The Role of Supply Chain Management in Enhancing Customer Satisfaction in The Banking Industry: A Case Study of Skye Bank Sierra Leone Limited.

Michael Komah and I Nyoman Pujawan
Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia.
komahmichael@gmail.com, pujawan@gmail.com

Abstract
This research attempts to examine the role of supply chain management in enhancing customer satisfaction in the banking industry, taking Skye Bank Sierra Leone Limited as case study. Accordingly, the research focused on assessing some specific supply chain variables (reliability, responsiveness, cost and quality of products and services, and agility), among others, which are judged to influence customer satisfaction in the banking industry. The study utilized a mix of quantitative and qualitative data, for which descriptive statistical methods were adopted to analyze the data collected. 185 participants being customers of the case institution were targeted for this study via convenient sampling, from which 162 customers took part in the research. Findings revealed that, the variables assessed in this study seem to have a significant influence on customer satisfaction. Specifically, the reliability and responsiveness aspects tend to contribute more to the satisfaction of customers in the case institution than the cost and quality of products and services, and agility aspects in this study. The paper proffers some recommendations for enhancing customer satisfaction and improve loyalty via use of Quality Function Deployment (House of Quality).

Keywords
Customer Satisfaction, Loyalty, Service Quality and Supply Chain Management.

1. Introduction
The banking industry in Sierra Leone contributes immensely to the labor market and the national gross domestic product (GDP). As of 2018, the total assets of the banking sector were Le8.54 Trillion, which is 26.36% of Nominal GDP (Bank of Sierra Leone 2020). In relation to the huge profitability the banking industry is showing (Bank of Sierra Leone 2020), income from the banking industry is a significant source of economic growth in Sierra Leone. In this regard, it is therefore imperative to look for ways of improving the services of the banking industry in Sierra Leone that could impact customer satisfaction, since generating and sustaining customer satisfaction is a significant index which may strongly determines the success of the banks (Hamidi and Safareeyeh 2019).

In Sierra Leone, the banking industry is still overshadowed by the use of traditional practices characterized by inadequate products and services by majority of banks. The size of the countrys’ financial market is relatively small and the level of intermediation is quite insignificant (Osei-Assibey and Bockarie 2013). Even though strides have been made by the financial sector to impact economic growth in Sierra Leone, the countrys’ financial market is still considered weak which negatively impact resource mobilization and deter economic growth (Kargbo and Adamu 2012). The problem with inadequate products and services translates to poor service quality and by extension customer satisfaction becomes a problem. Many banks are struggling to adjust to the requirements of the changing market conditions triggered by rising competition and as such, they are not able to meet the needs and aspirations of their customers. This is evident by long queues in banking halls, longer lead times in filling customer requests, series of customers complaints, unfriendly staff attitude, inability to access loans and overdrafts, poor ATM services, and frequent glitch in the operating system software of banks. In view of the problems highlighted above, however, the key problem encountered by some banks, is that they are struggling to maintain their customer base because of customers not returning to do business with them as a result of dissatisfaction with the quality of products and services they receive. In other words, this research would look at ways on how customer satisfaction can be enhanced and improve customer loyalty by evaluating specific variables that impact customer satisfaction in the banking industry in Sierra Leone.
1.1 Objectives
Accordingly, the objectives of this study are to:
1. Evaluate the influence of reliability, responsiveness, cost and quality of products and services, and agility on customer satisfaction in the case study institution.
2. Proffer some recommendations for enhancing customer satisfaction and improve loyalty via use of Quality Function Deployment (House of Quality).

2. Literature Review
This section of the study is intended to give a review of related literature in relation to the topic under study with reference to the identified problems which form the basis for this research. In this regard, the study attempts to tap into several ideas from extant literatures in assessing some variables that are judged to impact customer satisfaction. Considering the above, therefore, this review would be limited to the elaboration of the key terms of the topic under review and the key variables highlighted in the objectives of the study.

2.1 Customer Satisfaction and Loyalty
According to Taufik et al. (2016), customer satisfaction is viewed as a metrics on how products or services offered by firms meet clients’ needs. Most firms know that customers are the essence of their existence, therefore, nowadays, firms that fail to add value to their clients, risk losing them to their competitors (Hafeez and Muhammad 2012). Satisfied customers are the basis for success in business, as they can be easily retained, repeat patronage, and even tell potential clients about the services of the business (Minta and Stephen 2017). Customer satisfaction turns to loyalty and loyalty translates to profitability (Ozatac et al. 2016). Customer loyalty leads to enhancement in the viability of firms (Goyal and Chanda 2017). Customer satisfaction is an important driving force for customer loyalty (Hamidi and Safareeyeh 2019).

2.2 Customer Satisfaction and Service Quality
Service quality is among the significant impetus in enhancing better client loyalty (Goyal and Chanda 2017). Service quality is considered to be the appraisal of clients’ expectations that have been met and how better the service level is delivered (Ozatac et al. 2016). In the opinion of Truong et al. (2020) the expectation, which is developed by accrued experience, knowledge, information and demand, impacts client real assessment. According to Tan et al. (2016), clients are far more reluctant to accept inefficient or unpleasant services because they gain from better and better services, which activate their endlessly growing expectations. According to Ali and Raza (2017), Siddiqi (2011), Tan et al. (2016), banks use the quality of service that they offer as strategies to enhancing customer satisfaction.

2.3 Customer Satisfaction and Supply Chain Management (SCM)
Nowadays, firms introduce SCM best practices and innovative products and services to improve the performance of their processes. This is to meet the demands of their clients, in a bid to delight them and make them loyal to their business. According to Kamara and Pujawan (2020), one vital role of SCM is that it enhances competitiveness in an effort to satisfy clients and it has emerged a key portion of business in relation to success and customer satisfaction. SCM has the ability to improve customer service, decrease operating cost and enhance the financial standing of an organization (Kleab 2017). Traditional SCM offers managers the opportunity to involve service roles at every stage of the supply chain (SC), in order to enhance SC efficiency and improve clients intimacy and drawing more attention (Liu et al. 2019). SC strategy should be directed to satisfying the client and SC metrics must be linked to customer satisfaction for enhancing performance (Barve 2011).

2.4 Drivers of Customer Satisfaction in the Banking Industry
There are several factors that are believed to impact customer satisfaction in the banking industry. For the purpose of this study, the researchers examine four main variables believed to be drivers of customer satisfaction in the banking industry. The variables identified among others are reliability, responsiveness, cost and quality of products and services, and agility. These variables have been derived from related literature on the topic, opinion of experts in the field and the writers experience from the industry. It is hoped that more variables would be considered for further studies in the future to make the research more meaningful.
2.4.1 Reliability
Reliability refers to the capacity to offer anticipated benchmark every time, in relation to handling customer services issues, delivering services accurately, availing services within stated time frame and keeping record free from inaccuracy (Taufik et al. 2016). With these attributes of reliability, it has emerged a significant driving force for customer satisfaction in most businesses. According to Tan et al. (2016), reliability is seen as the accurate and reliable capability to deliver the service promised. They went on to establish that, there is a positive relationship between reliability and customer satisfaction. Reliability implies consistency in service delivery to customers both in the performance of tasks by employees and equipment used, which guarantees customer satisfaction.

2.4.2 Responsiveness
Responsiveness is viewed as the capacity to act on clients’ request on a timely manner and being flexible (Taufik et al. 2016). Also, responsiveness is a concept that is based on timeliness, wherein customers anticipate that their dealings with firms should be done in a timely and swift manner (Manzoor 2020). According to Tan et al. (2016), responsiveness is the desire to assist the client and offer real time services. They furthered that, there exists a positive relationship between responsiveness and customer satisfaction. Also, Uvet (2020) concluded in his research that timeliness positively impact customer satisfaction. Furthermore, Langley et al. (1992) pointed out that a client value can be established through product readiness, timeliness and uniformity of delivery and comfort of placing requests and other aspects of customer service.

2.4.3 Agility
According to Manzoor (2020), the need for firms to become more responsive to the dynamic business environment, the requirements of clients and increasing environmental uncertainty are driving curiosity in the idea of agility in SC. Agility has a business-wide capacity that supports organizational arrangements, information systems, logistics activities, and, in particular, mindsets (Christopher 2000). Christopher further stated that a major characteristic of an agile organization is flexibility. In the perspective of Barve (2011), SC cope with uncertainty if it is agile in nature and that the overall aim of agility is generating responsiveness and overcoming the instability. In our contemporary business environment, firms now aware that they must endeavor to be agile more than ever before to survive (Khan and Wisner 2019).

2.4.4 Cost and Quality of Products and Services
In accordance with the dictates of SCM, Manzoor (2020) put it this way, that, offering the customers want they require, when they require it and at the most competitive prices is a major factor to enhancing their satisfaction level. According to Barve (2011), SC must endeavor to control costs related with their products or service delivery structure and the objective should be to enhance client satisfaction with decreased SC cost. It is important to note that decrease in SC cost does not imply delivering of poor quality of service, since quality of service is a basic requirement for customer satisfaction. Satisfaction is evaluated in relation to the quality of product, quality of service offered, location of utilization and the price of the product or service (Taufik et al. 2016)

3. Methods
This section of the study concentrates on the methods applied in carrying out the research, which include statistical tools in analyzing data, methods of data collection and types of data used, among others. This study adopted a descriptive statistical approach mainly mean and standard deviation, frequencies and percentages to analyzing the data collected and also, Quality Function Deployment (QFD) was utilized to determine what the customers want by assessing their feelings about the services offering of the case institution and how to improve the services that are not alright. The data were collected using both qualitative and quantitative methods. Basically, the data were obtained through questionnaire with open-ended and close-ended questions, interview and feedback techniques. Moreover, this study utilized both primary and secondary data.

3.1 Proposed Model for Customer Satisfaction
From existing literatures, five variables were identified by the SCOR model to accelerate the performance of business processes: reliability, responsiveness, agility, cost, and efficiency in asset utilization (Mina et al. 2017, Ren 2008,
Most firms searching for answers because of problems confronted through the use of traditional practices benefits greatly from the SCOR model by way of controlling expenditure and accelerating business processes and serves as a major driving force for customer satisfaction. The above variables identified by the SCOR model are slightly adjusted by selecting 4 variables out of 5 and labeled them as determinants of customer satisfaction in a bid to develop a model for this study as depicted in figure 1 below.

![Proposed Model for Customer Satisfaction](image)

**Figure 1: Proposed Model for Customer Satisfaction**

### 4. Data Collection

The primary data for this research were collected via convenient sampling method, by sending an online administered questionnaire developed from Google docs to customers of the case institution who were willing to participate in this study. According to Ary et al. (2006), a convenience sampling method is adopted in a situation wherein the researcher encounters time and resources constraints in the selection of the sample. The survey link was shared to 185 customers who were willing to participate in the study through the help of customer service officers of the 4 branches of the case institution, from which 162 customers responded. The secondary data were obtained through textbooks, articles published in journals, and research websites, among others.

From the data received, the response rate is 87.6%. The male participants were 87, which made up of 53.7% of the responses received while the females were 75 and made up of 46.3% of the total responses received. This difference in gender participations did not affect the research data. Also, 91 participants (i.e., 56.1%) have ages above 35 years old and 71 participants (i.e., 43.8%) have ages between 20 to 35 years. This depicts a more adult participation than youths, thus suggesting more reliable responses. More so, 67 participants (i.e., 41.4%) hold a masters’ degree as compared to 38 (i.e., 23.5%) and 57 (i.e., 35.2%) participants with bachelor and certificate/diploma, respectively. This shows that majority of the participants are well informed and hence they have the ability to fully understand and respond appropriately to the research instruments. Moreover, 98 participants (i.e., 60.6%) have taken 5 years and above with the case study bank and 64 participants (i.e., 39.4%) have taken between 1 to 4 years with the case study bank. This shows that, majority of the participants would be in a better position to assess the products and services they have been receiving and would provide appropriate responses to questions in relation to their feelings and perceptions.

### 5. Results and Discussion

The data collected evaluate the influence of reliability, responsiveness, agility, and cost and quality of products and services on customer satisfaction in the case study institution. The results obtained for this study is only valid for the case institution and those institutions that they share similar attributes, and not the entire banks in Sierra Leone. The reason for this is, that the individual banks differ in terms of the strength of their value-added and customer services offering, even though they offer homogeneous products and services. In essence, a recommendation that might be suited for one institution might not be feasible for another.
5.1 Evaluating the Determinant of Customer Satisfaction (Reliability, Responsiveness, Cost and Quality of Products and Services, and Agility Aspects) Using Mean and Standard Deviation

In this research, the variables dubbed as determinants of customer satisfaction (Reliability, Responsiveness, Agility, and Cost and Quality of Products and Services) as depicted in the model framework in Figure 1 are considered as the needs of the customers. The various aspects which are subsets of these variables so identified are considered as the “Voice of the Customers (VOC)” for this research as shown in Table 1 below. These sub variables which are utilized to obtain the primary data of this study are evaluated by using descriptive statistics mainly mean and standard deviation. The results of the evaluation process of these variables are depicted in Table 1 below.

Table 1. Mean and Std. Deviation of Reliability, Responsiveness, Cost and Quality of Products and Services, and Agility Aspects.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reliability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability in terms of staff &amp; equipment</td>
<td>162</td>
<td>3.8519</td>
<td>0.8862</td>
</tr>
<tr>
<td>Consistency &amp; accuracy in service delivery</td>
<td>162</td>
<td>3.4877</td>
<td>0.8506</td>
</tr>
<tr>
<td>Fulfilling services promised at the right time</td>
<td>162</td>
<td>3.1111</td>
<td>0.7802</td>
</tr>
<tr>
<td>Accurate records keeping of customer transactions</td>
<td>162</td>
<td>4.1481</td>
<td>0.8283</td>
</tr>
<tr>
<td>Providing easily understood statements</td>
<td>162</td>
<td>4.4198</td>
<td>0.8320</td>
</tr>
<tr>
<td>Reliable staff &amp; equipment enhance customer satisfaction</td>
<td>162</td>
<td>4.3827</td>
<td>0.8786</td>
</tr>
<tr>
<td><strong>Average of Reliability Aspects</strong></td>
<td></td>
<td>3.9002</td>
<td></td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prompt response to customer requests</td>
<td>162</td>
<td>3.9389</td>
<td>0.7935</td>
</tr>
<tr>
<td>Giving customers individual attention</td>
<td>162</td>
<td>3.2222</td>
<td>0.8561</td>
</tr>
<tr>
<td>Handling customer complaints with utmost attention</td>
<td>162</td>
<td>3.8457</td>
<td>0.9816</td>
</tr>
<tr>
<td>Giving customers timely feedback with enquiries</td>
<td>162</td>
<td>3.7037</td>
<td>0.8257</td>
</tr>
<tr>
<td>Willingness to quickly help customers</td>
<td>162</td>
<td>3.7593</td>
<td>0.8547</td>
</tr>
<tr>
<td>Having friendly staff with courtesy</td>
<td>162</td>
<td>4.2284</td>
<td>0.8435</td>
</tr>
<tr>
<td><strong>Average of Responsiveness Aspects</strong></td>
<td></td>
<td>3.7830</td>
<td></td>
</tr>
<tr>
<td><strong>Agility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quickly adapting to changes in the market</td>
<td>162</td>
<td>3.2531</td>
<td>0.7419</td>
</tr>
<tr>
<td>Ability to increase capacity to respond to urgent needs</td>
<td>162</td>
<td>3.142</td>
<td>0.7297</td>
</tr>
<tr>
<td>Willingness of management to embrace innovation</td>
<td>162</td>
<td>3.1914</td>
<td>0.7438</td>
</tr>
<tr>
<td>Having strong ICT network</td>
<td>162</td>
<td>3.5309</td>
<td>0.8646</td>
</tr>
<tr>
<td>Offering E-Banking solutions</td>
<td>162</td>
<td>2.5864</td>
<td>0.8462</td>
</tr>
<tr>
<td>Delivering services to the special needs of customers</td>
<td>162</td>
<td>3.0309</td>
<td>0.8070</td>
</tr>
<tr>
<td><strong>Average of Agility Aspects</strong></td>
<td></td>
<td>3.1225</td>
<td></td>
</tr>
<tr>
<td><strong>Cost and Quality of Products and Services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offering excellent &amp; innovative services</td>
<td>162</td>
<td>3.3704</td>
<td>0.7550</td>
</tr>
<tr>
<td>Offering wide range of value-added services at competitive rates</td>
<td>162</td>
<td>2.9444</td>
<td>0.8133</td>
</tr>
<tr>
<td>Offering quality services that meet customers expectation</td>
<td>162</td>
<td>3.1111</td>
<td>0.7960</td>
</tr>
<tr>
<td>Charging competitive rate for services compared to competitors</td>
<td>162</td>
<td>3.5675</td>
<td>0.8977</td>
</tr>
<tr>
<td>Competitive rates charged do not compromise services offering</td>
<td>162</td>
<td>3.3333</td>
<td>0.7960</td>
</tr>
</tbody>
</table>
From Table 1 above, it is seen that the reliability aspects on average (M = 3.9002) are what the participants opined that their bank is doing best in terms of satisfying customers, and the reliability aspects are followed by responsiveness aspects on average (M = 3.7830). Also, on average, the cost and quality of products and services aspects (M = 3.3086) are rated third by the participants of the study in terms of satisfying customers, and the least rated aspects for which the bank is not doing well in terms of satisfying customers according to the participants of the study are agility aspects, on average (M = 3.1225). Moreover, the low values of the Standard Deviation of the various aspects of the variables measured as depicted in Table 1, shows the consistency in the responses of the participants of the study. Accordingly, the values of the various Standard Deviation ranges from 0.7297 to 0.9816, which shows uniformity in the participants responses.

Furthermore, after gauging the opinion of the participants on some of the aspects that are judged to perform a crucial role in enhancing customer satisfaction, Table 2 below depicts the extent of customer satisfaction of the participants in the case institution. The aspects that are being assessed include assessing the extent to which: customers are extremely satisfied with their bank; their bank offering excellent and quality products and services; their bank always strives to meet or exceed customers expectation; their bank doing better than competitors in satisfying customer needs; customers recommending potential customers to do business with their bank; and customers switching their accounts to another bank.

Table 2. Mean and Standard Deviation of Customer Satisfaction of the Participants.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, I am extremely satisfied with my bank</td>
<td>162</td>
<td>3.3333</td>
<td>0.8847</td>
</tr>
<tr>
<td>In all, my bank offers excellent and quality products and services</td>
<td>162</td>
<td>3.2531</td>
<td>0.8584</td>
</tr>
<tr>
<td>My bank always strives to meet or exceed my expectation</td>
<td>162</td>
<td>3.0062</td>
<td>0.9684</td>
</tr>
<tr>
<td>My bank is doing better than its competitors in satisfying needs</td>
<td>162</td>
<td>3.0123</td>
<td>0.9457</td>
</tr>
<tr>
<td>From my experience, I would recommend potential customers to do business with my bank</td>
<td>162</td>
<td>3.3765</td>
<td>0.9192</td>
</tr>
<tr>
<td>Considering everything, I would not switch my account to another bank</td>
<td>162</td>
<td>3.2037</td>
<td>1.004</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td>3.1975</td>
<td></td>
</tr>
</tbody>
</table>

Among the attributes evaluated as depicted in Table 2 above, the extent to which customers can recommend potential customers to do business with their bank on average (M = 3.38, SD = 0.92) has the highest mean among the aspects assessed. This is closely trailed by the extent to which customers are extremely satisfied with their bank on average (M = 3.33, SD = 0.88). Also, the aspect with the third highest mean on average (M = 3.25, SD = 0.86) is bank offering excellent and quality products and services. Moreover, the aspect of customers not switching their accounts to another bank on average (M = 3.20, SD = 1.00) has the fourth highest mean. Also, the attributes which have the least means among the aspects assessed are that of bank always striving to meet or exceed customers expectation on average (M = 3.01, SD = 0.97) and bank doing better than its competitors in satisfying customers on average (M = 3.01, 0.95).

From a Likert Scale of 1 - 5 used in the evaluation process, a mean of above 3 can be considered favorable. Hence from the results of Table 2, there seems to be some amount of customer satisfaction (M = 3.33). This is shown by an above average of 3, of customers willing to recommend potential customers (M = 3.37), customers accepting that their
bank offers excellent and quality products and services (M = 3.25) and customers not switching their accounts to another bank (M = 3.20). This satisfaction by the customers might be influence by aspects relating to reliability and responsiveness with overall average scores of their means equal to 3.90 and 3.78, respectively, as shown in Table 1 above. Even though there seems to be some amount of customer satisfaction by the overall average score of (M = 3.20) for customer satisfaction, the bank needs to improve on their ability to meet or exceed customers expectation (M = 3.01) and bank doing better than competitors in satisfying customer needs (M = 3.01) by improving on their cost and quality of products and services, and agility aspects with overall average scores of their means equal to 3.31 and 3.12, respectively, as depicted in Table 1.

5.2 Evaluating the Determinant of Customer Satisfaction (Reliability, Responsiveness, Agility, and Cost and Quality of Products and Services Aspects) Via Quality Function Deployment

Quality Function Deployment (QFD) is oriented to the “Voice of the Customer” and not the “thoughts of the designers”. In this regard, since the concentration is on the customer, all decisions attained during the service design are focused on the customer. It is important to realize that Quality Function Deployment (House of Quality) establishes what the customers require and how we are going to achieve those customers requirement. Figure 2 below shows the banks’ customer satisfaction house of quality.

Figure 2. Banks’ Customer Satisfaction House of Quality
From Figure 2 above, the VOCs are derived from the sub variables of the determinants of customer satisfaction (i.e., Reliability, Responsiveness, Agility, and Cost and Quality of Products and Services) as shown in Table 1. These sub variables are made up of close-ended question evaluated on a Likert Scale of 1 – 5, which are designed to determine the perception of the participants in relation to what their bank is doing best to satisfy customers. From the foregoing, the relative scale used (1 – 5) in the QFD, which values are assigned to the variables regarded as the VOCs were done according to the favorability of the mean values in relation to the evaluation of the responses of the participants as shown in Table 1. The aspects with the highest mean values are what the participants think their bank is doing well in satisfying customers and vice versa. Note that, the evaluation process of Table 1 relates to close-ended questions relating to aspects concerning what the case study bank is doing to satisfy customers. Accordingly, in the QFD, the VOC aspects with the highest favorable mean values from Table 1 (i.e., 3.8457 – 4.4198) are assigned a score of 5. This is followed by a score of 4 for mean values between 3.5247 - 3.7593. Also, a score of 3 is assigned to aspects with mean values of between 3.2222 – 3.4877 and a score of 2 is assigned to aspects with mean values of between 3.0309 – 3.1914. Lastly, a score of 1 is assigned to aspects with mean values of between 2.5864 – 2.9444.

5.3 Importance Level of the Voice of the Customers (VOCs) and the Control Factors (Critical to Quality)

From Figure 2, the highest scores computed in relation to the Voice of the Customers importance level in order of their importance are as follows: prompt response to customers’ requests 420, reliable staff and equipment 390, giving customers timely feedback 336, having a strong ICT 336, handling customers complaints with utmost attention 300, having friendly staff with courtesy 285, accurate records keeping of customers transactions 275, consistency and accuracy in service delivery 252, providing easily understood statements 225, quickly adapting to changes in the marketplace 225, and offering excellent and innovative services 216. These high scores depicted under the absolute weights of VOCs in Figure 2 shows that, the aspects they represent are the most important aspects among the VOCs that need to be sustained and focused on in a bid to address what the customers want in the case institution. On the other hand, the aspects with low scores computed in relation to the Voice of the Customers important level in hierarchical order are as follows: ability to increase capacity to meet urgent needs 174, charging competitive rates compared to competitors 156, giving customers individual attention 156, fulfilling services promised at the right time 146, offering services that meet customers expectation 126, delivering services to the special needs of customers 114, willingness of management to embrace innovation 108, offering E-Banking solutions 66, offering wide range of value-added services 57, and offering concessions 40. Even though these aspects have low scores as depicted under the absolute weight of VOCs in Figure 2, they are important aspects that play a vital role in enhancing customer satisfaction. These aspects, such as those related to the cost and quality of products and services need to be improved on, as they have an impact on the preferred choice of bank by the end customers. More so, most of these aspects relate to agility, and since the concept of agility is influenced by issues relating to increasing uncertainty in the marketplace, intensive competition, and the necessity for businesses to increase their level of responsiveness in relation to the wants of customers, it is necessary to improve these aspects with low ranking under the absolute weight of the VOCs in the QFD above.

On the other hand, after calculating the importance level of the CTQs, Customer Feedback with a score of 594 emerged as the most important. This implies that the case institutions need to create a mechanism in which they can capture customer feedback and then create a process for actions to be taken if the feedback is not favorable. The second most important among the CTQs is management flexibility with a score of 447. This suggests that the management of the
The case institution needs to be flexible in delivering superior value for their customers in order to delight them and make them loyal. Also, operations management ability follows as the third most important control factor identified with a score of 390. This means that with available capacity, a lot of deliverables can be accomplished for end customers in times of uncertainty in the marketplace, which would enhance their satisfaction. More so, knowing your customer is ranked fourth with a score of 387 among the CTQs, in terms of importance level. Learning about your customers is essential in tailoring products and services according to their special needs. Moreover, the scores of the other CTQs in hierarchical order are as follows: system optimization 357, investment in equipment 324, enhancing marketing ability 304, technology and automation 281, providing contact for customer service 275, providing high security and convenience 270, targets 240, establishing real-time help 225, staff training 198, enhancing vendor relationship 195, rewards and recognition 132 and documentation 117. All of the above-mentioned control factors, if carefully planned and implemented, would have the effect of satisfying customers requirement. For instance, system optimization and investing in equipment would result in updating software and bringing in innovative products and services such as electronic products and services in a bid to match up with competition and stay in business. Also, enhancing marketing ability, technology and innovation, providing contact for customer service, targets, establishing real-time help, and rewards and recognition would improve the responsiveness aspects of the case institution and hence enhance the satisfaction of customers. Providing high security and convenience would boost confidence in the customers of the case institution and thereby making them loyal. Staff training and documentation would encourage the capacity of staff to respond timely and appropriately to customers request and hence improve the quality of services offering, which would in turn enhance customer satisfaction.

5.4 Defining Targets for Achieving the Control Factors (Critical to Quality)

In a bid to achieve the effectiveness of the control factors in enhancing customers satisfaction, targets need to be set. This is because, targets create a roadmap for planning and executing programs aimed at improving services geared towards enhancing customer needs, in this instance the VOCs identified in Figure 2. For example, there should be 1 to 2 training programs per quarter organize for staff in order to enhance their responsiveness and accuracy in carrying out their functions. Also, targets should be set for deliverables (all outputs) in a bid to measure the performance of the employees. More so, addressing customer feedback should be set to a target of 9 out of a scale of 10. In this case, mechanism should be put in place to address unfavorable feedback and consolidate favorable ones. Moreover, investment in equipment should be a continuous process in order to match up with competition and continue to function as going concern. Additionally, a system of rewards and recognition should be instituted at least once a quarter in order to motivate performing staff who are meeting or exceeding their targets. This is to encourage them to continue to do more. Furthermore, it is necessary to document all processes to make provision for easy reference for new employees whenever old staff resign. Likewise, the management must always exhibit some amount of flexibility in tailoring products and services to the special needs of customers. Also, the performance of the system must be regularly optimized in order to update the system and prevent it from becoming obsolete.

Again, a platform for real-time help must always be in place to help customers with timely and flexible support to meet their needs. Marketing ability must be enhanced by creating a customer focus team that would always be there to help customers meet their demands. In a bid to help clients get better experience with the services of the case institution by getting ready-made answers to typical questions, technology and automation should be adopted via use of chatbots. Moreover, operations management ability should be enhanced by the use of digital onboarding technologies to make possible the approval of customers transaction remotely. More so, there must be modalities in place to learn about the customer in order to tailor products and services according to their special needs. This is done by the frequent use of surveys. Also, providing adequate safety measures and convenience are among the reasons for customers to remain loyal. This can be achieved by using secured virtual banking as a conduit. Additionally, clients should be provided with a contact for customer service to enable them make contact whenever they want, which is an essential requirement for contemporary banking. This is achieved by providing them with online/mobile channel. Lastly, it is vital for the case institution to enhance its relationship with their vendors by constantly getting in touch with them. This would enhance seamless delivery of their supplies and other needs which would in turn improve their performance with their numerous customers. In all, if all the above measures are put in place and implemented, the satisfaction of the customers would be enhanced in the case institution.

6. Conclusion

In summary, the key input of this research relates to providing stakeholders (especially the case institution for which this research is valid) with some variables (i.e., determinants of customer satisfaction) that need attention in relation
to enhancing customer satisfaction. It is hoped that stakeholders would take advantage of these variables to help solve issues relating to customer satisfaction. Accordingly, the variables dubbed as determinants of customer satisfaction for this research have been found to be significant in enhancing customer satisfaction according to the results of the evaluation made in Table 1 and Table 2. The results seem to indicate that there is some amount of customer satisfaction in the case institution as the overall customer satisfaction aspects have a mean score of 3.20, which is above the desired average score of 3 from a Likert scale of 1 – 5, and positively relates to the overall mean values of the individual determinants aspects of customer satisfaction i.e., reliability (M = 3.90), responsiveness (M = 3.75), agility (M = 3.12), and cost and quality of products and services (M = 3.31). It is observed, according to the mean values, that the reliability and responsiveness aspects contribute more to the satisfaction of customers in the case institution.

From the foregoing, the results also show that there are dissatisfied customers in the case study institution since the overall mean score (M = 3.20) for the satisfaction aspects evaluated is just slightly above the desired average score of 3 from a Likert scale of 1 – 5, and this can be attributed to the cost and quality of products and services, and agility aspects evaluated for this study. In a bid to enhance customer satisfaction and improve loyalty in the case institution, the reliability and responsiveness aspects which seem to have higher favorable responses according to the results of the mean values and QFD, need to be sustained and the cost and quality of products and services, and agility aspects with lower mean and QFD scores, need to be improved on. The cost and quality of products and services, and agility aspects that need to be improved on in relation to their low evaluation mean and QFD scores can be seen in Table 1 and Figure 2 for ease of reference. The improvements or enhancements of customer satisfaction in the case institution can only be achieved more seamlessly by working on the targets set for achieving the control factors in the House of Quality depicted in Figure 2, otherwise the case institution would remain stagnated.

In all, it is hoped that for future research on this topic or related topics, more variables relevant to supply chain best practices would be investigated, and the participants increased by involving more than one case institution in order to make this research more meaningful and for better results to be achieved.

Acknowledgements
The researchers wish to thank the sponsors of the research especially the supervisor of this study for his valuable suggestions and comments, and the Industrial and Systems Engineering Department, ITS, Surabaya, Indonesia.

References

Biographies
Michael Komah is a Postgraduate student majoring in Operations and Supply Chain Engineering in the Industrial and Systems Engineering Department, ITS, Surabaya, Indonesia. He holds a bachelors’ degree in Economics from Fourah Bay College, University of Sierra Leone. Besides, he also has a Higher Teachers Certificate in Mathematics from Milton Margai College of Education and Technology, Goderich, Freetown, Sierra Leone. From 2013 to 2018, he works for Skye Bank Sierra Leone Limited as a Business Development Manager, where he accomplished a lot of tasks, prominent among them was starting a new branch and breaking even within six months of operations. Moreover, from 2008 to 2013, he works for United Bank for Africa Sierra Leone Limited as a Relationship Manager and attained the post of Team Leader. Moreover, from 2002 to 2008, he was employed as a Mathematics teacher at Ahmadiyya Muslim Secondary School, Kissy Dockyard, Freetown, Sierra Leone. Michael is result oriented, self-motivated and resourceful person. More so, he is honest and has integrity. He has learned and cooperated well with his superiors and has positively demonstrated the ability to work in a multi-cultural environment.

Nyoman Pujawan is Professor of Supply Chain Engineering at the Department of Industrial Engineering, Sepuluh Nopember Institute of Technology (ITS), Surabaya, Indonesia. He is currently the President of the Indonesian Supply Chain and Logistics Institute (ISLI). He received a Bachelors’ degree in Industrial Engineering from ITS, Indonesia,
Master of Engineering in Industrial Engineering from Asian Institute of Technology (AIT) Bangkok, Thailand, and PhD in Management Science from Lancaster University, UK. He also holds Certified Supply Chain Professional (CSCP) from APICS (USA). He was a Lecturer in Operations Management in Manchester Business School, The University of Manchester, UK in 2003 – 2004. His papers have appeared in many international journals including the European Journal of Operational Research, International Journal of Production Economics, International Journal of Production Research, Production Planning and Control, International Journal of Physical Distribution and Logistics Management, Supply Chain Management: An International Journal, International Journal of Logistics Research and Applications, Business Process Management Journal, among others. He is a Board Executive Member of the Asia Pacific Industrial Engineering and Management Systems Society (APIEMS) and the International Federation of Logistics and SCM Systems (IFLS). Professor Pujawan worked in industry before moving to the academia. While his academic background is very strong, he is equally well experienced in handling industry problems. He is an active consultant for various supply chain and logistics related industry problems (has involved in over 40 consulting projects). He is a frequent invited speaker for both academic as well as industry forum, nationally as well as internationally.