An accessible introduction to the essential quantitative methods for making valuable business decisions

Quantitative methods—research techniques used to analyze quantitative data—enable professionals to organize and understand numbers and, in turn, to make good decisions. *Quantitative Methods: An Introduction for Business Management* presents the application of quantitative mathematical modeling to decision making in a business management context and emphasizes not only the role of data in drawing conclusions, but also the pitfalls of undiscerning reliance of software packages that implement standard statistical procedures. With hands-on applications and explanations that are accessible to readers at various levels, the book successfully outlines the necessary tools to make smart and successful business decisions.

Progressing from beginner to more advanced material at an easy-to-follow pace, the author utilizes motivating examples throughout to aid readers interested in decision making and also provides critical remarks, intuitive traps, and counterexamples when appropriate.

The book begins with a discussion of motivations and foundations related to the topic, with introductory presentations of concepts from calculus to linear algebra. Next, the core ideas of quantitative methods are presented in chapters that explore introductory topics in probability, descriptive and inferential statistics, linear regression, and a discussion of time series that includes both classical topics and more challenging models. The author also discusses linear programming models and decision making under risk as well as less standard topics in the field such as game theory and Bayesian statistics. Finally, the book concludes with a focus on selected tools...
from multivariate statistics, including advanced regression models and data reduction methods such as principal component analysis, factor analysis, and cluster analysis.

The book promotes the importance of an analytical approach, particularly when dealing with a complex system where multiple individuals are involved and have conflicting incentives. A related website features Microsoft Excel® workbooks and MATLAB® scripts to illustrate concepts as well as additional exercises with solutions.

*Quantitative Methods* is an excellent book for courses on the topic at the graduate level. The book also serves as an authoritative reference and self-study guide for financial and business professionals, as well as readers looking to reinforce their analytical skills.

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**ABOUT THE AUTHOR**

**Paolo Brandimarte** is Professor of Quantitative Methods for Finance and Logistics at Politecnico di Torino (Italy). He has published numerous journal articles on the application of optimization and simulation methods in different areas, ranging from production management to finance. Dr. Brandimarte is the author of *Numerical Methods in Finance and Economics: A MATLAB-Based Introduction, Second Edition* and coauthor of *Introduction to Distribution Logistics*, both published by Wiley.

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