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book review

***Information and Communication Technologies for African Development: An Assessment of Progress and Challenges Ahead,* edited by Joseph O. Okpaku Sr., ICT Task Force Series 2, Third Press Publishers, New York, 2003.**

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This collection of essays gives a broad perspective on the critical issues on the agenda for decision-makers in government, business, the development sector and the international community regarding ICT in Africa today.

In the introduction, Dr. Joseph Okpaku, contributor and editor (and President and CEO of Telecom Africa Corporation), sets the rudder of the initiative firmly towards the purpose of African self-development. He argues that, in the current era of development, there is a logical progression in designing responses to Africa's development challenges -- from problem-solving and searching for new knowledge to innovation. He highlights the need for adequate "response capacity," combining the full range of knowledge competencies available to address specific challenges.

In the final chapter, Okpaku outlines key issues for a road map for ICT development in Africa – organisations and institutional networks; private sector initiatives and financing; public policy advocacy; community access to ICT; and sound policy and regulatory design based on African needs and capacities, rather than on the "expert advice" of consultants that does not fit because essentially it is designed for different social and economic contexts.

Critical contributions are presented by an array of writers with a vast collective knowledge and experience of African development with particular focus on ICT, including UNECA Director of Development Information Services Dr. Karima Bonemra Ben Soltane, development specialists Emmanuel OleKambanei and Mavis Ampah Sintim-Misa, businessman Nii Quaynor, and Chairman of the NEPAD eAfrica Commission, H.E. Alpha Oumar Konaré.

The book is the second in a series published by the UN ICT Task Force and so includes remarks from Kofi Annan, the UN Secretary-General, and contributions from José María Figueres and Dr. Pekka Tarjanne, respectively Chairman and Executive Coordinator of the UN ICT Task Force, and Task Force members Sarbuland Khan and Dr. Gillian Marcelle. Most importantly, this is a book about strategic thinking – how to achieve the broad range of development objectives by deploying one of an array of tools and resources – ICT!

In the context of African countries gearing up to build competitive economies and societies, this review discusses how the contributions respond to three key themes: sustainable development, participation in the global e-economy and financing infrastructure development in Africa. These themes are derived from a review of the most topical issues being addressed in multilateral fora and in African development institutions today.

Sustainable Development & Poverty Eradication

In September 2000, the UN General Assembly adopted the Millennium Declaration, listing its millennium development goals. The UN ICT Task Force, established in November 2001, took as its primary objective the contribution of ICT to the goal of halving the number of people living in poverty by 2015. The contributors review many of the key indicators necessary to understand and tackle this gargantuan task, and the challenges for the Task Force's African Stakeholders Network.

Having listed the wide range of initiatives for ICT Development and ICT for Development in Africa, including the African Advisory Group on ICT ("the result of persistent advocacy amongst African ICT experts that the continent take control of its sector challenges and build indigenous institutions"), and the 13 projects of NEPAD's ICT Programme, Okpaku examines the strengths and weaknesses of the current arrangements. He argues that the range of uncoordinated initiatives may be greater than the "absorptive capacity" of African countries can bear, and that the current models of ICT for Development do not yet contribute to building sustainable ICT capacity for African countries -- a necessary condition for "Africa to become a comfortable partner in the global dispensation."

A short list of statistics in Jensen's chapter provides a stark reminder of the inequities in Africa: "Of the approximately 816 million people in Africa in 2001, …

- 1 in 4 have a radio
- 1 in 13 have a TV
- 1 in 35 have a mobile phone
- 1 in 40 have a fixed line
- 1 in 130 have a PC
- 1 in 160 use the Internet" (Jensen, pp 55-56).

This chapter also shows the highly skewed Internet distribution towards South Africa (1 in 60), Botswana (1 in 78), Seychelles (1 in 26) and Reunion (1 in 14).

Given these statistics and the costs of connectivity, several contributors refer to the need for models and strategies that tackle the challenge of sustainable development through introducing low-cost infrastructure (Okpaku), high-quality, competitively-priced telecom infrastructure (Jensen), teleaccess for rural areas to reduce the increasing marginalisation of rural communities from both local and global benefits (Konaré; Khan), and ICT initiatives that focus on the basic information needs of communities – education, health, business and trade (Ben Soltane).

Reading each chapter, the reader is struck by the questions posed for future sustainability, both directly and indirectly: How should the range of existing initiatives be coordinated to best enhance the opportunities for their success? Despite the apparent range and variety of initiatives, are they of sufficient number, scope and size to form the foundation for African ICT development? What do African countries need to do to build the necessary R&D capacity for innovation in ICT? What attention should be paid to the other components of the innovation value chain – R&D funding, intellectual property rights, incubating innovation, supporting commercialisation and business development? What are the fundamental resources required and timeframes within which African countries might build their ICT productive (manufacturing) capacity?

What is the role of higher education institutions in building generations of ICT knowledge workers, knowledge producers and innovators? How, in practice, can existing ICT resources best be used to support poverty reduction on a large scale? The contributors struggle valiantly to raise and think through these questions -- sustainability is posed first and foremost as a question of effective resource-building and resource utilisation.

The Global e-Economy

Koffi Annan puts his finger on one of the key questions for ICT and African development in his address to the opening of the 3rd meeting of the UN ICT Task Force in New York on September 30, 2002, published in the preface to the book, when he argues that possibly the most fundamental role that ICT can play in Africa's development is to "facilitate the integration of African countries into the global market."

There is no doubt in the contributors' minds that the processes of production, distribution, communication, knowledge-building, decision-making and institutional governance in the global economy are irrevocably driven by ICT platforms and resources – the electronic economy. Thus, by definition, Africa's integration into the global economy and access to the resources (intellectual and other) that reside there, are dependent to a significant degree on the capacity to integrate ICT into business and institutional and development processes, and to leverage Internet access for development. The power of ICT for Africa is the power of communication – local, regional and global. Thus, the communications infrastructures – fixed-line networks, mobile phone networks, satellite and new low-cost technologies such as Ku-band VSAT and WiFi, take on particular significance.

Pricing of telecom access will prove to be either an inhibitor or an enabler of global communication for African citizens and businesses, and there is demand to introduce new pricing regimes - 19 African countries have introduced local call charges for all calls to the Internet regardless of distance (Jensen), and to integrate new and potentially cheaper technologies into the provision of communications infrastructure to extend access and improve quality of service (OleKambainei & Sintim-Misa; Quaynor).

The challenge of human capital development and access to knowledge resources as a fundamental resource for participation in the e-economy/information society is a recurring theme in the book (Okpaku; Badshah & Thumler; and others), and is examined both in the African context and with regard to "the digital diaspora."

The case is made for a shift from a "technology transfer" paradigm, with the premise that the importing firm is a passive recipient of technology, to a "strategic acquisition of capabilities paradigm" in which firms apply their analytical skills to select appropriate technologies and applications (Marcelle).

The major challenges for African country participation in the global e-economy are covered extensively by the contributors, and the cases, arguments and questions suggest that significant work remains to be done in drafting the road map for which some ideas are presented in the final chapter.

Financing Infrastructure Development

In the context of the facts and figures presented in this book, the reader is bound to ask whether there is indeed any distinction to be made between the necessary actions of leadership and the commitment of resources for ICT for Development – the two seem immeasurably entangled. Effective financing models are the foundation for utilising infrastructure, in particular ICT infrastructure, to promote sustainable development and poverty reduction.

Khan makes the argument that leveraging private sector knowledge resources to promote ICT for Development strategies is necessary for success.

However, it is also the combination of development finance, private finance and trade flows that will generate future infrastructure development. The Development Report 2003: Financing Africa's Development: Enhancing the Role of Private Finance (DBSA & NEPAD, 2003) argues that "Over the past two decades, private capital flows have surpassed official development assistance as the primary source of investment capital in developing countries." The report shows that, of the 10 largest infrastructure projects with private finance in sub-Saharan Africa, five are in the telecommunications sector – four in South Africa and one in Nigeria.

Can these opportunities be extended to other African countries, and what new financing models are required to make this happen? What combinations of official development assistance (ODA), domestic development finance, private finance and trade flows are needed to address the financing challenges? Despite a number of fairly generic ideas and proposals – more adequate and innovative financing mechanisms (Ben Soltane), developing partnerships to finance connectivity programmes (OleKambainei & Sintim-Misa) and the role of private enterprise in financing (Quaynor) -- the book is perhaps weakest on the questions of ICT infrastructure financing and the leadership role of development finance institutions (DFIs) such as the Development Bank of Southern Africa and the African Development Bank. Having posed the questions, the contributors present the challenge to the African development community to apply their minds to these questions and to offer clear recommendations on the way forward. A next book, presenting further analysis and production of new knowledge for development, would be the requisite response.

Conclusion

Having set out on the road that establishes ICT, new knowledge and innovation as beacons for African self-development, the book misses the opportunity to engage in an intimate way with the nature of the struggle required to pursue these beacons through the distinct barriers of resource scarcity and still-nascent forms of organisation for innovation (human, intellectual, financial). Rather, it lays the foundation for the pursuit of this task. A distinction between the acquisition of existing knowledge and the bringing into being of new knowledge is fundamental to pursuing the quest for innovation. This is all too briefly raised in Okpaku's introduction and in the final chapter discussion of the critical need for building ICT research and development capacity and institutions. The challenges for R&D, building new knowledge, and innovation could have been further interrogated in a number of the contributions and in the final "towards a road map" chapter.

The introduction also raises the myriad obstacles to effective community participation in the design and implementation of ICT for Development strategies, though the ensuing chapters then fail to problematise these obstacles or propose effective remedies to enhance community activism and influence.

Despite these omissions, the chapters are rich with detail and ideas and the contributions collectively form a sound basis for thinking through the "big picture-little picture" questions of ICT and development with a distinctly African focus.

Bringing together, as Figueres calls it, "the best thinking on the prospect and promise of ICT deployment for Africa's development…" (p xii), this book is a must-read for every student and researcher, regulator, policy-maker and development practitioner, indeed any person wishing to understand the current value and potential of ICT to benefit African countries and peoples.

The book is available under the UN ICT Task Force Series at http://www.unicttaskforce.org

Reference

DBSA - Development Bank of Southern Africa & NEPAD (2003) *Development Report 2003: Financing Africa's development: Enhancing the role of private finance*, November, Midrand, South Africa. in the *Southern African Journal of Information and Communication (SAJIC)*