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Regulation and Entry into Telecommunications Markets

This book analyzes telecommunications markets from early to mature competition, filling the gap between the existing economic literature on competition and the real-life application of theory to policy. Paul de Bijl and Martin Peitz focus on both the transitory and the persistent asymmetries between telephone companies, investigating the extent to which price and retail price regulation stimulate both short- and long-term competition. They explore and compare various settings, such as non-linear versus linear pricing, facilities-based versus unbundling-based or carrier-select-based competition, and non-segmented versus segmented markets. On the basis of their analysis, de Bijl and Peitz then formulate guidelines for policy. This book is a valuable resource for academics, regulators, and telecommunications professionals. It is accompanied by simulation programs devised by the authors both to establish and to illustrate their results.

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Regulation and Entry into Telecommunications Markets

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Preface

Perhaps the typical process when writing a book is to start with some papers on a topic and then eventually get ready to do it. However, we did not have any papers to start with. The Dutch telecommunications and post authority, Opta, had asked the CPB Netherlands Bureau for Economic Policy Analysis to undertake a study on competition and regulation in the market for fixed telecommunications. That's how we got involved: Paul as a staff member of CPB, and Martin as an external consultant. In 2000, the project resulted in the CPB publication "Competition and Regulation in Telecommunications Markets," a report primarily aimed at regulators. From the beginning, we could draw on contributions to the literature, in particular by Mark Armstrong, Michael Carter, Jean-Jaques Laffont, Patrick Rey, Jean Tirole, and Julian Wright, who had analyzed competition in telecommunications. Our focus, however, was different from their work in that we were not primarily interested in mature markets, but rather in the process of competition that starts from an asymmetric market environment. This, we found, was what the regulator was particularly concerned with.

In the process of working on the report for Opta, we asked ourselves whether, based on the experience that was gained, we should write something more academic, addressing a wider audience. Put briefly, we decided to write this book.

This book targets academics and Ph.D students interested in telecommunications and, more broadly, in industrial organization, regulation, and applied microeconomics; regulators, competition authorities, and ministries involved in telecommunications; economic consultants; and telecommunications professionals. We also have advanced undergraduate students in mind. To cater to such a wide audience, we kept, on the one hand, the formal analysis in the main text relatively simple (in particular in the more applied chapters 4, 5, 7, and 8). On the other hand, we included several technical appendices, complementing the main text.

We are grateful for many helpful comments by Mark Armstrong, George Norman, Aaron Schiff, Tommaso Valletti, Ingo Vogelsang, and Julian Wright. We would also like to thank Marcel Canoy and Michael Carter for helpful discussions. Furthermore, we would like to thank Jean Tirole for his encouragement

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Martin thanks the Deutsche Forschungsgemeinschaft for its generous support (in the form of a Heisenberg fellowship) which made it possible for him to work intensively on the book. He also thanks CPB for its hospitality. Paul thanks CPB, and in particular Marcel Canoy and George Gelauff, for their support and making it possible to work on the book. At CPB, he also thanks Kathy Schuitemaker for her help, Arie ten Cate and Erwin Zijleman for computer support, and his colleagues for providing a stimulating work environment. Outside CPB, he thanks the universities of Frankfurt and Alicante for their hospitality. Thanks also to Chris Harrison of Cambridge University Press, who was always very supportive and encouraging, and to Kate Gentles for very effective copy-editing.

This is one of the many books that have affected the private lives of the authors. Paul is grateful to Denise. Martin thanks Ana for all her support and sacrifice, and Elias for his patience.

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Frequently used symbols

a, b	linear demand parameters
c_{i1}	per-minute, traffic-dependent cost for operator i of a call that originates and terminates on that operator's network
c_{i2}	per-minute, traffic-dependent cost for operator i of a call that terminates on another operator's network
c_{i3}	per-minute, traffic-dependent cost for operator i of a call that originates from another operator's network
c_{i4}	per-minute, traffic-dependent cost for operator i of a call that originates from and terminates on another operator's network
CS	consumers surplus
f	connection-dependent but traffic-independent cost of the local loop
l	lease price for local loop unbundling
m_i	(monthly) subscription fee of operator i
n	size of the market
p_i	per-minute price of operator i
s_i	market share of operator i
u	direct utility function
u_i^0	fixed utility parameter
v	indirect utility function
W	welfare
x	individual demand function
Z	consumer switching cost parameter
α	probability that carrier-select services fail due to a capacity shortage
α^k	relative size of segment k
β^{kl}	probability that a call which originates on segment k terminates on segment l
δ_i	originating access price to the local loop of operator i

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κ	retail price cap on the incumbent's retail services or only on its per-minute price
μ	retail price cap on the incumbent's subscription fee
Π_i	profits of operator i
τ_i	terminating access price to the local loop of operator i

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