A Critical Study of Information System Use in Ghana's Public Sector

Thema Monroe-White
Berry College, tmonroewhite@berry.edu

Peter Adjei-Bamfo
University of Ghana, bamfopeter@gmail.com

Justice Balowe
University of Ghana, jnbawole@ug.edu.gh

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Thema Monroe-White
Berry College
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Peter Adjei-Bamfo
University of Ghana
bamfopeter@gmail.com

Justice Bawole
University of Ghana
jnbawole@ug.edu.gh

ABSTRACT

This paper uses a critical perspective (i.e., one that is grounded in historical conditions) via the actor network theory (ANT) framing and methodological approach to explain innovation adoption process of a novel data and knowledge management system in a public sector context of Ghana, West Africa.

KEYWORDS

Non-profit, public sector, digitization, Ghana

EXTENDED ABSTRACT

Most of what we know about information systems and information technology come from its adoption and use in Western English-speaking environments. This dominant socio-political, cultural orientation and empirical narrative poses problems for researchers who seek ways to shed light on the opportunities and challenges around information systems (IS) and information and communication technology (ICT) adoption and use in emerging country contexts. Accordingly, this paper uses a critical perspective (i.e., one that is grounded in historical conditions) via the actor network theory (ANT) framing and methodological approach to explain innovation adoption process of a novel data and knowledge management system in a public sector context of Ghana, West Africa. Although the ANT framework has been particularly useful in studies of technological adoption and use in emerging country contexts (see Fang, 2002, Heeks and Stanforth, 2015), only recently have researchers begun to leverage ANT and its critical framing to investigate IS/ICT adoption and use from the vantage point of the fourth industrial revolution (Griffin et al., 2020). The era of big data analytics, and data science (including artificial intelligence and machine learning algorithms) has led researchers to ponder the exponential technological and social implications of these systems across all segments of the socio-technical landscape (Morrar, Arman & Mousa, 2017; Ochara & Moro, 2018). This study will contribute to this early, yet growing segment of literature with implications that have the ability to directly affect the practice of NGO data management and governance (Kpinpuo & Sanyare, 2015) and our understanding of how big data can be leveraged to enhance the social services sector (Gray, 2016). Innovations in ANT are "…developed and adopted (or not) through the building of networks of alliances between human and nonhuman actors" (Klecuń, 2004, p. 265). We use this ANT framing to ask the following research questions: *What are the different kinds of connections and associations created between MoGCSP IS/ICT actors/actants with respect to the NGO registration and re-registration process? What different ends are served through the IS/ICT actor/actant networks? What are the implications for digitized NGO registration and re-registration record adoption and use?* Semi-structured interviews were designed to provide insights into the study research questions. Interviews were conducted over the course of four months between July, 2019 and October, 2019. A total of seventeen different municipal assemblies and twenty-seven MoGSP staff participated in the study. Analyses centered on responses to semi-structured interview questions pertaining directly to technology adoption and use; including the use of technology for NGO registration/renewal process, how comfortable public administrators or NGO officials are with the available technology, the types of technology they consider beneficial in the NGO re-registration, monitoring and tracking process as well as the main hurdles to be addressed before digital innovation adoption will be possible. The authors document the challenges and opportunities associated with digitized NGO registration and re-registration processes in Ghana's public sector context, as well as provide recommendations for IT policy and practice.

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