

# **Conflicting Logics in IT Governance: Achieving Ambidexterity in Healthcare Organisations**

*Completed Research*

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## **Abstract**

Three institutional logics in healthcare organizations have been identified in literature, and these are managerial, IT professionalism and medical professionalism. IT governance among stakeholders with diverse backgrounds comes along with different perspectives on IT governance dilemmas. In this study interviews of health IT managers, clinician managers and Västra Götaland Region managers was done and the analysis was done using a resource orchestration lens to examine how the conflicting logics get connected in IT governance practices through the key stakeholders' views. It is clear that the logics are coupled to the health IT (HIT) managers, doctors and managers at the top. Findings reveal that amidst the conflicting logics, there are compromises that arise amid the circumstances. The managerial logic was seen to compromise in order to support IT professional logic. As a result, IT professionalism seeks to find out the needs of the medical professions and offer the much needed solutions.

## **Keywords**

Institutional logics, IT governance, resource orchestration, ambidexterity.

## **Introduction**

In most of the professional organizations, a few stakeholders dominate IT decision making. The decisions they make are based on their own beliefs and world views (Boonstra et al. 2017). The beliefs and worldviews that serve to legitimize human decisions and activities (Thornton and Ocasio, 2008) have been referred to as institutional logics. Lounsbury (2002) defines institutional logics as “the organizing principles that govern the selection of technologies, define what kinds of actors are authorized to make claims, shape and constrain the behavioural possibilities of actors and specify criteria for effectiveness and efficiency.”

Organizational performance is expected to improve due to a number of factors, mechanisms and complex interactions between the various elements of the organization. Previous research has advocated that the said elements are not studied in isolation (Melville et al. 2004). Existing literature makes mention of the purposes of IT as well as how the governance of IT should be done. Alternative IT governance frameworks adopt the prescriptive (Dietrich, 2005) perspective. If an organization is carrying out an IT transformation program, it should be able to coordinate, manage and prioritize amongst the ongoing joint business and IT projects, activities, goals and the conflicting stakeholder interested over a period of time (Jiang et al., 2014). This posits that there is need to find a balance between efficiency and innovation given the many joint business and IT projects. Furthermore, Raisch and Birkinshaw (2008) discuss the two concepts of exploration (innovation) and exploitation (efficiency) and how they affect organizational performance. They state that adopting the exploration (innovation) strategy will realise better performance for the organization as opposed to the exploitation (efficiency) strategy.

More recently, IT governance practices are bent more on trying to balance between attaining innovation and efficiency (Banker et al., 2011; Wu et al., 2015). Weill and Ross (2004) state that IT governance represents the framework for decision rights and accountabilities to encourage desirable behaviour in the use of IT. Some decisions may be affected by established beliefs and values or diverse backgrounds of key stakeholders in the debate. In some cases this leads to inconsistent decisions and as result affects the IT

performance (Balka and White, 2006; Boonstra and Van Offenbeek, 2010). There is the notion of exploratory technology adaptation (R-TECH) advanced by Schmitz et al., (2016). They affirm that the way R-TECH works leads to the development and nonstandard ways of interpreting the technology and it is qualitatively different from what previously existed. The need to facilitate or support new functional capabilities results into a vital change to the core principles of the artifact (Kallinikos et al. 2013). When a technology is changed toward an unintended capability, exploratory technology adaptation seeks to add functionality that did not previously exist. These adaptations create entirely new perceptions of effectiveness and place the technology artifact on a new performance course (Schmitz et al. 2016). Looking at innovation and efficiency as a question of considerable tradeoffs, has been an issue of discussion for a while now (Stigler, 1939; Merton 1958; Stettner and Lavie, 2014). The choice between innovation and efficiency is dependent on the organization in question.

The past contributions of tradeoffs between innovation and efficiency, have led to contributions in literature regarding organizational ambidexterity in the area of IT governance (Gregory et al. 2015; Roberts et al. 2016). Some scholars (e.g. Xue et al. 2012) however note that tradeoffs can be avoidable and therefore suggest that IT governance is designed in such a way as to achieve the two that is innovation and efficiency. To realise this means that the organization needs to have to deploy IT in most of its operations and processes in order to get the best out of IT and reap efficiency but also to also to involve other partners of the organization bent to innovation (Banker et al. 2011).

Smith and Lewis (2011) came up with a dynamic equilibrium model of organizing to help understand the organizational environments that are becoming more global, dynamic and competitive giving rise to contradictory demands. They categorize diverse application of a paradox perspective which represents core activities and elements of organizations. The categories are learning (knowledge), belonging (identity/interpersonal relationships), organizing (processes) and performing (goals). They note that tensions occur between and within the mentioned categories. Learning and performing create tensions between building capabilities for the future while guaranteeing success in the current period (Andriopoulos and Lewis, 2009; Tushman and O'Reilly, 1996). The need for change and the desire to retain a developed sense of self and purpose are normally in conflict and this brings about tensions between learning and belonging. As for the organizing and performing categories, the tensions can be summarized by the interplay between process and outcome which is apparent in conflicts between meeting employee and customer demands (Gittell, 2004) and between seeking high commitment and high performance (Eisenstart et al., 2008). Dynamic equilibrium highlights the integrative model's key features which are the persistence of conflicting forces and purposeful, cyclical responses over time that enable sustainability (Smith and Lewis, 2011). The assumption here is constant motion across opposing forces and by adapting a continuous pull in opposing directions leads to equilibrium.

The available IT governance frameworks as advanced by Weill and Ross (2005) and Xue et al (2008) are strict and one-sided in nature. Bechky (2003) states that they generally avoid the complexity that different sociocultural perspectives may bring when it comes to shared meaning. In healthcare organizations where there are various professional groups that work together, several institutional logics are expected to be suggested in IT governance debates (Wooten and Hoffman, 2008). Given that IT governance is affected by sociocultural mechanisms (Mignerat and Rivard, 2009), the study applies the resource orchestration approach while focusing on the institutional logics at the top, middle and operational managers' level. Traditional IS scholars often don't focus on institutional logics (Buchana and Seymour, 2017). With a clear comprehension of institutional logics, suggestions of how to create a balance between efficiency and innovation are tabled thus leading to improved design of IT governance practices. From the above perspective, the research question guiding this research is:

*How do the conflicting institutional logics in various managerial levels influence IT governance practices in healthcare organizations?*

To address this research question a review of relevant literature focusing on IT governance, institutional logics and ambidexterity was done to guide an empirical study conducted within the Västra Götaland Region (VGR), one of Sweden's largest public healthcare organizations. The contribution is for health IT (HIT) managers to understand how the conflicting logics may affect IT decision making and as a result revealing the internal forces that hinder the success of ambidextrous IT governance. In the next section the method is presented and then the results of an empirical study are reported. Finally a discussion of the

implication of research and practice. This study investigates how institutional logics can inform the study of IT governance enactment.

## **Theoretical Background**

### ***IT governance and institutional logics***

Institutional logics recognize that finding a balance depends on what is deemed legitimate in a specific IT service climate (Boonstra et al. 2017; Lowry and Wilson, 2016). Extant literature points out two prominent institutional logics namely professionalism and managerialism (O'Reilly and Reed, 2011). Decision-making by the various stakeholders in an organization may be influenced by the different logics (Xue et al., 2008). For instance, in hospitals some stakeholders control IT decision making based on their own beliefs and worldviews which are referred to as institutional logics (Thornton and Ocasio, 2008). In other words, institutional logics are "the organizing principles that govern the selection of technologies, define what kinds of actors are authorized to make claims, shape and constrain the behavioural possibilities of actors and specify criteria for effectiveness and efficiency" (Lounsbury, 2002, p.253). An institutional perspective looks more on the legitimation function of beliefs and norms which are a key condition in governance (Boonstra et al., 2017).

A healthcare organization setting presents a motivating context for IT governance. This is partly because of the varied stakeholders therein who impact IT governance. The dominant stakeholders are the healthcare organizations managers, clinicians and IT professionals (Heeks, 2006). Other stakeholders include the patients, healthcare insurance companies and legislative bodies (e.g. medical councils). The prominent logics mentioned earlier in this section prevail in healthcare organizations (Scott et al., 2000). Institutional logics literature puts emphasis on how these logics influence the technological choices and get inscribed in the technology (Hayes and Rajao, 2011; Nigam and Ocasio, 2010). The missing part is the recognition of the role of IT professionalism related logics in IT governance of healthcare organizations.

### ***IT governance and Ambidexterity***

Following from IT governance literature, what is clear is that coping with IT governance dilemmas is no longer optional but rather a must and so there is need to strike the right balance (Debrecey, 2013). The idea of tradeoffs or balancing between efficiency and innovation has been studied in management (Alder and Borys, 1996). Studies have also focused on identifying the link between goal displacement and rigidity (Merton, 1958) to the notions of excess capacity versus specialization (Hannan and Freeman, 1977). Many IS scholars have tackled the concept of balancing between efficiency and innovation. Indeed Wu et al., (2015) and Banker et al., (2011) put emphasis on the strategic dimension of managing the tradeoff between efficiency and innovation. Xue et al., (2012) study relating to IT investments reveals that where innovation is concerned the outcome leads to improved performance in dynamic markets. However it's worth noting that that in low dynamic markets, the need for efficiency geared towards increased performance determines the IT investments.

Robert et al., (2016) states that the routine information systems versus the role of innovation tells that innovative use drives idea volume and diversity, two important areas for successful innovation. Gregory et al., (2015) refer to trying to achieve a balance between efficiency and innovation as a paradox. This involves pursuing the parallel logics in the daily routine work. There is ongoing research towards trying to avoid tradeoffs and it is referred to as organizational ambidexterity (Smith et al., 2016). Organizational ambidexterity is all about alignment and efficiency of day to day management of business demands and at the same time adjusting to the changes in the environment (Raisch and Birkinshaw, 2008). They provide practical solutions they refer to as structural and contextual ambidexterity. On the contrary some studies indicate that ambidexterity undermines organizational performance through conflicting routines and limited specialization (Stettner and Lavie, 2015).

By applying the resource orchestration lens to a wide but yet limited setting of IT governance, findings reveal that IT governance decisions are not necessarily determined by institutional logics, but they are as a result of the understanding derived from the presentation of these logics in the stakeholders' shared meaning and negotiations within their environment (Epstein, 2013; Jesen et al., 2009)

### Resource Orchestration

Managing the implementation process to turn HIT investment into tangible benefits requires rearrangement of resources. The resource orchestration framework through its enriching and pioneering bundling activities (Sirmon et al., 2011) can enable finding a balance between efficiency and innovation. The resource orchestration framework as suggested by Sirmon et al. (2011) is a result of integration of the resource management framework and the asset orchestration framework. The only difference is that the resource management framework draws on the RBV and has been explicitly linked with RBV's primary logic while asset orchestration draws from the concept of dynamic capabilities. On the other hand, Helfat & Peteraf (2003) provide an indirect connection between asset orchestration and resource management. The resource management's treatment of resource divestment and the strategies for resource deployment are lacking from the asset orchestration arguments. The detailed types of bundling actions are also lacking. For instance, issues to do with business models, organizational and governance structures, and innovation are not reflected.

The resource management and asset orchestration frameworks complement each other (Sirmon et al., 2011) and so integrating them will facilitate research of managers' actions within capability and resource based resource-based logics. The term resource orchestration was in support of the integration, and ultimately a resource orchestration framework (Figure 1). To further explore the integration and develop a research agenda for the two frameworks, Sirmon et al. (2011) address issues not previously considered including the organization's breadth (scope of the organization), depth (managerial levels within the organization) and the life cycle. They provide a road map for further research in resource orchestration. The empirical study within the Västra Götaland Region (VGR) in this study focuses on the resource orchestration actions carried out by HIT staff at the different managerial levels in the organization and how they can inform the design of ambidextrous IT governance.

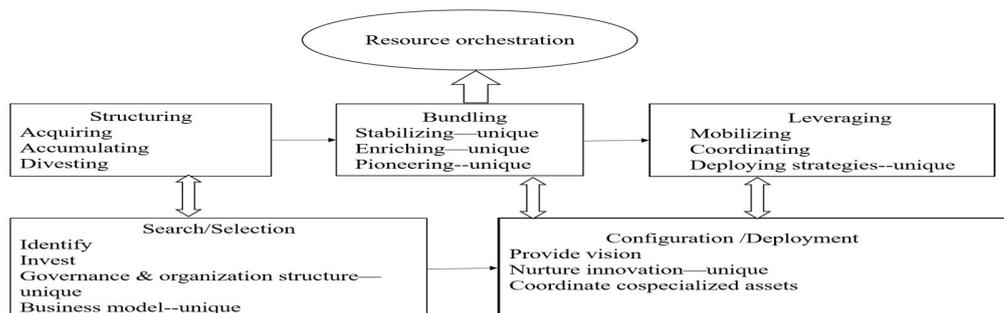


Figure 1: Resource Orchestration Framework (Adapted from Sirmon et al., 2011)

### Method

There is limited theory about how institutional logics influence IT governance. As a result an interpretative approach was adopted to advance theoretical insights (Ozcan and Eisenhardt, 2009). According to Orlikowski and Baroudi (1991), interpretivism attempts to understand phenomena through the meanings that people assign to them. In this respect, the research presented explores perspectives of individuals (health IT (HIT) staff, doctors, managers) and the values and meanings they attach to IT governance within the healthcare organizations' context in general.

Since the research is qualitative, the role of the research should be as transparent as possible. This is helpful especially when it comes to interview analysis which involves but is not limited to interpretation of the interview text by the researcher (Myers and Newman, 2007). The interviews were done informally allowing the interviewees to relay their views and formally with a structured interview guide.

### **Empirical selection and description of case**

The research was designed as a case study (Yin, 2013). The rationale was that Västra Götaland Region (VGR) is a relatively big organization and is a driving force for development in western Sweden. The region collaborates at many levels with academia, the private sector and other public organisations. Besides VGR is an active partner in the EU with a track record of many successful IT related projects (Västra Götalandsregionen, 2017). But the challenge has been that the successful IT systems serve only a given county council instead of the many county councils. As such, interoperability and sharing of information is not possible and this is a limiting factor to the digitalization of healthcare services. The fact that there has been a number of successful IT systems shows that VGR is mature in the area of health IT which makes a good case to study.

One aspect of Västra Götaland Region’s main mission is to ensure that the population in Västra Götaland has access to good medical care. They aim at providing conditions for a good and healthy life. Also another thing to note is that Västra Götaland Region is a politically governed organization. This indicates that there are various decision-making levels, which could affect IT governance.

### **Data collection**

Data was collected from various stakeholders who are part of HIT professionals, clinicians and academia. In depth semi structured interviews were conducted with 10 informants (See Table 1). The idea of selecting from different departments of the organization in the region was to enable the researcher capture the different logics that are involved. The interviews covered the governance of IT in healthcare and targeted the interviewees’ experience with IT projects. Each interview lasted between 45 minutes to 60 minutes. The interview information was complemented by reading documentation from the Västra Götaland Region website and other documentation recommended by some of the interviewees. The documents used were mainly to contextualize the findings based on interviews.

| Organisation             | Designation of person interviewed      |
|--------------------------|--|
| Innovation Fund          | Head                                   |
| Goteborg Business Region | Area IT Manager                        |
| Sodra Alvsborg Hospital  | IT strategist                          |
| Västra Götaland Region   | IT Strategist and Enterprise Architect |
|                          | IT Strategic Architect                 |
|                          | eHealth Expert/Radiology Nurse         |
|                          | Head Care Digitalization               |
|                          | Digitalization Strategist              |
|                          | Chief Standardization officer          |
| Lindholmen Science Park  | Programme Manager                      |

**Table 1 Overview of data collection informants**

### **Method of analysis**

Thematic analysis (Braun and Clarke, 2006) was used to identify, analyze and report themes in the data set. During the analysis, moderate literature review was done in regard to the resource orchestration framework. The review provided an understanding of the resource orchestration framework which helped in coming up with the themes from the data. The themes do not reside in the data per se but in our heads from the thinking about the data and creating links as we understand them (Ely et al., 1997: 205-6). The coding started during data collection and also during transcription where familiarization of the researchers with the data was done. Initial codes were generated by coding interesting features of the data in a systematic manner across the data set. The categories that emerged included: enriching, pioneering, and coordinating, mobilizing, and integrating resource to form capabilities. Others included stabilizing, acquiring, accumulating and divesting resources as well as provision of vision and nurturing innovation. The next step was to collate the codes into potential themes by gathering all data relevant to potential

themes. A secondary analysis was done by doing iterations through the transcribed interviews and later comparing with the documents analyzed as an internal validity check for the constructs identified.

## **Results**

This section presents results from the study that have been structured using the key components resource orchestration framework (as described under the resource orchestration sub section).

### **Structuring**

Looking at resource orchestration, structuring involves acquiring new systems or resources, accumulating and divesting of resources to form the organization's portfolio. Findings show that there has been a change in the way the conflicting institutional logics used to be managed. The centralized/regional procurement of standardized IT systems and equipment will therefore eliminate the problem of information sharing and interoperability that have been a perennial challenge in the region. Creation of science parks has improved on the collaboration between the medical and IT professionals. Furthermore, the Programme Manager Prehospital ICT Arena (PICTA) from the Lindholmen science park noted that: *'In trying to bring on board new systems, it is important that the new system is piloted in one county council and when all goes well it can then be deployed across the rest of the county councils'*

This has led to compromise between the conflicting institutional logics and therefore coming up with relevant solutions for the healthcare sector.

This is an indication that decisions for digital resource orchestration actions are taken collectively. It suggests more or less that the top, middle and operational managers in the region mutually agree on the procurements to do within the region. This is seen from the fact that the regional steering committee is made up of members from county council steering committees which means that the counties are involved in the planning for the region. The managers of the conflicting institutional logics are brought together in the regional steering committee and this has influenced the IT governance practices in that issues agreed upon in the steering committees of county councils are easily passed at the regional steering committee.

There has been a realization of the need to intentionally identify and invest in the right resources while forming the resource portfolio. This is as a result of compromise between the conflicting institutional logics. Most of the issues raised by most interviewees were specifics of governance of IT and they have influenced the IT governance practices. The standardization officer stated that *"the step we took was to put emphasis on defining our information model—how the data should be structured. By doing that it is simpler to connect our systems to other systems"*. The managers of the conflicting logics have agreed on an information model, which provides for standardization and interoperability. There is also an intentional move by the HIT managers, the clinicians' managers and top management of the region (political) to carry out structuring to acquire a new technologically complaint resource portfolio. Before the procurement happens, there is cohesion between the three dominant stakeholders (conflict logics). There is a sense of realization that the IT professional logic is important and that IT decisions hinge on the IT professions. The cohesion has influenced IT governance practices for the better.

### **Bundling**

The resource orchestration framework, refers to bundling as integrating resources to form capabilities. This involves three sub processes namely: minor incremental improvements or stabilizing the current capabilities; then extending the current capabilities or enriching them and finally creating new capabilities which they refer to as pioneering. Findings indicate that there is need to have new systems in place in order to replace the old or current systems. However, the organizations cannot get rid of the old systems just like that as they possess valuable information. The three conflicting logics work hand in hand to find solutions by consulting each other. The managers in the various professions have come up with ideas of how to integrate resources to form capabilities. This they have done through the development of APIs which help connect the old systems to the new systems. This is clear from the creation of the mode 1 and mode 2 systems by the HIT staff as stated by the IT strategist and Enterprise Architect. *"The mode 1 is more about maintenance getting the old systems to work and mode 2 is about innovation"*. Here the organization realizes an enrichment in the current capabilities as well as aiming at creation of new capabilities.

The IT strategist indicated that *“we have adopted having in place a system that is compatible with other devices. For example in the X-ray, ECG and laboratory departments, the core system that processes the images should be compatible with any type of model of camera. He further stated that the X-ray system is working well and requires no change unlike the laboratory system that needs to be changed to cater for the general practitioner and other specialities”*. This posits that there is influence on the IT governance practices in healthcare organizations.

On the other hand the area IT manager made mention of an innovation that is going on at the Lindholmen science park. He stated that *“we have seen development in certain areas but specifically one is pre hospital ICT arena (PICTA 2017)”*. It is about harmonizing semantic and technical interoperability, to improve conditions for the efficient use of ICT/eHealth in prehospital healthcare. The minor improvements to existing capabilities have been realised by enriching the clinicians' capabilities using technology to create new capabilities that match the new technology.

The head of digitalization care (a medical doctor) was keen in getting to see how the HIT staff are able to make use of IT to help them improve the way they offer healthcare services. He stated that *“we can also use our clinicians in a more efficient way via new technology, video and the Internet of Things (IoT) solutions enhance those possibilities. I think that the problem is all our governance structures are still as they were in the 1600s and we need to have a huge change in our governance structures”*. This indicates that there is a willingness to change the old governance structures. This has resulted into consultation between the three dominant logics. This will culminate into better IT governance practices in future.

### **Leveraging**

Leveraging involves a sequence of processes to exploit the organization's capabilities and take advantage of specific market opportunities; it includes mobilizing, coordinating and deployment. Findings reveal that through the innovation fund, the political leadership of the region has provided funds to help in coming up with a plan or vision for the requisite capability configurations. The Innovation fund manager stated that *“they work together with the medical and IT professionals to come up with solutions to current challenges and future challenges in healthcare.”* The innovation fund works hand in hand with the various science parks, clinicians and HIT staff in the region and this is aimed at integrating capability configurations. One of the ongoing projects under the Innovation Fund in VGR aims at creating new capabilities in healthcare. One of the projects aims at trying to reduce on the healthcare professionals' work by having the patients share their information on a daily basis in real time. The head of the innovation fund stated that *“patient related apps that are being worked on, require that the patient can manage their sickness. They are given measuring devices like a T shirt that has sensors for Parkinson disease, for example which sends real time information to the doctors about whether the patient swallowed their medication and also the shakiness levels, blood pressure and other measurements.”* This is an indicator that there are already efforts to influence the IT governance practices.

For the healthcare organizations it is imperative that the dominant stakeholders work together in order to realize successful digitalization. One of the object leader at one hospital in VGR stated that: *“The region has a model of how to steer the entire IT in the region, I am a part of this and that's my task is for the entire region”*. The model in VGR takes into consideration all the technological advancements and therefore puts strategies in place that are able to take advantage of the available IT opportunities within the healthcare organizations. The model was developed through consultation between the managerial, medical profession and IT profession. During consultation, the specifics of IT governance were addressed. Findings revealed that the procurement of health IT systems is done centrally after the managers at the county councils have agreed on standardization issues. This makes the future governing of healthcare IT systems in the region easier thus influencing IT governance practices. The chief standardization officer, corroborated the new procurement procedure and stated that *“we are currently in a phase where we are searching for the future healthcare environment. He added that it is a huge deal which will require a lot of money and will have brand new thinking, covering most domains”*. The search requires extensive consultation which involves the three dominant stakeholders (constituting the conflicting logics) and the political management of the region which releases the money. This gives an indication of how conflicting institutional logics influence IT governance practices.

Table 2 below shows the relationship between the antecedents constructs and the dependent variable (ambidexterity)

| <i>Antecedents constructs</i> | <i>Underlying sub-constructs</i>  | <i>Relationship with dependent variable (Ambidexterity)</i>   |
|-------------------------------|---|---|
| <i>Structuring</i>            | <i>acquiring, accumulating, and divesting</i>   | <i>Creation of science parks as a way of divesting and collaboration in the process of procuring new IT systems</i>   |
| <i>Bundling</i>               | <i>enriching, pioneering, stabilizing and integrating of resources to form capabilities</i> | <i>Having in place mode 1 (old) and mode 2 (new) systems to work together. Mode 2 systems are purely innovative and mode 1 have valuable old data are made to work efficiently</i>                  |
| <i>Leveraging</i>             | <i>mobilizing, provision of vision and nurturing of innovation</i>                          | <i>The radiologist partnered with GE health and are already sharing images across hospitals increasing efficiency. There is a plan to share other medical information on standardized platforms</i> |

**Table 2 Linkage between antecedents constructs and ambidexterity**

## Discussion and Conclusion

The centrality of IT professionalism is highlighted as well as the benefits accrued from IT investments. The focus was on HIT staff and medical practitioners at the top, middle and operational managerial levels and how evidence from the institutional logics in IT governance challenges the predominantly prescriptive and unilateral IT governance literature (Debreceeny, 2013; Xue et al., 2008). Mignerat and Rivard (2009) noted that the implementation success of IT governance is directly influenced by the similar IT arrangements with existing institutions. This study shows that amidst the conflicting logics, success of IT governance is rather fair since the IT arrangement for the healthcare organizations in VGR are similar.

This study used the resource orchestration lens and so an explanation of how resource orchestration is being carried out in VGR is given below

### *New strategies leading to improved IT governance practices*

The independent variables that is structuring and bundling as components of the resource orchestration framework, affect the balancing innovation and efficiency in healthcare organizations. Structuring involves acquiring new systems and this is done in consultation among the three professions. All this starts at the county councils and is later approved at the regional level. This implies that in a few years there will be better IT governance practices as the consultations involve the specifics of governance of IT.

### *Desire to listen, negotiate and innovate*

Those in charge of designing IT governance, do not come up with a “one size fits all” solution. Rather they should be in touch with the key stakeholders in order to tailor IT arrangements in line with the competing logics. Most importantly they should be able to listen, negotiate and in the final analysis innovate. The creation of innovation fund in VGR, is an indicator that there is a desire to innovate. The capabilities through which the healthcare organizations provide superior values must be dynamic, that is requiring constant update (Adner & Helfat, 2003).

The study has shown that in healthcare organizations two logics have been identified as managerial logic and medical professionalism (Boonstra et al., 2017). With the technological advancements and emerging area of digitalization, and using the resource orchestration framework, we note that the two prominent logics have come to appreciate the IT professionalism logic. In practice there were conflicts in the logics but findings from this study show that resource orchestration fosters close collaboration among the logics which will greatly improve IT governance practices.

## **Acknowledgments**

The authors would like to thank SIDA. This work was supported by the Sida/BRIGHT project 317 under the Makerere-Sweden bilateral research programme 2015-2020. In addition to this, we would like to thank the AMCIS reviewers for their insightful comments that allowed us to improve the paper.

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