The Mediating Effect of E - Satisfaction on E - Service Quality and E - Loyalty Link in Securities Brokerage Industry

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Abstract

The rising popularity and use of the internet - based e in India offers huge potential in the internet connected (e-commerce) market and economy, and in specific for the stock brokerage category, leading to improved electronic service quality (e-SQ), electronic satisfaction (e-Satisfaction), and electronic loyalty (e-Loyalty) and becomes powerful components for investment bankers and stock brokers to attract and keep traders in the online market. To cope and handle with advances in Technology (ICT) and the varying expectations and demands of stock traders, the relationship between e-SQ, e-Satisfaction, and e-Loyalty should be continuously reviewed. Nonetheless, the design of e-SQ for retailers in any industry remains an open question. In this study, E-SERVQUAL was combined with several other e-SQ scales to assess the e-SQ of major share brokers in India. The e-SQ frameworks in particular are Design, Functionality, Privacy, Reliability, and Recovery. An online questionnaire is used in the research and the sampling method used was convenience sampling. From the distributed questionnaire, 50 sets of finished and productive responses were returned by the traders and investors. The findings suggested that the five proposed dimensions of e-SQ for stock brokers in the share market be developed. Every aspect of e-SQ was observed to have significant positive and notable effect on stock dealers' e-satisfaction. The responsiveness of e-SQ had the greatest impact on online shoppers' e-satisfaction. The customer's e-Loyalty to use an online retailer's website on a regular basis was significantly influenced by their e-Satisfaction. The study's findings serve as the foundation for discussion on managerial and theoretical implication.

Key-words: e-SQ, Stock Broking, e-Loyalty, e-Satisfaction, Stock Traders.

1. Introduction

The firms providing various services must exactly know the needs and wants of their customers and also understand the level of efforts needed to invest on every single attribute of service

that the customer expects to benefit in order to achieve customer satisfaction. This research accordingly attempts to identify the required services of customers and to identify the various priorities to be evaluated when planning their services. Customer satisfaction is a prominent strategic tool that assists an entity to gain sustainable competitive advantage in a highly aggressive Stock broking world. Hence, all financial services providers like stock broking firms, banks, etc. are increasingly developing service quality initiatives. With digitalization of the financial sector, there is an increasing competition in the delivery of services to the customers. Hence analysing the e-service quality plays a vital role in learning the level of customer satisfaction in it. E-SERVQUAL is a multiple-item scale for measuring customer perception of service quality. (Ahamed, 2011) found that Investors engaged in the sale and purchase of stocks and shares from the numerous stockbrokers operating in Bangladesh are not happy with their services. A discrepancy exists between the expectation of investors and satisfaction. The average difference is estimated to be 0.791 in a seven-point scale; for some of the measurements, the gap is as high as 2.8, and for some, it is as low as 0. For every business enterprise, there should be no difference between their clients' expectations and satisfaction. This is an environment where customer satisfaction exists. (Palanisamy & Rajendran, 2013), the study results show that delivering prompt service, supplying modern equipment with upgraded trading platform, providing error-free documents, doing things in the right time and demonstrating genuine customer concern are the key attributes for improving the business performance of a stock brokerage firm. A study conducted among the investors of Tamil Nadu showed that there is a considerable difference between investor socio-economic characteristics and share broker service quality. Share brokers should receive feedback from investors frequently, and address the issues that investors face in share trading. Share brokers should provide effective methods of service delivery according to customer preferences and attitudes (Ganapathi, 2016). Fusilier and Mueller (2004) attempted to establish a link between the customers' age, socioeconomic status, and education levels and the extent of their investment portfolios. This same study analysis was performed using data collected from more than 750 investors. According to the findings of the study, highly educated and older investors appeared to have the least confidence in their brokers On Tran Thi Nhu Chau's research (2009), a securities company's quality of service depends on the competence, information technology, credibility, empathy (Chau, 2009). In addition, Dang Quoc Tu (2007) indicated three reasons affecting the quality of the brokerage business: central quality of operation, the process of transaction and courtesy of workers (Tu, 2007). In the same way, Dr. Thai Ba Can claim that variables affecting the outcome of brokerage operations include working environment, policy process, economic environment, business entity competencies. Overall, such

work has been identified or evaluated the efficiency of the operations of securities companies in general, the quality of stock brokerage has not been assessed.

2. Literature Review

According to Saleh Bukhari et al., the definitions of privacy and trust hasn't always been the same, but they often hold similar ideas in different settings or fields. Numerous researchers have highlighted the privacy element as a determinant of service quality in B2C websites, but none have explained the empirical evidence of the trust dimension and the web design aspect as determinants of e- SQ. This leads to the question of what comprises e- SQ for online stores in Malaysia's Market place. As a result, investigating the e-SQ construct by incorporating existing e-SQ models to address these concerns is critical analysis, particularly in Malaysia's B2C market.

(Liu, 2015) The perception of value and e-satisfaction of users were significantly determined by the characteristics of e-service. It was also found to be linked to e-trust. As a result, financial institutions brokers can increase the performance of their e-services based on the three components extracted throughout this survey. In terms of efficiency and privacy, the platform's ease of access and individual data protection must be prioritized. In terms of system adequacy, their website administrator must strive to make sure that all investment instruments displayed in the framework are appropriate and adequate, letting users to conduct financial purchases without error. Finally, in terms of accomplishment, the website administrator must improve the credibility and efficacy of transmission at each transaction. Improvements in these areas may lead to high level of investors satisfaction and in turn low level of customer retention.

(Floh & Treiblmaier, 2015) Satisfaction and Trust is directly and an indirectly impacted by the quality of Websites. The Websites of companies must be redesigned with a view to enhancing their usability and usefulness. The avoidance of downtimes can be considered as the most important factor amongst many other factors for the perceived quality of a Website and it is extremely important to online banks. Furthermore, designing the websites for easy navigation and giving them an uncluttered look are important recommendations provided by related literatures. Adequate information should be available govern the involvement of transactions and, most notably, ways to obtain adequate assistance in the event of unforeseen circumstances. Comparably, the perceptions of quality of the service in terms of the quality of the web site of the service provider has a substantial effect on consumer satisfaction and trust.

(Bansal, Zahedi, and Gefen 2015) The perceptions of privacy concerns vary from one individual to another. User privacy worries temper the influence of these confidentiality adverts on trust. The success of all companies is largely determined by assurance in addressing privacy of consumers by reducing their privacy concerns and building their trust.

According to Greenaway, Chan, and Crossler (2015), the question of security risks has been recognized as a focal construct inside the contemporaneous financial industry through numerous rigorous works, and it contain different moral, lawful, and information systems issues.

Yen, C.-L. (2008) suggested in his thesis titled "To investigate the satisfaction of security's investor web behavior" submitted to National Kaohsiung First University of Science and Technology, Kaohsiung city, Taiwan that, for brokerage firms in the financial market, giving their internet services and of the quality required by investors can result in increased investor satisfaction. He also advised brokerage firms with scarce resources to actively focus on improving factors that affect decreased investor satisfaction in catering the needs to investors and increase their degree of satisfaction. By so doing, they can not only help retain investors but also attract new ones.

3. Methodology

To assess the relationship between e-SQ, e-Satisfaction, and e-Loyalty of online retailers in the Ecommerce market, a descriptive framework was conducted. The design of a questionnaire was inspired by a review of the Gap Theory of electronic service quality, as well as recent research on e-SQ, e-Satisfaction, and e-Loyalty in the digital marketplace. To evaluate the variable, a maximum of 28 items were created.

Section A of the questionnaire requires the respondents to provide their demographic information.22 items of e-SQ Dimensions (Design, Functionality, Privacy, Reliability and Recovery) were constructed based on E- SERQUAL instrument in Section B of the questionnaire. The Design items were adapted from Liu et al. (2009). The items for functionality were adapted from the previousstudies of Aladwani and Palvia (2002), Parasuraman et al. (2005) and Collier and Bienstock (2006). The Privicy items were adapted from Janda et al. (2002), Collier and Bienstock (2006) and Parasuraman et al. (2005). Reliability items were taken from Adapted from Parasuraman et al. (2005), Wolfinbarger and Gilly (2003) and Aladwani and Palvia (2002). The items for Recovery were taken from Adapted from Collier and Bienstock (2006) and Parasuraman et al. (2005). 3 items of e-satisfaction of stock traders were adapted from previous researches of Cronin et al. (2000) and eight

(3) items of e-loyalty of stock traders in the questionnaire were adapted based on the works of Lin and Wang (2006) in Section C and Section D respectively.

To evaluate all of the independent and dependent variables in this research, a Likert scale ranging from "strongly disagree" to "strongly agree" had been used. This survey's population refers to the total of stock traders at a notable stock broker in Chennai. The online stock brokers were chosen based on rankings provided by moneycontrol.com and other internet sites in 2020. For the survey, ten brokers were chosen. Using the convenience sampling procedure, a google forms technique was used to collect 50 completed and usable questionnaires. It takes three weeks to obtain 50 useful responses. All data was stored securely in a Google sheets and exported to the Statistical Package for Social Science (SPSS) for more analysis.

4. Result and Analysis

Table 1- Rotated Component Matrix for e-SQ

	Component					
	1	2	3	4	5	6
eSQREL_2	.827	-.112			-.214	
eSQREL_4	.812		-.175			
eSQREL_3	.811			.233		
eSQREL_5	.790	-.153	-.190	.120	.216	-.223
eSQREL_1	.721	-.223	.139		-.126	
eSQFUN_2		.822	-.130		-.147	
eSQFUN_3	-.177	.812				-.148
eSQFUN_1		.791	-.162			
eSQFUN_4	-.234	.757		-.169		
eSQREC_6		.140	.843		.112	-.125
eSQREC_5		-.122	.839	-.140	.175	.232
eSQREC_4		-.329	.767	.170		
eSQREC_3	-.136	-.164	.690	.203	.281	-.111
eSQPRIV_2	.227			.848	.126	
eSQPRIV_3				.811		
eSQPRIV_1	.168		.129	.761	.103	
eSQFUN_5	.223	.368	.199	.625	.150	
eSQREC_2			.180		.849	.199
eSQREC_7	-.253			.364	.764	
eSQREC_1			.250		.750	.121
eSQDES_1	-.193	-.174				.876
eSQDES_2			.135		.189	.865
eSQDES_3		.377	-.160	.167	.295	.575
a. Rotation converged in 6 iterations.						

Exploratory Factor Analysis (EFA) was used to assess the instrument's suitability for further investigation. As seen in Table 1, the KMO for e-SQ is.630, which is supported by a 0.000 in Bartlett's measure of sampling adequacy. For e-SQ, the Total Variance Explained is 72.205 percent.

In addition to the five suggested dimensions of e-SQ, the rotated component matrix of EFA yielded six dimensions. All dimensions and items of e-SQ were retained since the factor loading scores of ≥ 0.5 (Table 1). The rotated component matrix of EFA yielded one more component in which, REC5: The Website gives me a satisfactory response (e-SQREC_5), REC7: The website responds quickly to my inquiries (e-SQREC_7) and REC4: The Website responds to my inquiries (e-SQREC_4) which can be called as "Responsiveness".

Table 2- Rotated Component Matrix[a]

Component						
	1	2	3	4	5	6
REL2: The billing process went off without a hitch. (**e-SQREL_2**)	0.827					
REL4: Information Website is current (**e-SQREL_4**)	0.812					
REL3: Information Website is clear (**e-SQREL_3**)	0.811					
REL5: Information Website is complete (**e-SQREL_5**)	0.79					
The service I obtained was precisely that which I ordered. (**e-SQREL_1**)	0.721					
FUN2: This Website has valid links (**e-SQFUN_2**)		0.822				
FUN3: This Website loads quickly (**e-SQFUN_3**)		0.812				
FUN1: This Website is always up and available (**e-SQFUN_1**)		0.791				
FUN4: This site allows me to access it swiftly. (**e-SQFUN_4**)		0.757				
REC6: Whenever I have a difficulties, the Website demonstrates a genuine interest in resolving it. (**e-SQREC_6**)			0.843			
REC2: Customer service people are available on the website. (**e-SQREC_2**)			0.839			
REC1: The Website displays its physical address, e-mail, contact details, and fax number. (**e-SQREC_1**)			0.767			
REC3: I could immediately reach a customer service agent when I want to. (**e-SQREC_3**)			0.69			
PRI2: The Website guarantees me that my private data is private (**e-SQPRIV_2**)				0.848		
PRI3: The Website guarantees that my private details will not be communicated with any third parties (**e-SQPRIV_3**)				0.811		
PRI1: On the webpage, signs and messages indicate that the site is safe (**e-SQPRIV_1**)				0.761		
FUN5: It allows you to get everywhere on the page quickly and easily (**e-SQFUN_5**)				0.625		
REC5: I receive a satisfying answer from the webpage (**e-SQREC_5**)					0.849	
REC7: The website reacts to my queries speedily (**e-SQREC_7**)					0.764	
REC4: My queries are answered by the website (**e-SQREC_4**)					0.75	
DES1: The Website looks attractive (**e-SQDES_1**)						0.876
DIS2: The fonts on the webpage are correctly used (**e-SQDES_2**)						0.865
DIS3: Colors are used correctly on the website (**e-SQDES_3**)						0.575
Total variation explained and Kaiser-Mayer-Olkin Measure of Sampling Adequacy	72.205 and .630					
Bartlett"s Test of Sphericity						
Approac. Chi-Square Approac. Chi-Square	621.529	df	253	Sig.		.000

Table 3- Factor Wise Analysis of Influencing Factors

Factors	Eigen value	% of Variance	Cumulative %
FACT1	3.498	15.209	15.209
FACT2	3.139	13.646	28.854
FACT3	2.822	12.271	41.126
FACT4	2.734	11.885	53.011
FACT5	2.309	10.039	63.050
FACT6	2.106	9.155	72.205

Analysis of the Measurement Model

Relationship between e-service quality and e-loyalty with e-satisfaction as mediating variable
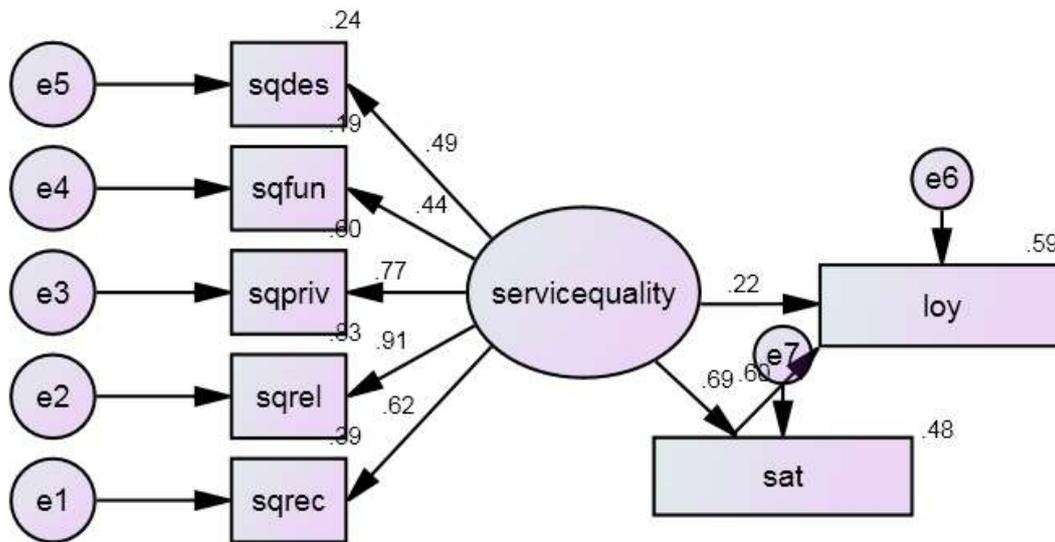
Model fit Summary Tables:

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	15	21.807	13	.058	1.677
Saturated model	28	.000	0		
Independence model	7	166.182	21	.000	7.913

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.777	.886	.854	.411
Saturated model	.000	1.000		
Independence model	4.760	.428	.237	.321

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.869	.788	.943	.902	.939
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.056	.000	.201	.109
Independence model	.376	.324	.430	.000

Relationship between e-service quality and e-loyalty with e-satisfaction as mediating variable
Model fit Summary Tables

Model	Chi-square	CMIN/DF	P-Value	GFI	AGFI	CFI	RMSEA
Study model		1.677	0.058	0.889	0.854	0.939	0.056
Recommended value		Acceptable fit: 1-4	Greater than 0.05	Greater than 0.9	Greater than 0.9	Greater than 0.9	Less than 0.08

From the above table it is observed that, all the parameters of goodness of fit are within the acceptable limit. The value of CMIN/DF for the model is 1.667 which falls within the acceptable limit of 1-4, the P-value is 0.058 which is slightly greater than 0.05, the values of GFI and AGFI are slightly lesser but at acceptable levels, the value of CFI is 0.939 which is greater than the acceptable level of 0.9 and the value of RMSEA is 0.056 which should be less than 0.08. With this it cab be concluded that all the values are within the acceptable parameters. The mediation effect can be further confirmed from the summary of estimates given below.

5. Summary of Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
sat	<---	servicequality	.719	.180	4.007	***	
sqrec	<---	servicequality	1.000				
sqrel	<---	servicequality	1.105	.233	4.733	***	
sqpriv	<---	servicequality	.667	.153	4.368	***	
sqfun	<---	servicequality	.647	.235	2.750	.006	
sqdes	<---	servicequality	.485	.159	3.051	.002	
loy	**<---**	**servicequality**	**.202**	**.136**	**1.487**	**.137**	
loy	<---	sat	.521	.119	4.393	***	

First, the model reflecting the mediating function of e-satisfaction was tested on the relationship between e-service quality and e-loyalty. Looking at the results of the estimation, it can be confirmed that all the items of e-service quality have a significant effect on consumers' e- satisfaction, and in the expected direction, e-service quality itself has a positive and significant effect on e-satisfaction. Looking at the results of the estimation, apart from e-service quality e-satisfaction also has a significant impact e-loyalty. It is also observed that e-service quality has no impact on e-loyalty directly. So it can be concluded that the mediating effect of e-satisfaction on e-service quality and e-loyalty cancels out the direct effect of e-service quality on e-loyalty.

6. Conclusion

This study extended the formation of e-SQ, e-Satisfaction and e-Loyalty in stock traders in stock broking market. It shows that e-SQ significantly influenced e-Satisfaction of stock traders, which in turn affected their e-Loyalty. This association was observed in other services, for example internet banking, hotel, telecommunication and higher education, to name a few. Further, construct of e-SQ of this study provides usable dimensions to be considered when developing a conceptual model involving e-SQ. It shows that, from the result relying on one e-SQ instrument is insufficient. Hence, combining several dimensions of e-SQ scales would give better understanding on quality of electronic services delivered. In conclusion, this research found that construct of e-SQ requires a combination of dimensions from various e-SQ instruments the e-satisfaction of online buyers is affected by e- SQ of online sellers, and e-satisfaction acts as the mediator in mediating the relationship of the buyers" e-loyalty towards the online sellers is mediated by their e-satisfaction.

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