
Editorial

Petrus Potgieter

Department of Decision Sciences,
University of South Africa,
P.O. Box 392, Unisa, 0003 Pretoria, South Africa
E-mail: php@member.ams.org

Peter Dell*

School of Information Systems,
Curtin University of Technology,
G.P.O. Box U1987, Perth, Australia
E-mail: P.T.Dell@curtin.edu.au
*Corresponding author

Biographical notes: Petrus Potgieter is a Professor in the Department of Decision Sciences at the University of South Africa in Pretoria. He received his PhD in Mathematics from the University of Pretoria in 1996 and his research interests include telecommunications, new media, mathematical computer science and unconventional models of computation. His research has been recognised by a five-year grant from South Africa's National Research Foundation (NRF) and his recent extended international collaborations include the Columbia Institute for Tele-Information's project Media Concentration Around the World and the EU project COMPUTAL on computable analysis.

Peter Dell is the Head of the School of Information Systems at Curtin University and has previously held Lecturer and Senior Lecturer positions in the school since 2000, prior to which he worked in the IT consulting industry. His current research interests include technology adoption and the social and economic aspects of ICTs. He has a first-class honours degree in Information Systems from Curtin and a PhD in Science and Technology Policy from Murdoch University.

In this special issue of *IJMNE* for the 5th Africa-Asia Australasia Regional Conference of the International Telecommunication Society (ITS) held in Perth, Western Australia, November 2011, regulation and spectrum are central themes. The conference was hosted by the Communication Economics and Electronic Markets Research Centre and the Department of Internet Studies, School of Media, Culture and Creative Arts, Curtin University on the theme of 'Emerging business opportunities in wireless technology and new media'. International Telecommunications Society-Communication Economics and Electronic Markets Research Centre (ITS-CEEM) regional conferences have been the leading ongoing conferences addressing the needs of the African, Asian and Australian telecommunications sectors since 2001. One of the foci of the conference has been to promote scientific information interchange between researchers, regulators, developers, engineers, students, and practitioners, a goal shared by this issue of the *IJMNE*.

Plans and implementations of for next-generation broadband networks are increasingly common and it is pertinent to investigate questions regarding their regulation and potential economic contribution. Five papers of particular relevance appear in this special issue appearing under the title 'Wireless technology and broadband economics'. They look at various economic and regulatory aspects of broadband internet and wireless telephony, the key communications technologies of the early 21st century.

Cave's article entitled 'How strong is the case for the fiscal exceptionalism of the telecommunications sector?' looks at the role of special taxes and subsidies in telecommunications. Especially in developing economies, where there is a higher incentive to fund the fiscus from a small number of sources in view of the difficulty to collect more broadly applied taxes, a relatively heavy tax burden falls on telecommunications services and hardware. Public financing of infrastructure through subsidies has generated more interest in developed economies where the technological shift from copper to fibre access is regarded as having high priority. His conclusion is that there is no convincing argument in favour of either especially high or especially low taxes on the telecommunications industry and that the case for subsidies or nationalised investment (e.g., Australia's NBN) is unproven.

An attempt in part to justify public subsidies is made in the next paper. Measuring the impact of broadband speed on economic growth is the topic of Rohman and Bohlin's 'Does broadband speed really matter as a driver of economic growth? Investigating OECD countries' in which data from Ookla and the OECD databases are used to estimate the impact of the doubling of broadband access speed on economic growth. Their conclusion, from panel data, is that a doubling of broadband access speed results in an economic growth rate in 2011 that is 0.3 percentage points higher than that reported for 2008.

In their paper 'Intergenerational effects of mobile telecommunications service diffusion in Sweden', Annafari, Lindmark and Bohlin use the Norton-Bass and the Islam-Meade models to examine the inter-generational diffusion between different mobile telephone technologies. Since Sweden has been a consistently advanced user of mobile telephony since the 1950s, the available data are relatively extensive and seven distinct generations of technology are considered for the model. The study shows that intergenerational effects exist in the mobile telephone service diffusion in the Swedish market and that the effects are positive toward the newer technology but not vice versa.

Looking at the latest generation of technology to have reach maturity, Madden, Bohlin and Morey in 'Entry into 3G mobile telecommunications markets' ask whether regulators' policy tools really affect the probability an entrant wins a 3G spectrum licence. Using data for 141 licence awards in 49 national processes from the DotEcon Spectrum Awards Database, an econometric analysis finds that auction assignment processes only modestly increase the probability of entry, whereas concessions on price and quantity concessions have no impact. The paper calls for further analysis into the ineffectiveness of price and quantity concessions to stimulate market entry.

Freyens considers the closely related issue of efficient allocation and licensing for radio spectrum in his 'On the economic objectives of spectrum policy reforms' by interrogating the notion of efficiency and looking in more detail at how goals of efficiency and public interest are pursued within Australia's three-pronged approach. He recommends that reforms should pursue greater activity rates and secondary usage in property rights spectrum spaces and an increase in the level of certainty and flexibility for

command and control licences. This could offer a way to maximise both mainstream economic efficiency and address future challenges in spectrum policy.

We would like to thank the *IJMNE* for making this special issue dedicated to the conference possible and the authors for their excellent contributions.