

Analysis of Customer Satisfaction from Service Quality Dimensions Using Fuzzy-Carter Method (A Case Study at BPRS Khasanah Ummat Purwokerto)

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Abstract

The primary goal of a business is to satisfy customers, so the caliber of this service has a significant impact on the success of a service company, specifically the creation of a sense of satisfaction with the services provided, where this will foster a loyal attitude of its customers and encourage positive and encouraging word of mouth as an assumption of customer satisfaction. By assessing the value gap between the services obtained and the standard of service expectations by clients, this researcher investigates the quality of services offered by BPRS Khasanah Ummat. This kind of research comprises quantitative associative research using the Fuzzy-CARTER approach to examine the connection between the caliber of services rendered and client satisfaction. The sample of this research is 286 active customers. The study's findings indicate that: 1) the level of customer satisfaction is measured across six CARTER dimensions, five of which customers are satisfied, namely compliance, assurance, reliability, tangibles, and responsiveness, but customers are not satisfied with the service on the dimension of empathy, indicating that improvements must be made by paying more attention to and understanding customer needs. 2) The overall level of customer satisfaction with service quality is good, and there is no gap between perceived perceptions and customer expectations.

Keywords: *customer satisfaction; fuzzy-carter; quality of service*

INTRODUCTION

The development of Islamic financial institutions continues to grow rapidly, even now that the existence of Islamic banks is starting to be taken into account. This is evidenced by the growing development of Islamic financial institutions, services, and products. The Financial Services Authority (OJK) reports that Indonesian Islamic banking continues to show positive growth in the midst of the COVID-19 pandemic. According to information from OJK, Islamic banking continues to grow and contributes greatly to supporting Islamic finance with total assets of Rp. 531.78 trillion, PYD Rp. 366.96 trillion, and DPK Rp. 421.32 trillion (OJK Information, released 23/9/2020).

With the development of financial institutions, competition in the field of banking services is becoming increasingly fierce. To face these challenges, financial institutions require an effort, one of which is implementing a good service quality system. The main purpose of the business itself is to make consumers feel satisfied, so the quality of service is very influential on the success of a service company because it greatly affects customer

satisfaction. Customer satisfaction will foster a loyal attitude, and loyal customers will encourage positive word of mouth and as an assumption of customer satisfaction. Customer satisfaction depends on customer perceptions. Customer satisfaction is defined as a gap, namely the level and direction of the difference between perceived perceptions and customer expectations; where if the service received or perceived by the customer is in accordance with what is expected, then the service quality is perceived to be satisfactory; and if the service received or perceived by the customer is lower than expected, then the service quality is perceived as bad.

To realize quality services, banks need to pay attention to customer service standards. There are several methods to measure and improve service quality, one of which is the ServQual method (Parasuraman, 1988), where there are five dimensions of service quality measurement, namely: tangibles, reliability, responsiveness, empathy, and assurance. However, this method is considered inadequate for service companies operating in accordance with Islamic sharia principles. Othman and Owen (2002) developed a service quality research model in which Othman added the dimension of compliance (compliance with Islamic law) as an important part for service companies that carry out their operational activities based on sharia principles, because this is a characteristic that distinguishes conventional banks from Islamic banks. Later, this model is known as the CARTER model, with six dimensions of service quality measurement, which include: compliance, assurance, reliability, tangible, empathy, and responsiveness. The use of the CARTER method is accommodated with Fuzzy theory. This is because the CARTER method has uncertainty in the answers to subjective questionnaires. This combination is used in completing research to ensure that the linguistic meaning of a statement regarding customer satisfaction can be conveyed accurately to the reader. The fuzzy method is used in this study because the fuzzy method is more appropriate to measure the level of customer satisfaction and can be used to find out about the attributes of service quality that have a gap value.

BPRS Khasanah Ummat Purwokerto is a financial institution whose operations are based on sharia law and principles. BPRS Khasanah Ummat has one mission, which is to strive to fulfill and provide the best service to customers and to become a business partner that provides value-added solutions. To achieve this target, the BPRS must have the right strategy in the service system so as to create a sense of satisfaction with the services provided. In improving the quality of services provided, BPRS Ummat uses the "pick up the ball" strategy. The application of this pick-up system is supported by the application of mobile teller technology. This technology is connected to a device to facilitate deposit or withdrawal transactions where customers can immediately find out their balances and can print deposit and/or withdrawal slips. This is a form of technology application to facilitate customers in conducting transactions. BPRS Khasanah Ummat implements excellent service in serving customers, namely by providing services that exceed customer

expectations. This excellent service system applies the best service pattern to customers and pays attention to the needs and desires of customers.

One indicator of customer satisfaction can be seen from the increase in the number of customers, because good service quality can increase the number of customers. The following table shows the number of customers for BPRS Khasanah Ummat from 2017–2021.

Table 1

Data on the Number of Customers of BPRS Khasanah Ummat Bank 2017-2021

Year	number of Customers	Number of Customers Increase
2017	6884	-
2018	7641	757
2019	8290	649
2020	8690	400
2021	8998	308

(Source: BPRS Khasanah Ummat)

From table 1 above, it shows that the number of customers changes every year , and from this data, it can be seen that the increase in the number of customers at the Khasanah Ummat BPRS bank has decreased from previous years. Indicators for assessing customer satisfaction can also be seen from how often transactions occur between customers and financial institutions. Customers who are satisfied with the services provided in transactions will re-transaction; otherwise, customers who are not satisfied with the services provided are reluctant to make transactions again, will even leave and switch to another bank. As a result, the bank will experience a decrease in income. The following is the number of customers conducting transactions at BPRS Khasanah Ummat in April 2022.

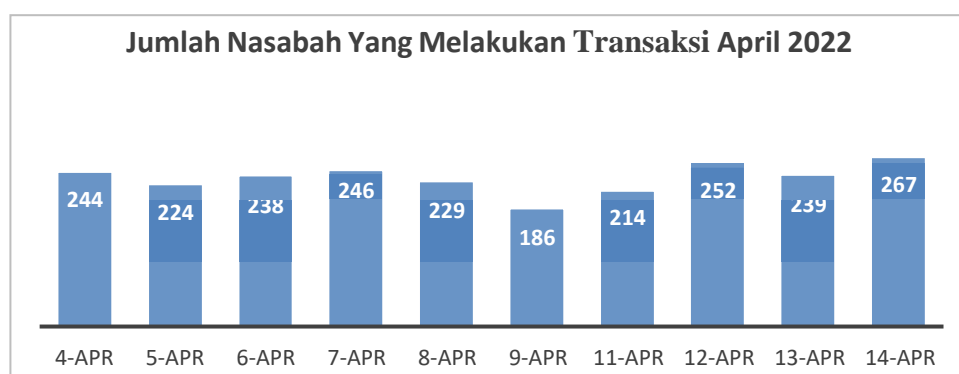


Figure 1.

Graph of the Number of Customer Transactions at BPRS Khasanah Ummat

(Source: processed data)

Based on table 1, the data above is the number of customers who made transactions at BPRS Khasanah Ummat in April 2022 from this data, it can be seen that the number of transactions per day of BPRS Khasanah Ummat is fluctuating and significant, with an average transaction per week of 233 transactions. In connection with the description above, this study aims to determine and analyze customer satisfaction from the dimensions of service quality using the Fuzzy-Carter method.

LITERATURE REVIEW

1. Quality of service

Allah says in the Qur'an Surah Al-Baqarah Verse 267, which means: "O you who believe, spend (in the way of Allah) part of the results of your good efforts and part of what you spend from the earth for you and do not choose the bad things and then spend from them when you yourself do not want to take them except by squinting at them." And know that Allah is Rich and Praiseworthy "(Surah Al-Baqarah (2): 267). The verse emphasizes that Islam is very concerned about quality service, providing good and not bad. Thorik G and Utus H (2006) explain that quality service is not only delivering or serving but also understanding, understanding, and feeling.

According to Kotler and Arief (2010), quality is defined as a set of characteristics and properties of a product or service that affect how well it can fulfill customer satisfaction, either explicitly or implicitly. If a product or service can meet consumer expectations for the value of the product, then the item or service will be judged to have high quality. Meanwhile, according to Perdana & Fahrullah (2020), service quality is an approach to meeting customer needs and desires and providing fast and timely service to meet their expectations.

Indasari (2019: 64), quoting from Lupiyoadi and Hamdani, stated that there are many dimensions that must be considered in evaluating service quality, including: 1) Tangibles, are a company's ability to demonstrate its presence to outsiders. 2) Reliability, namely the company's ability to provide services as promised accurately and reliably. 3) Empathy is the company's willingness to understand and pay attention to customers, and to know and try to meet customer needs. 4) Responsiveness, refers to the ability to assist customers and provide quick, accurate, and efficient service. 5) Assurance is the knowledge and courtesy of the staff and the ability to increase customer trust in the business.

According to Parasuraman (1998), there are two factors that affect service quality: expected service and perceived service. To overcome this gap, a service company must improve service quality. Service companies must eliminate or reduce factors that can cause failure in service delivery, in particular as follows: The gap between management perceptions and customer expectations; the gap between

management expectations and service standards; the gap between expectations and actual service quality; The gap between service delivery and external communication and the gap between perceived and expected services (Kotler, 2000:498-499).

2. Perceptions and Expectations

a. Customer Perceptions

According to Parasuraman and Zeithaml (1985), customer perception is explained as a consequence (result) of how consumers perceive service quality because they have used the product, but perceptions can also be developed from the opinions of others. Customer perceptions are a reflection of the quality of services provided by service providers, where the value of service quality from a service company is seen through the perceptions of its customers, because it is the customers who enjoy and feel the services provided.

b. Customer Expectations

Expectations are a person's desires for a specific product or service. The term "expect", defined by Parasuraman (1990), is something that refers to the strong desire or motivation of the parties using the service, according to their perception of what the service provider will provide. These expectations can be created by previous consumer experiences, recommendations or suggestions from others.

Basically, expectations consist of 3 categories (Tjiptono, 2011: 295), namely:

1) Will Expectation.

The level of performance is obtained from predictions or estimates of customers for services that will be received based on information that has been obtained and known beforehand. This level of expectation is most often expressed by consumers in assessing service quality.

2) Should Expectation.

This is the level of performance that should be accepted by consumers. Where there is a stronger than expected desire for what should happen.

3) Ideal Expectation.

This is the most optimal level of performance, where what is desired by consumers is the same as what is received by consumers.

3. Customer Satisfaction

Satisfaction A customer occurs when a person compares the perceived performance of a product (or outcome) with their expectations. This satisfaction can be a feeling of pleasure or dissatisfaction (Kotler & Keller, 2010: 138–139). Meanwhile, Wilkie (1990) defines satisfaction as an emotional response to consumer

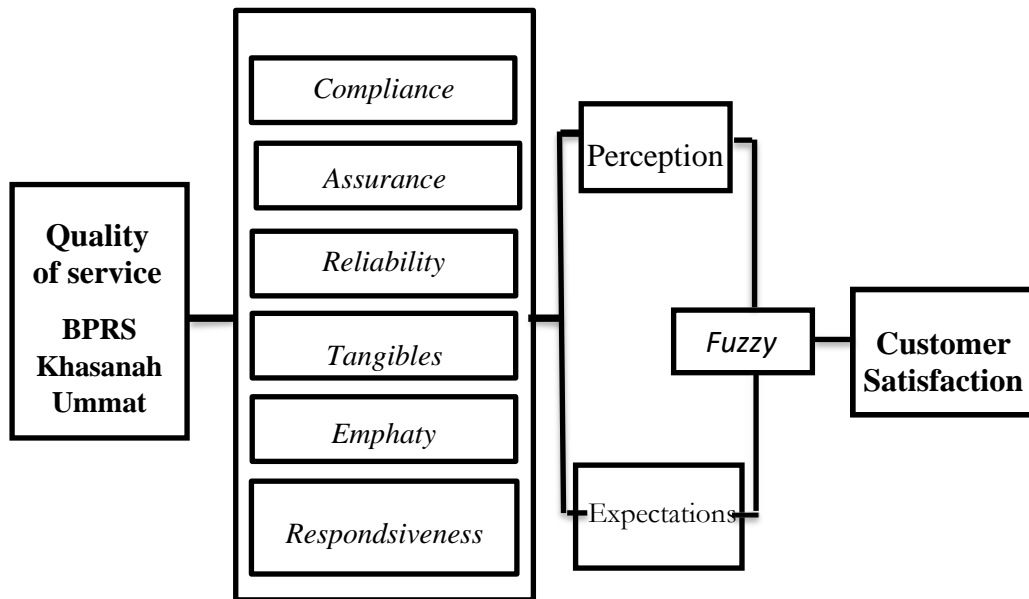
evaluations of the experience of an item or service. So basically, customer satisfaction is the gap between expectations and actual performance or perceived results.

CARTER

Model The CARTER model is a tool to measure the quality of service in financial institutions that implement sharia principles and was first developed by Othman and Owen in 2004. This CARTER model is a form of development from previous research by Parasuraman (1988), namely measuring service quality with the model Service Quality (ServQual). This model is not suitable for service companies that adhere to sharia principles. The Servqual model still has shortcomings because its implementation is different from Islamic banking, where Islamic banking has the characteristics of compliance with Islamic law in carrying out its activities. So, to complement these deficiencies, Othman and Owen add a compliance dimension. In their research, Othman and Owen mention compliance, which means the ability to fulfill Islamic law and operate under the principles of Islamic banking and economics. Furthermore, this model is better known as the "CARTER model."

This CARTER model has 6 dimensions of measurement (Othman and Owen: 2002) as follows: (1) Compliance, defined as a service company's ability to comply with Islamic law and operate in accordance with Islamic law and Islamic economics. This is in accordance with the word of God. "...And Allah has permitted trading and forbidden usury." (Surat al-Baqarah, verse 275). (2) Assurance is defined as employees' knowledge and courtesy, as well as their ability to convey and/or foster customer trust. (3) Reliability is the company's ability to provide services as promised, reliable and accurate. (4) Tangibles, or company facilities, such as office space, equipment, supplies, and office personnel. (5) Empathy is a form of care and individual attention given by the bank to its customers. (6) Responsiveness is defined as a willingness to assist customers in order to provide prompt and responsive service.

Based on the description above, it can be seen that the framework of thinking in this study is as follows:



METHOD

In this study, the sample was determined using the Slovin formula with an error rate of 5% and resulted in 286 customers.

Slovin's formula:

$$n = \frac{N}{1+Ne^2}$$

N : sample size

N : Research population

E : The percentage of attachment looseness caused by the desired sampling error.

Variables and Operational Definitions of Research Variable

Variables (Dimention)	Indicator
<i>Compliance</i>	1) The contract/agreement is in accordance with the principles of Islamic law. 2) There is no interest in the bank's operational activities, both savings and loans. 3) The bank provides sharia-compliant products and services. 4) Interest-free financing 5) The bank provides and provides profit sharing for investment products.

Variables (Dimention)	Indicator
<i>Assurance</i>	1) The staff are kind, friendly, and courteous to customers. 2) The employees are knowledgeable and experienced. 3) It is easy for customers to gain access to account information. 4) The bank provides financial advice for customers. 5) The bank has adequate office facilities.
<i>Reliability</i>	1) The bank provides convenience by providing quick and timely service. 2) The bank provides a variety of products and services. 3) Banks are able to solve customer problems appropriately. 4) The bank's accuracy in keeping promises
<i>Tangible</i>	1) Facilities room is waiting, comfortable and attractive. 2) The location of the bank that is easily accessible by customers. 3) Bank strategic location 4) There are clear counter restrictions to make it easier for customers. 5) Employees are clean and tidy. 6) Banks use technology well in their banking operations. 7) The bank has modern office equipment and supplies. 8) The bank has plenty of parking.
<i>Empathy</i>	1) Employees know customer needs. 2) Employees pay attention to customers when making transactions. 3) Ability of employees to detect customer interest. 4) Personal attention to customers in terms of service.
<i>Responsiveness</i>	1) Employees are ready to respond to helping and serving customers. 2) The bank provides loans with favorable repayment terms. 3) The bank has several branches available in various regions. 4) Banks provide efficient services.

Fuzzy-CARTER Test

1. Fuzzy set

A fuzzy set was conducted to determine the score that must be given by each respondent for each criterion proposed in the questionnaire. At this stage, it is used to determine the score that must be given by the respondent for each of the questions asked in the questionnaire. Where the score given on the questionnaire is in the form of linguistic variables on the questionnaire. The scores that have been determined in the questionnaire are linguistic variables (1,2,3,4,5) according to the number of scales used.

Table 2

Perception and expectation are linguistic variables that have a membership function.

Universe Speakers	Fuzzy Set		Domain	Range
0-1	Unsatisfactory	Not Important	[0-0,25]	(0; 0; 0,25)
0-1	Less Satisfactory	Less Important	[0-0,5]	(0; 0,25; 0,5)
0-1	Quite Satisfactory	Fairly Important	[0-0,75]	(0,25; 0,5; 0,75)
0-1	Satisfactory	Important	[0,5-0,75]	(0,5; 0,75; 1)
0-1	Significantly	Significant	[0,75-1]	(0,75; 1; 1)

2. Fuzzification and defuzzification

Stage 1 Fuzzification is the process of changing the value of a numeric variable to linguistic variables. In other words, it is a mapping from the input space to the fuzzy set defined in the speaker universe of input variables (Rahmawati, 2011). In this study, the fuzzification process of questionnaire data between customer expectations and perceptions is carried out using the Triangular Fuzzy Number (TFN) formula, which will obtain the upper limit value (α_i), the middle limit (b_i), and the lower limit (c_i). The TFN formula is as follows:

Upper limit value (α_i):

$$\alpha_i = \frac{(b_2n_1) + (b_3n_2) + \dots + (b_kn_k)}{n_2 + n_3 + \dots + n_k}$$

Middle limit (b_i):

$$b_i = \frac{(b_1n_1) + (b_2n_2) + \dots + (b_kn_k)}{n_1 + n_2 + \dots + n_k}$$

Lower limit (c_i):

$$c_i = \frac{(b_1n_1) + (b_1n_2) + \dots + (b_kn_k)}{n_1 + n_1 + \dots + n_k}$$

Furthermore, at this stage of defuzzification, there is a mapping from fuzzy sets to firm sets, where this fuzzy set is the output obtained from the results of inference (Wang, 1997: 108). In this defuzzification process, using the Arithmetic Mean, which is formulated as follows:

$$Crips\ Fuzzy = \frac{a_i + b_i + c_i}{3}$$

i: attribute (1,2,3,...,m)

3. Determination of the Gap Score

Customer satisfaction depends on the perception felt by the customer. This will form a gap between perceptions received and customer expectations. This gap is the difference between perceptions and expectations, which is formulated as follows:

$$\text{Gap} = \text{Perceptions} - \text{Expectations}$$

RESULTS AND DISCUSSION

The following discusses the influence of the CARTER dimension on customer satisfaction at BPRS Khasanah Ummat:

Table 3
Gap Analysis Compliance Dimensions

Criteria	Perceptions	Expectations	Gap	Rank
The contract/agreement is in accordance with the principles of Islamic law.	0,743298	0,740676	0,002622	
There is no interest in the bank's operational activities, both savings and loans.	0,713287	0,706294	0,006993	
The bank provides sharia-compliant products and services.	0,759033	0,75204	0,006993	3
Interest-free financing	0,684732	0,682984	0,001748	
The bank provides and provides profit sharing for investment products.	0,734557	0,732809	0,001748	
Amount	0,726981	0,7229603	0,004021	

(Source: data processed using Ms. Excel 2013)

Hypothesis 1:

H₀ : There is no gap between customer expectations of service quality and perceptions received by customers from the Compliance dimension

H_a : There is a gap between customer expectations of service quality and perceptions received by customers from the Compliance dimension.

From the results of the analysis of the gap in table 3 above, it is known that the value of each test criterion on the compliance dimension is positive, where the perceived value of the customer is 0.726981 and the expected value of the customer is 0.722960. From the calculation results, it can be concluded that the perception expectation and the results of the gap analysis of the compliance dimension obtained a gap value of 0.004021. Where the gap value is positive (+), it is said that customers are very satisfied with the services provided by the company because the gap perceived by customers is positive. This shows that customer perceptions are greater than expectations for service quality.

1. The Influence of Compliance Dimensions on Customer Satisfaction

From the results of the gap analysis in table 3, it is known that the gap (gap) on the compliance dimension is positive, meaning that customer perceptions are higher than expected for the quality of services provided by BPRS Khasanah Ummat. This can be seen from the test results per gap criteria on the compliance dimension. The overall value is positive, meaning that the quality of service on each criterion in the compliance dimension has met what is expected by the customer. Based on previous research by Wijaya et al. (2017), it shows that the better the implementation of compliance, the higher the impact on customer satisfaction. This is based on testing on this compliance dimension where the results of the overall gap analysis and the criteria for testing the compliance dimension are positive. Therefore, it can be seen that the implementation of compliance at BPRS Khasanah Ummat is good. And based on the concept of customer satisfaction according to Oliver, where "customer satisfaction is determined by whether or not customer expectations are met," and based on test results, it can be seen that customer expectations have been met. This has even exceeded what is expected by customers. This is also in accordance with the concept of customer satisfaction by Kotler and Keller, where: "If a product or service meets or exceeds consumer expectations, then consumers will feel happy and satisfied." So from the results of the analysis above, it can be seen that there is no gap between customer perceptions and their expectations of service quality, so it can be concluded that the first hypothesis on this compliance dimension is H_0 is accepted and H_a is rejected.

Table 4
Gap Analysis Assurance Dimension

Criteria	Perceptions	Expectations	Gap	Rank
The staff are kind, friendly, and courteous to customers.	0,791375	0,776515	0,01486	
The employees are knowledgeable and experienced.	0,741841	0,738345	0,003497	
It is easy for customers to gain access to account information.	0,792832	0,729312	0,06352	1
The bank provides financial advice for customers.	0,66958	0,680361	-0,01078	
The bank has adequate office facilities	0,717949	0,713578	0,004371	
Amount	0,742716	0,7276223	0,015093	

(Source: data processed using Ms. Excel 2013)

Hypothesis 2:

H_0 : There is no gap between customer expectations of service quality and perceptions received by customers from the Assurance dimension

Ha : There is a gap between customer expectations of service quality and perceptions received by customers from the Assurance dimension.

From the results of the gap analysis in table 4 above, it is known that the value of each test criterion on the Assurance dimension is positive, where the perceived value of the customer is 0,742716 and the expected value of the customer is 0,7276223. It can be concluded that the perception expectation and the results of the assurance dimension gap analysis obtained a gap value of 0.015093, where the gap value is positive (+). It is said that the customer is very satisfied with the services provided by the company because the customer perceives a positive gap. This shows that customer perceptions are greater than expectations of service quality.

2. The Influence of Assurance Dimensions on Customer Satisfaction

From the results of the gap analysis in table 4, it is known that the gap in the assurance dimension is positive, meaning that the perception felt by the customer is higher than the customer's expectation of the services provided by BPRS Khasanah Ummat, even based on the calculation results of the gap on the overall assurance dimension of service. The customer has stated that the services provided by the BPRS Khasanah Ummat have exceeded what was expected by the customer, although there is one of the criteria from the assurance dimension that has not met the customer's expectations, namely that the customer feels that he or she does not receive financial advice or advice from the BPRS Khasanah Ummat. Based on previous research conducted by Restu Khaliq (2019), knowledge and courtesy of employees affect customer satisfaction in transactions. The ability of employees to foster customer trust in the company also affects customer satisfaction, even though customers are not satisfied with one of the test criteria. On the assurance dimension, overall customers are satisfied with the services provided. According to customers, employees have the courtesy and broad knowledge to provide the services. Besides that, employees can also grow customer trust by implementing a mobile teller system to make it easier for customers to regularly monitor their financial transactions. And, according to Oliver's definition of customer satisfaction, "Customer satisfaction is determined by whether or not customer expectations are met," so this test shows that customer expectations were met. This has even exceeded what is expected by customers. This is also in accordance with the concept of customer satisfaction by Kotler and Keller, where: "If a product or service meets or exceeds consumer expectations, then consumers will feel happy and satisfied." So, from the results of the analysis above, it can be seen that there is no gap between customer perceptions and their expectations of service quality, so it can be concluded that the hypothesis on this assurance dimension is that H₀ is accepted and H_a is rejected.

Table 5
Gap Analysis Reliability Dimension

Criteria	Perceptions	Expectations	Gap	Rank
The bank provides convenience by providing quick and timely service.	0,793124	0,791084	0,00204	
The bank provides a variety of products and services.	0,728438	0,726399	0,00204	
Banks are able to solve customer problems appropriately.	0,7162	0,710082	0,006119	5
The bank's accuracy in keeping promises.	0,729604	0,726981	0,002622	
Amount	0,741841	0,7386363	0,003205	

(Source: data processed using Ms. Excel 2013)

Hypothesis 3:

H₀ : There is no gap between customer expectations of service quality and perceptions received by customers from the Reliability dimension

H_a : There is a gap between customer expectations of service quality and perceptions received by customers from the Reliability dimension.

The results of the gap analysis in table 5 above show that the value of each test criterion on reliability has a positive value, where the perceived value of the customer is 0, 741841 and the expected value of the customer is 0, 7386363, implying that perception expectations are greater than service quality expectations.

3. The Effect of Reliability Dimensions on Customer Satisfaction

From the results of the gap analysis in table 5, it is known that the gap in the reliability dimension is positive, meaning that the perception felt by the customer is higher than what they expected. This can be seen from the test results per criterion dimension of reliability, which are all positive, meaning that the quality of service on each criterion on the reliability dimension has met what is expected by the customer. Based on research conducted by Murdifin (table 5, it is known that the gap in the reliability dimension is positive, meaning that the perception felt by the customer is higher than what the customer expects. This can be seen from the test results per criterion dimension of reliability, which are all positive, meaning that the quality of service on each criterion on the reliability dimension has met what is expected by the customer. Based on research conducted by Murdifin (2020), the reliability dimension has an influence on high and low customer satisfaction in improving good service, in which the managerial service has provided services as promised and can foster customer satisfaction. Based on testing the reliability criteria above, it is known that customers are satisfied with the services of BPRS Khasanah Ummat, where the managerial party provides fast and timely service, provides services as promised, and can solve problems well. This makes customers feel very satisfied with the services

provided. And, according to Oliver's definition of customer satisfaction, "customer satisfaction is determined by whether or not customer expectations are met," so this test shows that customer expectations were met. This has even exceeded what is expected by customers. This is also in accordance with the concept of customer satisfaction by Kotler and Keller, where: "If a product or service meets or exceeds consumer expectations, then customer will feel happy and satisfied." So, from the results of the description above, it can be seen that there is no gap between customer perceptions and their expectations of service quality, so it can be concluded that the hypothesis on this reliability dimension is that H₀ is accepted and H_a is rejected.

Table 6
Gap Analysis Tangibles Dimension

Criteria	Perception	Expectation	Gap	Rank
Facilities room is waiting, comfortable and attractive.	0,739219	0,738345	0,000874	
The location of the bank that is easily accessible by customers.	0,733974	0,733683	0,000291	
Bank strategic location	0,740676	0,733683	0,006993	
There are clear counter restrictions to make it easier for customers.	0,742716	0,738345	0,004371	
Employees are clean and tidy.	0,793124	0,789918	0,003205	
Banks use technology well in their banking operations.	0,752331	0,743881	0,00845	
The bank has modern office equipment and supplies.	0,755245	0,746795	0,00845	2
The bank has plenty of parking.	0,73951	0,712704	0,026807	
Amount	0,749599	0,7421692	0,00743	

(Source: data processed using Ms. Excel 2013)

Hypothesis 4:

H₀ : There is no gap between customer expectations of service quality and perceptions received by customers from the Tangibles dimension

H_a : There is a gap between customer expectations of service quality and perceptions received by customers from the Tangibles dimension.

From the results of the gap analysis in table 6 above, it is known that the value of each test criterion on the Tangibles dimension is positive, where the perceived value of the customer is 0, 749599 and the expected value of the customer is 0, 7421692. From the results of these calculations, it can be concluded that the perception of expectations and the results of this Tangibles dimension gap analysis obtained a gap value of 0.00743, where the gap value is positive (+). It is said that the customer is very satisfied with the service provided by the company. Because the gap value is positive, it shows that the customer's perception is greater than the expectation of service quality.

4. The Influence of Tangible Dimensions on Customer Satisfaction

From the results of the gap analysis in table 6, it is known that the gap in the tangible dimension is positive, meaning that the perception felt by customers is in accordance with what is expected of the services provided by BPRS Khasanah Ummat. The services provided by BPRS Khasanah Ummat have exceeded what was expected by the customer. It can be seen from the test results per criteria on the tangible dimension, which are all positive, meaning that the quality of service on each criterion on the tangible dimension has met what is expected by the customer. Based on research conducted by Nasfi et al. (2020), the appearance of physical facilities, equipment, and communication tools used affect customer satisfaction. Then, based on testing each of these tangible dimension criteria, it is known if the office facilities, location, equipment, and communication tools used by BPRS repertoire of Ummat have met customer service quality standards, and customers are very satisfied with this. And, according to Oliver's concept of customer satisfaction, "customer satisfaction is determined by whether or not customer expectations are met," so this test shows that customer expectations have been met, even exceeding what customers expect, which is also consistent with the concept of customer satisfaction. by Kotler and Keller, where: "If a product or service meets or exceeds consumer expectations, then customer will feel happy and satisfied." From the results of the analysis above, it can be seen that there is no gap between customer perceptions and their expectations of service quality, so it can be concluded that the hypothesis on this tangible dimension is H₀ accepted and H_a rejected.

Table 7
Gap Analysis EmpathyDimension

Criteria	Perceptions	Expectations	Gap	Rank
Employees know customer needs.	0,72669	0,731935	-0,00524	
Employees pay attention to customers when making transactions.	0,744464	0,742424	0,00204	
Ability of employees to detect customer interest.	0,694347	0,707168	-0,01282	6
Personal attention to customers in terms of service	0,730186	0,724942	0,005245	
Amount	0,723922	0,7266171	-0,0027	

(Source: data processed using Ms. Excel 2013)

Hypothesis 5:

H₀ : There is no gap between customer expectations of service quality and perceptions received by customers from the Empathy dimension

H_a : There is a gap between customer expectations of service quality and perceptions received by customers from the Empathy dimension.

From the results of the gap analysis in table 7 above, it is known that the value of each test criterion on the empathy dimension is negative, where the perceived value of the customer is 0.723922 and the expected value of the customer is 0.7266171. From the results of these calculations, it can be concluded that the perception expectation and the results of this empathy dimension gap analysis obtained a gap value of -0.0027. Where the gap value is positive (+), it is said that the customer is very satisfied with the services provided by the company, because the gap perceived by the customer is valuable. negative, it shows that the customer's expectations are greater than the customer's perceived perception.

5. The Effect of Empathy Dimensions on Customer Satisfaction

From the results of the gap analysis in table 7, it is known that the gap in the empathy dimension is negative, meaning that the perception felt by customers is not in accordance with what is expected of the services provided by BPRS Khasanah Ummat. This can be seen from the results of gap testing on the empathy dimension, which is negative. Of the four testing criteria on the empathy dimension, two of them have negative values, namely: employees know and understand what customers are interested in; and employees know the needs of their customers, meaning that the two criteria in this empathy dimension have not met customer expectations for the services provided by BPRS Khasanah Ummat. Customers are not satisfied with the two services because customers feel that employees do not pay attention to the needs and desires of customers in carrying out transaction activities. Customers want the BPRS to be ready and responsive in giving attention and providing customer needs. And based on previous research conducted by Engkur (2018), that the ease of communication, attention, and understanding of customer needs can create customer satisfaction. From the test results above, it is known that customers are not satisfied with the service on this dimension of empathy, attention, and understanding provided by the employee, which means that the customer is not satisfied with the service. And based on the concept of customer satisfaction according to Oliver where: "Customer satisfaction is determined by whether or not customer expectations are met." If customer expectations are not met or exceeded, then the customer will feel disappointed and will be dissatisfied with the product or service. This is also in accordance with the concept of customer satisfaction by Kotler and Keller where: "If after consuming the product and it is not in accordance with what was expected, the consumer will be dissatisfied with the product or service." So, from the results of the description above, it can be seen that there is a gap between the perceptions felt by customers and customer expectations of service quality, so it can be concluded that the hypothesis on this empathy dimension is H₀ is rejected and H_a is accepted.

Table 8
Gap Analysis Responsiveness Dimension

Criteria	Perceptions	Expectations	Gap	Rank
Employees are ready to respond to helping and serving customers.	0,792249	0,790793	0,001457	
The bank provides loans with favorable repayment terms.	0,727564	0,717949	0,009615	
The bank has several branches available in various regions.	0,717075	0,715618	0,001457	4
Banks provide efficient services.	0,792249	0,790793	0,001457	
Amount	0,757284	0,7537878	0,003497	

(Source: data processed using Ms. Excel 2013)

Hypothesis 6:

H₀ : There is no gap between customer expectations of service quality and perceptions received by customers from the Responsiveness dimension

H_a : There is a gap between customer expectations of service quality and perceptions received by customers from the Responsiveness dimension.

From the results of the gap analysis in table 8 above, it is known that the value of each test criterion on the responsiveness dimension is positive, where the perceived value of the customer is 0.757284 and the expected value of the customer is 0.7537878. From the results of these calculations, it can be concluded that the perception expectation and the results of the gap analysis of the reliability dimension obtained a gap value of 0.003497. Where the gap value is positive (+), it is said that the customer is very satisfied with the services provided by the company. Because the gap perceived by the customer is positive, this shows that customer perceptions are greater than expectations of service quality.

6. The Effect of the Responsiveness Dimension on Customer Satisfaction

From the results of the gap analysis in table 8, it is known that the gap on the responsiveness dimension is positive, meaning that the services provided by the Khasanah Ummat BPRS have exceeded what customers expected. This can be seen from the results of the test per criterion on the responsiveness dimension, which overall is positive, meaning that the quality of service on each criterion on the responsiveness dimension has met what customers expected. Based on previous research conducted by Misbach (2017), it is stated that the higher the responsiveness of employees in serving customers, the higher customer satisfaction. From the results of the calculation of the gap above, it is known that customers are satisfied with the performance and responsiveness of employees in serving customers. In addition, employees are fast and efficient in serving and helping customers. And, according to Oliver's concept of customer satisfaction, "customer satisfaction is determined by

whether or not customer expectations are met," so this test shows that customer expectations have been met, even exceeding what customers expect, which is also consistent with the concept of customer satisfaction. by Kotler and Keller, where: "If a product or service meets or exceeds consumer expectations, then customer will feel happy and satisfied." So, from the results of the analysis above, it can be seen that there is no gap between customer perceptions and their expectations of service quality, so it can be concluded that the hypothesis on this responsiveness dimension is H0 is accepted and Ha is rejected.

Table 9
Overall Gap Analysis

Dimention	Perceptions	Expectations	Gap
<i>Compliance</i>	0,726981	0,72296037	0,004021
<i>Assurance</i>	0,742716	0,72762238	0,015093
<i>Reliability</i>	0,741841	0,73863636	0,003205
<i>Tangibles</i>	0,749599	0,74216929	0,00743
<i>Emphaty</i>	0,723922	0,72661713	-0,0027
<i>Responsiveness</i>	0,757284	0,75378788	0,003497
Total	0,888469	0,882359	0,00611

(Source: data processed using Ms. Excel 2013)

Hypothesis 7:

H0 : There is no gap between customer expectations of service quality and perceptions received by customers as a whole

Ha : There is a gap between customer expectations of service quality and perceptions received by customers as a whole.

From table 9 above, is the result of the overall gap analysis, where it can be seen that the perceived value of the customer is 0.888469 and the expected value is 0.882359. From the results of these calculations, it can be concluded that perception is an expectation. And based on the results of this overall gap analysis, the gap value is 0.00611, which means, in accordance with the test criteria, if the gap value is positive (+), it is said that the customer is very satisfied with the services provided by the company, because the gap felt by the customer is positive.

7. The Effect of Carter Variables on Customer Satisfaction

From the results of the gap analysis in table 9, it is known that the gap in the CARTER dimension is positive, meaning that the perception felt by customers is in accordance with what is expected of the services provided by BPRS Khasanah Ummat. In fact, the services provided by BPRS Khasanah Ummat have exceeded what customers expected. Although in the empathy dimension, the customer is not satisfied with the services provided by BPRS Khasanah Ummat, the other five dimensions, namely the dimensions of compliance, assurance, reliability, tangibles, and

responsiveness, have met customer expectations for the quality of services provided. And, according to Oliver's concept of customer satisfaction, "customer satisfaction is determined by whether or not customer expectations are met," so this test shows that customer expectations have been met, even exceeding what customers expect, which is also consistent with the concept of customer satisfaction. by Kotler and Keller, where: "If a product or service meets or exceeds customer expectations, then consumers will feel happy and satisfied." So, from the results of the analysis above, it can be seen that there is no gap between customer perceptions and their expectations of service quality, so it can be concluded that the hypothesis on this responsiveness dimension is H_0 is accepted and H_a is rejected.

CONCLUSIONS

Based on the results of data analysis and discussion in the previous chapter, it can be concluded that:

1. This research was conducted by examining the service quality of BPRS Khasanah Ummat using the Fuzzy CARTER method (Compliance, Assurance, Reliability, Tangibles, Empathy, and Responsiveness) with 30 criteria tested. The research was conducted by distributing closed questionnaires to 286 active customers of BPRS Khasanah Ummat.
2. From the results of the analysis of the level of customer satisfaction from each dimension of service quality, it shows that the quality of service, which includes the dimensions of compliance, assurance, reliability, tangibles, and responsiveness, has been proven that customers are satisfied with the services provided, but on the empathy dimension, customers are not satisfied with the service provided. services provided.
3. From the calculation results, the overall gap value is positive, namely 0.00611, which means that customers are satisfied with the services provided by BPRS Khasanah Ummat.

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