AN ANALYSIS TO PREDICT THE CONTRIBUTION OF THE DIMENSIONS OF SERVQUAL THAT MAKES THE BUYER TO WAIT TO SHOP GROCERY

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ABSTRACT

This study is basically for the improvement of the retail service quality of grocery stores in five major cities in Tamilnadu, India. It covers four retail formats. The grocery stores are opened around 9 to 9.30 am in the morning. Sometimes when the respondent needs to purchase during the opening hours, they need to wait as it takes some time to setup. The study aims at Predicting the contribution of factors that makes the Buyer to Wait to Shop Grocery when the shop is yet to be opened using Binary Logistic Regression. The important factor that contributes to the prediction is identified along with the target group. Few suggestions are given in the conclusion to build customer relationship and empathy.

Keywords: Service Quality, Grocery, Retail Store, Format of Retail store

I.   INTRODUCTION

Measuring service quality is not easy because of its distinctive characteristics: Intangibility, heterogeneity, inseparability and perishability (Bateson, 1995). Service quality is linked to the concepts of perceptions and expectations (Parasuraman *et al.*, 1985, 1988). Customers' perceptions of service quality is the result of a comparison of the expectations of services with the actual-service experience. When perceptions exceed expectations the service is said to be excellent; it will be good or adequate, when it just equals with the expectations; the service will be said as bad, poor or insufficient, when it does not meet their expectation. (Gitomer, 1998)

Based on this perspective, Parasuraman et al. developed a scale for measuring service quality, which is well known as SERVQUAL. This scale operationalises service quality by calculating the difference between Expectations and Experiences of the respondents in five major places in Tamilnadu, evaluating both in relation to the 22 items that represent five service quality dimensions known as 'tangibles', 'reliability', 'responsiveness', 'assurance' and 'empathy'.

The SERVQUAL scale has been tested and/or adapted in a great number of studies conducted in various service settings, cultural contexts and geographic locations like the quality of service offered and it is suggested that they require customization to the specific service sector in which they are applied (Finn & Lamb, 1991). The researcher has customized for Grocery retailing. After finding the SERVQUAL, the researcher aims at predicting the intention to wait with few predictor variables like spending on grocery, frequency of grocery shopping, age, occupation to improve the service quality.

II. LITERATURE REVIEW

It is universal fact that customer satisfaction is the base for repeated purchase. For example, when customers perceive good product or service, each one of them will typically share their experience few people in their circle. It is a fact that nearly one-half of Indian's business is built upon this informal, "word-of-mouth" communication. Improvement in customer retention by even a few percentage points can increase profits by 25 percent or more (Griffin, 1995). The University of Michigan found that for every percentage increase in customer satisfaction, there is an average increase of 2.37% of return on investment (Keiningham & Vavra, 2001). Most people praise the businesses that service them the way they like to be serviced; they will even pay more for that service.

The message is obvious finally that the customer's willingness to wait is an indication that the customers are satisfied and customers not willing to wait may not be loyal to the store at present and chances are there that they might also change. Customer satisfaction is an asset that should be monitored and managed just like any physical asset. This is true for both service-oriented and product-oriented organizations (Sureshchander, Rajendran, & Kamalanabhan, 2001).

III. STATEMENT OF THE PROBLEM

Research has concentrated in measuring SERVQUAL for the retail services. In addition, this study aims at Predict the Contribution of the Dimension of SERVQUAL that makes the Buyer to Wait to Shop Grocery when the shop is yet to open. 355 respondents who said that they would not wait for the shop to be opened and 187 respondents who said that they would wait when the shop is yet to open.

IV. SCOPE OF THE STUDY
The study is also confined to the following retail store formats.

Format of stores covered: Kirana Stores, Discount stores, Supermarket, Hyper Market in five major cities of Tamilnadu. India.

V. RESEARCH OBJECTIVE

The objective of this study is to assess the influence of service quality Dimension on customer's Willingness to wait when the shop is yet to open. In accordance with this objective, the research encompasses the following objective:

    a.   Predict the Contribution of the Dimension of SERVQUAL that makes the Buyer to Wait to Shop Grocery when the shop is yet to open using Binary Logistic Regression.

    b.   To know the conversion from those who said they would wait and those who said they will not wait to shop grocery.

VI. METHODOLOGY

Research study is descriptive in nature. Descriptive method is a method that describes the study systematically, methodically, rationally and ethically utilizing opinion, behavior and its relevance to the phenomenon being studied (Ayyamperumal 2015).

A structured questionnaire was constructed taking into account SERVQUAL dimensions such as Tangibles, Reliability, Responsiveness, Assurance, Empathy and demographics. Sampling Method employed is Convenience sampling. The questionnaire is collected from the 542 people who have grocery shopping experience.

Analysis methods used:

Binary Logistic Regression - willingness to wait as dependent variable and the five covariates/predictors of the SERVQUAL Dimension, Tangibility, Responsiveness, Reliability, Assurance and Empathy individually.

VII. RESULT

First the researcher analysed the Dimension/constructs Tangibility, Reponsiveness, Reliability, Assurance constructs individually with the willingness to wait and found that it does not have any predicted respondents who would wait to shop. When analyzing with Empathy the researcher was able

to predict the respondents who would wait to shop grocery. Please refer Table.1 for summary and discussion of results.

The Table1 here gives us the 'omnibus test of model coefficients'. These values gives us an idea of whether or not the model with our independent variables fits the data better (i.e. gives us a better prediction of individual scores) than the baseline model. We can find significance in the final column on this table 0.001, and this means (significance is less than .05) the model is significant, which means that our model with the four predictors fits the best. It shows the goodness of fit. Please refer table. 2

The Table2 provides us with the R square statistics and there are two measures, Cox & Snell and Nagelkerke. Both these use a little different formula, but both are equally valid. In this case, Cox & Snell is 0.038, and Nagelkerke is 0.052. These numbers indicate poor improvement in fit over the baseline model The value shows that it does not contribute to the improvement of fit over the baseline model. Please refer table. 3

In Table3, A chi-square statistic is computed by comparing the observed frequencies with those expected under the linear model.The significance value is 0.048 close to 0.05 (rounded as 0.05) A nonsignificant chi-square indicates that the data fit the model. This test is also to know the goodness of fit test and since the significance value is 0.05, it just fits. Please refer table.4

The above table4 helps us to predict the covariates that aids the prediction of the respondents those who have the intention to wait to shop grocery when the shop is yet to open. The equation to find the probability value to predict is as below. The "B" values refer to the log-odds of being willingness to wait to shop grocery when the shop is yet to open. We can insert these into the binary logistic regression equation as below:

$$\text{Binary Logistic Regression} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$
$$= -0.791 + 0.249(\text{ExperienceE1}) + (-0.229)(\text{ExperienceE2}) +$$
$$0.062(\text{ExperienceE3}) + 0.058(\text{ExperienceE4}) +$$
$$(-0.098)(\text{ExperienceE5})$$

The variable ExperienceE1 and ExperienceE2 in table4 alone has significance below 0.05 hence those variables alone contribute to the model.

VIII. DISCUSSION AND CONCLUSION

To predict whether a respondent will wait or not, the cut-off value is 0.5. The respondent with a probability greater than 0.5 is predicted to have the intention to wait to shop grocery. Please refer table.5.

Based on the results obtained by the researcher, the following are the conclusions:

a. In predicting the factors that contribute to the prediction of the intention to wait, from the table4 the researcher found that ExperienceE1 and ExperienceE2 are the factor that contributes to the decision on the intention to wait is correct in reality too.

b. The statement ExperienceE1 is "Employee should understand the personal service required by the customer". So it is clear that the respondents intention to wait to shop grocery is because of the employees understanding of the customer that reduces the shopping time than other shops eventhough the respondent waits for the shop to open.

c. The statement ExperienceE2 is "The store layout should be designed keeping in mind the requirement of the customer". So it is clear that the respondents intention to wait to shop grocery is because the design of the store has quick and easy accessibility to grocery.

d. Among 355 respondents those who had said they will not wait, 12 respondents might have the intention to wait in future. Among 187 respondents, those who said they would wait to shop, only 16 respondents might wait in future. Based on the analysis using five predictors from the SERVQUAL diemension empathy, the researcher predicted that 28 respondents have the intention to wait. Hence, it is clear that the predicted conversion from the analysis, among those who said yes and no.

e. Among 187 those who said they would wait, 171 might not wait. Among 355 who said they won't wait to shop grocery 12 might wait to shop grocery.

Therefore, the conclusion is that Empathy has an influence on the respondent's intention to wait to shop grocery. Hence train the employees to focus on these factors. (Clottey, Collier, & Stodnick, 2008)

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FIGURES AND TABLES

Table 1: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	20.736	5	.001
	Block	20.736	5	.001
	Model	20.736	5	.001

Table 2: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	677.695[a]	.038	.052

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 3: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	15.625	8	.048

Table 4: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	ExperienceE1	.249	.073	11.715	1	.001	1.283
	ExperienceE2	-.229	.070	10.530	1	.001	.796
	ExperienceE3	.062	.071	.778	1	.378	1.064
	ExperienceE4	.058	.080	.521	1	.470	1.059
	ExperienceE5	-.098	.074	1.756	1	.185	.906
	Constant	-.791	.325	5.922	1	.015	.453

a. Variable(s) entered on step 1: ExperienceE1, ExperienceE2, ExperienceE3, ExperienceE4, ExperienceE5.

Table 5: Classification Table[a]

	Observed		Predicted		
			Will you wait to purchase when they are opening the store/yet to open in the Morning?		Percentage Correct
			No	Yes	
Step 1	Will you wait to purchase when they are opening the store/yet to open in the Morning?	No	343	12	96.6
		Yes	171	16	8.6
	Overall Percentage				66.2

a. The cut value is .500

ABOUT AUTHORS

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