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# Customer satisfaction analysis based on service quality: case of local credit provider in Bali

N L P Suciptawati<sup>1,\*</sup>, N L P S P Paramita<sup>2</sup> and I P Aristayasa<sup>1</sup>

<sup>1</sup> Department of Mathematics, Udayana University, Kampus Bukit Jimbaran Badung, Bali, Indonesia

<sup>2</sup> Department of Statistics, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

\*Corresponding author: [suciptawati@unud.ac.id](mailto:suciptawati@unud.ac.id)

**Abstract.** *Lembaga Perkreditan Desa* (LPD) or village credit institution is a financial institution that is only exists in Bali. LPDs had been developed to promote the local people economies by providing micro credits as well as to deposit their money. This paper is aimed to study the satisfaction of customers toward LPD's services. A hundred and fifty customers of LPD Sidakarya that is located at Denpasar were purposive sampling selected as the respondents of the study on July 2017. The data were collected by applying self-organized questionnaire which its items were developed using 7 scale on Likerts' measurement. The respondents were asked to value their expectation as well as their perception on five dimension of service quality i.e. tangible factor, reliability, responsiveness, assurance, and empathy. The study reveals tangible factor was perceived positively whilst the other determinants need to be improved.

## 1. Introduction

Customer satisfaction and service quality are considered as a crucial aspect in business, for the development of a company highly depends on how good they maintain their customer through service. Indeed good service quality is expected to result in customer satisfaction, therefore will increase customers retention and loyalty.

Service quality is defined as a comparison of customer expectations with service performance [1, 2]. Good service quality leads into customer satisfaction and, therefore, makes the firms more competitive in the market. High service quality can be achieved by identifying problems in service and defining measures for service performances and outcomes as well as level of customer satisfaction. Moreover, service quality can be defined by examining the differences between expected service and perceived service [3].

According to Agyapong (2011) there is a positive relationship between service quality and customer satisfaction. In this study, multiple regression analysis is implemented to examine the relationships between service quality variables and customer satisfaction [4]. The results show that all the service quality items were good predictors of customer satisfaction. Hence, identifying and satisfying customers' needs could improve network services because what is offered can be used to separate the company's services from competitors'.

Measuring consumer perceptions of service quality proposed in Parasuraman et al. (1988) [5],



known as SERVQUAL, in which service quality is measured in five dimensions including reliability, tangibles, responsiveness, assurance and empathy. SERVQUAL model suggests that consumer perceptions of quality are influenced by five gaps occurring in the internal process of service delivery.

Financial service companies is a business based on customer trust, service quality issue is one of important factors determining the success of this business. According to Belas and Gabcova (2014) [6], company's profit and growth are both primarily stimulated by customer loyalty which is directly formed by their satisfaction. Therefore, customer satisfaction is the company's top priority for long-term relationships with customers. In the context of retail banking where contact with customers is one of the most core business processes, customer satisfaction become the key to success. Additional work by Rahmani-Nejad et al. (2014) found that service quality is an important factor to both satisfaction and trust in private banks [7].

*Lembaga Perkreditan Desa* (LPD) or village credit institution is a financial institution that is only exists in Bali. LPDs had been developed to promote the local people economies by providing micro credits as well as to deposit their money. Therefore, this study aims to investigate how service quality influences the customer satisfaction at LPD Sidakarya.

## 2. Methods

A survey has been conducted to 150 customers of LPD Sidakarya that is located at Denpasar on July 2017. The sample was drawn based on purposive sampling; drawing only the customers who made transactions over a year. To assess the level of customer satisfaction, perception and expectations variables are represented in 30 questions with a ratio measurement scale of one to seven (1 – 7).

The analysis performed based on the following steps.

- 1) Forming a new variable Q (representing perceived quality of the item) defined as  $Q = P - E$ , where P and E are the ratings on the corresponding perception and expectation statements, respectively [5].
- 2) Grouping 30 question items into service quality dimensions using exploratory factor analysis (EFA).
- 3) Adapting SERVQUAL model [8] to see the gap between perceptions and expectations with the following steps.
  - i) Determine the weight of each dimension with the formula  $w_i = \frac{\sum d_i}{n}$  (1)  
where  $w_i$  is the  $i^{\text{th}}$  dimensional weight;  $\sum d_i$  is the total dimension weight given by the respondent, with  $i = 1, 2, 3, \dots, q$  (number of dimensions formed from factor analysis); and n is the number of respondents.
  - ii) Calculate the gap value for each dimension with the formula  $Q_{ij} = P_{ij} - E_{ij}$  (2)  
where  $Q_{ij}$  is the value gap for each dimension;  $P_{ij}$  is the respondents' perception of services provided for each dimension; and  $E_{ij}$  is the expectations from respondents about services provided for each dimension.
  - iii) Based on the value obtained from equation (2), then calculate the average gap value for each dimension and the weighted SERVQUAL value for each dimension.
  - iv) Analyze the level of satisfaction for each of these dimensions.

## 3. Results and Discussion

### 3.1 Factor analysis

Kaiser-Meyer-Olkin (KMO) and Barlett's test in the EFA gives the KMO index of 0.72 which is greater than 0.7. Such values suggest that the grouping based on EFA is suitable for further analysis [9]. However, the given value of measure for sampling adequacy (MSA) of indicator Q24 i.e officers can provide a sense of comfort to customers when making transactions is less than 0.50, hence this

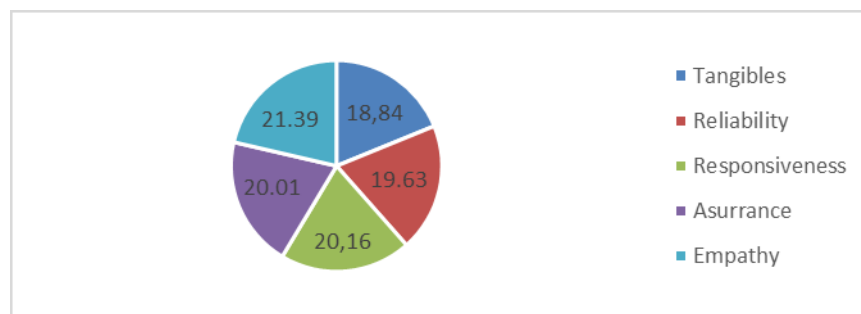
indicator does not include in the further analysis. For the SERVQUAL model, 29 indicators are finally included.

Based on the principal component analysis (PCA), top seven components with eigenvalues greater than 1 are acquired with the cumulative variance is 60.693%. Adapting the Varimax rotation, five factors of customer satisfaction influence the service quality are obtained, i.e. tangibles, empathy, reliability, responsiveness and assurance. This result is in accordance with the proposed method by Parasuraman et al. (1988) [5].

### 3.2 SERVQUAL

Before assessing the level of satisfaction of customers using SERVQUAL model, once the new variables  $Q_i$  obtained, both validity and reliability tests for the research instruments are performed. Using the product moment correlation test, the results show that all the question items in the questionnaires are valid. Reliability of the instruments has been examined through the value of Cronbach's alpha, which is 0.713 suggesting the instruments are reliable. Both tests recommend that the instruments used in this study meet the requirements of representing the problem stated, hence the further analysis can be conducted for decision making.

Figure 1 shows the importance of the five dimensions of service quality, based on the customers' view. These percentages are then used as the weights of each dimension employed in further analysis.



**Figure 1.** Dimension Weights

#### a. Tangibles

A summary of the survey results for the tangibility dimension of customer service quality are summarized in Table 1 below.

**Table 1** SERVQUAL: tangibility dimension

Tangibility factors	Perception	Expectation	Gap
Strategic location	4.3	3.48	0.84
Adequate parking	4.3	3.55	0.77
All employees are well-dressed	4.2	3.35	0.86
Comfortable waiting room	4.4	3.74	0.65
Communication facilities	4.2	3.7	0.54
Complete office equipment	4.2	3.8	0.42
Tangibility Dimension Weights			18.84
Average Tangibility Gap score			0.68
Weighted Tangibility Gap score			12.8

The average gap score for tangibles dimensions is given in a positive value, suggesting that the customer expectations and the service perceived by customers are matched. The result recommends that the way employees dress affects customer satisfaction, which is in accordance with the statement

proposed by [10] i.e. the staff outfits help to create a comfortable and friendly atmosphere for customers, and therefore, make customers feel more assured when having transactions in the bank.

#### *b. Reliability*

A summary of the survey results for the reliability dimension of customer service quality are summarized in Table 2 below.

**Table 2.** SERVQUAL: reliability dimension

Reliability factors	Perception	Expectation	Gap
The process of opening a new account is fast	4.10	4.45	-0.33
Administration when opening a new account is easy	4.20	4.71	-0.48
Quick in resolving the complaints	4.10	4.48	-0.36
Information about the products offered appropriately	4.20	4.39	-0.21
Good interest rate on savings (high)	4.00	4.44	-0.48
Good interest rate on loans (low)	4.30	4.30	-0.04
Reliability Dimension Weights			19.63
Average Reliability Gap score			-0.47
Weighted Reliability Gap score			-9.28

The average gap score for reliability dimensions is given in a negative value which suggests that there is customer dissatisfaction in regards to the reliability aspects.

#### *c. Responsiveness*

Table 3 shows a summary of survey results for responsiveness dimension of customer service quality.

**Table 3.** SERVQUAL: responsiveness dimension

Responsiveness factors	Perception	Expectation	Gap
Seriousness in serving customers	4.05	4.37	-0.32
Provide appropriate services to customers	4.00	4.54	-0.53
Seriousness in responding to customers' complaints	4.02	4.48	-0.46
Provide clear information to customers	3.90	4.41	-0.52
Willingness in accepting criticism from customers	3.76	4.45	-0.69
Willingness in accepting advice from customers	3.98	4.57	-0.60
Responsiveness Dimension Weights			20.16
Average Responsiveness Gap score			-0.78
Weighted Responsiveness Gap score			-15.74

The average gap score for responsiveness dimensions is given in a negative value which suggests that there is customer dissatisfaction in regards to the responsiveness aspects.

*d. Assurance*

Table 4 shows a summary of survey results for assurance dimension of customer service quality.

**Table 4.** SERVQUAL: assurance dimension

Assurance factors	Perception	Expectation	Gap
Good ability and knowledge in solving customer problems	3.66	4.37	-0.75
Willingness to visit those who want to open saving account	3.65	4.54	-0.73
Friendliness and politeness in serving customers	3.76	4.48	-0.72
Provide the equal service to all customers	3.36	4.41	-1.06
Equipped with CCTV and security officers	3.63	4.45	-0.78
Assurance Dimension Weights			20.01
Average Assurance Gap score			-1.01
Weighted Assurance Gap score			-20.2

The average gap score for assurance dimensions is given in a negative value which suggests that there is customer dissatisfaction in regards to the assurance aspects.

*e. Empathy*

Table 5 shows a summary of survey results for the empathy dimension of customer service quality are

**Table 5.** SERVQUAL: empathy dimension

Empathy factors	Perception	Expectation	Gap
Prioritizing the matter of customers	3.84	4.39	-0.54
Mentioning the name of the customers during the services	3.81	4.55	-0.75
Good communication and attitude in front of the customers	3.68	4.64	-0.96
Treating the customers with care	3.84	4.42	-0.58
Responsiveness when contacted by the customers	3.72	4.46	-0.74
Readiness to help the customers	3.82	4.48	-0.67
Empathy Dimension Weights			21.39
Average Empathy Gap score			-0.85
Weighted Empathy Gap score			-18.1

The average gap score for empathy dimensions is given in a negative value which suggests that there is customer dissatisfaction in regards to the empathy aspects.

Based the analysis discussed above, only the average gap score for tangibility dimension gives in a positive value, while others give in negative values. This indicates that customers only feel satisfied with the tangibles aspects of service quality. The dimensions of service quality with negative gap scores need to be improved to increase customers' retention and loyalty. Priorities to improve the dimensions of service quality determined by the weighted gap scores as presented in Table 6 below.

**Table 6.** Service improvement priorities

Dimension	Weighted Gap Score	Priority
Assurance	-20.2	I
Empathy	-18.1	II
Responsiveness	-15.74	III
Reliability	-9.28	IV
Tangibles	12.8	V

#### 4. Conclusion

In assessing the service quality influences on the customers' satisfaction, it is suggested that four dimensions of service quality, i.e. reliability, responsiveness, assurance and empathy, should be improved to increase customer satisfaction. Meanwhile, according to the customers, tangible factors of the service quality are matched customer expectation, and therefore, need to be maintained. This study, furthermore, recommends the priorities in improving the services for each dimensions, from the most to the less urgent as the following: assurance, empathy, responsiveness, then reliability.

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