Management Game Theory

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Preface

The content of management studies is very rich, with a large amount of theoretical and applied studies. As such, there is still much disagreement whether management studies are a subject in the liberal arts, science or engineering. I believe that whichever discipline management studies fall within, the most important mission of management studies is to be able to explain thoroughly the reason and mechanism that give rise to the various phenomena in practice, and to provide instruction and assistance for the various problems. In some respects, management studies are like medicine. In medical research, however abstract and abstruse, a 'model' is still useless if it cannot treat an illness or provide instruction and help for doctors. Similarly, the primary task in management research is to guide management practice by means of the profound theory.

As one of the main areas in management research, there is already a large amount of published work and teaching materials on game theory, providing abundant materials for studying game theory. However, these published work and teaching materials have one thing in common, in that they are mainly theoretical research. What readers find in these books are mostly abstract argument and lots of examples purely as numbers. Many people feel unable to apply them in actual management and research work.

The characteristic of this book is that while providing the necessary basics in game theory, it is mainly based on various game theory phenomena in management practice. Thus, it is convenient for the readers to see the profound game theory principle behind the various phenomena in management practice. Conversely, these game theory principles can also provide a degree of guidance for solving practical problems.

This book aims at being brief and concise, and is kept short, but the content is relatively comprehensive, including theories on non-cooperative games, cooperative games and evolutionary games and their related phenomena and questions in management practice.

The book is made up of two parts.

The first part focuses on the classical game theory. The content of this part comes mainly from several excellent reference books given at the end of this book, which was edited by the author of this book. The inclusion in this book of such content is mainly to enable the readers to have a relatively comprehensive understanding of the basics of game theory. In fact, these authors with their research and insights into their works greatly inspired the author of this book; theirs are the bases from which further research is carried out. Here, the author conveys sincere gratitude to the authors of those reference books.

The other part is the research of the author himself, some of which has already been published in academic journals. Different from the author's editing work in the first part, this part forms the author's 'writings' in this book. It is hoped that inclusion of these will inspire the readers to carry out further research.

This book is for teachers, students and cadres engaged in management studies and research, and it can also be used by postgraduate students as learning materials in game theory.

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Synopsis

Based on the fundamentals of game theory, the game problems in this book are organised from various game phenomena in management practice. Thus, the readers can easily understand the profound game theory principles behind the management practice. Meanwhile, these game theory principles can also provide some guidance on solving practical problems.

This book is clear and concise, while the content is comprehensive, including theories on non-cooperative games, cooperative games and evolutionary games and the related phenomena and problems in management practice.

This book can be used as reading material for teachers, students and officials engaged in management studies and research, or as teaching material for post-graduate students studying game theory.