EFFECT OF DEMOGRAPHIC CHARACTERISTICS ON RETAIL SERVICE QUALITY: A STUDY OF SUPERMARKET CONSUMERS IN JAFFNA,SRILANKA

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ABSTRACT

Retail Service Quality (RSQ) is one of the critical success factors that influence the competitiveness of an organization. This study attempts to examine, whether there are any significant mean differences among demographic factors such as gender, age, and educational qualification on RSQ of supermarkets is Jaffna, Sri Lanka. The present study employs independent samples t- test and one-way ANOVA (f-test) to test the operational hypotheses. For that purposes 373 usable responses are acquired by means of the systematic quasi-random sampling technique. The t-test revealed that, statistically there is no significant mean difference between gender and RSQ. Further, based on the f-test, there is a significant mean differences among educational levels of customers' of supermarket and RSQ, whilst the mean of age group does not differ significantly with RSQ. Finally, this study would hopefully provide a valuable insight to the academicians, researchers, policy makers of supermarkets, and practitioners of Sri Lanka as well as other emerging countries.

KEYWORDS: Gender, Age, Educational Qualification, Retail Service Quality, Supermarkets

1. INTRODUCTION

Globalization has been a great leveler in many ways, but retail services may require a judicial use of standardized practices (Raven & Welsh, 2004). Therefore the retail service quality has been the subject of considerable interest by both academics and practitioners in recent years (Gopalan & Satpathy, 2013; Siu & Tak-Hing Cheung, 2001; Sivapalan & Jebarajakirthy, 2017; Yuen & Chan, 2010). In this context, providing high RSQ is considered a basic retailing strategy for gaining competitive advantage (Bharti, Agrawal, & Sharma, 2014). Therefore, marketers need to develop their strategic marketing efforts for enhancing customer satisfaction and customer loyalty to their organization by enriching superior customer value (Achroll & Kotler, 2014). Therefore, it is essential to investigate factors having compelling effect on RSQ.

Similarly, there have been several research studies relating to the influence of RSQ on customer behavioral outcomes, such as satisfaction, purchase intention, loyalty and retention (Fullerton, 2005; Siddiqi, 2011; Sivapalan & Jebarajakirthy, 2017; To, Tam, & Cheung, 2013; Wong & Sohal, 2003). While there is an exiguous empirical research on the impact of demographic factors on RSQ scenario. Therefore, the present research examines whether is there any mean difference between the demographic factors (gender, age, and educational qualification) and RSQ in the supermarket context in Jaffna, Sri Lanka. Moreover, findings of this study are useful for the supermarkets in formulating appropriate strategies to satisfy their customer and increase loyal among customers.

2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT
2.1 RSQ

Considering the hyper competitive environment, there is a need for supermarkets to plan their strategies that will differentiate them

from other supermarket outlets. This can be achieved through the delivery of high service quality of retail (Deb, 2014). Service quality is defined as the degree of discrepancy between customers' expectation for service and their perceptions of service performance (Parasuraman, Zeithaml, & Berry, 1985). However, service quality in retailing context is different from that in any other products or services contexts (Bishop Gagliano & Hathcote, 1994; Kumar, Manjunath, & Kumar, 2012). In retailing context, both products and services are combined. Hence, general parameters defining service quality might be inappropriate for retailing context (Bishop Gagliano & Hathcote, 1994; Dabholkar, Thorpe, & Rentz, 1996). Therefore Dabholkar et al. (1996), introduced the concept of "Retail Service Quality", which encompasses five dimensions; physical aspects, reliability, personal interaction, problem solving and policy. The concept of RSQ is widely recognized and its measures have been validated and enriched by researchers in various contexts (Demirci-Orel & Kara, 2015; Sivapalan & Jebarajakirthy, 2017; Wong & Sohal, 2003; Yuen & Chan, 2010).

2.2 Demographic factors

Customer demographics and its influence on RSQ have been of interest to researchers for decades (Siu & Tak-Hing Cheung, 2001). Today, an increasing number of consumers of all demographics are engaged in multi-channel marketing (Persaud & Azhar, 2012; Valaei, Rezaei, & Shahijan, 2016). Because the demographical information are the key to derive and implement an effective segmentations strategies in todays marketing paradim (Gupta & Chintagunta, 1994). Demographic variables provide information about physical attributes of consumers that can be used to identify homogeneous groups (Workman & Cho, 2012) and it is varing from person to person (Jamal & Naser, 2003). Further, Yuen and Chan (2010) suggests that the demographic factors such as age, occupation and income help to gain a comprehensive understanding of the service quality in the retail outlets. Sharma (2015), claims that demographic characteristics of consumers such as gender, ethnicity and age may control overall service quality.

Moreover, empirical evidence argues that socio-demographic factors such as gender, age, educational status and income play an important role in determining the consumer behaviour across the world (Ilias, Hasan, & Rahman, 2009; Kuruvilla & Joshi, 2010; Mehra, 2016; Roslow, Li, & Nicholls, 2000; Roux, Le Couedic, Durand-Gasselin, & Luquet, 2000; van Waterschoot, Sinha, Van Kenhove, & De Wulf, 2008). However, the relationship between demographic factors and RSQ are not so clear, that is research findings in this area are still in lack (Ha, Minh, Anh, & Matsui, 2015; Ushantha, Wijeratne, & Achchuthan, 2014). With an aim of identifying the significance mean difference between demographic factors and RSQ in the supermarkets setting, the present study examines the significance and relavence of some key demographic variables: gender; age; and educational qualification on RSQ. In this sense, we propose the following hypothesis:

H_{1a}: There is a significant mean difference between male and female in the physical aspect of RSQ.
H_{1b}: There is a significant mean difference between male and female in the reliability of RSQ.
H_{1c}: There is a significant mean difference between male and female in the personal interaction of RSQ.
H_{1d}: There is a significant mean difference between male and female in the problem solving of the RSQ.
H_{1e}: There is a significant mean difference between male and female in the policy of RSQ.

H_{2a}: There is a significant mean difference between age and physical aspect of RSQ.
H_{2b}: There is a significant mean difference between age and reliability of RSQ.
H_{2c}: There is a significant mean difference between age and personal interaction of RSQ.
H_{2d}: There is a significant mean difference between age and problem solving of RSQ.
H_{2e}: There is a significant mean difference between age and policy of RSQ.

H_{3a}: There is a significant mean difference between educational Qualification and physical aspect of RSQ.
H_{3b}: There is a significant mean difference between educational Qualification and reliability of RSQ.
H_{3c}: There is a significant mean difference between educational Qualification and personal interaction of RSQ.
H_{3d}: There is a significant mean difference between educational Qualification and problem solving of RSQ.
H_{3e}: There is a significant mean difference between educational Qualification and policy of RSQ

3. METHOD
3.1 Sample

To test the hypotheses, paper based survey was designed for the purpose of collecting the primary data for this study. The study was limited to the consumers of supermarkets in the Jaffna, Sri Lanka. Therefore, the most prominent supermarket brands (TCT Trade Center, Annai Naga Food City, and Cargills Food City) in this city were selected and the systematic quasi-random sampling technique was adopted to recruit respondents for this study. Respondents were the customers of above three leading supermarkets and they were approached within the premises of supermarkets. Further, the structured questionnaire was given to five consumers in every one hour who shopped at supermarket outlets. A total of 500 surveys were

distributed among customers. The response rate was 85.4% (427). Among these, 373 (74.6%) of the responses were the usable data. Table 1 depicts the demographic profile of respondents.

3.2 Measure

Self-administered questionnaire was used to collect the data and respondents were required to rate their perceptions for every item using a Liker scale which was anchored at one for strongly disagree and seven for strongly agree. This survey instrument has empirically validated scales, however, these scales were modified to suit the retailing and supermarket context, where appropriate. The scales of RSQ included 30 items under the five dimensions: physical aspect, reliability, personal interaction, problem solving and policy. This means that, physical aspect was operationalized using six items; reliability, using six items; personal interaction using ten items; problem solving using three items and policy using five items. Of this 30 items, first 28 items were adopted from Dabholkar et al. (1996) and last two from Verma and Duggal (2015). A self-administered questionnaire was used in this research, which consists of two sections. The first section contains the demographic profile of respondents which consist of name of the supermarket, gender, age, educational qualifications, occupations and monthly income. Besides, the other section contains the 30 questions to assess the RSQ of the supermarket outlets.

Table I: Demographic profile of the respondents

Name of the supermarket	TCT Trade Centre (22.5%), Annai Naaga Food City (10.7%), Cargills Food City (66.8%)
Gender	Male (46.1%), Female (53.9%)
Age	Below 17 (0.5), 18 – 30 (68.9%), 31 – 40 (20.1%), 41 – 50 (6.4%), 51 and Above (4.0%)
Educational Qualification	GCE (O/L)s and Below (5.4%), GCE (A/L)s (42.6%), Graduate (26.5 %), Post Graduate (14.3%), Professionals (11.1%)
Occupation	Government (36.5%), Private (31.6%), Business (5.9%), Self-employed (4.0%), Other (22.0%)
Monthly Income	Below LKR. 25,000 (33.8%), LKR. 25,000 to LKR. 50,000 (42.6%), LKR. 50,000 to LKR. 75,000 (15.5%), LKR. 75,000 to LKR. 100,000 (4.3%), Above LKR. 100,000 (3.8%)

Before finalized the research instrument, researcher conducted the pilot study to reduce the language biasness. During the pilot study, some inconvenience words to the respondents were changed by the researcher with the help of the respondents of the pilot study. Furthermore, reliability analysis, independent sample t-test (t-test), and independent sample one-way ANOVA (f-test) were employed to identify the significant mean different between the retail service quality and the personal demographic factors. The data analysis for this study conducted through Statistical Package for Social Science (SPSS) version 23.0.

4. RESULTS AND DISCUSSION

4.1 Reliability Analysis

The initial step in this analysis part is to examine the measures' reliability and validity according to certain criteria. Internal item consistency and reliability was examined with Cronbach's Alpha test (Oly Ndubisi, 2007). Reliability refers to the extent to which a construct is free from errors and yields consistent results (Yuen & Chan, 2010). Moreover Cronbach's was used to measure the internal consistency of the multi-items used in this study. Nunnally and Bernstein (1994), proposed a criterion of 0.7 - 0.9 as a measure of good internal consistency. The respective Cronbach Alphas values of RSQ dimensions and the items used in this are reflected in Table II.

Table II: Reliability Test

Dimensions	Cronbach's alpha value
Physical Aspect	.866
Reliability	.824
Personal Interaction	.822
Problem Solving	.862
Policy	.849

In term of the Table II, that presents the Cronbach's alpha coefficients for the different dimension. Indeed, it can be seen that the results range from 0.822 to 0.866. Therefore, all values exceed the recommended threshold 0.70, indicating that variables used in this study deemed to have

adequate reliability and can be used for further analysis. Additionally, the Overall Cronbach alpha value is 0.872, which is indicating good internal consistency among the construct and the each variables are considered to be very strong (Hair, Black, & Babin, 2010).

4.2 Validity Analysis

In the meantime, Validity test is used to accurately assess the construct for this study. The

Table III, indicates the Kaiser-Meyer-Olkin measure of sampling adequacy test of retail service quality is 0.942. This indicates sufficient inter-correlations, while the Bartlett's Test of Sphericity is significant (Chi-square = 5527.492, p<0.01). Both reliability and validity results indicate the suitability and validity of the data which is collected for this study.

Table III: KMO & Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.942
Bartlett's Test of Sphericity	Approx. Chi-Square	5527.492
	df	435
	Sig.	.000

4.3 Independent Samples T-Test

T- Test was used to identify the significant difference between the two variables (Norušis, 2006). In this study, Independent Samples t-test

was performed to find out the significant mean different between male and female on retail service quality. The results of the T-test are shown in the Table IV below.

Table IV: Results of Independent samples t-test

Dimensions	Gender	N	Mean	Std. Deviation	Std. Error Mean
Physical Aspect	Male	172	6.2791	.62799	.04788
	Female	201	6.3002	.53568	.03778
Reliability	Male	172	6.0911	.71472	.05450
	Female	201	6.1095	.64175	.04527
Personal Interaction	Male	172	6.2186	.63697	.04857
	Female	201	6.1746	.71295	.05029
Problem Solving	Male	172	5.9671	.93981	.07166
	Female	201	5.9005	.99780	.07038
Policy	Male	172	6.2233	.66591	.05077
	Female	201	6.2289	.72950	.05145

The above table shows the results of the T-test on the mean differences between male and female on sub dimensions in the retail service quality. The results have revealed that, statistically there is no significant mean difference between male and female in the dimensions of the retail service quality due to the significant level (P > 0.05). It means that both male and female customers of supermarket have perceived almost same level in all the dimension of retail service

quality. Thus, the result failed to accept the hypotheses H_{1a}, H_{1b}, H_{1c}, H_{1d}, and H_{1e}.

4.4 Independent sample one –way ANOVA Test

The one – way ANOVA (f-test) was carried out to find out the significant mean difference in retail service quality among age and educational qualification of the respondents. Table V provides the results of f-test carried out to identify the mean difference between age and sub dimension of retail service quality.

Table V: Results of F-test - Age vs. RSQ

Description		Sum of Squares	df	Mean Square	F	Sig.
Physical Aspect	Between Groups	.877	4	.219	.651	.626
	Within Groups	123.992	368	.337		
	Total	124.869	372			
Reliability	Between Groups	.739	4	.185	.402	.807
	Within Groups	169.013	368	.459		
	Total	169.752	372			
Personal Interaction	Between Groups	2.966	4	.741	1.622	.168
	Within Groups	168.254	368	.457		
	Total	171.220	372			
Problem Solving	Between Groups	4.293	4	1.073	1.141	.337
	Within Groups	346.274	368	.941		
	Total	350.567	372			
Policy	Between Groups	1.918	4	.479	.978	.419
	Within Groups	180.345	368	.490		
	Total	182.263	372			

According to the above table, the significant level is greater than the 0.05 levels ($P > 0.05$). It means, f-test revealed that there is no significant mean difference between age group and sub dimension of retail service quality. Therefore, the result failed to accept the hypotheses H_{2a}, H_{2b}, H_{2c}, H_{2d}, and H_{2e}. The Table VI, explains the mean difference between educational qualification of the respondents and sub dimension of retail service quality.

Table VI: Results of F-test – Educational Qualification vs. RSQ

Description		Sum of Squares	df	Mean Square	F	Sig.
Physical Aspect	Between Groups	4.739	5	.948	2.896	.014
	Within Groups	120.130	367	.327		
	Total	124.869	372			
Reliability	Between Groups	7.801	5	1.560	3.535	.004
	Within Groups	161.951	367	.441		
	Total	169.752	372			
Personal Interaction	Between Groups	6.878	5	1.376	3.072	.010
	Within Groups	164.342	367	.448		
	Total	171.220	372			
Problem Solving	Between Groups	15.906	5	3.181	3.489	.004
	Within Groups	334.661	367	.912		
	Total	350.567	372			
Policy	Between Groups	4.708	5	.942	1.946	.016
	Within Groups	177.554	367	.484		
	Total	182.263	372			

Another result on ANOVA test in Table V, clearly indicated that there is a significant mean difference between the all dimensions of the retail service quality among the five educational groups ($P < 0.05$. Thus, the hypotheses H_{3a}, H_{3b}, H_{3c}, H_{3d}, and H_{3e} was accepted. Because the retail service quality is differ the educational background of the respondents.

5. CONCLUSION

The primary objective of this study was to analyze the impact of demographic factors (gender, age, and educational qualification) on retail service quality among the customers of supermarket in Jaffna, Sri Lanka. In this way, influence of demographic variables such as gender, age, and educational qualification of supermarket customer on retail service quality has been analyzed using independent samples t-test and the one-way ANOVA (f-test). The results of the t-test indicated that there was no statistically significant mean difference between the male and female customers of supermarkets regarding with the services they receive during retail encounters. Findings from the one-way ANOVA, it is clear that there was no significant differences between age group and sub dimension of retail service quality. Besides, significant mean differences have been observed on the all dimensions of retail service quality among educational qualification of the customers.

The outcomes of this research can also be used to help the supermarket management to derive a better segmenting, targeting and positioning strategies in the retail service quality paradigm. Therefore, the outcome of this study could facilitate the supermarkets to devise valuable techniques to attract the different groups of customers. One of the limitations of this study was that the respondents were from only selected supermarket and may not represent the entire supermarket customers in Jaffna, Sri Lanka. Therefore, future research should consider the responses from this population as well. This will enable a stronger and a more reasonable standpoint on the research issues.

REFERENCES

1. Achroll, R., & Kotler, P. (2014). The service-dominant logic for marketing. The service-dominant logic of marketing: Dialog, debate, and directions, 320.
2. Bharti, K., Agrawal, R., & Sharma, V. (2014). What drives the customer of world's largest market to participate in value co-creation? Marketing Intelligence & Planning, 32(4), 413-435.
3. Bishop Gagliano, K., & Hathcote, J. (1994). Customer expectations and perceptions of service quality in retail apparel specialty stores. Journal of Services Marketing, 8(1), 60-69.
4. Dabholkar, P. A., Thorpe, D. I., & Rentz, J. O. (1996). A measure of service quality for retail stores: scale development and validation. Journal of the Academy of marketing Science, 24(1), 3.
5. Deb, M. (2014). A study on the factors governing retailer–customer long-term relationship. International Journal of Commerce and Management, 24(3), 257-272.
6. Demirci-Orel, F., & Kara, A. (2015). Assessing the Role of Service Quality of Retail Self-Checkouts on Customer Satisfaction and Loyalty: Empirical Evidence from an Emerging Market Marketing Dynamism & Sustainability: Things Change, Things Stay the Same… (pp. 226-226): Springer.
7. Fullerton, G. (2005). The service quality–loyalty relationship in retail services: does commitment matter? Journal of Retailing and Consumer Services, 12(2), 99-111.
8. Gopalan, R., & Satpathy, B. (2013). Indian Retail Service Quality Evaluation-Grey and Ridit Approach. International Journal of Business Insights & Transformation, 7(1).
9. Gupta, S., & Chintagunta, P. K. (1994). On using demographic variables to determine segment membership in logit mixture models. Journal of Marketing Research, 128-136.
10. Ha, N. T., Minh, N. H., Anh, P. C., & Matsui, Y. (2015). The relationship between service quality and customer loyalty in specialty supermarket-Empirical evidence in Vietnam.
11. Hair, J. F., Black, W. C., & Babin, B. J. (2010). RE Anderson Multivariate data analysis: A global perspective: New Jersey, Pearson Prentice Hall,).
12. Ilias, A. I., Hasan, H. F. A., & Rahman, R. A. (2009). Student Satisfaction and Service Quality: Any Differences in Demographic Factors? International Business Research, 1(4), 131.
13. Jamal, A., & Naser, K. (2003). Factors influencing customer satisfaction in the retail banking sector in Pakistan. International Journal of Commerce and Management, 13(2), 29-53.
14. Kumar, A., Manjunath, S., & Kumar, N. (2012). A Study Of Retail Service Quality In Orgnised Retailing. International Journal of Engineering and Management Sciences, 3(3), 370-372.
15. Kuruvilla, S. J., & Joshi, N. (2010). Influence of demographics, psychographics, shopping orientation, mall shopping attitude and purchase patterns on mall patronage in India. Journal of Retailing and Consumer Services, 17(4), 259-269.
16. Mehra, R. (2016). Effect of Demographic Factors on the Purchase of Private Label Brands of Food Products from Organized Retail Stores in Chandigarh.
17. Norušis, M. J. (2006). SPSS 14.0 guide to data analysis: Prentice Hall Upper Saddle River, NJ.
18. Nunnally, J. C., & Bernstein, I. H. (1994). Psychological theory. New York, NY: MacGraw-Hill.
19. Oly Ndubisi, N. (2007). Relationship marketing and customer loyalty. Marketing Intelligence & Planning, 25(1), 98-106.
20. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. the Journal of Marketing, 41-50.
21. Persaud, A., & Azhar, I. (2012). Innovative mobile marketing via smartphones: Are consumers ready? Marketing Intelligence & Planning, 30(4), 418-443.
22. Raven, P., & Welsh, D. H. (2004). An exploratory study of influences on retail service quality: a focus on Kuwait and Lebanon. Journal of Services Marketing, 18(3), 198-214.
23. Roslow, S., Li, T., & Nicholls, J. (2000). Impact of situational variables and demographic attributes in two seasons on purchase behaviour. European Journal of Marketing, 34(9/10), 1167-1180.
24. Roux, C., Le Couedic, P., Durand-Gasselin, S., & Luquet, F.-M. (2000). Consumption patterns and food attitudes of a sample of 657 low-income people in France. Food Policy, 25(1), 91-103.
25. Sharma, S. K. (2015). Adoption of e-government services: The role of service quality dimensions and demographic variables. Transforming Government: People, Process and Policy, 9(2), 207-222.
26. Siddiqi, K. O. (2011). Interrelations between service quality attributes, customer satisfaction and customer loyalty in the retail banking sector in Bangladesh. International Journal of Business and Management, 6(3), 12.
27. Siu, N. Y., & Tak-Hing Cheung, J. (2001). A measure of retail service quality. Marketing Intelligence & Planning, 19(2), 88-96.
28. Sivapalan, A., & Jebarajakirthy, C. (2017). An application of retailing service quality practices influencing customer loyalty toward retailers. Marketing Intelligence & Planning.
29. To, W. M., Tam, J. F., & Cheung, M. F. (2013). Explore how Chinese consumers evaluate retail service quality and satisfaction. Service Business, 7(1), 121-142.
30. Ushantha, R., Wijeratne, A., & Achchuthan, S. (2014). An Assessment of Retail Service Quality:

An Empirical Study of the RSQS in Sri Lankan Supermarkets. developing country studies, 4(3), 78-90.

31. Valaei, N., Rezaei, S., & Shahijan, M. K. (2016). CouQual: assessing overall service quality in courier service industry and the moderating impact of age, gender and ethnicity. International Journal of Management Concepts and Philosophy, 9(2), 144-169.

32. van Waterschoot, W., Sinha, P. K., Van Kenhove, P., & De Wulf, K. (2008). Consumer learning and its impact on store format selection. Journal of Retailing and Consumer Services, 15(3), 194-210.

33. Verma, H. V., & Duggal, E. (2015). Retail service quality in India: construct exploration and measure development. South Asian Journal of Global Business Research, 4(1), 129-148.

34. Wong, A., & Sohal, A. (2003). Service quality and customer loyalty perspectives on two levels of retail relationships. Journal of Services Marketing, 17(5), 495-513.

35. Workman, J. E., & Cho, S. (2012). Gender, fashion consumer groups, and shopping orientation. Family and Consumer Sciences Research Journal, 40(3), 267-283.

36. Yuen, E. F., & Chan, S. S. (2010). The effect of retail service quality and product quality on customer loyalty. Journal of Database Marketing & Customer Strategy Management, 17(3-4), 222-240.