ESQ-SAT-BI Model: Moderating Influences Of Customer Demographic & Psychographic Traits

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Abstracts: It was discovered through literature review that most of the researchers focused only on the direct impact of individual customer traits, mostly demographic and very few studies that too in different cultural, geographical and time settings were done to examine Mediating & Moderating effects of individual customer traits on ESQ-SAT-BI linkages of Internet Banking services. The study focused on the identified research gap pertaining development of direct & moderating influences of customers specific individual differences (demographic & psychographic) on their perceptions towards ESQ-SAT-BI linkage with reference to Internet Banking in India. The mediation effect of SAT between ESQ & BI was tested through AMOS and the moderation influences were examined with the help of regression analysis from data collected from uses of Internet Banking. It was discovered that all Demographic & Psychographic Personality Traits play an important role in influencing the customer perceptions towards Internet Banking and completely moderate the relationship between SAT -BI.

Keywords: Electronic Service Quality, Behavioral Intentions, Customer Traits, Satisfaction, Moderation.

1. INTRODUCTION

1.1 Research Problem

In India all Banks have realized this fact that in order to compete in Indian market they must be competitive enough to deliver top of the line technology driven Banking services to their customers and understanding this, all Banks have put up huge investments in setting up the strong technology base to serve their customers. The technology oriented approach in Banking was thought of as a secondary business strategy in the past. But it has become an important marketing strategy to deal with the customers to attract & retain them. Hence, it becomes the top priority of the Banks these days to address these issues of customers to deliver a desirable level of quality services through internet (Hasani et al., 2008). Ravi et al (2007) confirmed this fact that self driven banking services in India is still at a very initial stage and that too dominated mainly by private sector; and public sector is adopting the same slowly (Malhotra and Singh, 2007). The huge potential of these modes of technology-enabled self-services is going to have a significant contribution in the market shares & profit making capabilities of the Banks. Motivating customers to take up new technologies and continue the same in future will definitely pose a challenge for the service providers. As the online services results in replacing the Bank staff with online portals being accessed by the customers themselves remotely; this can result in fast service experience, less time consumption, lesser costs and customizations at both the customers & service provider level. However it can also backfires on the image, reputation or the profits of the Bank if the same is being implemented wrongly or the level of e-service quality presented by the organizations does not meet customer expectations. So, it becomes mandatory for the organizations to provide the quality online services and develop them into the core competencies to have a significant market share through satisfied customer base.

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e-Service Quality can be defined as "the customer overall evaluation and judgment of the excellence and quality of e-service offering in the virtual marketplace" (Santos, 2003, p.235). In other words e-SQ may be described as the entireprocess of customer's experience with an organization based on network and internet (Parasuraman et al., 2005, p.217). It can be considered as an alternative to the traditional factors of production & service delivery and is tested for its relevance by large number of researchers (Kang and James, 2004). It can be summed up that e-Service quality is the most critical driving force for the organizations to sustain & maintain competitive position and establishing satisfying relationships with customers. A large number of researchers have focused on the concept of service quality across a diverse set of industries. The more prominent among them were Parasuraman, Zeithaml and Berry (1988, 1991). They discovered the most widely accepted instrument to assess the service quality SEVQUAL encompassing a set of statements divided into five dimensions namely — responsiveness, tangibility, reliability, empathy and assurance. SERUVQUAL in its original shape cannot be applied to Internet banking since it is altogether a different process of service delivery. A number of researchers have used a variety of dimensions to assess the electronic service quality of online users of a variety of services delivered through internet. Like Yang, Peterson and Huang (2001) used web content, ease of use, timely response, privacy, accuracy of information & design of website as main dimensions to assess e-SQ of online pharmaceuticals. Also, Wolfinbarger and Gilly (2002) after going through literature review prepared a four factor scale which consisting of: design of website, security & privacy, customer service & reliability. There is a scarcity of studies on the service quality of internet banking in literature. Zeithaml, Parasuraman and Malhotra (2000, 2002) developed a unique measure of measuring the online service quality named e-SERVQUAL through a multi stage process of focus group discussions & empirical collection of data. The e-SERVQUAL consist of seven dimensions named as: reliability, fulfillment, efficiency, privacy, contact, compensation and responsiveness. On the basis of extensive literature review, the following dimensions have been selected for measuring the Electronic Service Quality of Internet Banking services for the present study: Dimensions of ESQ: Ease of Use (EOU), Security (SEC), Functionality (FUN), Availability of Information

(INFO), Customer Support (CS), Website Design (DES).

2.2 Customer Satisfaction (SAT) & Electronic Service Quality (ESQ)

Hansemark and Albinsson (2004) defined Satisfaction as an overall attitude of customer towards service provider or difference between what customers expect and what they actually get. The most critical factor determining the success or failure of a business depends on whether customers are satisfied or not. Gustafsson et.al, (2005) explained Customer Satisfaction as an assessment, how customers evaluate the service of organization. However, the just match of expectations with performance is satisfaction (Wai-Ching Poon, 2008). Hence it can be said that, satisfaction & service quality are the outcomes expectations & performance. A large number of researchers have studied the relationship between Service Quality with Satisfaction (Kumar et.al. 2008; Wei and Ramalu, 2011). But the need of studying the same in the current business scenario is very demanding since the customer's expectations of quality dimensions are very dynamic, particularly in the virtual service delivery mechanisms. The measurement concepts of the service quality dimensions and their relationship with customer satisfaction are still unsettled. In between this continuous debate, numerous researchers have discovered the significances of service quality and its impact on customer satisfactions and the possibility of development of new theory is not rejected (Arambewela, 2006; Ben, 2007).).

2.3 Electronic Service Quality (ESQ)-Customer Satisfaction (SAT)- Behavioral Intentions(BI)

The key concept the present study is Behavioral Intentions. Different authors have defined Behavioral Intentions in different manners. These definitions are more or less complementary in nature and not contradictory. Oliver (1999) defined "consumer loyalty as a commitment to re-buy or re-patronize a preferred product/ service again and again in the future". Chen and Dubinsky (2003) in their research work discovered the relationship between e-service quality through the quality of website; since the better perception from the quality of online experience develops positive shifts in behavior. The most interesting & exhaustive definition of Loyalty/Behavioral Intentions as given by Chang, Wang and Yang (2009), explained the loyalty of customers as the commitment towards a product/service/brand in terms of repeat purchase, recommending the same to others i.e. positive word of mouth after continue use.

2.4 Individual Differences & Customer Perceptions

An important part of the earlier studies in the psychology of Internet usage has highlighted the job of personality and individual differences. Rosengren (1974) acknowledged the individual differences as the primary element of any model for media (new) uses and fulfillment research and concluded that considering the effect of personality variables into these research studies appears to be almost "self-evident". In real words, relationship between individual differences and their psychological characteristics have been regularly positioned within an incorporated media satisfaction paradigms (Palmgreen, Wenner, & Rosengren, 1985; Rosengren, 1974). Premature endeavors in examination of personality as a variable influencing media experience suffer due to the lack of dependable implementation of personality traits, leading to conflicting results (Wober, 1986). In order to act as valuable outcomes of technology practice and perceptions, personality traits, demographic variables, must be planned into a limited number of categories; hence, a dependable consideration of personality traits on the motives behind new media usage need to be obtained. An appraisal of the online and offline service quality and customer satisfaction literature has discovered that a variety of individuals linked factors encompassing customers' wants, awareness, familiarity, practice and belief have an influence on customer contentment and behavioral outcomes (Laforet and Li, 2005 ; Servon, & Kaestner, 2008). Although there are a large number of factors that may control the treatment of online services, the various demographic & psychographics customer traits for the current study are: Demographic: Gender (GEN), Education (EDU), Income (INC), Age (AGE), Psychographic: Customer Innovativeness (INN), Need for Personal Contact (CONT), Risk Aversion (RISK), Technology Anxiety (ANX)

2.5 Research Gap

Based on the past researches done on the role of individual customer traits on the perception towards electronic service quality and their impact on customer satisfaction and behavioral intentions towards Internet Banking, it has been observed that most of the researchers focused only on the direct impact of individual customer traits, mostly demographic and very few studies that too in different cultural, geographical and time settings were done to a) Examine difference in diverse category of customers in terms of identified demographic & psychographic traits on their perceptions towards e-SQ of Internet Banking b) To analyze the direct & mediating impact of Satisfaction on Behavioral Intention of customers towards the continue use of Internet Banking c) Moderating effects of individual customer traits (both demographic and psychographic) on e-SQ-SAT., SAT-BI & e-SQ-BI sub linkages. Hence, the present study focused on this identified research gap pertaining to direct & moderating influences of customers specific individual differences on their perceptions towards Electronic Service Quality (e-SQ) of Internet Banking and their impact on Satisfaction & futuristic Behavioral Intentions.

3. RESEARCH QUESTIONS & HYPOTHESIS

3.1 Objective wise break up of Hypothesis:

Objective-I: To analyze the direct effect of customers' demographic and psychographic personality traits on the perception of Electronic Service Quality (e-SQ) dealing with Internet banking services.

H1: There is no significant difference with regards to diverse demographic traits (Gender, Age, Income & Education) on the perception towards e-SQ (measured by Ease of Use, Security, Information Availability, Functionality, Customer Support & Website Design) of Internet Banking services.

H2: The customer perception towards e-SQ (measured by ease of use, security, Information Availability, Functionality, Customer Support & Website Design) of Internet Banking services is not influenced by diverse psychographic personality traits (Innovativeness, Risk Aversion, Need for personal contact & Technology Anxiety).

Objective-II: To assess the direct impact of customers' overall

perceptions of Electronic Service Quality (e-SQ) on Customer Satisfaction (SAT.) and Behavioral Intentions (BI) towards Internet Banking services.

H3: The electronic service quality (measured by ease of use, security, Informational availability, Functionality, Customer Support, Website Design) of Internet Banking services does not have a significant impact on Customer Satisfaction.

H4: The electronic service quality (measured by ease of use, security, Informational availability, Functionality, Customer Support & Website Design) of Internet Banking services does not have a significant impact on customer Behavioral Intentions

Objective-III: To examine the moderating effects of customer specific individual demographic and psychographic personality traits on the Electronic Service Quality-Customer Satisfaction (e-SQ-SAT.), Customer Satisfaction–Behavioral Intentions (SAT.-BI) and Electronic Service Quality-Behavioral Intentions (e-SQ-BI) linkages of Internet Banking services.

4. RESEARCH METHODS

4.1 Design

The research design of the present study was exploratory to some extent and descriptive and diagnostic to a large extent. It was exploratory in nature because very few studies have been conducted to understand the influence of customer specific demographic and psychographic personality traits on the e-SQ-Satisfaction-Behavioral Intention linkage of Internet Banking services and a conceptual model based on previous research findings & recommendations was formulated for empirical investigation. It was descriptive because the population under study was asked to rate their perceptions towards e-SQ, Satisfaction & future Behavioral Intentions towards the use of these services along with the role of customer traits in modeling the stated behavior.

4.2 Geographical Extent

Since the usage of Internet Banking services is directly correlated with the customer education level and the awareness of using technology oriented services, therefore the study was limited to urban banked centers and only urban areas were considered for the study. Literacy rate of the Urban Agglomerates/Cities having population 1 lakh and above was considered as the main criteria to select two cities (with one being the most literate and other being the least literate) each from Majha, Malwa & Doaba regions of State of Punjab (India) on the basis of Literacy Rate data retrieved from Census 2011.

4.3 Population of the Study

In this research the investigation was about the Customer's Perceptions towards Electronic Service Quality of Internet Banking services confined to the Urban areas of Punjab. Accordingly universe in this research was taken as the set of all Retail Banking Customers in the selected geographical locations, while the population for the study defined as all the Retail Banking Customers aged above eighteen years in the selected cities who have used the Internet Banking services at least once in the recent past.

4.4 Selection of Banks

All public & private sector banks located within municipal council/corporation limits of the selected cities having transactional websites offering Internet Banking services have been considered to undertake the study. However, it was not possible to select all the banks for the study, therefore Six banks (three each from public & private sector) having highest no. of branches in Urban Areas in the state of Punjab were selected for collecting the data from the respondents about. The top three public sector banks selected on the basis of their branches in Punjab were State Bank of Patiala, State Bank of India and Punjab National Bank and the private sector banks include AXIS Bank, HDFC Bank & ICICI Bank.

4.5 Sample Size & Sampling

To analyze customer perceptions a total of 500 customers were approached from Six cities of Punjab viz. Jalandhar, Hoshiarpur, Amritsar, Pathankot, SAS Nagar & Malerkotla; and 480 completely filled questionnaires were used for the analysis. Both non-probability and probability sampling methods have been used to select the respondents. The sampling methods used were convenience random sampling, branch intercept method, mall intercept methods, purposive sampling and so on.

5. DATA COLLECTION

5.1 Primary Measures

Questionnaire consisting of a number of questions with the intention of gathering data from respondents was designed and developed after an extensive literature review, close consultation with guide and experts on the concerned topic. The questionnaire consisted of 21 items scale (based on literature review) to assess the Electronic Service Quality of e-banking services on five dimensions (i.e. ease of use, security, functionality, availability of information, customer support and Website Design); a set of questions to measure the Satisfaction and Future Behavioral Intention of the respondents towards the Internet Banking services offered by the banks and 19 items Likert Scale to assess the personality traits of the respondents in terms of Customer Innovativeness, Need for Personal Contact, Risk Aversion and Technology Anxiety.

6. ANALYSIS

6.1 Direct Assessment of Demographic Traits on E-SQ

In order to accomplish First Objective of the study, two Hypotheses were tested. The first hypothesis H1 deals with analyzing the direct impact of Customer specific demographic traits on their perception toward Electronic Service Quality of Internet Banking. The demographic variables of Gender, Age, Income & Education were tested with respect to each of the identified Six dimensions of Electronic Service Quality. In order to test for any difference among Males & Females, Independent Samples t-test was applied on the data collected. The results of the analysis are tabulated below for Gender:

***Table:I**: Independent Samples t-test for Gender perceptions towards dimensions of*

e-SQ

H1	Hypothesis	Gender	Sig.	Acc./Rej.
H1a	There is no significant difference among males & females w.r.t. ease of use of Internet Banking services.	Female Male	0.509	Accepted
H1b	There is no significant difference among males & females w.r.t. Security of Internet Banking services.	Female Male	0.263	Accepted
H1c	There is no significant difference among males & females w.r.t. Information Availability of Internet Banking services	Female Male	0.533	Accepted
H1d	There is no significant difference among males & females w.r.t. Functionality of Internet Banking services	Female Male	0.146	Accepted
H1e	There is no significant difference among males & females w.r.t. Customer Support of Internet Banking services	Female Male	0.358	Accepted
H1f	There is no significant difference among males & females w.r.t. Website Design of Internet Banking services	Female Male	0.488	Accepted

The analysis of the facts in Table I revealed that all Hypotheses H1a, H1b, H1c, Hid, H1e & H1f framed to analyze the Gender (Male & Female) differences in perceptions towards various dimensions of e-SQ have accepted at 5% level of significance. So, it can be interpreted from above that, there was no significant difference between Male & Female respondents with respect to their perception towards various dimensions of e-SQ measured by Ease of Use, Security, Information Availability, Functionality, Customer Support & Website Design.

Further, One-way ANOVA was applied to test the significance of remaining demographic variables Age, Income, and Education on the perceptions towards identified dimensions of e-SQ. The ANOVA results are discussed below for the remaining variables:

Table: II: *One Way Analysis of Variance for AGE, INCOME,*

EDUCATION w.r.t. dimensions of E-Service Quality.

H1	Hypothesis	Var.	F-Value	Sig.	Acc./ Rej.
H1g	There is no significant difference among different age group customers w.r.t. ease of use of Internet Banking services.	AGE	37.74	0.000	Rejected
H1h	There is no significant difference among different age group customers w.r.t. Security of Internet Banking services.		33.71	0.000	Rejected
H1i	There is no significant difference among different age group customers Information Availability of Internet Banking services		28.72	0.000	Rejected
H1j	There is no significant difference among different age group customers w.r.t. Functionality of Internet Banking services		17.66	0.000	Rejected
H1k	There is no significant difference among different age group customers w.r.t. Customer Support of e-SQ of Internet Banking services.		19.12	0.000	Rejected
H1l	There is no significant difference among different age group customers w.r.t. Website Design of Internet Banking services.		23.63	0.000	Rejected
H1m	There is no significant difference among diverse Education background respondents w.r.t. Ease of use of Internet Banking services.	EDU	16.92	0.000	Rejected
H1n	There is no significant difference among diverse Education background respondents w.r.t. Security of Internet Banking services.		17.21	0.000	Rejected

H1o	There is no significant difference among diverse Education background respondents w.r.t. Information Availability of Internet Banking services.		11.87	0.000	Rejected
H1p	There is no significant difference among diverse Educationl background respondents w.r.t. Functionality of Internet Banking services.		11.19	0.000	Rejected
H1q	There is no significant difference among diverse Education background respondents w.r.t. Customer Support of Internet Banking services.		14.71	0.000	Rejected
H1r	There is no significant difference among diverse Education background respondents w.r.t. Website Design of Internet Banking services.		7.29	0.000	Rejected
H1s	There is no significant difference among different Income group respondents w.r.t. Ease of use of Internet Banking services.	INC	4.75	0.000	Rejected
H1t	There is no significant difference among different Income group respondents w.r.t. Security of Internet Banking services.		6.16	0.000	Rejected
H1u	There is no significant difference among different Income group respondents w.r.t. Information Availability of Internet Banking services.		9.39	0.000	Rejected
H1v	There is no significant difference among different Income group respondents w.r.t. Functionality of Internet Banking services.		6.17	0.000	Rejected

H1w	There is no significant difference among different Income group respondents w.r.t. Customer Support of Internet Banking services.		3.79	0.002	Rejected
H1x	There is no significant difference among different Income group respondents w.r.t. Website Design of Internet Banking services.		4.04	0.001	Rejected

As presented in Table II above, ANOVA analysis of Age, Income & Education indicated that there is a significant difference among different group of respondents across the selected demographic variable included in the analysis with respect to their perceptions towards identified dimensions of electronic service quality. As shown in the analysis table above, all hypotheses framed to assess differences among various groups of variables of Age, Income & Education were Rejected at 5% level of significance, since the p-value (sig.) is < 0.05 for all. So, it can be interpreted that there was a significant difference between various groups of respondents categorized under AGE, INCOME & EDUCATION with respect to their perceptions towards Ease of Use, Security, Information Availability, Customer Support, Functionality & Website Design dimensions of e-SQ. In order to assess the inter group differences towards perceptions of electronic service quality of respondents Tukey HSD Post Hoc analysis was performed for the demographic variables of AGE and it was discovered that the perceptions towards E-SQ of Internet Banking services offered by Banks varies significantly for all dimensions for 46 & above age group of respondents. In other words it can be said that higher the age of users less was the level of service quality perceived by the users since the significance of Mean Differences was negative for 46& above category individuals with others for all dimensions of e-SQ. On analyzing the EDUCATION profile of respondents through Tukey Post Hoc, it was concluded that the Under Graduate category of respondents perceive the E-SQ differently from highly qualified users of Internet Banking. As far as INCOME is concerned it was found that respondents with income more than 30000 per month perceive the Service Quality of Internet Banking services differently with regards to various dimensions used in the present study. Further, as the income level of respondents increases; the perceptions of enhanced online service experience also increases due to more experience in dealing with such services

6.2 Direct Assessment of Psychographic Personality Traits

The psychographic personality traits of Customer Innovativeness, Risk Aversion, Need for Personal Contact & Technology Anxiety were tested with respect to each of the identified dimensions of Electronic Service Quality. The Regression Analysis is performed on the dimensions of e-SQ & Customer specific personality traits. Here, the customer traits were taken as Independent Variable & perceptions toward online service quality dimensions as Dependent Variable. The analysis of the Customer Innovativeness personality trait is presented below:

Table III: *Regression Analysis of Customer Innovativeness with E-SQ Dimensions*

Hyp.	Statement	B-Coeff.	R-Square	Sig.
H2a	The customer perception towards EASE OF USE dimension of e-SQ of Internet Banking services is not influenced by C. Innovativeness.	0.586	0.41	0.000(Rej.)
H2b	The customer perception towards SECURITY dimension of e-SQ of Internet Banking services is not influenced by C. Innovativeness.	0.671	0.41	0.000(Rej.)
H2c	The customer perception towards Information Availability dimension of e-SQ of Internet Banking services is not influenced by C. Innovativeness.	0.576	0.34	0.000(Rej.)
H2d	The customer perception towards Functionality dimension of e-SQ of Internet Banking services is not influenced by C. Innovativeness.	0.529	0.24	0.000(Rej.)
H2e	The customer perception towards CUSTOMER SUPPORT dimension of e-SQ of Internet Banking services is not influenced by C. Innovativeness.	0.512	0.23	0.000(Rej.)
H2f	The customer perception towards WEBSITE DESIGN dimension of e-SQ of Internet Banking services is not influenced by C. Innovativeness.	0.469	0.30	0.000(Rej.)

The analysis presented in Table III above revealed that Customer Innovativeness personality trait of the Internet Banking users does influence their perception towards electronic service quality, measured by Ease of Use, Security, Information Availability, Customer Support, Functionality & Website Design dimensions. The results of Linear Regression Analysis confirms that all un-standardized beta coefficient values of various e-SQ dimensions (ranges from 0.469 to 0.671) were statistically significant (p-values 0.000< 0.05) at 5% los for Customer Innovativeness personality trait.

Table IV: *Regression Analysis of Risk Aversion with E-SQ*

Dimensions

Hyp.	Statement	B-Coeff.	R-Square	Acc./Rej.
H2g	The customer perception towards EASE OF USE dimension of e-SQ of Internet Banking services is not influenced by Risk Aversion.	-0.257	0.06	0.000 (Rej.)
H2h	The customer perception towards SECURITY dimension of e-SQ of Internet Banking services is not influenced by Risk Aversion.	-0.339	0.08	0.000 (Rej.)
H2i	The customer perception towards INFORMATION AVAILABILITY dimension of e-SQ of Internet Banking services is not influenced by Risk Aversion.	-0.273	0.06	0.000 (Rej.)
H2j	The customer perception towards Functionality dimension of e-SQ of Internet Banking services is not influenced by Risk Aversion.	-0.264	0.04	0.000 (Rej.)
H2k	The customer perception towards Customer Support dimension of e-SQ of Internet Banking services is not influenced by Risk Aversion	-0.248	0.04	0.000 (Rej.)
H2l	The customer perception towards Website Design dimension of e-SQ of Internet Banking services is not influenced by Risk Aversion.	-0.129	0.18	0.000 (Rej.)

The results of regression analysis of Risk Aversion (depicted in Table IV) personality trait with various electronic service quality dimensions were found to be significant at 5% los, which means that Risk Aversion did influence the perception of customer significantly. The beta coefficients for all dimensions were negative (with minimum value of 0.129 & maximum 0.339), which indicates that as the customer was more averse to taking risk while using technology services, his/her perception towards e-SQ of Internet banking portal becomes negative.

Table V: *Regression Analysis of Need for PC with E-SQ Dimensions*

Hyp.	Statement	B-Coeff.	R-Square	Acc./Rej.
H2m	The Customer Perception towards EASE OF USE dimension of e-SQ of Internet Banking services is not influenced by Need for Personal Contact.	-0.147	0.015	0.007 (Rej.)
H2n	The customer perception towards SECURITY dimension of e-SQ of Internet Banking services is not influenced by Need for Personal Contact.	-0.211	0.024	0.001 (Rej.)
H2o	The customer perception towards INFORMATION AVAILABILITY dimension of e-SQ of Internet Banking services is not influenced by Need for Personal Contact.	-0.081	0.004	0.166*(Acc.)
H2p	The customer perception towards FUNCTIONALITY dimension of e-SQ of Internet Banking services is not influenced by Need for Personal Contact.	-0.224	0.026	0.000 (Rej.)
H2q	The customer perception towards CUSTOMER SUPPORT dimension of e-SQ of Internet Banking services is not influenced by Need for Personal Contact.	-0.161	0.014	0.011 (Rej.)
H2r	The customer perception towards Website Design dimension of e-SQ of Internet Banking services is not influenced by Need for Personal Contact.	0.025	0.000	0.625* (Acc.)

The perception towards Information Availability & Website Design dimensions of e-SQ did not possess a significant association with Need for Personal Contact personality trait of respondents as shown in Table V above. The p-values, as shown above were > 0.05 (i.e. 0.166 & 0.625 respectively) for H2o & H2r, leading to acceptance of the hypotheses. The other hypotheses for remaining e-SQ dimensions were rejected, confirming the significance of influence of Need of PC with EOU, SEC, FUN & CS. The values of the un-standardized Beta coefficients were found to be negative, indicating the reverse nature of relationship between Independent & dependent variable. It can be interpreted that as the customer's Need for Personal Contact with service provider increases then his/her perceptions for Ease of Use,

Security , Functionality & Customer Support dimensions of e-SQ decreases i.e. more a person was comfortable in human interaction, less was the quality perception towards online banking services.

Table VI: *Regression Analysis of Technology Anxiety with E-SQ Dimensions*

Hyp.	Statement	B-Coeff.	R-Square	Rej./Acc.
H2s	The customer perception towards EASE OF USE dimension of e-SQ of Internet Banking services is not influenced by Technology Anxiety.	-0.257	0.06	0.000 (Rej.)
H2t	The customer perception towards SECURITY dimension of e-SQ of Internet Banking services is not influenced by Technology Anxiety.	-0.339	0.082	0.000 (Rej.)
H2u	The customer perception towards INFORMATION AVAILABILITY dimension of e-SQ of Internet Banking services is not influenced by Technology Anxiety.	-0.273	0.06	0.000 (Rej.)
H2v	The customer perception towards Functionality dimension of e-SQ of Internet Banking services is not influenced by Technology Anxiety.	-0.264	0.04	0.000 (Rej.)
H2w	The customer perception towards Customer Support dimension of e-SQ of Internet Banking services is not influenced by Technology Anxiety.	-0.248	0.04	0.000 (Rej.)
H2x	The customer perception towards Website Design dimension of e-SQ of Internet Banking services is not influenced by Technology Anxiety.	-0.129	0.018	0.003 (Rej.)

As far as Technology Anxiety personality trait was concerned, it was very much clear from the analysis table VI, that the customer perceptions towards identified dimensions of e-SQ were significant and the relationship between the Independent (Tech. Anxiety) & Dependent variable (e-SQ dimensions) was such that, more the anxiety concerning the usage of the technology among the respondents less was the perceptions with regards to the online quality of Internet Banking services offered by banks. The significant values of the un-standardized beta coefficients confirm the nature of relationship between the variables undertaken for study.

6.3 Relationship between E-SQ, Satisfaction & BI

In order to test the Hypotheses 3 & 4, Multiple Regression analysis was applied to test the impact of Electronic Service Quality on Customer Satisfaction & Behavioral Intentions respectively. The dimensions of E-SQ (EOU, SEC, FUN, INFO, CS & DES) were selected as independent variable & Customer Satisfaction, Behavioral Intention with respect to

Model		Sum of Squares	Df	F	Sig.
1	Regression	317.223	6	168.644	.000a
	Residual	148.287	473		
	Total	465.510	479		

Internet Banking services were considered as dependent variables.

Hypothesis 3: The Electronic Service Quality (measured by ease of use, security, Informational availability, Functionality, Customer Support, Website Design) of Internet Banking services does not have a significant impact on Customer Satisfaction

The results of multiple regressions for H3 are presented below:

Model	R	R Square	Adjusted R Square
1	.826a	.681	.677

As shown above, the Model Summary table for the impact of identified dimensions of E-SQ on Customer Satisfaction accounts for 68% variation in the value of Dependent variable (SATESQ) measured through dimensions of E-SQ taken as Independent Variable (EOU, SEC, DES, CS, FUN, and INFO) altogether. It can be interpreted from the analysis above that the model developed in the study, quite significantly determine the variation caused by the online service quality of Internet Banking towards the Satisfaction among the users.

Table: VIII: ANOVA table for Significance of Regression Model (SAT-ESQ)

The ANOVA table VIII confirms the significance of the Regression Model with F-Value at 168.644 for 6 d.f.. The two-tail p-value (0.00) was <0.05 which means that the Hypothesis 3 is rejected and significance of E-SQ dimensions on Customer Satisfaction can be interpreted. The regression analysis gives the relative importance of various dimensions of E-SQ with Customer Satisfaction as criterion variable. The ENTER method was used to obtain the output of regression model since all independent variables entered simultaneously. The un-standardized beta coefficient values for all dimensions of online service quality were significant at 5% los except Information Availability. The value of t-statistic was also quite large & significant for all the dimensions except one. The output regression model for calculating the customer satisfaction score is presented as below:

Table IX: *Multiple Regression Output of E-SQ dimensions w.r.t. Customer Satisfaction*

Regression Coefficients

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.189	.135		-1.402	.162
	Mean Score_EOU	.337	.076	.274	4.433	.000
	Mean Score_SEC	.295	.058	.274	5.036	.000
	Mean Score_FUN	.164	.052	.158	3.154	.002
	Mean Score_CS	.111	.050	.105	2.224	.027
	Mean Score_INFO	.002	.059	.002	.030	.976*
	Mean Score_DES	.132	.059	.101	2.228	.026

a. Dependent Variable: Mean Score_SATESQ

Customer Satisfaction (SATESQ) = -0.189+0.337 EOU+0.295 SEC+ 0.164 FUN +0.111 CS+ 0.132 DES+0.002INFO*

The results of the Multiple Regression applied to test H4 are presented below. In this, customer Behavioral Intentions towards Internet Banking services were chosen as Dependent Variable and the dimensions of E-SQ were taken as Predictor variable to test the significance of any impact of E-SQ on customer intentions toward IB services

Table X: *Multiple Regression Output of E-SQ dimensions w.r.t. Behavioral Intention*

Model		Un-standardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.516	.128		-4.033	.000
	Mean Score_EOU	.386	.072	.300	5.361	.000
	Mean Score_SEC	.277	.055	.247	5.011	.000
	Mean Score_FUN	.173	.049	.159	3.522	.000
	Mean Score_CS	.142	.047	.128	2.998	.003
	Mean Score_INFO	.075	.056	.063	1.344	.180*
	Mean Score_DES	.074	.056	.054	1.310	.191*

Dependent Variable: Mean Score_BI

The Model Summary table for Behavioral Intentions of the respondents derived from the quality of e-service of Internet Banking services highlights 74% variation in the value of Dependent variable (BI) measured from the six dimensions of E-SQ taken as Independent Variables for the study. The Multiple Regression output generated through SPSS gives the significance of various dimensions of E-SQ in determining the Behavioral Intentions of respondents. The ENTER method was used to obtain the output of regression model since all independent variables entered simultaneously. The un-standardized beta coefficient values for all dimensions of online service quality were significant at 5% los except Information Availability (0.180*) & Website Design (0.191*). The value of t-statistic was also quite large & significant for all the dimensions except two. The output regression model for calculating the Behavioral Intentions score can be presented as below Behavioral Intentions (BI) = -0.516+0.386 EOU+0.277 SEC+ 0.173 FUN +0.75INFO* +0.74DES * So, it can be interpreted from the above that Information Availability & Website Design dimensions of Online SQ were not significant in determining the respondents' future intentions towards net banking The analysis of the R-square value (0.739) confirms that the model predicted in the analysis was quite significant in determining the Behavioral Intentions of respondents towards the Internet Banking in future.

Table XI: *R-Square for Behavioral Intentions w.r.t. E-SQ*

Model	R	R Square	Adjusted R Square
1	.860a	.739	.736

b. Dependent Variable: Mean Score_BI

Table: XII: *ANOVA table for BI*

Model		Sum of Squares	Df	F	Sig.
1	Regression	376.485	6	223.612	.000a
	Residual	132.728	473		
	Total	509.212	479		

b. Dependent Variable: Mean Score_BI

The results of ANOVA output table obtained through SPSS highlights the significance of the Regression Model with F-Value at 223.612 for 6d.f. & Mean Square value at 62.747. The significant p-value (0.00) is <0.05 which means that the Hypothesis 4 is rejected and a significant impact of E-SQ dimensions in determining the Behavioral Intentions towards Internet Banking services can be interpreted. Hence it can be said that online service quality dimensions play an important role in developing future behavioral intentions towards the continued usage of Internet Banking services.

6.5 Moderation Effects of Demographic Customer Traits on ESQ-SAT-BI Linkage

The last objective of the study i.e. Objective-IV was to examine the moderating effects of customer

Gender

The significant SPSS output results for testing the moderation effects of Gender on SAT-BI & ESQ-BI are presented below:

Table: XIII: *Interaction effects of Gender on SAT-BI Linkage*

Linkage: SAT-BI		F-Sig.	R-square Change	Sig. F-Change	Interaction Occurs
SAT	Model 1	0.000	0.731	0.000	YES
GENXSAT	Model 2	0.000	0.003	0.019**	

The analysis of the table revealed that both models, with & without the Interaction terms added were significant for all linkages with ANOVA value (0.000) significant at 5% LOS for all and there was a significant change in the F-Value** for SAT-BI linkages after the Interaction term added with p-values significantly less than 0.05; hence confirming the rejection of null hypothesis that GENDER does not moderate the relationship between SAT-BI.

Age

The SPSS output results for testing the moderation effects of Age on SAT-BI linkages are presented below. On examining the SPSS output related to ANOVA & Regression Models (with & without moderator) it was discovered that there was a significant change in the F-Value (at 5%LOS) when Age interacted with Satisfaction (SAT) resulting in a significant increase of about 2% (R2 Change=0.02) in customers Behavioral Intentions towards Internet Banking services

Table: XIV: *Moderation effects of Age on SAT-BI Linkages*

Education

But there was a significant increase in the customers' Behavioral Intentions towards online Banking after the introduction of Moderation term (Education) with Satisfaction. The R2 value showed an increase of 2.5 % and F-Value significant* at 5% as depicted below:

Linkage: SAT-BI		F-Sig.	R-square Change	Sig. F-Change	Moderation Occurs
SAT/BI	Model 1	0.000	0.748	0.000	YES
SATXAGE1	Model 2	0.000	0.020	0.000	
SATXAGE2					
SATXAGE3					

Table: XV: *Moderation effects of Education on SAT-BI*

Linkage.

Linkage: SAT-BI		F-Sig.	R-square Change	Sig. F-Change	Moderation Occurs
SAT/EDU	Model 1	0.000	0.740	0.000	YES
SATXUG	Model 2	0.000	0.025	0.000*	
SATXGRAD					
SATXPG					

Income

On analyzing the moderating impact of Income on SAT-BI linkage it was found that R2 value for the Behavioral Intentions of customers (with Income acting as moderator) shows a very significant increase of about 3.7% and the F-Value* was also significant at 5% Los. Alternatively, it can be stated that the future Behavioral Intentions of

Table: XVI: *Moderation effects of Income on SAT-BI Linkage*

Linkage: SAT-BI		F-Sig.	R-square Change	Sig. F-Change	Moderation Occurs
SAT/INC	Model 1	0.000	0.733	0.000	YES
SATXINC1	Model 2	0.000	0.037	0.000*	
SATXINC2					
SATXINC3					
SATXINC4					
SATXINC5					

diverse income category respondents showed an increase of 3.7% when interacted with Satisfaction experienced from the usage of online services.

6.6 Moderation Effects of Personality Traits on ESQ-SAT-BI Linkage

This section of the paper deals with testing the moderation influences of psychographic personality traits of Customer Innovativeness, Risk Aversion, Need for personal Contact & Technology Anxiety on ESQ-SAT-BI linkages.

Customer Innovativeness

A significant change in the F-Value* when C.INNV. Interacted with Satisfaction (SAT) to produce considerable influence on respondents Behavioral Intentions as revealed by the analysis. Further, C.INNV. was found to moderate the ESQ-BI linkage to a modest extent in the sense that it interacted significantly with three dimensions of ESQ (out of 6) to introduce a noteworthy change in F-Value

Table: XVII: *Moderation Analysis of Customer Innovativeness on SAT-BI Linkage*

Linkage: SAT-BI		F-Sig.	R-square Change	Sig. F-Change	Moderation Occurs
SAT	Model 1	0.000	0.755	0.000	YES
C.INNVXSAT	Model 2	0.000	0.006	0.000*	

Risk Aversion

Risk Aversion lead to a significant change in R-square & F-value of Interaction Model and confirms the enhanced Behavioral Intentions of customers when Risk Aversion interacts with Customer Satisfaction derived from ESQ.

Table: XVIII: *Moderation Analysis of Risk Aversion on SAT-BI Linkage*

Linkage: SAT-BI		F-Sig.	R-square Change	Sig. F-Change	Moderation Occurs
SAT	Model 1	0.000	0.735	0.000	YES
R.A.XSAT	Model 2	0.000	0.006	0.001*	

Need For Personal Contact

There was a significant change in R-square (about 1.5%) on BI when Need for PC interacts with the SAT and confirmed the presence of a noteworthy moderation influence. In other words, it can be stated that the respondent with diverse Need for Personal Contact can feel the enhanced Behavioral Intentions towards Internet Banking if they are satisfied from the quality of Online Services.

Table: XIX: *Moderation Analysis of Risk Aversion on SAT-BI Linkage*

Linkage: SAT-BI	F-Sig.		R-square Change	Sig. F-Change	Moderation Occurs
SAT	Model 1	0.000	0.732	0.000	YES
CONTXSAT	Model 2	0.000	0.015	0.000	

Technology Anxiety

On analyzing the change in R-Square & Sig. of F-Values it was apparent that Technology Anxiety had no moderation influence on ESQ-BI linkage but there was a very huge change in R-Square value i.e. 3.3% when Technology Anxiety interacts with SAT:

Table: XX: *Moderation Analysis of Risk Aversion on SAT-BI Linkage*

Linkage: SAT-BI		F-Sig.	R-square Change	Sig. F-Change	Moderation Occurs
SAT	Model 1	0.000	0.738	0.000	YES
ANX.XSAT	Model 2	0.000	0.002	0.033	

7. RESULTS:

On analyzing the above facts it has been noted that no significant differences between Male & Female (i.e. GENDER) respondents were observed in their perception towards various dimensions of e-SQ (measured by Ease of Use, Security, Information Availability, Functionality, Customer Support & Website Design) at 5% LOS. In other words it can be stated that both Male & Female respondents perceived the Electronic Service Quality equally. Also there was a significant effect of demographic variables of AGE, EDUCATION & INCOME in causing a significant variation among respondent's perceptions toward Electronic Service Quality of Internet Banking services. It was discovered that there is a significant effect of customer specific psychographic personality traits of CUSTOMER INNOVATIVENESS, RISK AVERSION, NEED FOR PERSONAL CONTACT & TECHNOLOGY ANXIETY in influencing the perceptions toward Electronic Service Quality as tested through Linear Regression model with Personality traits as Independent

Variable & each dimension of ESQ as dependent variable. Moderation Influences of demographic & personality traits were tested on all sub-linkages of ESQ, SAT & BI. Regression Models were developed (with & without Interaction term added) for all the variables in the study & presence of significant moderation influences were tested through change in R2 values & significant change in F-Value. The interaction effects of GENDER on SAT-BI linkage were identified to produce a significant change in R2 where as no significant interaction effects on ESQ-SAT and ESQ-BI linkages were discovered for Gender. AGE was found to interact with Functionality, Customer Support & Design dimensions of E-SQ thus confirmed the presence of partial Moderation effects of Age on ESQ-SAT. Further, AGE found to interact with Satisfaction (SAT) resulting in a significant increase of about 2% (R2 Change=0.02) in customers Behavioral Intentions (BI) and complete moderation on SAT-BI was confirmed. Lastly moderating influence of AGE on ESQ-BI linkage was also observed. It was discovered that EDUCATION did not moderate with any of the dimensions of ESQ to influence the Customer Satisfaction (SAT). But there was a significant increase in the customers' Behavioral Intentions towards Online Banking after the interaction of Education moderation term with Satisfaction. The R2 value shows an increase of 2%. Also it was found that Education did not moderate the ESQ-BI linkage. The demographic variable, INCOME was found to moderate Ease of Use, Security & Functionality dimensions and confirming the existence of partial Moderation effects on ESQ-SAT linkages. Whereas the moderating impact of INCOME on SAT-BI linkage was discovered to produce a very large significant change of 3.7% in R2 value in the Behavioral Intentions of customers. Lastly, partial moderation influences were also tested for ESQ-BI linkage when INCOME interacts with Functionality, Security & Ease of Use dimensions of online service quality. So, it was discovered that all demographic variables completely moderated the relationship between SAT-BI linkage. The demographic variables of GENDER & EDUCATION do not appear to interact significantly with dimensions of ESQ to generate a significant impact on SAT & BI. But demographic variables of AGE & INCOME showed a partial moderated influence on SAT & BI when interacted with dimensions of ESQ. The interaction of psychographic personality traits with ESQ-SAT-BI linkages was performed through Regression and Customer Innovativeness was discovered to have no moderating influence on Satisfaction (SAT) on interacting with ESQ. But a significant impact was assessed on BI when C.INNV. interacted with Satisfaction (SAT) i.e. SAT-BI. Also C.INNV. was found to moderate the ESQ-BI linkage to introduce a noteworthy change in F-Value. The Risk Aversion only confirmed a significant shift in the respondents Behaviour Intentions (BI) towards Internet Banking when interacted with Satisfaction (SAT) (i.e. SAT-BI) and all other interactions with various dimensions of ESQ to cause any influence on SAT & BI were found to be insignificant. Need for Personal Contact personality trait successfully interacted with ESQ-BI & SAT-BI to produce enhanced intentions of using the Online Banking services in future but no noteworthy increase in SAT was noted when moderated with ESQ dimensions (i.e. ESQ-SAT). Also Technology Anxiety produced a considerably large variation (of about 3.3%) through its interaction with SAT on respondents Behavioral Intentions toward Internet Banking Services (i.e. SAT-BI). Further the interaction effects on BI through ESQ interactions were also discovered to be significant but not in case of ESQ-SAT linkage.

8. DISCUSSIONS

8.1 Implications

It has been observed from the findings that all Demographic & Psychographic Personality Traits completely moderated the relationship between SAT-BI and it can be concluded from the study that all respondents, irrespective of the demographic & personality traits develop a strong futuristic Behavioral Intentions toward Internet Banking only after getting the satisfactory quality services on a continuous basis. Thus Satisfaction from Electronic Service Quality was a pre requisite for developing Loyalty Intentions among customers by the Banks. So as the final outcome of the study following "ESQ-SAT-BI Model" was formulated:

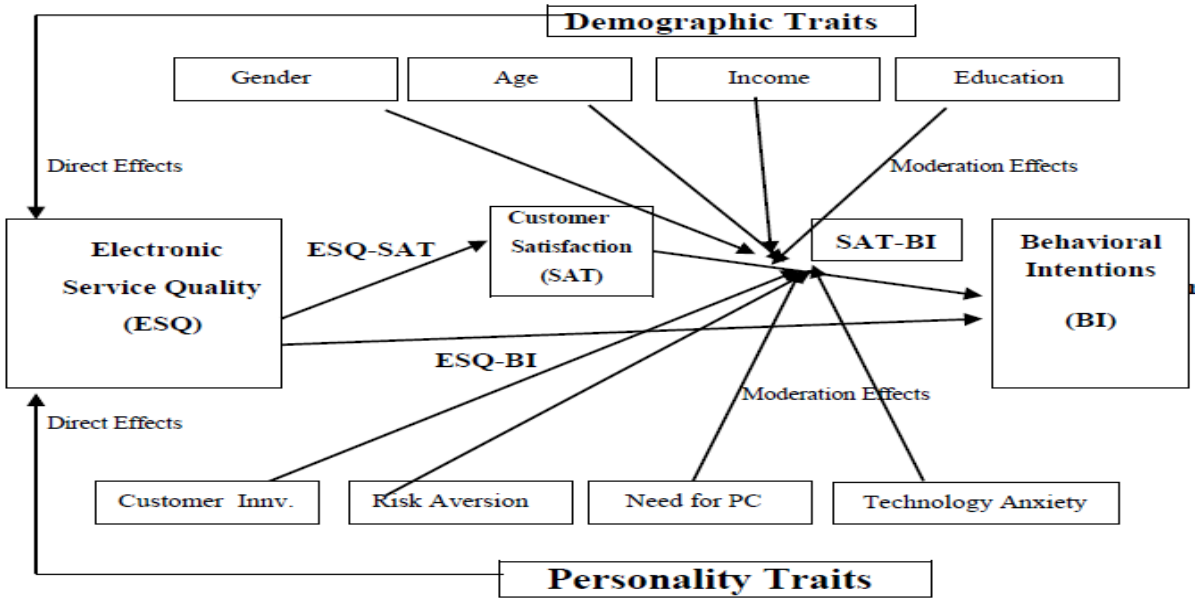

Figure 1 :*Model of ESQ-SAT-BI Linkage in Internet Banking*

8.2 Limitations of the Study

The present research has been conducted under certain limitations generally found in the study of a topic of this nature, which was relatively volatile. The main limitations faced while undertaking the study were: In order to limit the scope of study only Urban centre's in the state of Punjab were considered for collecting the data. Secondly, only six cities were selected for the purpose of data collection due to time & resource constraints. The reliability of the collected data depends upon the responses given by the respondents; especially when issues pertaining to describing the personality traits are considered. The thrust was laid on group of respondents who have a certain level of education; the inclusion of unqualified respondents was beyond the scope of the current study.

Suggestions for Future Researchers

The present study has shown certain areas/aspects for future research. Some of the important areas for potential research are: The scope of current study aimed at understanding the customer perceptions toward the Electronic Service Quality of Banks in general, however enhanced Comparative Analysis of Electronic Service Quality of Public vs. Private Banks could be taken up as an extension of this study. In order to limit the scope of the current study only urban branches/customers were selected for the purpose of data collection. The future studies may be conducted by including the customers living in semi urban & rural areas to understand the behavioral patterns prevailing among diverse group of respondents to demonstrate the universality of the results of the study.

CONCLUSION:

The current study indicated the significance of dimensions of Electronic Service Quality on Customers' Perceptions toward the Quality of Internet Banking services offered by Banks and consequently on the level of Customer Satisfaction & Behavioral Intentions of the respondents using them. Further the perception of these services varies across the diverse group of respondents categorized on a set of Demographic & Psychographic Personality traits (directly & indirectly) leaving their influence on the ESQ-SAT-BI linkage. The key demographic variables like Age, Income & Education play vital role in isolating the customer perceptions toward the online experience of the services consumed. Hence, the service providers must design the services keeping in mind the expectations, skills, knowledge, background, concerns etc. of the targeted customer base. The technology driven self serving features of the Internet Banking portals have a very consequential influences on people with different personality traits (e.g. Customer Innovativeness, Risk Aversion, Need for Personal Contact, Technology Anxiety) in terms of continued use and recommending these services to others. In order to develop strong futuristic Behavioral Intentions (i.e. Loyalty) among the customers, Satisfaction resulting from the Quality of e-services is a prerequisite. It has a significant implication for the Banks in the sense that a satisfied customer perceives the Electronic Service Quality of the online medium to develop behavioral intentions for the service provider. As the final outcome of the study, a conceptual model was developed and tested empirically to be reproduced in different technology driven service settings.

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