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# **Socialising the Digital Divide: Implications for ICTs and E-Business Development**

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## **EXECUTIVE SUMMARY**

*The digital divide is a phenomenon associated with disparities between groups and societies in the adoption and diffusion of electronic information and communications technologies (ICTs) and e-business practice. The article argues that, in rhetoric at least, the innovation, adoption, and diffusion of ICTs bear the hallmark of technological determinism (i.e., that of a technical imperative) in which social, economic, and political factors are underplayed. By way of contrast, the article considers the merit of a social shaping approach to analysing innovation in ICTs, to assess the prospects for ameliorating the digital divide between developed and developing countries and for stimulating economic development in the latter through the promotion of e-business. The article suggests how future research on the social shaping of ICTs, e-business, and the digital divide between developed and developing nations can meet the challenges discussed herein.*

**Keywords:** *digital divide; e-business; less developed countries; social impact of technology; technological determinism*

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## **INTRODUCTION**

On the heels of initiatives such as that of then Senator Al Gore during the 1991-1992 U.S. presidential campaign and the Bangemann report (Europe and the Global Information Society), a series of national-level policies have been produced aiming to a greater or lesser extent to create information-based societies, including some occurring in developing countries. In Eu-

rope these include the French Information Autoroutes, the Danish Information Society 2000, and the UK's Information Society initiative. In Asia, one may identify Singapore's Intelligent Island strategy, Malaysia's Vision 2020, Japan's high-performance information infrastructure plan, China's NII 2020 policy, and Vietnam's IT 2000, amongst others (Ducatel, Webster, & Herrmann, 2000). Yet there remains a marked disparity between developed and

developing countries in their take up and ability to use the information and communication technologies (ICTs) central to the creation of information societies, the growth of e-business and e-commerce, and thence economic development.

This article explores the extent, nature, and factors affecting bridging of this digital divide, drawing on and reviewing the literature related to “technological determinism” and the “social shaping of technology,” whilst identifying implications for e-business and economic development in poorer nations. Vestiges of the former, which tends to be treated as theoretically passé, remain pervasive, whilst social shaping approaches have yet to provide any effective analysis of the digital divide as it applies to developing compared with developed countries. The article is concerned that technological determinism is pervasive in public accounts and rhetoric associated with the creation of information societies and the bridging of digital divides. For example, Mark Malloch Brown, administrator of the UN Development Programme, claims that it is ICTs that are “transforming societies” (2003) and calls for ICTs “to deliver revolutionary breakthroughs... giving the world’s poor access to the global economy” (2000). Bearing this in mind, a second concern of this article is to assess the contribution of social shaping approaches to understanding the complexity of factors and processes implicated in technology development, particularly as this relates to the adoption and diffusion of ICTs, e-business development, and the bridging of the digital divide between developed and developing countries.

The general position regarding social shaping may be enunciated as follows: social processes shape not only the form and features (i.e., the content) of particular technologies, but also the patterns, general char-

acteristics, and direction of technologies across whole areas of development and application (Russell & Williams, 2002). Over time, the social shaping approach has been applied to the reshaping or ‘reinnovation’ of technology ‘on the ground’, in the home or office, or on the factory floor, and how these activities feed back into upstream activities linked to public policy or corporate strategy decisions about the designs, purposes, and uses of potential new technology (MacKenzie & Wajcman, 1985; Russell & Williams, 2002). Central to the social shaping approach is the idea that there are ‘choices’ (though not necessarily conscious choices) inherent in both the design of individual artefacts and systems, and in the direction or trajectory of innovation programmes (Williams & Edge, 1996).

Clearly, this type of approach could be of great relevance to analysis of developing countries’ efforts to develop information societies and to close the digital gap with developed countries. Yet, a search of major databases such as ISI Web of Knowledge yields nothing in this vein.

In April 2004, the authors entered all permutations of the key terms ‘social aspects’, ‘social shaping’, ‘digital divide’, ‘information society’, ‘technology’, ‘e-business’, and ‘electronic business’ into ISI Web of Knowledge, searching for research published since 1995. One hundred and two (102) articles were recorded in the database — which admittedly is not exhaustive of work done in the area — but tellingly, not one article could be said to encapsulate the interaction of technology, policy, and society associated with social shaping research in a developing country context (i.e., as distinct from, say, the PICT studies of ‘wired cities’ in developed, mainly Western European nations and the STAR project assessing the ‘digital revolution’ in the EU).

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