Online Service Quality and Customer Satisfaction: A case study of Bank Islam Malaysia Berhad

Ahmed, Khalil

University Science Islam Malaysia

7 April 2011

Online Service Quality and Customer Satisfaction: A case study of Bank Islam Malaysia Berhad

Prepared by

KHALIL MOHAMMED KHALIL

Graduate Student

University Science Islam Malaysia

In the name of Allah, the most Beneficent, the most Merciful

Abstract

Online banking can provide a reliable service to the customers for which make them happy. Online banking service is a comparative advantage and can improve relationship with customers. The purpose of this study is to understand the impact of E-SERVQUAL model on customer satisfaction in Bank Islam Malaysia Brhd (BIMB). Four service quality dimensions namely tangibles, reliability, responsiveness, assurance, and empathy have been established based on the SERVQUAL model modified by Han and Beak (2004). These variables have been tested to explore the relationship between online service quality and the customer satisfaction. The data were gathered through a questionnaire with 21 customers. The study shows that these dimensions are good to measure the relationship between online service and customer satisfaction. The study also explores that empathy, reliability, and responsiveness have more contribution to satisfy the customers of Bank Islam online banking service.

Table of Contents

Chapter I

Introduction

Web-based service (online service or e-service) has witnessed explosive growth in the past several years. In service industries in general and in the banking industry, in particular, the internet has been exploited as a means to provide e-services. Online banking services are becoming an attractive alternative to visiting service outlets or phoning call centers for increasing number of customers (Kenova and Jonasson, 2006). Internet banking helps banks to build and maintain close relationships with their customers, reduces operating and fixed costs and achieves more efficient and enhanced financial performance (DeYoung et al., 2007 as cited in Rod et al. 2009). From customer perspective, online services offer panoply of benefits to the customers such as enhanced control, ease of use, and reduced transaction charges (Scullion and Nicholas, 2001, as cited in Yang and Fang, 2004).

Online quality service is a key issue to maintain customer satisfaction. In recent years, many banks try to provide a quality online service to satisfy their customers. These banks are introducing internet banking as an assurance to their customers that they will be able to maintain a competitive quality of service in the future, in efforts to avoid losing their customers (Rod et al. 2009). Offering internet banking is no longer regarded as a competitive advantage but a competitive necessity (Gan et al., 2006, as cited in Rod et al. 2009).

Statement of the problem

Providing a good service quality is a major issue for all business especially for banking industry. Customer satisfaction may determine the success or fail of a business. In order to be competitive in the marketplace, banks need to satisfy their customer. Best service quality provided would ensure a high market share and substantial return. It is important for banks to provide online service to uncover what attributes consumers utilized in their assessment of overall service quality and satisfaction and which attributes are more important (Yang and Fang, 2004). Therefore, the banks need to understand the attributes that customer use to judge service quality and enhance service quality. The research tries to investigate the customers' perceptions towards online service quality of bank Islam.

Objectives of the study

This study aims to address the relationship between online service quality and customer satisfaction for Bank Islam. The objectives of the study are:

1. To determine the dimensions of online service quality.
2. To analyze the level of customer satisfaction towards Bank Islam online banking service.

Developing an understanding for the relationship between online service and customer satisfaction is initial focus of this study. In a broader perspective, this study intended to be a valuable addition to the literature on the relationship between online service and customer satisfaction.

Research questions

More specifically, this study answers the following research questions:

1. What are the dimensions of online service quality?
2. What is the level of customer satisfaction towards Bank Islam online banking service?

Limitations of the study

This study is limited to gathering empirical data through a questionnaire from a sample of the population in IIUM, UUM, and INCEIF universities. The study also concerns to investigate online service of Bank Islam Brhd Malaysia (BIBM). The study is not subject to generalization because it is just to fulfill the English Business course requirements. The sample, therefore, it is small, 21 samples.

The study has employed a questionnaire including 19 questions developed by Han and Beak (2004).

Chapter II

Review of relevant literature

2.1 Service quality

A growing body of scholarly work has begun to explore e-service quality, and consumer relationship primarily focusing on online banking services. The concept of e-service quality derived from service quality construct. Parasuraman et al. (1988), as cited in Santos, 2003) defined service quality as "The overall evaluation of a specific service firm that results from comparing that firm's performance with the customer's general expectations of how firms in that industry should perform". Asubonteng et al. (1996) (as cited in Saha and Zhao, 2007) defined it as "The difference between customers' expectations for service performance prior to the service encounter and their perceptions of the service received". Bitner et al. 1990, (as cited in Hank and Beak, 2004) define service quality as "the consumers' overall impression of the relative inferiority/superiority of the organization and its services." There are, however, several definitions of service quality may vary from person to person but essence is the same. Ojo (2010) argues that the definitions of service quality vary only in wording but typically involve determining whether perceived service delivery meets, exceeds or fails to meet customer expectations.

The assessment of service quality is largely based upon Parasuraman et al.'s (1988) original development of the measure of perceived service quality (Herington and Weaven, 2008). Parasuraman et al. 1988, (as cited in Tissica Santos, 2003) developed an assessment tool known as SERVQUAL. It consists of a list of ten dimensions (reliability; responsiveness; competence; access; courtesy; communication; credibility; security; understanding the customer; and tangibles) to measure service quality (Rod et al., 2008). Later in 1988, these ten dimensions were cut down to five ones: tangibility, reliability, responsiveness, assurance, and empathy (Wang and Shieh, 2006). The SERVQUAL, however, does not embrace the unique facets of online service quality, such as customer-to-Web-site interactions, since this instrument was constructed based mainly on customer-to-employee interactions (Cai and Jun, 2003). Despite SERVQUAL as an instrument to measure quality has been widely accepted and several studies have attempted to address the key attributes of services quality, many researchers express the need that the

SERVQUAL should be customized to the specific service area (Han and Beak, 2004). Saha and Zhao (2007) argue that the SERVQUAL can evidently not be applied as such to e-services, but dimensions that closely resemble them can be constructed.

Table 2.1 dimensions of service quality (SERVQUAL scale)

Service quality dimension	Definition
Reliability	Involves consistency of performance and dependability
Responsiveness	Willingness or readiness of employees to provide service (timeliness of service, giving prompt service)
Competence	Possession of the required skills and knowledge to perform the service
Access	Approach of ability and ease of contact
Courtesy	Politeness, respect, consideration and friendliness of contact personnel
Communication	Keeping customers informed in language they can understand and listening to them
Credibility	Trustworthiness, believability, honesty, and having the customers' best interests at heart
Security	Freedom from danger, risk and doubt
Understanding/Knowing the customer	Making the effort to understand the customer's needs
Tangibles	Physical evidence of the service

Source: Quality online banking services, 2006, p. 9

2.2 E-service quality

E-service quality is defined broadly to encompass all phases of a customer's interactions with a Web site: The extent to which a Web site facilitates efficient and effective shopping, purchasing, and delivery (Parasuraman et al. 1988). Santos (2003) argues that e-service quality is an overall customer assessment and judgment of e-service delivery in the virtual marketplace. The

important of delivering online services is recognized by business world. One of the reasons for the increase importance of e-services quality is that over the Internet, it is much easier for customers to compare different service offerings than through traditional channels (Santos, 2003). Despite the increased aware of online services, but still there is the problem of how the quality of online services is defined, which its determinants are and how it can be actually measured (Kenova and Jonasson, 2006). The quality of e-service is an essential issue to develop a valid scale. The growth of e-commerce in the global and regional markets creates a special interest in the measuring of e-service quality and also in the investigation of the dimensions of e-service (Mekovec et al., 2007). Considerable studies have been conducted focusing on the measurement and evaluating online service quality. Some academic researchers have developed scales to evaluate online service quality as shown in the table:

Table 2.2 E-service scales

Scale	Researcher
WebQual	Loiacono, Watson, and Goodhue (2000).
SITEQUAL	Yoo and Donthu (2001)
IRSQ scale	Janda, Trocchia, and Gwinner (2002)
E-A-S-QUAL	M. Kim, J.H. Kim, and Lennon (2006).

Adapted from different sources

The scales vary in dimensions from one to another depends on the researcher's preferences. For instance, the WbQual created by Loiacono, Watson, and Goodhue (2006) has a scale for rating e-service on 12 dimensions: informational fit to task, interaction, trust, response time, design, intuitiveness, visual appeal, innovativeness, flow-emotional appeal, integrated communication, business processes, and substitutability. Yoo and Donthu (2001) developed a nine-item SITEQUAL scale for measuring site quality on four dimensions: ease of use, aesthetic design, processing speed, and security.

Despite the valuable contribution of these scales, the SERVQUAL scale developed by Parasuraman, Zeithaml and Berry has received a considerable attention. Yang (2001) argues that the primary value of SERVQUAL lies on its powerful benchmarking, diagnostic and perspective tools. As stated earlier, the SERVQUAL scale does not best fit the online services and therefore

many studies have tried to extend its conceptualization to the electronic context. Lee and Lin (2005) maintain that most research on e-service quality measurement has focused on rewording the SERVQUAL scale items.

Drawing upon the traditional SERVQUAL scale, Parasuraman et al. developed E-S-QUAL Scale, consisting of 22 items on four dimensions: efficiency, fulfillment, system availability, and privacy. Jayawardhena (2004), (as cited in Hans et al., 2004) transforms the original SERVQUAL scale to the internet context and develops a battery of 21 items to assess service quality in e-banking. Yang (2001) proposed in his research the use of seven online service quality dimensions which align with those of the SERVQUAL scale. These dimensions include reliability, responsiveness, access, ease of use, attentiveness, credibility and security. Lee and Lin (2005) revised the SERVQUAL scale items to establish dimensions of e-service quality through web site design, reliability, responsiveness, trust, and personalization. Herington and Scott Weaven (2008) have tested the SERVQUAL in the online context based on four dimensions: personal needs, site organization, user-friendliness, and efficiency.

2.3 E-banking service

E-Banking is also called Internet banking, on-line banking or PC banking (Mobarek, 2007). Internet banking as a new alternative channel to distribute financial services has become important to remain competitive in the market. Pikkarainen et al., 2004 (as cited in Nupur, 2010) define internet banking as an "Internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments". Stone, 2003 (as cited in Mobarek, 2007), have said that the internet deals with a large number of varied financial transactions like customer payments, securities transactions applications for loans or insurance acquisitions.

2.4 Customer satisfaction and service quality

Service quality and customer satisfaction are inarguably the two core concepts that are at the crux of the marketing theory and practice (Spreng and Mackoy, 1996, as cited in Siadat, 2008). Satisfaction can be defined as "Customer satisfaction is a collective outcome of perception, evaluation and psychological reactions to the consumption experience with a product/service" (Yi, 1999, as cited in Saha and Zoha, 2005). Yang (2001) argues that customers reach

satisfaction decisions by comparing the performance a product or service with their prior expectations. If performance exceeds the expectation positive disconfirmation occurs and increases in satisfaction can be expected to take place (Yang, 2001). On the other hand, if performance shortfalls the expectation negative disconfirmation occurs and consequently satisfaction would be decreased.

Yang (2001) found a positive relationship between online quality service and customer satisfaction based on five dimensions of e-service quality: care/help, ease of use, reliability, and product portfolio. Mobarek (2007) in his study about e-banking and customer satisfaction proved that customers are generally satisfied with e-banking services as a whole. Nupur (2010) arrived at the conclusion that there is a relationship between customer satisfaction and in e-banking and the five dimensions of SERVQUAL scale: reliability, responsiveness, assurance, empathy, and tangibles.

In a unique study, Osamn et al. investigate service quality and customer satisfaction between the full-pledged Islamic banks and the conventional banks offering Islamic banking products and services in Malaysia. The study utilized CARTER scale which is a modified scale for SERVQUAL with six dimensions: Compliance, assurance, reliability, tangibles, empathy, and responsiveness. What important in this study is the findings regarding Bank Islam. The findings show that Bank Islam was ranked top under the compliant attribute. As for the Reliability, Tangibles and Responsiveness, the respondents have ranked the services rendered by BIMB as dissatisfactory. In justification to this statement, the study maintains that It could be inferred that the BIMB has taken little effort to improve with their services knowing that consumer will still go to their bank because of the important factor that consumer are looking at especially the Muslims, and it would be that the bank must fully adhere to the Islamic principles.

2.5 Dimensions for this study

Based on the literature review, the researcher would like to use as a basis the SERVQUAL model modified by Han and Beak (2004) for evaluating the relationship between online service quality and customer satisfaction. The model suggests four dimensions service quality including: Tangibles, reliability, responsiveness, and empathy.

Table 3 Dimensions of SERVAQAL instrument modified by Han and Beak

SERVQUAL dimension	Description
Tangibles	Online bank has up-to-date equipment. Easiness and availability of information on the bank web site.
Reliability	Involves the correct technical functioning of the site and the accuracy of service promises (delivering when promised) and product information
Responsiveness	Quick response and the ability to get help if there is a problem or question
Empathy	Provision of caring and individualized attention to customers provided by call centers or web administrators.

Source: Antecedents and Consequences of Service Quality in Online Banking: An Application of the SERVQUAL Instrument, 2004.

2.6 Theoretical framework

Based on narrowed down scope of literature review above, the relationship between service quality variables and customer satisfaction can be shown in figure 2.1 below. The four online service quality dimensions have been selected from Han and Beak (2004).

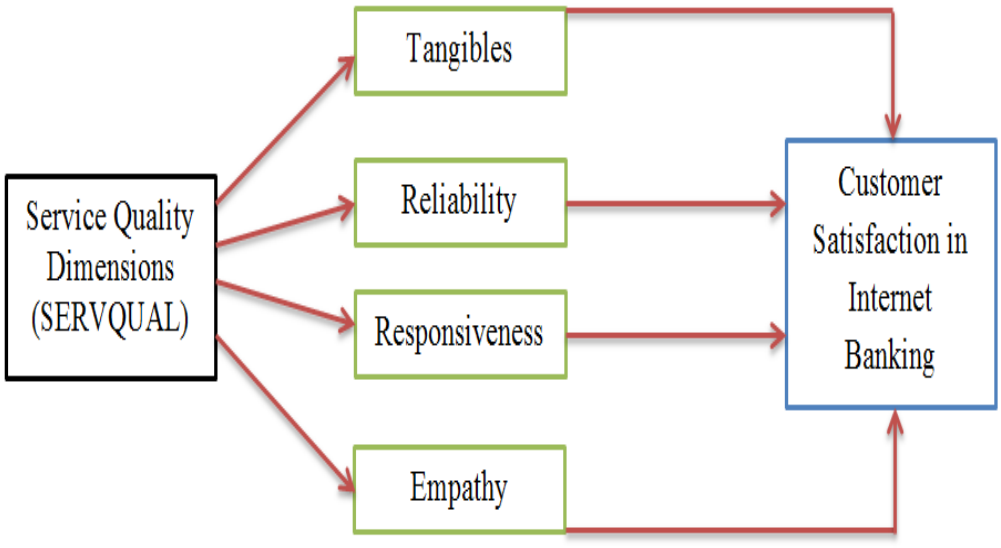

Figure 1: The Theoretical Framework of the This Study

Chapter III

Methodology

3.1 Research Approach

For the underlying study the researcher has chosen quantitative approach for achieving the purpose of the study.

3.2 Quantitative Research

Quantitative approach is one in which the investigator primarily uses post positivist claims for developing knowledge and employing strategies of inquiry such as experiments and surveys and collects data on predetermined instruments that yield statistical data (Creswell 2003, as cited in Sidat, 2008).

Quantitative research approach is based on the development of testable hypotheses and theory. Quantitative investigations tend to measure "*how often*" or "*how much*" (Kenova and Jonnason, 2006). Through utilizing this method, the researcher would to measure the level of customer satisfaction with Bank Islam online bank services. To collect the quantitative data the survey method has been used and eventually the data has been analyzed by using statistical techniques.

3.3 Selecting Sampling method

The study used judgment sampling as a method to select samples. Group of people who have knowledge about particular problem they can be selected as sample element. Sometimes it is referred as a purposive sample because it involves a specific purpose (Sidat, 2008). According to Hair et al., 2003 (as cited in Sidat, 2008) judgment sampling is more convenience and low cost involvement.

3.4 Sample Selection

This study is a mini research study. Generalization, therefore, is not the purpose of the study but to capture the idea of how to conduct an academic research at master or Ph.D. level.

The researcher has distributed an online questionnaire to a limited number of informants who are postgraduate student at IIUM, UUM, and INCEIF universities. In addition, the respondents have experience for a period of two years in dealing with the Bank Islam online service.

3.5 Data Collection

For the purpose of the study, survey was used as a data collection method. The study has utilized the questionnaire developed by Han and Beak (2004) to measure online banking service and customer satisfaction.

The questionnaire consists of 19 questions on online banking service quality dimensions namely, Tangibles, Reliability, Responsiveness, and Empathy. For understanding the importance and satisfaction of service quality dimensions, a 5-likert scale was used (1=strongly disagree, 5=strongly agree).

Han and Beak introduced a modified version of the SERVQUAL instruments. Based on their study, the modified version is appropriate instrument for measuring the quality of online banking services and assessing the level of customer satisfaction.

3.6 Data analysis

The collected data in the study has been presented and analyzed using Descriptive Statistics, Cronbach's Alpha Test of Reliability, and Regression Analysis.

3.7 Validity and reliability

When evaluating an instrument or conducting a research in general, attention need to be paid to two issues: reliability and validity.

3.7.1 Validity

According to Eriksson and Wiederscheim-Paul (1997, as cited in Kenova and Jonnason, 2006), validity defined as:

"The ability of a scale or measuring instrument to measure what is intended to be measured". In this regards, the following steps were taken to ensure the validity:

1. Data was collected from the reliable sources, from respondents who are more experienced to use online banking service;
2. Survey questions were made based on the Han and Beak study where the validity was ensured.

3.7.2 Reliability

According to Saunders et al., 2003 (as cited in Sidat, 2008) reliability refers to the degree to which data collection method or methods will yield consistent findings, similar observations would be made or conclusions reached by other researchers or there is transparency in how sense was made from the raw data.

There are two types of reliability, external and internal reliability. According to Kenova and Jonnason, 2006 the external reliability method is time-consuming and tedious. Internal reliability can be tested by using alpha (Cornbach). It measures the extent to which the responses collected for given item correlate highly with each other (Garson, 2002, as cited in Kenova and Jonnason, 2006).

3.8 Hypothesis

Hypothesis: Ho (Null hypothesis): There is a relation between customer satisfaction in online banking service of Bank Islam and tangibles, reliability, responsiveness, and empathy.

$Ho= ß_1 = ß_2 = ß_3 = ß_4 =0$

H_1 (Alternative Hypothesis): There is no relation between customer satisfaction in online banking service of Bank Islam and tangibles, reliability, responsiveness, and empathy.

. H_1= At least one ß is not zero.

3.9 Model

The researcher has used the customer satisfaction as the dependent variable and the four dimensions of service quality are namely tangibles, reliability, responsiveness, and empathy, as the independent variables. The author has run the Regression to determine the significance level of the variables for the customer satisfaction in e-banking. The basic model was as follows:

Customer Satisfaction (CS) = f (tangibles, reliability, responsiveness, and empathy,). Basically, $CS= \alpha + ß_1x_1 + ß_2x_2 + ß_3x_3 + ß_4x_4 + e$

Where,

CS= Customer Satisfaction in online banking,

X_1= tangibles

X_2= reliability

X_3= responsiveness

X_4= empathy

There α is constant and ßs are coefficients to estimate, and e is the error term.

3.10 chapter summary

In this chapter, the researcher had identified the guide lines and procedures that will be applying in this project. Since the purpose of this research is to understand the most important dimensions of service quality from the customers' perspective, quantitative research is found to be more appropriate for this study. Moreover, a survey method has been done using a questionnaire in order to gain a better understanding of the research area. The questionnaire was adapted from Han and Beak's study (2004). For quantitative data analysis, statistical tools of SPSS are used for data input and analysis.

Chapter IV

Empirical Data Analysis

In the following chapter on Empirical Data and Analysis, the results from the conducted survey and the following analysis will be presented.

4.1 Cronbach's Alpha test of Reliability

Cronbach's Alpha Test of Reliability is the most popular estimate to measure internal consistency of a scale. Ideally, the Cronbach alpha coefficient of a scale should be .7 and above (Pallant, 2007).

Reliability Statistics

Cronbach's Alpha	N of Items
.699	4

Table 4.1 Cronbach Alpha Score

It can be seen from the above table that the Cronbach alpha for the four items that make up the scale is .699 which is almost .7.

According Pallant (2007) a scale has good internal consistency with a Cronbach alpha coefficient reported of .7. In current study, the Cronbach alpha coefficient is .7.

4.2 Descriptive statistics

Table 4.2: Descriptive Statistics

	N	Mean	Std. Deviation
Overall customer satisfaction	21	3.29	.717
Tangibles	21	3.41	.732
Reliability	21	3.37	.724

Responsiveness	21	3.45	.902
Empathy	21	3.42	.734
Valid N (listwise)	21		

Table 4.2 shows the mean value depicting the overall customers' satisfaction. As far as this descriptive statistics is concerned, customers' satisfaction on online banking service is above satisfactory level (with a mean value of 3.29 on a 5 point Likert scale).

As far as the mean values are concerned, customers are satisfied on Tangibles, Reliability, Responsiveness, and Empathy. This satisfaction comes from easiness and availability of information on the bank web site, accuracy of service promises, quick response and the ability to get help if there is a problem or question, and caring and individualized attention provided by web administrator.

4.3 Regression analysis

The overall regression and its ANOVA are summarized as follows:

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.799[a]	.638	.547	.482

a. Predictors: (Constant), Empathy, Responsiveness, Reliability, Tangibles

b. Dependent Variable: Overall customer satisfaction

Table 4.4: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.561	4	1.640	7.047	.002[a]
	Residual	3.724	16	.233		
	Total	10.286	20			

a. Predictors: (Constant), Empathy, Responsiveness, Reliability, Tangibles

b. Dependent Variable: Overall customer satisfaction

From the ANOVA Test, it shows the table Sig. value 0.05 is greater than the calculated Sig. value 0.002. It reflects the null hypothesis at 5% level of significance. It means there was a significant correlation between dependent variable and independent variables. Therefore customer satisfaction level depends on quality dimension in Bank Islam online banking service.

The overall predictability of the model is shown in the table 4.3 above. The adjusted R square value of .547 indicates that the model explains about 54% of the factors responsible for quality in Bank Islam E-Banking, which is significant (F=7.04, p < 002). F values imply that the model and data are well fit in explaining customer satisfaction in Bank Islam E-Banking.

Table 4.5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.342	1.175		1.142	.270
	Tangibles	-.080	.050	-.322	-1.586	.132
	Reliability	.012	.067	.306	.184	.003
	Responsiveness	.021	.057	.507	1.358	.000

Empathy	.189	.047	.975	4.060	.001

a. Dependent Variable: Overall customer satisfaction

Table 4.5 shows the relationship between dependent variable and each independent variable. The three variables reliability, responsiveness, and empathy are significantly correlated with satisfaction. The "Empathy" and "Responsiveness" correlate strongly, "Reliability" is moderately correlated, whilst the "Tangibles" is not correlated (Waven, 2008). No evidence of serious multicollinearity is found between the independent variables, with all VIF (Variance Inflation Factor) scores less than 3, and Tolerance is greater than .10 (Pallant, 2007).

Based on the data found in the table 4.6 below, it can be interpreted that the independent variables such as "Reliability", "Responsiveness", and "Emathy" have strong impact on customer satisfaction; hence, the other variable "Tangibles" was dropped from the final analysis based on (99% level of significance).

Here, "Reliability" = 0.306 i.e., 100% change in reliability leads to 30.6% change in customer satisfaction level.

"Responsiveness" = 0.507 i.e., 100% change in responsiveness leads to 50.7% change in customer satisfaction level.

"Empathy" =0.975 i.e., 100% change in assurance leads to 97.5% change in customer satisfaction level.

Chapter V

Discussing and Conclusion

From the statistical analysis, it is observed that there is a relation between customer satisfaction in online banking service and tangibles, reliability, responsiveness, and empathy. The empathy is found to have the greatest influence on satisfaction followed by responsiveness. The reliability is found to have a small influence on satisfaction, whilst the tangibles have no influence on satisfaction.

Based on previously conducted studies, the researcher has decided to apply a modified version of SERQUAL developed by Han and Beak (2004) for measuring quality of online services to the banking context. Furthermore, based on the applied and later modified theoretical model, the research made an attempt to evaluate the level of customers' satisfaction with the quality of different aspects of the online banking services the customers use.

For the purpose of the study, a survey has been conducted with 21 people. To analyze the data and test its reliability, Cronbach's Alpha Test of Reliability was conducted. The Cronbach's Alpha Test of Reliability proved the relative reliability of the dimensions used in the model.

In order to evaluate how customers perceive the quality of the different aspects of the online banking services they use, the Descriptive Statistics and Regression analyze have been employed. The results showed that the customers are satisfied with Bank Islam online banking service.

The current study supports the findings of previous studies of Yang (2001), Mobarek (2007), and Nupur (2010) where they found a relationship between customer satisfaction and online banking service.

Recommendation

Because of the time-constraints and the specific conditions under which the study has been conducted, only 21 questionnaires were used to collect data. Since the generalization is not the purpose of the study, the sample size should be increased for future studies.

References

Books and Theses

Kenova, V. & Jonasson P. 2006. *Quality Online Banking Service*. Jonkoping university.

Pallent, Julie. 2007. SPSS Survival Manual: *A Step by Step Guide to Data Analysis using SPSS for Windows*. England: McGraw.

Saha, P. & Zhoa, Y. 2005. *Relationship between Online Service Quality and Customer Satisfaction: A Study in Internet Banking*. Lulea University.

Sidat, S. 2008. *Measuring Service Quality using SEWRVQUAL Model: A Case Study of E-Retiling in Iran*. University Technology Malaysia.

Yang, Z. 2001. *Measuring E-Service Quality and its linkage to Customer Loyalty*. New Mexico University.

Articles

Bauer, Hammerschmidt. & Falk. 2004. "Measuring the quality of e-banking portals". International Journal of Bank Marketing. Vol. 23 No. 2.pp. 153-175.

Cai. & Jun. 2003. "Internet users' perceptions of online service quality: a comparison of online buyers and information searchers". Managing Service Quality. Vol. 13. pp. 504-519.

Carlson. & O'Cass. 2008. "Exploring the relationships between e-service quality, satisfaction, attitudes and behaviours in content-driven e-service web sites". Journal of Services Marketing. Vol. 24. pp. 112–127.

Han, Sang. & Beak, Seung. 2004. "Antecedents and Consequences of Service Quality in Online Banking: An Application of the SERVQUAL Instrument". Advance in Consumer Research. Vol. 31. pp. 208-214.

Herington, C. & Weaven, S. 2008. "E-Retailing by Banks: E-Service Quality and its Importance to Customer Satisfaction". European Journal of Marketing Vol. 43 No. 9/10, pp. 1220-123.

Jaiang & Rosenbloon. 2004. "Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time". European Journal of Marketing. Vol. 39 No. 1/2, pp. 150-174.

Janda, S, J, Philip, Trocchia & Gwinner, P. 2002. "Customer Perceptions of Internet Retail Service Quality". International Journal of Service Industry Management. Vol. 13. pp. 412-431.

Lee, G. & Lin, H. 2005. "Customer perceptions of e-service quality in online shopping". International Journal of Retail & Distribution Management Vol. 33 No. 2, pp. 161-176.

Mekoves, R, Bubas, G. & Verck, N. 2007. "A METHOD FOR IMPROVEMENT OF OBJECTIVITY OF E-SERVICE QUALITY EVALUATION". Journal of information and organizational sciences, Vol 31.

Mobarek, Asma. 2007. “E-BANKING PRACTICES AND CUSTOMER SATISFACTION- A CASE STUDY IN BOTSWANA”. Dpt. Accounting and Finance. University of Botswana.

Nupur, J. 2010. “E-Banking and Customers’ Satisfaction in Bangladesh: An Analysis”. International Review of Business Research Papers. Vol. 6. September. pp. 145-156.

Oju, Olu. 2010. “The Relationship between Service Quality and Customer Satisfaction in the Telecommunication Industry: Evidence from Nigeria”. Broad Research in Accounting, Negotiation, and Distribution. Vol. 1. pp. 88-100.

Osman, I, Ali, H, Zainuddin, A, Rashid, W. 2009. “Customers Satisfaction in Malaysian Islamic Banking”. International Journal of Economics and Finance. Vol. 1. pp. 197-202.

Parasuraman, A, Zeithaml, A. & Malhotra. A. 2005. “E-S-QUAL A Multiple-Item Scale for Assessing”. Electronic Service Quality Journal of Service Research, Vol. 7. pp. 1-21.

Rod, M, Ashill, N & Carruthers. 2008. “An examination of the relationship between service quality dimensions, overall internet banking service quality and customer satisfaction: A New Zealand study”. Marketing Intelligence & Planning. Vol. 27 No. 1. pp. 103-126.

Shang, T. & Liu, C. 2010. “An Empirical Study on the Effect of E-Service Quality on Online Customer Satisfaction and Loyalty”. Nankai Business Review International Vol. 1 No. 3. pp. 273-283.

Yang & Fang. 2004. “Online service quality dimensions and their relationships with satisfaction: A content analysis of customer reviews of securities brokerage services”. International Journal of Service Industry Management. Vol. 15 No. 3. pp. 302-326.

Yang, Z, Jun, M. & Petrson, T. 2004. “Measuring customer perceived online service quality Scale development and managerial implications”. International Journal of Operations & Production Management. Vol. 24 No. 11. pp. 1149-1174.

Appendix

Dimension	Item (Performance items only)
Tangibles	Q1) XYZ online bank has up-to-date equipment & technology. Q2) The web-site of XYZ online bank is visually appealing. Q3) The web-site of XYZ online bank makes you find information easily. Q4) The web site of XYZ online bank provides you with valuable information. Q5) The web site of XYZ online bank is easy to use and navigate.
Reliability	Q6) When XYZ online bank promises to do something by a certain time, it does so. Q7) When there is a problem; XYZ online bank shows a sincere interest in solving it. Q8) XYZ online bank performs the service right first time. Q9) XYZ online bank provides its services at the time it promises to do so. Q10) XYZ online bank insists on error-free records.
Responsiveness	Q11) Administrators of XYZ online bank tell you exactly when the service will be performed Q12) Administrators of XYZ online bank give you prompt service. Q13) Administrators of XYZ online bank are always willing to help you. Q14) Administrators of XYZ online bank are never too busy to respond to your questions.
Empathy	Q15) XYZ online bank gives you individual attention. Q16) Help desks or call centers of XYZ online bank have operating hours convenient to all its customers. Q17) Help desks, call centers, and web administrators of XYZ online bank give you personal attention. Q18) Help desks, call centers, and web administrators of XYZ online bank have your best interests at heart. Q19) Help desks, call centers, and web administrators of XYZ online bank understand your specific needs