

Foreword

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It has become routine to marvel at the extraordinary dynamism of the modern communications marketplace. This sector – whether in developed or developing nation – does not cease to amaze observers with its feats. A few of those feats deserve repeating: In just the last two decades the number of mobile users worldwide went from less than 1 to over 70 per hundred people, and starting from zero the internet is now used by 30 per cent of the world's population. Twenty years ago people watched video programming at home on their TV sets received over the air or off a coaxial cable. Today video is also delivered by satellite networks, by cell phones, and by broadband connections to an expanding array of screens and devices, and some viewers are now the source of videos and images shared with the world. This connectivity is not just enabling high-tech social interaction, but is providing the means to generate wealth through market information at the micro level as well as to shape broad national trends and regional politics.

While progress in communications services has been relentless, the path has not been linear by any means. The quick twists and turns without much warning make it difficult to get a firm grip on the underlying forces driving the industry. Academic research is handicapped in an undertaking of this sort because it is based on historical evidence – as it should be – and so destined to always be out of date. The urge to forecast the future, however, is nearly irresistible. Who would not want to identify the next big development before it dislodges established incumbents and sweeps in new technologies and business models? Of course, this is a fool's errand. Time and again, history has confirmed the futility of these exercises.

This volume, edited by Gerald R. Faulhaber, Gary Madden and Jeffrey Petchey, is able to straddle the turbulent past of the telecoms sector and yet contributes to its exciting, though unpredictable, future. It does so by conducting positive analysis of communications policies adopted in the past and using that analysis to deduce lessons that can guide policy makers in the future. On occasion, the volume also takes the tack of calibrating structural

models using historical data and then using those models to numerically simulate counterfactual regulatory policies or corporate strategies. It is these kinds of research strategies that preserve the scientific method while providing relevant policy analysis for this fast-changing sector.

One advantage of the backward looking nature of academic research that is too often overlooked is the lessons offered by past failures. It is important to keep in mind this sector has filled a large cemetery of failed technologies, companies and their business models and practices, and regulatory policies. The invention of the telephone in 1876 is held up as the birth of the telecommunications industry only to ignore that it was the beginning of the end for the telegraph. Nevertheless, it took 130 years, until 2006, before Western Union ceased sending telegrams. Its demise may have begun with the telephone but it was sealed by email and text messaging. Yet some new popular technologies never displace the established ones. Despite fears to the contrary, television has not made radio obsolete – though digital transmission of sound and picture clearly is displacing the earlier analogue equivalent. Mobile phones may be making payphones and pagers extinct but fixed line penetration remains high in the developed world.

Make no mistake: communications services and technology have much left to do. Despite several digital initiatives, most medical records remain on paper. Few workers telecommute, even those in advanced economies, but rather spend countless hours and tremendous amounts of fossil fuel traveling back and forth to work. Education, with few exceptions, is consumed by students seated in buildings in front of teachers, and not at home or work in front of a computer screen. The challenge to imagine and build a digital economy that efficiently and effectively meets these goals is what makes communications research so intriguing. This volume provides the reader with a good blueprint of how best to pursue this project.