

Preface

Neuroeconomics is a fairly new domain of knowledge that emerged in the 1990s. It is an interdisciplinary field that combines insights from neuroscience, psychology, and economics to build a comprehensive decision-making theory. The essence of neuroeconomics is to analyze the decision-making process not only in terms of external conditions or psychological aspect but also from the neuronal point of view by examining the cerebral conditions of decision making. Examining the decision-making process from these three perspectives leads to its more complete understanding.

Neuroeconomics was preceded by numerous young fields—behavioral economics, experimental economics, and cognitive neuroscience. Ever since, these fields have been witnessing a dramatic development—although independently. They are, however, bound by common interest areas based primarily on experiments whose results are used to test and to better understand theories in economics.

This book includes papers from researchers who are immersed in this subject with a certain level of experience in the field. Its main objective is to exemplify the links between various domains of knowledge which are part of neuroeconomics, behavioral economics and experimental economics. The book is divided into three parts:

- Theoretical Basis of Decision Making—Interdisciplinary Approach
- Behavioral Aspects of Economic Decision Making
- Practical Issues—Case Studies

The first part of the book presents the theoretical aspects of decision-making process from the point of view of various scientific disciplines. It frames the historical background of applying neurobiology and psychological determinants to measure and monitor emotions in the decision-making process during the economic experiments, as well as several other issues referring to the neuroeconomic and behavioral aspects of the decision-making process.

The second part of the book contains a broad outline of behavioral aspects of economic decision making along with instruments and tools that support the

decision-making process in various phases of study. Thus, it contains a wide overview of the applications of different methods that support the analysis of the impact of behavioral factors on the process of decision making in various areas. In sum, the aim of this part is to present the importance of the scientific toolkit of decision making in economics research.

The last part presents examples of broadly understood experiments in economics in the context of decision making. It refers to different areas and utilizes various methods, which are described in the methodological chapters of the book. However, it presents only selected experiments and approaches in neuroeconomics, behavioral economics, and experimental economics. It nonetheless outlines a wide range of topics and methods that can be used in this field of study. Recent advancements in technology pave the way for shaping increasingly advanced and interesting economic experiments related to decision making. Therefore, it can be assumed that this field of science will develop dynamically in the future.

The issues addressed in this book do not exhaust the subject of neuroeconomic and behavioral aspects of decision making. Yet, in the opinion of the editors, the book shows the diversity of areas, problems, methods, techniques, and domains concerning this subject.

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