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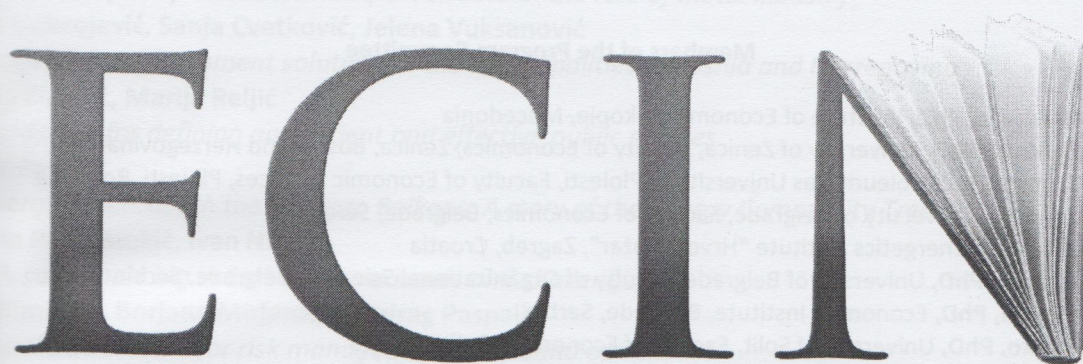
ECIN

ECIN 2016: INTERNATIONAL ECONOMICS AND MANAGEMENT CONFERENCE

Thematic Proceedings

Belgrade, September 2016

CONTENTS

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Measuring service quality in convenience retailing using modified CALSUPER scale

Abstract: This study aims to propose service quality measurement instrument which would be suitable to the context of convenience retailing of a transitional economy. Widely acknowledged CALSUPER instrument, developed in the context of supermarket retailing, together with group discussions with retail customers provided the foundation for the development of measurement instrument. The survey was conducted on a sample of 286 shoppers, whose primary source of supply of groceries and related assortment were convenience stores. Findings of exploratory factor analysis (EFA) and reliability analysis indicate four internally consistent dimensions of convenience retailing service quality. Results of the study also indicate significant differences between customers' expectations and perceptions of service quality attributes, wheres the application of stepwise regression indicate employees' responsive, empathetic and assuring bahavior as the most important service quality dimension. Implications of the study have been discussed and suggestions for further research are highlighted.

Keywords: convenience retailing, retail service quality, measurement instrument, CALSUPER, exploratory factor analysis, multiple linear regression

1. Introduction

The construct of service quality has gained the status of one of the most discussed and debated topics in Service Marketing literature to date. A surge of interest in service quality was spurred on by the expected positive consequences of service quality. Literature review indicates positive impact of service quality on customer satisfaction (Lee et al., 2000; Brady et al., 2005; Žabkar et al., 2010; Calabuig et al. 2015) which further leads to customers' repurchase intentions. Empirical studies have also supported positive impact of service quality on perceived value (Calabuig et al., 2015; Roger-Monzo et al., 2015). In addition to customer satisfaction and perceived value, the construct of service quality has been also directly linked to customer loyalty. In a multicompany study Zeithaml et al. (1996) provide evidence of significant impact of service quality on customers' loyalty intentions, i.e. customers' willingness to say positive things, recommend the company to other people and encourage friends and relatives to do business with the company, as well as customers' willingness to repurchase from the same company in the future and pay price premiums. On a sample of customers of different types of service industries, such as supermarkets, fast food restaurants, amusement parks and outpatient clinics, Bloemer et al. (1999) corroborated positive impact of service quality on customers' willingness to recommend the service provider, repurchase from the same company and pay higher prices for quality services. These findings have been also supported in the context of health care services (Lonial et al., 2010) and tourism industry (Žabkar et al., 2010).

Whereas initially greater attention was paid to the measurement of service quality and its implications in the context of developed economies, over recent years, due to rising competitive pressures, there has been a surge of interest in the construct of service quality in the context of developing economies. Among them is also Serbia, which has been classified as an upper middle income economy, according to the World Bank's classification (www.worldbank.org). In the development of modern market economy one of the key roles is played by retail sector (Lovreta, 2008). At the outset of new millennium, with the opening of Serbian market, its retail sector has been faced with increasing presence of foreign retail chains, which has finally led to the duopoly and dominance of Belgium-based Delhaize and Agrokor, which market share amount to 62% (Savić & Garić, 2015). Faced with large retail companies with broader assortment and larger buying power, an alternative for small and medium-sized retail enterprises for attracting and retaining customers is improvement in quality of

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services offered to the customers. As an instrument for service quality measurement suitable to the context of Serbian convenience retailing has not been devised yet, the primary aim of this study is to set foundations for the development of proper measurement instrument, based on previous literature review and the examination of applicability of CALSUPER instrument, widely acknowledged measurement scale developed in the context of Spanish retailing.

The remainder of the paper is organized as follows. First, the review of literature pertaining to the measurement of the service quality is presented, followed by a discussion of the methodology applied. Findings of the study are presented subsequently, followed by a discussion of the research and managerial implications, limitations of the study and suggestions for future research.

2. Literature review

Due to unique characteristics of services, such as intangibility, perishability, simultaneity of consumption and production and heterogeneity, service quality is an abstract and elusive construct and as such it is more difficult for customers to evaluate than goods quality (Ueltschy et al., 2007). This is especially true for professional services, which are people-based. However, due to a number of favourable consequences of improvements of goods quality and the rise of service industries in overall economic activity, researchers' attention since the beginning of 1980s has been increasingly given to the construct of service quality. According to the most widely accepted conceptualization of service quality, the construct is defined as "a consumer's judgment about an entity's overall excellence or superiority" (Parasuraman et al., 1988; p. 15) and in practice it is operationalized as calculating the difference between consumer perceptions of the delivered service and consumer expectations about a service, on a number of items addressing five dimensions of service quality, such as reliability, assurance, responsiveness, tangibles and empathy (Parasuraman et al., 1985). The key to ensuring acceptable service quality is meeting or exceeding customers' expectations about a service. According to Parasuraman et al. (1985) consumers generally use the same criteria in evaluation of service quality, regardless of the type of service. Based on this notion, the authors devised a 22-item instrument, called SERVQUAL, for measuring customers' perceptions of service quality and in a number of subsequent examinations corroborated validity and reliability of the instrument in a wide spectrum of services (Parasuraman et al., 1988; 1991, 1994).

However, a number of consecutive applications of the SERVQUAL instrument in a variety of service industries resulted in equivocal conclusions regarding the scale's applicability across service settings. Among the first researchers who examined the applicability of SERVQUAL instrument in retail setting were Carman (1990) and Finn and Lamb (1991). Carman's (1990) application of SERVQUAL scale in the context of tyre retailing led to the conclusion that five dimensions of service quality were not generic and the author suggested adding new service quality attributes, relevant to the context of retailing. Finn and Lamb (1991) examined the applicability of SERVQUAL instrument in the context of department and discount stores and their confirmatory factor analysis failed to support five-dimensional structure of service quality, which led to the conclusion that without modifications SERVQUAL scale could not be used as a proper measurement instrument by retail companies. According to Dabholkar et al. (1996), SERVQUAL instrument does not adequately capture customers' perceptions of service quality of retail stores, as it was devised on the basis of examinations in a number of "pure" service settings (e.g. retail banking, long distance telephone service, credit card and securities brokerage), whereas retail companies offer a mix of goods and services and customer's experience in a retail setting involves more than a nonretail service experience. This notion was also supported by Vazquez et al. (2001) who, on the basis of group discussions and subsequent survey research conducted in the context of supermarket retailing in Spain, developed a 28-item CALSUPER scale. According to the authors, customers' perceptions of overall service quality of a retailing company are shaped by their perceptions along four dimensions of retail service quality, physical aspects, reliability, personal interaction and policies.

Literature review indicates context as well as culture-specific nature of service quality constructs. According to Greenland et al. (2006) a service quality measurement instrument devised in a developed economy should not be directly transposed into emerging markets, but it should be first tailored to the research context, on the basis of extensive qualitative and quantitative research, in order to avoid omitting important service quality attributes and losing details. Greenland et al.'s (2006) recommendations have been adhered to in this study as well, whereas qualitative research was conducted first, with the aim of generating initial pool of service quality attributes relevant in the

context of convenience store retailing, followed by quantitative research. The following sections describe methodology which has been applied, as well as main conclusions and implications of the study.

3. Research methodology

Quantitative research has been performed by means of structured questionnaire, on a convenience sample of shoppers whose primary source of providing grocery and related assortment were convenience stores. Students attending the course of Marketing at small public faculty participated in data collection, by means of face-to-face interviewing, which took place in selected households in the region of Eastern Serbia. A total of 350 questionnaires were distrubuted, whereas 286 properly fulfilled questionnaires were entered into statistical analysis, yielding a response rate of 81.7%.

Prior to quantitative research, a thorough qualitative study was conducted. Review of literature dealing with the construct of service quality and the development of service quality measurement instruments across service industries was performed first, whereas special attention was given to CALSUPER instrument, measurement scale which was developed in the context of Spanish retailing (Vazquez et al., 2001). Literature review was followed by group discussions with convenience store customers. Respondents who participated in group discussions were asked to recall particularly satisfying and dissatisfying shopping experiences which, together with service quality attributes included in CALSUPER instrument, provided intial pool of measurement items. Both customer expectations and perceptions of service quality were measured. In addition to service quality attributes, structured questionnaire also included an item relating to customer overall service quality perceptions. Items were measured on a 7-point Likert-type scale.

Dimensionality of service quality in the context of Serbian convenience store retailing was examined by means of exploratory factor analysis (EFA), whereas paired samples t-test was applied to examine the existence of service quality gaps. Relative importance of retail service quality dimensions was examined by means of multiple linear regression. Data analyses were performed using SPSS v.18.

4. Results and discussion

Principal component analysis with varimax rotation was performed in order to condense larger number of items into smaller number of latent variables, in this case service quality dimensions in convenience store retailing. Although both customers' expectations and perceptions were measured, into factor analyses were entered only items related to customer perceptions. Factor loadings lower than 0.40 were suppressed and eigenvalue≥1 was set as a criterion for factor extraction. Prior to factor extraction, Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of sphericity were examined. The analysis yielded KMO value of 0.918 and indicated significance of Bartlett's test implying acceptable level of correlation among observable variables, i.e. suitability of data for factor analyses. Several rounds of exploratory factor analyses were performed excluding variables with crossloadings over two or more factors. Factor analysis finally yielded four factors explaining 57.56% of variance in the model. According to the content of factors they were named as follows: employees' behavior, store's ambiance, retailer's policy and assortment and layout. Rotated factor solution is presented in Table 1. To assess reliability of service quality dimensions, i.e. extent to which the sets of items are consistent in what they are intended to measure (Hair et al., 2009), Cronbach's alpha values were calculated for each of the factors. Cronbach's alpha coefficients which were higher than the lower threshold of 0.70 (0.882; 0.798; 0.795; 0.770) indicated acceptable level of construct validity of retail service quality.

Results of this study indicate that in the context of Serbian convenience retailing customers' perceptions of overall quality of retailer's services are shaped by their perceptions of employees' responsiveness, assurance and empathy, store's ambiance, retailer's policy and store layout and assortment.

Relative importance of service quality dimensions was examined by means of stepwise regression, whereas service quality dimensions were entered into analysis as predictor variables and overall assessment of service quality as criterion variable. Collinearity among predictors was examined first, by calculating Tolerance and VIF values. Tolerance value indicates the percetage of variance in the

predictor variable than cannot be accounted by other predictors and values lower than 0.10 indicate redundancy of a predictor, whereas VIF value indicates the effect that other predictors have on a standard error of a regression coefficient and variables with VIF values higher than 10 may merit further investigation (Hair et al., 2009).

Table 1. Rotated component matrix

	Component			
	1	2	3	4
Employees' behavior				
Q1. Pleasant appearance of employees	.554			
Q7. Employees are always polite with customers	.709			
Q8. Employees are willing to put in extra effort to help customers	.714			
Q9. Customers are quickly served at the cash register	.752			
Q15. Employees instill confidence into customers	.670			
Q17. Employees have enough knowledge to answer customers' questions	.619			
Q18. Adequate number of empoyees for prompt and efficient serving of customers even in peak hours	.640			
Q19. Special tretment of loyal customers	.615			
Q20. Employees are never too busy to respond to customers' requests	.750			
Store's ambiance				
Q16. The store provides convenient, clean and well-lit parking area		.489		
Q21. Pleasant scents and ventilation in the store		.708		
Q22. Pleasant sounds in the store		.794		
Q23. Pleasant lighting in the store		.708		
Q24. Appropriate combination of colours in the store		.714		
Retailer's policy				
Q3. Attractive sales promotions in the store			.734	
Q4. Store's working hours are tailored to the needs of customers			.550	
Q5. Customers are well informed about upcoming sales promotions			.784	
Q6. Attractive promotional material is available in the store (brochures, leaflets, catalogues, posters, etc.)			.757	
Store layout & assortment				
Q10. Wide assortment of goods				.580
Q11. The store provides various possibilites of dererred payment				.719
Q12. The products are appropriately displayed on the shelves				.626
Q13. Convenient depth of the assortment				.645
Q14. The layout of the store enables customers to move around with ease				.561
Eigenvalues	4.524	3.091	2.853	2.771
% of Variance	19.671	13.439	12.405	12.047
Cumulative %	19.671	33.110	45.515	57.562

Source: authors'

As presented in Table 2, Tolerance values were higher than 0.10 and VIF values were lower than 10, indicating the absence of high collinearity among the predictors, i.e. service quality dimensions. According to Parasuraman et al.'s (1988) application of generic SERVQUAL scale across service settings, reliability emerged as the most critical dimension of service quality in shaping customers' overall perceptions of service quality, whereas empathy was found to be the least important. Standardized beta coefficients of this study indicate employees' behavior as the most significant determinant of customer overall retail service quality perceptions, followed by store's ambiance and layout and assortment, whereas retailer's policy was deemed the least important predictor.

Table 2. Regression coefficients and collinearity statistics

Model	R Square	Adjusted R Square	Unstandardized Coeff.		Standardized Coeff.	t	Sig.	Collinearity statistics	
			B	Std. Error	Beta			Tolerance	VIF
(Constant)			1.139	.271		4.197	.000		
Factor 1			.332	.052	.338	6.436	.000	.680	1.472
Factor 2	.477	.469	.176	.049	.202	3.605	.000	.597	1.675
Factor 4			.194	.062	.184	3.138	.002	.543	1.840
Factor 3			.123	.046	.144	2.698	.007	.655	1.525

Dependent variable: Overall service quality of a retailer

Source: authors'

In order to examine how successful convenience retailers are in meeting customers' needs, i.e. whether customers' perceptions fall short of exceed expectations, the difference between perceptions and expectations was calculated for each service quality attribute retained in the final round of exploratory factor analysis and statistical significance of the differences was examined by means of paired samples t-test. Results of the analysis, which are presented in Table 3, indicate convenience retailers' inability to fulfill customers' expectations per each of service quality attributes, whereas the discrepancy between customers' perceptions and expectations was not statistically significant (p>0.05) only in terms of combination of colours.

Table 3. Paired samples t-test

	Mean perceptions	Mean expectations	Perceptions - Expectations	Paired t-value	Sig. (2-tailed)
Q1. Pleasant appearance of employees	4.84	5.48	-0.64	-7.235	.000
Q7. Employees are always polite with customers	5.16	6.34	-1.18	-12.021	.000
Q8. Employees are willing to put in extra effort to help customers	4.73	5.71	-0.98	-10.642	.000
Q9. Customers are quickly served at the cash register	4.58	6.13	-1.55	-14.114	.000
Q15. Employees instill confidence into customers	4.89	5.84	-0.95	-10.781	.000
Q17. Employees have enough knowledge to answer customers' questions	4.80	5.86	-1.06	-12.694	.000
Q18. Adequate number of empoyees for prompt and efficient serving of customers even in peak hours	4.89	6.10	-1.21	-13.203	.000
Q19. Special tretment of loyal customers	4.50	5.32	-0.82	-8.898	.000
Q20. Employees are never too busy to respond to customers' requests	4.78	5.91	-1.13	-11.762	.000
Q16. The store provides convenient, clean and well-lit parking area	4.88	5.70	-0.82	-7.098	.000
Q21. Pleasant scents and ventilation in the store	5.35	6.01	-0.66	-7.978	.000
Q22. Pleasant sounds in the store	4.39	5.03	-0,64	-5.286	.000
Q23. Pleasant lighting in the store	5.57	6.04	-0,47	-6.330	.000
Q24. Appropriate combination of colours in the store	4.81	4.95	-0,14	-1.566	.118
Q3. Attractive sales promotions in the store	5.15	5.81	-0,66	-6.565	.000
Q4. Store's working hours are tailored to the needs of customers	5.56	6.02	-0,46	-5.513	.000
Q5. Customers are well informed about upcoming sales promotions	4.95	5.70	-0,75	-7.950	.000
Q6. Attractive promotional material is available in the store (brochures, leaflets, catalogues, posters, etc.)	4.64	5.12	-0,48	-4.546	.000
Q10. Wide assortment of goods	5.35	6.14	-0,79	-9.671	.000
Q11. The store provides various possibilites of dererred payment	5.77	5.96	-0,19	-2.035	.043
Q12. The products are appropriately displayed on the shelves	5.40	6.09	-0,69	-8.987	.000
Q13. Convenient depth of the assortment	5.10	5.48	-0,38	-4.646	.000
Q14. The layout of the store enables customers to move around with ease	5.32	6.12	-0.80	-8.744	.000

Source: authors'

5. Conclusions

The main objective of this study was to propose and empirically examine service quality measurement instrument which would be suitable to the context of convenience retailing in Serbia. Widely acknowledged CALSUPER instrument, developed in the context of supermarket retailing in Spain, and service quality attributes generated on the basis of group discussions with convenience retailing customers generated initial pool of service quality items, which was further refined by the application of exploratory factor analysis. Quantitative study resulted in a 23-item scale, addressing four dimensions of service quality of convenience retailing. Findings of this study point to the key

importance of employees' behavior as a determinant of overall perceptions of service quality of a convenience retailer, whereas retailer's policy related to sales promotion activities was least important for determining customers' overall quality perceptions. In line with the development of generic SERVQUAL instrument, this study also focused on the measurement of both customer perceptions and expectations. Further analysis indicated high level of customer expectations, i.e. underperformance of convenience retailers in meeting customer expectations, whereas all but one service quality gaps were statistically significant at the .05 level.

Despite its contribution, this study is not bereft of limitations. The main drawback of the study is the size and scope of the sample. As the study has been performed on a sample of customers from Eastern Serbia, findings of this research should not be generalized to the context of convenience retailing in Serbia. In order to achieve generalizability of the findings it is highly advisable to replice the study on a more representative sample of convenience retailing customers. Although this study resulted in four internally consistent service quality measurement subscales, i.e. service quality dimensions, these latent variables explain 57.56% of the variance in the model, indicating the existence of some other service quality attributes which might be important in determining customers' perceptions of retail service quality, but which have not been initially included in the model. Therefore, thorough qualitative research, including customers of convenience retailing across Serbia, followed by quantitative survey on a representative sample of customers, is highly advisable.

Development of valid and reliable measurement instrument would be of particular relevance for retailers as it would provide the opportunity of better understanding customer expectations and perceptions and the improvement of service quality. Such an instrument could be used by retailers for comparing their own performance relative to their principal competitors. Its application is also advisable on a continual basis, as it would provide the opportunity of tracking service quality trends and highlight service aspects in need of further improvement.

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1. Introduction