Bargaining and Markets

Martin J. Osborne Department of Economics McMaster University Hamilton, Ontario Canada

Ariel Rubinstein Department of Economics Tel Aviv University Tel Aviv, Israel



United Kingdom - North America - Japan - India - Malaysia - China - Australasia

,

Contents

Preface		ix
1.	Introduction	1
	1.1 Some Basic Terms	1
	1.2 Outline of the Book	3
	Notes	6
Pa	art 1. Bargaining Theory	7
2.	The Axiomatic Approach: Nash's Solution	9
	2.1 Bargaining Problems	9
	2.2 Nash's Axioms	11
	2.3 Nash's Theorem	13
	2.4 Applications	17
	2.5 Is Any Axiom Superfluous?	20
	2.6 Extensions of the Theory	23
	Notes	26

,

Cont	ents
------	------

3.	\mathbf{The}	Strategic Approach: A Model of Alternating Offers	29
	3.1	The Strategic Approach	29
	3.2	The Structure of Bargaining	30
	3.3	Preferences	32
	3.4	Strategies	37
	3.5	Strategies as Automata	39
	3.6	Nash Equilibrium	41
	3.7	Subgame Perfect Equilibrium	43
	3.8	The Main Result	44
	3.9	Examples	49
	3.10	Properties of the Subgame Perfect Equilibrium	50
	3.11	Finite versus Infinite Horizons	54
	3.12	Models in Which Players Have Outside Options	54
	3.13	A Game of Alternating Offers with Three Bargainers	63
		Notes	65

4.	The	Relation between the Axiomatic and Strategic	
	Approaches		
	4.1	Introduction	69
	4.2	A Model of Alternating Offers with a Risk of Breakdown	71
	4.3	A Model of Simultaneous Offers: Nash's "Demand Game"	76
	4.4	Time Preference	81
	4.5	A Model with Both Time Preference and Risk of Breakdown	86
	4.6	A Guide to Applications	88
		Notes	89

5.	A Strategic Model of Bargaining between Incompletely		
	Informed Players		91
	5.1	Introduction	91
	5.2	A Bargaining Game of Alternating Offers	92
	5.3	Sequential Equilibrium	95
	5.4	Delay in Reaching Agreement	104
	5.5	A Refinement of Sequential Equilibrium	107
	5.6	Mechanism Design	113
		Notes	118

,

vi

Contents

.

Part 2. Models of Decentralized Trade		121	
6.	A F	irst Approach Using the Nash Solution	123
	6.1	Introduction	123
	6.2	Two Basic Models	124
	6.3	Analysis of Model A (A Market in Steady State)	126
	6.4	Analysis of Model B (Simultaneous Entry of All Sellers and	
		Buyers)	128
	6.5	A Limitation of Modeling Markets Using the Nash Solution	
	6.6	Market Entry	131
	6.7	A Comparison of the Competitive Equilibrium with the	104
		Market Equilibria in Models A and B	134
		Notes	136
7.	Stre	ategic Bargaining in a Steady State Market	137
	7.1	Introduction	137
	7.2	The Model	138
	7.3	Market Equilibrium	141
	7.4	Analysis of Market Equilibrium	143
	7.5	Market Equilibrium and Competitive Equilibrium	146
		Notes	147
8.	Str	ategic Bargaining in a Market with One-Time Entry	151
0.	8.1		151
	8.2	A Market in Which There Is a Single Indivisible Good	152
	8.3	Market Equilibrium	153
	8.4	A Market in Which There Are Many Divisible Goods	156
	8.5	Market Equilibrium	159
	8.6	Characterization of Market Equilibrium	162
	8.7	Existence of a Market Equilibrium	168
	8.8	Market Equilibrium and Competitive Equilibrium	170
		Notes	170
9.	Th	e Role of the Trading Procedure	173
	9.1	.	173
	9.2	Random Matching	175
	9.3	A Model of Public Price Announcements	180
	9.4	Models with Choice of Partner	182
	9.5	A Model with More General Contracts and Resale	185
		Notes	187

,

Contents

10.	The Role of Anonymity	189
	10.1 Introduction	189
	10.2 The Model	190
	10.3 Market Equilibrium	191
	10.4 The No-Discount Assumption	195
	10.5 Market Equilibrium and Competitive Equilibrium	197
	Notes	197
Refe	erences	199
Inde	ex	211

ø

¢

.

viii