DOCTORAL CANDIDATE: Ayub Shisia Manya

DEGREE: Philosophiae Doctor

FACULTY: Mathematics and Natural Sciences

DEPARTMENT: Institutt for informatikk

AREA OF EXPERTISE: Health information systems

SUPERVISORS: Prof. Jørn Braa and Prof. Sundeep Sahay

DATE OF DISPUTATION: 4th July, 2019

DISSERTATION TITLE: Understanding the Role of Institutional

Incentives in Shaping Data Quality and

Information Use in Devolved Health Systems: A

Case of Health Information System

Implementation in Kenya.

Successful devolution of power and authority from national to subnational levels creates institutional arrangements, which have far-reaching effects on the implementation of Health Information Systems (HIS) in low to middle-income countries. This study sets out to understand the critical role of institutional incentives in shaping the effectiveness of HIS in view of the transition from a centralized health system to a devolved one in Kenya.

The findings reveal that the challenges of HIS regarding data quality and information use are by-products of the interactions between the data and the social system that benefits from these data. Significant observations exhibit contradictions or dichotomies. For example, the quest for re-election of leaders in devolved governments appears to be a major institutional incentive driving increased data demand and use for planning, but interestingly, the elected leaders receive more recognition from the electorate when they implement visible projects like constructing roads, disregarding data from HIS. In a case where the national government provides financial incentives to devolved governments for the number of hospital deliveries, the accuracy, timeliness and completeness of data in HIS improves. However, the same incentives have the propensity to lead to data quality challenges as observed in some cases where health facilities "over reported" deliveries in order to increase resource allocation. The study shows that the use of advanced technology, which enhances information sharing between the national and devolved governments, becomes a centralizing factor in a decentralized environment. From a dialectical perspective, the accumulation of these contradictions both within and between institutions provides the seeds for institutional change.

The research is operationalized through the author's active engagement in the implementation and governance of a web based information system, the District Health Information system (DHIS2) in Kenya. The author reports directly from his own journey, experiences, and shifting priorities throughout the implementation of the system in the face of the devolution process. The dissertation develops a fresh perspective on

information system implementation by highlighting the challenges, the drivers and the motives for information use in public sector management in devolved context.