

Contents

<i>List of Figures</i>	page xiii
<i>List of Tables</i>	xv
<i>Preface</i>	xvii
<i>Acknowledgements</i>	xxi
<i>List of Abbreviations</i>	xxiii
1 Competition Policy: History, Objectives, and the Law	1
1.1 Introduction	1
1.2 Brief History of Competition Policy	1
1.2.1 Anti-Trust Law in the United States	1
1.2.2 Competition Laws in the European Union	9
1.3 Objectives of Competition Policy and Other Public Policies	17
1.3.1 Objectives of Competition Policy	17
1.3.2 Other Public Policy Factors Affecting Competition	26
1.3.3 Competition Policy: A Definition	30
1.4 The Main Features of European Competition Law	30
1.4.1 Article 81: Horizontal and Vertical Agreements	31
1.4.2 Article 82: Abuse of a Dominant Position	34
1.4.3 Mergers	36
1.5 Exercises	38
2 Market Power and Welfare: Introduction	39
2.1 Overview of the Chapter	39
2.2 Allocative Efficiency	40
2.2.1 Market Power: A Definition	40
2.2.2 The Allocative Inefficiency of a Monopoly	41
2.2.3 Rent-Seeking Activities	44
2.3 Productive Efficiency	45
2.3.1 Additional Welfare Loss from Productive Inefficiency	46
2.3.2 Why Is a Monopolist Less Efficient?	46
2.3.3 Number of Firms and Welfare	51
	vii

2.3.4	Conclusions	52
2.3.5	Competition and Productive Efficiency*	52
2.4	Dynamic Efficiency	55
2.4.1	The Lower Incentives to Monopolist Innovation	56
2.4.2	Incentives to Invest in R&D	58
2.4.3	Models of Competition and Innovation*	58
2.5	Public Policies and Incentives to Innovate	64
2.5.1	<i>Ex Ante</i> v. <i>Ex Post</i> : Property Rights Protection	65
2.5.2	Essential Facilities	66
2.5.3	Price Controls and Structural Remedies	69
2.5.4	Internal v. External Growth	70
2.6	Monopoly: Will the Market Fix it All?	70
2.6.1	Durable Good Monopolist	71
2.6.2	Contestable Markets	73
2.6.3	Monopoly and Free Entry	75
2.7	Summary and Policy Conclusions	89
2.8	Exercises	89
2.8.1	Solutions to Exercises	94
3	Market Definition and the Assessment of Market Power	101
3.1	Introduction	101
3.2	Market Definition	102
3.2.1	Product Market Definition	102
3.2.2	Geographic Market Definition	113
3.3	The Assessment of Market Power	115
3.3.1	Traditional Approach: (Indirect) Assessment of Market Power	117
3.3.2	Econometric Techniques: (Direct) Assessment of Market Power*	124
3.4	Exercises	134
3.4.1	Solutions to Exercises	135
4	Collusion and Horizontal Agreements	137
4.1	Introduction	137
4.1.1	What is Collusion?	138
4.2	Factors That Facilitate Collusion	142
4.2.1	Structural Factors	142
4.2.2	Price Transparency and Exchange of Information	150
4.2.3	Pricing Rules and Contracts	156
4.2.4	Analysis of Collusion: Conclusions	159
4.2.5	Factors That Facilitate Collusion*	159
4.3	Advanced Material**	167
4.3.1	Credibility of Punishment and Optimal Penal Codes**	167
4.3.2	Cartels and Renegotiation**	171

4.3.3 The Green – Porter (1984) Model**	175
4.3.4 Symmetry and Collusion**	178
4.4 Practice: What Should Be Legal and What Illegal?	185
4.4.1 Standards of Proof: Market Data v. Hard Evidence	185
4.4.2 <i>Ex Ante</i> Competition Policies against Collusion	190
4.4.3 <i>Ex Post</i> Competition Policies against Collusion	192
4.5 Joint-Ventures and Other Horizontal Agreements	202
4.5.1 Joint-Ventures	202
4.5.2 Research Joint-Ventures	203
4.5.3 Other Forms of Co-Operation Regarding Technology	206
4.5.4 Co-Operative R&D*	208
4.6 A Case of Parallel Behaviour: <i>Wood pulp</i>	211
4.7 Exercises	219
4.7.1 Solutions to Exercises	224
 5 Horizontal Mergers	 231
5.1 Introduction	231
5.2 Unilateral Effects	233
5.2.1 Absent Efficiencies, a Merger Increases Market Power	233
5.2.2 Variables Which Affect Unilateral Market Power	234
5.2.3 Efficiency Gains	238
5.2.4 Modelling Unilateral Effects of Mergers*	243
5.3 Pro-Collusive Effects	250
5.3.1 Factors which Affect Collusion (Reminder)	251
5.3.2 Efficiency Gains and Pro-Collusive Effects	252
5.4 A More General Model**	252
5.4.1 The Model	252
5.4.2 Unilateral Effects, without Efficiency Gains	253
5.4.3 Efficiency Gains from Mergers	257
5.4.4 Efficiency Offence: When the Merger Leads to the Exit of the Outsiders	261
5.4.5 Proofs	263
5.5 Merger Remedies	265
5.5.1 Divestitures	266
5.5.2 Behavioural Remedies	268
5.6 Merger Policy in the European Union	270
5.6.1 Dominance Test	271
5.6.2 The Treatment of Efficiency Gains	273
5.6.3 Conclusions	276
5.7 Case Studies	277
5.7.1 How to Proceed in Merger Cases	278
5.7.2 <i>Nestlé/Perrier</i>	279
5.7.3 <i>ABB/Daimler-Benz</i>	286
5.8 Exercises	292
5.8.1 Solutions to Exercises	295

6	Vertical Restraints and Vertical Mergers	302
6.1	What are Vertical Restraints?	302
6.1.1	Plan of the Chapter	305
6.2	Intra-Brand Competition	306
6.2.1	Double Marginalisation	307
6.2.2	Horizontal Externality: Free-Riding in the Provision of Services	313
6.2.3	A More General Treatment*	323
6.2.4	Other Efficiency Reasons for Vertical Restraints and Vertical Mergers	333
6.2.5	Vertical Restraints, Vertical Mergers, and the Commitment Problem	338
6.2.6	Conclusions	347
6.3	Inter-Brand Competition	347
6.3.1	Strategic Effects of Vertical Restraints	348
6.3.2	Vertical Restraints as Collusive Devices	358
6.4	Anti-Competitive Effects: Leverage and Foreclosure	362
6.4.1	Anti-Competitive Effects: Exclusive Dealing	363
6.4.2	Exclusionary Effects of Vertical Mergers	372
6.5	Conclusions and Policy Implications	377
6.6	Cases	378
6.6.1	<i>General Electric/Honeywell</i>	379
6.6.2	<i>Ice-Cream</i>	391
6.7	Exercises	398
6.7.1	Solutions to Exercises	403
7	Predation, Monopolisation, and Other Abusive Practices	411
7.1	Introduction	411
7.2	Predatory Pricing	412
7.2.1	Predation: Search for a Theory	413
7.2.2	Recent Theories of Predatory Pricing	415
7.2.3	Models of Predatory Pricing*	422
7.2.4	Practice: How to Deal with Predatory Pricing Allegations	442
7.3	Non-Price Monopolisation Practices	454
7.3.1	Strategic Investments	454
7.3.2	Bundling and Tying	460
7.3.3	Incompatibility and Other Strategic Behaviour in Network Industries	483
7.3.4	Refusal to Supply and Exclusive Contracts (Reminder)	490
7.3.5	Raising Rivals' Costs	490
7.4	Price Discrimination	491
7.4.1	Welfare Effects of Price Discrimination	493
7.4.2	Price Discrimination*	502

7.5	<i>US v. Microsoft</i>	511
7.5.1	A Short Description of the Case	511
7.5.2	Monopolisation	513
7.5.3	Attempted Monopolisation	520
7.5.4	Tying	520
7.5.5	Remedies	522
7.5.6	Conclusions	522
7.5.7	The District Court Judgment on Remedies	523
7.6	Exercises	524
7.6.1	Solutions to Exercises	528
8	A Toolkit: Game Theory and Imperfect Competition Models	533
8.1	Introduction	533
8.2	Monopoly	533
8.2.1	Single-Product Monopoly	533
8.2.2	Multi-Product Monopoly	535
8.3	An Introduction to Elementary Game Theory	542
8.3.1	Nash Equilibrium	543
8.3.2	Dynamic Games and Sub-Game Perfect Nash Equilibrium	548
8.4	Oligopoly I: Market Competition in Static Games	551
8.4.1	Product Market Competition with Homogenous Goods	551
8.4.2	Product Market Competition with (Exogenously) Differentiated Goods	561
8.4.3	Repeated Product Market Interaction	570
8.5	Oligopoly II: Dynamic Games	572
8.5.1	Strategic Investments	573
8.6	Appendix	578
	<i>Bibliography</i>	581
	<i>References to Cases and Legislation</i>	599
	<i>Index</i>	605