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Evangelos Grigoroudis • Yannis Siskos

# Customer Satisfaction Evaluation

Methods for Measuring and Implementing  
Service Quality



Springer

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# Preface

The customer orientation philosophy of modern business organizations and the implementation of the main principles of continuous improvement, justifies the importance of evaluating and analyzing customer satisfaction. In fact, customer satisfaction is considered today as a baseline standard of performance and a possible standard of excellence for any business organization.

Extensive research has defined several alternative approaches, which examine the customer satisfaction evaluation problem from very different perspectives. These approaches include simple quantitative tools, statistical and data analysis techniques, consumer behavioral models, etc. and adopt the following main principles:

- The data of the problem are based on the customers' judgments and are directly collected from them.
- This is a multivariate evaluation problem given that customer's overall satisfaction depends on a set of variables representing product/service characteristic dimensions.
- Usually, an additive formula is used in order to aggregate partial evaluations in an overall satisfaction measure.

Many of the aforementioned approaches do not consider the qualitative form of customers' judgments, although this information constitutes the main satisfaction input data. Furthermore, in several cases, the measurements are not sufficient enough to analyze in detail customer satisfaction because models' results are mainly focused on a simple descriptive analysis.

Taking into account all the above, the aim of this book is to provide a comprehensive discussion of the customer satisfaction evaluation problem, by presenting an overview of the existing methodologies, as well as the development and implementation of an original multicriteria method in the context of this particular problem. The main objective of the proposed multicriteria method is the development of a model able to evaluate the level of customer satisfaction both globally and partially for each of the characteristics/attributes of the offered product/service. Moreover, the method aims at providing an integrated set of results

capable to analyze customer needs and expectations and to justify their satisfaction level. Finally, the development of a decision support tool emphasizing the understanding and applicability of the results is also examined.

The book is organized in nine chapters aiming to comprehensively present the alternative methodological approaches and the different perspectives of the customer satisfaction evaluation problem.

Chapter 1 is devoted to the presentation of the customer satisfaction measurement problem. Based on the literature, the definitions of “satisfaction” and “customer” are given in detail, while a short historical review and reporting of relevant efforts are discussed.

The problem of measuring customer satisfaction is approached by several different scientific fields. Chapter 2 describes such alternative methodologies, including the most important quantitative techniques, as well as the related consumer behavioral models.

Chapter 3 presents additional quality-based approaches that may be used in the satisfaction measurement and analysis problem. In this context, service quality models are presented and the linkage between customer/employee satisfaction and Total Quality Management is discussed.

Chapter 4 is devoted to the development of the multicriteria method MUSA (MULTicriteria Satisfaction Analysis) aiming at measuring and analyzing customer satisfaction. The MUSA method is a preference disaggregation model following the principles of ordinal regression analysis (inference procedure). The results of the method are able to provide a decision-aid tool and assess an integrated benchmarking system.

Several extensions of the MUSA method are discussed in Chapter 5. These include different formulations of value functions, multiple satisfaction criteria levels, additional constraints, different types of input data, and alternative optimality criteria. Moreover the problem of modeling preference on criteria importance is discussed, and a satisfaction barometer model is described.

Chapter 6 refers to advanced topics on the MUSA method. In this context, computational issues of the method and the selection of appropriate values of model parameters are discussed, while several reliability indicators are proposed. In addition, an experimental simulation process is used in order to compare alternative satisfaction measurement methods.

Chapter 7 is devoted to customer satisfaction surveys and barometers. More specifically, several issues for designing and conducting satisfaction surveys are discussed and the most important national customer satisfaction barometers are presented.

The main aim of Chapter 8 is to present applications of the MUSA method in real-world customer satisfaction surveys. These applications refer to business organizations of several types and demonstrate the implementation process of the method.

Finally, Chapter 9 presents different information technology approaches related to customer satisfaction. These approaches not only focus on measuring and analyzing customer satisfaction, but also refer to the management of rela-

tions/transactions between companies and customers. In this context several customer service information systems are discussed, along with the MUSA software.

As authors of this book, we would like to thank the management of the business organizations that assigned us the presented customer satisfaction measurement projects, and kindly permitted the publication of parts of these studies. Moreover, we thank the researchers Andreas Samaras and Yannis Politis for their help in several parts of the book, as well as all the members of the Decision Support Systems Design and Development Laboratory (ERGASYA) of Technical University of Crete, Greece. Especially, we would like to thank Dr. Christina Diakaki for her valuable comments and edits of the whole manuscript; without her help and encouragement, this book may have not been achieved. Finally, we would like to extend our sincere thanks to Springer publishing editor, Fred S. Hillier, for his patience and encouragement during the preparation of this book.

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Yannis Siskos

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