

# Table of Contents

<b>Introduction .....</b>	<b>1</b>
<i>Claude E. Barfield, Günter Heiduk and Paul J.J. Welfens</i>	
<b>A. Telecommunications, Internet, Innovation and Growth in Europe.....</b>	<b>9</b>
<i>Paul J.J. Welfens and Andre Jungmittag</i>	
1. Telecommunications, Internet and Transatlantic Growth	
Differentials.....	9
1.1 Telecommunications and the Internet .....	9
1.2 Telecommunications and Technological Dynamics.....	10
1.3 Taking Stock: Transatlantic Growth Differential.....	13
2. Theoretical Analysis.....	17
2.1 ICT Dynamics and Growth .....	17
2.2 Perspectives on Inflation and Growth .....	29
3. Innovation, ICT Dynamics and Growth: Theoretical and Empirical	
Aspects .....	33
3.1 Basic Theoretical Issues.....	33
3.2 Empirical Links Between Innovations and Output .....	36
3.3 ICT as a General Purpose Technology? .....	40
4. The Role of Telecommunications and the Internet for Trade and	
Growth.....	41
4.1 Telecommunications, Innovation and Economic Growth in	
Germany 1960 - 1990 .....	41
4.2 Growth and Employment Effects of an Internet Flat Rate in	
Germany .....	44
4.3 Telecommunications and Foreign Trade.....	48
5. Some Long-Term Aspects .....	51
Appendix: Methodological Issues in Growth Statistics .....	54
<b>B. Is the IT Revolution Possible in Japan? .....</b>	<b>67</b>
<i>Yukio Noguchi</i>	
1. Introduction .....	67
2. The Present State of IT Utilization in Japan .....	68
3. The Government IT Policy .....	71
4. Social Factors Prevent the IT Revolution .....	73
5. The Traditional Companies Still Dominate the Economy .....	75
6. The Reform of the 1940 System.....	77
Annex: Tables .....	80
<b>C. The Internet and Evolving Patterns of International Trade .....</b>	<b>85</b>
<i>Caroline L. Freund and Diana Weinhold</i>	
1. Introduction .....	85
2. Brief Review of a Theoretical Framework for Empirical Tests.....	86
3. Specification of the Gravity Equation of Trade .....	87
4. Data .....	88
5. Discussion of the Results.....	90

6.	Sensitivity Analysis and Alternative Explanations.....	99
7.	Conclusions .....	101
D.	<b>Internet Dynamics, Trade and Globalization (Some Comments on the paper by Caroline L. Freund and Diana Weinhold).....</b>	105
	<i>Thomas Gries</i>	
1.	General Comments .....	105
2.	Comments on "Internet Increased Trade" .....	105
3.	Comments on "Internet Distance Trade" .....	106
E.	<b>Internet and Culture.....</b>	109
	<i>Marieke de Mooij</i>	
1.	The Convergence Thesis .....	109
2.	Meta-Analysis of Consumption and Consumer Behaviour .....	111
3.	Hofstede's Dimensions of National Culture .....	113
4.	With Increased Wealth Cultural Values Become Manifest .....	114
5.	Culture and Consumption.....	114
6.	Convergence-Divergence: A Pattern .....	115
7.	Communication Technology: Increasing Influence of Culture .....	120
8.	The Communication Means of the New Economy.....	122
9.	The Internet in Europe.....	124
10.	Business Application .....	127
11.	Conclusions .....	128
F.	<b>E-Commerce: A Paradise for Bargain Hunters? .....</b>	131
	<i>Christiane Jäcker</i>	
G.	<b>E-Finance: Causing Major Upheavals in the Spatial Organization of the Financial Sector? .....</b>	135
	<i>Nicole Pohl</i>	
1.	E-Finance: Technological Revolution, Paradigm Shift or Hype? .....	135
2.	The Role of International Financial Centers.....	137
3.	New Technological Developments and the Role of E-Finance .....	139
3.1	Online Banking .....	141
3.2	Investment Houses: Traditional, Online or Hybrid .....	141
3.3	Alternative Trading Systems and the Competition Between Floor Trading and Electronic Trading.....	142
3.4	Cooperation and Alliances of Stock Exchanges .....	143
3.5	Implications for International Financial Centers: Expectations and Perceptions .....	144
4.	Financial Centers as Information and Interaction Centers.....	146
4.1	Delineating the Argument.....	146
4.2	Open Questions .....	150
5.	Further Reasons for Agglomeration: Labor Markets and Institutions.....	157
5.1	Labor Markets .....	157
5.2	Institutions .....	159
6.	Information Strategies and the Special Characteristics of Centers.....	159

7. Conclusion.....	161
Appendix: Tables .....	164
<b>H. E-Finance: Causing Major Upheavals in the Spatial Organization of the Financial Sector? (Some Comments on Paper by Nicole Pohl) .....</b>	<b>171</b>
<i>Thomas P. Gehrig</i>	
1. Introduction .....	171
2. What Does Theory Tell Us? .....	172
3. What Do Empirical Observations Tell Us? .....	173
4. How Does the Internet Affect Spatial Financial Activities?.....	175
<b>I. How Will the Internet Change the Japanese Financial Perspective? .....</b>	<b>179</b>
<i>Mariko Fujii</i>	
1. Introduction .....	179
2. Current State of the Development of Electronic Financial Services in Japan.....	179
2.1 Securities Businesses on the Internet .....	180
2.2 E-Banking .....	182
2.3 Challenges to the Development of Electronic Financial Transactions .....	186
2.3.1 Internet Access.....	186
2.3.2 System Security .....	186
2.3.3 Growth Potential for Online Brokers .....	187
3. Impacts of Electronic Financial Transactions on Market Structure.....	189
3.1 Direct Effects: Transaction Costs.....	189
3.2 Possibility of Changing Market Structure: Cooperation and Competition.....	190
4. Policy Implications and Concluding Remarks.....	192
4.1 Policy Challenges.....	192
4.2 Implications for the Banking Business.....	193
<b>J. How Will the Internet Change the Japanese Financial Perspective? (Some Comments on Paper by Mariko Fujii) .....</b>	<b>195</b>
<i>Christian Thygesen</i>	
<b>K. Internet Dynamics and Expansion of European Financial Markets: Issues from a Behavioral Finance Perspective .....</b>	<b>199</b>
<i>Matthias Bank</i>	
1. Introduction .....	199
2. Recent Trends in the Internet and the Internet Economy .....	200
3. The Expansion of the European Financial Markets.....	202
3.1 European Financial Markets as a Source of Risk Capital for SMEs .....	202
3.2 Mergers, Acquisitions and Corporate Debt Markets .....	207
4. An Assessment of the Recent Developments .....	208
4.1 Shortcomings in the Valuation of Internet-Related Firms.....	209

4.2 The Behavioral Finance Approach (BFA) .....	211
4.3 A Behavioral Finance Interpretation for the Internet Bubble.....	212
5. Conclusions .....	213
<b>L. Competition in Telecommunications and Internet Services:</b>	
<b>A Dynamic Perspective.....</b>	<b>217</b>
<i>Günter Knieps</i>	
1. The Internet as the Prime Driver of Convergence of the Telecommunications, Media and Information Technology (IT) Sectors .....	217
2. Internet Periphery Versus Internet Service Provision.....	218
3. Access to the Internet .....	220
4. Internet Backbones .....	223
4.1 Long Distance Network Capacity (Communications Bandwidth) 224	
4.2 Internet Backbone Services.....	224
4.3 Organization of Interconnectivity: Transit and Peering .....	224
<b>M. Persistence of Monopolistic Bottlenecks in Telecommunications and Internet Services (Some Comments on a Paper by Günter Knieps) .....</b>	<b>229</b>
<i>Torsten J. Gerpott</i>	
1. Summary of Key Conclusions of Knieps .....	229
2. Availability of Competing (Internet) Access Technologies .....	230
3. Competitive Intensity on the German (Internet) Backbone Bandwidth Market.....	231
<b>N. Regulatory Economics and the Internet.....</b>	<b>235</b>
<i>Friedhelm Dommermuth and Christoph Mertens</i>	
1. Introduction .....	235
2. Market Trends and the Importance of the Internet .....	235
2.1 Importance of the Internet.....	235
2.2 Development of Internet Usage / Development of Broadband Internet .....	236
2.3 Internet Service Provider Trends .....	237
2.4 Convergence .....	238
3. RegTP Determinations .....	238
3.1 Wholesale Metered Access for ISPs .....	238
3.2 Wholesale Unmetered Internet Access .....	239
3.3 DSL .....	240
3.4 Line Sharing.....	240
3.5 Internet Telephony .....	241
4. Impact of the Internet on the PSTN/ISDN .....	243
5. Questions Arising from Regulatory Practice and Emerging Trends .....	245
5.1 Should RegTP Regulate the Internet? .....	245
5.2 Is Regulation of the Wholesale Service Enough? .....	246
5.3 Regulatory Implications.....	246
6. Conclusion.....	248

<b>O. The Regulation, Deregulation, and Nonregulation of Telecommunications and the Internet in the United States.....</b>	<b>249</b>
<i>Donald K. Stockdale</i>	
1. Background and Overview .....	249
1.1 Antitrust versus Regulation: A Two-Pronged Approach to Regulating Firms.....	249
1.2 Reconsidering Industry-Specific Regulation.....	250
2. Regulation and Deregulation of Telecommunications .....	251
2.1 The Communications Act of 1934 .....	251
2.2 The Introduction of Competition into the Long-Distance Market 253	
2.2.1 Opening the Long-Distance Market to Competition.....	253
2.2.2 Regulatory Responses to the Introduction of Competition .....	254
2.3 The Introduction of Competition into Local Telephone Markets..	260
2.3.1 The Local Competition Provisions .....	260
2.3.2 Deregulation .....	263
3. The Non-Regulation of Enhanced Services and the Internet.....	265
3.1 The Non-Regulation of Enhanced Services .....	265
3.2 The Non-Regulation of the Internet .....	268
4. Summary and Conclusions .....	269
<b>P. Deregulation of Telecommunications and Non-Regulation of the Internet in Japan .....</b>	<b>275</b>
<i>Koichiro Agata</i>	
1. Introduction .....	275
2. Actors on the Internet Market.....	275
3. Deregulation of Telecommunications in Japan .....	277
3.1 Concrete Actors.....	277
3.2 Stages of the Telecommunications Deregulation .....	277
3.3 Further Discussions and Reforms .....	279
4. Non-regulation of Internet Content in Japan .....	280
4.1 Concrete Actors.....	280
4.2 Process of Discussions .....	281
4.3 Pending Issues.....	282
5. Perspectives .....	285
<b>Q. Electronic Commerce and the Gats Negotiations.....</b>	<b>289</b>
<i>Claude E. Barfield</i>	
1. Introduction .....	289
2. Classification .....	289
3. Taxation.....	292
4. Scope: Modes of Supply.....	293
5. E-Commerce: The Impact of Regulation.....	297
5. Intellectual Property Issues.....	300
6. Privacy & Security .....	302

<b>R.</b>	<b>Electronic Commerce and the GATS Negotiations (Some Comments on a Paper by Claude E. Barfield).....</b>	<b>305</b>
	<i>Harald Sander</i>	
1.	Introduction.....	305
2.	Issues in E-Commerce and Trade.....	306
3.	Towards an Informed Debate on E-Commerce .....	308
<b>S.</b>	<b>The Internet and Society .....</b>	<b>311</b>
	<i>William H. Dutton</i>	
1.	Technological Determinism and Conflicting Visions of the Internet ....	311
2.	Limitations of the “Social Impacts of ICTs” Approach .....	312
2.1	An Over-simplified View of the Processes Determining Societal Outcomes .....	312
2.2	Narrowness of the “Information Age” Thesis.....	313
2.3	Bias Towards Long-term Analyses of Staged Development .....	314
2.4	Failure to Acknowledge that Technology is Intrinsically Social ..	314
3.	The Internet and Society: The Crucial Role of Tele-Access .....	315
3.1	“Communicative Power” and the Politics of Information.....	315
3.2	Key Dimensions of Tele-Access.....	315
3.3	Social Factors Shaping Choices and their Implications for Access .....	316
4.	Encompassing Studies of Influence, Control and Management .....	317
4.1	Influence and the Mass Media .....	317
4.2	Technology, Expertise, and Social Control.....	318
4.3	Management Strategies Related to ICT Use .....	319
5.	The Interaction of Strategies within a Broader Ecology of Games .....	319
<b>T.</b>	<b>The Internet and Society (Some Comments on Paper by William H. Dutton) .....</b>	<b>323</b>
	<i>Guenter Heiduk</i>	
<b>U.</b>	<b>Knowledge, Work Organisation and Economic Growth.....</b>	<b>327</b>
	<i>Elena Arnal, Wooseok Ok and Raymond Torres</i>	
1.	Introduction .....	327
2.	The Changing Nature of Work .....	328
2.1	The Diffusion of New Work Practices and New Forms of Work .	328
2.1.1	How Prevalent are New Work Practices Among Firms?....	329
2.1.2	Telework: An Emerging Form of Work .....	331
2.2	A Higher Demand for Knowledge-Intensive Employment.....	334
2.2.1	Emerging Labour and Skill Shortages .....	335
2.2.2	A Shift Towards Knowledge-Intensive Employment .....	336
2.3	Employee Tenure: Overall Stability Which Masks Important Underlying Changes.....	341
3.	New Work Practices, Skills and Economic Growth.....	346
3.1	New Work Practices and Growth.....	347
3.1.1	Findings from the Existing Literature.....	348
3.1.2	Empirical Evidence.....	349
3.2	Links Between Skills and Economic Growth .....	355

4.	Policy Issues .....	358
4.1	Mobilising Labour Supply .....	358
4.2	Equipping Workers with the Appropriate Skills .....	359
4.2.1	Education in New Technology.....	360
4.2.2	Vocational and on-the-Job Training.....	361
4.2.3	Looking at Migration in a New Light.....	364
4.3	Enhancing Employment Adjustment: the Role of Collective Bargaining and Government Regulation.....	365
5.	Concluding Remarks .....	369
	Annex I: Survey on New Work Practices Used in the Study .....	371
	Annex II: Tables.....	372
V.	<b>The Quest for Global Leadership in the Internet Age: A European Perspective (Luncheon Speech).....</b>	<b>377</b>
	<i>Sigmar Mosdorf</i>	
	<b>List of Figures .....</b>	<b>381</b>
	<b>List of Tables.....</b>	<b>383</b>
	<b>List of Contributors.....</b>	<b>387</b>