

Diverse and Global Perspectives on Value Creation Set

coordinated by
Nabyla Daidj

Volume 3

**Game Theory Approach to
Managerial Strategies
and Value Creation**

Abdelhakim Hammoudi
Nabyla Daidj

ISTE

WILEY

Contents

Introduction	ix
Chapter 1. Game Theory and Strategic Management	1
1.1. Game theory and strategic management: semantic and/or conceptual convergences?	1
1.2. The current position of game theory in strategic management.	7
1.2.1. Game theory and the school of positioning	7
1.2.2. Growing interest for game theory	13
1.3. The theoretical determinants of coopetition: borrowed from game theory	16
1.3.1. The origin of coopetition	16
1.3.2. Coopetitive practices	18
1.3.3. Mechanisms of value creation in the value network (value net)	21
1.4. Conclusion.	25
Chapter 2. From Static Games to Dynamic Approaches	27
2.1. Introduction	27
2.2. Strategies and solution concepts: static games	28
2.2.1. Decentralized concepts	28
2.2.2. Maximin and Minimax solutions or the search for a new level of security	41
2.3. Process of dynamic decisions: solutions concepts.	44
2.3.1. “Non-cooperative collusion” or “tacit collusion”	45

2.3.2. Sequential games	56
2.4. Conclusion	69
Chapter 3. Coalitions Formation	71
3.1. Introduction.	71
3.2. The notion of a coalition and the cooperative approach	73
3.3. Emergence of cooperation: from collective rationality to individual rationality	84
3.3.1. Some illustrations.	84
3.3.2. Emergence of cooperation.	86
3.4. A simple conceptual frame of analysis for cooperation: notions of internal and external stability of a coalition	90
3.4.1. The concept of stability as a basic property of cooperation	92
3.4.2. The stability as an equilibrium property of a game	93
3.4.3. Examples	96
3.4.4. The role of heterogeneities	99
3.4.5. R&D in a context of asymmetrical firms	103
3.5. Conclusion	105
Chapter 4. Application 1: Dieselgate	107
4.1. Introduction.	107
4.2. Storytelling: for those who missed the beginning	108
4.3. Presentation of the facts and strategic reading	110
4.4. The strategic variables and the associated game	115
4.4.1. The rules of the game	116
4.4.2. Payoff.	121
4.5. Game resolution and strategic analysis.	123
4.5.1. Perfect equilibrium of the game where fraud is deterred	125
4.5.2. Perfect equilibrium with the firm committing fraud.	128
4.6. Conclusion	134
Chapter 5. Application 2: Emergence of Food Safety Standards.	137
5.1. Introduction.	137
5.2. The game	140
5.3. Nash equilibrium.	145
5.4. Conclusion	154

Chapter 6. Application 3: Petrol Stations	157
6.1. Introduction: price structure of a multi-store firm and fragilization of isolated competitors	157
6.2. The facts	157
6.3. Strategic management questions	161
6.4. The game	163
6.5. Price structure in the event of collusion	165
6.6. Price war threat and game equilibrium	171
6.7 Game equilibrium within a time horizon	173
6.8. Conclusion	177
 Chapter 7. Application 4: HD-DVD versus Blu-ray	 181
7.1. Introduction: individual strategies and collective dynamics . . .	181
7.2. Constitution of HD-DVD and Blu-ray consortiums.	182
7.3. Definition of the game	186
7.4. Numerical application	191
7.5. Conclusion	195
 Conclusion	 199
 Appendices	 203
 Appendix 1	 205
 Appendix 2	 231
 Bibliography	 239
 Index.	 259