

# Chapter 23

## A Fuzzy Segmentation Approach to Guide Marketing Decisions

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### ABSTRACT

*The aim of this chapter is to present a fuzzy segmentation model that combines statistical and Artificial Intelligence techniques to identify and quantify multifaceted consumers. One of the primary challenges faced by companies is getting to know their consumers. The latter are increasingly complex, versatile, ever-changing, and even contradictory; in other words, they are multifaceted. There is thus a need for techniques and tools to be able to segment this type of consumer in order to provide companies with the realistic information they need to make the appropriate marketing decisions. A real case study from the Spanish energy industry is included in this chapter to demonstrate the potential of the segmentation model being proposed.*

### 1. INTRODUCTION

Consumers are complex. The marketplace is also complex and ambiguous. Moreover, the way consumers used to behave 50 years ago is completely different from that today. And the way they behave nowadays is likely to be different from how they will behave in the near future. A common chal-

lenge for companies is to understand how and why consumers act the way they do in order to make the appropriate marketing decisions.

In real life, when we ask an audience of marketing professionals whether consumers always behave the same way in different situations, the unanimous response is “No”. When we ask if consumer motivations, preferences and attitudes are static, they again coincide in saying “No”. This

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“No” is also unanimous when we ask whether consumers always act in character.

Since Smith’s definition of the market segmentation concept in 1956, it has been perceived as a conceptual model reflecting the way managers wish to see a given market (Wedel and Kamakura, 2002). Segmentation helps managers to understand this enormous variety of consumers. However, marketing managers understand that there are many different kinds of people displaying many different buying patterns and that market segmentation techniques haven’t been of much help to these professionals (Yankelovich and Meer, 2006).

In general, when we segment individuals, we force them into a single segment category. If marketing professionals agree that this just does not reflect the world as consumers know it, why do we still do it?

Based on the fact that consumers behave not only differently but even often contradictorily, we need a fuzzy segmentation approach capable of capturing the consumer as he/she truly is: ambiguous, complex, plural and not black or white. The main purpose of this chapter, then, is to describe this innovative fuzzy segmentation model in detail. The major particularity of this multibehavioural model is its ability to interpret non-exclusive segments, enabling a clearer image of market realities and thus improving marketing managers’ decision-making.

In order to achieve our purpose, we believe some previous points need to be considered:

- The subject of research has changed considerably in the last 50 years. This chapter describes the multifaceted consumer in the 21<sup>st</sup> century.
- Understanding consumers is the basis of marketing. Segmentation helps in this process. Therefore, we review the concept of market segmentation and its evolution.
- LAMDA, a fuzzy learning technique, is proposed and explained as an alternative

method to break with non-overlapping segmentation techniques.

- This innovative segmentation model is presented as a means to understand the multifaceted consumer.

Afterwards, the chapter invites the reader to examine a real business case in the Spanish energy industry from a multibehavioural perspective. Finally, conclusions are drawn and further research is suggested.

## **2. BACKGROUND**

### **2.1 The Multifaceted Consumer: Making Decisions Based on a Multifaceted Subject of Analysis**

The need to make decisions is a common characteristic shared by most companies. Nevertheless, the challenge resides in maximising success when choosing the best option from amongst possible alternatives. In this respect, the decisions that most directly affect corporate marketing departments are those related to the new 21<sup>st</sup> century consumer.

In the 1930s, a 25-year-old woman had a very clear notion of her role in the family, society and life, in general. There weren’t many surprises in terms of her behaviour, habits or preferences. Today, however, we are faced with a consumer who is connected via new technologies, one who is demanding and informed and lives in an increasingly global setting. In this changing social context, then, it is surprising to find static, one-dimensional and/or predictable consumers. The great challenge faced by companies is developing new decision-making models for their marketing departments based on multiple realities and the consumers’ versatile behaviour.

The new social context no longer offers clues based on the consumer’s age. For example, a 16-year-old adolescent may be an avid consumer of products originally aimed at an adult target.

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