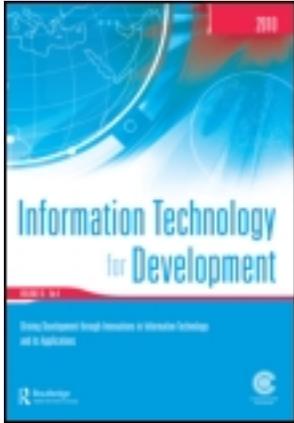


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Assessing the Effects of Information and Communication Technologies on Development

Editorial Introduction

Sajda Qureshi

Editor-in-Chief

The word “development” continues to be used to describe a number of ways in which people living in communities with limited resources and in often impoverished conditions attempt to make better lives for themselves. A recent World Bank report found that the number of people living on less than \$1.25 per day is 1.4 billion (*New York Times*, August 27, 2008). Poverty has decreased in countries such as China from 835 million people in 1981 to 207 million in 2005, whereas it has increased in countries such as India from 420 million in 1981 to 455 million in 2005. These numbers hardly reflect the changes countries have been going through when they implement and use information technology infrastructures to promote new industries. This raises the following questions: How do we know that improvements in people’s lives are taking place? What are the ways in which these improvements can be assessed? How do we assess the effects of information and communication technologies (ICTs) on the lives of people? How do we assess the improvements, if any, that take place?

We know that poverty has a different meaning to people living in the United States and Europe and those living in Africa and Latin America. While some countries in Asia and Eastern Europe are becoming economically strong, the measures of poverty vary considerably within these countries and illustrate the fact that development has many components. Although some aspects of development may not be researchable, most can and continue to be researched, as evidenced in the plethora of papers being published in this journal as well as in other mainstream journals and conferences. However, there are three aspects of development—economic, social, and human—that have been systematically investigated in this journal and that provide valuable insight into how ICTs can improve the lives of people. Development is most often referred to as an economic phenomenon in that the growth of economies, firms, and poverty is measured through well-developed indicators to inform monetary and fiscal policies. Following Schumpeter’s (2002) theory of development, ICTs can be seen as technical innovations that can bring about development if they offer opportunities for new enterprises and enable factors of production to be more efficient. In economic development, this journal has a track record of publishing research that measures the relationships between key indicators relating to ICTs and growth. The social concept of development suggests that people participate in improving their circumstances through the development of government, healthcare, education, and the environment (Apthorpe, 1999; Arce, 2003; Midgley, 2003). This concept has informed research published

in this journal in electronic government, eLearning, technology-supported healthcare programs, and spatially distributed infrastructures of which GIS are an application. Human development emphasizes the need for human freedoms, empowerment, and civic engagement (Sen, 1993; Norris, 2001; Giddens, 2003). Papers published in this journal illustrate how human development is achieved and sometimes hindered through ICTs.

The papers published in this issue represent all three of the above aspects and take a step further in what we know about how ICTs affect development. The first contribution is in understanding the effect of a well-known but little understood phenomenon: gender and ICTs. The first article in this issue, by Hazel Gillard, Debra Howcroft, Natalie Mitev, and Helen Richardson, is entitled “Missing Women: Gender, ICTs, and the Shaping of the Global Economy.” The authors quote Drèze & Sen (1995), who suggest that “the agency of women as a force for change is one of the most neglected aspects of the development literature.” This paper attempts to fill a gap in the current literature on ICTs and development—that of gender and gender relations. The authors draw on the substantial gender and development literature to demonstrate the centrality of gender to our understanding of information systems (IS) in developing countries. They consider the relationship among gender, ICTs, and globalization to illustrate how changes in the global economy both impact and are influenced by changing gender identities and roles.

The second paper in this issue also makes a contribution to gender and ICTs. It is authored by Ayman Elnaggar and is entitled “Towards Gender Equal Access to ICT.” The author suggests that, despite the strides in ICT, women in the Arab Gulf region in general and in Oman in particular are at a higher risk of being marginalized from today’s knowledge-based economy. He suggests that this is due to a traditionally male-dominated ICT sector, unequal access to training, the lack of customization of the Internet to Arabic content and training, and the lack of awareness and policy advocacy, among others. This research aims to provide a gender-sensitive assessment of ICT use in Oman and the status of women within it and to develop the seeds of an information base that provides gender analysis of the opportunities and challenges to ICT use. The results of a survey conducted in this research illustrate that socio-cultural norms, the innate character issues of Omani females, access, and training, as well as career counseling, inhibit them from entering and adopting careers in IT. The analysis and recommendations presented in this research are intended to assist policymakers who are willing to develop ICT policy to take account of the needs, aspirations, and constraints of women in Omani society.

The second contribution is made by the following two papers in taking us a step further in understanding ways to assess development and how ICTs enable economic growth. The third paper in this issue is by Felix Bollou and Ojelanki Ngwenyama and is entitled “Are ICT Investments Paying Off in Africa? An Analysis of Total Factor Productivity in Six West African Countries from 1995 to 2002.” The authors suggest that there has been an increasing debate about ICT as an engine of growth that could lift developing nations out of poverty. Many African nations have implemented market liberalization and invested huge sums of money into their ICT sectors. But few studies have been conducted to assess the effectiveness of these investments. Demonstrating ICT sector performance is especially important because of challenges of the development of ICT policy. The United Nations agencies have not been able to state firmly whether there are benefits to these investments. In this article, the authors investigate the total factor productivity (TFP) of the ICT sectors in six West African countries from 1995 to 2002. Although the findings demonstrate positive growth in TFP, there is cause for concern. TFP growth in the ICT sector has been declining, and these countries are not yet able to take advantage of scale efficiencies. Careful attention

must be given to future ICT investment strategies and performance management of existing ICT infrastructure if continued growth is to be achieved.

The fourth paper is by Laura Hosman, Elizabeth Fife, and Laura Elizabeth Armev and is entitled “The Case for a Multi-Methodological, Cross-Disciplinary Approach to the Analysis of ICT Investment and Projects in the Developing World.” The authors make a case for greater collaboration and communication between scholars and practitioners of ICT for development projects. They also suggest that, given the complex nature of development, researchers should use multi-methodological, cross-disciplinary approaches to understand what will make for more successful projects. They add that this is necessary because of the widespread occurrence of public–private partnerships in development projects. The research reported in this paper utilizes both macro- and micro-level analyses to examine ICT investments in the developing world. The first research question is stated as: Can ICT investment be shown to contribute to economic growth? This is investigated through econometric analysis. Though their model finds evidence to the affirmative, macro-level models often do not account for how ICT funds are employed, differentiate growth effects, or discern the characteristics of specific initiatives that make them more or less likely to succeed. This is where the case study level of analysis becomes useful in providing additional in-depth insight. This case study approach is used to address the second research question: How can successful strategies found among case studies better inform policy prescription? To research this question, a case study of a project based in rural Vietnam is carried out. This research has implications for policy making and improving the outcomes of ICT initiatives and presents a step forward in the mixed-methodological, cross-disciplinary research.

The View From Practice paper in this issue is by Patience Idaraesit Akpan-Obong and is entitled “Discourse as Practice in Nigeria’s IT Industry—A Research in Progress.” The author suggests that a communication revolution is occurring in Nigeria as cell phone usage, number of fixed phone lines, and Internet usage rise at a very fast rate. The author suggests that the acquisition of ICTs can be a positive development in any country, but in Nigeria the effects are not that easy to assess. This is because ICT-centered narratives of improvement are embedded in the dynamics of power, resistance, and change. The author offers a way of using critical discourse analysis to assess the effects of ICTs on Nigeria’s IT industry that is not commonly used in ITD research. Her approach can provide the analytic tool that facilitates an understanding of the power of the discourse that links information technology to development and practice.

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