

## Improving the Quality of Customer Service System at Sharia Bank using SERVQUAL and Six Sigma Methods

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**Abstract :** Customer satisfaction is a main factor important to Islamic banking in its effort to improve service quality. Customers expect the Bank Syariah Wilayah Jakarta Timur to have good service quality, yet customers perceived that it does not meet their expectations, which in turn resulted in their dissatisfaction. This can be assessed from the gap between customers' perceptions and expectations. The dimension of reliability forms the widest gap. The mapping of perception value and customers' expectation for the SERVQUAL dimension identifies that the making of the ATM card gets the highest priority for further improvement. The customer service system in the process of making a named ATM card for Bank Syariah savings is actually still centralized in the Area II Card head office of Bank Syariah in Jakarta. During January to September 2013, 73% of the delays were later than its standard time (five work days). Improvements in the quality of customer service system in the customer service unit was designed with the SERVQUAL method and Six Sigma which is a holistic approach to problem solving and process improvement through the stages of DMAIC (define, measure, analyze, improve and control). During the Improve stage is designed an improvement action on the customer service system in dealing with the need for the making of a named ATM card by replacing the centralized system in the Area II Card head office of Bank Syariah with the decentralized system at the branch office.

**Keywords-** SERVQUAL, Gap, Six Sigma, DMAIC, Customer Satisfaction

### I. INTRODUCTION

Quality of service is a form of consumer assessment of the level of service received (perceived service) with the level of service expected (expected service). Increasing the quality of services by a banking company is a real way to win the competition and retain customers. Quality must start from customer needs and end on customer perception which in the banking is customer according to Kotler (1994) in Muluk[1]. This means that a good quality image is not based on a bank's perspective or perception, but on the client's point of view or perception. The function of sharia banking, in addition to performing the function of collection and distribution of public funds, is to perform social functions, namely: (1) in the form of baitulmaal institutions receiving zakat, infaq, alms, grants and other funds to be channeled to zakat management organizations; ) In the form of a syariah financial institution receiving a money waqf who receives the money waqf and distributes it to the designated (nazhir) manager. One effort to serve the needs or complaints of customers of Bank Syariah effectively, it takes customer service that can bridge the customer with the bank service. Customer service (customer service) is the quality of treatment received by the customer during the business contract with the company. Good service is a service that is targeted in the sense that it suits the needs and demands of the customers or customers. Client's expectation to Bank Syariah East Jakarta area, of course have high service quality. In reality, what customers perceive about the quality of their services is not as customer expectations. This is indicated by the complaints / complaints of customers. A complaint filed by customers to customer service can be seen in Table 1. From Table 1 it can be seen that there are several types of complaints, which leads to customer dissatisfaction with the services of Bank Syariah in East Jakarta area.

**Tabel 1.** Customer Complaints Data at Bank Syariah East Jakarta area period January - September 2016

No	JenisKomplain	Jumlah
1	The time of making a regular ATM card is over than 5 (five) working days	49
2	Failed transaction in ATM	8
3	Failed transaction in ATM but was debted	5
4	Failed Transfer to another bank but was debted	5

Source: Bank Syariah in East Jakarta area.

Based on the description above, the problem in this research is still there is customer dissatisfaction on the quality of service by customer service at Bank Syariah East Jakarta area which is indicated by the high number of customer complaints to customer service.

The purpose of this study is to evaluate and design the improvement of customer service quality in the customer service unit in order to improve the quality of service in an effort to achieve high level of customer satisfaction at Bank Syariah East Jakarta area.

The assumptions used in this study are as follows:

1. Customer service is assumed to have an understanding of all Sharia Bank products.
2. Samples of data (customers) used are taken from a homogeneous population of customers who are actively saving in Bank Syariah East Jakarta area that transact in customer service.

In this study to be more targeted to limit only on:

1. The research is only done in the branch office of Bank Syariah East Jakarta area.
2. This research is focused on customers who actively saving transactions at customer service counter.

## II. DISCUSSION

From the calculation of the gap of each dimension of quality of sharia banking services obtained information that all dimensions of service quality is not qualified and not satisfactory because of the negative gap where the perception is lower than customer expectations. This shows that the difference between the perception and expectations of customers. Clients' expectations should be a reference for the East Jakarta Sharia Bank to design, produce and deliver services to customers, while customer perception is the customer's assessment of the services it receives[2]. The average value of customer expectations that is 3.85 higher than the perceived customers of 3.38 on the quality of service in Bank Syariah East Jakarta Region. This causes the gap to become negative (perception < expectations). The highest gap value is in the reliability dimension with a value of -1.03. The managerial implications of the customer's assessment result are that the overall quality of the service should be improved with the priority of service improvements starting from the dimensions of the poorest quality. From the calculation of the gap obtained the sequence of improvements that begins with reliability, compliance, empathy, assurance responsiveness and tangibles.

### Weighting Service Quality Level

The calculation of the weights of the perceptual level and customer expectations of the SERVQUAL dimension is derived from the total values obtained from the perception questionnaire and customer expectations. From the data obtained that customer expectations are higher than customer perceptions. This causes the gap to become negative (perception < expectations). The highest weighted gap value for the perception level and customer expectations are in the same dimension of reliability. The gap value is weighted at the perception level of -0.19 while the gap value is weighted at the expectation level of -0.22, which means that reliability is a priority for improvement in customer service system at East Jakarta Regional Sharia Bank. The managerial implications of the customer's assessment result are that the overall quality of the service should be improved with the priority of service improvements starting from the dimensions of the poorest quality. From the calculation of the gap obtained the sequence of improvements that begins with reliability, compliance, empathy, assurance, responsiveness and tangibles.

### Mapping of SERVQUAL Calculation Results

The average value of each attribute of the question and each dimension is then plotted into the importance performance matrix in which perceptions as performance and expectations are important. The average value of perception (performance) as a constant value of the X axis that is at 3.38 coordinates that form a straight line and also the average value of expectations (importance) as a constant value of the Y axis is at 3.85 coordinates that form a straight line. The mean value intersection between perception (X) and expectation (Y) will form the spaces for the quadrants A, B, C and D on the importance performance matrix[1]. From mapping results to quadrants of importance performance matrix for service attributes it is found that the service attribute that is in quadrant B (concentrate here) is ATM card completion time. This suggests that the expectation level for attributes is high but the level of perception shown by the service attribute is low. This condition is dangerous because of the contrast between the perception level and the expectations of the client so that the improvement must be prioritized or concentrated for the attributes that are in quadrant B[2]. From the importance performance analysis for each service attribute above can be concluded that the dimension with the highest improvement priority is the service attribute that is the time of making the ATM card. From the importance performance analysis for each service attribute above can be concluded that the dimension with the highest improvement priority is the service attribute that is the time of making the ATM card.

### Evaluate Improvement by Using Six Sigma Concepts

The purpose of six sigma is to reduce costs and increase profit by eliminating variations, defects, and waste that can reduce customer satisfaction and loyalty. Variations in data dissemination on average can be the key cause of defective goods and services. The statistical description of the variation is called the standard deviation symbolized by sigma ( $\sigma$ ). The six sigma philosophy is to reduce variation across all aspects of the business and focus on the consumer. The sources of harmful variations must be eliminated as well as reducing system disruptions. The results obtained from data processing is the variation of ATM card making time at the opening of new savings account of Bank Syariah East Jakarta Region. This indicates the time of making the ATM card beyond the standard time of 5 (five) working days. Due to this variation, researchers want to improve the existing ATM card manufacturing system in order to further optimize the existing processes within the system.

### Define Stage

At this stage, formal definitions of process improvement objectives are consistent with customer demand or needs and company strategy [3]. The stages of the define are as follows:

1. The problem of defects that will be solved by using six sigma method in this research is the time of making the ATM card exceeds from the standard time of completion that is 5 (five) working days.
2. The purpose of problem solving is to redesign the ATM card-making system at the East Jakarta Regional Sharia Bank.
3. In this study determined that the input of the concept of six sigma to evaluate the improvement is the time of completion of the ATM card.

### Stage Measure

At this stage, the measurement of the performance of the current process (baseline measurement) can be compared with the target set. At this stage control charts are made (control chart) and R because the data obtained are attribute data [4]. Then can be calculated process capability ( $C_p$ ), defects per million opportunities (DPMO) and also sigma value. The ATM card selected to be the object of this study is just a regular ATM card named.

### Calculation of Process Capability Index ( $C_p$ and $C_{pk}$ )

Six sigma is a concept derived from process capabilities. When it is known how the performance of the process (voice of process), of course want to be compared with the specified specifications by the customer (voice of customer). Customers' wishes are usually expressed quantitatively with specifications consisting of USL (Upper Specs Limit) and LSL (Lower Specs Limit). When comparing the range of specifications to the process ranges, then we will get a quantity called Process Potential Index (Process Potential Index) which is denoted by  $C_p$ . From the calculation of process capability ( $C_p$ ), the value of  $C_p$  is 0.77 then the concept used is True 6-Sigma Process, because for Motorola Company's 6-Sigma Process Control concept allows the average shift of  $\pm 1.5$  sigma process, Required a high process capability index that is  $C_p > 1.33$  for process control using the concept of Motorola Company's 6-Sigma to be effective. The  $C_p$  value of 0.77 shows the process capability in DPMO (Defect Per Million Opportunities) of 211.855 DPM. The value of  $C_p < 1$  indicates that the manufacture of regular ATM cards named in the period January to September does not meet customer specifications in this case are customers [5]. The DPMO conversion value to Sigma value based on True 6-Sigma Process (Normal Distribution Centered) is 2.30 sigma which means that out of 1,000,000 (one million) opportunities there will be 211.855 DPM it is likely that the process will cause defect or non-conforming on Products with process capability ( $C_p$ ) of 0.77 or 2.30 sigma after being converted based on DPMO value. DPMO value for six sigma concept is 3.4. This is a measure mechanism used to calculate the six sigma to differentiate complex processes. The core of the measure stage is that 3.4 DPMO represents the best level of quality with the lowest level of defects [6]. DPMO value obtained from the calculation of data when making a regular ATM card named obtained value of 2.30 sigma which means that of the million opportunities there will be 211.855 possibility that the process will cause defect at the time of the manufacture of a regular ATM card named process capability 0.77. This shows that ATM card making time has very high defects because it is very far from the level of 3.4 DPMO.

### Analyze Stage

At this stage will be analyzed obstacles and constraints that occur in companies that have lowered profits and harm the company. At this stage will be in the analysis system handling customer needs in the manufacture of ATM cards named new account Bank Syariah. Stage analysis is done with the aid of tools used in the analysis phase in this research is to use causal diagram or more commonly referred to as fishbone diagram

to find the potential cause of an effect, failure mode analysis based on interview result with Bank Syariah East Jakarta Region Potential causes of problems can be identified.

### Pareto Diagram

Pareto Diagrams are created to find or understand the problems or causes that are key to problem solving and overall comparison. By knowing the dominant causes we will be able to set priorities for improvement. Improvement in this dominant causal factor will have a greater impact than a meaningless solution.

### Stage Improve

This repair stage provides solutions to fix the problems and failures that occur. At this stage the result of identifying the cause of the problem is used as the basis to provide the necessary concept of improvement. At this stage of improvement is analyzed proposed improvement of each cause of delay settlement of a regular ATM card named .

### Control Stage

Controlling the process continuously to improve process capability towards the target of six sigma. At this stage monitoring processes are modified to test that the variables under control remain stable within the specified limits. Control is performed on each action plan implemented to achieve the expected sigma improvement target. The responsibility of this step is in black belts. Thus, the control measures will control the critical value-system characteristics for customers in this case are customer.SOP control and monitoring process that can be done is as follows:

- Monitoring of customer service quality improvement program with focus of time of making of ATM card is done by using control tool that is standard operating procedure (SOP) which has been redesigned.
- Monitoring and controlling the implementation of the repair under Supervisor control.
- Conducting Internal Audit on customer service quality improvement program with focus on the time of making a regular ATM card named. Audit is intended as a tool for monitoring and control. The feedback is a corrective action.

### Limitations of Research

In relation to the various obstacles that researchers face in completing this thesis, especially with regard to preparation and time available, there are some limitations in this research:

1. The number of samples used in this study is only 50 customers so that it is less representative of the total number of customers in the Bank Syariah Region East Jakarta.
2. This study measures only 1 gap of 5 gaps contained in the SERVQUAL method, ie the gap between customer perceptions and customer expectations which is a gap 5 of the gaps model of service quality. Although in this study there are some limitations, but it does not reduce the meaning of the findings of this research, especially with the accurate data that became one of the strengths that support the results of this study.

## III. RESEARCH IMPLICATION

The implications of the research findings include the following theoretical and managerial implications:

### 1. Theoretical implications

- A. From the results of research conducted shows that SERVQUAL method can be used to measure the quality of services provided by Bank Syariah. Service quality is measured based on a comparison of two main factors, namely the perception of the Sharia Bank customers for the actual service they receive (perceived service) with the actual service expected by the customer (expected service).
- B. In relation to the five dimensions of service quality based on the SERVQUAL method, the research results show that the five dimensions consisting of tangibles, reliability, responsiveness, assurance, and empathy, have proven to be instruments that can measure service quality because of their technical ability to measure and manage service quality. However, since Sharia Banks operate under different principles and cultures different from other service industries, this study adds another dimension of compliance (syariah principle), so that the instrument used to measure the quality of service in a Sharia Bank is called CARTER which has Principles are the same as SERVQUAL method.
- C. The implications of the Six Sigma concept used in this study indicate that the Six Sigma concept is able to solve the problem and improve the process through DMAIC (Define, Measure, Analyze, Improve, Control). DMAIC is the heart of Six Sigma analysis that ensures the voice of customer running in the whole process so that the services generated by Bank Syariah can satisfy the customer

## 2. Managerial implications

- A. Based on the result of the research, it is found that overall service quality must be improved with service improvement priority starting from the worst quality dimension with the highest gap value that is on the reliability dimension.
- B. Based on the evaluation of improvements using the Six Sigma method found that the problem associated with the time of making ATM cards named that exceeds the standard, which is five days, by redesigning the ATM card-making system named which originally applied ATM card-making system named from the regional card office II in Move to branch office.

## IV. CONCLUSION

Based on the discussion of research can be taken or put forward some conclusions as follows:

1. The average value of client expectations is higher than that perceived by the customer on the quality of service at Bank Syariah Region East Jakarta. In general there is still a gap between expectations and perceptions among all dimensions and service attributes in sharia banking.
2. The mapping of importance performance matrix shows that there is one attribute in quadrant B (concentrate here) that is attribute 8 (reliability) which indicates that the improvement priority is concentrated for attribute 8 in the dimension of reliability.
3. Evaluation of improvement by using Six Sigma concept at the stage of improvement, the Bank of East Jakarta Region can improve customer service system based on four factors: man, tools, method, and money.

## V. SUGGESTION

Based on the results of research and limitations of research that has been submitted earlier, the researchers suggest several things as follows:

1. Suggestions for improvement of service system quality
 

The Bank of East Jakarta Regional Bank may take action to improve the customer service system on handling the ATM card making needs by replacing the ATM card-making system named from the regional card office head II in moving to the branch office.
2. Advice for further research
  - A. To measure the quality of service as a whole, it is necessary to measure gaps from service providers (gaps 1 (gap between customer expectations and management perceptions), gap 2 (the gap between the service provider's perceptions of customer expectations and service quality specifications), Gap 3 (gap between service quality specification and service delivery process), and gap 4 (gap between service and external communication to customer)).
  - B. To classify the desires and needs of customers and evaluate each systematic use of service capabilities in meeting customer needs, research can be done using Quality Function Development (QFD) method so that companies can prioritize customer needs, find innovative responses to those needs, and improve the process Until maximum effectiveness is achieved.

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