
Editorial

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Biographical notes: Brigitte Preissl received her PhD in Economics from Frankfurt University. Her 25-year research experience covers innovation systems, service markets, the impact of information technology and the regulation of telecommunication markets. Most of her research experience was gained at the German Institute of Economic Research (DIW) in Berlin. Visiting fellowships in England (University of Warwick and Aston University), the USA (USC Berkeley) and Italy (Università Cattolica, Milan) have complemented her academic itinerary. From 2005 to 2007, she worked as a Senior Economist for Deutsche Telecom. Since 2007, she has been the Editor-in-Chief of *Intereconomics* and *Wirtschaftsdienst*, two economic policy-oriented journals.

Technical development drives telecommunication markets. However, large investments in infrastructure are needed to deliver new services to the end user. At the same time, uncertainty about demand makes infrastructure deployment a high-risk activity. Mobile technology has long been hailed as a low-cost substitute for physical network construction, but providing a similar level of quality and comfort in mobile as in fixed networks requires a much higher investment effort than commonly assumed. The papers in this special issue have been presented at the 21st European Regional Conference of the ITS in Copenhagen in September 2010.

Jan Markendahl and Bengt G. Mölleryd address the problem of infrastructure requirements in mobile markets in their paper: 'Mobile broadband expansion calls for more spectrum or more base stations: analysis of the value of spectrum and the role of spectrum aggregation'. They conclude that with an increasing number of new applications for mobile broadband connections, demand for spectrum will grow and considerable sums of money will have to be invested in infrastructure to be able to deliver what customers want.

Investments in telecommunications infrastructure do not only lead to innovative services; they also contribute to growth and employment in the economy as a whole. The debate on the regulatory impact of this phenomenon has gained momentum in the context of NGN, a technology that requires large investments and that is under regulatory scrutiny. Reinhard Wieck and Miguel Vidal give an overview of the recent literature. They find strong evidence that infrastructure investment generates growth in most economies.

Orada Teppayayon and Erik Bohlin, 'Challenges of fibre-based infrastructures: a review of the NGA debate in Europe', look at the regulatory rules for communication networks at the EU level. A detailed analysis of the provisions foreseen for access to NGN reveals the difficult balance between laying the infrastructure basis for advanced

communication in a high-risk scenario and the need to enhance competition mechanisms. Conflicts may arise between a strategic agenda aiming at a full exploitation of the technological potential, and a sectoral agenda that is more concerned about the benefits of competition.

However, is it true that fixed connections are a technology of the past and consumers substitute their fixed telephony and internet connections with mobile access technology? This question is at the core of the paper 'Fixed-to-mobile substitution in Turkey: a policy perspective', written by Yavuz Göktaylar and Mehmet Bilal Ünver. The authors distinguish between access and traffic and find that – not surprisingly – traffic substitution is more common than access substitution. They deny the need for policy intervention in this field, as any regulatory intervention could lead to unforeseen side effects and distortions.

Network effects can shape the diffusion of services to a large extent. Thus, suppliers might want to use them in their market strategies. Network effects have been widely discussed for fixed connections. Much less is known about their characteristics in mobile networks. The first step to find out about the nature and intensity of such network effects is to develop a technique to measure them. In their paper, 'Measuring network effects in mobile telecommunications markets with stated-preference valuation methods', Mikołaj Czajkowski and Maciej Sobolewski use stated-preference analysis to identify and describe network effects in the mobile communications market in Poland.

Altogether, the five papers deal with different aspects of market dynamics. They show that despite flourishing service markets, infrastructure investment for NGN remains problematic and needs greater awareness in policy making circles. Mobile solutions face the same problem and do not provide an easy solution, in particular, if the backbone networks are not in place. The complex features of fixed-mobile substitution show furthermore that a lack of adequate infrastructure cannot simply be compensated by migration to another technology.