

## Chapter 5

# Green Attitudes and Thinking in The New Green Market: Using Mathematical Modeling to Satisfy Green Customers' Needs

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### ABSTRACT

*People are concerned by the implications of product consumption on their health, which is why they become followers of a healthy and sustainable lifestyle, using green products and becoming aware of a sustainable environment. To have a viable business and to respond to customers' needs, the organization must have an attractive product that offers utility, value, health, joy, and satisfaction to consumers. This chapter analyses a few approaches regarding the implementation of green marketing policies and the situation of green marketing in the world and in Romania. Green customers' behaviour in choosing a green product (using Markov chains), the impact this could have on the number of specialists and the surfaces used in ecological agriculture on green production (using a regression function) are also analysed, and the author developed some measures in order to improve companies' involvement in implementing green activities.*

### INTRODUCTION

The world is facing enormous challenges like never before. The Earth's systems are under constant pressure due to adverse impacts from human activity: using more energy, creating more waste, and produce more air pollutants (Iannuzzi, 2016, p. xiii). The world is constantly changing and is trying to have a sustainable behaviour and attitude. Global companies have embraced sustainability and are triggering companies to build eco-innovation into their product offerings. Governments have responded by putting pressure on product developers to consider tough new requirements such as removing materials of concern, designing more recyclables, and minimizing packages and facilitating product take-back. These global regulations started out in Europe and have exploded throughout the world, making it very complicating for business to keep up with the ever-changing requirements and be compliant.

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Global companies must eco-innovate products for the market and its customers from the new green economy—who is favoured by politicians, businesses, and policy-makers (Gasparatos & Willis, 2015, p. 19)—and generate economic growth and protect the environment (Vasile & Nicolo, 2017, p. xiv), bringing changes first in the culture (Danaher, Biggs, & Mark, 2016). They must inform their customers about this thing, because a greener product is useless if no one knows it exists. Appropriate marketing of eco-improved products is a critical aspect of a sustainability program (Iannuzzi, 2016, p. xiv). Degradation of environment led to green economy (Ayuk, Oku, Asubonteng, & Nutakor, 2017, p. 1) and its role is to minimize or to eliminate the factors that affect the environment (Nhamo & Mjimba, 2017, p. 3). This analysis is relatively recent and focuses on the need of reaching the consumer with wide spectrum of environmentally friendly products. A window of opportunity has opened up for those firms willing to take the lead in establishing positions of advantage based on greenness (Sahay, Stough, Sohal, & Goyal, 2006, pp. 96-97). It is clear now that the demands will continue to grow, and firms must respond to this challenge to achieve performance.

Every activity supposes a high cost for every stakeholder; this cost consists of consumption of valuable, rare, and unique resources: human, financial, technological, and especially natural. This affects the stakeholder efficiency and also the environment: use of energy for electronics and houses, driving cars, wearing trend-driven fashion, enjoy a wide range of fresh and processes food (Ha, 2008, p. 9). Every product bought is an investment of resources, and its production can contribute to pollution, climate change, and the destruction of habitats. Ecological footprinting has become a popular way of measuring the environmental impact of a given person's way of life. The interest in environmental, organizational, and individual protection and safety is growing every day. Starting in 1960s, the attention grew for environmental issues (Telesiene & Gross, 2016, p. 1; Kahle & Gurel-Atay, 2015), and for green economy, starting with 2000s (Shmelev, 2016, p. 143), and this has created many changes: policies, regulations, rules, and many studies and research made for a greener lifestyle, greener innovations (Peiry, Ziegler, & Baumgartner, 2016, p. xv), and green marketing. Thus, many studies regarding green marketing policies, green consumers' attitudes, green products characteristics, and green thinking and behaviours have been done.

Green business has grown rapidly and it has important expectations from customers, employees, managers, organizations, politicians, and the world in general. Green is not just about protection of the environment; it is about protection and safety of humans and organizations. Before, in order to develop a sustainable strategy, time to convince management to obtain the benefits was needed, but now major companies are making sustainability a platform for growth and funding significant advertising campaigns. Today's climate encourages sustainability improvements and shows how these can help us in the marketplace. People have moved from looking at environmental issues as a risk management function to something that has enormous potential for innovation and growth. Greener products play a bigger role than ever before and should be a growing part of every company's business model (Iannuzzi, 2016, p. 3).

Concern for the environment first appeared in the 1970s, gained momentum for the next two decades, and in recent years, has exploded onto the world business scene (Iannuzzi, 2016, p. 4). Using a green behaviour, the benefits are for everyone: saving resources consumption (natural, human, money), (re) using of waste, and improving personal and professional life.

This chapter brings to the foreground the literature made in the green marketing field, the behaviours of individuals and organizations, the policies made, especially the measures taken by our specialists at the Romanian level compared to European level. The objective of this chapter is to analyse the green market on the Romanian level by simulating customers' behaviours using probabilities calculations and Markov chains. The model used consists of analysing the impact the number of specialists and the sur-

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