

# ICT Leapfrogging Policy and Development in the Third World

**Amanda Third**

*Monash University, Australia*

**Kai-Ti Kao**

*Monash University, Australia*

## INTRODUCTION

'Leapfrogging' is the term used to describe development policies, and the processes of their implementation, that aim to move lesser developed societies to a higher stage of development without them transitioning through the spectrum of changes that have underpinned the development of industrialized societies. Information and communication technology (ICT) leapfrogging strategies have the potential to bypass intermediate stages of development that are often resource intensive (in terms of capital investment in hardware and labor), environmentally unsustainable, and involve the building of infrastructure that is prone to become obsolete in a relatively short time. A number of organizations, including (and not only including) the Association of South East Asian Nations (ASEAN, 2000), Group of Eight (G8, 2000), the United Nations (UN, 2000), and aid agencies, advocate ICT leapfrogging in the developing world.

The rise and increasing reach of globalization has seen the emergence and widespread uptake of ICTs. Indeed, for many commentators the proliferation of ICTs is a key mechanism of the social, cultural, political, and economic transformations that characterize globalization. In this context, as Nulens and van Audenhove (1999, p. 451) note:

*The benefits of ICTs are not considered confined to the West alone. Several observers believe that the widespread use of ICTs in developing countries will improve the economic and social situation of the Third World populations as well. Technological innovation in ICTs and the drastic reduction in prices will enable [lesser developed nations such as those of] Africa to 'leapfrog' stages of development and catch up with the global Information Society.*

The explicit aim of leapfrogging policies is to allow developing nations to compete on par with the developing world. The introduction of ICT production, distribution, and consumption initiatives is seen to represent a unique opportunity for developing nations in places like South America, Asia, and Africa to enter the global economy and benefit from the processes of globalization. As such, the argument that ICTs are crucial to development underpins the agendas of a number of global organizations. For example, the activities of the UN Global Alliance for ICT and Development (UN-GAID) to date have emphasized the importance of integrating ICTs into development strategies in order to achieve the UN's broader development goals (see ECOSOC, 2000). Leapfrogging is thus a policy orientation with considerable purchase in arenas dedicated to development.

## DEVELOPING NATIONS AND THE PROBLEMS WITH THE THIRD WORLD

The term 'third world' first came into popular usage in the aftermath of World War II when nations around the world began the process of post-war reconstruction. From the outset, the idea of the third world was bound up with the emergent politics of the Cold War, which saw the capitalist 'Western world' (and in particular, the United States) engage in a nuclear standoff with the communist 'East' (represented most prominently by the then Soviet Union). A 'three worlds' model of development was used to classify the nations of the world according to levels of 'industrialization' or 'modernization' and economic status. The 'first world' described highly industrialized, capitalist nations. The 'second world' described communist bloc nations with strong levels of modernization. And the 'third world' applied to those nations that fell outside the 'first' and

'second' worlds. These nations were typically colonial territories or newly independent nations with low levels of industrialization and highly dependent economies. In the context of the Cold War, the modernization of the third world was seen in the West as an important component of the struggle against the threat of communism. It was thought that, by lending third-world nations' economic support for the process of industrialization, the first world could annex the third world and facilitate the global spread of capitalism. Further, as a major source of raw materials (minerals, timber, and so on), the third world was of economic importance to manufacturing in first-world industrialized nations.

With the so-called 'fall of communism' in the early 1990s and the 'disappearance' of the second world, the three worlds model became an increasingly irrelevant way of describing the developmental status of the world's nations. In this context the term 'developing nations' gained prominence and has become the preferred term, not least because it is a more dynamic term that conveys the possibility of changing the circumstances of impoverished nations. As globalization gained momentum, developing nations, while remaining a primary source of raw materials, also came to be configured as potential markets for first-world products.

Discussions about the status of third-world or developing nations typically emphasize the problem of widespread poverty. However, these terms also describe nations with very high rates of population growth, traditional rural social structures, low rates of literacy, high rates of disease, and also often unstable governments. While the term 'developing world' implies that the nations that comprise this category are homogenous, it in fact disguises a high degree of diversity. That is, there are vast differences between individual developing nations (compare, for example, Vietnam, Sierra Leone, and Barbados) and also between different social groups within developing nations (e.g., historically India has had a very small but wealthy population as well as large numbers of people living in extreme poverty). Further, there is a tendency to discuss concepts of development in terms of binaries such as first/third worlds, north/south and west/east, wherein the former is always allocated a more privileged status than the latter. The use of these binaries implies that development can be measured according to geographical location, which also overlooks the presence of varying states of development within both 'first' and 'third' worlds. Acknowledging this, the specific

historical, geographical, socio-cultural, political, and economic factors shaping underdevelopment in individual nations need to be taken into consideration in the process of formulating solutions to these nations' problems.

## **POTENTIAL BENEFITS FOR ICT LEAPFROGGING FOR DEVELOPING COUNTRIES**

The process of globalization has arguably exacerbated the problems of the developing world. Some theorists suggest that, to date, globalization has witnessed an extension of Western imperialism that further forces developing nations into a relationship of dependency upon developed nations (Moore, 1995; McChesney & Nichols, 2002). In this understanding, the developing world remains a source of cheap labor and raw materials that is exploited by (Western) global corporations to increase their profits. That is, globalization is seen to be underpinned by the flow of capital from the developing world into the developed world, reproducing asymmetrical power relations. In this view, globalization, rather than remedy, is said to compound the problems of the developing world. Added to this, it is argued that one of the negative effects of the information or network society is that it has consolidated a digital divide between the 'information haves' of the developed world and the 'information have-nots' of the developing world (Flew, 2002, pp. 208-209).

However, if globalization and the rise of the network society have compounded the problems of the developing world, these phenomena also arguably present new possibilities for rectifying their problems. In *The Rise of the Network Society*, Manuel Castells argues that the current information society is facilitated by a global media system and the proliferation of convergent information and communication technologies. He argues that "the new economy is organized around global networks of capital, management, and information, whose access to technological know-how is at the roots of productivity and competitiveness" (Castells, 1996, p. 471). The information and network society is characterized by a 'weightless' economy in which specialist knowledge, skills, and creativity are highly prized and sought after (Flew, 2002, pp. 146-147). Businesses increasingly operate on a global scale (Dann & Dann, 2001, pp. 49-56), and ICTs facilitate

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