal, recommend services, and continue using the products offered (Kotler & Keller, 2013). The high percentage of positive responses in satisfaction variables indicates strong potential for long-term loyalty among BPJS participants.

Overall, the results confirm that improving service quality and product quality can directly enhance customer satisfaction and indirectly strengthen customer loyalty. These findings are consistent with the SEM model applied in this study, where both direct and indirect effects are observed.

Customer Loyalty Analysis

The descriptive analysis of customer loyalty indicates that respondents generally exhibit a strong level of loyalty toward BPJS Ketenagakerjaan services. The majority of responses fall into the “agree” (69.75%) and “strongly agree” (23.75%) categories, indicating that participants are willing to continue using the services, recommend them to others, and maintain long-term engagement. This suggests that loyalty has been successfully established among participants.

However, some variation is observed in responses related to continued usage despite higher costs, where a portion of respondents expressed hesitation. This indicates that while overall loyalty is strong, price sensitivity remains a factor that may influence long-term commitment.

Structural Model Analysis

This study employs a path analysis model consisting of two structural equations. The first model examines the influence of service quality (X1) and product quality (X2) on customer satisfaction (Y), while the second model analyzes the influence of

service quality, product quality, and satisfaction on customer loyalty (Z).

The first structural equation is formulated as:

$$Y = \rho_{YX1}X_1 + \rho_{YX2}X_2 + \varepsilon_1$$

The results show that the model is statistically significant, with an F-value of 53.111 and a significance level of 0.000, indicating that service quality and product quality simultaneously have a significant effect on customer satisfaction. The coefficient of determination (R^2) is 0.523, meaning that 52.3% of the variation in customer satisfaction can be explained by service quality and product quality.

Partial testing shows that service quality has a stronger effect on satisfaction ($\beta = 0.502$) compared to product quality ($\beta = 0.322$). Both variables are statistically significant, indicating that improvements in service delivery and product offerings directly enhance customer satisfaction.

Second Structural Model

The second structural equation examines the determinants of customer loyalty:

$$Z = \rho_{ZX1}X_1 + \rho_{ZX2}X_2 + \rho_{ZY}Y + \varepsilon_2$$

The simultaneous test results show that the model is significant, with an F-value of 30.195 and a significance level of 0.000. The coefficient of determination (R^2) is 0.485, indicating that 48.5% of the variation in customer loyalty can be explained by service quality, product quality, and customer satisfaction.

However, the partial test results reveal an interesting finding. Service quality does not have a significant direct effect on customer loyalty ($\beta = 0.053$; Sig = 0.597), indicating that service quality alone is not sufficient to directly influence loyalty. In contrast, product quality ($\beta = 0.224$; Sig = 0.017) and customer satisfaction ($\beta = 0.579$; Sig = 0.000) both have significant positive effects on loyalty.

This suggests that customer satisfaction plays a critical mediating role in transforming service quality into loyalty outcomes.

Correlation Analysis

The correlation analysis shows strong and positive relationships between variables. Service quality and product quality are positively correlated ($r = 0.518$), indicating that improvements in service are often accompanied by improvements in perceived product quality.

Service quality and customer satisfaction show a strong correlation ($r = 0.668$), while product quality and satisfaction also exhibit a strong relationship ($r = 0.582$). These findings confirm that both variables contribute significantly to satisfaction.

All correlations are statistically significant at the 0.01 level, indicating robust relationships between constructs (Sarwono, 2006).

Direct and Indirect Effects

The analysis of direct effects shows that service quality has a significant direct effect on satisfaction (50.2%), while product quality contributes 32.2%. In terms of loyalty, product quality contributes directly (22.4%), while satisfaction has the strongest direct influence (57.9%).

Interestingly, service quality does not directly influence loyalty but has a substantial indirect effect through satisfaction. The indirect effect of service quality on loyalty is calculated as:

$$(0.502 \times 0.579) = 29.07\%$$

Similarly, the indirect effect of product quality on loyalty through satisfaction is:

$$(0.322 \times 0.579) = 12.97\%$$

These findings highlight that customer satisfaction acts as a mediating variable that strengthens the relationship between independent variables and loyalty.

Discussion

The findings of this study reinforce the theoretical framework that customer satisfaction plays a central role in building loyalty. While service quality is essential for creating positive experiences, it does not directly translate into loyalty unless it leads to satisfaction. This supports the mediation model commonly discussed in marketing literature (Kotler & Keller, 2013).

Product quality, on the other hand, has both direct and indirect effects on loyalty, indicating that tangible benefits and perceived value play a crucial role in maintaining customer commitment. This is particularly relevant in the context of social security services, where participants evaluate both service processes and the actual benefits received.

Overall, the results confirm that improving service quality and product quality will enhance customer satisfaction, which in turn strengthens loyalty. This aligns with the Structural Equation Modeling (SEM) framework applied in this study and provides empirical evidence for the proposed research model.

5. CONCLUSION AND IMPLICATIONS

Conclusion

Based on the results of data analysis, hypothesis testing, and discussion, this study concludes that service quality, product quality,

customer satisfaction, and customer loyalty at BPJS Ketenagakerjaan Pulogadung Branch are generally perceived positively by respondents. The majority of participants rated service quality as good, with 95.74% expressing agreement or strong agreement, indicating that service delivery meets participant expectations. Similarly, product quality is perceived positively, with 97.33% of respondents indicating favorable evaluations, suggesting that the benefits and features of the programs are aligned with participant needs.

Customer satisfaction is also reported at a high level, with 97.67% of respondents expressing positive perceptions. This reflects that participants generally feel satisfied with both service delivery and product offerings. Furthermore, customer loyalty is perceived as strong, with 93.50% of respondents indicating agreement or strong agreement, demonstrating a high level of commitment to continue using BPJS Ketenagakerjaan services.

From the structural model analysis, service quality has a significant direct effect on customer satisfaction ($\beta = 0.502$), while product quality also has a significant direct effect on satisfaction ($\beta = 0.322$). However, service quality does not have a significant direct effect on customer loyalty ($\beta = 0.053$), indicating that its influence is mediated through satisfaction. In contrast, product quality has a direct and significant effect on loyalty ($\beta = 0.224$), and customer satisfaction has the strongest direct effect on loyalty ($\beta = 0.579$).

The indirect effects further confirm the mediating role of customer satisfaction. Service quality influences loyalty indirectly through satisfaction with an effect size of 0.290, while product quality influences loyalty indirectly with an effect size of 0.129. These findings highlight that customer satisfaction serves as a key mechanism in strengthening the relationship between service quality, product quality, and customer loyalty.

Managerial Implications

The findings of this study provide important managerial implications for BPJS Ketenagakerjaan. Although service quality, product quality, satisfaction, and loyalty are already perceived positively, continuous improvement is necessary to maintain and enhance competitive performance.

First, in terms of service quality, the responsiveness dimension has been evaluated positively; however, the number of service personnel, particularly Customer Relationship Officers, should be increased. This is necessary to better accommodate participant demand and reduce waiting time, thereby improving overall service experience.

Second, regarding product quality, although it is generally perceived as good, improvements should be made in the speed of claim processing.

Faster claim procedures will enhance perceived value and strengthen participant trust in the system.

Third, customer satisfaction should be continuously improved by focusing on service excellence. Employees should be trained to provide more attentive, personalized, and solution-oriented services to ensure that participant expectations are consistently met or exceeded.

Finally, customer loyalty needs to be strengthened despite already being at a high level. One critical factor to consider is cost sensitivity. BPJS Ketenagakerjaan should carefully evaluate any potential increase in participant contributions to ensure that it does not negatively affect loyalty. Maintaining a balance between cost and perceived benefits is essential to sustain long-term participation.

Overall, the study confirms that improving service quality and product quality will enhance customer satisfaction, which in turn strengthens customer loyalty. Therefore, organizations should prioritize strategies that focus on customer-centric service delivery and value creation.

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