How IT Governance Practices Contribute to Inter-Municipal ICT Cooperation and Its Benefits: Indeed, “The Emperor Has No Clothes”

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ABSTRACT

ICT is significant for municipal’ services. Yet, they are usually operated with limited resources, which motivates cooperation. We investigated, how ICT cooperation was governed in 20 Finnish regions. As the theoretical basis, we reviewed TCE, RBV, IT governance practice and Granovetter’s social network theories. The theory basis was used to identify theory-proposed cooperation benefits and to link these benefits to IT governance practices. We then compared theory-proposed benefits and practices to those detected in the 20 regions. Our findings revealed differences in ICT cooperation, in the gaining of benefits, and in the use of IT governance practices. The lack of social ties helped to understand differences. Our findings indicate that the emperor will not enjoy new clothes – ICT cooperation benefits – unless ICT cooperation is systematically organized for governance. We contribute to research by augmenting the theory base of IT governance research, by extending IT governance research to inter-organizational contexts and by showing how this theory base can be used empirically.

KEYWORDS

ICT Cooperation, Inter-Municipal ICT Cooperation, Inter-Municipal IT Governance, Inter-Organizational IT Governance, IT Governance, Municipalities, Networked IT Governance, Secondary Data Analysis

INTRODUCTION

Municipalities produce most of their services by being supported and enabled by ICT. The country in the present study (Finland) consists of 311 municipalities as of January 1st, 2017. They produce most public services for the country. The several hundreds of services include social welfare, healthcare, educational, infrastructure, and other types of services produced for the municipality’s residents, companies and third sector organizations. A medium-size municipality with 20 000 inhabitants may own thousands of ICT devices located in its various premises that are connected via local area networks (LAN) or wireless LANs to the ICT infrastructure of the municipality. These devices provide access to the hundreds of information systems (IS) and applications used to produce and deliver municipal services. They also provide access to municipal data storages, divergent governmental services, and in principle to any Internet service. ICT devices owned by residents and/or organizations may also be used to access municipal services and data storages via the Internet. The municipality is responsible for data security and related ICT risks for any internal or external device and user connected to or
given access to the municipality’s ICT infrastructure. The work of municipal civil servants cannot be performed nor a municipality managed without ICT since digital data on its various activities and services are created, processed, stored, and reported via ICT. The deployment of ICT continues its rapid growth. Further digitalization of municipal services, digitization of printed/analogue legacy materials, and the Internet of things (IoT), e.g. to monitor municipal traffic or buildings are just a few examples of ICT’s constant and ever-increasing use context.

Municipalities develop and operate their large and increasing stock of ICT-enabled services as well as manage service continuity and data security risks with surprisingly small ICT resources, both people and money. From the enterprise architecture perspective (TOGAF, 2016), the infrastructure, applications, data, and process layers of municipal ICT are both complex and business critical. The physical ICT, such as server computers, data storages and network devices, is often placed into just one or a few data centers. Even in a medium-size municipality, its data center could reside in a locked storage room. Such a municipality typically has only two to five full-time ICT professionals to operate and manage the entire ICT of the municipality. A smaller municipality may not have recruited any full-time ICT professionals at all. Our conclusion is that municipalities have not recognized how ICT-dependent their activities and services actually have become. On the other hand, scarcity of resources and time could be incentives for ICT cooperation between nearby municipalities, as they produce similar services. Are the pooling and sharing of ICT resources, the joint development and production of ICT-enabled municipal services, and the combined sourcing of ICT devices and services useful means to achieve lower unit costs/prices, savings in total costs, better quality ICT services, lower ICT usage-induced risks, and other benefits? What is the role of organized inter-municipal ICT cooperation and inter-organizational IT governance in the achievement of such potential benefits? Answers to these questions are both practically and theoretically important. As the amount of prior research is limited, there is also a research gap here.

The social welfare and healthcare services reform in Finland makes our research topical. This reform has been one of the key initiatives of the past three National Governments, that is, since 2007. In 2015, the current National Government decided that 18 provinces, to be established, would take over the responsibility for these services at the beginning of 2019. In July 2017, the National Government postponed the start date to the beginning of 2020. The responsibility for close to 60% of current municipal services with related taxes and other income, facilities and ICT would be transferred to the 18 provinces. Due to this reform, inter-organizational IT governance and ICT cooperation have received unprecedented attention, as answers are needed for the questions articulated above. The benefit expectations resemble the famous H.C. Andersen’s fable, where there was a lot of commotion about emperor’s new clothes, in our case about the benefits of ICT cooperation. In summary, the generic research problem in the present study is why and how can nearby municipalities jointly govern ICT cooperation and, if so, will they benefit from the jointly governed ICT cooperation?

To solve this research problem, we reviewed the literature and analyzed secondary data. First, we reviewed the literature on why organizations cooperate. We selected seminal and state-of-the-art articles from two complementary, well-established boundary theories, Transaction Cost Economics (TCE) (Coase, 1937; Williamson, 1975, 1985) and the Resource Based View theories (RBV) (Barney, 1991; Wiengarten et al., 2013). TCE explains from the cost efficiency perspective, what a firm should do it self, what should be purchased from markets and what should be done through alliances. RBV evaluates the same question from the value increase perspective. Is the best way to create and add value to operate independently, to rely on markets or to cooperate? We used these theories to reason theoretically the connection between inter-organizational ICT cooperation benefits and inter-organizational IT governance practices. We reasoned that one of the purposes of inter-organizational
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