Chapter 4
Comparative Analysis Regarding the Online Interest of Consumers Towards Green Retrofitting:
Case Study in Germany and Romania

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ABSTRACT
Green retrofitting and housing energy efficiency are some of the most debated topics nowadays. They contribute to lower costs for the involved households and more efficient sources of energies, which lead to a cleaner environment. The number of methods and devices for increasing the energy efficiency of housing ranges from very simple methods to complex ones. In spite of the fact that in the research there is high interest for the development of energy-efficient housing systems, it is also important to inform the consumer about the existence of such devices and to convince them to use these types of systems more frequently. The objective of the chapter is to give an overview of the popularity and the interest of the consumers towards different forms of housing energy efficiency systems and green retrofitting methods.

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INTRODUCTION

One of the goals of the sustainability strategy within the energy policy refers to an increasing domestic efficiency for assuring the welfare of its tenants and home owners (Gooding & Gul, 2016). Taking into consideration the fact that the comfort needs of the population represent a big amount of the private household energy consumption, it is important to identify means of reducing the waste of energy. In this sense housing energy efficiency plays an important role for the wellbeing of the population, as it reduces the energy costs of households, by offering optimal thermic solutions. The preoccupation for better living conditions from an energetic point of view has led to a big range of methods and devices for increasing the energy efficiency of housing. Simple methods include the changing of lighting bulbs with ecological ones or the replacement of old electronic equipment with newer ones, with lower energy consumption. In the category of complex energy efficiency methods, several applications or smart devices which are able to optimize the energy consumption in the household as well as intelligent devices with an independent programming for energy optimization can be included. Green retrofitting and the modernization of houses is one of the methods to increase energy consumption efficiency. In spite of the fact that in the research area, there is a high interest for the development of energy efficient housing systems, it is also important to inform the consumer about the existence of such devices and to convince them, to use these types of systems more frequently. The lack of information, a certain inertia in the consumption or the limited financial resources are factors that slow down the process towards an increased use of housing energy efficiency systems.

The main objective of our chapter is to determine the popularity of several key terms related to green retrofitting and energy efficiency in the online environment. With the help of Google Keyword Planner, we have determined the number of searches for the defined key terms, such as green retrofitting, energy efficiency, residential energy saving, building retrofitting, modernization, refurbishment, solar panel for the year 2017. The research has been done as comparison between the interest of German and Romanian users. The number of searches is a first step in determining the interest and preoccupation of users regarding a certain term. In the final part of the paper, we have also presented a best practice example for the implementation of a webpage, which should provide the necessary information for increasing the awareness of consumers related to the importance of energy efficient housing systems and green retrofitting. Only by knowing the advantages of such systems, will the attitude and behavior of consumers’ switch towards a clean energy usage.

LITERATURE REVIEW REGARDING THE EFFECT OF INFORMATION SOURCES ON THE IMPLEMENTATION OF HOUSING ENERGY EFFICIENCY SYSTEMS

Factors Influencing the Pro-Environmental Behavior

Different researches have tried to determine the factors that affect the worldwide energy consumption. The standard of living and the development of technology are assumed to be factors that increase the energy consumption of households, but there are also researches which contradict this assumption (Stoppok, et al., 2018). On one hand in developed countries in a household there are definitely more domestic appliances that use energy, but on the other hand technological innovations have led to more