

A Review Paper on the Credibility Model for Electronic Service Quality using Big Data

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Abstract

The purpose of this study is to investigate the concept of service quality in the context of an online retail bank in Jalandhar (India), with a particular emphasis on the level of customer satisfaction. The purpose of this study is to investigate the factors that determine the level of consumer contentment with electronic banking services. On the basis of the model and the findings from the literature analysis, the following five service quality metrics were selected: responsiveness, security, navigation, customer service, and content quality. These principles have been put to test in online banking to shed light on the connection that exists between the quality of service and the level of happiness experienced by customers. The information was gathered by a survey, an interview, or direct observations, as well as a structured questionnaire with one hundred clients. According to the findings of the study, these aspects of service quality are the most essential ones for determining the level of consumer satisfaction in online banking. The research that was done to establish the facts about security, usability, and navigation had a greater influence on the level of pleasure that e-banking consumers in Jalandhar reported. According to the findings of the regression analysis, these three aspects of service quality appear to have a significant impact on the overall level of customer satisfaction. The data that was gathered from these surveys can be utilized later on in the process of formulating marketing strategies to enhance the level of customer satisfaction in retail banking. In this study, we investigate the impact of consumer search activity on the creation of consideration sets and the consumer's ultimate purchase choice by employing a one-of-a-kind dataset consisting of data collected from thorough customer surveys. According to our findings, searching across market leaders does not have a negative impact on market followers; however, searching across market followers does have a negative impact on market leaders. According to these findings, current market leaders may be at risk as a result of a rise in consumer adoption of broad search technology such as Internet shopbots.

Keywords : E-banking, evaluation, interpretation

I. INTRODUCTION

Competition has picked up in India's retail banking sector, which is one of its defining characteristics. The increased level of competition that exists amongst banks has caused them to give serious consideration to how they can compete better. In the past, banks often maintained a uniform marketing strategy that was directed toward a broad spectrum of clients rather than specific segments of that spectrum. An enticing strategy would have been to offer all clients access to the complete spectrum of available services and to work toward the establishment of a unified financial hub. The

concept of cross-selling suggests that it is more significant than the separation of services. As a direct consequence of this, clients were unable to reap the benefits that would have been available to them had they obtained a service from one bank rather than another. In addition, expanding the variety of services offered is not an amazing method of distinction in and of itself because of how easy it is for competitors to replicate newly supplied services. This is because of the intangible nature of services, which means that there is no such thing as a patent for them and that the lifespan of innovations can be very brief. Therefore, a distinction will be made between banks not through the service mix, which refers to the

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combination of services that are provided, but more generally through the quality of service, which is difficult to achieve but essential for establishing a long-term relationship with customers [1].

In light of the intense competition that already exists, maintaining happy customers has become an essential component of successful retail banking. The expansion of electronic banking in a nation can be attributed to a number of different causes, including successful access to the internet, the development of innovative online banking features, the consistently increasing use of the internet, as well as a legal and regulatory framework. E-banking is able to provide clients with services that are both more quickly accessible and easier to grasp, which increases the likelihood that customers will be satisfied with the service. Not only does the e-banking system produce the most recent available return, it can also get its better worries through to customers. The goal of this study is to gain an understanding of the influence that different aspects of online banking have on the level of satisfaction experienced by Indian customers.

Internet banking has provided a fresh opportunity for financial institutions to differentiate themselves from one another and provide customers with a level of service that is superior to that of their rivals. It entails clients using the Internet to communicate with their banks, check their accounts, and carry out financial transactions in order to fulfill the requirements of the service. The transition to online banking has had a significant impact on the distribution strategies employed by banks, as well as the manner in which customers engage with financial institutions and the quality of the service they receive. Therefore, the quality of services provided is a primary factor in determining the ability to maintain and acquire new customers [2].

It has two aspects to it. This research contributed significantly, from an analytical standpoint to the limited number of studies that have analyzed the topic of acknowledged quality of online services. When seen from an organizational perspective, it demonstrates to the bankers the importance of customer happiness by highlighting the benefits of improved online service quality.

E-service quality has been investigated extensively. Overall e-service quality, customer happiness, and repurchase intentions are linked to e-service quality parameters, but not word-of-mouth (WOM) [12]. The impact of e-service quality on online loyalty based on

online buying in Taiwan was researched. It was found that system quality and electronic service quality had substantial effects on perceived value, which influenced online loyalty. Gounaris and Dimitriadis et al. [11] observed that e-service quality affected purchase intentions, site revisit, and WOM. Blut [12] found that e-service quality increased U.S. online shoppers' contentment, repurchase intent, and WOM. Existing research on e-service quality varies in approach and outcomes, with no clear conclusions [11].

Existing internet business e-service quality measurement contains flaws. According to Blut [12], E-S-Qual and eTailQ lack criteria to analyse online retailers, hence they can't explain customer discontent and store switching. Predicting client behaviour is another vulnerability. eTailQ ranks seventh in predictive ability and poorly measures customer service and security, despite covering 13 of 16 e-service quality factors [12]. WebQual may be the best at predicting client behaviour, but it is limited.

II. LITERATURE REVIEW

A. Standard of Service

The term "perceived quality" is used to describe the quality of a service, which refers to how well a consumer understands that service. "Quality interpretation is not formed exclusively on the output of a service; they also involve interpretations of the process of service supplied," as indicated by the developers of SERVQUAL, which has been widely used in assessing the service quality of various service providers, including banks. The SERVQUAL model defines service quality as the gap between the customer's perspective of what occurred during the service transaction and the customer's assumptions of how the service transaction should have been carried out. The following are the five quality measurements defined by SERVQUAL:

- ✧ Reliability (delivering the guaranteed outputs at the stated level).
- ✧ Responsiveness (providing primate service and help to customers; feedback plays an important role here).
- ✧ Assurance (the ability of a service organization to impress faith and assurance in the organization through knowledge, kindness, and honesty of the employees).

↳ Compassion (enthusiasm and ability to give personal concern to a customer).

↳ Tangibles, such as a company's services, workers, machinery, and communication materials.

B. E-SQ

Recently, there has been a shift in the focus of attention in service quality towards reversing existing trends in e-commerce that serve to sustain e-service quality. E-service quality may be defined as an entire consumer evaluation as well as an understanding of the perfection and the quality of e-service delivery in the virtual marketplace. The process of conducting business online is complex and may be broken down into a number of distinct sub-steps. Some of these sub-steps include discovery, information seeking, consultation, net payment, delivery, and after-sales care. Therefore, the evaluation of the quality of electronic services must take into account a number of components, each of which inverts the weighting of two aspects: system quality and service quality [3]. The ability, speed, and safety of the system are some of the factors that go into determining its quality. On the other hand, the quality of electronic service is not an independent evaluative result of a system; rather, customer service, including order delivery and after-sales service is the component that constitutes the quality of an electronic service. The quality parameters of electronic services from previous studies are outlined in Table I.

The absence of consensus regarding the nature or the scope of quality measurement for electronic services, which leads to a variety of various approaches and results, in addition to the prevalence of research gaps. As a result, the body of research on the quality of electronic

services requires a more comprehensive and holistic understanding and perspective of the topic.

C. Value as it is Currently Viewed

The method that Zeithaml and Parasuraman et al. [9] takes to service value and defines it as a consumer's total judgement of the account of a service based on observation of what they receive and what they are supplied. The value of a business is the difference between what is delivered and what is received. While the "receive" components of perceived value comprise budgeted prices and non-budgetary cost, the "receive" components of perceived value include underlying qualities (such as how the purchase is made) and exotic attributes (such as the reputation of the product or service) (e.g. time, energy, effort). Functional value and observational value are the two sorts of values that Lee and Overby found to be associated with online buying. The term "functional value" refers to an all-encompassing evaluation of a functional advantage that takes into account the following four metrics: price savings, service savings, time savings, and goods choices [4]. The value of functionality is important to consider for application specific uses of online shopping, such as purchase consultation. The term "experiential value" refers to an all encompassing portrayal of the factual advantages that can be derived from the entertainment, escapism, visualizations, and interactions that are engaged in online purchasing. It is important to consider the functional value in order to achieve emotive and social stimulation.

D. Satisfaction of Customers

Customer tolerance refers to a customer's evaluation of a

TABLE I.
QUALITY PARAMETERS OF ELECTRONIC SERVICES FROM PREVIOUS STUDIES

Wolfinbarger and Gilly [7]	Website quality and customer's service quality of e-retailer	Fulfillment/reliability, website design, privacy/security, customer service
Zeithaml and Parasuraman et al. [9]	E-service Commerce	Information Easeful or usability, privacy/security, graphic style, reliability/fulfillment
Wolfinbarger and Gilly [7]	E-service quality of B2C Commerce	Efficiency, system availability, accomplished, privacy, quick response, coverage, Contact

service based on whether or not the service has satisfied the customer's demands and expectations of the service. According to the findings of a number of studies, customer contentment is inextricably linked to the standard of service provided, and it also plays a significant role as an intermediary between service quality and observable significance [10].

It has been demonstrated that quality of service is a reliable indicator of customer satisfaction. Research in a variety of businesses, including telecommunications [8]; restaurants, hospitals [1], hotel services [6], travel agencies [2], internet services [5], and multiple other industries has investigated the relationship between service quality (its measures), and customer satisfaction [3]. In the measurement of the historical trade banking service characteristics of relational performance, origin performance, and features performance, it was revealed that these three characteristics were significant predictors of customer satisfaction. Several research have been carried out in the same field, with the goal of determining whether or not certain aspects of banking service quality may accurately predict customer happiness [5].

E. Quality of Service Provided, Perceived Value, and the Level of Customer Satisfaction

Numerous studies have been conducted in order to investigate the interrelationships between customers' expectations, their perceptions of the quality of the service they receive, and their levels of satisfaction [9]. According to what they discovered, there is a very strong relationship between the quality of service and the pleasure of the consumer.

Increase in the service quality of banks can help develop and maintain client satisfaction, which helps banks keep their most valuable customers. Increased levels of customer satisfaction is the direct result of a high degree of perceived service quality. Customers will be unhappy with the level of service provided when it falls short of their expectations for that level of service. According to Voss and Parasuraman et al. [6], customer satisfaction is directly proportional to the quality of service provided; more specifically, quality is regarded as one of the most significant aspects of customer satisfaction rating.

III. RESEARCH QUESTIONS

Following a detailed comprehension of the history that was described earlier, the following research questions and hypotheses were identified to be validated by means of primary research for the study:

- 1)** What are the most important measures of the quality of online service that are related with a high degree of satisfaction with e-banking on the part of customers?
- 2)** Does the degree of customers' perceived overall service quality have a positive correlation with the level of customers' satisfaction with e-banking?

IV. RESEARCH DESIGN

The nature of the research is typically considered to be primary. The information was obtained by means of a well-structured, itemized 5-point Liker scale, which was distributed via face-to-face conversation with clients who have utilized online banking services on at least one occasion in the most recent past. It was determined that a convenience sample of 100 people who had recently used online banking should be questioned, and each of these individuals was requested to fill out the survey questions (after being found eligible to fill the same).

V. DATA ANALYSIS AND INTERPRETATION

The results of the data analysis carried out with SPSS are shown in Tables II to VI. The first issue, which was about determining the extremely significant *Service Quality Measure* in relation to e-banking services was addressed by using the Mean scores computed of the responses supplied by respondents (Table II). This provided an answer to the first question. It was discovered that the most important parameter for evaluating the quality of electronic services is the *Responsiveness of the Portal in Clearing the Transactions/Generating Receipts etc.* with a mean score of 4.85 with minimum Standard Deviation. This was followed by *Security of the Details of the Customers in the Virtual Space* with a mean value of 3.97, and consequently *Responsiveness of the Portal in Clearing the Transactions etc.* with a mean score of 4.85. The ease with which users are able to go from one page to the next, places the website's navigation at the third place,

with a mean score of 3.73; the quality of the content, meanwhile, comes in at fifth place, with a mean score of 5. Customer Support Service, with a score of 3.47, and Fourth Place: Customer Support Service, with a score of 3.41.

The initial research questions can be answered as follows: *Security, Responsiveness, and Navigation* are the primary important factors that most significantly impact the *Service Quality of Net-banking web Portals* [7].

The results of running the Regression model have

been summarised in Table II. The regression model has a strong fit, as shown in Table II, with values of R equal to 0.942 and R^2 equal to 0.887, as well as a p -value of 0.000, which is accessible from the ANOVA Table III, which reveals that with a F value of 147.87, this model reaches the threshold of statistical significance known as the 5% level of significance [9].

In order to find the answer to the second research question, we need to take a look at the Linear Regression Model that was developed with *Customer Comfort* serving as the dependent variable and *Privacy,*

TABLE II.
MODEL SUMMARY

Descriptive Statistics-Mean Scores					
	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
<i>Security Perception</i>	100	3	5	3.97	0.359
<i>Navigation Perception</i>	100	2	5	3.73	1.109
<i>Quality</i>					
<i>Content Perception</i>	100	2	5	3.47	0.979
<i>Responsiveness</i>					
Customer Service	100	4	5	4.85	0.171
Valid <i>N</i>	100	2	5	3.41	0.965
(list wise)	100		5		
(a) Regression Model					
MODEL	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
Regression	22.180	5	4.436	147.878	0.000
Residual	2.820	94	0.030		
Total	25.000	99			
(b) Regression Model					
Predictors: (constant), Customer Service Perception, Privacy Perception, Responsiveness Perception, Navigation Perception, Content Perception					

TABLE III.
ANOVA (OVERALL SATISFACTION)

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>Sig.</i>
	<i>B</i>	Std. Error	Beta		
1 (Constant)	5.743	0.456		12.586	0.000
<i>Privacy Perception</i>	0.576	0.045	0.469	12.789	0.000
<i>Navigation Perception</i>	0.170	0.048	0.168	3.576	0.001
<i>Content Perception</i>	0.037	0.029	0.060	1.282	0.203
<i>Responsiveness Perception</i>	0.851	0.038	0.826	22.596	0.000
<i>Customer Service Perception</i>	−132	0.041	0.129	3.218	0.002

TABLE IV.
REGRESSION COEFFICIENTS

Scale Items	Scale(1 to 5) Likert Scale
(For Measuring most important Service Quality Dimension)	1- Least Important 2- Somewhat Importance 3- Neither important nor unimportant 4- Important 5- Very Important
I consider the security of my personal details while using e- banking services of this bank to be_____.	() () () () () 1 2 3 4 5
For me the user friendliness in transition from one page to the other is_____.	() () () () () 1 2 3 4 5
I give _____to the quality of content available on the website that provides me the features of products or processes in details.	() () () () () 1 2 3 4 5
For me the availability of graphics and design is_____ while doing e-banking transactions.	() () () () () 1 2 3 4 5
I consider the responsiveness of the system in clearing the transactions and generating receipts to be_____.	() () () () () 1 2 3 4 5
For me the availability of 24 hours customer service is_____.	() () () () () 1 2 3 4 5

TABLE V.
MEASUREMENT SCALES IMPORTANT DIMENSIONS OF E-SQ

Scale Items	Scale(1 to 5) Likert Scale
(For Measuring most important Service Quality e-banking services)	1- Disagree very much 2- Disagree 3- Neither agree nor disagree 4- Agree 5- Agree very much
My bank ensures my privacy and security while dealing with the e-banking services offered by my bank.	() () () () () 1 2 3 4 5
My bank offered a pleasant experience while navigating the e-banking portal.	() () () () () 1 2 3 4 5
Quality content is available on the portal that provides me the features of products/services in detail.	() () () () () 1 2 3 4 5
The well designed graphics are used in my bank's e-banking portal.	() () () () () 1 2 3 4 5
The e-portal of my bank is quite responsive in clearing the transactions and generating receipts.	() () () () () 1 2 3 4 5
Customer service for using e-banking services is available 24 hours.	() () () () () 1 2 3 4 5

TABLE VI.
PERCEIVED E-SERVICES QUALITY

Scale Items	Scale
(For Measuring Customer Satisfaction of e-banking services)	() Very much dissatisfied
I am-----with the performance of my banks e-banking services.	() Dissatisfied
	() Neither Satisfied nor Dissatisfied
	() Satisfied
	() Very Satisfied

Navigation, Content, Responsiveness, and Customer Duty serving as the dependent variables, as shown in the Table II. It is apparent from Table II that *Privacy, Responsiveness*, and *Navigation* are important factors for determining *Customer comfort* from the service quality of e-banking portals. These factors were seen to be significant at the 5% level of significance. On the other hand, *Customer Service* shows a very small association with *Total Customer Satisfaction*, and *Quality of Content* measures of *Service Quality* was not supported as a source of *Customer Comfort* [8].

VI. CONCLUSION

It is possible to draw the conclusion from the preceding discussion that *Privacy, Responsiveness*, and *Navigation* are the most important parameters of *Electronic-Service Quality*. These three factors were rated as being very effective in determining the *Total Customer Satisfaction* from the e-banking portals that were used by customers in the Jalandhar region of the state of Punjab (India).

AUTHORS' CONTRIBUTION

Prof. N. K. Joshi conceptualized the research, prepared the questionnaire, and scaling dimensions, and prepared the draft transcript. Ritu Mathur worked on the literature review, collection of questionnaire, and revised the draft. Both authors collectively finalized the article.

CONFLICT OF INTEREST

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in the manuscript.

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