

“Questions about digital platforms are paramount in today’s economy. Belleflamme and Peitz have written a book for people who want to understand many of the drivers of success that have been hypothesized by economists. This is a very useful book to read for people who are interested in policy or firm strategy. It is particularly valuable because unlike many textbooks it focuses on the cutting edge of economics research.”

Catherine Tucker, Massachusetts Institute of Technology

“Paul Belleflamme and Martin Peitz put their many years of research and policy work into this comprehensive book that covers the key economic and policy aspects of platforms, which have been playing an increasingly important role in our lives. The authors successfully walk the tightrope between rigor and accessibility for a broader audience, making it an ideal book for those seeking an introduction to platform economics. Key aspects of network effects, direct and indirect externalities, pricing, and platform design strategies are covered in depth, balancing theoretical concepts with empirical facts and case studies. *The Economics of Platforms: Concepts and Strategy* will surely provide an excellent resource and reference for policy makers, business practitioners, researchers, and students of both undergraduate- and graduate-level programs.”

Steve Tadelis, University of California, Berkeley

“A comprehensive and rigorous exposition of the economic analysis of platforms. The book covers in an accessible way a wide range of topics such as design, information management, pricing, or start-up. The presentation is clear, including material at the forefront of the economic literature. Written by two leading scholars in the domain, the book caters to a wide range of readers, from students and professors to businesspeople and policy makers, with minimum economic background. A must-read for anyone interested in the economics of platforms.”

Bruno Jullien, Toulouse School of Economics

“Numerous books have been written about platforms but none of them cover the economics behind platforms in any depth. This path-breaking book fills the gap, covering the key concepts and applications of platform strategy in an accessible but thorough way. As well as being a must-read for practitioners and academic scholars who want to understand platform strategy, it is an ideal textbook for business school or economics courses on the digital economy or platforms. Extensive real-world cases from around the world bring to life the economic analysis and numerical examples.”

Julian Wright, National University of Singapore

## The Economics of Platforms

Digital platforms controlled by Alibaba, Alphabet, Amazon, Facebook, Netflix, Tencent and Uber have transformed not only the ways we do business but also the very nature of people's everyday lives. It is of vital importance that we understand the economic principles governing how these platforms operate. This book explains the driving forces behind any platform business with a focus on network effects. The authors use short case studies and real-world applications to explain key concepts such as how platforms manage network effects and which price and non-price strategies they choose. This self-contained text is the first to offer a systematic and formalized account of what platforms are and how they operate, concisely incorporating path-breaking insights in economics over the last twenty years.

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# The Economics of Platforms

## Concepts and Strategy

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## Preface

A few years ago, we started our project on a book with a broad coverage of the economics of platforms. We remember the times when new platforms were mushrooming,<sup>1</sup> strategy pundits were talking of a “platform revolution,”<sup>2</sup> allegedly anticompetitive practices were rare, and mergers involving platforms were hardly scrutinized by competition authorities.

Over the last few years, many of the newly created platforms have shut down, while a handful of others have gained a foothold in their respective market segments, to the point of raising competition issues that have attracted media attention. Also, as the ever increasing publication of academic and policy work on platforms has become impossible to digest, we have barely caught up with new developments on the policy and the research front. Thus, instead of getting closer to finishing our book project, we felt that the gap was widening between our partial draft and what we should write.

Confronted with this dilemma, we decided to take a shortcut by splitting our grand project into two shorter books. This first book focuses on *concepts and strategy*; we aim to shed light on conceptual issues regarding platforms and on the strategic decisions of a monopoly platform. We largely keep away from strategic interaction between platforms and from regulatory policy questions about platforms. This is reserved for our follow-up book (which we are currently working on) that centers on *competition and policy*.

In the process of completing this book, our and many others’ attention has been absorbed by the COVID-19 pandemic. On the one hand, this is just one further reminder that our topic is not the most pressing issue in this world. On the other hand, the pandemic has shown us that digital services – many of them delivered by digital platforms – are essential for the working of our society and economy. Large digital platforms have been affected differentially by the pandemic: On the one hand, digital platforms active in the mobility and hospitality sectors have taken a bad hit because of lockdown, stay-at-home, and social distancing policies. On the other hand, the same policies have also boosted home delivery, digital communication, and

<sup>1</sup> “There’s an Uber for Everything Now” was a headline you could read in the *Wall Street Journal* in 2015. See [www.wsj.com/articles/theres-an-uber-for-everything-now-1430845789](http://www.wsj.com/articles/theres-an-uber-for-everything-now-1430845789).

<sup>2</sup> See Parker, Van Alstyne, and Choudary (2016).

the consumption of some digital products, to the benefit of the digital platforms that cater to these needs; also, “prosocial” platforms emerged in many countries, demonstrating that platform businesses are able to quickly address the pressing needs of the most vulnerable among us.

The pandemic should add to the public awareness that externalities – and “network effects” as their specific incarnation – are essential to understand the workings of society and the economy. Individual behavior affects the spread of the virus; in particular, individual decisions regarding social distancing and mask wearing affect the likelihood by which the virus spreads. The adoption and usage of corona contact-tracing apps affect the individual and societal benefit from such apps. The more users install and use the tracing app, the more capable the app is of informing an individual user about the risks they have been exposed to. This allows for more effective testing and a better adjustment of individual behavior (for instance, self-isolation in case of high-risk contact). These are all clear examples of positive direct network effects: The wider the adoption of a given behavior or application, the larger the benefits that this behavior or application confers to all (adopters and also, to a lesser extent, nonadopters).

In case there was any doubt, the COVID-19 pandemic demonstrates how much we rely on digital platforms for our daily life. So, we had better try to understand how they work. This book is the modest effort by two economists to look at the fundamental role that platforms play in making and managing markets. This is a first step in this direction, which we hope to complement in our follow-up book.

This book benefited from many comments we received from colleagues, students, and practitioners over the years when teaching about the economics of platforms. We are grateful for specific comments we received from Chiara Fumagalli, Andrei Hagiu, Doh-Shin Jeon, Eric Toulemonde, and Julian Wright on parts of the book. We are grateful to our partners, Catherine and Diana, for coping with the adjustments in our work-life balance when writing this book.

The topic of platforms and, in particular, digital platforms has raised a lot of policy interest recently. Are we hired guns? Here are our disclosure statements. Paul is a member of DERN, the Digital Economics Research Network.<sup>3</sup> Paul also regularly serves as an independent academic expert on matters related to the economics of platforms for regulatory bodies – such as the European Commission, the UK Parliament or the Belgian Competition Authority – and economic think tanks – such as the Centre on Regulation in Europe (CERRE), the Center for European Policy Studies (CEPS), or BRUEGEL. Paul does not have any financial stakes in any platform. Over the years, Martin has authored or coauthored a number of policy reports related to the economics of platforms for the European Commission, the German Federal Ministry of Economic Affairs, CERRE, and GSMA, all of them written in academic

<sup>3</sup> Created in 2020, the network aims at bringing together academia and private companies: Scholars pursue theory and evidence-based research with full academic freedom and autonomy, while partner firms contribute to the scientific activity by sharing data and institutional knowledge; at the time of this writing, the network gathers scholars from seven universities and is funded by Google; more partner firms, research institutions, and scholars are expected to join the network in the near future.

independence; he also worked as an economic expert on platform-related issues and cases for a number of competition authorities. Martin did not work for any platform over the last ten years and does not have any financial stakes in any platform. In any case, Paul and Martin do use a lot of services offered by digital platforms, large and small.