SERVICE QUALITY DIMENSIONS OF ONLINE LIFE INSURANCE SERVICES

Vinoshpeter K V*

Dr.S.Sankaranarayanan**

ABSTRACT

The Internet and its related advances in information technology have significantly influenced financial services in both general and life insurance markets. Principal Component Analysis in this case leads to the extraction of only five factors. Regression analysis was performed to the associations of the extracted five dimensions with overall service quality. Here a regression equation was fitted with response of overall service quality as the dependent variable and the five dimensions extracted as independent variable for finding out how these extracted dimensions related to overall service quality.

* Ph.D Scholar, School of Management Studies, Bharathiyar University, Coimbatore,

** Associate Professor, School of Management Studies, Bharathiyar University, Coimbatore,

Introduction

The Internet and its related advances in information technology have significantly influenced financial services in both general and life insurance markets. By lowering information costs, the Internet enables insurers to enhance the accuracy and efficiency of classifying, underwriting, pricing risk as well as settling claims. At the same time, consumers could do more comparison shopping for their insurance on the Internet which displays all the up-to-the-day accurate information and reputable insurers simultaneously. At present, a wide range of online services is being provided in insurance markets, such as online sales, needs analysis, online policyholder account information, claims management and processing, group insurance certificates and customer needs response etc. On the technology front, some companies possess the new Internet capabilities to service around the clock, record calls digitally, offer easy-to-use reference tools and educate to assist insurance shoppers. Some insurance companies even have systems that can generate projections or illustrations for the future performance of life policies.

Objectives of the study

- To identify the dimensions of service quality of online life insurance services
- To confirm the usefulness of existing models of measuring service quality of online life insurance services

Review literature

Ahmad and Sungip (2008) the purpose of this study was to evaluate customers' general expectation and perception of insurers in terms of services offered at the insurance service counter (ISC). Other than that, this study also examined the relationship between the demographic factors and SERVQUAL mean score.

The study was carried out at service counter of Insurance companies and any respondents which cover unlimited areas in Kuala Lumpur and Selangor (Malaysia). The study utilized the survey approach. The sample consisted of 319 respondents. The primary data collected through structured questionnaire and seven point likert scale had been used for the questionnaire starting from 1(strongly Disagree to 7(strongly agree). The result shows huge

gap for reliability, responsiveness and empathy, and reliability showed the highest gap between customers' perception and expectation. The other dimensions (tangible, responsiveness, assurance and empathy) appeared important but reliability dominated.

Bodla and Chaudhary (2012) the main objective of the study was to assess the gap of service quality expected and perceived in ICICI prudential life insurance and to assess the service quality gaps of selected service quality dimensions in ICICI prudential life insurance. The population of the survey consisted of all the customers of ICICI prudential life insurance company residing in the State of Haryana, Delhi and Punjab. A sample of 180 respondents was selected, choosing 60 each from aforesaid geographical limits. The five service quality dimensions- core service, human elements of service delivery, non human elements of service delivery, Tangibles of services and social responsibility. The findings of research showed that there existed a significant gap in service quality expected and perceived by the customers of ICICIPLI and it was recommended that ICICIPLI should think strategically to improve its customer services on selected dimensions of service quality so that the business growth rate and market position might improve.

Data collection Instrument – Questionnaire Design: The researcher developed structured questionnaire for life insurance customers using **online** services. The questionnaire for **online life insurance** services survey the questionnaire contained 29 statements for expectation in Part A and 29 statements for perception of customers in Part B . The six dimensions commonly used for the study of **online life insurance** services were: reliability, efficiency, responsiveness, fulfillment, privacy, and site interface. All the dimensions and their items included in the questionnaire have been described and are based on the researches of Parasuram, Zeithmal, and Malhotra (2000 and 2002), Sunayana Khurana (2009) and Deepika Upadhyaya and Manish Badlani (2011). Five point Likert Scale was used ranging from the score 1 (strongly disagree) to 5 (strongly agree). Scores1and 2 considered for disagreement (dissatisfaction), score 3 considered to be neutral (no opinion) and scores 4 and 5 considered for agreement (satisfaction). There were nine questions relating to demographic characteristics of the study group and one open end question about suggestions to improve the service quality of online life insurance services.

The Pilot Study: It was conducted among the selected customers of **online life insurance** companies in the study area. The researcher had to approach directly the customers of bank and life insurance services at their work places such as Govt. offices, Banks, insurance companies and online share broking centers. The researcher distributed the self administered questionnaire to 30 customers of online life insurance services. Almost all of them were filled and returned. But 20 from online life insurance customers returned were in complete form and only such questionnaires were considered for testing the reliability of the instrument.

Table 1 Reliability Of The Service Quality Of Online Life Insurance Questionnaire

Dimensions	Expectations	perceptions
Reliability	.616	.654
Efficiency	.661	.782
Responsiveness	.748	.840
Fulfillment	.617	.735
Privacy	.613	.619
Site Interface	.620	.682
Total	.852	.926

The above reliability results of online life insurance services are above.5. Hence the instrument is considered as a reliable tool for data collection.

Validity Of The Questionnaire: The questionnaires of online life insurance services were given to expert panel of members who were professionals with sound knowledge and experience in online life insurance services of different organizations. After careful evaluation of their suggestions and recommendations, the questionnaire was revised and finalized with twenty nine statements for life insurance services.

Population and Sampling Frame: In the life insurance sector 18 companies (1 Public sector and 17 Private sector companies) are considered for the study. In the Life insurance sector, the total number of customers in Thrissur District is approximately 3, 88,600 (*total number of customers in Kerala State is approximately 18, 77,000)* i.e. 20.7% of total customers of Life insurance companies are in Thrissur district. The total number of online customers of Life insurance companies in Thrissur district is approximately 6,900, *(total number of online customers in Kerala State is approximately56900),* and i.e. 12% of total online life insurance customers are in Thrissur District.

Sample size: In our study, the population happens to be finite and hence the fixation of the sample size was based on the following formula.

$$n = \frac{z^2.p.q.N}{e^2 (N-1) + Z^2.P.q}$$

Based on the calculation the researcher fixed the sample size as 187 for Online Life insurance services. The researcher had approached 225 respondents, but only 200 respondents have agreed to participate in the survey. At last 187 completely filled questionnaire completed in all aspects were considered. The distribution of samples according to different categories of life insurance companies are given in the following tables.

Table 2 Distribution of Sample Across Categories of Life Insurance Companies

Categories	No. of Respondents (n)
Public sector Life insurance	50
Private sector Life insurance	137
Total	187

Sampling Method: The researcher has implemented the **Multi stage sampling technique** for the study. In the first stage Kerala state was selected and in the second stage Thrissur District in kerala state was selected. In the third stage all life insurance companies providing **online** service in the study area were considered. In fourth and final stage proportionate stratified sampling was used for the selection of respondents from all life insurance companies providing **online** services. This was done by dividing the life insurance companies into two (public life insurance company and Private life insurance companies) strata respectively. Finally, purposive sampling technique was used for the selection of respondents in a uniform manner from each of the life insurance companies.

Data analysis – Tools used: Factor Analysis and Regression analysis were applied for analyzing **online life insurance** services data.

Results and Discussion

In order to analyze the collected data and confirm the usefulness of the existing theoretical model of service quality of online life insurance services, factor analysis on the twenty nine statements with the principal component analysis as an extraction method and varimax as

rotation method with Kaiser Normalization was performed. Bartlett's test of sphericity and KMO measure of sampling Adequacy were performed to confirm the suitability of the data for factor analysis. After that, Kaiser's criterion was used while performing factor analysis in order to decide what number of factors (dimensions in this case) to retain. Then serious iterations were used in order for the items with low loadings on each of the factors to be eliminated.

Table 3 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	2041.485
	Df	406
	Sig.	.000

After these preliminary steps, factor analysis with principal component analysis as an extraction method has been performed using 187 cases.

Table 4 Identification of Factors TOTAL VARIANCE EXPLAINED

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.586	33.054	33.054	9.586	33.054	33.054	4.617	15.921	15.921
2	1.684	5.806	38.859	1.684	5.806	38.859	3.581	12.348	28.269
3	1.611	5.555	44.414	1.611	5.555	44.414	2.916	10.054	38.323
4	1.284	4.428	48.842	1.284	4.428	48.842	2.365	8.153	46.476
5	1.071	3.694	52.536	1.071	3.694	52.536	1.757	6.059	52.536
6	1.03	3.550	56.086						
7	0.956	3.296	59.382						
8	0.878	3.029	62.411						
9	0.837	2.887	65.298						
10	0.821	2.831	68.13						
11	0.755	2.602	70.732						
12	0.706	2.434	73.166						
13	0.696	2.399	75.564						
14	0.634	2.185	77.75						

15	0.605	2.087	79.836						
16	0.577	1.990	81.826						
17	0.556	1.917	83.743						
18	0.536	1.849	85.592						
19	0.521	1.796	87.388						
20	0.494	1.703	89.091						
21	0.46	1.587	90.679						
22	0.433	1.491	92.17						
23	0.405	1.396	93.566						
24	0.376	1.297	94.863						
25	0.348	1.202	96.064						
26	0.334	1.151	97.215						
27	0.313	1.080	98.295						
28	0.278	0.959	99.254						
29	0.216	0.746	100						
Extraction Method: Principal Component Analysis.									

The column total under initial Eigenvalues in the table of total variance explained shows different eignevalues what amount of the variance in all variables is explained by the corresponding number of components (dimensions in this case). Using Kaiser Criterions only those factors which has eigen values greater than 1 is taken as extracted factors. In this case, there are five such dimensions, meaning that five factors should be extracted from the whole data set. The table shows that 15.92% of the total variance in all the variables of the model is explained by one factor, 28.27% of their variance is explained by two factors, 38.32% of the total variance of all variables is explained by three factors, and 46.48% of the variance is explained by four factors and 52.54% of the variance is explained by five factors pertaining to the existing theoretical model. Using the Kaiser's criterion for extraction of factors, the performed principal component Analysis in this case leads to the extraction of only five factors, meaning that all the 29 variables (questions) should be regrouped to form only five quality dimensions. Most appropriate way to split the variables in five different dimensions can be found by analyzing the data presented into the Rotated Component Matrix.

Table 5 Rotated Component Matrix

	Component				
	1	2	3	4	5
REL 1 (1)				.797	
REL 2 (2)				.612	
REL 3 (3)				.733	
EFF 1(4)	.403	.423		.356	
EFF2 (5)				.407	
EFF 3 (6)		.407			.556
EFF 4 (7)		.540			
EFF 5 (8)		.582			
EFF 6 (9)		.622			
EFF 7(10)		.665			
RES 1 (11)	.443	.373			
RES 2 (12)	.364	.422	.401		
RES 3(13)		.660			
RES 4 (14)	.523	.454			
RES 5 (15)	.587				
RES 6 (16)	.709				
RES 7 (17)	.603	.377			
FULL 1(18)	.473				.547
FULL 2(19)	.658				
FULL 3(20)	.653				
FULL 4(21)	.645				
PRI 1(22)			.657		
PRI 2 (23)			.432		.584
PRI 3 (24)			.696		
ST 1 (25)			.529		
ST 2 (26)			.425		
ST 3 (27)	.586				
ST 4 (28)			.605		
ST 5 (29)					.455

The Rotated Component Matrix shows correlation between each variable and the different dimensions. Each variable should pertain to that dimension with which it correlates best. The Rotated Component Matrix included in the table presents only those correlations higher than 0.3. In the next stage, all variables which have eliminated from the model because of values below 0.5. The variables best correlate to first dimension is Q14 (52.3%), Q15 (58.7%), Q16 (70.9%), Q17 (60.3%), Q19 (65.8%), Q20 (65.3%), Q21 (64.5%), and Q27 (58.6%).Similarly second dimension is more correlated to the variables Q7 (54%), Q8 (58.2%), Q9 (62.2%), Q10 (66.5%), and Q13 (66%). Third dimension is more correlated to Q22 (65.7%), Q24 (69.6%) Q25 (52.9%) and Q28 (60.5%). Fourth dimension is more correlated to Q1(79.7%), Q2(61.2%)and Q3(73.3%) .Fifth dimension is more correlated to Q6 (55.6%) Q18, (54.7%), and Q23 (58.4%).

Modified service quality dimensions of online life insurance

Based on the correlation values between dimension and variables, the new dimensions are identified and the definitions for the new dimensions are described below.

Responsiveness: the responsiveness dimension relates to quick response (proper response) i.e. the ability to get help if there is a problem, provide the right information about product and services to customers and proper response from employees. **Efficiency:** the efficiency dimension includes the proper structure of the site, requirement of the minimum information as input to the customer, ease of accessing the web site, speed of completing transaction through web site . **Privacy:** the privacy dimension includes the safety of the site from intrusion, protection of personal information and builds confidence of online services **Reliability:** the reliability dimension consists of technical functioning of the site, general information and accurate records of costumer transactions. **Convenience:** easy accessibility of the web site and possibility of online payment of insurance premium.

Cronbach's Alpha Test of Reliability is performed in order to prove the reliability of the modified theoretical model. The table is given below.

Table 6 **Cronbach's Alpha Test of Reliability**

Dimensions	Cronbach's Alpha
Responsiveness	.866
Efficiency	.766
Privacy	.698
Reliability	.654
Convenience	.669
Total	.926

As the new α-scores are significantly higher than those of the initial theoretical model, the modified theoretical model can be considered to be much better constructed and much more reliable than the initial theoretical model.

Regression analysis

Regression analysis was performed to the associations of the extracted five dimensions with overall service quality. Here a regression equation was fitted with response of overall service quality as the dependent variable and the five dimensions extracted as independent variable for finding out how these extracted dimensions related to overall service quality. Results of regression analysis are given in the table given below. The adjusted coefficient of determination

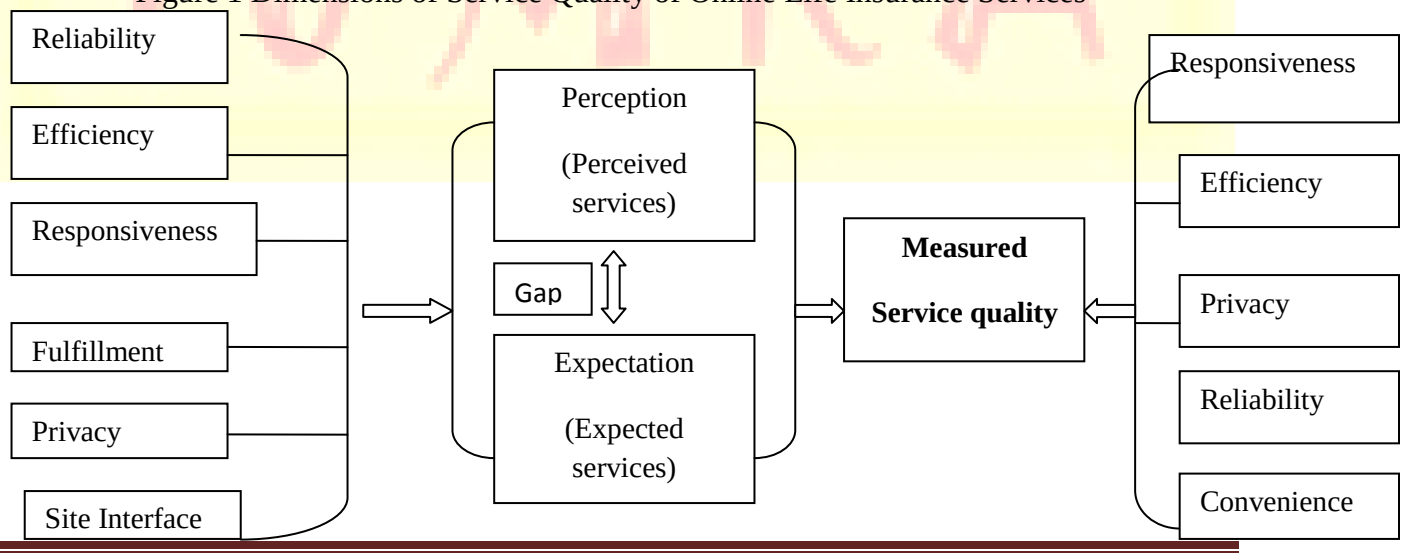
(R^2) were 0.983 ($p<0.001$). Therefore regression equations produced a satisfactory level of goodness to fit in predicting the variance of online perceived service quality. The effects of all dimensions are significant at 0.01 level.

Table 7 Regression analysis

Independent variable	Standardized Coefficients Beta	T	Sig.
Constant		0.115	0.909
Responsiveness	0.454	33.019	<0.001
Efficiency	0.291	21.502	<0.001
Privacy	0.207	16.346	<0.001
Reliability	0.169	15.995	<0.001
Convenience	0.120	12.083	
F-value	2109.304		
P	<0.001		
Adjusted R^2	0.983		

The results of the regression analysis supported the validity of the measures extracted by factor analysis. All four modified dimensions positively influence the overall service quality.

Figure 1 Dimensions of Service Quality of Online Life Insurance Services



Conclusion

The theoretical frame work of the study in the last page shows the dimensions of service quality of online life insurance. It consists of two phases, namely existing theoretical model and modified theoretical model. Based on the factor analysis the six dimensions of the existing theoretical model have been reduced to five dimensions and these five dimensions are considered as modified dimensions of service quality of online life insurance

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