

CONTENTS

| | |
|------------------------------|------|
| <i>Preface</i> | v |
| <i>List of Abbreviations</i> | xv |
| <i>Table of Cases</i> | xvii |
| <i>Introduction</i> | xxv |

PART 1: ECONOMIC FOUNDATIONS

| | |
|--|-----------|
| 1. Efficiency Concepts in Economic Theory | 3 |
| I. Allocative Efficiency | 3 |
| II. Productive Efficiency | 8 |
| III. Dynamic Efficiency | 9 |
| 2. Competition and Efficiency | 11 |
| I. Perfect Competition | 11 |
| II. Monopoly | 17 |
| III. A Dominant Firm with Competitive Fringe | 23 |
| IV. Monopolistic Competition | 24 |
| V. Oligopoly | 26 |
| 1. Basic concepts of game theory | 27 |
| 2. Equilibria in oligopolistic markets | 29 |
| VI. Monopsony and Oligopsony | 36 |

PART 2: MARKET POWER, MARKET DOMINANCE, AND MARKET DEFINITION

| | |
|--|-----------|
| 3. Market Power and Price Elasticities | 41 |
| I. Introduction—The Price Elasticity of Demand | 41 |
| II. Market Power and the Lerner Index Under Different Market Forms | 45 |
| III. Market Power in the Case of Differentiated Goods | 47 |
| IV. Market Power in Two-sided Markets | 47 |

| | |
|---|-----|
| 4. Market Power, Market Dominance, and Effective Competition— Economic and Legal Aspects | 51 |
| 5. Determining Market Power and Market Dominance | 57 |
| I. Determining Market Power Directly | 57 |
| II. Determining Market Power Indirectly | 59 |
| 1. Market definition—economic market concepts | 60 |
| a) Concept of consumers' wants | 61 |
| b) The hypothetical monopoly test | 63 |
| c) Major aspects of market delineation | 66 |
| α) Demand-side substitution | 66 |
| β) Supply-side substitution | 68 |
| γ) Simultaneous definition of the relevant product and geographical markets | 70 |
| δ) Market definition in the case of differentiated goods | 71 |
| ε) Chains of substitution | 72 |
| ζ) Market definition in the presence of price discrimination | 73 |
| η) Aftermarkets | 73 |
| θ) Innovation markets | 74 |
| ι) Two-sided markets | 75 |
| κ) The Cellophane fallacy | 76 |
| λ) Conclusions | 77 |
| 2. Empirical methods of market definition | 78 |
| a) The price elasticity of demand, critical elasticities, and critical loss | 79 |
| b) Cross-price elasticities and diversion ratios | 82 |
| c) Price tests | 82 |
| d) Other methods of defining the relevant geographical market | 85 |
| e) Conclusions | 86 |
| 3. Basic concepts in practice | 87 |
| a) Concept of consumers' wants | 87 |
| b) Hypothetical monopoly test | 98 |
| 4. Practical application of econometric and empirical methods | 106 |
| a) Price elasticity analyses | 106 |
| b) Absolute and relative price differences | 108 |
| α) Price differences as a basis for defining the relevant product market | 108 |
| β) Definition of the relevant geographical market on the basis of price differences | 111 |

| | |
|--|-----|
| c) Price correlation | 112 |
| α) Use of price correlation analyses to define product markets | 112 |
| β) Use of price correlation analyses to define geographical markets | 114 |
| d) Price discrimination/other customer differentiation | 115 |
| e) Switching costs | 117 |
| f) Shock analyses | 118 |
| g) Distribution channels | 119 |
| h) Complementary products | 121 |
| i) Market for free products or services? | 122 |
| j) Substitution chains | 122 |
| 5. Determining market shares | 125 |
| a) Economic concepts used to determine market shares | 125 |
| α) Sales-based market shares | 125 |
| β) Revenue-based market shares | 126 |
| γ) Capacity-based market shares and other reference parameters | 126 |
| b) Determination of market shares in practice | 127 |
| α) Sales volume as the basis for calculation | 127 |
| β) Sales value as the basis for calculation | 127 |
| γ) Capacity as the basis for calculation | 129 |
| δ) Alternative methods of calculation | 129 |
| 6. Relevance of market shares and other factors | 130 |
| a) Absolute market shares and market-share thresholds under European law | 130 |
| α) Acceptable market shares | 131 |
| β) Market shares indicating a need for an examination of market power | 132 |
| b) Factors influencing the relevance of market shares | 134 |
| α) Markets with differentiated products | 134 |
| β) Dynamic markets | 136 |
| γ) Bidding markets—competition for the market | 137 |
| δ) Historical development of market shares | 140 |
| ε) Dependency of the market share on single contracts | 141 |
| ζ) Position of current competitors | 141 |
| η) Potential competition and barriers to entry | 143 |
| θ) Buyer power | 153 |
| c) Particular features of German law | 155 |
| α) Statutory basis | 155 |
| β) Relevance of the market share | 158 |
| III. Conclusion | 162 |

PART 3: EFFECTS OF CHANGES IN MARKET STRUCTURE

| | |
|--|-----|
| 6. Introduction | 167 |
| 7. Single Dominance | 169 |
| I. Economic Foundations | 169 |
| II. Single Dominance in Practice | 169 |
| 8. Non-coordinated Effects | 175 |
| I. Different Effects Resulting from Different Forms of Competition | 175 |
| 1. Price competition with a homogeneous good | 175 |
| 2. Quantity competition with a homogeneous good | 176 |
| 3. Price competition with differentiated goods | 177 |
| 4. Quantity competition with differentiated goods | 180 |
| II. Determining Non-coordinated Effects by Means of the Dominance and SIEC Test? | 181 |
| 1. The first sign: the planned <i>Heinz/Beech-Nut</i> concentration | 181 |
| 2. Legal developments in EU merger control | 183 |
| III. Methods of Determining Non-coordinated Effects | 191 |
| 1. Simulation models | 192 |
| 2. Structural methods | 195 |
| 3. Conclusions with respect to the choice of method | 200 |
| IV. Simulation Models and Structural Methods in Practice | 201 |
| 1. Recent developments | 201 |
| 2. Case decisions | 205 |
| 9. Coordinated Effects and Collective Dominance | 221 |
| I. Economic Foundations of Collective Dominance | 223 |
| II. Legal Classification | 227 |
| III. Basic Conditions for Collective Dominance | 228 |
| 1. Repeated interaction | 228 |
| 2. The discount factor | 230 |
| 3. Credible retaliation mechanisms | 231 |
| 4. Market transparency | 233 |
| a) Transparency with respect to coordination mechanism | 235 |
| b) Market transparency as a factor stabilising coordination | 237 |

| | |
|--|-----|
| IV. Criteria Relating to the Firms and Concentration | 239 |
| 1. The number of firms | 239 |
| a) The number of competitors and supply-side concentration | 240 |
| b) Threshold for intervention—number of suppliers | 241 |
| c) Relevance of the concentration rate | 243 |
| 2. 'Symmetry' of the firms | 245 |
| a) Technology and costs | 246 |
| b) Market shares | 247 |
| c) The product range | 249 |
| d) Organisational and corporate structure | 249 |
| 3. Excess capacities and inventory stock | 251 |
| 4. Structural links between market participants | 253 |
| V. Market-related Criteria | 255 |
| 1. Market entry | 255 |
| 2. The price elasticity of demand | 257 |
| 3. Typical transactions | 259 |
| 4. Homogeneous and differentiated products | 259 |
| 5. Buyer power | 262 |
| 6. Multi-market contacts | 263 |
| 7. Growing markets | 265 |
| 8. Innovations | 266 |
| 9. Fluctuations in economic activity | 268 |
| 10. Geographical allocation of economic activities | 270 |
| VI. Achieving Agreement on the Terms of Coordination | 271 |
| 1. Coordination parameter | 271 |
| 2. Relevance of past competitive behaviour | 272 |
| 3. Means of coordinating behaviour | 274 |
| a) Explicit agreements | 274 |
| b) Information exchange and price leadership | 275 |
| c) Pricing rules | 278 |
| d) Other means of coordinating behaviour | 281 |
| VII. Adoption of the Findings of Economic Theory in Practice | 281 |
| VIII. Establishing Coordinated Effects | 283 |
| 1. Establishing coordinated effects in practice | 283 |
| a) Community law | 283 |
| b) Particular features of German law | 288 |
| 2. Theoretical problems to predict coordinated effects | 302 |
| IX. The Assessment of Coordinated Effects | 306 |

| | |
|---|------------|
| 10. Other Factors Relevant to the Assessment of Mergers | 311 |
| I. Mergers in Two-sided Markets | 311 |
| II. Takeover of a Particularly Dynamic Competitor ('Maverick') | 313 |
| III. Acquisition of a Potential Competitor | 314 |
| IV. Catch-up Mergers | 316 |
| V. Rescue Mergers | 317 |
| VI. Efficiency Gains | 318 |
| 1. Economic aspects of efficiency gains | 318 |
| a) Gains from rationalisation and increasing returns to scale | 320 |
| b) Economies of scope | 321 |
| c) Advantages on procurement markets | 321 |
| d) Improved means of raising capital | 321 |
| e) Reducing slack and X-inefficiencies | 322 |
| f) Improved transfer of know-how | 322 |
| g) Technological progress | 322 |
| 2. Efficiency gains under Regulation No 4064/29 | 323 |
| a) Views taken on the literature | 324 |
| b) Commission practice and the case-law of the Community courts | 327 |
| 3. Efficiency gains under Merger Regulation No 139/2004 | 330 |
| 4. The relevant welfare standard | 334 |
| a) Introduction | 334 |
| b) Problems associated with the welfare standards | 335 |
| 5. Requirements in the Guidelines on the assessment of efficiencies | 337 |
| 6. What type of efficiency gains satisfy the requirements laid down in the Guidelines? | 344 |
| 7. Assessment of efficiency gains on a case-by-case basis from the perspective of institutional economics | 348 |
| a) Costs and benefits of a rule-of-reason approach | 349 |
| b) Costs and benefits of a general presumption approach | 352 |
| c) Conclusion | 353 |
| 11. Vertical and Conglomerate Mergers | 357 |
| I. Vertical Mergers | 358 |
| 1. Pro-competitive effects of vertical mergers | 358 |
| a) Double marginalisation | 358 |
| b) Single monopoly profit | 361 |
| c) Reducing transaction costs | 361 |
| 2. Anti-competitive effects of vertical mergers | 362 |
| a) Input foreclosure | 363 |

| | |
|---|------------|
| b) Customer foreclosure | 370 |
| c) Coordinated effects of vertical mergers | 372 |
| 3. Effects of vertical mergers on competition | 375 |
| II. Conglomerate Mergers | 375 |
| 1. Pro-competitive effects of conglomerate mergers | 376 |
| a) Economies of scope | 376 |
| b) Improved coordination | 376 |
| c) Cournot effect | 377 |
| d) Efficiency effects of tying and bundling | 378 |
| e) Price discrimination | 379 |
| f) Single monopoly profit | 380 |
| 2. Anti-competitive effects of conglomerate mergers | 381 |
| a) Anti-competitive effects of tying and bundling | 381 |
| α) Tying | 381 |
| β) Bundling | 383 |
| γ) Effects of tying and bundling on competition | 386 |
| b) Portfolio effects | 386 |
| c) Financial market predation | 387 |
| d) Coordinated effects of conglomerate mergers | 388 |
| 3. Effects of conglomerate mergers on competition | 389 |
| III. Legal Aspects of Vertical and Conglomerate Mergers | 390 |
| 1. Predicting anti-competitive behaviour | 390 |
| 2. Guidelines on the assessment of non-horizontal mergers | 394 |
| 3. Practical application of economic methods | 396 |
| 12. Conclusion | 399 |
| <i>References</i> | 407 |
| <i>Index</i> | 439 |

INTRODUCTION

This work is divided into three parts. Part 1 introduces the various economic concepts of efficiency and places them in the context of various market forms such as perfect competition, monopoly, and oligopoly. Moreover, it considers the concepts of game theory essential to investigations of, in particular, oligopolies.

Part 2 addresses the relationship between the economic concept of market power and the legal concept of dominance. It explains both direct and indirect methods of determining market power and dominance and discusses the notions of market definition. The approaches taken in practice to define the relevant market and establish dominance are analysed in detail and reviewed in terms of their consistency with the concepts of economic theory.

Part 3 deals with the impact on competition of changes in the market structure. The examination of possible merger effects begins with the creation or strengthening of a dominant position of a single undertaking (single dominance). The following section is devoted to those effects of mergers on oligopolistic markets referred to in the literature as non-coordinated effects and addresses the question whether such effects can be better identified by the dominance test or a different test. Finally, the notions relating to collective dominance and the coordinated effects of a merger leading to the creation or strengthening of such a market position are explained. This is followed by a discussion of other factors relevant to the assessment of merger effects. Particular attention is given to the question of whether and how potential efficiencies should be considered in the context of merger control. The next section deals with vertical and conglomerate mergers, the specific characteristics of which have recently received increased attention.

The analysis of each of the above points includes an examination of the practice of the European Commission and the Community courts. Where appropriate, the practice in Germany is also examined. The decisions cited in the various sections were selected on account of their application of the economic methods of analysis discussed in the study.