How Health Managers’ Trust Towards FOSS Implementors Changed and Shaped HIS Implantation Trajectories: An Empirical Study of Selected FOSS HIS Implementations in Sri Lanka

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ABSTRACT

In developing countries, implementation of FOSS health information systems demands participation of diverse organizational actors and, can be considered similar to software outsourcing exercise. The multi sectoral actors operate in a network form of governance model where psychological and social contracts are important in maintain the fabric of the network organization. Inter-personal and inter-organizational trust is a key constituent in psychological and social contracts in IS outsourcing. This article attempt to reflect the empirical evidence of trust based governance of the network organization around 2 FOSS HIS implantation within the state health sector with an inter-organizational trust lenses. The longitudinal case studies try to understand how health managers’ trust towards FOSS implementors changed and shaped HIS implantation trajectories with long term repeated interactions during two HIS implementations in Sri Lankan context.

Keywords: Free and Open Source, Health Information System, Inter-Organizational Trust, Network Organization, Normative Implementation Environment Evaluation

INTRODUCTION

In developing country perspective, implementations of free and open source health information systems (HIS) demands participation of many organizational actors in a networked manner (Puri, Sahay, & Lewis, 2009). This multi sectoral participation is necessitated mainly due to the lack of HIS related technical competencies in healthcare organization and comprised of heterogeneous actors, including healthcare managers and administrators, free and open source software (FOSS) developer communities and FOSS implementors. FOSS implementors often provide their services in the form of well-organized entities around customization.
and implementation of large scale information systems and identified as implementation mediators (Puri, Sahay, & Lewis, 2009). FOSS implementation exercises can be comparable to an Information Systems (IS) outsourcing project. Bridging the health care organization and FOSS developers, implementation mediators play a significant role in the HIS implementations (Twaakyondo & Lungo, 2008).

The multi-sectoral actors participating in the network organization of HIS implementation are often independent from each others (Braa & Hedberg, 2002) and in the early phase of FOSS implementations operate outside formal contracts, based on psychological and social contracts. This persistent, and structured set of autonomous firms and agencies are referred to as a network governance by Jones, Hesterly and Borgatti (1997) and engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinates and safeguard exchanges. Inter-organizational trust has been identified as a key determinant of the fabric of the network governance (Uzzi, 1997). In the network governance around FOSS HIS implementation, the most interactive inter-organizational trust relationship can be seen among the healthcare organizations and HIS implementation mediators. Trust has been identified as an important denominator in IS outsourcing projects (Heiskanen, Newman, & Eklin, 2008) hence expected to have similar value in FOSS HIS implementations as well. Miranda and Kavan (2005) further emphasize this suggesting that even after making the formal contract, the cooperation continues mainly according to a psychological contract in IS outsourcing. Trust is theorized as a construct by some authors with trust dimensions such as competence, benevolence and integrity (McKnight, Choudhury, & Kacmar, 2002), whereas others prefers to consider it as a process. It is argues that treating trust as a construct or a variable is a weakness in trust discourse due to the changing nature of the composition of the trust in the society. Hence the process oriented view of trust emphasizes its creation, development and maintenance (Khodyakov, 2007).

This comparative analysis was carried out to investigate how health managers’ trust towards FOSS implementors changes and shapes the HIS implementation decisions. One of the studied HIS project was Hospital Health Information Management System (HHIMS) and the other was a customization of District Health Information System 2 (DHIS2). In evaluating these HIS initiatives at department of health level to grant permissions for piloting and scaling, it was observed that the inter-organizational trust appeared to play a key role affecting the implementation decisions by the central health care authorities. Based on these empirical findings, the paper organizes as follows: the theoretical development section discusses the literature on network organization emphasizing inter-organizational trust in the forms of a construct and a process. The research method section describes the data collection and analysis process as longitudinal case studies, followed by narrations of two case studies based on two large-scale FOSS HIS implementations attempted with multi-sectoral participation in Sri Lanka from mid-2010 to mid-2012. The discussion reveals how trust was established in the two projects being considered. Finally, the paper reflects the findings, while special attention was given to the normative implantation environment analysis described by Chen (1989).

THEORETICAL DEVELOPMENT

Network Organization

Network organization is a form of co-governance (Kooiman & Jentoft 2009) and is defined as a select, persistent, and structured set of autonomous firms engaged in creating product or service based on implicit and open-ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges (Jones, Hesterly, & Borgatti, 1997). The network governance is a main form of governance in network organization and characterized by, being a clusters of organizations with non-hierarchical collectives of legally separated units (Alter, & Hage, 1993), having long-term recurrent
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