

## A Study on the Service Quality Determinants of Organised Food Retailers in India

K. Abdus Samad <sup>1+</sup> and K. Ravichandran <sup>2</sup>

<sup>1</sup> Jamal Mohamed College(Autonomous), Trichy, India.

<sup>2</sup> Madurai Kamaraj University(MKU), Madurai, India.

**Abstract.** This study attempts to codify the service quality factors within the scope of the Organized Retailing Sector in India. This research article evaluated the services quality of major food retailers by taking important services quality issues like Physical Aspects, Reliability, Personal Interaction, Problem Solving and Policy. In order to measure the impact of services quality factors, the study examined we contacted 630 retail shoppers from major food retail stores namely Spencer's, Nilgiris, Reliance Fresh and Margin Free. The test portrayed how the services quality departed from the normality assumption.

**Keywords:** Food Retailing, Normality Test, Casual Approach, LAD Methodology.

### 1. Introduction

Organized food retailing is a relatively new phenomenon in India, with small Western-style supermarkets starting to appear only since the 1980s. Most food is still sold through local wet market vendors, roadside pushcart sellers or tiny *kirana* (grocery) stores. Although less than one per cent of food is estimated to be sold through supermarkets, this share is growing rapidly. Most supermarkets resemble the small independent operations that existed in Australian cities and towns about 20 years ago, typically occupying 275-750 square meters and carrying about 6000 stock-keeping units. Most of the supermarket developments have occurred in the south of the country in the major cities of Bangalore, Chennai and Hyderabad, as well as New Delhi and Mumbai in the north.

### 2. Scope of the Study

This research article is exclusively conducted as a case study for the major food retailers in India. The human capital of food retailers in India are in a need to get a clear picture about the food retailing world. For this purpose the study focused on the in-depth issues regarding the nature and quality of services provided by the food retail stores to the Indian Customers.

#### 2.1. Research Design

This research article studied the services quality of major food retailers by taking important services quality factors like Physical Aspects, Reliability, Personal Interaction, Problem Solving and Policy which asses the retail service users, especially the food retailers. Moreover, the study made an attempt to scrutinize the impact of services quality issues on the overall services quality of food retailers. In order to measure the impact of services quality factors, we contacted 630 retail shoppers from major food retail stores namely Spencer's, Nilgiris, Reliance Fresh and Margin Free. Then we issued the instrument which comprised of 28 services quality items under the 5 factors to the retail shoppers. After data collection is over, the Marginal Normality and Joint Normality of Servqual were also checked by using the Shapiro Wilk Test, Mardia's Multivariate Skewness Test, Mardia's Multivariate Kurtosis Test and Henze Zirkler Test respectively. The

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<sup>+</sup> Corresponding author. *E-mail address:*directorjim.jmc@gmail.com

result of the above test clearly portrays the services quality items are purely departed from the normality assumption. Hence we forced to undertake a non-parametric estimation technique to dissect the impact of services quality facet. For the purpose of estimation we utilize the causal approach of research by introducing the new technique of LAD Estimation in data analysis. We used Systat Version 12 to perform the Lad Estimation and treat the overall Services Quality as dependent variable and independent variables are items under the services quality factors. The results of the analysis are presented in a sequential manner.

Table1. Shapiro Wilk Marginal Normality Test

Factors	Variables	Test Statistic	p-Value
Physical Aspects	Modern Equipment and Fixtures	0.723	0.000
	Physical Facilities	0.706	0.000
	Good looking Shopping Materials	0.805	0.000
	Attractive and Convenient Public Areas	0.808	0.000
	Easy Accessibility	0.817	0.000
	Easy Internal Mobility	0.813	0.000
Reliability	Promising Services	0.867	0.000
	Time Promising Services	0.876	0.000
	Doing it Right	0.865	0.000
	Supply of Right Products	0.822	0.000
	Error Free Transactions	0.821	0.000
Personal Interaction	Employees Knowledge	0.858	0.000
	Employees Confidential Behaviour	0.861	0.000
	Security in Transactions	0.777	0.000
	Performing Prompt Services	0.841	0.000
	Performing Exact Services	0.857	0.000
	Immediate Response to Customer Request	0.868	0.000
	Individual Caretaking	0.869	0.000
	Courteousness of Employees	0.869	0.000
	Courteous Communication	0.870	0.000
Problem Solving	Returns and Exchanges	0.857	0.000
	Sincerity in Problem Solving	0.859	0.000
	Handling Customer Compliance	0.857	0.000
Policy	Offering Quality Products	0.762	0.000
	Convenient Parking Facilities	0.896	0.000
	Convenient Operating Hours	0.784	0.000
	Acceptance of Credit Cards	0.775	0.000

(n = 630)

Table2. Multivariate (or) Joint Normality Test

Test Name	Coefficients	Test Statistic	p-value
Mardia's Skewness	103.141	10885.040	0.000
Mardia's Kurtosis	1019.543	75.016	0.000
Henze-Zirkler		1.384	0.000

(n = 630)

Table 1 shows the results of the marginal normality test named Shapiro Wilk Test. The results shows all the service quality items exactly and purely departed from the univariate normality at 1% and 5% level respectively. Moreover, Table 2 also explains the results of multivariate or Joint Normality test of the service quality items. We made an attempt to prove the multivariate normality of the items by using three battery of test namely Mardia's Skewness, Mardia's Kurtosis and Henze-Zirkler Test. The effect of the test statistic shows that the 28 service quality items are purely departed from the multivariate normality at 1% and 5% significance level respectively.

Table3. Lad Parameter Estimates – Physical Aspects

Dependent Variable : Service Quality (Y)

Independent Variables	<sup>a</sup> Spencer’s (n=250)		<sup>b</sup> Nilgiris (n = 143)		<sup>c</sup> Margin Free (n=55 )		<sup>d</sup> Reliance Fresh (n=182)	
	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error
Constant	2.442	0.266	1.354	0.278	6.859	0.798	1.741	0.161
Modern Equipment and Fixtures (X <sub>1</sub> )	0.068	0.055	0.093	0.045	-0.194	0.141	0.046	0.022
Physical Facilities(X <sub>2</sub> )	-0.104	0.066	0.098	0.041	-0.467	0.146	0.102	0.021
Good Looking Shopping Materials(X <sub>3</sub> )	0.040	0.036	0.123	0.046	-0.194	0.116	0.055	0.024
Attractive and Convenient Public Areas(X <sub>4</sub> )	0.215	0.045	0.138	0.041	0.146	0.123	0.176	0.022
Easy Accessibility (X <sub>5</sub> )	0.074	0.042	0.078	0.046	-0.131	0.171	0.148	0.018
Easy Internal Mobility (X <sub>6</sub> )	0.004	0.040	0.076	0.044	-0.152	0.122	0.074	0.020

Method : LAD Regression

Algorithm: Simplex

<sup>a</sup> SAD : 45.797       $\hat{Y} = 2.442+0.068X_1 - 0.104X_2+ 0.040X_3+0.215X_4+0.074X_5+0.004X_6$  (1)

<sup>b</sup> SAD : 30.573       $\hat{Y} = 1.354+ 0.093X_1 +0.098X_2+0.123X_3+0.138X_4+0.078X_5+0.076X_6$  (2)

<sup>c</sup> SAD : 19.382       $\hat{Y} = 6.859-0.194 X_1 - 0.467X_2- 0.194X_3+0.146X_4-0.131X_5-0.152X_6$  (3)

<sup>d</sup> SAD : 21.608       $\hat{Y} = 1.741+0.046X_1 + 0.102X_2+ 0.055X_3+0.176X_4+0.148X_5+0.074X_6$  (4)

$\hat{Y}$  is the estimated service quality score.

Table4. Lad Parameter Estimates – Reliability

Dependent Variable : Service Quality (Y)

Independent Variables	<sup>a</sup> Spencer’s (n=250)		<sup>b</sup> Nilgiris (n = 143)		<sup>c</sup> Margin Free (n=55 )		<sup>d</sup> Reliance Fresh (n=182)	
	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error
Constant	2.071	0.094	1.587	0.187	2.983	0.153	1.919	0.153
Promising Services(X <sub>1</sub> )	0.120	0.015	0.158	0.032	0.132	0.035	0.152	0.023
Time Promising services(X <sub>2</sub> )	0.121	0.012	0.128	0.032	0.012	0.037	0.063	0.020
Doing it Right(X <sub>3</sub> )	0.163	0.015	0.088	0.033	-0.039	0.041	0.089	0.022
Supply of Right Products(X <sub>4</sub> )	0.080	0.014	0.153	0.028	-0.042	0.032	0.115	0.021
Error Free Transactions(X <sub>5</sub> )	0.005	0.016	0.055	0.029	0.049	0.031	0.137	0.019

Method : LAD Regression

Algorithm: Simplex

<sup>a</sup> SAD : 31.557       $\hat{Y} = 2.071+0.120X_1 + 0.121X_2+0.163X_3+0.080X_4+0.005X_5$  (1)

<sup>b</sup> SAD : 28.829       $\hat{Y} = 1.587+0.158X_1 + 0.128X_2+0.088X_3+0.153X_4+0.055X_5$  (2)

<sup>c</sup> SAD : 8.084       $\hat{Y} = 2.983+0.132X_1 + 0.012X_2 - 0.039X_3 - 0.042X_4+0.049X_5$  (3)

<sup>d</sup> SAD : 18.998       $\hat{Y} = 1.919+0.152X_1 + 0.063X_2 + 0.089X_3 + 0.115X_4+0.137X_5$  (4)

$\hat{Y}$  is the estimated service quality score.

Table5. Lad Parameter Estimates – Personal Interaction

Dependent Variable : Service Quality (Y)

Independent Variables	<sup>a</sup> Spencer’s (n=250)	<sup>b</sup> Nilgiris (n = 143)	<sup>c</sup> Margin Free (n=55)	<sup>d</sup> Reliance Fresh (n=182)
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	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error
Constant	1.276	0.123	1.252	0.104	1.198	0.179	1.204	0.170
Employees Knowledge( $X_1$ )	-0.006	0.032	0.135	0.015	0.131	0.035	0.073	0.019
Employees confidential Behaviour ( $X_2$ )	0.046	0.032	0.087	0.014	0.132	0.041	0.080	0.018
Security in transactions( $X_3$ )	0.166	0.020	0.020	0.018	0.124	0.041	0.087	0.021
Performing prompt services ( $X_4$ )	0.072	0.020	0.075	0.023	0.058	0.045	0.088	0.021
Performing exact services ( $X_5$ )	0.069	0.023	0.038	0.018	-0.048	0.042	0.080	0.017
Immediate response to customer request ( $X_6$ )	0.133	0.030	0.112	0.023	0.076	0.049	0.068	0.020
Individual caretaking ( $X_7$ )	0.060	0.023	0.057	0.021	0.104	0.040	0.082	0.018
Courteousness of employees( $X_8$ )	0.088	0.031	0.048	0.021	0.002	0.043	0.077	0.019
Courteous communication ( $X_9$ )	0.059	0.026	0.096	0.021	0.065	0.041	0.082	0.019

Method : LAD Regression

Algorithm: Simplex

<sup>a</sup> SAD : 25.610  $\hat{Y} = 1.276 - 0.006X_1 + 0.046X_2 + 0.166X_3 + 0.072X_4 + 0.069X_5 + 0.133X_6 + 0.060X_7 + 0.088X_8 + 0.059X_9$ -(1)

<sup>b</sup> SAD : 18.705  $\hat{Y} = 1.252 + 0.135X_1 + 0.087X_2 + 0.020X_3 + 0.075X_4 + 0.038X_5 + 0.112X_6 + 0.057X_7 + 0.048X_8 + 0.096X_9$ -(2)

<sup>c</sup> SAD : 4.052  $\hat{Y} = 1.198 + 0.131X_1 + 0.132X_2 + 0.124X_3 + 0.058X_4 - 0.048X_5 + 0.076X_6 + 0.104X_7 + 0.002X_8 + 0.065X_9$ -(3)

<sup>d</sup> SAD : 17.041  $\hat{Y} = 1.204 - 0.073X_1 + 0.080X_2 + 0.087X_3 + 0.088X_4 + 0.080X_5 + 0.068X_6 + 0.082X_7 + 0.077X_8 + 0.082X_9$ -(4)

$\hat{Y}$  is the estimated service quality score.

Table6. Lad Parameter Estimates – Problem Solving

**Dependent Variable : Service Quality(Y)**

Independent Variables	<sup>a</sup> Spencer's (n=250)		<sup>b</sup> Nilgiris (n = 143)		<sup>c</sup> Margin Free (n=55 )		<sup>d</sup> Reliance Fresh (n=182)	
	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error
Constant	2.481	0.130	2.284	0.101	1.758	0.190	2.852	0.194
Returns and Exchanges( $X_1$ )	0.056	0.028	0.173	0.031	0.185	0.057	0.037	0.034
Sincerity in Problem Solving( $X_2$ )	0.142	0.040	0.136	0.033	0.097	0.056	0.185	0.029
Handling Customer Compliance( $X_3$ )	0.173	0.038	0.111	0.031	0.231	0.054	0.111	0.031

Method : LAD Regression

Algorithm: Simplex

<sup>a</sup> SAD : 39.022  $\hat{Y} = 2.481 + 0.056X_1 + 0.142X_2 + 0.173X_3$  (1)

<sup>b</sup> SAD : 26.264  $\hat{Y} = 2.284 + 0.173X_1 + 0.136X_2 + 0.111X_3$  (2)

<sup>c</sup> SAD : 8.556  $\hat{Y} = 1.758 + 0.185X_1 + 0.097X_2 + 0.231X_3$  (3)

<sup>d</sup> SAD : 26.288  $\hat{Y} = 2.852 + 0.037X_1 + 0.185X_2 + 0.111X_3$  (4)

$\hat{Y}$  is the estimated service quality score.

Table7. Lad Parameter Estimates – Policy Dependent Variable : Service Quality (Y)

Independent Variables	<sup>a</sup> Spencer's (n=250)		<sup>b</sup> Nilgiris (n = 143)		<sup>c</sup> Margin Free (n=55 )		<sup>d</sup> Reliance Fresh (n=182)	
	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error
Constant	2.889	0.161	1.999	0.307	3.246	0.351	2.815	0.225
Offering	0.037	0.033	0.037	0.048	0.148	0.044	0.074	0.036

Quality Products( $X_1$ )								
Convenient Parking Facilities ( $X_2$ )	0.074	0.024	0.136	0.047	0.019	0.032	0.037	0.021
Convenient Operating Hours ( $X_3$ )	0.037	0.036	0.037	0.055	0.028	0.048	0.111	0.032
Acceptance of Credit Cards ( $X_4$ )	0.037	0.026	0.272	0.048	-0.106	0.057	0.111	0.031

Method : LAD Regression

Algorithm: Simplex

$${}^a \text{SAD} : 42.878 \quad \hat{Y} = 2.889 + 0.037X_1 + 0.074X_2 + 0.037X_3 + 0.037X_4 \quad (1)$$

$${}^b \text{SAD} : 33.719 \quad \hat{Y} = 1.999 + 0.037X_1 + 0.136X_2 + 0.037X_3 + 0.272X_4 \quad (2)$$

$${}^c \text{SAD} : 9.010 \quad \hat{Y} = 3.246 + 0.148X_1 + 0.019X_2 + 0.028X_3 - 0.106X_4 \quad (3)$$

$${}^d \text{SAD} : 28.824 \quad \hat{Y} = 2.815 + 0.074X_1 + 0.037X_2 + 0.111X_3 + 0.111X_4 \quad (4)$$

$\hat{Y}$  is the estimated service quality score.

## 2.2. Findings and Implications

The results found that the majority of the Services Quality aspects give a positive impact on the overall Services Quality of major food retailers. The result extracted from the study is fruitful and helps to take the major managerial initiatives for improving food retail service quality.

**Spencer's** - Based on this factor the researcher recommends some suggestions to enhance the services quality of the retail outlet. Physical Aspect – The customers of Spencer's identified the elements of physical aspects which declined the quality of services provided by the store. Whenever customers entered the store, their eyes always looked for the equipments and fixtures and the availability of physical and storage facilities etc. In this regard, the managers of Spencer's should enhance the equipment and fixtures, physical facilities by providing a modern look and a high-tech look to the customers. **Nilgiris-** Reliability - examines the steadfastness of the retail chain through contributing a guaranteed service assurance done by the retail store. Reliability also refers to carry out each and every transaction with dedication and commitment. If a good has been determined to supply in a particular date it has to be done with faithfulness to reach the end-users level of delight. The human resource of this food retail chain can introduce proactive retail software called ETP V5. It gives a support to handle proactive decisions that makes a difference between success and failure. These kinds of retail services will create resoluteness in the mindset of the customers for a right product decision. **Margin Free** - Personal Interaction - Claims about how effectively do the employees of the store interacting with its end-users. In these retail stores the sales executives are not well qualified, for that reason they are not in a position to respond what the customers' desires because they are qualified at higher secondary level only. Here the managers have to go for highly skilled sales person who provide exact services to its customers. The store managers have to explain the objectives and aims of the corporate retail environment and customisation concepts to be feed to its supervisory staff. As well as the store administration of Margin Free must devise an ideal compensation plan in which more focus has to be made, because the pay package level is poor. **Reliance Fresh** - Problem Solving is one of the core factors for the retail store. Here in Reliance Fresh the customer complaints have not been solved in proper manner according to the customer's expectations. Crisis exists in the number of checkout counters. Increase in the checkout counters would carry out the work in a easy manner. The store managers must take action for customer complaints through the customer problems and clearance cell. They can also plan for online customer solutions which would be more adequate. The problems must reach the corporate office for further clearances. Extensive care should be given for the complete replacement of the products if damaged. Brand card should be introduced to explain the Kilograms of the product mentioned. **Policy** - Pursuing the final variation is the policy of the retail store. This element reviews about offering quality products, convenient parking facilities, operating hours and acceptance of credit cards. In Reliance Fresh, the patrons have assessed that the products offered is inferior when compared with other retailers. Few retailers and manufactures sell the products in their own brand name itself. The price mechanism of Reliance Fresh is

good at certain level but the quality component is weakened. So, this element has to be given more concentration by the retail managers.

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