

Analyzing the Problem of Unsustainable Health Information Systems in Less-Developed Economies: Case Studies from Tanzania and Mozambique

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Abstract

Most of donor-supported information technology (IT)–based projects developed or implemented in less-developed economies (LDEs) end up as complete or partial failures or unsustainable. Notably, a number of intra-organizational and external factors are associated with this problem, including inadequate infrastructure and human resource capacity, fragmented donor policy, and lack of policies to manage the sustainability problem. Accordingly, IT initiatives are often donor-driven, top-down, and hijacked by top managers who (normally) do not have adequate skills, but have enormous power to enforce such initiatives across organizational hierarchies.

In analyzing the concepts from sustainability and institutionalization, key insights towards a better understanding of the problem of unsustainability are developed. It is argued that health information systems (HISs) become sustainable if they are institutionalized in the sense of being integrated into the everyday routine of the user organization. However, a sustainable HIS should also be flexible enough to allow changes as the user needs change. Moreover, introduction of a new HIS is not only a technical change, but requires the cultivation and institutionalization of a new kind of culture.

Through a comparative case analysis of the HIS development and implementation processes in Tanzania and Mozambique, we have identified two sets of relationships, between the Ministry of Health (MoH) and donor agencies and between the MoH and software development agencies as critical and contributing factors to the unsustainability of a HIS. Given this setting, we highlight three key strategies for dealing with the problem of unsustainability in LDEs: (a) integration of a HIS, (b) local shaping of new cultures, and (c) cultivation approach to systems development.

Keywords: Sustainability; Institutionalization; Health Information Systems; Integration; International Aid Agencies; Design; Development; Less-Developed Economies; Ministry Of Health; Tanzania; Mozambique