

# Contents

Table of Abbreviations .....	XIII
<b>1 Introduction .....</b>	<b>1</b>
<b>2 The Situation to Date .....</b>	<b>5</b>
2.1 Abuse of Dominance and Article 102 TFEU.....	6
2.1.1 Brief Introduction to Article 102 TFEU .....	6
2.1.2 Reform of Article 102 TFEU.....	8
2.1.2.1 The More Economic Approach .....	8
2.1.2.2 Framework for Assessing Abusive Conduct .....	9
2.2 An Overview of Article 102 TFEU Intellectual Property Cases .....	11
2.3 Comparison with American Caselaw .....	20
2.3.1 An Overview of Abuse of Intellectual Property Rights Cases.....	20
2.3.2 Are There Systematic Differences Between U.S. and EU Decisions? .....	24
2.4 The European <i>Microsoft</i> Case: Introduction of the Incentives Balance Test? .....	27
2.4.1 The Decision of the Commission .....	28
2.4.2 The Judgment of the CFI.....	32
2.4.3 Discussion of the Microsoft Decision .....	35
2.4.3.1 The Requirement of Indispensability .....	35
2.4.3.2 Elimination of Competition .....	36
2.4.3.3 The New Product Requirement .....	37
2.4.3.4 Objective Justification and the Incentive Balance Test....	38
2.5 Criteria for Refusal to License in the Article 102 TFEU Guidance Paper.....	42

2.6 The Incentives Balance Test as a New Instrument in Competition Policy?.....	45
<b>3 Do Competition Policy and Intellectual Property Rights Stand in Conflict With Each Other?.....</b>	<b>47</b>
3.1 Interface between Competition Law and Intellectual Property Law.....	47
3.1.1 Conflict Theory.....	48
3.1.2 Theory of Complementarity .....	51
3.2 Innovation as a Common Objective.....	53
3.2.1 Justification of Intellectual Property Rights .....	53
3.2.2 Economic Goals of Competition Policy .....	56
3.2.3 Interface of Competition Policy and Intellectual Property Law from an Economic Perspective .....	59
3.2.4 Tension between European Competition Rules and Intellectual Property Rights .....	60
3.3 Interplay of Competition Law and Intellectual Property Rights as a Means of Fostering Innovation .....	63
3.3.1 Under Which Circumstances Should Competition Law Interfere with Intellectual Property Rights? .....	63
3.3.3 The Incentives Balance Test as a Means to Redefine Intellectual Property Rights.....	66
3.4 Conclusion: What We Have Learned So Far.....	68
<b>4 The Appropriation of Innovation: How Can We Assess the Necessity of Intellectual Property Rights?.....</b>	<b>71</b>
4.1 The Optimal Design of Intellectual Property Rights in Law and Economics.....	72
4.1.1 Patents.....	72

4.1.1.1 Optimal Length.....	73
4.1.1.2 Optimal Breadth .....	76
4.1.1.3 Optimal Combination of Length and Breadth for Single Innovations.....	79
4.1.1.4 Optimal Combination of Length and Breadth for Cumulative Innovation .....	81
4.1.1.4.1 Limits of Patents with Cumulative Innovation...	81
4.1.1.4.2 Licensing Agreements as Solution .....	83
4.1.2 Copyrights.....	86
4.1.2.1 Theoretical Approach to Optimal Design .....	87
4.1.2.2 Empirical Assessment of Optimal Copyright Scope.....	88
4.1.3 Intermediate Result: Necessity of Case-by-Case Design of Intellectual Property Rights .....	90
4.2 Innovation Research: What Do We Know about the Appropriability Conditions for New Knowledge? .....	92
4.2.1 Preconditions for Successful Innovation and Imitation .....	93
4.2.1.1 Influence of Different Knowledge (Sources) and Routines .....	93
4.2.1.2 Spillovers, Absorptive Capacity, and Path Dependence ...	96
4.2.2. Empirical Results.....	99
4.2.2.1 Effectiveness of Intellectual Property Rights in Protecting R&D .....	99
4.2.2.2 Why Firms Do or Do Not Patent .....	103
4.2.3 Alternative Strategies to Appropriate R&D Returns.....	106
4.2.3.1 Secrecy.....	106
4.2.3.2 Lead Time .....	109
4.2.3.3 Complementary Assets and Technologies.....	111
4.2.3.4 Other Appropriation Strategies.....	114

4.2.4 Intermediate Result: Limited Relevance of Intellectual Property Rights for Appropriation of R&D Returns .....	115
4.3 Innovation in Markets with Network Effects .....	118
4.3.1 Theoretical Digression on Innovation and Market Structure.....	118
4.3.2 Markets with Network Effects.....	122
4.3.2.1 Characteristics of Network Industries .....	122
4.3.2.2 Competition, Innovation, and Intellectual Property Rights in Networks and Standards.....	125
4.3.3 Intermediate Result: Considering Differences between Market Structure, Industry Features, and Innovation .....	128
4.4 Conclusion: Redefining Misallocated Intellectual Property Rights with Competition Policy .....	129
4.4.1 Summary of the Previous Results.....	129
4.4.2 Limited Practicability of the Incentives Balance Test.....	132
<b>5 Towards a New Test to Assess Refusal to License Intellectual Property Rights Cases.....</b>	<b>135</b>
5.1 Experiences from Previous Caselaw: Discussion of the Criteria for Abusive Conduct.....	136
5.1.2 Indispensability Criterion and Elimination of Competition .....	136
5.1.3 Defining Harm to Consumers: Prevention of a New Product or Impediment to Innovation .....	141
5.1.4 Objective Justification .....	144
5.2 General Standards to Assess Exclusionary Conduct .....	145
5.2.1 No Economic Sense Test and Profit Sacrifice Test.....	145
5.2.2 Equally Efficient Competitor Test.....	148
5.2.3 Consumer Welfare Test and Disproportionality Test.....	150
5.3 Introduction of the Innovation Effects and Appropriability Test.....	153

5.3.1 Basic Idea.....	153
5.3.2 Design and Structure of the Test in Detail .....	155
5.3.2.1 Detecting the Anti-Competitive Effects .....	155
5.3.2.1.1 Indispensability for Competition in a Secondary Market .....	155
5.3.2.1.2 Harm to Consumers.....	158
5.3.2.2 Are Intellectual Property Rights Necessary to Protect the Innovation? .....	160
5.3.2.2.1 Methodological Approach.....	160
5.3.2.2.2 The Criteria in Detail .....	163
5.3.2.3 Imposing the Remedy .....	166
5.3.2.3.1 Choosing the Right Remedy .....	167
5.3.2.3.2 Enforcement and Supervision .....	171
5.4 Critical Acclaim .....	173
5.4.1 Analysis of the Anti-Competitive Effects .....	173
5.4.1.1 Indispensability Criterion and Elimination of Competition .....	173
5.4.1.2 Consumer Harm.....	174
5.4.2 Objective Justification .....	176
5.4.2.1 Incentives Balancing v. Appropriability Test.....	176
5.4.2.2 Efficiency Defense v. Appropriability Test.....	179
5.4.3 Problems related to the Innovation Effects and Appropriability Test .....	181
5.5 Intermediate Result .....	183
<b>6 Lessons Learned and Open Questions .....</b>	187
6.1 Summary of the Results .....	187
6.2 Fields of Further Research.....	190

6.2.1 Implementing a Dynamic Perspective.....	190
6.2.2 Differentiation between the Various Types of Intellectual Property Rights (One Size Cannot Fit All).....	192
6.3 Conclusion .....	193
<b>Bibliography.....</b>	<b>195</b>