

Introduction to “ICT4D: ICTs and Sustainable Development” Minitrack

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The Information and Communication Technologies for Development (ICT4D) research field is multidisciplinary and concerned with the use and design of ICTs for the betterment of the poor and marginalized. Betterment, in the context of ICT4D, often refers to the improvements of the well-being, agency and opportunities for the poor. ICTs can improve individuals or communities economic situation, access to healthcare, access to market information for rural farmers, development in an environmentally sustainable way or as a tool to combat corruption. Walsham [1] published a paper in 2012 in which he asked the question “Are we making a better world with ICTs?”. While the question was addressed to the information systems field at large, the question resonates well with the ICT4D field since the core of the field is its quest to understand the mechanisms of how ICTs can improve the world we live in, focusing on those that need it the most (i.e., the poor and marginalized).

While it is widely acknowledged that ICTs can foster positive development, the question of *how* changes are made is still not fully understood. There is also a shortage of understanding on the roles of different stakeholders in development efforts using ICT. National government, non-government organizations and international donor agencies all play important roles, but we need a clearer understanding on the effectiveness of different development efforts undertaken by the different actors, and the roles that each actor could and should enact in the development process.

Three papers were accepted for presentation in this Minitrack. The papers focus on different aspects of the use of ICT to improve the well-being of the poor and marginalized. The summary of the papers are as follows.

In the first paper, “*The Role of Open Source Communities in Development: Policy Implications for Governments*,” Link and Qureshi explore the connection between open source communities and development outcomes. By doing so, they develop a

theoretical framework that enables inquiries into the roles of open source software (OSS) communities in development. They argue that OSS communities, by engaging in a shared design of software, can meet the needs of the communities and enable development by the growth of micro-enterprises. The aim of the study is to investigate “1) how OSS communities contribute to development efforts and 2) how government policy can stimulate development efforts through OSS”. They conclude by listing five different options for a government to support development with OSS.

In the second paper, “*Inverting the Relationship between Development and Public Access Computing (PAC): A Comparative Study of PAC Ecosystems*”, Stratton explores how the phenomenon of development shapes public access computing (PAC). Stratton use “metaphor of the ecosystem to study the ensemble of organizations, resources, venues, and infrastructures that construct and comprise PAC”. The study uses the case study methodology and investigates the use of PAC in two large South American cities (Medellín in Colombia and Santa Cruz de la Sierra in Bolivia). The paper concludes that studying a PAC ecosystem can offer a complimentary view on the understanding of PACs development impacts.

The third and final paper, “*In Search for Holistic ICT4D Research: A Systematic Literature Review*”, is authored by Ramadani, Kurnia and Breidbach. In the paper, they present a literature review of three different streams of ICT4D research, the technology transfer stream, the social embeddedness stream and the transformative ICT4D stream. The literature review includes 48 ICT4D research papers from 2007-2016. They conclude that the literature review “offers a valuable insight for scholars who seeks toward a holistic approach of ICT4D.”

[1] Walsham, G., "Are we making a better world with ICTs? Reflections on a future agenda for the IS field" *Journal of Information Technology*, 2012. 27(2): p. 87-93.