

Vladimir I. Danilov
Alexander I.-Sotskov

Social Choice Mechanisms

With 8 Figures
and 2 Tables



Springer

Table of Contents

Introduction	1
1. Basic Concepts	9
1.1 Preferences.....	9
1.2 Social Choice Correspondences.....	13
1.3 Monotone Social Choice Correspondences.....	19
1.4 Social Choice Mechanisms.....	25
1.5 Effectivity Functions and Blockings.....	30
1.A1 Arrow's Impossibility Theorem.....	35
1.A2 Non-manipulable SCFs.....	37
1.A3 Minimal Monotone SCCs.....	40
Bibliographic Comments.....	43
2. Nash-consistent Mechanisms	45
2.1 Definitions and Examples.....	45
2.2 Blockings Generated by Consistent Mechanisms.....	50
2.3 Strongly Monotone Social Choice Correspondences.....	54
2.4 Nash-implementable Correspondences.....	58
2.5 Implementation: the Case of Two Participants.....	62
2.6 Acceptable Mechanisms.....	65
2.A A Simple Mechanism for the Implementation of Walrasian Equilibria.....	68
Bibliographic Comments.....	70
3. Strategy-proof Mechanisms	73
3.1 Dominant Strategies. The Revelation Principle.....	73
3.2 Single-Peaked Environment.....	78
3.3 Linear Environment.....	85
3.4 The Transferable Environment. Groves Mechanisms.....	92
3.5 Further Properties of Groves Mechanisms.....	97
3.A1 The Simple Transferable Environment Case.....	105
3.A2 Acceptable Mechanisms in Transferable Environment.....	106
Bibliographic Comments.....	108

4. Cores and Stable Blockings	111
4.1 Stable Outcomes	111
4.2 Additive Blockings	116
4.3 Convex Blockings	122
4.4 Almost Additive Blockings	125
4.5 Necessary Stability Conditions	128
4.6 Veto as a Decision-making Procedure	132
4.A1 Balanced Blockings	138
4.A2 Blockings with Infinite Number of Alternatives	140
4. A3 The Harems Lemma	141
Bibliographic Comments	142
5. Strongly Consistent Mechanisms	145
5.1 Definitions and Examples	145
5.2 A Tokens Mechanism (or Veto-mechanism)	149
5.3 Blockings Generated by SC-mechanisms	153
5.4 Direct Core Mechanisms	158
5.5 Laminable Blockings	163
5.6 A Necessary and Sufficient Condition of Laminability	168
5.7 Neutral Laminable Blockings	172
5.A Implementation via Strong Equilibria	175
Bibliographic Comments	180
References	183
Index	189