EUROPEAN CUSTOMER SATISFACTION INDEX SCALE COMPATIBILITY; APPLICATION IN FIVE STAR HOTELS OF ANTALYA

Cafer Topaloğlu
Muğla University
School of Tourism and Hotel Managment
Muğla, Turkey
ctopaloglu@mu.edu.tr

and

Onur Akbulut
Turkuaz Boutique Hotel Sarıgerme
Muğla, Turkey
info@sarigerme.tc

ABSTRACT

This research seeks to contribute to the literature on customer satisfaction measurement by providing a multi-item and multi dimensional scale to evaluate customer satisfaction. Customer satisfaction is measured by using European Customer Satisfaction Index. 828 participants responded. After the measurement of structure equation model in LISREL programme it is found that observation model has sufficient goodness of fit statistics. Afterwards, the structural equation model is analyzed. Results of the analysis show that image dimension did not provide sufficient goodness of fit statistics. Image dimension was removed and a new model formed. The new model did provide sufficient goodness of fit statistics.

Keywords: Customer Satisfaction, Customer Satisfaction Index, ECSI.

INTRODUCTION

The concept of customer satisfaction has attracted much attention in recent years. Satisfaction could be defined as a customer's post-purchase evaluation of a product or service. A key motivation for the growing emphasis on customer satisfaction is that higher customer satisfaction can lead to a stronger competitive position resulting in higher market share and profit reduce price elasticity, lower business cost, reduce failure cost, and reduce the cost of attracting new customers (Fornell, 1992). Customer satisfaction is also generally assumed to be a significant determinant of repeat sales, positive word-of-mouth, and customer loyalty (CL). Satisfied customers return and buy more, and they tell other people about their experiences (Fornell et al., 1996).

It is self evident that companies should listen to and satisfy their customers. Numerous studies have shown that the long-term success of a firm is closely related to its ability to adapt to customer needs and changing preferences (Li et al., 2006; Takala et al., 2006).

The original interest in customer satisfaction research was on customer's experience with a product episode or service encounter (Yi, 1990; Anderson et al., 1994). More recent studies have focused on cumulative satisfaction. Cumulative satisfaction defines satisfaction as customer's overall experience to date with a product or service provider. This approach to satisfaction provides a more direct and comprehensive measure of a customer's consumption utility, subsequent behaviors and economic performance (Fornell et al., 1996).

The customer satisfaction index (CSI) model is a structural model based on the assumptions that customer satisfaction is caused by some factors such as perceived quality (PQ), perceived value (PV), expectations of customers, and image of a firm. These factors are the antecedents of overall customer satisfaction. The model also estimates the results when a customer is satisfied or not. These results of customer satisfaction are consequences factors such as complaints or loyalty of customer (Johnson et al., 2001). Each factor in the CSI model is a latent construct which is operationalized by multiple indicators (Fornell, 1992;Chien et al., 2002).

Swedish customer satisfaction barometer (SCSB), reported in 1989, was the first national CSI (Fornell, 1992). It was applied to 130 companies from 32 Swedish industries. In 1992, the German customer barometer

(GCB) was introduced. The study is conducted for 52 industry sectors in Germany (Meyer and Dornach, 1996). The American customer satisfaction index (ACSI) was developed in 1993 by Claes Fornell, Founder of SCSB. The ACSI survey is conducted for seven main economic sectors, 35 industries, and more than 200 companies with revenues totaling nearly 40 percent of the US GNP (Fornell et al., 1996). The European customer satisfaction index (ECSI), developed by European organization for quality and European foundation for quality management, was first introduced in 1999 across 11 European countries (Eklöf and Westlund, 2002). Other efforts for establishing national CSIs can be seen in Denmark, Austria, France, Netherlands, Switzerland, Taiwan, New Zealand, South Korea, Malaysia, Hong Kong and Russia (Grigoroudis and Siskos, 2003).

The ECSI, a modified adaptation of the ACSI model, considers the European economy as a whole, and thus, CSI scores of the countries can be compared with each other and with the European average (Eklof and Westlund, 1998). In the ECSI model, customer expectations, PQ, PV, customer satisfaction, and CL constructs are modeled the same as in the ACSI. There are two fundamental differences between the ACSI and ECSI models. First, the ECSI model does not include the complaint behavior construct as a consequence of satisfaction. Second, the ECSI model incorporates company image as a latent variable in the model. In the ECSI model, company image is expected to have a direct effect on customer expectations, satisfaction and loyalty (Grigoroudis and Siskos, 2003).

The ECSI is derived from successful applications of the Swedish and American national customer satisfaction indices, designed to improve the measurement of customer satisfaction, and has been validated in such service industries as telecommunications, postal services and banks (Chitty et al., 2007).

Customer satisfaction is one of the main factors for the success of a company. Customer satisfaction measurement is possible with customer satisfaction indexes. Today, customer satisfaction indexes are carried out commonly in many countries. The structure of the European Union contributed to the foundation of European Customer Satisfaction Index. The main characteristic of European Customer Satisfaction Index is that the observed variables in its structure can be easily usable in the manufacturing and service sectors.

RESEARCH METHODOLOGY

Sample
The survey sample contained slightly more females than males 52.2-44 per cent. The great majority 39.9 per cent were aged 41 years and over, with 30.6 per cent being 21-30 years, 19.5 per cent being 31-40 years and 9.9 per cent aged 20 and under. Over half the respondents 52.4 per cent had graduated from university, 35.5 percent from high school and 12.1 percent from primary school.

Survey instrument
The survey questionnaire was developed from the literature review. A pilot study of 264 randomly selected five star hotel customers staying at five star hotels located in Sarıgerme town assessed its reliability and validity. Some questions were duly revised to improve respondent comprehension. After that, 864 randomly selected five star hotel customers staying at five star hotels located in Antalya city assessed. Respondents expressed the strength and directions of their feelings on a five-point Likert scale from "strongly disagree" (= 1) to "strongly agree" (= 5). The final questionnaire contained 29 questions addressing all the variables: image, technical dimensions, functional dimensions, price, perceived value, satisfaction and loyalty.

RESULTS

Analysis
The data were screened using the SPSS program (Version 11). A list wise deletion of missing cases was undertaken and outliers were examined to ensure that extreme values did not influence the results. The assumptions of normality, linearity and homo skedasticity were assessed by examining skewness and kurtosis values and scatter plot diagrams (Tabachnick and Fidell, 1989).

In order to evaluate simultaneously the relationships shown in Figure 1, and to evaluate the measurement properties of the important factors in the model so that the findings of the study could more widely applied, it was decided to conduct confirm analysis using LISREL 8.51.

"A structural equation model with unobservable latent variables... that link customer satisfaction to its determinants and, in turn, to its consequence, namely customer loyalty" (Kristensen et al., 2000:1010). The original ECSI model included customer expectations as an independent variable. Their role in determining

perceived value is not discussed in the current study because the customers surveyed had stayed at the hotels for more than one night prior to the survey. Thus, their expectations would have been influenced by that experience, rather than other stays elsewhere. The model suggests that perceived value has an impact on satisfaction, which, in turn, is an antecedent to customer loyalty. Perceived value is assumed to result from a customer's perceptions of the core service provided (termed "technical dimensions"), perceptions of service processes (termed "functional dimensions"), the image of the service provider (in this case, Five star hotels randomly selected in Antalya region) and the price of the accommodation.

Figure 1
Graphical Illustration of The Proposed Structural Equation Model with T-Values
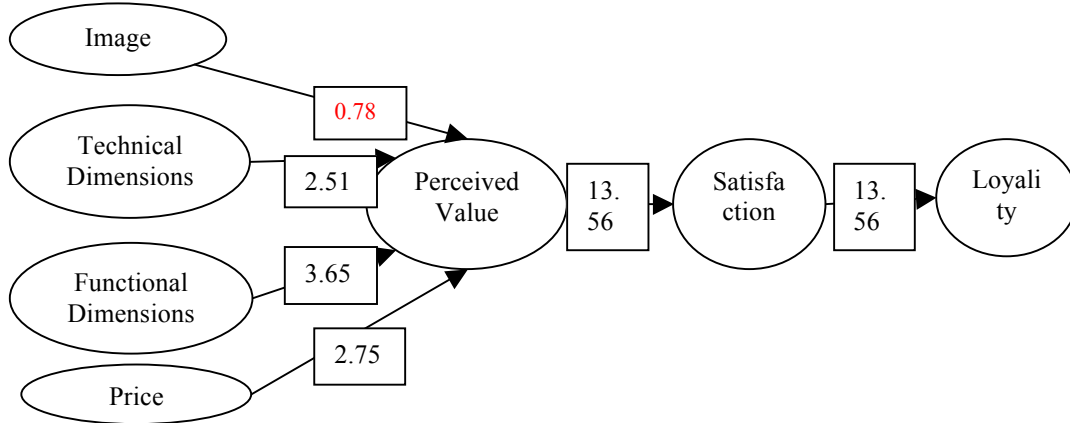
Customer satisfaction is measured by using European Customer Satisfaction Index. After the measurement of structure equation model in LISREL programme it is found that observation model has sufficient goodness of fit statistics. Afterwards, the structural equation model is analyzed. Results of the analysis show that image dimension did not provide sufficient goodness of fit statistics, path from image to perceived value is under critical t-value 1.96. This is shown in Figure 1. Image dimension was removed and a new model formed. This is shown in Figure 2.

Figure 2
Graphical Illustration of The New Structural Equation Model with T-Values
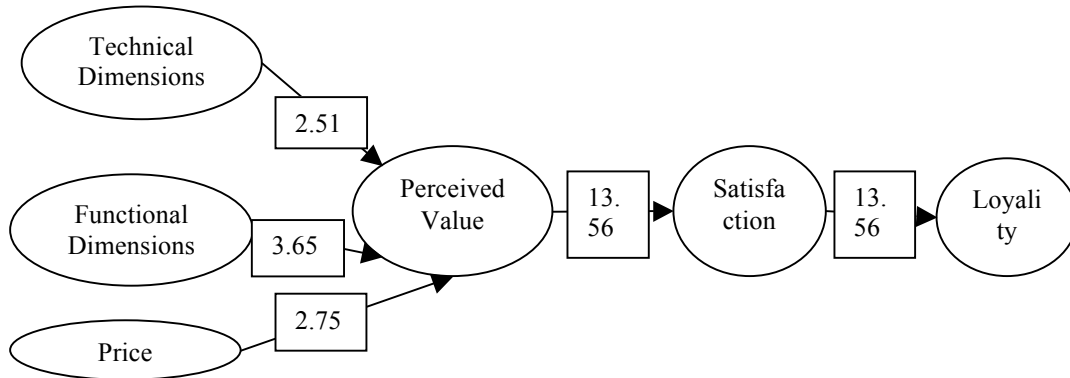
The new model did provide sufficient goodness of fit statistics. This is shown in Table 1.

Table 1
The New Structural Equation Model's Goodness of Fit Statistics

FIT STATISTICS	GOOD FIT	ACCEPTABLE FIT	NEW MODEL RESULTS
χ^2	$0 \leq \chi^2 \leq 2\text{d.f.}$	$2\text{d.f.} \leq \chi^2 \leq 3\text{d.f.}$	2.43
$\chi^2/\text{d.f.}$	$0 \leq \chi^2/\text{d.f.} \leq 2$	$2 \leq \chi^2/\text{d.f.} \leq 4$	2.653
RMSEA	$0 \leq RMSEA \leq 0.05$	$0.05 \leq RMSE \leq 0.09$	0.079
SRMR	$0 \leq SRMR \leq 0.05$	$0.05 \leq SRMR \leq 0.10$	0.050
NFI	$0.95 \leq NFI \leq 1.00^a$	$0.90 \leq NFI \leq 0.95$	0.90
NNFI	$0.97 \leq NFI \leq 1.00^b$	$0.95 \leq NNFI \leq 0.97$	0.96
CFI	$0.97 \leq CFI \leq 1.00$	$0.95 \leq CFI \leq 0.97$	0.98
GFI	$0.95 \leq GFI \leq 1.00$	$0.90 \leq GFI \leq 0.95$	0.92
AGFI	$0.90 \leq AGFI \leq 1.00$	$0.85 \leq AGFI \leq 1.00$	0.86

Source: Hair et al., 1998; Jöreskog and Sörboom, 2002, 2004; Schermelleh-Engel and Moosbrugger, 2003; Raykov and Marcoulides, 2006; Şimşek, 2007; Çelik and Yılmaz, 2009.

CONCLUSION

The ECSI model is a structural equation model (SEM) which consists of well-established theories and approaches in customer behavior. The constructs of the ECSI model are latent variables indirectly described by a block of measurement variables. A major advantage of the measurement model is the use of generic questions, which are sufficiently flexible to be used across a wide variety of products, services, and public sector services.

A number of CSIs have been introduced in the last decade. While some index models (i.e. SCSI, ACSI) are applied in national level, the ECSI being implemented by most of the EU member countries is an international satisfaction index model (Eklöf and Westlund, 2002). The study reported here has indicated that, in general, technical dimensions, functional dimensions and price influences perceived value, satisfaction and loyalty, in the context of five star hotel customers and five star hotels. Image dimension did not provide sufficient goodness of fit statistics possibly because of most of the five star hotels have their customers through tour operators. However, the ECSI model at the root of the research design includes generic measuring criteria, rather than specific, which may limit its application to other services industries. Research conducted in the banking, telephony and supermarket sectors in 11 European countries (Cassel and Eklöf, 2001) found that it was sufficiently robust for comparability. It is therefore suggested that further research be conducted to investigate other variables, applicable other hotel accommodation that might usefully be included in an appropriate model of satisfaction and loyalty for the whole hospitality industry.

The results of the ECSI model as a whole can be a valuable guide for the managers in formulating competitive marketing strategies. For the hotels, independent and uniform measurement characteristics of the ECSI model provide a useful tool for tracking performance and systematic benchmarking over time. Considering the results of the ECSI model, the limited resources of the hotels can be allocated for critical factors which have important impacts on satisfaction. In conclusion, the ECSI model provides important information for the purchase decisions of the customers and leads to improvements in the quality of goods and services they consume.

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