
Editorial

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Biographical notes: Bill Martin has, until recently, been Research Director in the School of Business IT and is now working on a part-time basis, engaged in the supervision of PhD students and on external consulting work. His particular areas of expertise are in knowledge management and digital publishing. He initiated the first course in knowledge management in Australia and has taught and consulted in that area, both in Australia and in the wider Asia-Pacific region, with clients in government, academia and the law sector. He has published widely and been active in conference presentations in both fields. He has just completed a government-funded project on the impact of digitisation on publishing and is now researching and consulting in the area of business models for digital models for digital publishing.

Mohini Singh is an Associate Professor in Information Technology and E-Business at RMIT University, Australia. Her research is in the areas of digital business, administration and government, IT management and e-Services. She has published widely in the areas of e-business and new technology and innovation management. Her publications include books, book chapters, journal and conference papers. She has edited journals, books and serves as a Member on several journal editorial boards.

Alemayehu Molla is a Senior Lecturer in Information Systems at the School of Business Information Technology, RMIT University, Australia. His research interests include e-business, information systems outsourcing and success and ICTs and socio-economic development. His research has appeared in journals such as the *European Journal of Information Systems*, *The International Journal of Electronic Commerce*, *Information and Management*, *Electronic Commerce Research*, *Journal of Information Technology Cases and Application Research*, *International Journal of Entrepreneurship and Innovation*, *Journal of Internet Banking and Commerce*, *Information Technologies and International Development*, *Journal of IT for Development* and *Electronic Journal of Information Systems in Developing Countries*.

1 Introduction

There is a global consensus on the perceived connection between the uptake of Information and Communication Technologies (ICTs) and economic growth. Development today is virtually synonymous with knowledge and technology, including computer hardware and software, multimedia, communications and biotechnology, digitised information, services and products with a range of these available around the clock. Nonetheless, the benefits of the so-called digital revolution and the knowledge economy it enables have been accompanied by the gap between those that access knowledge and information readily and those that lack such access either completely or with significant constraints. This divide exists both within the developed countries of the North and between them and those nations in the South that are striving to escape the burdens of underdevelopment. The digital divide is not only dependent on technology access, and on inadequate infrastructures and institutions, including regulatory uncertainty, but also is affected by a wide range of social factors related to income, literacy and education, a lack of both general and ICT-specific skills and the quality of access to technology and related opportunities. As was pointed out nearly a decade ago (Heeks, 1999) in order to access ICTs in any meaningful manner, users need money to buy or access these technologies, usage skills to employ them and literacy skills to read the content.

Clearly, the acquisition of technological capacity is a necessary but not sufficient response to such challenges. People must be capable of responding to the opportunities presented by technology. Various national and international institutions including the United Nations, the International Telecommunications Union, the Organisation for Economic Cooperation and Development and the European Union are undertaking policies, programmes and projects to include those that remain on the negative side of the digital divide. While differing in emphasis and application, all these programmes are aimed at resolving issues of access and equity, including the basic literacy skills necessary to participate in the digital economy. They also address a range of issues in relation to legal and regulatory frameworks for telecommunications, intellectual property, e-business and e-government, and not the least to do with the sustainability of positive impacts. Moreover, as these positive impacts increasingly have to do with the creation and exploitation of intangible value, people must also have access to the information and knowledge to become both users and producers of these technologies. Critically, success in such ventures may ultimately depend on the exploitation not only of imported information and knowledge but also on the ability to combine these with a knowledge of local conditions including knowledge of local political and social structures (Stiglitz, 1999). This Special Issue has been heavily influenced by the view that much of the reasoning on growth and development occurs within a too narrow understanding of knowledge and of the economic processes in which it takes part, not the least where growth is concerned (Fagerburg, 2005) leading to stunted growth. Arguably, one major consequence of such misunderstanding is continuance of the digital divide.

This Special Issue will address issues of technology from a global, knowledge-based perspective for potential insights to some of the major problems of development impacting the digital divide. The Special Issue includes four papers based on a range of approaches to address various topics related to the digital divide. At one end of the continuum of approaches is Deichmann et al.'s quantitative analysis of the digital divide. At the other end is Fairchild and Quansah's conceptual analysis of approaches to

the digital divide. In between, Celik and Ipcioglu's paper provides much needed survey evidence on issues to do with the digital divide, whereas Molla and Al-Jaghoub's paper uses a case study approach to understanding the outcome of efforts to tackle the digital divide.

Topic coverage ranges from measuring the international digital divide (Deichmann et al.) to evaluating the outcome of digital inclusion projects in the context of a developing economy (Molla and Al-Jaghoub); from the gender dimension of the digital divide in use of the internet (Celik and Ipcioglu), to the causes and effects of the digital divide on the countries of Sub-Saharan Africa (Fairchild and Quansah).

The authors also drew upon various analytical and theoretical frameworks. At one end of the theoretical continuum is the application of the Kohonen self-organising algorithm, an exploratory data analysis technique that helps to visualise a multidimensional dataset and identify groups of countries with similar digital access indicators (Deichmann et al.). At the other end is the livelihood framework, a holistic approach which recognises the effects of a community's vulnerability, assets and strategies in understanding the outcome and impact of digital inclusion projects (Molla and Al-Jaghoub). Fairchild and Quansah's paper applies the technological determinism and social constructivist views to analyse national strategies, whereas Celik and Ipcioglu rely on the Technology Acceptance Model to investigate gender perceptual differences and their effect on the use of the internet.

Despite the differences in approach and topic, similarities underlying the idea for this Special Issue were recognition of the continuing need for effective and realistic benchmarks for ICT and knowledge-based development; a need for a broader understanding of the digital divide beyond issues of technology to consider socio-legal and socio-economic dimensions; and a message that information and knowledge remains at the core of both the digital divide and of strategies to promote digital inclusion.

References

- Fagerburg, J. (2005) 'Knowledge in space: What hope for the poor parts of the globe?' *Paper prepared for the Washington Conference Advancing Knowledge and the Knowledge Economy*, National Academies, Washington.
- Heeks, R. (1999) *Information and Communication Technologies, Poverty and Development*, Manchester, Institute for Development Policy and Management, University of Manchester.
- Stiglitz, J. (1999) 'Scan globally, reinvent locally: knowledge infrastructure and the localization of knowledge', Keynote address, First Global Development Network Conference, Bonn, December, Available at: <http://www.iucn.org/themes/ceesp/Publication/CMWG/Stiglitz-local-knowledge.PDF>. Accessed on July 2007.