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## Abstract

The intense competition in Europe and worldwide, the rapid changes in the various environments of economic units (economic, technological, financial, legislative, etc.) and the complexity of the problems faced by businesses today make it necessary to avoid waste and require the immediate use and development of all tools related to optimal business decisionmaking. Operational Research, and linear programming in particular, is a branch of science that deals with decisionmaking through the search for optimal solutions. However, the advent and use of computers has given a huge boost to the science of operations research, as today businesses, organizations, and government agencies of all sizes use Operational Research as a tool in making various decisions. This textbook presents basic knowledge in selected chapters of Operational Research. The approach followed emphasizes the presentation of applications in different areas of business operations and focuses on how Operational Research can support important management decisions. At the same time, participants are given the opportunity to take advantage of zero-cost programs (e.g., Graph, R with the necessary libraries) by solving real problems, using real data, and correlating economic applications with theory. In fact, we believe that this is the comparative advantage of this book in relation to what already exists in Greek literature. Therefore, the main objective is to enable the use of linear programming methods to address economic problems (optimization of economic functions) using free software.



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