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Editors' Note

Gillwald, Alison; Van Audenhove, Leo

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This issue of the journal represents the research outcomes of a bilateral research project between the LINK Centre at the Graduate School of Public and Development Management, Witwatersrand University and SMIT at the Vrije Universiteit Brussels. The Bilateral Scientific Co-operation project, made possible by the support of the National Research Foundation in South Africa and the Flemish Community in Belgium, seeks to explore broadband development in the two countries. Researchers from both institutes gathered in Johannesburg and Brussels to exchange views and insights into infrastructure, applications, usage patterns and policy related to broadband.

Despite the obvious differences between these two countries, both have not seen the uptake and usage that has characterised broadband front runners such as Korea and Iceland. With its elderly population and relatively slow take up of new technologies Belgium's penetration lags behind many of its Northern European neighbours. In 2007, 67% of Belgian households have a computer and 60% of households have access to the Internet. At the end of 2006, 90% of these lines were broadband. However, increasing the number of households with computers and Internet in the future might be difficult. In 2007, 40% of households without an Internet connection saw no need or interest in acquiring an Internet connection. The cost of material and connection forms an important barrier for many and especially for single parents. In 2006, Belgium had one of the highest broadband monthly subscription rates of the 40 best performing broadband economies, though its price per 100Kbs was better than average (Kelly 2006).

South Africa, despite being the historical leader in the ICT penetration on the continent, has fallen behind other North African countries and island states and in 2005 had fewer ADSL connections than Morocco (325 000 compared to less than 200 000)[1] Telkom's relatively late introduction of ADSL in global terms resulted in significant demand, which they could not initially service.[2] While wireless competitors leveraged supply-side delays with the roll-out and early introduction

1 See Southwood (2006).

2 See *Sunday Time*s (2006).

of mobile HSDPA services, ADSL growth has recently expanded again to counter the rapid uptake of mobile broadband services, and still has a significant lead over mobile services. Independent broadband wireless access providers such as iBurst have also been able to leverage the prevailing conditions to their advantage and marginally improve the competitive take-up of data services. In spite of a promising start, being first to enter the wireless data market, state multimedia operator Sentech's My Wireless broadband product was plagued by the challenges of entering the retail market under-financing, and the service more or less petering out with less than 5% of broadband market share in 2006. Yet notwithstanding the installation delays and relatively high prices, Telkom nevertheless dominates the broadband market with over two-thirds market share, which translated into over 300 000 subscribers in mid-2007. Yet in spite of these innovations, South Africa continues to lag behind similar size economies in terms of broadband take up (Esselaar and Gillwald 2007).

The implications of this for these countries are profound. Broadband is the critical infrastructure necessary for the competitive development of the modern national economy and for their integration into the global economy. Its current uneven development also raises major questions around the expansion of the digital divide within countries and associated policy concerns around marginalisation and social inclusion. In this issue Wendy van den Broeck and Bram Lievens highlight some of these issues in their paper *Why Broadband?* which examines the drivers of broadband uptake particularly among residential users.

Luciano Morganti examines some of these issues at the global level with his exploration of the policy economy of the Internet and the unevenness of its development. He provides a map of the power structure in place behind the Internet through an examination of who the main players behind the technical infrastructure of the Internet are and how packets flow unevenly in and between different parts of the world. He also gives an analysis of which cultures and regions are profiling themselves as strong Internet players today, paths of content production, content usage and content flows.

Simon Delaere's paper provides a regional focus on the issue of spectrum policy trends in the European Union, that are leading towards more flexible forms of spectrum management. Despite the acknowledgement of the need to reform spectrum management, he demonstrates the lack of consensus among European regulators on how best to achieve this. He highlights the fact that policy is also

often finalised by Government before there is consensus in industry around what is required.

The political economy of broadband development in South Africa is explored by Alison Gillwald. She attributes the poor penetration rates for broadband to the policy incoherence that has straddled 'statist'- and market-policy paths resulting in neither competition benefits nor state investment and provisioning.

Ewan Sutherland examines the negative impact of the monopoly provision of leased lines as the critical input into ISPs, mobile networks and virtual private networks in South Africa. He demonstrates how the absence of competition or effective regulation has resulted in non-cost orientated pricing to the detriment of sector infrastructure development and the national growth strategy ASGISA.

In the article on Wireless City Networks, Leo van Audenhove, Pieter Ballon, Martijn Poel and Tomas Staelens compare and contrast the development of wireless networks in cities in Europe and North America. Lucienne Abrahams, Brian Bakker and Mohammed Bhyat continue this theme in their consideration of the viability of digital cities in a developing country context, focusing on South Africa. They argue that the six larger metropolitan municipalities might feasibly build broadband networks, but caution against how this is done in order to enable network extension rather than become a drain on municipal resources.

Steve Esselaar and Pieter Soete look at the pioneering, but much smaller scale, Knysna town network and conclude that despite its heroic efforts to offer affordable service in the face of the incumbent monopoly, the model is not scalable and replicable at present.

Jo Pierson, Dorien Baelden, Bram Lievens and Christine Marsigny examine the use of ICTs by SMMEs in Belgium – including access and the use of broadband – and find them widely underutilised. Pascal Verhoest, Tina James, Mario Marais and Leo van Audenhove demonstrate the positive effects of ICT usage by South African SMMEs in the tourism industry. They found that ICT significantly improves performance in the South African tourism industry. Although ICT adoption represents a significant operational cost for the interviewed firms, it also substantially contributes to increased revenue and improved labour productivity. The most positive effects are attributed to the usage of the Internet to improve customer relations in conjunction with creative product offerings (customisation, product-service bundling), all of which highlight the importance of access to affordable high-speed broadband.

This represents a snapshot of developments related to broadband in Belgium and South Africa. It highlights the impact of international and regional development, but

emphasises the importance of the national or local context responding to the specific needs of countries and segments within them. Owing to the dynamic nature of the ICT industry, and as a result of the research carried out in this area, new research has been done and new areas of research have been identified since the writing of these papers. It is hoped nevertheless, that the insights provided by these papers will be of use to policy makers and researchers in other developed and developing countries and that they will provide a platform for further research in this area.

Alison Gillwald
Associate Professor
LINK Centre
Witwatersrand University

Leo van Audenhove
Researcher
SMIT-IBBT
Vrije Universiteit
Brussels, Belgium

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