

The Effect of Product Quality and Service Quality in Creating Customer Satisfaction: The Case of BPJS Ketenagakerjaan Batam Nagoya

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Abstract: The aim of this study is to investigate the impact of both product quality and service quality on Batam Nagoya Employment BPJS customer satisfaction. The research was conducted on 100 respondents, namely BPU participants of the Batam Nagoya Employment BPJS who became the research population. In carrying out this research using primary data taken through questionnaire survey techniques using a likert scale, distributing questionnaires using accidental sampling techniques. The data was analyzed using the SmartPLS 3.29 software tool. The results of the study show that product quality has no significant effect on customer satisfaction. Meanwhile, service quality affects customer satisfaction.

Keywords: Product quality, service quality, customer satisfaction, BPJS Ketenagakerjaan

1 Introduction

Social security is a very important right for all people, especially for people in developing countries including Indonesia [29]. Social security services in Indonesia itself are still relatively lacking and still require a lot of attention [22]. Because of this, the government of the Republic of Indonesia enacted a policy in 2011 through Law No. 24 of 2011 regarding the formation of two social security agencies, namely BPJS Health and BPJS Employment [29]. BPJS Ketenagakerjaan is a social security institution engaged in the field of life insurance and finance including death, health and work accident funds. The programs created are aimed at implementing social security programs for all workers in Indonesia [22].

In policy terms, social security is a tool designed to provide certainty against poverty, increase economic activity, and promote decent work. The ILO describes social security as the social protection of a country. In social protection, the foundation of protection conveys the idea that all workers have the same right to security. The expansion of social security coverage can be affected by financial factors that can cause *disincentives* or barriers to coverage expansion. In other words, affordability is a major issue in the implementation of social security. So that even though the need for social security is of considerable value, unaffordable contribution or payment schemes can be an obstacle to social security coverage [18].

BPJS Ketenagakerjaan focuses its services on small businesses and people with low income levels with two approaches, namely welfare and *institutional*. From the welfare approach, BPJS Ketenagakerjaan has a challenge in increasing the number of participants and contribution recipients, which of course has an indicator of success if it succeeds in reaching and providing social security to all segments. While in terms of institutional, BPJS Employment is said to be successful if it is able to *sustainable* maintain its finances by fulfilling every financing while still making a profit. To be able to maintain this *sustainability*, BPJS Ketenagakerjaan is not a non-profit oriented company and only uses the approach of receiving contributions, so that the wider the range of membership will make the financial scheme more stable and lasting [17]. Improved customer satisfaction contributes to faster

cash flow inflows, greater cash flow volumes, and reduced cash flow-related risks. Customer satisfaction has the potential to increase future revenue.

In the last forty years, Indonesia has introduced numerous social security initiatives, yet they continue to reach only a fraction of the populace. Furthermore, based on statistical data from the BPJS annual report as of December 2019, active coverage only managed to reach 19% of the total population of Indonesia¹. This shows that there is only a small proportion of workers who feel that job protection is important. In the meantime, the effectiveness of BPJS Ketenagakerjaan programs can typically be assessed based on the extent of social protection they offer to the community [29]. The extent of this coverage can also be seen based on the level of satisfaction of social security users, so it can be said that increasing the level of user satisfaction is something that must be considered and needs to be improved [5].

In all fields of business, user satisfaction is something that should be considered. Satisfaction is a feeling when customers feel their expectations are well met when using a product or service [15]. Satisfaction by users includes experience, when users have a positive experience, there's a good chance they'll return, reuse, or repurchase. So, with an effort to pay attention and maintain satisfaction from customers, it will also bring benefits to business actors because in addition to customer loyalty, it will also bring positive communication between potential customers. User satisfaction can be due to many factors, for example, product quality factors and the quality of the services provided [4].

The quality of a product or service offered is something that can attract so that it gives rise to a response between satisfaction or dissatisfaction when using it. In addition, the level of service quality offered will elicit a similar response. The satisfaction felt by users will be influenced by the product factor along with the services rendered by business proprietors. When the desired expectations match what is received when making transactions, It will positively influence customer satisfaction because what is expected is based on what is received. Consequently, this will positively affect the business's longevity [23]. Assessing service quality relies heavily on customer satisfaction as a key parameter. Customer loyalty is achieved by striving for customer satisfaction as one of the criteria. Nevertheless, even though several studies have shown a direct correlation between product/service quality and customer happiness, some research indicates that the connection between service quality and customer loyalty may not be strong.

This current research builds upon and extends ideas derived from prior studies by [25] dan [6] which investigates the influence of coffee product quality on customer satisfaction in South Karawaci, and explores the link between service quality and customer satisfaction in the automotive industry at Toyota Dasmaring-Cavite, Philippines. There are also things that are used as a differentiator in this study, which lies in the population used, namely BPJS Ketenagakerjaan, which is a company providing intangible services and products. Based on the research reference article, it's evident that both product quality and service quality are among the main factors that determine consumer satisfaction. Therefore, the study focuses on exploring how product quality and service quality affect customer satisfaction of BPJS Ketenagakerjaan Batam Nagoya is important to do.

2 Study of Theory, Literature, and Hypothesis Development

2.1 Study of Theory and Literature

Theory of Consumer Behavior

Dharmesta dan Handoko (1982) provides a definition of consumer behavior, namely the activities or actions of a person who is directly involved in obtaining, utilizing and evaluating products and services which include the stages of decision making regarding suitability for references, needs, expectations, and consumer confidence. [21]

¹ BPJS Ketenagakerjaan. (2019). *Integrated Annual Report 2019*. Jakarta: BPJS Ketenagakerjaan <https://www.bpjsketenagakerjaan.go.id/> accessed on October 25, 2023

identifies three main drivers that shape consumer behavior: (1) Environmental factors include external elements that impact individual consumers, decision-making units, and marketers. This includes cultural influences, social class, then individual influences, then family, and situational influences. (2) Individual differences refer to internal factors such as consumer resources, then motivation, participation, knowledge, behavior, personality, and also lifestyle that trigger and influence behavior. (3) In addition to external and internal factors, consumer behavior is also shaped by psychological stages, including information processing, then learning, and a change in behavior and attitudes.

Improving customer satisfaction is a step towards achieving business goals. Understanding the attitudes of customers allows marketers to truly understand what their consumers want. Consumer behavior is essentially the physical and mental activities of consumers which include the acquisition, consumption, discontinuation of the use of products, services and ideas and experiences that are useful for fulfilling certain desires and desires of consumers.

2.2 Hypothesis Development

As per Kotler (2016) product quality refers to a product's ability to meet its functions fully, including aspects such as reliability, accuracy, competitiveness, and more. According to the theory of consumer behavior, based on psychological factors, an individual's satisfaction is intricately tied to how effectively a product or service meets the needs and advantages of its users [21]. However, each individual can have different preferences for a product due to differences in the level of satisfaction. Someone will feel more satisfied when they feel that the things they use can provide their own benefits to their users. Customer satisfaction refers to the sentiment experienced by buyers when the company's performance matches their expectations. It can be inferred that a direct relationship exists between the quality of a product and the satisfaction of the consumer. This was once stated by Gilmore (1974) that product quality has the ability to satisfy the specific desires of consumers. When the quality of a product can fill the wants and expectations of consumers, consumers will feel satisfied and perceive the product as a high quality product. This causes product quality to be considered as a factor that can determine consumer satisfaction [20]. In his research, [9] stated that the sense of satisfaction felt due to product quality is a feeling felt by a person for his experience using the product. This sense of satisfaction is a response that occurs when a customer feels pleasure and feels that his desires are well met.

These findings are consistent with the research conducted by oleh [28], [26], and [9] indicating a significant impact of product quality on customer satisfaction. However, divergent results were observed in studies by [19] and [13] suggesting that product quality does not influence customer satisfaction. From the outlined findings, the research hypothesis can be articulated as follows:

H1: Product quality has a significant effect on customer satisfaction.

In applying the theory of consumer behavior, Customer satisfaction may be grounded on how products, services and experiences that customers feel can be useful and fulfill certain desires and desires of consumers [21]. Customer satisfaction is a feeling that the customer feels after a comprehensive evaluation process of his expectations with the actual situation based on what he experiences when using a product or service [16]. In assessing service quality, customers tend to like the consistency of service providers, so far it can be said that consumers will feel a sense of satisfaction if there is a certain consistency or ease in the quality of service [11]. Service quality is the main constituent of the sense of satisfaction felt by a person, and it can be said that satisfaction is a feeling that is created when service quality is successfully obtained as desired [27]. Consistent satisfaction with a service will result in lasting customer loyalty [7].

In his report [30], [24], dan [1] also states that service quality is able to have a positive and significant effect on customer satisfaction. Research by [3] provides a statement that several aspects of service quality, namely sympathy, responsibility, responsibility and proof, have a positive influence on the sense of satisfaction of hotel customers in Erbil city. On the other hand [12] shows that there is no significant relationship between service quality and customer satisfaction. From the outlined findings, the research hypothesis can be articulated as follows:

H2: Service quality has a significant effect on customer satisfaction.

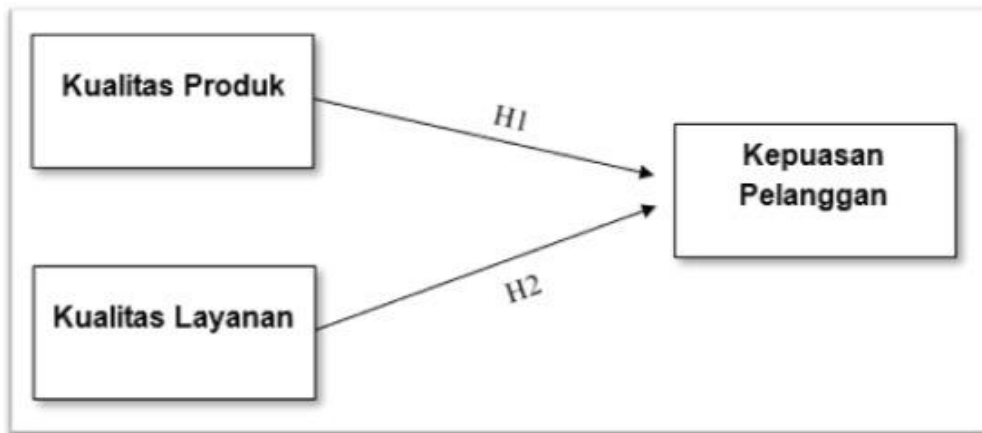


Figure 1 Research Framework

3 Research Methods

This research was prepared using a quantitative correlation approach. Quantitative research is in line with the research objectives, namely to determine the effect of independent variables, namely product quality and service quality on the dependent variable, namely product quality.

3.1 Population and Research Sample

The research population is Active Labor participants BPU BPJS Ketenagakerjaan Batam Nagoya. The population amounted to 54,727 Active TK in December 2023. This survey was conducted using *accidental sampling* method. Through the Slovin formula with the use of a margin of error of 10%, 100 participants were chosen to represent the research sample.

3.2 Research Instruments and Data Analysis Techniques

The utilized data consists of primary data obtained by disseminating surveys employing a 5-point Likert scale questionnaire among the research population. The questionnaire distributed was divided into 3 parts, the first part contained the respondent's confirmation, the second part contained the questions, and finally the collection of information on the research respondents. Measuring instrument for product quality variables according to [31] is performances, features, conformance to specifications, reliability, durability. Meanwhile, the indicators of service quality variables according to [6] is tangible, empathies, responsiveness, reliabilities, assurance. The collected data was assessed with SmartPLS 3.29 software.

4 Results and Discussion

4.1 Outer Model (Measurement Model)

In this research, the assessment of the outer model was conducted, comprising three sections: evaluating convergent validity, assessing discriminant validity, and examining composite reliability. Each variable's validity and reliability were tested utilizing SmartPLS software version 3.29. The outcomes of the outer model examination in this investigation are as stated:

Table 1 Outer Model Results

VARIABLE	AVE	DESC	COMPOSITE R	DESC	CRONBACH'S ALPHA	DESC
Product Quality	0.565	Valid	0.901	Realibel	0.872	Realibel
Service Quality	0.521	Valid	0.958	Realibel	0.954	Realibel
Customer Satisfaction	0.553	Valid	0.881	Realibel	0.838	Realibel

Source: Research data processed using SmartPLS 3 software in 2024

According to [8] as a general guideline in assessing convergent validity, the factor loading value should be greater than 0.70 for the type of exploratory research and must exceed 0.60 for the type of exploratory research. While the Average Variance Extracted (AVE) value must have a value above 0.50. The data in table 1 shows that the factor loading value for each variable indicator, such as product quality, service quality, and customer satisfaction, is greater than 0.60. Also, all variables should have an average Variance Extracted (AVE) higher than 0.50. Therefore, the criteria for convergent validity have been satisfied by considering the loading factor values and AVE calculations of each indicator within the construct.

According to [8] rule of thumb in testing the reliability of an instrument in a research model is that the Composite Reliability value along with Cronbach's Alpha must have a value exceeding 0.70 for the type of exploratory research and must exceed 0.60 for the type of exploratory research. Referring to table 1 The outcomes of the computation Construct Reliability value along with Cronbach's Alpha of all variables have met the criteria because the value is > 0.70. From the results of the calculation of Outer loading, AVE, Composite Reliability and Cronbach's Alpha, all of them have met the valid and reliable criteria. Based on these considerations, the research model is considered to be used for further testing.

4.2 Inner Model (Structural Model)

At this stage, Inner Model testing is carried out, namely R square and T-statistics. The R square and T-statistic tests for each variable were carried out using SmartPLS 3.29 software. The results of testing the inner model of this study are as follows:

Table 2 Coefficient of Determination (R^2)

	R Square	R Square Adjusted
Customer Satisfaction	0.423	0.411

According to [8] R-Square is a measure that shows how strong or weak the influence that has been caused by exogenous variables. Based on table 2, the accuracy of estimating the R2 model of customer satisfaction is 0.423. Referring to this value has a **weak** accuracy estimation. So, the variables used are only influenced by 42.3% of the variables and are influenced by 57.7% by other variables.

Table 3 Hypothesis Testing Results

	T Statistics (O/STDEV)	P Values	Desc
Product Quality -> Customer Satisfaction	1.774	0.077	Rejected
Service Quality -> Customer Satisfaction	6.589	0.000	Accepted

Source: Research data processed using SmartPLS 3.29 software in 2024

Analysis of the structural model coefficients will be used to assess the hypotheses by determining the relationships that have a substantial impact. Hypothesis testing involves examining the t-statistic value. If the t-statistic result exceeds the 1.96 value of the t-table, It suggests that the hypothesis is supported or accepted. Conversely, if the P-value surpasses 0.05, it indicates that the hypothesis testing demonstrates a significant effect [8].

H1: product quality has a significant effect on customer satisfaction.

The test results in table 3 demonstrate that the t-statistics value is $1.774 < 1.96$ and the value of the P value is $0.077 > 0.05$. These results lead to the conclusion that the hypothesis suggesting that product quality greatly impacts customer satisfaction is not backed up.

Based on consumer behavior theory, satisfaction depends on psychological factors, specifically it's it concerns how well a product or service aligns with the perceived needs and benefits of its users [21]. However, each individual can have different preferences for a product due to differences in the level of satisfaction. Someone will feel more satisfied when they feel that the things they use can provide their own benefits to their users. But this study shows different results on the assumptions of consumer behavior theory. Even though the products offered by BPJS Ketenagakerjaan are good enough. In reality, this doesn't influence consumer satisfaction. This issue can be experienced due to several factors, one of which is that in using BPJS Ketenagakerjaan products, Customers are often influenced not solely by their needs but rather by motivating factors from the work environment, leading to reduced expectations regarding the characteristics offered by the product. In addition, the products offered by the Employment BPJS are intangible products so that customers are not worried about the risk of damage or failure in their use, then the durability of the use of the products offered is also not a concern of the customer because the product usage period is determined by the customer's personal decision to extend or not so this supports the research results that the quality of BPJS employment product does not impact customer satisfaction.

This has alignment with the results obtained from research [19] and [13] which indicate that product quality does not affect customer satisfaction. Similar results were also found in research [2].

H2: service quality has a significant effect on customer satisfaction

The test results in table 3 demonstrate that the t-statistics value is $6.589 > 1.96$ then the value of the P value is $0.000 < 0.05$. Based on these findings, it can be inferred that the hypothesis suggests that service quality significantly impacts customer satisfaction is supported.

Based on the theory of consumer behavior, customer satisfaction can be based on how products, services and experiences that customers feel can be useful and fulfill certain desires and desires of consumers [21]. In fulfilling consumer desires, service providers can optimize the provision of facilities to create a positive impression for their consumers. In addition, service providers also need to pay attention to speed and accuracy in serving customer

complaints. This supports the results of this study. BPJS Employment customers show a positive impression when the facilities provided meet their needs, with good facilities customers are able to feel comfortable when visiting the BPJS Employment office. Then the attention, speed, and responsiveness given by BPJS Employment employees in dealing with complaints given by customers can provide satisfaction for customers. These results have shown that all research indicators such as: tangible, empathy, responsiveness, reliability, and assurance, as a whole, affect customer satisfaction BPJS Employment Batam Nagoya. BPJS Employment customers are satisfied when the level of service provided by BPJS Employment Batam Nagoya can fulfill customer desires.

This has alignment with the results obtained from research [1] This suggests that service quality significantly and positively influences buyer satisfaction in online markets. Similarly, the findings of the study by [6], [14] along with [11] the report mentions that there is a strong correlation between the quality of service and customer satisfaction.

5 Conclusion

The study's findings revealed that as an insurance service provider, the satisfaction felt by customers of BPJS Ketenagakerjaan Kota Batam is not swayed by the quality of the products presented. Even though product quality doesn't impact customer satisfaction, this does not mean that the goods offered are of poor quality, this could be caused by customers who prioritize other factors as determinants of their satisfaction.

The significance of service quality in influencing customer satisfaction, particularly in the service sector and intangible goods, cannot be underestimated. As a company that offers intangible products, BPJS Ketenagakerjaan certainly relies more on quality in serving its customers to expand the market and gain trust from consumers on an ongoing basis.

This research has practical implications for BPJS Employment, because companies providing BPJS Employment services and intangible products must focus more on improving service quality as the main driver of customer satisfaction. Customers prioritize the service they receive over perceived product quality. Therefore, companies must continue to provide improvements in the quality of their services, such as improving employee skills through training and accepting input, criticism and suggestions from customers so that they become positive input for customers. improve the quality of service at BPJS Employment.

Researchers are very aware of the limitations in this study, namely first, the lack of understanding of respondents regarding the research questions given allows respondents not to provide accurate answers. Second, researchers only use a few indicators in conducting this research so that this certainly limits the results of this study. Future researchers are anticipated to address and surmount these limitations.

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Attachment

Table 4 Loading Factor Test Result

VARIABEL	DIMENSI	KODE	LOADING FACTOR	DESC
PRODUCT QUALITY	Performances	P1	0.763	Valid
		F1	0.737	Valid
	Features	F2	0.785	Valid
		Conformance to Specifications	CTS1	0.687
	Reliability	RP1	0.718	Valid
		RP2	0.797	Valid
	Durability	D1	0.766	Valid
SERVICE QUALITY	Tangible	T1	0.703	Valid
		T2	0.73	Valid
		T3	0.71	Valid
		T4	0.723	Valid
		T5	0.751	Valid

		T6	0.709	Valid
		E1	0.7	Valid
	Empathies	E2	0.721	Valid
		E3	0.727	Valid
		E4	0.702	Valid
		RES1	0.715	Valid
	Responsiveness	RES2	0.713	Valid
		RES3	0.739	Valid
		RES4	0.725	Valid
		RS1	0.736	Valid
	Reliabilities	RS2	0.731	Valid
		RS3	0.748	Valid
		RS4	0.73	Valid
		A1	0.715	Valid
	Assurance	A2	0.703	Valid
		A3	0.721	Valid
VARIABEL	DIMENSI	KODE	LOADING FACTOR	DESC
		CS1	0.718	Valid
		CS2	0.769	Valid
		CS3	0.715	Valid
		CS4	0.78	Valid
		CS5	0.716	Valid
		CS6	0.76	Valid