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Creating Shared Service Centers for Public Sector Accounting: The Case of Estonia

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Declaration

Hereby I declare that this doctoral thesis, my original investigation and achievement, submitted for the doctoral degree at Tallinn University of Technology, has not been submitted for any other degree or examination.

/Kaide Tammel/

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CONTENTS

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INTRODUCTION

Focus and aim of the thesis

The question of how to govern efficiently has been one of the central issues for governments at all times. As there is no single answer, governments are constantly on the lookout for instruments that can help increase efficiency in the public sector. While some of these instruments (such as privatization or outsourcing) have gone somewhat out of fashion, a new promising instrument has emerged. A current global mega-trend (Elston 2014) in public management is creating shared service centers: lifting back-office work out of traditional organizational structures into separate units or organizations which subsequently become “support service” providers within the public sector.

Shared service centers (SSCs) can be found at all administrative levels of government – local, regional and national/federal – and in different fields, such as finance; information and communication technology (ICT); procurement; property and facilities management; and human resource management (HRM) (Elston 2014; Walsh et al. 2008). Shared services have been introduced in the United States (Schwarz 2014; Selden and Wooters 2011), Canada (Elston 2014), Australia (Borman and Janssen 2013; Dollery and Akimov 2007; Reid and Wettenhall 2015), the Netherlands (Borman and Janssen 2013; Janssen and Joha 2006a; Meijerink and Bondarouk 2013; Post 2012; Wagenaar 2006), Belgium (Boon and Verhoest 2015), Sweden (Kastberg 2014; Ulbrich 2010a; 2010b), Finland (Hyvönen et al. 2012), Germany (Becker et al. 2009), the United Kingdom (Elston 2014; Tomkinson 2007; Whitfield 2007), Ireland (MacCarthaigh 2014) and Denmark (OECD 2010). This list is not exhaustive.

The expectations about shared service centers are very high. It is hoped that they help reduce costs and fragmentation, increase quality and standardize processes, modernize government and foster innovation. Public sector shared service centers are inspired by the successful examples from the business sector, where they already have a long history (Schwarz 2014; Tomkinson 2007).

The benefits of shared service centers are further promoted by strong advocates for change, such as consulting companies, the ICT industry, international organizations (such as OECD), practitioner networks (http://www.ssonetwork.com) and SSC conferences (Schwarz 2014). Currently, a lot of information on public sector shared service centers is available in the form of “best practice” studies and project-management guidelines (see, e.g., Accenture 2005; A.T. Kearney 2005; 2007; Ernst & Young 2013; KPMG 2011; 2012; Microsoft and GFOA Consulting 2012). Websites of governments and public sector shared service centers offer access to program documents and overviews of shared service centers.

In contrast to this wealth of industry sources and practitioner information, there is a clear lack of systematic academic research that could help to understand both the roots and effects of this mega-trend (Schwarz 2014). The trend has drawn scholarly attention only recently, and the academic literature on public sector shared service centers lacks both a solid theoretical foundation and systematic empirical research (Schwarz 2014).

The first wave of academic research was inspired by, and to a large extent followed, the generic, often overly optimistic manager-oriented literature (such as Bangemann 2005; Bergeron 2003). The central question of this research was how to successfully implement shared services, without paying much attention to the differences between business and public sector contexts.

However, establishing a shared service center in the public sector is a major strategic decision that transforms the way the public administration functions by changing the existing organizational structures, power relations, processes, accountability lines, job profiles, culture and technology, having a long-term impact on all stakeholders (Janssen et al. 2009; Ulbrich 2013; Wagenaar 2006).

As creating public sector SSCs is a current trend, it is somewhat too early to study its longer-term effects. However, studying the roots of the public sector SSCs is already possible, and it should be undertaken in order to better understand the drivers of this reform wave.

A review of the current literature on public sector SSCs reveals several research gaps that this thesis aims to reduce. First, most of the empirical studies concern ICT shared service centers, which can be explained by the fact that a large number of studies have been written by ICT scholars. Also, research on HRM shared service centers is well represented (Bondarouk and Friebe 2014). As there are calls for more field-specific studies (Bondarouk and Friebe 2014), the research in this thesis is focused on financial accounting. So far, the *initiation* of SSCs for public sector financial accounting has received only limited attention in the literature (see Hyvönen et al. 2012).

Second, the vast majority of research concerns the *implementation* stage of SSCs. However, very little is known about the factors that influence the decision-making process that precedes that stage. While the importance of the specific contextual and organizational factors at the initiation stage is well acknowledged (Borman and Janssen 2013; Wagenaar 2006), there is a lack of empirical research that takes a context-specific approach which helps better understand the enabling and constraining factors for SSC reforms (Borman and Janssen 2013). This thesis addresses this gap.

Third, if we acknowledge the importance of contextual factors in public management reforms (Pollitt 2013), we need to study different jurisdictions, levels of government, and also the time period when the shared service centers were initiated. The existing research has primarily focused on studying shared service centers in Anglophone countries, and also in the Netherlands, Belgium, Sweden and Finland. There is almost no knowledge about whether, why and how shared service centers are created in Central and Eastern Europe (CEE). Yet, we could expect that different country contexts influence the way the agreements and decisions to create SSCs are reached. To date, the research embodied in the current thesis is the first attempt to garner insights from Estonia for the benefit of a more balanced academic discussion on public sector shared service centers.

Fourth, while acknowledging the potential importance of the role of individual actors in initiating shared service centers, the previous research has rarely systematically studied the role and strategies of different actors in the initiating process (except Boon and Verhoest 2015; Hyvönen et al. 2012). Using the analytical framework of institutional entrepreneurship (DiMaggio 1988), this thesis provides an in-depth analysis of the roles and strategies of the key actors in establishing accounting SSCs in Estonia.

Finally, as the existing studies on public sector SSCs indicate, the creation of SSCs can follow diverse paths and result in a variety of SSC models (Janssen and Joha 2006a; Joha and Janssen 2014; Ulbrich 2013). When discussing the different reform options, it would be useful to employ a typology to distinguish between the various design elements of SSC reform models. The thesis addresses a theoretical gap in the current literature on public sector SSCs by proposing a new typology of reform models for creating SSCs.

The thesis comprises an introduction and four published research articles (**I-IV**). The three academic articles (**I**; **III-IV**) and a book chapter (**II**) altogether provide empirical research into the processes that led to the creation of accounting centers at different levels of Estonian public administration: local (**IV**), regional (**III-IV**) and central (**I-IV**). The aim of the empirical research is to study the role that different factors and actors play in initiating shared service centers for public sector financial accounting.

The individual academic articles seek answers to the following research questions:

1. *What have been the main motives for creating financial accounting SSCs in Estonia? (**I-IV**)*
2. *What have been the main obstacles and challenges in initiating, designing and implementing the central government accounting SSC in Estonia? (**I-II**)*
3. *How were public-sector financial accounting SSCs initiated in Estonia? (**IV**)*

4. *What was the role of change agents in initiating public-sector financial accounting shared service centers in Estonia? (**IV**)*
5. *Could SSCs reduce costs in the public sector context? (**III**)*

The first article (**I**) is focused on the motives and challenges of SSCs in public administration. As a theoretical contribution to the literature on public sector SSCs, a typology of reform models for creating SSCs is proposed. The typology comprises eight distinct reform models, each representing different configurations of design and implementation elements. The typology can be used for analyzing the reform strategies in different SSC stages (initiating, implementing and operating).

The second article (**II**) is a book chapter that provides a rich context of and preliminary insights into the implementation issues of the Estonian central government SSC. Using the coordination literature as a reference, the chapter discusses whether SSCs can be instrumental in reducing inherent coordination problems in the public sector.

The third article (**III**) is a critical account of the main motive – cost reduction – for SSCs. This article argues that compared to the business sector, public administration has fewer opportunities to reduce costs. The main sources of cost reduction are identified and critically assessed. The lack of hard evidence to support the belief that SSCs are instrumental in reducing public administration costs and the methodological issues in measuring cost reduction are emphasized.

The fourth article (**IV**) uses the analytical framework of institutional entrepreneurship for studying the initiation stage of the three Estonian public sector accounting centers. To the knowledge of the author, this article is the first study that looks – in a comparative way − at the role of different actors and factors in creating public sector accounting SSCs at *different* levels of administration. Studying the three cases that were initiated by different types of actors and at different times was especially fruitful as it made it possible to unveil the role of the factors specific to the organizational field of accounting. It also enabled the analysis of the role of the fiscal crisis in initiating SSCs in the public sector. The research revealed that the fiscal crisis did not trigger the SSC reform but opened a window of opportunity to realize the already existing centralization ideas.

The introductory part of the thesis proceeds by describing the methodology of the research. Thereafter the concept of a shared service center and its motives are explained. One of the theoretical contributions of the current thesis was to propose a typology of different reform models for creating SSCs in the public sector. The typology is explained in detail and is subsequently employed for describing the strategies used for creating the three accounting centers in the Estonian public sector. Finally, the factors that influence the choice of the SSC initiation strategy – politico-administrative context, features of the organizational field, key actors, technology and the fiscal crisis – are analyzed on the basis of the results of the cumulative research contained in the individual academic articles.

Methodology

The research in this thesis aims to understand why and how shared service centers are initiated in the public sector. Among the social science research methods, the case study is the most appropriate one for finding answers to the "how" and "why" questions when studying a contemporary phenomenon (Yin 2003). The case-study approach is "*especially useful in describing and explaining the details about organizations, policy processes, and institutional arrangements*" (Eller et al. 2013, 133-140). A case study can enable an in-depth investigation into a contemporary phenomenon together with its context (Yin 2009). In social science research, producing context-dependent knowledge is valuable and necessary (Flyvbjerg 2006) as it helps to avoid prescriptions based on oversimplification (Pollitt and Bouckaert 2011b).

The focus of the main case study in this thesis is on the factors that contributed to the creation of a State Shared Service Centre in the central government of Estonia (**I**-**IV**); two additional cases are analyzed to reduce the limitations of a single-case study (Yin 2009) and to increase the validity of findings (Thiel 2014). The first of these two is a case from the county government[1] level in Estonia (**III**-**IV**), and the second is a case from the local government level (**IV**).

In order to detect possible similarities in the initiation process, the three cases are selected from one jurisdiction (Estonia) and organizational field (accounting). In order to detect possible differences between the practices, depending on the level of administration, the cases are selected from different levels. The different timing of the cases is expected to give some indication about the possible impact of the fiscal crisis on the initiation stage of public sector shared service centers. A rich narrative and detailed description of the reform context provided in the articles of this thesis also enables researchers studying SSCs in other countries to compare the cases and interpret the results.

The aim of the original research contained in this thesis is to advance the academic discussion on public sector shared service centers by providing an in-depth and contextual account of the processes and factors underlying the creation of SSCs for public sector accounting. The Estonian public sector setting

1 County governments are governmental authorities financed from the state budget and headed by a county governor. County governors represent the interests of the state in the county. Since 1 September 2015 county governments belong to the area of government of the Ministry of Finance (Government of the Republic Act).

is chosen in order to balance the current bias in the SSC literature, which is primarily focused on studying shared service centers in Anglophone countries and Western Europe. To date, the research embodied in the current thesis is the first attempt to garner insights from Estonia.

The processes studied in this thesis fall within the period of approximately 20 years (1995-2015). The period covered in this research started with the enactment of the new Accounting Act (on 1 January 1995), which relied on international standards of accounting and ended with the Cabinet decision (2015) that made the consolidation of central government financial accounting into a State Shared Service Centre mandatory. The research for this thesis was carried out in a period of four years (2012-2015).

The research methods involved both desk research and interviews. The most important sources of data were documents (legislative acts and their explanatory memoranda, strategies and action plans, reports, working documents, materials presented to the Cabinet meetings and exchanges of emails) and media articles. The contents of the documents and media articles were used to outline the chronology of the reform events, to establish the sequence of decisions and to identify the main reform actors and the goals of changes.

The second source of data for the empirical research were interviews. During the period of 2012-2015 altogether 25 interviews were conducted (23 face-to-face, one via e-mail exchange and one via Skype). The interviewees were selected using snowball sampling (Thiel 2014). The interviewees were actors from the central (16), regional (1) and local (3) administrations, from the private sector (3) and the National Audit Office (1). Also one key politician (Minister) was interviewed. The interviews covered the history, motives and process of creating financial-accounting SSCs and the challenges faced by the different reform actors. As the focus of the study was on the initiation stage of shared service centers, the aim of the interviews was to understand the role and the motives of the key actors and to describe their strategies for initiating shared service centers in the public sector. The interviews were semi-structured, with open-ended questions. Most of the interviews were recorded – with the consent of the interviewees – and transcribed. The interviews lasted between 1 and 2.5 hours. The interview transcripts were first analyzed with a view to completing the chronology of events and the sequence of relevant decisions (i.e. filling in the gaps left by the official documents and media articles). The contents of the interview transcripts were coded in order to identify common themes, converging assessments and diverging views of the reform history, motives and the challenges that had emerged.

The chosen methodology has several limitations. First, it takes the perspective of change initiators and does not cover the other actors in the organizational field. Second, the empirical research was mainly focused on the initiation stage of shared services projects. The initiation stage is defined as a stage that ends once the implementation stage starts. This limitation provided a necessary focus that helped to better analyze the similarities and differences between the chosen cases. However, this focus did not enable this thesis to make any substantial suggestions or predictions about the implementation or operating stages of shared service centers. Further research is needed to assess the implications of the initiation strategies for the implementation and operation of the three studied SSCs. Third, as this research is context-dependent, one must be careful in generalizing the results of the study to other public sector contexts or organizational fields.

The concept and motives for shared service centers

The concept of the "shared service center" has been subjected to extensive definitional debates, and a number of definitions for SSCs have been put forth in the existing literature (see, e.g., Janssen et al. 2012; Schulz and Brenner 2010; Wagenaar 2006). Although there are still debates about what an SSC exactly means in the public sector context, there is an emerging consensus that it entails the following elements: consolidation; sharing arrangement; a new or separate business unit; focus on services; and multiple internal partners (see Miskon et al. 2010). In addition, an SSC is expected to have its own dedicated resources and informal or formal contractual arrangements (usually called "service level agreements") with the organizations that are its "internal customers" (Schulz and Brenner 2010).

With regard to the types of services that an SSC offers, most studies on the topic agree that SSCs usually provide "support services". Support services are functions that facilitate core activities of the organizations but are not core functions themselves (Schulz and Brenner 2010). It is often argued in the SSC literature that an SSC would be particularly suitable for offering what are called "transactional" services (i.e. routine and high-volume activities) rather than transformational (or professional or "knowledge-based") services (see, e.g., Schulz and Brenner 2010; Selden and Wooters 2011). Transaction-oriented services are services that entail *"processes that share a high degree of standardization, feature few interfaces with other processes and technologies, entail low financial risk and show a high potential for automation"* (Schulz and Brenner 2010, 215).

In the literature on SSCs in the public sector, the most frequently mentioned motive for establishing SSCs is cost reduction (see, i.a., Burns and Yeaton 2008; Dollery et al. 2009; 2011; Grant et al. 2007; Janssen 2005; Janssen and Joha 2006a; Janssen et al. 2012; McIvor et al. 2011; Miskon et al. 2010; Paagman et al. 2015; Selden and Wooters 2011; Schulz and Brenner 2010; Ulbrich 2010a; 2010b; Wagenaar 2006). Cost-savings are expected to be generated through economies of scale and scope, reductions in duplication, elimination of redundancy in operations, created synergies and lower staff costs.

It should be noted, however, that the literature on public sector SSCs lacks hard empirical evidence to support the widespread belief that SSCs help reduce costs (Dollery and Grant 2009; Janssen and Joha 2006b; Paagman et al. 2015; Strikwerda 2014; **III**). Janssen and Joha (2006b, 110) argue that *"(w)hile the economic rationale legitimizes the introduction of SSC, the true economic benefits are far from obvious."* The existing empirical research on public sector shared service centers indicates that often the expectations towards shared service centers are too high or go beyond realism (Janssen and Joha 2006a; Ulbrich 2006; Wagenaar 2006). One of the articles of this thesis analyzes the literature on SSCs and argues that compared to their counterparts in the business sector, public sector organizations have fewer opportunities to achieve cost reduction (**III**). Related to the cost-reduction motive is the question of whether and how cost reduction is *measured* (**III**). The literature on public sector SSCs indicates that different stakeholders hold different views about what and how should be measured, which makes a consensus on this question unlikely (Hyvönen et al. 2012; Janssen and Joha 2006b). As empirical evidence indicates, when the cost motive is used during the initiation phase, the projected cost reduction in a business case may not necessarily need to be supported by actual calculations and can be based on a cost reduction myth (Hyvönen et al. 2012; **III**).

The second most frequently mentioned motive for establishing SSCs is improving the quality of support services (Borman and Janssen 2013; Janssen and Joha 2006a; Janssen et al. 2012; McIvor et al. 2011; Miskon et al. 2010; Selden and Wooters 2011; Wagenaar 2006; Wang and Wang 2007). A number of SSC elements are expected to contribute to increasing the quality of the services provided. These include: build-up, concentration and sharing of knowledge and expertise, exchange of internal capabilities and best practices, more effective knowledge management and concentration of innovation (Borman and Janssen 2013; Dollery et al. 2009; Janssen 2005; Janssen and Joha 2006a; Wagenaar 2006).

Similarly to the cost-reduction motive, achieving the second main motive for SSCs – increasing the quality of services – is also not unambiguously backed by empirical evidence. There are two reasons for this: first, the quality of services means different things for different stakeholders, and second, increasing quality may be achieved at the expense of other motives, such as cost reduction (and vice versa) (Reid and Wettenhall 2015; Wagenaar 2006). Therefore, despite the promises of the SSC model, simultaneously achieving cost reduction and increasing the quality of services may not be realistic (Wagenaar 2006).

Third, SSCs are expected to increase the customer focus in the provision of support services. It is often noted that an SSC in its genuine form seeks to maintain close relations with the “customers” and involve them in decision-making about the levels and content of the services provided (Grant et al. 2007; Janssen and Joha 2006a; Schulz and Brenner 2010; Selden and Wooters 2011).

Whether and how this motive is achieved in practice is also a subject of debate in the academic literature (Ulbrich 2013). There are examples of SSC initiatives that failed due to overlooking stakeholder needs and expectations (Borman and Janssen 2013; Wagenaar 2006; **III**). Resistance to change is a common challenge in initiating and implementing SSCs (**I**), and the literature on SSC suggests that in order to establish and maintain customer focus, all stakeholders need to be engaged in the SSC design process (Grant et al. 2007; Janssen and Joha 2006a; **III**). However, the democratic decision-making process is usually time-consuming and costly and tends to scale back the initial plan (Janssen et al. 2009).

Fourth, it is claimed that an SSC enables the participating organizations to focus on their core tasks. The argument is that since the management does not have to deal with the day-to-day operations of back-office functions anymore, they would have more time to concentrate on the main (substantive) activities (Dollery et al. 2009; Janssen and Joha 2006a; Janssen et al. 2012; McIvor et al. 2011; Wagenaar 2006; Walsh et al. 2008).

To date, very little research exists to verify whether and to what extent this motive is achieved in the public administration context, as the literature on SSCs has been primarily focused on studying the supply-side of SSCs (Elston 2014).

Finally, reform actors can be expected to claim that SSCs would be able to offer management information that is more consistent and of higher quality (Janssen and Joha 2006a; Wagenaar 2006).

This is yet another aspect of public administration SSCs that needs to be studied more extensively, as there can be different conceptions about what exactly management information means and how (and by whom) its quality and consistency is assessed.

The empirical research of the three Estonian case studies found support for all the aforementioned motives for establishing SSCs, except customer focus (**I-IV**). Increasing the quality of accounting was the central motive for initiating SSCs; however, the business cases for all SSCs promised a substantial reduction of administrative costs (especially the central government SSC). Reducing back-office headcount was an important aim for the two SSCs that were initiated during the fiscal crisis in 2009 (**III**). Additionally, all the studied cases showed that an important motive for creating SSCs was the modernization of government by making better use of information technology and introducing a common SAP ERP[2] system (**I-IV**).

Interestingly, while the realization of the expected SSC motives in the public sector is far from obvious (Janssen and Joha 2006b; Janssen et al. 2009; Paagman et al. 2015; Wagenaar 2006; **III**), there is little knowledge about the factors that influence the adoption of the SSC model in the public sector context. As the existing studies on public sector SSCs indicate, the creation of SSCs can follow diverse paths and result in a variety of SSC models (Janssen and Joha 2006a; Joha and Janssen 2014; Ulbrich 2013). Therefore, when discussing the different reform options, it would be useful to distinguish between the various design elements of SSC reform models. The thesis addresses this theoretical gap in the literature on public sector SSCs by proposing a new typology of reform models for creating SSCs (**I**), described in the next section.

Different reform models for creating SSCs in the public sector

The new typology proposed in (**I**) aims to advance the analysis and theoretical discussion on SSCs in the public sector.

Table 1. Typology of reform models for creating SSC

	Incremental	**Big bang**
Vertical		
Optional	VOI	VOB
Mandated	VMI	VMB
Horizontal		
Optional	HOI	HOB
Mandated	HMI	HMB

Source: (**I**)

As the processes that lead to creating SSCs have received very limited attention, the typology contributes to the analytical framework for studying the SSC phenomenon in different country contexts and organizational fields. The new typology comprises eight distinct reform models, each representing different configurations of three major dichotomies: vertical – horizontal, optional – mandated and incremental – big bang (**I**).

2 An enterprise resource planning (ERP) system is a modular software that *"aims to integrate departments and functions across an organization onto a single computer system"* (Source Information Services 2012, 3). ERP systems are produced by global companies such as SAP, Oracle, and Microsoft.

As pointed out by Janssen and Joha (2006b), SSCs can be either intra-organizational or inter-organizational. In the public sector context, however, it is more fruitful to distinguish between vertical and horizontal SSCs. In the case of a vertical SSC, the various departments of the same ministry and also the subordinate agencies under the same “parent ministry” would jointly use the SSC located in the ministry. The most important feature of the vertical SSC is the hierarchical relationship between the organization where the SSC is located (usually the parent ministry) and the “customers” of the support services (i.e. the agencies or equivalents). In the case of a horizontal SSC, the SSC would span sectoral boundaries and include different line ministries. The most important feature of a horizontal SSC is that the organizations involved are not in a hierarchical relationship but participate as “equals” (**I**).

The second dichotomy pertains to whether the creation of the SSC is mandated by a legal act (and is hence made compulsory) or it is made optional for the organizations involved (**I**).

The third dichotomy refers to whether the creation of the SSC follows a big bang or incremental reform strategy (see, e.g., Wagenaar 2006). In the case of a big bang approach, the aim is to complete the creation of the SSC in a short time period and in a comprehensive way by including all organizations meant to be covered by the SSC in the same round of reform. In the case of an incremental approach, the creation of an SSC is foreseen to take place over a longer time period and as a step-by-step process in which the pace at which different organizations join the SSC can vary (**I**).

Table 2. Reform strategies for creating SSCs in Estonia

	Incremental	**Big bang**
Vertical		
Optional		
Mandated	CASE III	CASE I, CASE II, CASE III
Horizontal		
Optional	CASE III	
Mandated	CASE III	

Source: Author, based on (**I**)

The three cases studied in this thesis were all designed as mandated big bang reforms. The earliest case (Tallinn city – CASE I) was initiated as a major business process re-engineering project to be implemented comprehensively in all city organizations (**IV**). The second case (county governments – CASE II) was also designed as a big bang project to be implemented simultaneously in all county governments under the direction of the Ministry of the Interior (**III-IV**). The most far-reaching project (CASE III) at the central government level that aimed at consolidating financial accounting (together with a number of other back-office functions) into a single shared service center was first designed as a big bang mandatory reform, but due to different constraints the design was modified several times (**I-II**). Hence, while the design of the first two projects can be classified as VMB (vertical, mandated, big bang), the third project went through different designs from HMB (horizontal, mandated, big bang) to VMB (vertical, mandated, big bang) to VMI (vertical, mandated, incremental) to HOI (horizontal, optional, incremental) and ending up as a HMB (horizontal, mandated, big bang) in 2015 (**I**; **III**).

Understanding the choice of the reform strategy

While the aim of the previous chapter was to show theoretically that there could be eight distinct reform strategies for creating shared service centers in the public sector, the aim of the current chapter is to study the factors that could impact the choice of the SSC reform strategy. In the public sector different factors can influence the initiation of an SSC.

First, political and administrative conditions can be either favorable or hostile towards the SSC idea in the public sector. As *politico-administrative contexts* vary, the reform strategies that can be employed in one country may not be successful in another country (Peters 2010; Pollitt and Bouckaert 2011b).

Second, the *features of an organizational field* may enable or constrain SSC initiatives. Organizational fields *"constitute somewhat distinctive worlds that operate under different rules, with different logics and different kind of players"* (Scott 2001, 207). Hence, the characteristics of different fields (e.g. human resource management, accounting or property management) may prescribe suitable SSC initiation strategies.

Third, the role of *key actors* in initiating SSCs has been noted in the literature (Becker et al. 2009; Hyvönen et al. 2012). However, as most of the literature on public sector SSCs is focused on the organizational level, the roles and strategies taken at the actor level have received very limited attention.

Fourth, while SSCs are considered to be technology-enabled organizations (Miskon et al. 2010; Sedera and Dey 2007), there is little information about how important the factor *technology* is at the initiating stage of shared service centers and how the features of a specific technology may impact the initiation of an SSC.

Fifth, *fiscal crises* can provide momentum for structural and functional reforms in the public sector (Randma-Liiv and Kickert 2016). This momentum, or "window of opportunity" that opens during the crisis, can allow reform strategies that in a "normal" situation would not be feasible.

In the following subsections each of these five clusters of factors that can be expected to affect the choice of the SSC initiation strategy will be analyzed in detail. In addition to the literature on public sector SSCs, public administration reform literature, literature on public administration ICT and recent studies on the effects of the fiscal crisis add to explaining the empirical findings from the three Estonian case studies.

Politico-administrative context

The literature on public sector SSCs indicates that both political and administrative factors can influence SSC strategies (Becker et al. 2009; Boon and Verhoest 2015; 2017; Paagman et al. 2015; Ulbrich 2010a; Wagenaar 2006). First, *political factors* can either enable or constrain SSC reforms (Becker et al. 2009; Boon and Verhoest 2015; 2017; Paagman et al. 2015). For instance, Becker et al. (2009) demonstrate how the long-time cooperation of the political representatives of the municipalities in Germany paved the way for an SSC. On the other hand, political considerations may also hamper the SSC initiatives. For example, the political will to keep jobs within one's municipality may outweigh the arguments for a (horizontal) SSC (Hyvönen et al. 2012; Whitfield 2007). As is the case with the public sector reforms in general, the election cycles and changes in the composition of a coalition government can alter the SSC reform (Boon and Verhoest 2015; 2017).

Second, the importance of *administrative factors*, such as public administration values and tradition in shaping SSC strategies, has also been noted in the literature on public sector SSCs. While creating an SSC requires an "entrepreneurial mindset" (Grant et al. 2007; Tomkinson 2007) the traditional "public sector ethos" is considered to be an obstacle to SSC initiatives (Tomkinson 2007). The patterns of previous coordination and cooperation but also past reform experience are likely to set the stage for future developments and influence the SSC reform model (Becker et al. 2009; Janssen and Joha 2006a).

The literature on public administration reforms argues that there is a great variance in country contexts, which lead to the adoption of different reform strategies and paths (De Vries and Nemec 2013; Hammerschmid et al. 2016; Painter and Peters 2010; Peters 2010). According to Painter and Peters (2010, 11) *"there are noticeable differences in the kinds of solutions that are considered feasible or appropriate and it has been noted that different administrative* *traditions produce different kinds of outcomes in what appears to be the application of the same reform"* (Painter and Peters 2010, 11).

It has been suggested that public administration reform opportunities and strategies depend on whether "process legitimacy" or "performance legitimacy" is valued (Hood 1991; MacCarthaigh et al. 2016). In the former, the legitimacy of the decision is achieved by following the correct procedures for democratic input, while in the latter case the decision is legitimate if it achieves the promised results (Hood 1991; MacCarthaigh et al. 2016). Hence, it can be assumed that the prevailing ideology is likely to determine which values (individualistic vs. collective; efficiency vs. equity/democracy) are emphasized when SSCs are initiated, and the political and administrative culture defines the acceptable decision-making mechanisms.

Among the CEE countries Estonia stands out as a radical reformer. Since the 1990s the prevailing ideology of the Estonian governments has been neo-liberal (Drechsler 2004; Lauristin and Vihalemm 2009; Raudla and Kattel 2011; Sarapuu 2011; 2013; Verheijen 2007). This can be explained by the fact that the post-Soviet transformation of Estonia started in a point of time which was *"dominated by neo-liberal definitions and solutions for democratic governing"* (Sarapuu 2013, 18). During the past decades Estonian governments have been averse to socialism and emphasized individualistic values, economic competitiveness and success, which has often been defined externally by the international organizations, such as the EU (Lauristin and Vihalemm 2009; Sarapuu 2013). Hence, instead of "right" vs. "left" the political competition has followed a logic of "national/reformist" vs. "Soviet/anti-reform" (Lauristin and Vihalemm 2009).

The neo-liberal worldview of Estonia's political and administrative elite has led to the reluctance to invest in coordination and administrative development, and the downsizing of the state has become a routine (Sarapuu 2011). Furthermore, initiating and carrying out public sector reforms has become as a success symbol in the Estonian administrative culture (Savi and Randma-Liiv 2016). Public managers enjoy a high degree of managerial discretion, and their ability to initiate and implement novel managerial instruments is highly valued (Savi and Randma-Liiv 2016). The downside of frequent reforms is their inconsistency and low public involvement; rather than introducing systematic improvements, they have predominantly aimed at reducing costs (Savi and Randma-Liiv 2016).

Reforms and downsizing of the state have been facilitated by the weakness of the employee unions and the civil society in general (Sarapuu 2013; Savi 2015). The lack of strong guarantees concerning salary cuts or layoffs for the civil servants and the almost non-existing collective bargaining culture in Estonia facilitated the cuts to the operational expenses of the government during the crisis in 2008-2009 (Raudla 2013; Savi 2015).

Understanding the politico-administrative context of the Estonian case studies helps to explain the strategies chosen for creating SSCs. Having a solid public sector reform experience, radical SSC initiation strategies were preferred in Estonia, as efficiency (performance legitimacy) was valued over the democratic decision-making process (process legitimacy). All SSC projects were designed to be mandatory to all involved organizations, and a big bang implementation strategy was foreseen. This strategy was chosen as it was estimated that the future "customer" organizations would resist the plan (**IV**). Engaging stakeholders in the initiation stage was avoided, as this could have slowed down the process and potentially reduced the scope of the project. It was suggested that the organization of the state's financial management system in general and the creation of accounting SSCs in particular had little to do with the democratic decision-making process. In the words of one interviewee: "*In democracies you don't build pyramids*" (**IV**).

Features of the organizational field

It can be expected that the distinctive features of an organizational field might influence the choice of an SSC reform strategy (Bondarouk and Friebe 2014). Systematic research, however, is still missing, and there is an evident lack of knowledge about how the features of different organizational fields enable or constrain SSC initiatives.

Organizational fields *"have their own histories and institutional processes"* (Greenwood et al. 2008, 6). Organizational field-level analysis helps to understand the "environment" or sub-system in which organizations and professions operate and to detect the different exogenous and endogenous forces that influence the field (DiMaggio and Powell 1983; Scott 2008). Hence, compared to the organization-level analysis, organizational field-level analysis helps to identify and understand the field-specific practices and forces for change.

Public sector financial accounting as an organizational field has distinctive principles, values, standards and regulations. Accountants form a group of professionals who have accounting expertise and share a similar "logic of appropriateness" (March and Olsen 1983; 2004). Accounting regulations are equally applicable for all public sector organizations and have to be followed by accountants. Hence, the organizational field of public sector financial accounting can be seen as homogenous rather than as heterogeneous and is usually considered to be a mature organizational field (Hyvönen et al. 2012).

However, the field of public sector financial accounting has been going through a major global transformation in line with the New Public Management (NPM) reforms. As with NPM reforms in general, the changes in the public sector financial accounting principles aimed at employing private sector practices in the public sector context. Central to this change agenda has been a move from cash accounting to accruals and setting international standards for public sector financial accounting, which is often seen as a linear process towards better quality reporting (Guthrie et al. 1999; Haldma and Kenk 2014; Tikk 2010).

Introducing accruals instead of cash accounting was considered a major “cultural change”, and it was warned that implementing accruals should not be seen as just a “technical” accounting exercise (Blöndal 2003). The change demanded both improving the skill levels of many government accountants and major information technology investment in order to handle the additional information associated with accruals (Blöndal 2003).

As discussed in (**II**) Estonia was an early adopter of international accounting standards for public sector accounting. The suitability of the business sector accruals model for the public sector was taken for granted, and the change from cash-based accounting to accruals was considered to be mainly a technical change (Haldma and Kenk 2014). The transformation of Estonian financial accounting principles started in the early 1990s when the Soviet accounting principles had to be replaced by new accounting regulation that corresponded to the requirements of a free market economy (Tikk 2010).

Throughout the 1990s and early 2000s, the financial accounting of the Estonian public sector was highly decentralized: all ministries in the central government and also the subordinate agencies were free to develop their own financial accounting systems (**II**).

In 2003-2004, an extensive reform of government accounting took place, led by the newly appointed State Accountant General (SAG), who was the Head of the State Accounting Department of the Ministry of Finance (**II**). The most important element of this reform was the introduction of accruals-based accounting methods in the public sector (Tikk 2010). This change was in line with the New Public Financial Management agenda (Guthrie et al. 2005).

However, as in many other countries, resourceful municipalities in Estonia were quicker than the central government to introduce accruals (Guthrie et al. 1999; Haldma and Kenk 2014; **II**; **IV**). The Tallinn city case (CASE I) that is studied in this thesis (**IV**) revealed that change processes that led to the consolidation of the finance function in local government were ahead of similar developments at the national level. In 2002, when Tallinn city launched its project (CASE I) that prescribed consolidating the city finance function, the legislation that was needed for this change was being drafted in the Ministry of Finance (**IV**). However, the pace of adopting new accounting procedures varied, depending on the availability of resources and knowledge in different municipalities.

The implementation of accruals presented significant challenges to the decentralized and fragmented administrative system, especially at the agency level (**I**; **II**). The National Audit Office in its reports to the parliament pointed to the weak coordination of financial accounting in several ministries which did not guide and control their subordinate agencies sufficiently, and therefore their input to the state's annual financial report remained uneven (**I**; **II**).

In response to this problem, the Ministry of Finance resolved to reduce the number of accounting entities. The Minister of Finance established in the general rules for accounting and financial reporting of the state that the accounting function shall be centralized in small organizations that had up to two accountants by the beginning of 2008. As a result of these provisions, between 2006 and 2009, the number of central government accounting entities was reduced from 381 to 178 (**I**; **II**).

According to the vision of the Ministry of Finance there could have been 17 accounting entities at the central government level. In a highly decentralized administrative system, however, the Ministry of Finance lacked the tools to impose consolidation, and the government organizations themselves did not want to give up the accounting function in their organizations, as this was perceived to reduce their autonomy and power (**I**; **II**).

However, viewing the state as a corporation, the Ministry of Finance was determined to consolidate financial accounting into a single accounting center. This can be explained both by normative and mimetic pressures identified by DiMaggio and Powell (1983). First, normatively private-sector accounting practices have been considered superior in Estonia. Both accrual accounting and accounting centers were first introduced in the private sector, then diffused to municipalities and finally to the central government. As these processes had already taken place in other countries (e.g. in Sweden, see Olson and Sahlin-Andersson 2005), mimetic pressures to change in order not to "lag behind" were noteworthy. Public sector financial accounting in Estonia was regulated top-down by the guidelines and the Decrees of the Minister of Finance (Haldma and Kenk 2014), and the necessity to adopt accruals for public sector financial accounting was not questioned. The latter can be related to the fact that accounting as a research field has received very limited scholarly attention in Estonia (Talpas 2016).

The direction and dynamics of change in all studied cases relied on the norms, values and the "logic of appropriateness" embedded in the organizational field. This logic was largely based on the private-sector accounting practices, international accounting standards and the example of similar practices in other countries which set the direction for change.

Key actors

The role of *key actors* in initiating SSCs has been noted in the SSC literature (Becker et al. 2009; Boon and Verhoest 2014; Hyvönen et al. 2012; Niehaves and Krause 2010). Becker et al. (2009) and Niehaves and Krause (2010) show how political actors from different municipalities in Germany were willing to cooperate in order to reduce costs by establishing SSCs. Hyvönen et al. (2012) and Boon and Verhoest (2014) have taken a closer look at the administrative actors and show how actor orientations are shaped by the institutional context and myths. However, as most of the literature on public sector SSCs is on the organizational level of analysis, the roles and strategies taken at the actor level have received only limited attention.

Insights from institutional entrepreneurship help to explain how individuals change the institutions in which they are embedded (Dacin et al. 2002). Since 1988, when DiMaggio introduced interest and agency in institutional theory (DiMaggio 1988), the research on institutional entrepreneurship has focused on the role played by the active agency in changing the organizations and organizational fields. The theory suggests that in order to succeed, an institutional entrepreneur must occupy subject positions with wide legitimacy and bridging diverse stakeholders, theorize new practices through discursive and political means and institutionalize these new practices by connecting them to stakeholders' routines and values (Maguire et al. 2004).

The occupation of the subject position with wide legitimacy helps to portray the new institutional form as legitimate, whereas other alternatives are seen as less appropriate, desirable or viable (Dacin et al. 2002; Leca et al. 2008). In the process of legitimation, change agents engage in battles that originate from conflicting perspectives between existing and proposed organizational fields (Greenwood and Suddaby 2006; Leca et al. 2008; Maguire et al. 2004; Pacheco et al. 2010). As the outcomes of the institutional entrepreneurship spread, more diverse social groups will be affected and possibly mobilized, which will lead to new legitimacy battles (Garud et al. 2007).

The change agents that possess resources, knowledge or strategic positions are better equipped to use their power to win the legitimacy battles and to shape the organizational field in their favor (Beckert 1999, cited in Pacheco et al. 2010). Additionally, the change agents who migrate from an organization that has implemented a new practice are better positioned because they possess the appropriate expertise and cognitive reasoning to deem that practice appropriate (Kraatz and Moore 2002).

The theorization of new practices consists of two key components: framing problems and justifying innovation (Maguire et al. 2004). In more detail, theorization involves highlighting and recasting problems and problematizing existing systems as inadequate (Koene and Ansari 2013). As the process of theorization diffuses among organizations in a given field, new norms and practices take on a greater degree of legitimacy and become institutionalized (Dacin et al. 2002). However, theorization does not lead to automatic institutionalization of change. The way the institutional entrepreneurs connect their change projects to the activities and interests of other actors in the organizational field determines their success; consequently, the projects are crafted to fit the conditions of the field (Maguire et al. 2004).

While zooming in on the key actors in the SSC initiation phase, there are many similarities, but also some differences between the studied cases (**IV**). The main change agent that initiated the restructuring of the financial management process in Tallinn city (CASE I) was a major who had been building up the banking sector in Estonia. Coming from a private bank to lead the city organization the major expected to have a corporate view of the city finances and assets, which was not possible at that time, as every city organization had its own accounting system, and gathering information for a holistic overview required effort and time.

The main change agent in the regional-administration project (CASE II) had been working for the aforementioned mayor of Tallinn city and also in another vertical accounting center under the Ministry of Justice. Hence, while drafting a business case for the VMB (vertical, mandated, big bang) accounting center for regional governments under the Ministry of the Interior, the change agent had had a previous experience in consolidating the finance function. Due to his prior experience, both the accounting center of Tallinn city and the courts' accounting center were seen as replicable working solutions.

In CASE III, the main change agent, who also led the change agenda from cash accounting to accruals, was the State Accountant General (SAG), who had been in this position since 2003. Known as one of the top accountants in Estonia she was recruited by the Ministry of Finance with the task to build up and coordinate the financial accounting system in Estonia. Being experienced in corporate accounting, the SAG held the view of the state as a corporation. However, her tools for restructuring the financial management in the public administration were limited to drafting accounting legislation, guidelines and decrees.

The three cases show that none of the main change agents was able to initiate SSC alone. The mayor of Tallinn city in CASE I needed the support of the city council for the business process reengineering project, the main change agent in CASE II needed both the political support of the Minister and input to the business case from the key civil servants of the Ministry of the Interior. The SAG in CASE III needed government support (a political decision) to consolidate financial accounting into a corporate accounting center.

In garnering political support for the change, the role of auditors and consultants was instrumental. First, the audit reports drafted either by public or private sector auditors framed problems and showed that the state of public sector financial accounting was in need of improvement. Second, once the problems had been framed and generally acknowledged, business cases for restructuring financial management offered solutions for improvement.

Out of the three business cases studied in this thesis, two were drafted by the consultants (PWC). All business cases showed cost reduction potential, and the belief that SSCs help reduce costs was strongly upheld both by the politicians and administrators. Hence, the political decision to implement SSCs in the public sector was based on two main beliefs. First, that financial accounting in the public sector needs to be restructured in line with corporate accounting. Second, based on business cases it was believed that consolidation of financial accounting (together with other support functions) will reduce costs, increase quality and improve processes.

To sum it up, the research in this thesis indicates that five types of key actors are central in the SSC initiation process. First, the role of auditors and consultants was to point to the problems and deficiencies of financial accounting and reporting in their audit reports. Second, the role of key accountants was to support consolidation and to provide input to business cases. Third, the role of the drafters of the business cases was to provide decision support for politicians. Fourth, the role of entrepreneurial change agents with previous consolidation experience from the private or public sector was to "sell" the idea to politicians. And fifth, the role of politicians (city council in CASE I, the Minister of the Regional Affairs in CASE II, and Cabinet ministers in CASE III) was to make the consolidation of financial accounting mandatory.

Usually the idea of an SSC is not attractive to all involved parties. It is common for public sector organizations to resist change as they want to maintain their autonomy and authority (Boon and Verhoest 2015; Janssen and Joha 2006a; Wagenaar 2006). According to Wagenaar, *"SSCs have great consequences for the autonomy of departments, since dependency relationships will arise between them and a new SSC. There may be valid arguments for resistance, and opposition from the organizations that give up tasks must therefore be taken seriously"* (Wagenaar 2006, 358).

The Estonian cases show that the key actors who initiated SSCs were aware of the potential resistance to consolidation. However, contrary to the recommendation in the SSC literature to engage all stakeholders from the earliest stage possible to avoid resistance (Grant et al. 2007; Janssen 2005; Janssen and Joha 2006a, 2006b; Janssen et al. 2009), all three projects were designed top-down with the minimal engagement of stakeholders. This can be explained both by the Estonian politico-administrative context and the organizational-field specific context.

As discussed before, employee unions are very weak in Estonia. Initiating and implementing SSCs can be difficult if employees are protected by a special civil-servant status or collective bargaining agreements (MacCarthaigh 2014; Selden and Wooters 2011). The Estonian case studies show that although public sector employees could have resisted consolidation, they lacked necessary experience, power and means for collective bargaining. Once SSCs were made mandatory by a political decision, there was little room for resistance.

Acknowledging the possible resistance before getting the mandate from the political decision makers, disclosure of the reform plans was deliberately avoided. This corresponds to the observation of Wagenaar (2006) that in order to avoid the attention of the potential critics of SSCs, a strategy to adopt a less open approach and to keep the project low-profile may be chosen by project initiators. In order to avoid resistance, the consolidation projects were treated as "internal" administrative reorganizations. While the business case for the earliest consolidation project (CASE I) was open for the public, the other two business cases were hidden from the public oversight.

Media attention that is often considered to be a constraining factor for reforms in the public sector has been weak in Estonia as almost no critical accounts have been produced. This can be explained by the fact that the public opinion has been supportive of the prevailing neo-liberal ideology. As the two recent cases were initiated during the fiscal crisis, it is important to note that also the austerity measures taken by the government were supported by the public opinion: the majority of the population favored fiscal discipline (Raudla 2013; Raudla and Kattel 2011).

The findings of this research indicate that rather than using a collaborative strategy that involves all stakeholders the public sector SSCs are initiated by a small group of change agents who only collectively have the necessary skills, knowledge and position to change the organizational field. Embedded change agents (key accountants) may advocate and provide important input to the SSC initiation but are not able to initiate SSCs without other (external) change agents who are better positioned to theorize new practices through discursive and political means. The strategies of the small group of change agents can be viewed as a collective institutional entrepreneurship.

The findings from the three case studies revealed that the intention of the change agents was to centralize back-office functions, and the concept of an SSC and its advantages compared to centralization were not seriously considered and weighed. The prevailing neo-liberal ideology has legitimized the use of the private-sector concepts (such as international accounting standards, considering the state as a "corporation") in public sector accounting. Consolidating financial accounting into accounting centers was a common practice in the private sector. Hence the question was not so much *whether* accounting should be consolidated in the public sector, but rather *when* to do it. This might explain why – contrary to the suggestions from the SSC literature – a mandatory and big bang SSC reform strategy was chosen.

Technology

Shared service centers are considered to be technology-enabled organizations (Miskon et al. 2010; Sedera and Dey 2007; Wagenaar 2006); however, there is little information about how important the factor *technology* is at the initiation stage of shared service centers and how the features of a specific technology may impact the choice of SSC initiation strategy.

During the past two or three decades, public administrations have been profoundly affected by technological change (Dunleavy et al. 2005; Pollitt 2012; 2014), and information and communication technology (ICT) has become a key component of administrative reforms (Dunleavy et al. 2005; Gil-Garcia 2013). Already in 1991 Christopher Hood considered the development of automation in the production and distribution of public services one of the administrative "mega-trends" linked to the rise of the New Public Management (Hood 1991). He argued that changes in the socio-technical system associated with the development of the lead technologies have served to remove the traditional barriers between "public sector work" and "private sector work" (Hood 1991). Pollitt and Bouckaert (2011b) suggest that just as the period 1980-2000 was characterized by NPM, the current era can be characterized by integrated services and e-government; Dunleavy et al. have termed this "Digital-Era Governance" (Dunleavy et al. 2005).

While ICT can enable greater inter-organizational collaboration, information sharing and integration, data quality and data accuracy should not be taken for granted (Gil-Garcia 2013). Implementing the same technology in different organizational contexts can lead to very different results, and also the context itself can be significantly changed by the introduction of a new technology (Pollitt 2012). The newness and complexity of the technology and lack of technical skills have been identified as potential problems for government information-sharing initiatives (Gil-Garcia 2013).

Estonia has continuously invested in the development of e-government, introduced a wide range of digital innovations in public administration (Kalvet 2012) and is a renowned pioneer of electronic voting (Alvarez et al. 2009; Krimmer 2012; Madise and Martens 2006; Madise and Vinkel 2014) and e-residency (Kotka et al. 2016). Adopting new ICT solutions and integrating different systems has been high on the government's agenda.

In addition to the e-government agenda that is coordinated by the Ministry of Economic Affairs and Communications, the Ministry of Finance has aimed to integrate the public sector accounting technology (**II**). As early as in 1994, the Ministry of Finance explored the possibility of introducing a common accounting software (Agresso) in the public sector (**II**). The implementation of the new accounting software failed for several reasons, one of which was missing accounting regulation (**II**). Due to the negative experience with Agresso, the Ministry of Finance had to refrain from suggesting the adoption of (another) common software for some time and focused on establishing public sector accounting rules and consolidating the accounting function from small accounting entities to their parent entities (**II**).

In parallel, however, the Ministry of Finance continued pursuing the idea of a common software for the whole public sector that would enable an automatic consolidation of information into a common database (**II**). Faced by the resistance to change and the autonomy of the other public sector organizations, the hands of the Ministry of Finance were tied, and it could not impose centralization (**II**).

In 2008, the Estonian central government organizations used 15 different financial accounting softwares (**II**). Although the Ministry of Finance suggested adopting common software (SAP ERP) for all central government organizations, which would have enabled automatic consolidation of data into a joint database, the ministries and agencies were reluctant to change the accounting software they had chosen according to their own specific needs (**II**).

In 2009, the Cabinet agreed to give a mandate to the Ministry of Finance to introduce SAP ERP in the central government without creating an SSC (**II**). However, the Ministry of Finance was convinced that as long as there was no common SSC it would be difficult to realize the expected economies of scale (**III**). In order to return to its initial plan the Ministry of Finance decided to establish a horizontal SSC: the State Shared Service Centre (SSSC) was established in 2012 under the Ministry of Finance (**III**). Until spring 2015 the SSSC provided services for four ministries and was developing an in-house SAP ERP support team (**III**). In spring 2015, shortly after general elections, the newly elected government decided to make the services of the SSSC mandatory for all central government organizations (**III**).

The SSC for regional administrations (CASE II) anticipated the developments at the central government level, and the project received SAP ERP implementation know-how and support from the Ministry of Finance (**III**). The Tallinn city SSC was also based on SAP ERP infrastructure, although several other possible ERP systems were considered when the system was procured (**IV**).

As the case studies show, technology is an important factor that influences the SSC initiation strategy. As the literature on ERP systems indicates, it is advisable not to customize the ERP (although it is possible) because it would complicate the system and render future upgrades difficult (**III**). It can be argued that the input from customers was not essential as the Ministry of Finance aimed to standardize the existing processes and forms as much as possible in line with the SAP ERP functionality. The effects of this SAP ERP adoption strategy are not known yet and future studies need to verify whether it can be considered successful or not.

Fiscal crisis

A *fiscal crisis* can be an important factor influencing the choice of the SSC initiation strategy, and it has been noted that during the recent fiscal crisis top-down, big bang and mandatory SSC strategies were chosen (Boon and Verhoest 2017; **I; II**). However, as the number of studies that have looked at the effects of the fiscal crisis on the creation of SSCs is still very small, there is an evident need for more empirical research about the impact of the fiscal crisis.

A fiscal crisis can be an important factor influencing the choice of the SSC initiation strategy. The crisis facilitates the consideration of radical options and more fundamental changes that otherwise are unlikely to get onto the reform agenda (Pollitt 2010; Pollitt and Bouckaert 2011b). The fiscal crisis forces governments to react and act quickly and the time for taking decisions is reduced. Hence, seeking consensus and involving different stakeholders into the decision-making process may not be feasible. The necessity to solve the crisis can lead the government to adopt a single logic of appropriateness, as there is no time for discussing the alternatives (Hardiman and MacCarthaigh 2016).

After the outburst of the financial crisis in 2008 many governments have implemented significant cuts in public expenditure and initiated reform measures to cope with lower revenues (Randma-Liiv and Savi 2014; Savi 2015). The crisis seems to have revived the parts of NPM that claim to increase efficiency (Pollitt and Bouckaert 2011b). As the recent research indicates, the decision-making processes of the governments in 17 European countries became more centralized in response to the financial crisis of 2008 (Raudla et al. 2015).

The peak of the crisis in Estonia was in 2009, when the GDP fall of Estonia was the third largest in the European Union (Raudla 2013). In addition to cutting back salaries, laying off civil servants, and other fiscal austerity measures (see Raudla 2013 for a detailed overview) various centralization measures, including a merger of several governmental agencies, were used during the peak of the crisis (Peters et al. 2011; Raudla et al. 2015).

It can be argued that the global financial crisis and the subsequent fiscal crisis opened a window of opportunity for the Ministry of Finance − with the support from the Cabinet − to impose the consolidation of financial accounting in the Estonian central government (**I-II**). The fiscal crisis pointed to the importance of obtaining a real-time overview of the finances of the state in order to allow the government to evaluate the effects of fiscal consolidation efforts. In addition, given its goal to cut expenditures, the Cabinet was looking for opportunities to reduce operational costs of the public sector, and consolidating financial accounting (and other support services) appeared to be one possible option for achieving significant cost-savings (**III**).

The consolidation of financial accounting of regional administrations into an accounting center (CASE II) was also enabled by the fiscal crisis. The business case was drafted and the project was implemented during the peak of the crisis in 2009 (**III**).

However, while the initiation of these two cases was facilitated by the fiscal crisis, the vision that there could be a single accounting (ERP) system dated back to the middle of the 1990s, and a piecemeal consolidation of accounting function had been practiced since 2006. Also, the Tallinn city case (CASE I) shows that an accounting center can be initiated without the pressure of the crisis and even without an explicit aim to reduce costs (**IV**).

Tracing the origins and seeking factors that trigger reforms helps to identify the role of the fiscal crisis in the process of change (Randma-Liiv and Kickert 2016). The studied cases show that accounting SSCs were not triggered by the crisis; however, the crisis opened a window of opportunity to implement a vision that had existed already in the 1990s.

Finally, the Estonian case confirms what has been noted by many authors before: a crisis can open a window of opportunity for radical reforms. The timing of the reform proposal is indeed very important: without the help of the fiscal crisis the line ministries would have unlikely agreed to adopt SAP ERP software for the whole central government. The crisis helped to claim the need for an urgent reform.

Summary of the research findings

First, an ambition of this thesis was to contribute to the theoretical discussion on different forms of shared service centers. Since in the public sector context, SSCs are a relatively new phenomenon, theorizing about the different SSC forms is warranted. Based on the configurations of the various design and implementation elements, we put forth a novel typology of SSC reform models that was instrumental in analyzing the Estonian case and can be effectively used for examining the creation of SSCs in other countries as well (**I**).

Second, the thesis aimed to reduce the lack of empirical knowledge in the current literature on public sector SSCs. Because of its promise to deliver a number of important benefits, it is likely that SSCs will remain on the public sector reform agenda for some time. As is the case with other public management reforms, it is important to examine how the normative ideal plays out in reality.

This thesis provided an in-depth and contextual account of the processes and factors underlying the creation of SSCs for public sector accounting in Estonia. Studying the major events and decisions in the field of public sector financial accounting helped to understand how and why SSCs were created. The retrospective study that in addition to the Estonian central government case investigated the history of two other cases (at the county government and a local government level) revealed a number of factors that influenced the SSC reform strategies.

In the following table an overview of the factors that were described in detail in previous subsections is given. Each factor had a specific role in shaping the choice of the SSC reform model.

Table 3. Factors influencing the SSC reform strategies in Estonia

Factor	**Role**	**Explanation**	**Preferred reform model**
Politico-administrative context			
Neo-liberal ideology shared by coalition governments and administration since the 1990s	Enabling reform context	• Superiority of private sector practices • Widespread support for public sector ICT innovations • Perceived need to reduce the number of back-office staff	mandated big bang
Features of the organizational field			
International accounting standards	Logic of appropriateness	• Formed the basis and influenced the development of public sector financial accounting regulation • Established single logic of appropriateness	mandated
Private and public sector example	Mimetic and normative pressure for change	• Accrual accounting and accounting centers were seen as integral to a modern "corporate" state • Expectation to have a	mandated

		central real-time overview and control	
Past coordination experience	Problem perception	• Coordination problems • Past experience of solving coordination problems via top-down regulations	mandated big bang
Key actors			
Top accounting professionals	Advocates for change: corporate vision of state accounting, accounting requirements, commitment to change	• Advocated for change • Provided input to business cases • Drafted accounting legislation and guidelines (MoF) • Possessed professional knowledge but had limited access to political agenda setting	mandated
Auditors	Problem formulation	• Advocated for compliance, quality, and improvement • Pointed to the accounting and ICT-related deficiencies in public sector organizations • Framed problems	vertical incremental
Consultants	Advocates for change: drafters of business case	• Advocated for compliance, quality, and improvement • Pointed to the accounting and ICT-related deficiencies in public sector organizations • Framed problems • Drafted business cases • Provided information about the international "best practice"	horizontal mandated big bang
Entrepreneurial change agents	Forming coalitions of like-minded actors, seeking	• Promoted the benefits of change • Formed a group of like-	mandated big bang

	mandate for change, commitment to change	minded change agents • Gained the mandate for change from decision-makers	
Politicians	Political support for consolidation	• Gave mandate for change (via legal/binding act) • Were main change agents (CASE I)	mandated big bang
Employees/ unions/ potential opponents	No visible role in the initiation stage	• Were generally not engaged in the initiation process • Had only limited or no information about the project	optional
Media	No role in the initiation stage	• Generally uncritical coverage of public sector reforms and downsizing in the media	-
Technology			
SAP ERP	Solution	• Adoption of the SAP ERP was central to the reform • Reliance on the "best business practices" that are embedded in the SAP ERP system reduced the need to engage "customers" into the design process	horizontal mandated big bang
Fiscal crisis			
Fiscal crisis	Window of opportunity	• Emphasized the necessity of reliable data for central decision-making • Created the pressure to reduce costs • Enabled speeding-up the decision-making process and uncritical consideration of SSC benefits (CASE II and III)	horizontal mandated big bang

Source: Author

The analysis of factors that influenced the SSC reform strategies helps to understand why a mandated and big bang approach was preferred for creating public sector accounting centers. The three Estonian accounting centers were designed top-down with little or no involvement of the future “customers”. The resistance to change that is considered to be the main obstacle to using this strategy in the public sector (Wagenaar 2006) was anticipated and treated as an unavoidable challenge that needed to be overcome.

Reducing fragmentation by substituting different accounting softwares with a common (SAP) ERP system was central to all the studied projects. Therefore, technology was an important driver and enabler of SSCs. Fiscal crisis helped to speed-up the decision-making process and opt for a big bang reform in order to achieve the expected cost reduction. However, strong institutional pressure for change predated the crisis.

The answers to the specific research questions addressed in the individual articles of this thesis could be briefly summarized as follows:

*1. What have been the main motives for creating financial accounting SSCs in Estonia? (**I-IV**)*

It was found that the motives for creating SSCs for financial accounting corresponded to a large extent to the motives listed in the literature on public-sector SSCs (**I**). However, the customer focus, which is usually considered to be an important motive for creating SSCs, was absent in all three studied cases. An important motive of the SSC initiatives in Estonia was (and continues to be) their potential to contribute to the development of the Estonian information society and e-government agenda – this is a motive that has not been mentioned in the existing SSC literature so far.

*2. What have been the main obstacles and challenges in initiating, designing and implementing the central government accounting SSC in Estonia? (**I-II**)*

It was found that during the different SSC stages different challenges emerged. The challenges corresponded largely to those that have been listed in the existing literature on public-sector SSCs. Namely, resistance to change, lack of ex-ante analysis and reliable data, political obstacles, ICT-related obstacles and problems of unbundling the transactional functions from the transformational functions. An important challenge that has not been extensively discussed in the existing literature on SSCs, but emerged in the Estonian case, is that the creation of SSCs can lead to more cumbersome working processes and information flows. The challenge of diffused accountability between the SSC and the organizations served was also observed in the Estonian case.

*3. How were public-sector financial accounting SSCs initiated in Estonia? **(IV)***

The in-depth inquiry into the roots of the three existing public-sector accounting centers reveals an interesting pattern. Namely, the advantages of the SSC model compared with a centralized model were not seriously considered and discussed while the SSCs were initiated. Therefore the important features of the SSC model such as customer focus and introducing a market mechanism for financing SSCs were overlooked. All these accounting centers were considered to be internal reorganizations. Only for the first project the acceptance of the legislative was sought as the city council had to approve the budget for the project. As the resistance to the SSC initiatives was expected, a top-down and big bang strategy was chosen. Engaging all stakeholders was considered to be problematic, as it could have led to altering, delaying or even dismissing the plan.

*4. What was the role of change agents in initiating public-sector financial accounting shared service centers in Estonia? **(IV)***

It was found that SSCs were not initiated by a single embedded institutional entrepreneur. The main change agent was not embedded in the organizational field and joined the organization to initiate the change project or to gain legitimacy for the already initiated project that otherwise would have lacked sufficient political support. The main change agent formed a coalition with like-minded officials that were able to provide necessary input to the project. As none of the members of the group would have succeeded in initiating the change alone, this coalition can be termed collective institutional entrepreneurship.

Problems were framed in various reports and business cases. Business cases played a major role, as they problematized the existing situation and suggested solutions to problems. While there were discussions over the details of the business case, the necessity for administrative restructuring was not questioned at the political level. The absence of an ideological divide over administrative restructuring can be explained by the Estonian reform context but also by the fact that business cases downplayed or did not even mention possible implementation problems. It is worrying as it seems to be a common strategy that leaves decision makers and managers largely unaware of the difficulties encountered when implementing and developing SSCs (Knol et al. 2014).

While the concept of institutional entrepreneurship stresses that the way the institutional entrepreneurs connect their change projects to the activities and interests of other actors in the organizational field determines their success (Maguire et al. 2004), the evidence from current cases does not seem to confirm this. The change projects were initiated not by gaining legitimacy from the field but by winning over the key decision-makers and leaving aside other players that could potentially question the legitimacy of the project. Hence, the absence of the power dimension seems to be an important weakness of the concept of institutional entrepreneurship.

*5. Could SSCs reduce costs in the public-sector context? (**III**)*

Although several reform advocates (e.g. consulting companies) argue that consolidating support functions and creating shared service centers will deliver significant cost savings, the analysis of the literature on public sector shared service centers showed that there is a lack of hard empirical evidence to support this widely held belief. Indeed, compared to their counterparts in the business sector, public sector SSCs have fewer possibilities to achieve cost reduction. The Estonian case studies indicate that the reduction of the number of back-office employees could be achievable when the public-sector context enables instant dismissal of the public sector staff.

However, the Estonian case also confirms the findings from the existing SSC literature, according to which the projected cost savings can be overly optimistic and the cost-reduction argument may have been used to "sell" the SSC idea to politicians. While cost reduction is a central motive for introducing SSC in the public sector, the question of how, when and by whom it should be measured and what an appropriate measuring methodology is remains open. The constantly changing nature of an SSC makes it a moving target for measurement, and different parties are likely to have different conceptions about an appropriate measurement methodology.

Avenues for further research

The concept of shared services and its introduction in the public sector continues to attract the interest of both practitioners and researchers. While the consulting industry is urging practitioners to elevate to the "next generation of shared services" (Ernst & Young 2013), the research on public sector shared service centers aims to provide information about how the model of SSCs plays out in practice. More empirical data and hard evidence is needed to balance the overly optimistic expectations towards SSCs.

First, there is a clear lack of hard evidence to support the claimed benefits (especially cost reduction) of SSCs in the public sector. One of the academic articles (**III**) of this thesis raises concerns about the cost reduction motive of SSCs. This focus was chosen because the SSC literature shows that cost reduction is often the main motive for establishing SSCs. Future research is urged to look for hard evidence to verify whether SSCs are instrumental in reducing public administration costs.

Second, further research on SSCs should focus on the underlying reasons for introducing SSCs in the public sector and study whether and how the motives for public administration SSCs materialize in practice. Also, as the current research is primarily based on single-case and single-country studies, further comparative studies would be necessary in order to allow for a more substantial evaluation of how SSCs perform in the public sector.

Third, as the majority of research on shared services is concentrated on the supply side (SSC), very little information exists about the effects of this transformative change on customer organizations (demand side). Hence, the full impact and possible side effects of the consolidation on "customer organizations" should be necessarily addressed in future studies.

Fourth, the wider societal effects of SSCs (e.g. regional policy and employment), and public administration (e.g. effects on accountability and longer-term implications) should also be studied in order to understand the implications of SSCs in public administration.

Fifth, the research on public sector SSC could benefit from using common typologies and tools for analyzing the phenomenon. The new typology proposed in article (**I**) of this thesis and the conjectures outlined could be used for examining the creation of SSCs in other countries, as well. It would be interesting to explore in future studies whether other reform models have been tried in other countries and what the corresponding motives and challenges have been. Furthermore, the implementation dimensions outlined in (**I**) could be explored in greater detail (e.g. under the big bang vs. incremental dichotomy, the dimension of time period and the scope of the reform could be examined separately).

Finally, Estonian cases revealed the importance of the collective institutional entrepreneurship and ICT (ERP) solutions in initiating SSCs. It would be worth investigating whether in other countries similar observations can be made. Both the role of different actors in different SSC stages and the role of technology (which ICT solutions have been used in SSCs) should be studied further.

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SUMMARY IN ESTONIAN

Raamatupidamiskeskuste loomine avalikus sektoris: Eesti näide

Valitsused on läbi aegade otsinud võimalusi valitsemiskulude optimeerimiseks. Erinevatel perioodidel on efektiivsuse saavutamiseks kasutatud erinevaid meetodeid ja praktikaid, mille populaarsus on kord kasvanud ja siis jälle kahanenud.

Praegusel ajal on avalikus sektoris "globaalseks megatrendiks" (Elston 2014) erinevate (tugi)funktsioonide (peamiselt raamatupidamise, palgaarvestuse, personaliarvestuse, kinnisvarahalduse, infotehnoloogia ja hangete) konsolideerimine teenuskeskustesse. Avaliku sektori teenuskeskused on inspireeritud erasektorist ning nii nagu erasektoris, loodetakse ka avalikus sektoris teenuskeskuste abil saavutada mitmeid eesmärke: eelkõige vähendada kulusid, parandada kvaliteeti, standardiseerida ja automatiseerida protsesse ning moderniseerida avalikku sektorit.

Teenuskeskust (inglise keeles *shared service center)* käsitletakse erialakirjanduses kui uut ja traditsioonilistest organisatsioonivormidest eristuvat mudelit, mis lubab samaaegselt nii kulude kokkuhoidu kui ka kvaliteedi tõusu. Mudelile pandud ootused põhinevad ühest küljest klassikalisel majandusteoorial, millest tulenevalt peaks teenuskeskus aitama saavutada mastaabiefekti: standardiseerides ja konsolideerides erinevate asutuste tugifunktsioonid saab neid pakkuda teenusena ja vabastada teenust kasutavad asutused (kliendid) kohustusest tugifunktsioone iseseisvalt arendada. Teisest küljest rõhutatakse teenuskeskuse mudeli puhul kliendikesksust, mis peaks tagama teenuste pakkumise vastavalt kliendi vajadustele.

Kuigi teenuskeskuste loomine avalikus sektoris on väga populaarne, on olemasolev teadmine selle fenomeni kohta endiselt napp. Teatava illusiooni info rohkusest loob praktikutele suunatud "parimat praktikat" ja teenuskeskuse rakendamiseks juhtnööre pakkuv kirjandus konsultatsiooni- ja infotehnoloogiaettevõtetelt, kelle jaoks on avalik sektor oluliseks turuks, kus oma tooteid ja teenuseid pakkuda. Konteksti mitte arvestava ning enamasti edulugudele keskenduva info peamiseks probleemiks on asjaolu, et see võib tekitada müüte[3] ning varjata teenuskeskuste loomisega seonduvaid probleeme ja küsimusi.

Teadlased hakkasid avaliku sektori teenuskeskustele tähelepanu pöörama alles 2000. aastate teisel poolel ning tegemist on suhteliselt uue uurimisvaldkonnaga. Sarnaselt praktikutele suunatud erialakirjandusega ei pööratud ka akadeemilistes artiklites esialgu tähelepanu teenuskeskuste kontekstile, kuid hilisemad käsitlused on seda teinud üha sagedamini. Vaatamata avaliku sektori

3 Näiteks müüt, et teenuskeskused aitavad kokku hoida 20% kuludest (vt Hyvönen et al. 2012).

teenuskeskuste populaarsusele ja üha kasvavale akadeemilisele huvile, on kirjanduse olulisemaks lüngaks asjaolu, et napib nii teoreetilisi kui empiirilisi käsitlusi, mis aitaksid selgitada teenuskeskuste loomist avalikus sektoris.

Teenuskeskuse loomise näol on tegemist fundamentaalse institutsionaalse muutusega, mille kulg ja tulemused ei ole tavaliselt ette teada. Teenuskeskus muudab asutuste funktsioone, töökorraldust, struktuuri, kultuuri ning olemasolevaid jõujooni. Seega tekitab mudeli populaarsus olulisi vastust vajavaid küsimusi. Nimelt, millised protsessid viivad teenuskeskuse loomiseni – kas tegemist on välise surve, hoolikalt kavandatud reformi, moevoolu või pikemaajalise protsessi tulemusega? Kes on muutuse "agendid", kas poliitikud, ametnikud, huvigrupid või keegi muu? Milline on tehnoloogia ja hiljutise finantskriisi roll avaliku sektori teenuskeskuste loomisel?

Kuna teenuskeskuse loomist peetakse tihti avaliku sektori asutuste töö sisemiseks ümberkorralduseks, ei ole keskuse loomiseni viivad protsessid väga sageli avalikkusele nähtavad ning kergelt analüüsitavad. Samas on nende protsesside analüüsimine ülimalt oluline, kuna teenuskeskuse loomine toob kaasa avaliku sektori transformatsiooni, mis mõjutab paljusid osapooli. Ajal, mil teenuskeskused on kujunenud globaalseks trendiks, on oluline uurida, miks ja kuidas luuakse teenuskeskusi avalikus sektoris, milliseid strateegiaid on võimalik selleks kasutada ning millised faktorid mõjutavad strateegia valikut. Käesolev doktoritöö keskendub nendele küsimustele, seades fookuse avaliku sektori raamatupidamiskeskustele, mida on siiani väga vähe uuritud.

Doktoritöö koosneb eelnevalt avaldatud teaduspublikatsioonide seeriast (**I-IV**) ja sissejuhatusest. Sissejuhatuses antakse ülevaade teenuskeskuse kontseptsioonist ja motiividest, kirjeldatakse tüpoloogiat, mis aitab analüüsida erinevaid teenuskeskuse loomise strateegiaid ning analüüsitakse kolme Eesti juhtumi põhjal faktoreid, mis mõjutavad teenuskeskuse loomise strateegia valikut.

Doktoritöö publikatsioonide uurimisstrateegiaks on juhtumiuuring, mida peetakse sobivaimaks viisiks kaasaegse fenomeni ja selle keskkonna analüüsimiseks (Yin 2009). Kolmest uuritavast juhtumist pööratakse enim tähelepanu Eesti keskvalitsuse teenuskeskuse (Riigi Tugiteenuste Keskus) loomiseni viinud protsessidele (**I-IV**), maavalitsuste projekti käsitletakse kahes artiklis (**III**; **IV**) ning kohaliku omavalitsuse projekti (Tallinna linn) ühes artiklis (**IV**). Mitme-juhtumi-disain, mida on kasutatud kahe artikli puhul (**III**; **IV**), võimaldab uurida juhtumite erisusi ja sarnasusi, selgitada nende põhjuseid ning suurendab uurimistulemuste valiidsust (Thiel 2014).

Raamatupidamiskeskuste loomise tausta mõistmiseks annab doktoritöö ülevaate Eesti poliitilis-administratiivsest kontekstist ja olulisematest Eesti riigi raamatupidamises aset leidnud protsessidest perioodil 1995-2015. Perioodi alguspunkti tähistab 1995. aastal kehtima hakanud uus raamatupidamise seadus ning lõpp-punkti 2015. aastal tehtud valitsuskabineti otsus viia keskvalitsuse raamatupidamine üle Riigi Tugiteenuste Keskusesse. Analüüsi alusmaterjalideks on dokumendid (õigusaktid ja nende eelnõud, strateegiad ja tegevuskavad, töödokumendid, kabinetinõupidamistele esitatud materjalid ja kirjavahetus) ning ajakirjanduses ilmunud artiklid. Lisaks viidi perioodil 2012-2015 läbi 25 intervjuud, mille eesmärk oli täita dokumendianalüüsist jäänud lüngad. Poolstruktureeritud intervjuud käsitlesid kolme raamatupidamiskeskuse loomise ajalugu, peamisi motiive ja väljakutseid ning erinevate isikute rolli ja strateegiaid keskuste kavandamisel.

Esimene artikkel (**I**) keskendub teenuskeskuse loomise motiividele ja peamistele väljakutsetele avalikus sektoris. Teoreetilise panusena teenuskeskusi käsitlevasse kirjandusse pakutakse välja tüpoloogia erinevatest reformimudelitest. Kuna protsesse, mis viivad teenuskeskuse loomiseni, on siiani väga vähe uuritud, täiendab artiklis välja pakutud tüpoloogia uurijatele vajalikku analüütilist raamistikku. Tüpoloogia abil saab uurida teenuskeskusi erinevates riikides ja tegevusvaldkondades. Tüpoloogia koosneb kolme dihhotoomia (vertikaalne vs horisontaalne; vabatahtlik vs kohustuslik; inkrementaalne vs radikaalne) kaheksast konfiguratsioonist. Tüpoloogiat saab edukalt kasutada teenuskeskuste reformistrateegiate uurimiseks erinevates teenuskeskuse faasides (algatamine, rakendamine ja funktsioneerimine).

Teine artikkel (**II**) annab põhjaliku ülevaate Eesti keskvalitsuse raamatupidamise konsolideerimise taustast. Kuna uuritav projekt oli uurimise hetkel rakendusfaasis, ei olnud võimalik teha lõplikke järeldusi. Samas oli võimalik täheldada, et teenuskeskuse mudel tõstatab avaliku sektori kontekstis uusi küsimusi ja lahendamist vajavaid probleeme. Nimelt, kuidas jagada funktsioonid asutuste ja teenuskeskuse vahel nii, et ei tekiks vastutuse hajumist ja "halle alasid" ning kuidas tagada klientide vajadustest lähtumine.

Kolmandas artiklis (**III**) keskendutakse kulude kokkuhoiu motiivile, mis olemasoleva kirjanduse põhjal on peamine motiiv teenuskeskuste loomiseks avalikus sektoris. Artiklis leitakse, et kuigi teenuskeskuste loomise peamiseks eesmärgiks on kulude kokkuhoid, ei anna olemasolev akadeemiline kirjandus kinnitust selle kohta, et teenuskeskuse loomisega oleks võimalik samaaegselt oluliselt kulusid kokku hoida ning teenuste kvaliteeti tõsta. Tähelepanu vajab asjaolu, et puudub arusaam, kuidas kulude kokkuhoidu mõõta ning erinevatel osapooltel on tihti erinev nägemus sellest, mida, millal ja kuidas tuleks mõõta, et selgitada teenuskeskuse mudeli otstarbekust avalikus sektoris.

Neljandas artiklis (**IV**) kasutatakse institutsionaalset teooriat (DiMaggio 1988), et uurida kolme avaliku sektori raamatupidamiskeskuse algatamise faasi. Teadaolevalt on tegemist esimese uurimusega, mis vaatleb erinevate isikute rolli raamatupidamiskeskuste loomisel erinevatel administratiivsetel tasanditel.

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PUBLICATIONS (Articles I-IV)

Article I

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Creating shared service centres for public sector accounting

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Abstract

Purpose – The purpose of this paper is twofold. First, it aims to contribute to the theoretical discussion on shared service centres (SSCs) for public sector accounting by putting forth a novel typology of different SSCs and their creation modes, and outlining the challenges these specific models are likely to face. Second, it uses the Estonian case study to test the theoretical conjectures.

Design/methodology/approach – Since in the Estonian central government different reform models for creating SSCs for public sector accounting have been tried out, the Estonian case offers an opportunity for exploring what the motives behind the creation of different forms of SSCs can be and what kind of challenges reform actors can face when opting for different reform models. The sources of data for the qualitative case study included official documents, media articles and interviews.

Findings – The Estonian case study demonstrates that the distinct reform models for creating SSCs in public sector accounting can indeed have different motives and also face various challenges to different degrees. Some challenges, however, are present in all reform models (e.g. difficulties in achieving customer orientation and reduced input to managerial decision making).

Originality/value – This paper puts forth a novel typology of public sector SSC reform models and analyses the challenges these different reform models are likely to face. The theoretical contribution and the Estonian case study are valuable for both academics and practitioners analysing or considering the creation of SSCs.

Keywords Estonia, Shared service centres, Accounting reform,
Consolidation of financial accounting, Public sector accounting, Public sector reform

Paper type Research paper

1. Introduction

In the current era of austerity measures and cutbacks in the public sector, governments in Europe and elsewhere are on the lookout for instruments that can help them reduce costs. One such "instrument" that has increasingly caught the eyes of government decision makers is the model of shared service centre (SSC) (Janssen *et al.*, 2012; Ulbrich, 2010b). In the public sector context, establishing a SSC entails the consolidation of support functions (e.g. finance and accounting, human resource management, IT, procurement) from several organizations (e.g. agencies and/or ministries) into a single organizational entity, supported by a sharing arrangement (see, e.g. Burns and Yeaton, 2008; Joha and Janssen, 2011; Miskon *et al.*, 2010; Schulz and Brenner, 2010)[1]. Broadly speaking, SSC has been conceived of as a sourcing arrangement, which takes the form of in-sourcing rather than out-sourcing. Despite its increasing popularity among

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governments, there are surprisingly few studies on public sector SSCs (or other sourcing arrangements) in both the public administration and accounting literatures (for exceptions see Dollery and Akimov, 2008; Dollery *et al.*, 2009; Hyvönen *et al.*, 2012; Walsh *et al.*, 2008). Given its promises to save costs and to enhance the quality of accounting, the idea of a SSC should be of particular interest to researchers and practitioners in these fields, especially since the real-world implementation of the idea may not live up to the high expectations (see, e.g. Wagenaar, 2006; Borman and Janssen, 2013).

Our paper addresses the general gap in the public administration and accounting literatures concerning different sourcing arrangements but deals also with two specific theoretical and two empirical gaps in the existing literature on public sector SSCs. With regard to the theoretical gaps, first, it can be observed that the distinction between vertical and horizontal SSCs has received very limited attention in the existing studies discussing public sector SSCs. A vertical SSC encompasses organizations that are in a hierarchical relationship (e.g. a parent ministry and a subordinate agency); in such arrangements, the unit providing the support services is located in the ministry itself. A horizontal SSC provides support services to organizations that are not in a hierarchical relationship (e.g. different line ministries) but operates as a stand-alone unit outside the internal structure of the ministries involved. Although both of these types can be categorized as SSCs, it can be conjectured that the reform motives and also the reform challenges can be somewhat different for these two types of SSC. Thus, in the theoretical part of the paper we explicitly distinguish between these SSC design features when discussing the reform motives and challenges involved in creating public sector SSCs. Second, in the existing literature on public sector SSCs, the design features and the implementation strategies of SSCs are usually discussed separately. It can be expected, however, that the design elements are likely to interact with the modes of implementation, and different configurations of the various design and implementation elements – resulting in what we term here "reform models" – influence the challenges faced in creating SSCs in the public sector (i.e. different reform models are likely to face different challenges to different degrees). In sum, our paper seeks to contribute to the theoretical discussions on public sector SSCs by putting forth a new typology of different reform models and outlining the challenges these specific models are likely to face. Since creating SSCs in the public sector can be expected to be one of the important reform trends during the next years, it is important to examine the different forms they can take in order to provide input for better informed decision making on what types of SSCs to create and how to implement them. In Estonia different public sector SSC reform models have been tried out in public sector accounting between 2009 and 2013. Thus, Estonia offers an opportunity for examining what the motives behind the creation of different forms of SSCs can be and what kind of challenges reform actors can face when opting for different models. Hence, we use the Estonian case study to explore the plausibility of the conjectures put forth in the theoretical part of the paper.

Our paper also seeks to address two specific empirical gaps in the literature on public sector SSCs. First, while most of the studies on public sector SSCs examine local governments, this paper focuses on the SSC initiatives at the central government level. Second, most of the existing articles that analyse public sector SSCs focus on IT and HRM functions, but there is a clear lack research looking at financial accounting. The Estonian case examined in this paper entails SSC initiatives focusing on financial accounting.

In particular, the case study addresses the following questions: What have been the main motives behind the different financial accounting SSC models in Estonia? What have been the main obstacles and challenges in initiating, designing and implementing the accounting SSC models in Estonia? How have the challenges varied across the different reform models? The sources of data for the qualitative case study included official documents, media articles and interviews.

The structure of the paper is as follows. Section 2 provides the theoretical framework: it outlines a new typology of reform models for creating SSCs in the public sector and discusses the motives and challenges associated with different types of reform models. Section 3 gives an overview of the Estonian case, and Section 4 analyses the motives and challenges that emerged in the SSC initiatives in Estonia. Section 5 discusses the results and Section 6 concludes.

2. Theoretical framework

2.1 The concept of SSC in the public sector

As is the case with many other new models and reforms, SSC as a concept has been subjected to extensive definitional debates. As a result, a number of definitions of SSC (with somewhat different foci or nuances) have been put forth in the existing literature (see, e.g. Janssen *et al.*, 2012; Schulz and Brenner, 2010; Wagenaar, 2006). Although there are still debates about what a SSC exactly means in the public sector context, there is an emerging consensus that it entails the following elements: consolidation; sharing arrangement; a new or separate business unit; focus on services; and multiple internal partners (see Miskon *et al.*, 2010). In addition, a SSC is expected to have its own dedicated resources and informal or formal contractual arrangements (usually called "service level agreements") with the organizations that are its "internal clients" (Schulz and Brenner, 2010).

With regard to the types of services that a SSC offers, most studies on the topic agree that SSCs usually provide "support services". Support services are functions that facilitate core activities of the organizations but are not core functions themselves (Schulz and Brenner, 2010, p. 212). It is often argued in the SSC literature that a SSC would be particularly suitable for offering what are called "transactional" services (i.e. routine and high-volume activities) rather than transformational (or professional or "knowledge-based") services (see, e.g. Craike and Singh, 2006; Quinn *et al.*, 2000; Schulz and Brenner, 2010; Selden and Wooters, 2011). Transaction-oriented services are services that entail "processes that share a high degree of standardization, feature few interfaces with other processes and technologies, entail low financial risk and show a high potential for automation" (Schulz and Brenner, 2010, p. 215).

When contrasting SSCs with other types of public sector reforms, a distinction between SSC and outsourcing is often mentioned. SSC has been conceived of as a "sourcing arrangement", which takes the form of "in-sourcing" rather than "out-sourcing". In the public sector context, out-sourcing means that service provision is contracted out to a vendor from the private sector, whereas in-sourcing implies that specific government organization(s) is (or are) made responsible for providing services to other government organizations (see, e.g. Farndale *et al.*, 2009). Although some of the authors discussing SSCs point to the possibility to outsource the SSC (see, e.g. Hyvönen *et al.*, 2012; McIvor *et al.*, 2011, p. 448), the dominant view in the literature – and with which we agree – is the one that views SSC as a form of in-sourcing[2].

2.2 Different reform models for creating SSCs in the public sector

In the public sector context, the creation of SSCs can follow diverse paths, and when discussing the different options it would be useful to distinguish between the various design elements and modes of implementation. In this paper we focus on three major dichotomies and, based on these dichotomies, we outline a new typology of SSCs, comprised of eight distinct reform models, each representing different configurations of design and implementation elements (see Table I).

The first dichotomy concerns the most basic design feature of a SSC. As pointed out by Janssen and Joha (2006a, p. 103), a SSC can be either intra-organizational or inter-organizational. In the public sector context, however, it would be more fruitful to distinguish between what we call vertical and horizontal SSCs. In the case of a vertical SSC (denoted as V in the following models), the various departments of the same ministry and also the subordinate agencies under the same "parent ministry" would jointly use the SSC located in the ministry. The most important feature of the vertical SSC is the hierarchical relationship between the organization where the SSC is located (usually the parent ministry) and the "clients" of the support services (i.e. the agencies or equivalents). In the case of a horizontal SSC (denoted as H), the SSC would span sectoral boundaries and include different line ministries. The most important feature of a horizontal SSC is that the organizations involved are not in a hierarchical relationship but participate as "equals".

The second dichotomy pertains to whether the creation of the SSC is mandated by a legal act (and is hence made compulsory) or it is made optional for the organizations involved. This dichotomy is denoted as O (optional) vs M (mandated) in the typology below.

The third dichotomy refers to whether the creation of the SSC follows a big bang or incremental reform strategy (see, e.g. Wagenaar, 2006). In the case of a big bang approach (denoted as B), the aim is to complete the creation of the SSC in a short-time period and in a comprehensive way by including all organizations meant to be covered by the SSC in the same round of reform. In the case of an incremental approach (denoted as I), the creation of a SSC is foreseen to take place over a longer time period and as a step-by-step process in which the pace at which different organizations join the SSC can vary.

In the existing literature on public sector SSCs, the distinction between vertical vs horizontal SSCs has received limited attention. It can be expected, however, that the motives of the main reform actors and the challenges they face when implementing the reform can be somewhat different in these two types of SSC. Also, in the existing literature on public sector SSCs, the design features and the implementation strategies of SSCs are usually discussed separately. It can be expected that the design characteristics interact with the implementation features, and the different

	Incremental	Big bang
Vertical		
Optional	VOI	VOB
Mandated	VMI	VMB
Horizontal		
Optional	HOI	HOB
Mandated	HMI	HMB

Table I. Typology of reform models for creating SSCs configurations of the design and implementation elements – what we term here as different reform models – can influence the challenges faced by the reform actors.

In the following subsections, we outline the main motives and challenges associated with creating public sector SSCs, which have been pointed out by existing studies and discuss to what extent these motives and challenges are likely to be present in the reform models delineated in Table I. While the list of motives and challenges discussed below is not exhaustive, it encompasses the issues that are most frequently pointed out in the existing literature.

2.3 Motives for establishing SSCs and their claimed benefits

In the academic literature on SSCs in the public sector, the most frequently mentioned motive for establishing a SSC is cost reduction (see, inter alia, Burns and Yeaton, 2008; Craike and Singh, 2006; Grant *et al.*, 2007; Janssen and Joha, 2006a; Janssen, 2005; Janssen *et al.*, 2012; Dollery *et al.*, 2009, 2011; McIvor *et al.*, 2011; Miskon *et al.*, 2010; Selden and Wooters, 2011; Schulz and Brenner, 2010; Ulbrich, 2010a, b; Wagenaar, 2006). Cost-savings are expected to be generated through economies of scale and scope, reductions in duplication, elimination of redundancy in operations, created synergies and lower staff costs. The motive of reducing costs is likely to be present in both horizontal and vertical SSCs. It can be conjectured, however, that the size of cost-savings projected by the reform actors is likely to be larger in the case of horizontal SSCs because these usually encompass more organizations (and can hence promise a more extensive reduction of duplicated work), especially if the big bang implementation mode is considered (which can be expected to deliver faster cost savings).

The second most frequently mentioned motive for establishing SSCs is improving the quality of support services (Borman and Janssen, 2013; Craike and Singh, 2006; Janssen *et al.*, 2012; Janssen and Joha, 2006a; McIvor *et al.*, 2011; Miskon *et al.*, 2010; Selden and Wooters, 2011; Wagenaar, 2006; Wang and Wang, 2007). A number of SSC elements are expected to contribute to increasing the quality of the services provided. These include: build-up, concentration and sharing of knowledge and expertise, exchange of internal capabilities and best practices, more effective knowledge management, and concentration of innovation (Borman and Janssen, 2013; Dollery *et al.*, 2009; Janssen and Joha, 2006a; Janssen, 2005; Wagenaar, 2006). This motive is likely to be characteristic of both the vertical and horizontal SSCs, although the argument is likely to be made more vocally in the case of horizontal SSCs, which allow the concentration of a larger variety of competencies by pooling accountants with different sectoral backgrounds into one SSC.

Third, SSCs are expected to increase the customer focus in the provision of support services. It is often noted that a SSC in its genuine form seeks to maintain close relations with the "customers" and involve them in decision making about the levels and content of the services provided (Craike and Singh, 2006; Grant *et al.*, 2007; Janssen and Joha, 2006a; Quinn *et al.*, 2000; Schulz and Brenner, 2010; Selden and Wooters, 2011). It can be expected that this motive is likely to be more strongly present in the case of optional horizontal SSCs but weak (or even non-existent) in the case of mandatory vertical SSCs. In a horizontal SSC, the participating organizations are likely to view each other as being located at the same level of "hierarchy" and hence expect to be treated as "customers" when the SSC is designed and also when the support services are provided to them (especially when joining the SSC is optional). In contrast, in the case of a vertical SSC, the hierarchical relationships between the parent ministry and the subordinate agencies are likely to remain intact, with the result that the participating agencies continue to be viewed as "subordinates" rather than "customers" of the SSC.

Fourth, it is claimed that a SSC enables the participating organizations to focus on their core tasks. The argument is that since the management does not have to deal with the day-to-day operations of back-office functions anymore, they would have more time to concentrate on the main (substantive) activities (Janssen *et al.*, 2012; Dollery *et al.*, 2009; Janssen and Joha, 2006a; Wagenaar, 2006; McIvor *et al.*, 2011; Walsh *et al.*, 2008). This motive can be expected to characterize the creation of both vertical and horizontal SSCs – although perhaps more strongly the horizontal SSCs given that the support functions are entirely moved from the governing area of a ministry.

Finally, reform actors can be expected to claim that a SSC would be able to offer management information that is more consistent and of higher quality (Janssen and Joha, 2006a; Wagenaar, 2006). This motive is likely to be present in both vertical and horizontal SSCs. However, the claim is likely to be made more strongly in the case of horizontal SSCs since the differences between the existing information systems are likely to be larger between organizations from different sectors (i.e. between different line ministries) rather than between organizations from the same sector (i.e. the line ministry with its subordinate agencies in the same field).

2.4 Challenges of establishing SSCs in the public sector

Probably the biggest general challenge in creating SSCs in the public sector is whether the reform is able to strike an "optimal" balance between centralization and decentralization. Indeed, an important element in the discussions over the concept and nature of SSCs in the existing literature is that a SSC is claimed to be (in almost all studies discussing it) an organizational arrangement that combines (and balances) the benefits of both centralization and decentralization (while avoiding or minimizing their drawbacks) (see, e.g. Janssen and Joha, 2006a, p. 104). Thus, in theory a SSC should combine the advantages of completely centralized arrangements (e.g. economies of scale and scope) with the advantages of decentralized arrangements (including a flexible and effective alignment of service needs of the organizations involved) given that the "customers" of SSC have some degree of ownership over the delivery of the support functions and are hence able (at least to some extent) to tailor these services to their idiosyncratic needs (Farndale *et al.*, 2009; Janssen and Joha, 2006b; Quinn *et al.*, 2000; Ulbrich, 2010b; Selden and Wooters, 2011; Walsh *et al.*, 2008). Striking this balance, however, is likely to be especially challenging in the case of vertical SSCs, in which the hierarchical relationship between the ministerial unit where the SSC is located and the subordinate agencies (who are the recipients of the support services) may tilt the SSC towards traditional centralization rather than allowing the creation of a "genuine" SSC. Below, the specific challenges of creating SSCs in the public sector are discussed in more detail, with a specific focus on which challenges are likely to be present in the case of different reform models outlined in Table I.

First, a number of authors have emphasized that the success of a SSC depends on the extent to which the SSC becomes truly customer focused in its activities. It has been conjectured that it would be difficult for public sector organizations to shift from a predominantly supply-driven service culture to a demand-driven and client-centred service culture (Frei, 2008), making the realization of a "genuine" form of SSC (with its focus on "customer" needs) problematic. If the design of the SSC and its activities become dominated by the "one size fits all" syndrome (see, e.g. Wagenaar, 2006), it will tilt the SSC towards pure centralization, with corresponding inflexibilities and resulting difficulties in offering customized solutions to the client-agencies. This challenge is more likely to be present in mandatory vertical SSCs because of the hierarchical relationship(s) between the parent ministry and the subordinate agencies. Also, this challenge is likely to emerge, at least to some extent, in horizontal arrangements following a mandated and a big bang approach, because the short time-frame and extensive scope of organizational coverage may leave limited opportunities for the SSC to focus on the individual "customers". It can also be conjectured that those SSC reform models that make it optional for the organizations to join the vertical or horizontal SSC (rather than mandating it by law) would face this challenge less: if the organizations do not feel that they are treated as "customers", they can opt out from participating in the SSC arrangement.

Second, even if the SSC is designed to be customer oriented, important challenges arise from the tension between the need to offer customized services and the need to standardize both the processes and ICT solutions. As most of the existing studies on SSCs emphasize, for a SSC to function properly and to provide the expected benefits, it is necessary to standardize the processes that have been consolidated into the SSC (Borman and Janssen, 2013; McIvor *et al.*, 2011; Selden and Wooters, 2011; Ulbrich, 2006; Wagenaar, 2006; Walsh *et al.*, 2008). Without standardization, process duplication would not be reduced (McIvor *et al.*, 2011). This challenge is likely to characterize all SSC reform models, but is probably more severe in the case of horizontal SSCs where the informational needs of the participating organizations are likely to be more divergent. This tension is also likely to be stronger in the case of a big bang mode of implementation because there would be less time to solve the contradictions between standardization and customization needs. Furthermore, the larger the number of organizations involved in the SSC in one round, the larger the divergence of the individual needs from the standardized services is likely to be.

A third important challenge in designing a SSC is that the "transactional services" that are consolidated into a SSC may be importantly interlinked with "transformational" services, and unbundling the transactional processes from an organization may weaken the transformational functions (Wagenaar, 2006; Farndale *et al.*, 2009; Quinn *et al.*, 2000). As Farquar *et al.* (2006, pp. 6-8) emphasize, the separation of transactional from strategic processes may limit the ministries' or agencies' access to "valuable information generated in a transactional process", information which they would need to have "close at hand". This challenge is likely to be present in all SSC reform models but can be conjectured to be especially stark in the case of horizontal SSCs, especially when the big bang approach has been chosen (because then the organizations have less time to adjust to the separation of these services from the organization).

The fourth challenge in creating SSCs is how to solve issues of accountability. SSCs and participating organizations are likely to end up with some shared accountability arrangements, which may give rise to problems like unclear lines of accountability and increased opportunities for blame-shifting (Boston and Gill, 2011, p. 212). It can be conjectured that accountability problems are likely to emerge especially sharply in the case of horizontal SSCs (irrespective of the implementation mode). In the case of vertical SSCs, the accountability issues can be solved by making the line minister responsible for what is happening in his or her "governing area" (including in the subordinate agencies) and hence it is less likely that "grey areas" of accountability would occur.

Fifth, given that the shift of certain functions to a SSC may lead to perceived loss of autonomy, authority, control and responsibilities by the agencies involved, the implementation of SSCs may be challenged by internal upheaval and "turf issues" whereby agencies show resistance to giving up control over the functions involved and defend the maintenance of the status quo (Burns and Yeaton, 2008; Janssen and Joha, 2006a; Janssen, 2005; McIvor *et al.*, 2011). This challenge is likely to be the most severe in the case of mandated and big bang modes (especially if a horizontal SSC is implemented in such a way, given that it constitutes a larger departure from the organizational status quo than the creation of a vertical SSC), and less severe in optional and incremental modes. The severity of these challenges depends, of course, on how the change is managed: effective communication and involvement of the stakeholders in initiating, implementing and functioning of the SSCs can help to alleviate the resistance (see, e.g. Burns and Yeaton, 2008; Wagenaar, 2006; Janssen, 2005; McIvor *et al.*, 2011; Farquar *et al.*, 2006; Miskon *et al.*, 2011; Borman and Janssen, 2013; Walsh *et al.*, 2008).

3. Case study: consolidation of support services in Estonia

The case study investigates the creation of SSC(s) for financial accounting in the Estonian central government, with a specific focus on different SSC reform models that were tried out between 2009 and 2013, the motives of reform actors behind these initiatives and the challenges that emerged in initiating, designing and implementing these models. Given that in Estonia four different reform models (see Table I) have been tried out (see the timeline in Table II), the case study can be used for testing the conjectures outlined in the theoretical discussion concerning the motives and challenges associated with different reform models.

The sources of data for the qualitative case study included official documents (legislative acts and their explanatory memorandums, reports, working documents, and materials presented to the Cabinet meetings), media articles and interviews. The contents of the official documents and media articles were used to outline the chronology of the reform events, to establish the sequence of decisions, and to identify the main reform actors and the goals of the reform. Ten semi-structured interviews

	2009	2010	2011
Type of SSC	Plans for HMB	From VMB to VMI	Plan/implementation: HOI
Comments	The MoF proposed to create a horizontal SSC for all central government organizations, to be implemented in a mandated Big Bang The plan dropped at the end of 2009	Based on the Cabinet's mandate, the MoF led the process of creating mandated vertical SSCs within line ministries Initially big bang approach adopted, but as a result of ICT obstacles, incremental approach chosen	Horizontal optional incremental SSC involving Ministry of Justice (2012); Ministry of Finance, Ministry of Social Affairs and Ministry of Economic Affairs and Communications (2013)

Table II. The evolution of the types of accounting SSCs planned and/or implemented in Estonia between 2009 and 2012 were conducted during the period of May 2012-April 2013 with the representatives of ministries, the National Audit Office, the State Chancellery and one implementing agency. The criteria for selecting the interviewees were the following. First, the interviewees were selected so that different types of reform actors in the reform process could be covered. Thus, it was important to include officials from the Ministry of Finance, the line ministries and the agencies, because these organizational actors played different roles in the reform process. Second, it was considered useful to include interviewees from different layers of the organizational hierarchy (i.e. higher officials and officials from the lower levels) in order to capture the different implications that SSCs may have at different organizational levels. Third, it was necessary to cover the different types of reform experiences (i.e. with vertical and horizontal SSCs), and the interviewees were selected accordingly. The list of interviewees is provided in Appendix. The interviews covered the history, motives and process of creating financial accounting SSCs and the challenges faced by the different reform actors. The interview transcripts were first read with a view to completing the chronology of reform events and the sequence of relevant decisions (i.e. filling in the gaps left by the official documents and media articles). The contents of the interview transcripts were then openly coded in order to identify common themes, converging assessments and diverging views of the reform motives and the challenges that had emerged. The two authors analysed the transcripts of the interviews separately and then discussed them jointly in order to increase the validity of interpretations.

Background information on the developments in public sector accounting in Estonia until 2009 will be provided in Section 3.1, followed by a brief description of the different SSC reform models initiated (and in some cases implemented) between 2009 and 2013 in Sections 3.2-3.4 and a discussion of the motives and challenges of the reforms in Section 4.

3.1 Developments in Estonian public sector accounting prior to 2009: attempts at centralization in a fragmented system

Financial accounting in the Estonian public sector has undergone substantial changes in a relatively short period of time. When the transition from planned economy to market economy started in the early 1990s, the accounting system inherited from the Soviet times was no longer appropriate. The first new Accounting Act, which was enacted on 1 January 1995, relied on international standards of accounting (Tikk, 2010). However, this act only laid down general financial accounting principles for the private sector, but left public sector financial accounting largely unregulated (Tikk, 2010, p. 348).

Therefore, throughout the 1990s and early 2000s, the financial accounting of the Estonian public sector was highly decentralized: each ministry in the central government and also the subordinate agencies were free to develop their own financial accounting systems (Rahandusministeerium, 2009b). This was in line with the other features of the "administrative landscape" of the Estonian central government, which can be characterized as a fragmented administrative system with a high number of relatively autonomous individual organizations (Sarapuu, 2012).

In 2003-2004, an extensive reform of government accounting took place, led by the newly appointed State Accountant General (SAG), who was the Head of the State Accounting Department of the Ministry of Finance. The most important element of the reform was the introduction of accruals-based accounting methods in the public sector (Tikk, 2010, p. 348). The implementation of these new methods presented significant challenges to the decentralized and fragmented system, especially at the agency level (Riigikontroll, 2005). As pointed out by the National Audit Office in its reports to the parliament, the coordination of financial accounting was weak in several ministries which did not guide and control their subordinate agencies sufficiently and therefore their input to the state's annual financial report remained uneven (Riigikontroll, 2005).

In response to this problem, the Ministry of Finance resolved to start consolidating financial accounting in the central government in 2006 – with a goal to reduce the number of accounting entities. The Minister of Finance established in the general rules for the accounting and financial reporting of the state that the accounting function shall be centralized in organizations with up to two accountants by the beginning of 2008 (General Rules § 7 art. 7-11). As a result of these provisions, between 2006 and 2009, the number of central government accounting entities was reduced from 381 to 178 (Rahandusministeerium, 2009c). This, however, was not considered to be sufficient by the SAG, who wanted to have only 17 accounting entities at the central government level: 11 ministries and six constitutional institutions (Rahandusministeerium, 2009b). In a highly decentralized administrative system, however, the Estonian Ministry of Finance lacked the tools to impose consolidation, and the central government organizations themselves did not want to give up the accounting function in their organizations as this was perceived to reduce their autonomy and power (Interview H).

It is worth emphasizing that in the consolidation initiative the ICT considerations also had a role to play. In addition to its efforts to reduce the number of accounting entities, the MoF also promoted the adoption of common financial accounting software. In 2008, the Estonian central government organizations used 15 different financial accounting softwares (Rahandusministeerium, 2009a). Although the Ministry of Finance suggested adopting common software (SAP) for all central government organizations, which would have enabled automatic consolidation of data into a joint database, the ministries and agencies were reluctant to change the accounting software they had chosen according to their own specific needs (Rahandusministeerium, 2009b).

3.2 Initiative of a horizontal, mandated, big bang SSC

In 2009, the consolidation of financial accounting in Estonia took a new turn. Instead of an incremental process, a big bang project of creating a horizontal SSC encompassing all eleven line ministries was initiated. The project was drafted under the pressure of the economic and fiscal crisis, characterized by a dramatic fall in GDP and corresponding declines in tax revenues (for an overview of the crisis in Estonia, see Raudla and Kattel, 2011). The Estonian government decided to respond to the economic and fiscal crisis by consolidating the budget; therefore, it was looking for opportunities to cut the operational expenditures of the public sector. Creating a SSC appeared to be a possible option for achieving significant cost-savings.

The initiative of creating a horizontal SSC was launched at the Cabinet meeting of 26 March 2009 when the Prime Minister, backed by the State Chancellery, proposed to consolidate the financial accounting of the entire central government into a single stand-alone organizational entity (Interview A; Rahandusministeerium, 2009b). The plan needed further elaboration, however, so it was agreed that the Ministry of Finance should conduct preliminary analyses.

The analyses submitted by the Ministry of Finance suggested the creation of a horizontal big bang SSC (Rahandusministeerium, 2009c). The Ministry of Finance expected the Government to approve the SSC concept, but by the end of 2009 the Government became divided over the issue of whether to create a SSC within the public sector or to outsource it to the private sector. One of the governing parties (Pro Patria and Res Publica Union) favoured the option of outsourcing the SSC to the private sector, while the other (the Reform Party) supported the creation of a new unit within the public sector. As a result of this stalemate, the Government dropped the idea of establishing a horizontal SSC altogether (at least for the time being) and, as a compromise between the coalition partners, opted for vertical SSCs instead (Interview C).

3.3 Creating mandated vertical SSCs since 2010: from a big bang to an incremental approach

Instead of allowing the Ministry of Finance to go ahead with a big bang horizontal SSC for all ministries, the Cabinet decided (on 29 December 2009) to give the Ministry of Finance the authority to impose the creation of mandated vertical SSCs within the line ministries, foreseeing one SSC for each ministry (and encompassing all the subordinate agencies in the governing area of the ministry). In addition, the Ministry of Finance was given a green light to introduce common accounting software (SAP) in all ministries.

According to the Cabinet's decision of 29 December 2009 the consolidation project started in early 2010 and had to be finalized by 2013. This was considered to be a short time period by the reform actors. The initial implementation strategy could hence be categorized as a big bang.

The consolidation started with the ministries that were already using the SAP (i.e. the Ministry of Finance and the Ministry of Justice), and the creation of vertical SSCs in those ministries did not face major implementation barriers. However, in those ministries not yet using the SAP software, the consolidation of financial accounting into vertical SSCs became saddled with three major ICT-related difficulties. First, finding a compromise between the needs of the different line ministries and the functionality of the SAP turned out to be more difficult than expected. Second, in 2011, the Ministry of Finance discovered that the SAP version (SAP 4.0) had an advanced upgrade (SAP 6.0). By that time, the consolidation had already been done in 113 organizations using the outdated SAP version. As the automatic transfer of data from SAP 4.0 to SAP 6.0 was not possible, it was decided that the process would continue with the new SAP in 2013 but the organizations that had already adopted the outdated SAP would introduce SAP 6.0 in 2015. Third, the procurement of different ICT solutions necessary for creating the vertical SSCs took more time than was initially planned (Rahandusministeerium, 2012b).

The emergence of these implementation obstacles meant that although the reform was initially foreseen to be big bang and to entail all ministries in the same round of reform, a more incremental approach had to be adopted with the reform completion deadline being extended from 2013 to 2015.

3.4 Parallel development since 2011: incremental creation of an optional horizontal SSC

In parallel with the government-mandated consolidation process, which focused on creating vertical SSCs, in 2011 the Ministry of Finance decided to continue with a plan to create a horizontal SSC as well. However, given the resistance to the creation of a horizontal SSC in a mandated and big bang fashion, the Ministry of Finance proposed an optional and incremental reform instead.

The first step was undertaken together with the Ministry of Justice, which had already established an accounting SSC for the courts. Given that one of the coalition partners had opposed the creation of a new organization in the central government (which could have been seen as public sector "expansion" by its constituents), using an existing organization to which additional clients could be added was seen as a way to overcome this political obstacle. Thus, at the beginning of 2011, the Ministry of Finance and the Ministry of Justice agreed to establish a "State Service Centre" on the basis of the already functioning courts' SSC. The Ministry of Justice, in whose governing area the Centre had been created in 2005, became its first client and handed over all its accounting functions to the SSC on 1 January 2012. As a result, the Ministry of Justice no longer employed any accountants of its own.

Other ministries were invited to become customers of the new SSC. In early 2013, the Ministry of Finance, the Ministry of Economic Affairs and Communications and the Ministry of Social Affairs handed their accounting functions over to the horizontal SSC. All other ministries and other public sector organizations have been invited (but are not required) to join the State Service Centre.

4. Motives and challenges of the SSC initiatives

4.1 Motives for creating SSCs in Estonia

As the type of SSC that was either planned or implemented in Estonia changed over time (see Table II), the motives and claimed benefits changed as well, depending on what SSC reform model was discussed at any particular time period.

While the uneven quality of the financial reports of the various public sector organizations had been pointed out as a motive for consolidating accounting already before, the need for reliable information on public sector finances became especially pressing in 2009 because of the Estonian government's efforts to undertake extensive fiscal consolidation (in the midst of economic crisis) in order to qualify for the euro (see Raudla and Kattel, 2011 for a more detailed discussion). Having high-quality real-time information was necessary, for example, to evaluate the effects of different consolidation measures on the resulting public sector deficit (in order to make sure that it would remain below the threshold of 3 per cent of GDP, which was necessary for entry into the eurozone). According to one of the key persons involved in the reform (an official from the State Chancellery) the main motivator behind the big bang horizontal SSC initiative was to get a real-time overview of state finances in order to inform Government decisions (Interview A). Obtaining higher quality financial reports has also been one of the main goals of the VMI and HOI reform models pursued from 2010 onwards (Rahandusministeerium, 2013).

With regard to the motive of cost reduction, it is worth noting that the interviews with the leading reform actors and the documentary evidence point in diverging directions. Two of the interviewees emphasized that cost reduction was not the primary aim of these initiatives (Interviews A and B). Two other interviews (Interviews C and G) and the documentary analysis, however, indicate that in 2009 one of the main motives behind the horizontal big bang SSC was the reduction of public sector spending. For example, the preliminary analysis prepared by the Ministry of Finance in June 2009 (Rahandusministeerium, 2009c) showed that up to two-thirds of relevant costs could be saved. All subsequent analyses drafted by the Ministry of Finance and other documented materials also promised possible reductions of staff and operating expenses – although it has to be noted that the projected cost-savings have been considerably less for the optional and incrementally implemented horizontal SSC than they initially were for the mandatory big bang model (Rahandusministeerium, 2012a).

The aim to bring the professionals together into a single stand-alone organizational entity was also one of the strong motives for consolidation, especially in the case of the horizontal SSC. The preliminary analysis discussing the HMB model (Rahandusministeerium, 2009c) emphasized that bringing the best people into one organization would help to enhance the quality of both the employees and the outcomes. This motive has been repeatedly emphasized when advocating the (voluntary) expansion of the horizontal SSC as well (Rahandusministeerium, 2012a, b, 2013).

Also, the rhetoric that organizations can better focus on their core tasks when support functions are consolidated into a SSC was part of the Estonian SSC initiatives. This was emphasized clearly in the case of horizontal SSC reform models (Rahandusministeerium, 2009c; Interviews I and J) but was not explicitly mentioned in the case of the vertical SSC model.

It is noteworthy that the customer focus, which is usually considered to be an important motive for creating SSC(s), was entirely absent in the case of the mandated vertical SSCs. In promoting the optional horizontal SSC among the line ministries in 2011-2012, however, the customer service rhetoric has played at least some role (Rahandusministeerium, 2012a).

Finally, an important motive of the SSC initiatives has been (and continues to be) their potential to contribute to the development of the Estonian information society and e-government agenda – this is a motive that has not been mentioned in the existing literature so far. All the SSC reform models have foreseen the implementation of e-invoices and e-documents and links between different ICT systems leading to automated data transfer. An introduction of uniform e-invoices and e-documents was seen as an important step in moving towards the Government's long-term goal of "paper-free" public administration (Ministry of Economic Affairs and Communications, 2006; Rahandusministeerium, 2011).

4.2 Challenges of the SSC reform models

As shown in the previous section, the motives associated with the different SSC reform models varied, depending on which model was being discussed. In a similar vein, different challenges emerged for the different models (see Table III for an overview).

When the plan to create a horizontal SSC in a mandated and big bang fashion came to the agenda in 2009, the main challenges were a lack of reliable data and ex ante analysis for undertaking such a substantial project (Interviews B and C). In addition, as mentioned in Section 3.2., political and ideological obstacles emerged: the coalition partners in the cabinet could not reach an agreement on what form the horizontal SSC should take and, as a result of this stalemate, the Ministry of Finance was only given the mandate to go ahead with the creation of vertical SSCs within ministries (Interview C).

Once the Government took the decision at the end of 2009 to proceed with creating vertical SSCs in a mandated and big bang way (and to introduce SAP), several challenges emerged. First, as mentioned in Section 3.3., because of the ICT-related obstacles, the implementation of the reform in a big bang fashion turned out to be impossible (Rahandusministeerium, 2013). Second, the reform actors realized very soon after the creation of the vertical SSCs that consolidation without previous standardization was difficult (Rahandusministeerium, 2012b; Interview B). In 2011 the creation of vertical SSCs was paused (for a year) because an insufficient level of standardization of the accounting and reporting principles and report formats made it difficult to proceed with the consolidation process. Consequently, the reform actors had to switch from the big bang reform model to an incremental model. Another important technological challenge that emerged already in the big bang phase of the vertical SSC but continued in the incremental models of both the vertical and horizontal SSC is the limited use of e-invoices in the public sector (Interview C). This has meant that the paper documents have to be "transported" physically from the subordinate agencies to the vertical SSCs in their parent ministries. Organizing such a flow of paper documents has been cumbersome, causing delays and even disruptions in the accounting process (Interview F).

Although the consolidation of support services in Estonia drew on the "genuine" SSC concept by using the corresponding rhetoric, the creation of vertical SSCs (both in the big bang and incremental mode), as mentioned above, actually failed to achieve a genuine customer focus. In the case of those SSCs that were created in the big bang phase, the short time-frame meant that the needs of the ministries and their subordinate agencies had remained unstudied beforehand (Interview B). In addition to the mandated creation of SSCs, the introduction of SAP was made mandatory. Even if organizations were satisfied with the software they were already using, they had to replace it with SAP. The contracts in the form of a "functional model" that divided tasks and responsibilities between the central ministerial unit and its subordinate agency were heavily based on SAP functionality. Even though the "functional models" were adaptable and there was some flexibility in deciding which functions should be centralized, the consolidation project was not focused on specific customer needs. In the case of the optional horizontal SSC, the rhetoric of customer orientation can be found in the formal documents, but as mentioned by an official of the Ministry of Justice, in the actual communications between the Ministry of Justice and the SSC no increase in customer orientation has been felt. To the contrary, it was noted that because of increased anonymity in communications between the ministry officials and the accountants in the SSC, the "customer orientation" might have even declined (Interview I).

HMB	VMB	VMI	HOI
Insufficient analysis and information to go ahead with big bang reform Political and ideological resistance	ICT obstacles to quick consolidation Resistance from the ministries and agencies Need to standardize before consolidation	ICT challenges Insufficient focus on idiosyncratic needs of the different organizations, which has led to duplication of work Agency heads lack information at hand; missing input to management decisions Accountability problems	ICT challenges No demonstrable cost-reductions Missing input to management decisions Coordination problems: e.g., disrupted, cumbersome information flows and work processes Accountability problems

Table III.
Main challenges of the various SSC reform models in Estonia

Although the goal of creating SSCs in Estonia has been to reduce the amount of duplicated work, achieving this goal has proven challenging. Some of the duplicative activities have been eliminated, but at the same time – because of excessive standardization and switching to SAP that accompanied the implementation of the vertical SSC – the agencies created "parallel" accounting systems which served their own special purposes and informational needs better (Riigikontroll, 2012).

In all the reform models tried out in Estonia, the consolidation of financial accounting brought out the problems of unbundling the transactional functions from the transformational functions in the subordinate agencies. The recent report of the National Audit Office (Riigikontroll, 2012) concludes that in both vertical and horizontal SSCs, problems related to the fact that "there are no accountants in house anymore" have emerged very clearly. As mentioned by one of the interviewees, the role of the accountants had not been only to supply "technical information" but to provide important substantive input to managerial decision making in the ministry as well (Interview I). To some extent, the role of offering accounting-related inputs to managerial decision making in the Ministry of Justice has been taken over by the financial analysts, but they often lack the necessary accounting background and are not able to help with all questions (Interview I).

An important challenge that has not been extensively discussed in the existing literature on SSCs but clearly emerged in the Estonian case is that the creation of SSCs can lead to more cumbersome working processes and information flows – resulting in significant time lags and confusions about what kind of accounting information is needed by whom, from whom and in what form. This problem can be demonstrated with the experience of the Ministry of Justice, where, first, the vertical SSC was created and then the "internal SSC" was given over to the horizontal SSC. Given that the officials in the ministry still have to coordinate the financial activities of their subordinate agencies, several additional organizational levels have been added to the coordination processes. For example, when a subordinate organization that does not have a financial analyst has a funding-related question, they often have to turn to the "content" manager in the Ministry of Justice, who then has to ask advice from the financial analysts in the Ministry, who, because of limited experience with accounting, have to ask input from accountants in the SSC, who may be able to help with the accounting side but may not have sufficient background or experience with this specific policy field (Interview I). Before the creation of the horizontal SSC, the "accounting knowledge" and also the "sectoral" knowledge were joined together in the accountants of the ministries. Once these two fields of expertise were split (when the accountants were transferred to the horizontal SSC), some important tacit knowledge was lost, leading to disruptions in the work processes of the organizations involved (Interview I).

With regard to the challenge of diffused accountability between the SSCs and the organizations served, this problem can be also observed in the Estonian case. For example, the NAO has raised the question of changed internal control systems related to accounting and reporting and warned that inadequate controls and responsibilities would eventually lower the accounting quality (Riigikontroll, 2012). Especially in the case of the horizontal SSC, blurred accountability lines may give rise to problems, particularly if the cumbersome information flows between the various organizations remain unaddressed.

As all interviewees and also the Ministry of Finance in its overviews of the implementation of the project confirmed, the mandated creation of the vertical SSCs, undertaken since the beginning of 2010, has sparked tensions and hostility. The Ministry of Finance faced resistance from the other ministries, and ministries (which were responsible for the consolidation of support services of their subordinate agencies) faced resistance from their subordinate agencies. Because the Ministry of Finance could rely on the government mandate, however, it could use the legal authority to "push through" the changes. By giving the mandate to the Ministry of Finance to lead the consolidation, all ministers agreed upon a strict project implementation timetable. The ministries overcame the hostility of their subordinate agencies by using top-down enforcement and the Ministry of Finance solved conflicts with other ministries by referring to the "Government decision" (Interviews B, C, and H). Also, meetings with the highest ranking officials were used to solve emerging inter-ministerial conflicts (Interview C). In the case of the horizontal SSC, however, the relations between the SSC and the line ministries have been less plagued by hostility given the voluntary nature of joining the SSC (Interview J).

5. Discussion

The Estonian case demonstrates that the typology proposed in the theoretical section is helpful in conceptualizing the different SSC reform models. As indicated by the Estonian case, the distinctions between horizontal and vertical SSCs (as outlined by Janssen and Joha, 2006a) and the modes of implementation – mandated vs optional and also big bang vs incremental (as pointed out by Wagenaar, 2006) – are important to keep in mind when different reform experiences are analysed.

As discussed in Section 2, the motives associated with different SSC reform models can vary (at least to some extent). The Estonian case provided evidence for the plausibility of the conjectures put forth in the theoretical discussion. Hence, these could be used in future studies to sharpen the focus of analysis and to generate a deeper understanding of public sector SSCs.

First, it was hypothesized that when a big bang horizontal SSC is considered by the reform actors, the claims of achievable cost-savings are likely to be larger than would be the case with vertical SSCs and also those horizontal SSCs that are implemented in a more incremental fashion. The Estonian case demonstrates that this was indeed the case: the cost-saving projections were significantly larger for the HBM model than for the other models (HIO and VBM/VIM). Thus, while many existing studies on SSCs point to cost-savings as a major motive for establishing SSCs (e.g. Burns and Yeaton, 2008; McIvor *et al.*, 2011), it is worth taking a closer look at the extent to which the size of projected cost-savings varies in different reform models – an issue neglected in the literature so far.

Second, it was proposed that the motives of improving the quality of the support service, achieving higher quality accounting information, and allowing the client organizations to focus on their core tasks – which are pointed out as important motives for establishing any kind of SSC in the existing literature (e.g. Borman and Janssen, 2013; Janssen and Joha, 2006a; Miskon *et al.*, 2010) – would be stronger in the case of horizontal SSCs than in the case of vertical SSCs. The Estonian case demonstrates the plausibility of these conjectures. When the creation of the horizontal SSC was considered in Estonia in 2009, one of the main "triggers" for proposing it was the need to obtain high-quality real-time accounting data. The benefits of pooling the accountants with different backgrounds into one SSC (and allowing the client organizations to focus on their core tasks) was repeatedly emphasized when the creation of a horizontal SSC was discussed, whereas this motive received less attention in the creation of vertical SSCs. Given the existing literature's silence on this issue, future studies should examine further how motives vary in different SSC types.

Third, concerning the goal of increasing "customer satisfaction" – again considered to be a motive associated with all types of SSCs in the existing literature (e.g. Grant *et al.*, 2007; Selden and Wooters, 2011) – it was conjectured in Section 2 that this would be more strongly present in horizontal SSCs (especially if they are optional) and less present in mandated vertical SSCs. The Estonian experience with different reform models proves that to be the case: when the horizontal optional SSC was created, the claimed benefits focused significantly more on the aspects of increasing client satisfaction than had been true for mandated vertical SSCs. Though the existing studies on SSCs have not systematically examined how strong the motive of customer satisfaction has been across the different reform models, the Estonian case indicates that this question warrants attention in further theorizing and empirical studies on SSCs in the public sector context.

It was proposed in the theoretical discussion that the various reform models are likely to face different challenges. For the most part, the Estonian case proved this to be true but it also showed that some challenges were present for all reform models.

First, it was conjectured that the challenge of achieving genuine customer focus would be especially salient for vertical SSCs and also for those horizontal SSCs that are created in a big bang and mandatory fashion. The Estonian case does indeed show that the creation of mandated vertical SSCs, both in an incremental and big bang fashion, led to the problems in securing customer focus. This problem was especially severe in the big bang phase of creating the SSCs (because of the short time-frame) but persisted in the incremental phase. Although it was hypothesized in Section 2 that the optional horizontal SSCs implemented in an incremental fashion should be significantly less affected by this problem, the Estonian experience with this reform model reveals that because of the increased "anonymity" of accountants in this model, the problems of securing customer orientation have been even more severe than in the case of vertical SSCs. Thus, while the Estonian case confirms the general prediction of the existing SSC literature – that SSCs are likely to face difficulties in increasing customer satisfaction (e.g. Wagenaar, 2006) – the study also indicates that it is important to examine the various routes via which different reform models can lead to that problem.

Second, it was proposed that the tension between customization and standardization – a challenge frequently pointed out in the existing literature (e.g. Selden and Wooters, 2011; Walsh *et al.*, 2008) – would be particularly strong for horizontal SSCs (especially if created in a mandatory big bang mode) because of the sectoral differences of the organizations involved, and that this tension would be less problematic in vertical SSCs which serve the same policy sector. In the Estonian case, it is possible to evaluate the experience of vertical SSCs (because additional sectors were added to the horizontal SSC only recently). The experience with the vertical SSCs demonstrates that these tensions have been severe (especially in those created in the big bang phase) and have even led to the creation of "parallel" accounting systems, which better fit the organizations' needs. While none of the existing studies on SSCs has pointed out that establishing an SSC can lead to the creation of "parallel" systems, the Estonian case provides evidence of such a possibility. Since the emergence of such parallel systems (of accounting or other support functions) can strongly undermine the achievement of the goals of the SSC, it is a problem that has to be considered – both in future academic studies and also in practice.

Third, it was conjectured that the issues associated with removing the "transactional" services which are interlinked with "transformational" services in the organization (and of which accounting is a clear example) are likely to be especially problematic in the case of big bang horizontal SSCs. The Estonian case demonstrates, however, that this problem has, in fact, surfaced in all reform models that were implemented – thus confirming the general predictions about the problems associated with unbundling transactional and transformational functions made in the existing literature on SSCs (e.g. Farndale *et al.*, 2009; Farquar *et al.*, 2006).

Finally, it was expected that resistance to implementing SSCs would be the most severe in the mandated and big bang modes (especially if a horizontal SSC is implemented in such a way) and less severe in optional and incrementally implemented SSCs. As the Estonian case demonstrates, the political resistance to implementing the mandatory horizontal SSC in a big bang way was so strong that the MoF could not proceed with that model. Organizational resistance did also emerge in vertical SSCs, especially those created in a big bang way, whereas it has been less of a problem in the optional and incremental horizontal SSC. Though in the existing literature on SSCs the resistance to the reform has often been discussed (e.g. Janssen, 2005; McIvor *et al.*, 2011), the Estonian case indicates it is worth taking a closer look at the scope and form of resistance generated by different reform models.

6. Concluding remarks

Because of its promise to deliver a number of important benefits, it is likely that SSCs will remain on the public sector reform agenda for some time. As it is the case with other public management reforms, it is important to examine how the normative ideal plays out in reality and what kind of challenges and even negative consequences it can entail.

Since in the public sector context, SSCs are a relatively new phenomenon and the existing literature on public sector SSCs is in its infancy, theorizing about the different SSC forms is useful. This paper has made the following contributions to the existing theoretical discussions on public sector SSCs. First, it has pointed to systematic differences between vertical and horizontal SSCs. Second, it has delineated how the design elements of SSCs can interact with modes of implementation. Third, based on the configurations of the various design and implementation elements, this paper put forth a novel typology of SSC reform models. Fourth, it has outlined which motives and challenges are likely to characterize the different reform models.

Given that in Estonia four different SSC models have been tried, it provided a good opportunity to test the preliminary conjectures outlined in the theoretical discussion. The Estonian case study shows that most of the theoretical propositions are plausible and, thus, the new typology proposed in this paper and the conjectures outlined could be used for examining the creation of SSCs in other countries as well. The Estonian case study demonstrates that the distinct reform models for creating SSCs in public sector accounting can have different motives and face various challenges to different degrees. However, some challenges can be present in all reform models. For example, the case study demonstrates that the creation of SSCs can lead to reduced input to managerial decision making and problems with customer orientation, no matter the reform model used.

The plausibility probes generated by the Estonian case study are, of course, limited by the very specific context of Estonia and hence further comparative studies would be necessary in order to allow for a more substantial evaluation of how well accounting SSCs can work in the public sector. Also, given that in Estonia only four different reform models (out of eight) have been tried out, it would be interesting to explore in future studies whether other reform models have been tried in other countries and what the corresponding motives and challenges have been. Furthermore, the implementation dimensions outlined in this paper could be explored in greater detail (e.g. under the big bang vs incremental dichotomy, the dimension of time period and the scope of the reform could be examined separately).

In addition, there are two substantive questions that warrant closer attention in future studies. First, as the Estonian case demonstrated, in all SSC reform models unbundling the allegedly "transactional" function of accounting from the organizations revealed the underlying "transformational" elements entailed in this support service, which can make the creation of accounting SSCs problematic in the public sector. Future studies could examine systematically whether this problem can be found in other countries as well (and how this challenge has been addressed). Second, the Estonian case revealed the overriding importance of ICT solutions in implementing the different reform models. It would be worth investigating whether in other countries similar observations can be made and which ICT solutions have been helpful in mitigating these challenges.

Notes

1. Public sector SSCs have been established, for example, in the Netherlands (see, e.g. Janssen and Joha, 2006a; Wagenaar, 2006), Finland (Hyvönen *et al.*, 2012), the USA (Burns and Yeaton, 2008), Canada (Burns and Yeaton, 2008), Sweden (Ulbrich, 2010b), and Australia (Walsh *et al.*, 2008).
2. Systematic overview of the differences between SSC and outsourcing has been provided by Wang and Wang (2007).

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Further reading

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Appendix

List of interviews:
Interview A – Former official of the State Chancellery, 20 November 2012.
Interview B – Official of the Ministry of Finance, 23 July 2012.
Interview C – Senior official of the Ministry of Finance, 5 July 2012.
Interview D – Official of the National Audit Office, 29 May 2012.
Interview E – Official of the Enterprise Estonia, 22 May 2012.
Interview F – Official of the Ministry of Defence, 22 May 2012.
Interview G – Former senior official of the Ministry of Finance, 7 September 2012.
Interview H – Official of the Ministry of Social Affairs, 14 May 2012.
Interview I – Official of the Ministry of Justice, 29 April 2013.
Interview J – Senior official of the Ministry of Justice, 30 April 2013.

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Article II

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3

Consolidation of Support Services in Estonia

Kaide Tammel and Ringa Raudla

Introduction

This chapter examines the consolidation of support services in the Estonian central government in 2009–13, with the specific focus on the consolidation of financial accounting.

For most of the independence period (starting in 1991), public sector financial accounting in Estonia was decentralized and fragmented, with each public sector organization having its own accountants (and also its own financial accounting software). Such a decentralized and fragmented system of public sector accounting led to an uneven quality of the financial reports and made it difficult for the government to have a real-time overview of the state finances. Although the Ministry of Finance in Estonia tried to encourage the consolidation of financial accounting throughout the 2000s, it did not have a sufficient legal mandate for it, and because of the resistance of the public sector organizations, the progress in consolidating public sector financial accounting was limited. The global financial crisis of 2008 provided a window of opportunity for the Ministry of Finance – with the support from the Cabinet – to impose consolidation of financial accounting in the Estonian central government. The financial crisis pointed to the importance of obtaining real-time overview of the finances of the state in order to allow the government to evaluate the effects of fiscal consolidation efforts. In addition, given its goal to cut expenditures, the Cabinet was looking for opportunities to reduce operational costs of the public sector, and consolidating financial accounting appeared to be one possible option for achieving significant cost savings.

Although initially the Ministry of Finance envisaged a more ambitious plan of swiftly creating one single organization that would take over financial accounting and possibly other support services from all ministries and agencies in Estonia, this proved to be too 'radical' in the eyes of the other reform actors and a more 'incremental' model for consolidating financial accounting was adopted instead. The incremental model entailed the consolidation of financial accounting separately within each ministry, meaning that the accounting departments of the ministries would take over the accounting functions from their subordinate organizations in their governing area. The goals of the reform were to improve data quality and availability, to increase the transparency of public sector accounting and to reduce operational expenditures (via reducing the number of accountants and eliminating redundant and duplicative activities in the central government accounting). The reform actors also hoped that the reform would constitute an important step towards harmonizing the management information systems in the Estonian central government.

Although according to the timetable adopted in 2009, the consolidation within each ministry should have been completed by the end of 2013, the reform is still on-going due to several implementation obstacles that emerged. It is, however, possible to undertake a preliminary evaluation of the reform experience. In this chapter we give an overview of the motives behind the initiation of this coordination practice, describe how it was implemented and assess the preliminary impacts and outcomes of the reform.

Country and policy field background

Estonia is a small country with a population of 1.286 million. Since the regaining of independence in 1991, the Estonian public administration has shaped itself by moving away from the inherited Soviet system and working towards European integration (OECD, 2011: 99). The governments have usually been coalition governments consisting of two to three different parties.

The Estonian administrative system is relatively decentralized and fragmented (Sarapuu, 2011). The policy areas and responsibilities are divided between 11 line ministries and the ministries are expected to be experts in their own fields of competence. Although the Estonian ministries are small, they represent strong administrative actors that have considerable leverage over the issues belonging to their areas of governance. The role of the ministries is mostly confined to policy formulation while the implementation of the policies is carried out by the agencies under their supervision. As Estonia is a small state with limited resources (money, people, expertise), the ministries' capacity to supervise and steer their subordinate agencies' daily functioning is also often very limited (Sarapuu, 2011).

Similarly to the general administrative system, the information and communication technology (ICT) systems used in the Estonian central government institutions have enjoyed relative freedom from central coordination and control. Although the Ministry of Economic Affairs and Communications has primary responsibility for the coordination of ICT development across the state, its capacity and will to devise uniform ICT solutions for the whole central government and steer their functioning has been limited. Therefore, even though Estonia is considered to be a front-runner in the area of ICT with its sophisticated ICT infrastructure (OECD, 2011), the central government ICT systems represent a mix of different ICT systems that are developed according to the organizations' specific needs and are incapable of exchanging information with each other.

While the coordination of ICT belongs to the competency of the Ministry of Economic Affairs and Communications, the public sector financial accounting in Estonia is coordinated by the Ministry of Finance. Although the Ministry of Finance is responsible for establishing the general framework for public sector accounting in the Estonian central government, the line ministries and their agencies have had a lot of autonomy in how they organize the accounting function within their governing areas (including decisions regarding the number of accounting units and the adoption of accounting software).

Within the governing area of the Ministry of Finance, the responsibility for the public sector financial accounting organization and coordination is attributed to the State Accountant General (SAG) who is also responsible for the compilation of the consolidated annual accounts of the state and drafting accounting legislation. Until 2012, the financial accounting department, headed by the SAG, was a department of the Ministry of Finance. In 2013 the department together with its functions was moved to the State Shared Service Centre, which is in the governing area of the Ministry of Finance. The main act regulating both the private and the public sector financial accounting is the Accounting Act. Public sector financial accounting is additionally regulated by the General Rules, which are – in compliance with the Accounting Act – enacted by the Minister of Finance.

The most important development during the past ten years in the field of public sector financial accounting in Estonia has been the introduction of accrual accounting principles in 2003 (Tikk, 2010: 348). As the implementation of accrual accounting was demanding, not all organizations had the capacity to comply with the new requirements (for an overview of the general challenges associated with accrual accounting, see Blöndal, 2003). Thus, due to the weak coordinating power of both the Ministry of Finance and the line ministries, the financial accounting quality in public sector organizations remained uneven throughout the second half of the 2000s. Also, because of a large number of accounting entities, the Ministry of Finance faced problems in consolidating the received financial information into the consolidated annual accounts of the state (that form part of the Consolidated Annual Report of the State).

Consolidation of support services in Estonia

In 2004–8, in order to address the problems arising from fragmented financial accounting system, the Ministry of Finance aimed to centralize financial accounting from very small organizations to their 'parent' organization (e.g. from the agencies to their parent ministry). This goal was also supported by the National Audit Office, which noted in its audit report that while financial accounting at the *ministerial* level was generally adequate there were deficiencies at the *agency* level (Riigikontroll, 2006). As a first step, the Ministry of Finance included a provision in the General Rules (for accounting) that foresaw the centralization of financial accounting in public sector organizations with up to two accountants by 2008.

Even though the Ministry of Finance managed to get an agreement with the other ministries to reduce the number of central government accounting entities from 320 in 2006 to 187 in 2008, this was considered to be insufficient by the SAG who envisioned having no more than 17 accounting entities in the central government. Until 2009, however, the Ministry of Finance had no legal mandate for imposing a more extensive consolidation of financial accounting on the line ministries. The public sector organizations, in turn, did not want to give up the accounting function since this was viewed as potentially reducing their autonomy and power.

Also, although the Ministry of Finance wanted to reduce the number of different accounting software in use (in 2008 the central government organizations were using altogether 15 different financial accounting software) and suggested the adoption of SAP for all central government organizations (which would have enabled automatic consolidation of data into a joint database), it had no legal mandate for imposing the adoption of that software on the other line ministries. The line ministries and their subordinate agencies, in turn, were reluctant to change the financial accounting software they were using, given that so far they had been able to choose ICT solutions according to their own needs and had also gotten used to working with these software solutions.

The global financial crisis of 2009 provided a window of opportunity for the Ministry of Finance with the support from the Cabinet to *impose* the consolidation of financial accounting in the Estonian central government. The financial crisis pointed to the importance of obtaining real-time overview of the finances of the state (to allow the government to evaluate the effects of fiscal consolidation efforts in order to qualify for the euro-zone) and hence equipped the Ministry of Finance with additional arguments for advocating the consolidation of the accounting functions in the central government organizations. In addition, given its goal to cut expenditures, the Cabinet was looking for reform initiatives that would help to reduce operational costs of the central government and consolidating financial accounting appeared to be an attractive option for achieving significant cost savings, given its promise to reduce the number of accountants needed in the central government organizations and to generate productivity gains via eliminating the duplicative tasks in entering and processing accounting data. Because of the fiscal pressure and the need to cut the budget in 2009, the line ministers were also more willing to consider different reform options for reducing public sector expenditures.

Throughout 2009 different reform models for consolidating financial accounting were discussed in the Cabinet, the Ministry of Finance and the Government Office. As a result of several compromises, the reform model of creating accounting centres *in all line ministries* was approved – together with the adoption of SAP – at the end of 2009, when the Cabinet gave the Ministry of Finance the mandate to go ahead with the consolidation process.

It is worth emphasizing that when the reform of consolidating financial accounting came to the Cabinet's agenda in 2009, a significantly more 'radical option', which entailed the consolidation of the accounting function into one single accounting centre for the whole central government, was first considered. The Cabinet gave the Ministry of Finance the task to analyse the possibility of creating a single standalone shared service centre for providing support services to the central government including financial accounting. The Ministry of Finance, with the help of a consulting company, examined the experiences of other countries (like Finland and the United Kingdom) in creating shared service centres for support services and proposed the creation of a shared service centre in Estonia as well (for a more detailed discussion on shared service centres, see Schulz and Brenner, 2010).

Despite the fact that the preliminary analyses for creating such a single shared service centre promised to deliver significant savings in operational expenditures related to support services (even figures like 40 per cent cost reduction were mentioned in one of the early analyses), getting an approval for this reform model eventually ran into difficulties and was abandoned by the end of 2009.

One of the obstacles that emerged in proceeding with the more radical *inter-ministerial* shared service centre model was political disagreement among the coalition partners about whether the shared service centre should be created as a new *public* sector organization or outsourced to the *private* sector. As a result of this stalemate, the government gave up on the idea of creating an inter-ministerial service centre that would take over accounting from all ministries and opted for a more incremental reform model, which entailed the establishment of accounting centres within each line ministry (meaning that the subordinate organizations of the ministries would have to hand over their accounting function to the accounting department of their parent ministry).

With the Cabinet decision of December 2009, the Ministry of Finance was hence made responsible for overseeing the implementation of the reform and was obliged to report to the Cabinet about the progress of the reform once a year. The Ministry of Finance appointed a project leader who would be responsible for coordinating the reform. Inter-ministerial working groups were established for the purposes of discussing the details of implementation. In the line ministries the reform was carried out mostly with the existing staff; there were no compensation or motivation packages foreseen for the employees. Since the adoption of SAP was one of the central features of the reform, most of the activities of the affected employees were related to studying the new system, inserting the data into the new accounting system in parallel with the old system and preparing the old systems for archiving.

During the project implementation phase, the role of (agency) leaders and accountants opposing the project became important. As the project aimed to reduce significantly the number of central government accountants, uncertainty about their future job prospects made it difficult for the accountants to favour the project. Overt and covert resistance and tensions made the implementation of the project difficult and frustrating both for the accountants of the agencies and the accountants working in the central accounting departments of the line ministries. As the participant autonomy was low, the resistance, however, could not reverse the consolidation process.

According to the Cabinet's decision, which gave the Ministry of Finance the mandate to proceed with the consolidation of financial accounting and to require the introduction of SAP in all central government organizations, the reform was to follow a rather ambitious time schedule: it was expected that the reform should be completed by the end of 2013. Because of several implementation obstacles, discussed below, however, the completion deadline of the reform was extended until 2015.

The implementation obstacles, which made it necessary to extend the completion deadline, were the following:

First, it was realized that important parts of the reform were the introduction of e-invoices and e-documents and establishing an internet-based self-service interface to facilitate the exchange of information. Although the concept of such an interface was not clearly formulated at the early stage of the consolidation project it was clear that some type of online channel was needed in order to enable the staff of different organizations to make use of the central database for both sending and receiving the relevant information. These ICT solutions were not ready when the project implementation started and the Ministry of Finance began working on the ICT developments *in parallel* with the consolidation process.

Second, in 2011 the Ministry of Finance discovered that the SAP version (SAP 4.0) had an advanced upgrade (SAP 6.0). By that time the consolidation had already been done in 113 organizations using the outdated SAP version. As the automatic transfer of data from SAP 4.0 to SAP 6.0 was not possible, it was decided that the process would continue with the new SAP in 2013 and these organizations that had introduced out-dated SAP would introduce SAP 6.0 in 2015.

It is also worth noting here that in addition to the establishment of the accounting centres in the line ministries, the Ministry of Finance kept on pursuing the idea of creating an inter-ministerial shared service centre that would take over the accounting functions from the ministries on a *voluntary* basis. Given that the mandated approach to creating such a shared service centre had not been approved by the Cabinet in 2009, the Ministry of Finance pursued a different route and sought to establish an inter-ministerial service centre to which the ministries could hand over support functions on a voluntary basis. Given that the cabinet had been opposed to creating a 'new' public sector organization for offering support services, the Ministry of Finance came up with the idea of utilizing an already *existing* organization for that purpose. Thus, at the beginning of 2011, the Ministry of Finance and the Ministry of Justice agreed to establish a 'State Shared Service Centre' (SSSC) on the basis of the already functioning courts' accounting centre. The Ministry of Justice, in whose governing area the centre had been created in 2005, became the first client of the 'new' centre and handed over all its accounting functions to the SSSC on 1 January 2012. As a result, the Ministry of Justice did not have accountants working within the ministry anymore. Other ministries were also invited to become customers (and hand over their accounting) to the new SSSC. In early 2013, the Ministry of Finance, the Ministry of Economic Affairs and Communications and the Ministry of Social Affairs handed their accounting functions to the horizontal SSSC.

Main impacts and effects

The goals of consolidating financial accounting and creating accounting centres within the line ministries which would provide accounting services to the whole governing area of a ministry were reducing operational expenditures of the public sector, improving the transparency and real-time availability of accounting data and increasing the quality of the financial reporting in the public sector. Although the implementation of the reform is still on-going, some preliminary assessment of the reform impacts and outcomes can be undertaken. On the one hand, according to the National Audit Office (Riigikontroll, 2013), the consolidation of accounting and the adoption of SAP have, for the most part, increased the quality of accounting and evened out inter-organizational differences. On the other hand, it can also be argued that because of insufficient ex ante analysis and implementation obstacles the achievement of some of the reform goals has so far fallen short on the expectations. Furthermore, the reform has also brought about some unexpected negative consequences. The problematic impacts of the reform have been the following:

First, the projected cost reductions have not been realized (e.g. Riigikontroll, 2012). There are several reasons for this. First, although the subordinate agencies had to 'give up' the accounting function and to eliminate the position of an accountant, they still needed to maintain at least one financial specialist who would be responsible for the finances in the agencies and forward the financial information to the parent ministries. Second, the creation of central accounting units within ministries increased the workload of the ministries and more accountants were needed to perform the additional tasks. Third, the project implementation had taken more time than estimated and additional resources were needed for ICT developments.

Second, although the standardization process that was based on the functional requirements of the SAP software has made the central government financial accounting more uniform and broken down the support service provision silos that existed in the decentralized system, the introduction of the SAP together with consolidating the financial accounting into the ministries has not eliminated duplicative functions in all the subordinate organizations of the ministries. Given that some of the subordinate organizations were not satisfied with the standardized ICT solutions imposed on them as a result of the reform, they started to create their own (parallel) data storing systems that would fit better their own information needs (e.g. Riigikontroll, 2012). This unintended effect has clearly undermined the reform goals associated with the 'simplification' of the public sector financial accounting system.

Third, given that the implementation of e-invoices and internet-based user interfaces has been slow, the removal of the accountants from the agencies has led to cumbersome work processes. In the absence of e-invoices, the flow of accounting documents from the agencies to their parent ministries was often organized 'physically' (e.g. by the agency head taking a pile of invoices with him/her when s/he goes to the parent ministry), which has made the process cumbersome and even disruptive at times.

Fourth, because the reform removed the accounting function from the agencies, at least some of the agency heads started to feel that they are missing out on important management information they had so far received directly from their accountants. In small agencies, the accountants had, until 2009, performed the task providing the agency heads with relevant information and assisting managerial decision-making. In other words, the accountants had not just been employees in charge of providing 'technical' information – they had been important carriers of institutional memory and aids to managerial decision-making. The full impact and possible side effects of the consolidation on agencies remain to be seen, as these have not been studied yet.

Fifth, as a result of the removal of the accounting function from the agencies, there are more possibilities for the emergence of accountability gaps in the accounting process. In order to ensure accountability, a clear division of tasks and responsibilities between the central service provider (in the ministry) and the agencies is necessary. Even though this division has been formally established in the organization-specific functional models, the NAO has noted in its audits that after the consolidation reform, neither the service provider nor the client have assumed full responsibility for the correctness of the accounts (Riigikontroll, 2012).

In sum, while consolidation of support services can be conceived of as an instrument for enhancing coordination, the Estonian case demonstrates that it can also present further challenges to coordination, which have to be solved before the reform goals can be fully met. As mentioned earlier, the implementation of the reform is still on-going. Hence, its longer-term impacts still remain to be seen and have to be evaluated in the future.

Lessons learned and policy implications

Although it is too early to draw final conclusions about the consolidation of support services in Estonia since the implementation of the reform is still on-going, the Estonian case can provide useful lessons to practitioners, who are contemplating similar reforms in their countries. In particular, the following lessons can be pointed out:

First, given that consolidation of support functions entails an important change for the public sector, such a reform requires a thorough ex ante analysis in order to make realistic assessments about potential cost savings and to evaluate the potential negative effects such a reform may have on public sector organizations and their work processes.

Second, as the Estonian experience demonstrates, accounting is not just a "technical" function that can be easily removed from an organization, without adversely affecting managerial decision-making. Accountants can often play an important role in supporting the leaders of organizations in their decision-making and, hence, removing the accounting function from the agency may lead to informational gaps.

Third, the implementation of the reform in Estonia also points to the importance of thinking through the technological aspects of consolidating support functions. Without e-invoices and functioning user interfaces, the consolidation of support functions can give rise to cumbersome and disrupted workflows. Hence, the introduction of the necessary technological solutions should *precede* the consolidation process rather than take place in parallel.

Fourth, given that consolidation of financial accounting entails a significant increase in standardization of the service, the idiosyncratic needs of different public sector organizations can remain unmet. As the Estonian case demonstrates, at least some organizations can respond to the imposed standardization of the support functions by creating their own parallel systems, which may lead to additional costs and work against the goal of reducing duplicative activities.

Fifth, although several reform advocates (e.g. consulting companies) argue that consolidating support functions and creating shared service centres will deliver significant cost savings, the Estonian case demonstrates that the projected cost savings can be highly unrealistic. Thus, reformers in other countries should proceed cautiously when estimating the cost reductions associated with consolidating support services.

Sixth, the Estonian case points to the importance of proper change management when implementing such an extensive reform. Because of insufficient communication and hasty time schedules, the implementation of the reform led to confusions and misunderstandings on the part of the ministries and their subordinate agencies and further complicated the management of the project.

Finally, the Estonian case confirms what has been noted by many authors before: a crisis can open a window of opportunity for radical reforms. The timing of the reform proposal is indeed very important: without the help of the financial crisis the line ministries would have unlikely agreed to adopt SAP software for the whole central government.

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Article III

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Shared Services and Cost Reduction Motive in the Public Sector

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ABSTRACT
The intention of this article is to understand whether and how shared service centers can help reduce costs in the public sector context. We identify the sources of cost reduction for shared service centers and discuss the obstacles to making use of them. In order to illustrate and complement the theoretical discussion and the literature review, empirical insights from two Estonian cases are provided. The case studies indicate that when the context is enabling, shared service centers can help reduce back-office headcount. However, the total costs and benefits of the public-sector shared service centers are not calculated and remain unknown.

KEYWORDS
Shared service center (SSC); motives for shared services; cost reduction; public sector; back-office; accounting; case study; Estonia

Introduction

The financial crisis of 2008–2009 and the following recession period have forced governments in Europe and elsewhere to reduce public administration costs. While cutting core public administration functions can be complicated and lead to adverse effects, cutting non-core (back-office) functions may seem to be an attractive or at least a less harmful option. As shared services promise *both* cost reduction *and* better quality of services (Bergeron, 2003; Forst, 1997; IMA, 2000; Janssen & Joha, 2006; Janssen, Joha, & Zuurmond, 2009; Janssen, Kamal, Weerakoddy, & Joha, 2012; Joha & Janssen, 2010; McIvor, McCracken, & McHugh, 2011; Schwarz, 2014; Selden & Wooters, 2011; Shah, 1998; Wagenaar, 2006), reducing public sector expenditures by consolidating back-office functions into shared service centers has become an important trend in public management (Elston, 2014).

The underlying idea of shared services is that routine administrative back-office functions such as finance and accounting, human resources (HR), information and communication technology (ICT), and procurement can be standardized, consolidated and offered as support services by a dedicated service provider (Accenture, 2005; Burns & Yeaton, 2008; A. T. Kearney, 2007; OECD, 2010; Schwarz, 2014). The service provider—shared service center—is a semi-autonomous organization that "has a management structure designed to promote efficiency, value generation, cost savings and improved services" for its internal customers (Bergeron, 2003, p. 3). The range and quality of the services provided by the shared service center are agreed in a service level agreement (Accenture, 2005; Bergeron, 2003; Janssen et al., 2012; Joha & Janssen, 2010; Schwarz, 2014). If the customer is not satisfied with the service, it should be possible to sanction the service provider (Schwarz, 2014). In theory, shared service centers should compete with similar service providers in the open market (Bergeron, 2003; Wagenaar, 2006).

Intuitively, the concept of shared services is very rational. When a number (or all) public sector organizations have some non-core (support) tasks that can be standardized, it seems logical to consolidate these tasks into a shared service center. This relieves organizations from performing these functions by themselves (Schwarz, 2014). As organizations do not have to invest in their support staff and associated ICT anymore, important efficiencies can be generated to increase the quality of support services offered by the shared service center. The modern ICT enables a seamless flow of information and the data that was previously fragmented and dispersed between different organizations is consolidated into a central database and becomes easily accessible (Davenport, Harris, & Cantrell, 2004). As the information is entered into the central system only once, duplication that usually occurred while compiling consolidated reports is avoided (Janssen et al., 2012). And last but not least, the success of business-sector SSCs gives reason to believe that public-sector SSCs can learn from the formers' experience in generating economies of scale and reducing public administration costs (Tomkinson, 2007).

However, while in theory the concept of shared services seems promising and the earlier academic studies encouraged governments to establish SSCs (Borman, 2008;

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Burns & Yeaton, 2008; IMA, 2000; Janssen & Joha, 2006; Tomkinson, 2007; Walsh, McGregor-Lowndes, & Newton, 2008), the more recent studies report substantial problems in public administration sharing arrangements (e.g. AIM, 2012; Economic Regulation Authority, 2011; Dollery & Grant, 2009; Kastberg, 2014; Meijerink & Bondarouk, 2013; National Audit Office, 2012). The decision to introduce SSCs in the public sector entails major transformational changes (Burns & Yeaton, 2008; Janssen et al., 2009; Rothwell, Herbert, & Seal, 2011; Shah, 1998), is risky (Dollery & Grant, 2009; A. T. Kearney, 2007; Su, Akkiraju, Najak, & Goodwin, 2009; Wagenaar, 2006) and, most importantly, it seems that the promoted benefits of sharing arrangements rarely materialize (Dollery & Grant, 2009; Economic Regulation Authority, 2011; Hyvönen, Järvinen, Oulasvirta, & Pellinen, 2012; National Audit Office, 2012; Paagman, Tate, & Furtmueller, 2015).

While cost reduction is usually the main motive for introducing shared services in the public sector (Accenture, 2005; Bangemann, 2005; Becker, Niehaves, & Krause, 2009; Burns & Yeaton, 2008; Dollery & Grant, 2009; Farquhar, Fultz, & Graham, 2005; A. T. Kearney, 2005; Kearney, 2007; Paagman et al., 2015; Schulz, Hochstein, Uebernickel, & Brenner, 2009; Ulbrich, 2006), there is surprisingly little information about whether and how this goal is actually reached (Dollery & Akimov, 2007; Paagman et al., 2015; Schwarz, 2014).

This article aims to investigate whether and how SSCs can reduce costs in the public sector context. Based on the literature on shared services we suggest that compared with the business-sector SSCs the public-sector SSCs have less possibilities to achieve cost reduction. The main sources for cost reduction in the public sector—*cutting the back-office headcount, reducing the cost of ICT and curtailing duplication*—are discussed in detail in the first part of this article.

In order to illustrate the discussion, two SSC projects consolidating financial accounting and payroll in the Estonian public sector are studied in the second part of this article. Estonia offers an interesting context for studying cost reduction as during the financial crisis (that started in 2008/09) Estonia stood out as one of the very few states in Europe that managed to keep its costs under control (Raudla & Kattel, 2011). The projects that we study were launched during the financial crisis and cost reduction was an important motive for these projects. Both projects were implemented top-down within a tight time-frame. As there were no substantial implementation obstacles that public-sector SSCs usually face, these case studies can be seen as extreme cases for studying the cost reduction motive in the public sector context.

Motives for establishing shared service centers

Business-sector SSCs

Shared service centers (SSCs) are wide-spread throughout the business sector. The trend of establishing SSCs for internal back-office functions such as accounting and payroll, human resource management (HRM), and ICT took off in the 1980s (Elston, 2014; Häusser, 2013). It was driven by large corporations that decided to cut their operational expenditures in order to become more competitive in the global market (Häusser, 2013). Since the 1980s, the number and size of SSCs has been growing at an increasing rate. It is estimated that currently more than 90% of all large Western companies have consolidated their back-office functions into SSCs (Helbing, Rau, & Riedel, 2013).

There is a range of benefits that an SSC could provide for a company: cost reduction, better services, improved management capacity, increased efficiency and economies of scale, and reduced personnel requirements (Helbing et al., 2013). However, the main motive for creating an SSC is cost reduction (Häusser, 2013; Reilly, 2014; Stephenson, Becker, Lange, Rau, & Riedel, 2013).

The estimations of the potential cost reduction after successfully implementing an SSC vary. As consulting companies and ERP (enterprise resource planning) vendors refer either to the “cost reduction potential” or to the cost reduction achieved in the “best practice organizations” there is little information about actual cost savings and possible cost overruns. While Strikwerda (2014) suggests that direct cost savings owing to the deployment of shared service centers vary between 25 and 70%, a study of 500 major German companies from different sectors shows that after the implementation of an SSC it was possible to save 5–30% annually (Lueg, 2013). However, after more than three decades of implementing SSCs, the precise mechanisms of achieving cost reductions are still not well known (Strikwerda, 2014).

It can be argued that multinational companies, the pioneers of SSCs, have a potential to gain most from SSCs. First, if companies have branches in many countries, they need to comply with a heterogeneous set of accounting and tax regulations, which increases complexity (Helbing et al., 2013). Creating an SSC for financial accounting in one country means that the company does not need to employ accountants for all its branches anymore as accounting data is standardized and consolidated into an SSC with less effort and cost (Helbing et al., 2013; Shah, 1998; Tomkinson, 2007). Second, a company can benefit from relocating its SSC to a country with low-cost but skilled workforce (Le Goff, 2005; PWC, 2013;

Reilly, 2014). As ICT systems enable instant connections and telecommunication costs have become marginal, back-office work is often sent to China, India, the Philippines and other countries with lower wages (Helbing et al., 2013; Reilly, 2014). In Europe, Hungary and Poland have become most attractive locations for SSCs (PWC, 2013). Hence, substituting the existing back-office staff with low-cost workforce seems to have been an important strategy for multinational companies to cut back-office costs.

Public-sector SSCs

Following the success in the business sector, SSCs have gained ground in the public sector as well (Janssen & Joha, 2006; Ulbrich, 2010a). The Canadian public sector is known as a pioneer in sharing back-office services and many other governments (Australia, the UK, the US, Denmark and The Netherlands are among the leaders) have taken the same road. One could even say that creating public-sector SSCs has become a "mega-trend" (Elston, 2014).

The economies of scale that have arisen from sharing services in the business sector are expected to materialize also in the public sector and similarly to the business sector the main argument for establishing the public-sector SSCs is cost reduction (Dollery & Grant, 2009; Janssen et al., 2012; A. T. Kearney, 2005; Paagman et al., 2015). According to Farquhar et al. (2005) shared services can save 20% or more on internal services. While different cost reduction estimates exist (e.g., Accenture, 2005; Burns & Yeaton, 2008; Gershon, 2004; A. T. Kearney, 2007), the 20% cost-saving potential is often taken for granted when public-sector SSCs are initiated (Hyvönen et al., 2012).

Similarly to the business-sector SSCs, cost reduction is not the only argument for public-sector SSCs. The literature reviewed by Paagman et al. (2015) shows that while cost reduction is more important than any other motive, other goals such as improving the quality of services, improving efficiency and effectiveness, standardization of processes, focus on core competencies, concentration of innovation, improving customer orientation, exchange of internal capabilities, improved control, consistent management information, compliance with legislation and standards, and mitigation of risk are also referred to as arguments for introducing shared service centers in public administration (Paagman et al., 2015).

In addition to these commonly stated motives, the establishment of SSCs is also considered as a tool to reduce fragmentation and redundancies in public administration. The consolidation of back-office functions into SSCs means that different back-office functions and practices in different public administration organizations have to be streamlined. Simpler and streamlined processes, in turn, can contribute to the whole-of-government approach (Dollery & Grant, 2009). Therefore, it is not surprising that in addition to consulting companies, ICT providers and specialist networks, also the OECD promotes establishing public-sector SSCs (OECD, n.d., 2011).

The multitude of motives for SSCs has led to a common, but still rather underestimated problem. Namely, when it is not possible to fulfill the main motive (cost reduction), the initiators of an SSC can claim that other motives were (or became) more important (Hyvönen et al., 2012; Janssen & Joha, 2006; Paagman et al., 2015; Raudla & Tammel, 2015; Ulbrich, 2010a). This makes the assessment of the SSC concept difficult. Compared to downsizing, for example, which explicitly aims to reduce the number of staff, an SSC can be considered to be successful even if the number of staff remained the same or increased. As many motives of the SSC are intangible (e.g., modernization of government, improved quality, exchange of internal capabilities, improved control, etc.), the accomplishment of all SSC motives cannot be easily measured. Hence, out of all the motives for SSC, the cost reduction motive seems to be the only one that could and should be measured.

Public-sector shared service centers as instruments for cost reduction

The advocates of SSCs generally do not see much difference between business and public sector back-office functions and suggest that the same practices that are successfully implemented in the business sector could lead to cost reduction in the public sector (Burns & Yeaton, 2008; A. T. Kearney, 2007; Kamal, 2012; KPMG, 2012; Oracle, n.d.; Walsh et al., 2008). Public sector is targeted both by the consulting companies and ERP vendors as an important SSC market; therefore, there is a wide range of "best practice" studies that refer to important efficiency gains that sharing services has already produced or is expected to produce in the nearest future (Burns & Yeaton, 2008; A. T. Kearney, 2005, 2007). For example in Canada, "dramatic and sustained positive turn-around at most levels has delivered budget surpluses (except at the municipal level)" (A. T. Kearney, 2007, p. 4).

In order to illustrate the low efficiency of the existing public sector organizations it has become customary to refer to the performance of the "best in class" organizations. Just one example: according to Oracle, the "best in class" organizations spent 0.75% of their total expenditure on human capital management and finance. Compared with typical public sector organizations whose costs are 2.5% of total spending, a huge potential for savings and service quality improvements is seen (Oracle, n.d.).

However, compared with business sector companies the public sector organizations do not have the same tools or mechanisms at their disposal for achieving substantial cost reduction with their SSCs. Public sector organizations in one country are already working within the same jurisdiction. Also, usually public-sector SSCs cannot be relocated to another country in order to reap benefits from salary differences (Accenture, 2005). Moreover, compared to multinational corporations, public sector organizations tend to be relatively smaller and recovering the costs of setting up an SSC is more difficult for smaller organizations (Paagman et al., 2015; Zabel, 2013) as "efficiency gain is the result of economies of scale, which pleads for the largest possible SSC" (Wagenaar, 2006, p. 359).

These differences between public- and business-sector SSCs, however, are generally overlooked in the consultant literature and the introduction of SSCs in the public sector is thus expected to lead to rationalization (A. T. Kearney, 2005), efficiency gains, and economies of scale (Borman, 2010). Little information exists about what it takes to attain these benefits. Essentially, it can be assumed that when SSCs are used as instruments for cost reduction, there are three basic sources of cost reduction: cutting the number of public-sector employees, reducing the number and cost of back-office software, and curtailing redundant processes. We discuss these sources in turn below.

Reducing back-office headcount

Unlike businesses, governments usually do not have a possibility to relocate their SSCs to another country with low-cost and skilled workforce in order to save costs (Accenture, 2005). Therefore, public sector organizations can reduce costs by cutting the number of back-office employees. Handing the back-office functions over to an SSC means that in-house back-office employees may not be needed anymore. Hence, headcount reduction seems to be one of the main (if not the main) sources of cost reduction for public-sector organizations (Ahmed, 2014; Dollery & Grant, 2009; Paagman et al., 2015), ranging from 50 to 80% of the overall SSC benefits (A. T. Kearney, 2007).

However, reducing headcount in the public sector context is often complicated (Paagman et al., 2015). Compared to the business sector where layoffs are common, public sector employment is usually more strictly regulated. Moreover, in order to guarantee their neutrality, civil servants often enjoy special status or a life-time tenure (Bossaert, 2005).

The case studies of Ulbrich (2010a, 2010b) show how public sector job security hindered the establishment of SSCs or centers of excellence in Sweden. Even though the life-time tenure did not officially exist in the Swedish public sector anymore, it was not possible to force civil servants to move to another location in order to work in the newly established center of excellence (Ulbrich, 2010b). As the existing back-office staff resisted moving to another location, new staff had to be hired for the SSC (Ulbrich, 2010b). Therefore, instead of reducing the number of back-office employees, the introduction of an SSC actually *increased* the headcount. Also in Finland, the promise to secure jobs for the existing back-office staff and to cut accounting costs by 20% at the same time turned the cost-saving argument an unachievable myth (Hyvönen et al., 2012). An ongoing large-scale ICT consolidation project in Canada shows how the job conditions and the terms of the existing ICT support staff are protected by law and an active union (May, 2014). Hence, public sector organizations often need to compromise and forgo the potential benefits in order to achieve balance between two competing and inherently contradictory priorities: maintaining employment and maximizing efficiencies (KPMG, 2015).

Reducing the number of ICT systems

Traditionally, public sector organizations have been free to choose their (back-office) software according to their own needs and preferences. However, as public sector organizations are relying more and more on ICT systems, the costs of procuring, maintaining and developing different ICT systems are constantly increasing. Therefore, reducing the number of different back-office ICT systems is central to the introduction of an SSC and the adoption of a new technology plays critical role in realizing the benefits (Oracle, n.d.; Tomb, 2006).

The new technology chosen for shared services is usually an ERP system[1] (Accenture, 2005; Bangemann, 2005; Borman, 2010; Borman & Janssen, 2013b;

[1]Enterprise resource planning (ERP) system is an integrated modular ("out-of-the-box") software from global vendors such as SAP, Oracle, and Microsoft Dynamics. An ERP system consolidates the data from different organizations into one database (Dempsey et al., 2013). Public administration ERP could be called Government Resource Planning (GRP) systems; however, this term is not used by software producers (Ziemba & Obłąk, 2013).

Dempsey, Vance, & Sheehan, 2013; Hyvönen et al., 2012; National Audit Office, 2012; Sedera & Dey, 2007). If organizations already employ ERP systems, they usually decide to upgrade to a newer version of the ERP application through the shared services initiative (Sedera & Dey, 2007).

ERP implementations are notorious for lengthy delays and cost overruns (KPMG, 2011; Sedera & Dey, 2007) and have a high potential to fail.[2] Implementation of an ERP system is not an ordinary adoption of an information system (Aloini, Dulmin, & Mininno, 2007; Grabski & Leech, 2007; KPMG, 2011; Microsoft & GFOA Consulting, 2012; Sangster, Leech, & Grabski, 2009). While an information system is usually customized for an organization and corresponds to its specific needs, an ERP is a complex system that embodies process-oriented 'best business practices' (Shah, Khan, Bokhari, & Raza, 2011; Soh, Kien Sia, Fong Boh, & Tang, 2003). Organizations that implement ERP systems have to transform themselves to be fit for the new system (Shah, Khan, Bokhari, & Raza, 2011; Soh et al., 2003).

Even though technically ERP systems can be modified and customized, it is not advisable to do so, as this would reduce the possible benefit of an ERP implementation, render future upgrades of the ERP system difficult and add substantial (unanticipated) cost to the implementation project (Dempsey et al., 2013; Sedera, Rosemann, & Gable, 2001).

There are several examples of unsuccessful public-sector ERP implementations (Economic Regulation Authority, 2011; Microsoft & GFOA Consulting, 2012; Shah et al., 2011; Wagenaar, 2006). For example, in its attempt to introduce a common ERP system and to consolidate back-office functions into an SSC, Western Australia failed to accommodate the different human resources and financial needs of participating departments (Borman & Janssen, 2013a; Economic Regulation Authority, 2011). The project was cancelled and Western Australia lost hundreds of millions of dollars (Borman & Janssen, 2013a; Economic Regulation Authority, 2011). Learning from the failure of Western Australia, Canada decided to create an SSC *without* introducing common ERP software (Buckler, 2011). However, the Canadian case shows that even if the SSC does not aim to employ a common ERP system, substituting different ICTs—in the Canadian case rolling 63 e-mail systems into one—is a challenging endeavor (Auditor General of Canada, 2015; Buckler, 2011; The Public Servant, 2016).

Reducing redundant activities and duplication

An SSC is expected to reduce duplication as it provides the opportunity to gather routine functions from multiple sites into a competent service-oriented center (Institute of Management Accountants (IMA), 2000). When routine administrative functions are gathered into an SSC, governmental organizations can focus their resources on high-impact activities and produce improved outcomes at lower cost (Accenture, 2005). End-to-end processes are redesigned, standardized and automated as much as possible in order to reduce the need for staff intervention and also the time to complete a process (Accenture, 2005). The principle of one-time-insertion of data eliminates many previously necessary tasks and functions. As many of the previous routine tasks and controls can be automated, an important amount of resources can be released.

However, cutting redundant activities and duplication presumes changing the way the public sector works. Introducing an SSC together with a common (ERP) software requires changing existing business processes (KPMG, 2011; Sangster et al., 2009; Singla, 2008). Business process reengineering "is characterized by fundamental, radical, and dramatic changes" (Ulbrich, 2006, p. 195) and similarly to ERP projects, BPR initiatives have a high failure rate (Singla, 2008).

It has been advised that business process reengineering should precede the ERP implementation (KPMG, 2011; Tomb, 2006). Quite often, however, business processes are changed in parallel with the SSC project or remain unchanged (Davenport et al., 2004; KPMG, 2011). When the existing procedures and routines are considered important and need to be retained, it is difficult to reduce activities that at first sight seem redundant. However, retaining old processes and procedures while establishing an SSC leads to adverse effects and increases administrative costs instead of reducing them (Wagenaar, 2006).

The establishment of an SSC also means that many processes that were carried out in-house will be shared between the SSC and its "customer." However, when there is no clear ownership of a process, it is difficult to optimize it. Hence, even if an SSC optimizes its internal processes, the whole (end-to-end process) may become more cumbersome and costlier than it was before (Jäckle & Wolf, 2013; Kastberg, 2014; Reilly, 2014). In order to overcome this problem it has been advised to integrate more functions (in addition to transactional

[2]Depending on the author and the concept of what failure means, the ERP failure rate ranges from 40–90% (Aloini et al., 2007; Khaparde, 2012).

functions also mid-office functions[3]) into an SSC so that the SSC would own end-to-end processes (Ernst & Young, 2013; Jäckle & Wolf, 2013). Hence, in order to achieve efficiency gains from business-process reengineering, an SSC may have to grow beyond the initially envisioned organization (Ernst & Young, 2013; Jäckle & Wolf, 2013).

How to measure cost reduction?

Measuring the value contribution of shared services is crucial as stakeholders need to understand its actual benefits (Accenture, 2005; Häusser, 2013). SSCs are expected to produce both intangible and tangible benefits. While intangible benefits (such as productivity gains, modernization of government, knowledge sharing, and better quality of information) are difficult or impossible to measure (OECD, 2010), cost reduction is a tangible benefit that should, in principle, be easily measured in monetary terms (Ulbrich, 2013).

However, as cost reduction is only one among many benefits attributed to an SSC, measuring the attainment of cost reduction is not always prioritized. For example, Hyvönen et al. (2012) noted that once the SSCs were created, the initiators of SSCs were not required to provide any ex post calculations.

In theory, measuring cost reduction is simple. Just as any other major project, the introduction of an SSC is based on a project plan (or business case) that outlines the rationale and costs and benefits of an SSC, sets project deadlines, responsible persons and project indicators. Measuring the success or failure and the actual costs and benefits of an SSC should be based on a business case. In order to be able to measure cost reduction, it is necessary to create baseline measures of the initial cost of services, customer demands and levels of satisfaction with services as they are being delivered *before* SSC initiation (Farquhar et al., 2005; Strikwerda, 2014).

In practice, drafting the business case seems to be the first major challenge for public sector organizations. As public sector organizations lack experience and expertise on SSCs (and ICT systems) (Accenture, 2005), assessing the savings potential or drafting a business case is often left for external consultants (Hyvönen et al., 2012; Janssen, 2005; Microsoft & GFOA Consulting, 2012; Raudla & Tammel, 2015). Interestingly, the projected cost reduction in a business case does not necessarily need to be supported by actual calculations (Hyvönen et al., 2012). Rather, it can be based on a cost reduction myth (Hyvönen et al., 2012) or examples from “best practice organizations” (Raudla & Tammel, 2015).

It seems that measuring cost reduction is a challenging endeavor both for business- and public-sector SSCs (Reilly, 2014; Strikwerda, 2014). For example, when analyzing cost reduction achieved by business-sector SSCs in Hungary, the PWC concluded that “SSCs reported considerable cost savings provided that they can measure it” (PWC, 2013, p. 24). In case of local governments, the Victorian Auditor-General noted that “Even though most councils identified cost savings as an expected benefit, they often could not quantify the expected cost saving actually delivered. They were unable to set a benchmark for delivery, or measure whether this benchmark had been met.” (Victorian Auditor-General, 2014, p. 27).

A related question is *who* should measure cost reduction. Currently, consultancies carry out most of the measurement and benchmarking studies. When consultancies report about the best SSC practices and cost reductions achieved, they usually rely on surveys. Therefore, most of the available empirical evidence we have of cost reduction is based on surveys and case studies rather than on standard econometric analyses on service-by-service basis (Dollery & Akimov, 2007).

Usually SSCs themselves are required to gather and provide information about achieved cost reduction. Performance measurement and benchmarking are considered to be vital to the success of an SSC (Accenture, 2005). However, when an SSC has to prove its efficiency and effectiveness, there is a threat that an SSC is concerned only about the effectiveness of its internal organization and the costs remaining in the customer organizations are not considered (Strikwerda, 2014). Also, the unanticipated implementation costs of customer organizations can be overlooked (Economic Regulation Authority, 2011; National Audit Office, 2012).

Alternatively, not the SSC itself but the customers may be required to constantly monitor the value of shared services (CIO, 2013). This situation is more likely to occur when there is more than one service provider. In that case, customers are obliged to ensure that they buy services from the most competitive service provider.

In addition to consulting companies, SSCs and their customer organizations, national audit authorities can measure the benefits of an SSC. This option has the potential to offer the most holistic and impartial view.

[3]For example, within the finance function these mid-office functions can be treasury, management accounting, and analytics (Ernst & Young, 2013).

Case study

Method

The two case studies from Estonia are based on longitudinal research that started in 2012. The article covers the period of 2009–15. The sources of information include different types of documents such as internal reports, official documents, press releases, exchanges of emails, media articles etc. Additional information was gathered via semi-structured interviews. The key informants for interviews were selected using the snowball method. This method was considered suitable as it enabled to identify the most relevant and informed persons who were involved in designing and implementing the two shared service centers. Interviews were conducted until relevant information was repeated and confirmed by two or more interviewees. The interviews lasted approximately 1–2 hours. Altogether 10 interviews were conducted. All interviews were recorded and transcribed.

For the first case (county governments) the interviewees were top officials (of the Ministry of the Interior) who designed and implemented the SSC. Also the Minister of the Regional Affairs and the head of the SSC were interviewed in order to complement the documented project information.

For the second case (the central government) the interviewees were the top officials who were involved in the initiation and implementation of the project. Most of the interviewees were from the Ministry of Finance where the SSC was initiated. Additionally, top-level civil servants from other ministries were interviewed.

Background and the common features of the two SSC cases

In 2009, in the middle of the financial and fiscal crisis in Estonia, two SSC projects were launched. The first SSC project concerned the county governments while the second encompassed all central government organizations. An important motive for both projects was cost reduction (reducing the number of accountants and HRM staff); however, other motives such as introducing a common software (SAP ERP), standardizing and improving the quality of accounting, reducing duplication and modernizing public administration were also central.

Both projects were designed and implemented using a top-down approach. The design process was hidden from the public view and also from the organizations whose back-office functions were to be consolidated into an SSC. Both projects were seen as internal reorganizations that aimed at improving public administration. The project drafters had a pragmatic approach toward the consolidation and engaged only key persons (mostly from the top level of administration) to the SSC design process (see Tammel (2015) for more information). There was no wide communication of the reform plan and the approval of the legislature was not necessary.

Big-bang implementation strategies were chosen for both projects, although due to some drawbacks, the implementation of the central government SSCs became incremental (see Raudla & Tammel (2015) for more information). The participation in the consolidation projects was mandatory for all target organizations. Back-office functions that were to be consolidated into an SSC were accounting and HRM, with a possibility of additional functions in the future.

SSC for county governments

There are 15 county governments in Estonia. Their role is to represent the central government in Regions; therefore, they are not elected bodies but under the Ministry of the Interior.[4] Depending on the priorities of the central government, there can be more than one Minister heading a line ministry. In 2009 the Ministry of Interior was headed by two Ministers: the Minister of the Interior and the Minister of the Regional Affairs.

The Minister of the Regional Affairs gave the mandate to launch the project consolidating accounting and HRM from all the 15 county governments into one SSC. As the consolidation was seen as an internal administrative matter, it did not need approval of the central government. It has to be noted that there was almost no opposition to the plan to reduce the back-office headcount of county governments. To some extent this can be explained by the timing of the project: in 2009 several austerity measures were adopted in response to the financial crisis (see Raudla & Kattel (2011) for more information). For many, the project was one of the cost saving measures.

According to the project profile that was drafted by the top officials of the Ministry of the Interior, the main goals of the project were the improvement of the quality of financial reporting, ensuring better comparability of core functions, introduction of the SAP ERP, and a general reduction of working hours spent on accounting and HRM. Also, the project was seen as improving the preparedness of the Ministry of the Interior for the central government SSC that was being planned at the time the project profile was drafted.

The SSC for county governments was expected to become a center of excellence and the efficiencies were expected to arise from the fact that while the accountants

[4]Since fall 2015 under the Ministry of Finance.

of county governments fulfilled also other tasks, the staff of the SSC was to be fully dedicated to accounting and HRM.

In addition to the efficiencies arising from the professional staff, the deployment of common accounting software was seen as an important source of efficiency. A common database was expected to enable more efficient reporting, control, analysis, and securing and managing the data.

The SSC was established in 4 months. The project completion deadline was 01.01.2010 and it was not exceeded. Due to the considerations of regional development, the SSC was established outside the capital. The choice of location was mainly determined by the availability of a capable project leader and necessary office space for the SSC. The SSC was based on the accounting department of one county government. The former head of the accounting department became the project leader and the head of the SSC. The project leader considered the emotional side of the implementation process most demanding. She had to manage with turf issues, tensions, resistance and blaming.

The accountants of the county governments were aware of the fact that they would all be dismissed. Part of the plan was that the existing back-office staff from different county governments was not to be relocated; instead, new accounting and HRM personnel was recruited for a SSC and a competition to get a job in the SSC was tough. Every county government was allowed to recruit one financial specialist. The financial specialist (who was often the former head of accounting department of the county government) served as a link between the SSC and county government. The financial specialist also drafted the budget plan and advised county governors on financial matters.

According to all the interviewed top officials of the Ministry of the Interior and the head of the SSC, the establishment of the SSC is viewed as a great success. Although it is acknowledged that the county governments suffered at the beginning since they did not get all the necessary management information from the SSC, the situation is improving gradually and the SSC tries to take into account the proposals of the county governments.

To conclude, the case of county governments was in essence rather simple:

(1) County governments were homogenous and strategically not the most important public sector organizations, so their informational needs could be overlooked (at least for some time).
(2) The consolidation project fell under a single ministry and there was no political resistance to the project.
(3) ICT was readily available and the know-how for the adoption of SAP ERP was provided by the Ministry of Finance.
(4) The timing of the project was good—the financial crisis of 2008–09 opened the window of opportunity.
(5) The short implementation time (less than 4 months) and the ability to dismiss staff contributed to the achievement of the set goals.

As for the cost reduction, it has been easy to count the reduction of the number of back-office staff. However, it is not as easy to calculate the overall costs and benefits of the project. For example, as SAP ERP is offered and developed by the Ministry of Finance, there is no clear overview of the total cost of the ICT (and ICT staff). It is also unclear what the effect of consolidation on the internal processes of county governments was. More research is needed to verify the financial effect of the reduced availability of accounting information for the functioning and performance of county governments.

SSC for the central government

In 2009 the Ministry of Finance proposed to establish an SSC that would provide financial accounting and payroll services to all central government organizations in Estonia. The proposal was not unexpected as the efforts of the Ministry of Finance to consolidate public sector accounting had already a long history that started in the 1990s (see Raudla & Tammel (2015) for more information).

While the previous incremental consolidations of accounting concerned mostly small organizations with less than two accountants, the project drafted in 2009 aimed at consolidating the financial accounting from all line ministries and constitutional bodies. While the previous consolidations were implemented mainly in order to improve the quality of accounting, the project proposed in 2009 had cost reduction as one of its central implementation motives.

In order to draft the project plan, the Ministry of Finance hired a consultant. The initial project plan was drafted in 2 months. It included benchmarking data from an internal database of a consulting company. The world's best practices were used to estimate the optimal number of public sector accountants. In comparison to those, the Estonian public sector was seen as inefficient and having a considerable potential for optimization (Tammel, 2015).

The draft project plan never materialized as the following discussions in the Cabinet revealed that there was no consensus about the plan. However, by the end of 2009, the Cabinet gave a mandate to the Ministry of Finance to start with consolidating financial accounting and HRM to ministerial level and to introduce SAP ERP in all ministries and constitutional bodies. The Ministry of Finance was to report annually about the progress of the project. Even though the project had to be completed by the end of 2013 (in 3 years), it is still ongoing (in 2016).

The reports submitted to the Cabinet in April each year indicate that the expected cost savings have not materialized. The first cost-related goal was to reduce the number of public sector accountants by 10% each year over the period of 2010–13 (altogether 40%: from 600 to 360). The second cost-related goal was to reduce the overall cost of public sector accounting by 40% by the end of 2013.

The Ministry of Finance was convinced that until there was no common SSC it would be difficult to realize the expected economies of scale. When every ministry retained their own internal SSCs, offering services for the ministry and the subordinate agencies, it was difficult to reduce the overall number of accountants. The number of accountants has not decreased notably because every organization needed to retain at least one financial specialist who would support the head of the organization in the issues of budgeting and finance. The financial specialist also serves as a link between public sector organization and the accounting center.

In order to return to its initial plan the Ministry of Finance decided to establish a horizontal SSC (see Raudla & Tammel (2015) for a typology of reform models for creating SSCs). The State Shared Service Center (SSSC) was established in 2012 under the Ministry of Finance. Until spring 2015 the SSSC provided services for four ministries and it was developed to become a center of excellence with an in-house SAP support team and financial accounting policy formulation capacity. However, as using the services of an SSSC was not mandatory, it proved difficult to convince the other ministries to give up their accounting and HRM functions. In spring 2015, shortly after general elections, the newly elected government decided to make the services of the SSSC mandatory for all central government organizations.

Currently, the central government SSC project is ongoing and should be completed by 2018. Until now, no interim evaluation and cost-benefit analysis of the project has been carried out. The government believes that the SSSC is capable of producing economies of scale even though the annual overviews of project implementation progress compiled by the Ministry of Finance (SSSC) have not provided any detailed cost-benefit analysis.

According to the Ministry of Finance, the consolidation has produced efficiencies as the SSSC is able to perform more transactions with fewer human resources. As organizations transfer their financial accounting and HRM budgets to the SSSC together with staff, the SSSC achieves efficiencies by optimizing its internal processes and cutting redundant headcount.

Discussion

In the theoretical part we suggested that there are three main avenues via which public-sector shared services can achieve cost reduction: cutting headcount, lowering the cost of ICT and curtailing duplication. The two Estonian case studies were used to examine whether and how can public-sector SSCs reduce public administration costs.

While reducing public-sector headcount is often complicated, laying off redundant back-office staff did not pose major problems in the Estonian context. Both the SSC for county governments and the SSC for central government were able to reduce back-office staff. The case of county governments was especially extreme as all accountants were dismissed and an open competition was announced for positions in the newly established SSC. The central government SSC managed to reduce back-office headcount after the staff from customer organizations was relocated to a SSSC. The optimization of internal processes and reorganization of work in an SSSC enabled detecting and laying off redundant staff.

As for reducing the cost of ICT, there is a lack of reliable data and analyses. There are several reasons for that. Firstly, and perhaps most importantly, there seems to be no general interest in verifying whether the new ICT together with a common ERP is cheaper than the previous system. Secondly, as the new ICT system is very different from the old system, verifying the cost difference is complicated and can result in comparing apples with oranges (or Ladas with Mercedeses as suggested in Hyvönen et al. (2012)). Thirdly, as the ICT is being continuously developed (Davenport et al., 2004), it could be impossible to state when the system is finally ready.

As for the cost reduction that is supposed to result from curtailing redundant processes and duplication, it is also difficult to measure in monetary terms. There are some indications that during the SSC implementation duplication actually increased. However, this was never recorded, measured and taken into account by SSCs in their cost-reduction calculations. Additionally, as all public sector employees are going to insert their personal data, vacation applications, secondments etc. into the system by themselves, it means that some of the former *back*-office functions are carried out by the *front*-office staff. The question of how to measure the costs related to the adoption of internet-based self-service interfaces for public sector employees seems to be generally overlooked both in practice and in the SSC literature.

To conclude, it is important to note that while both SSCs in Estonia are claimed to have reduced public administration costs, only the number of accountants and HRM staff has been taken into account when calculating headcount reduction. The cost of external consultants, the increasing number of ICT staff, and overall ICT expenditures have been left out from calculations. Also, the costs of customer organizations that go through the transformative change process and may have hired support staff to compensate the loss of their accountants and HRM staff have not been taken into account.

Conclusion

While cost reduction is the main motive for establishing SSCs, there is a lack of hard evidence to support this claim. At the time when creating public administration SSCs has become increasingly popular, both governments and academics need better understanding of how the concept of SSC plays out in different public sector contexts and whether it can meet all expectations. The aim of the current article was to study whether SSCs can be effective instruments for cost reduction in the public sector.

In this article, we argued that compared to their counterparts in the business sector public-sector SSCs have less possibilities to achieve cost reduction. In essence, there are three main sources for cost reduction: cutting the back-office headcount, reducing the cost of ICT and curtailing duplication. The review of the existing literature showed that public-sector SSCs may face important obstacles to making use of these sources. In order to explore further whether and how these avenues are used in practice, two case studies were carried out. The results of the case studies indicate that the reduction of the number of back-office employees is achievable when the public sector context enables instant dismissal of the public sector staff.

However, the main conclusion is that there is no appropriate methodology to calculate the overall costs and benefits of public-sector SSCs. Therefore more in-depth empirical research is needed in order to verify whether the widely circulated and promoted best-practice public sector cases have succeeded in generating real cost savings or just shifted the initial costs of back-office functions elsewhere.

The research has two main limitations. The first limitation is that only Estonian cases were studied. Currently, single-case and -country studies prevail in the SSC literature. This renders cross-country comparisons difficult. However, as public-sector SSCs differ and there is no coherent population of public-sector SSCs, mapping different SSC contexts and configurations is essential in order to understand the practice variation of the concept. As there is a lack of knowledge of Estonian SSC practices, our article aimed at addressing this empirical gap.

Second, our article concentrated only on the cost reduction motive. This focus was chosen because the SSC literature shows that cost reduction is often the main motive for establishing SSCs. However, SSCs have usually many other motives that can be considered as important as cost reduction. For example, the central public-sector SSC issues such as the quality of services and modernization of government (or whole-of-government) have not been discussed in this article. However, this limitation enabled deeper examination of a single and most important SSC benefit: cost reduction. Future research is urged to focus also on other SSC motives in order to explore whether and how the motives for a public-sector SSC materialize in practice.

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Article IV

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Collective Institutional Entrepreneurship in Initiating Public-Sector Shared Service Centers

Kaide Tammel

Abstract

The last decade has witnessed an increasing emergence of shared service centers (SSCs) in the public sector. While the motives for an SSC and its implementation challenges have received sufficient scholarly attention, little is known about the processes that lead to the introduction of the SSC model in the public sector. The aim of this research is to explain the initiating stage of public-sector SSCs within one organizational field (public-sector financial accounting). The research is guided by institutional entrepreneurship and designed as a multiple-case study. The findings of this research indicate that the public-sector SSCs are initiated by a small group of change agents who only collectively have the necessary skills, knowledge and position to change the organizational field. Rather than using a collaborative strategy suggested by the SSC literature, the public-sector SSCs are initiated as centralizations.

Keywords: centralization, financial accounting, institutional entrepreneurship, public sector, shared service center

1. Introduction

Creating shared service centers (SSC) for back-office functions has become one of the most popular trends in public management. Looking at the scale of public-sector SSC implementations, it is suggested that we are facing an international "mega-trend" (Elston 2014). The SSC concept is attractive for two main reasons: consolidating services into service centers (or centers of excellence) is expected both to reduce costs and to raise the quality of these services (Janssen 2005; Wagenaar 2006). However, the literature also shows that creating public-sector SSCs is a challenging endeavor and has a high risk of failure (Wagenaar 2006; Knol et al. 2012; Kastberg 2014). This should make governments cautious and unwilling to initiate SSC projects. That the opposite is the case, necessitates some explanation.

Currently, empirical insights are lacking in how the public-sector SSCs are initiated and what the role of change agents in this process is (Hyvönen et al. 2012 is a rare exception). The initiating stage of shared service projects and the motives for choosing this sourcing strategy tend to be "murky, hidden behind euphemism, perceived differently by various stakeholder groups, and generally not easily analyzed" (Hirschheim and Lacity 2000, cited in Janssen and Joha 2006, 105). In order to explain the initiating stage of public-sector SSCs, more empirical evidence from different jurisdictions and organizational fields is needed. The aim of this research is to try and fill the gap.

Looking at three case studies from different levels of administration I aim to explain the initiation of public-sector SSCs within one organizational field – public-sector financial accounting. All case studies are from the same jurisdiction and country – Estonia – that can be considered a representative of post-Communist states with a distinctive public-administration-reform context (Verheijen 2007). The Estonian public-administration-reform context is described in detail in chapter 3 of this paper. Understanding the reform context and background of the cases is necessary as public-sector organizations rarely emulate new management ideas (such as SSC) in their entirety but translate these ideas and concepts to fit their individual conditions (Ulbrich 2010).

The research is designed as a multiple-case study. Data are collected through document analysis and interviews. The study is looking for answers to the following research questions:

1. How are public-sector SSCs initiated?
2. What is the role of change agents (institutional entrepreneurs) in initiating public-sector shared service centers?

The empirical research is guided by the insights from institutional entrepreneurship that aims to explain how individuals and organizations change the institutions in which they are embedded (Dacin et al. 2002). Since 1988, when DiMaggio introduced interest and agency in institutional theory (DiMaggio 1988), the research on institutional entrepreneurship has focused on the role played by the active agency in changing the organizations and organizational fields. The theory suggests that in order to succeed, an institutional entrepreneur must occupy subject positions with wide legitimacy and bridging diverse stakeholders, theorize new practices through discursive and political means and to institutionalize these new practices by connecting them to stakeholders' routines and values (Maguire et al. 2004).

The findings of this research indicate that rather than using a collaborative strategy that involves all stakeholders the public-sector SSCs are initiated by a small group of change agents who only collectively have the necessary skills, knowledge and position to change the organizational field. Embedded change agents (key accountants) may advocate and provide important input to the SSC initiation, but are not able to initiate SSCs without other (external) change agents who are better positioned to theorize new practices through discursive and political means. The strategies of the small group of change agents can be termed collective institutional entrepreneurship.

The findings of the current study also reveal that the intention of the change agents was to centralize back-office functions, and the concept of SSC and its advantages compared to centralization were not considered. This finding has wide implications as it leads to the question whether the public sector is currently dealing with a wave of new (and developing) client-oriented collaborative strategies or a wave of (re)centralization.

The paper is structured as follows. Firstly, I outline the concept of SSC and its initiation recommendations from the SSC literature. Secondly, I look at the possible explanations for endogenous change offered by institutional entrepreneurship. Thirdly, I present the case studies. Finally, I discuss the findings and their contribution to the existing knowledge on public-sector SSCs.

2. Theoretical framework

2.1 The concept of shared service centers

The concept of shared service centers emerged in the private sector in the 1980s when big corporations started to consolidate separate business units of their branches into a single unit (Walsh et al. 2008). The public sector (led by Canadian and Australian state administration) began similar restructuring in the mid-1990s (Elston 2014).

While there are a number of definitions for shared service centers (see, e.g., Bergeron 2003; Wagenaar 2006; Schulz and Brenner 2010; Janssen et al. 2012), the definition of Bergeron (2003) is one of the most frequently cited in the SSC literature. According to Bergeron, shared services are "a collaborative strategy in which a subset of existing business functions are concentrated into a new, semiautonomous business unit that has a management structure designed to promote efficiency, value generation, cost savings, and improved service for the internal customers of the parent corporation, like a business competing in the open market" (Bergeron 2003, 3).

Earlier conceptions of shared services drew a clear line between centralization and shared services (Shah 1998; Schulman et al. 1999; IMA 2000; Janssen and Joha 2006; Burns and Yeaton 2008) and warned that these two concepts should not be confused, as shared services were not the rebirth of centralization (IMA 2000).

Shared Services	Centralization
• Focus is on needs of internal "clients" such as business units or divisions.	• Head office/corporation concerns dominate.
• The type and scope of services are negotiated and defined upon client needs.	• Services tend to be standardized regardless of the needs of the units being supported.
• Locations of SSCs are chosen to best serve key clients.	• Centralized services are usually located at corporate headquarters.
• The SSC has full responsibility for both costs and quality of service delivered.	• Support managers have little accountability for service cost and quality.
• Performance is assessed against service-level agreements and regular reviews.	• Performance is judged solely on budget and against corporate objectives.

Source: IMA 2000, 3

While shared service centers were seen as customer-oriented organizations that were first and foremost responsive to the needs of client organizations, centralized organizations were viewed as rigid and unresponsive bureaucracy (Shah 1998). Burns and Yeaton (2008) argue that while in the case of centralization the control is taken over by corporate management, shared services imply dispersed or federated responsibility to multiple units, and the customers of the shared services take control collectively.

In the more recent literature, however, the difference between centralization and shared services is not so obvious and clear-cut anymore. It seems that the real-life variation of public-sector SSCs has broadened the initial SSC concept.

Looking at the variety of SSC definitions, Schwarz concluded that "there is a common understanding that shared services are used to provide support activities to internal customers in at least two agencies at lower costs and at a higher quality" (Schwarz 2014, 62).

Janssen and his colleagues find that it is too deterministic to view a shared service arrangement as a particular business model with particular implications (Janssen et al. 2009). Elston (2014, 6) argues that as SSC arrangements evolve over time, "an unduly narrow definition risks overlooking this dynamism and the common user challenges that transcend particular governance structures." As the definition of SSC has become rather vague, the original SSC concept is sometimes referred to as a "genuine" (Raudla and Tammel 2015) or "ideal-type" SSC (Boon and Verhoest 2015).

Currently there are no comprehensive studies on public-sector SSCs that would allow it to assess the extent to which the "ideal-type" SSCs are implemented in the public sector. As the concept of SSC is demanding and not easily replicable in the public-sector context, it can be expected that instead of "genuine" shared services other types of sharing arrangements are more likely to emerge (Ulbrich 2010; Knol et al. 2012; Kastberg 2014; Raudla and Tammel 2015). As sharing arrangements in the public sector vary, we can also expect a variation in SSC initiation strategies. While it has been suggested that one of the main points for an SSC to articulate from the initiating stage onwards is the customer focus (Janssen and Joha 2006; Grant et al. 2007), it is also known that SSCs are evolving over time (Grant et al. 2007; Elston 2014), and customer focus that was initially lacking might be established during later stages.

2.2 Initiating shared service centers

According to Janssen, there are three main stages in the lifecycle of an SSC: the initiating, implementing and operating stages (Janssen 2005). The initiating stage involves all decisions and actions that precede the implementing stage. For example, a business case is drafted, and the political consensus to create an SSC is reached during the initiating stage. During the implementing stage the business case is implemented, and an SSC is established. At the operating stage, an SSC should be functioning and support the day-to-day operations of its clients (Janssen 2005).

The literature on public-sector SSCs emphasizes the importance of finding consensus and engaging all stakeholders at the early initiating stage (Janssen and Joha

2006; Grant et al. 2007). It has been stressed that as the establishment of an SSC is a major decision that has a long-term impact on all stakeholders, it has to be a conscious decision that is supported by all involved parties (Wagenaar 2006; Janssen et al. 2009). As the impact of an SSC is usually not clear in advance, stakeholders may have different conceptions about shared service arrangements (Janssen et al. 2009). Therefore there is a need to convince employees to change the existing organizational processes and leaders of the agencies to give up some authority, as some of the functions of the agencies are moved into an SSC (Janssen et al. 2009).

As it is advised that not all but only transactional functions should be moved to the SSC (Schulz and Brenner 2010; Selden and Wooters 2011; Schwarz 2014), a careful consideration of the existing processes and functions should be carried out together with all involved parties. In order to facilitate finding a proper sharing arrangement and deciding which functions should be moved to an SSC and which should remain in agencies, Janssen and his colleagues propose to use a simulation model that makes it possible to predict the level of efficiency of a planned SSC (Janssen et al. 2009; see also Knol et al. 2012 for an alternative model).

However, usually the idea of an SSC is not attractive to all involved parties. It is common for agencies to resist the change as they want to maintain their autonomy, oppose the "one size fits all" approach, are against power concentrations or have some other reasons to be against the establishment of an SSC (Wagenaar 2006; Boon and Verhoest 2015). Therefore the initiation of an SSC requires careful management and clear leadership (Wagenaar 2006). The central executive boards that are responsible for initiating and implementing SSCs in the business world do not exist in public administration (Wagenaar 2006). In the public sector every agency stands for its own interests, therefore a permanent political and administrative commitment to an SSC idea is necessary (Wagenaar 2006). However, due to election cycles, political commitment cannot be expected to be permanent. Hence, the key question is how to achieve administrative commitment to change.

2.3 Explaining change – insights from institutional entrepreneurship

The initiation of an SSC leads to the institutional change of an organizational field, which in our case is public-sector financial accounting. Institutional entrepreneurship aims to understand how individuals and organizations change the institutions in which they are embedded (Dacin et al. 2002). Since 1988, when DiMaggio introduced interest and agency in institutional theory (DiMaggio 1988), the research on institutional entrepreneurship has focused on the role played by the active agency in changing the organizations and organizational fields. The earlier research on institutional entrepreneurship focused mainly on individuals as institutional entrepreneurs and was criticized for seeing them as heroes (Leca et al. 2008). The more recent research gives credit to collective institutional entrepreneurship and acknowledges the importance of collaboration and coalition building (Levy and Scully 2007).

The organizational field is defined as a set of interdependent populations or organizations participating in the same cultural and social sub-system (Scott 2008). The characteristics of the organizational field determine whether the institutional entrepreneurs are likely to succeed in changing the field or not. While mature organizational fields represent stable structures under which behavior patterns (e.g. conflict or cooperation) are well defined, premature fields represent structures where the institutional order is not completely developed; hence, the institutional entrepreneur is expected to change premature fields more easily (Pacheco et al. 2010).

In order to make the change possible, the institutional entrepreneur uses different strategies. Maguire et al. (2004) identify three strategies used by a successful institutional entrepreneur:

- occupying subject positions with wide legitimacy and bridging diverse stakeholders;
- theorizing new practices through discursive and political means;
- institutionalizing these new practices by connecting them to stakeholders' routines and values.

The occupation of the subject position with wide legitimacy helps to portray the new institutional form as legitimate, whereas other alternatives are seen as less appropriate, desirable or viable (Dacin et al. 2002; Leca et al. 2008). In the process of legitimation, entrepreneurs engage in battles that originate from conflicting perspectives between existing and proposed organizational fields (Maguire et al. 2004; Greenwood and Suddaby 2006; Leca et al. 2008; Pacheco et al. 2010). As the outcomes of the institutional entrepreneurship spread, more diverse social groups will be affected and possibly mobilized, which will lead to new legitimacy battles (Garud et al. 2007). The agents that possess superior resources, knowledge or strategic social-network positions are better equipped to use their political power to win the legitimacy battles and to shape the organizational field in their favor (Beckert 1999, cited in Pacheco et al. 2010). Additionally, the leaders who migrate from an organization that has implemented a new practice are better positioned because they possess the appropriate expertise and cognitive reasoning to deem that practice appropriate (Kraatz and Moore 2002).

The theorization of new practices consists of two key components: framing problems and justifying innovation (Maguire et al. 2004). In more detail, theorization involves highlighting and recasting problems and problematizing existing systems as inadequate (Koene and Ansari 2013). As the process of theorization diffuses among organizations in a given field, new norms and practices take on a greater degree of legitimacy and, in turn, become institutionalized (Dacin et al. 2002).

However, theorization does not lead to automatic institutionalization of change. The way the institutional entrepreneurs connect their change projects to the activities and interests of other actors in the organizational field determines their success; consequently, the projects are crafted to fit the conditions of the field (Maguire et al. 2004).

2.4 Implications of the theoretical framework

Public-sector financial accounting can be categorized as a mature field with established rules, norms and behavior patterns (Hyvönen et al. 2012). Therefore, we might conjecture that a radical change in this field is unlikely or very challenging at least.

The potential institutional entrepreneurs (public-sector accountants) are unlikely to be able or willing to challenge the status quo. The establishment of an SSC for financial accounting has an important impact on accountants, as their tasks, functions and meaning for their home organization will change (Herbert and Seal 2012).

However, the accountants who have the potential to become the leaders or chief accountants of an SSC may have strong interests in initiating the center of excellence. Still, as the creation of an SSC does not concern only financial accounting but requires an extensive business-process re-engineering approach whereby agencies transfer the development, maintenance and control of their information systems to a different organization and abandon their existing information systems (Ulbrich 2006), it can be expected that accountants – even if they are interested in initiating an SSC – may lack the necessary knowledge about business process re-engineering and new ICT systems to become the main advocates of an SSC arrangement. And last but not least, accountants usually do not have direct access to the political level that could empower them to become the main change agents.

To conclude, we can predict that in order to initiate an SSC there must be at least some acceptance or interest in initiating an SSC in the organizational field, but it is rather unlikely that the change can take effect without (politically) better positioned and more powerful agents outside the field.

3. Case studies

3.1 Method

The research uses a multiple-case design. This design was found most appropriate for the current research, as it allows examining the processes and outcomes across many cases, identifying how these cases may be affected by different contexts and the specific conditions under which a finding may occur (Chmiliar 2010). The multiple-case study enables cross-case comparisons and is helpful in finding answers to the questions and detecting possible patterns related to the initiating stage of public-sector SSCs. In order to detect possible similarities in the initiation process, the three cases are selected from one jurisdiction and organizational field. In order to detect possible differences between the practices, depending on the level of administration, the cases are selected from all levels of administration – local, regional and central. As for the timing, two of the three SSC projects were initiated during the financial crisis (2008-2009); the third case was earlier (initiated in 2001). The different timing of the cases should give us some indication about the possible impact of the financial crisis on the initiating stage of public-sector SSCs.

The multiple-case study is informed by two types of sources – documents and interviews. Documents include official documents, internal documents, memos, reports, media articles and e-mails. The interviewees include key actors from the central-, regional- and local-administration levels. As the focus of the study was on the initiating stage of shared service centers, the aim of the interviews was to explain the role and motives of key actors and to describe their strategies for initiating shared service centers in the public sector. Altogether 18 interviews were conducted (8 interviews in the first round in 2012-2013 and 10 interviews in the second round in

2014). The interviews were semi-structured, with open-ended questions. Most of the interviews were recorded – at the consent of the interviewees – and fully transcribed. The interviews lasted between 1 and 2.5 hours.

The study has several limitations. First, it takes the perspective of change initiators and does not cover the other actors in the organizational field. Second, the study does not look at the implementing but only at the initiating stage of shared services projects. The initiating stage is defined as a stage that ends once the implementing stage starts. This limitation gives a necessary focus that helps better analyze the similarities and differences between the chosen case studies. However, this focus does not enable us to make any suggestions or predictions about the implementing or operating stages of these SSCs, and further research is needed to assess the implications of the initiation strategies on the implementation and operation of these SSCs. Third, as this research is context-dependent, one must be careful in generalizing the results of this study to other public-sector contexts or organizational fields.

3.2 Context and background of the case studies

Since the 1990s, the prevailing ideology of Estonian governments has been neoliberal (Verheijen 2007; Raudla and Kattel 2011). The neoliberal worldview of Estonia's political and administrative elite has led to a continuos downsizing of the state and a reluctance towards investing into coordination and administrative development (Sarapuu 2011). However, governments have continuously invested in the development of e-government, and in terms of internet voting Estonia is considered to be the most advanced country (Alvarez et al. 2009). Paper-free public administration, internet voting and the search for efficiency and effectiveness have been high on the agendas of all Estonian coalition governments.

Estonia is administered by three levels of government – central (state), regional (county) and local (municipalities). The administrative system relies on ministerial responsibility (Sarapuu 2011; Sarapuu 2012). The ministries are autonomous, and their responsibilities are designated by law. The coordination problems in Estonian public administration have been outlined in the OECD report that found that there is considerable room for development in terms of joined-up policy design and implementation (OECD 2011).

The county governments in Estonia do not represent a tier of self-government but are under the Ministry of the Interior.[1] The county governors are appointed by the Minister, and their task is to represent the state in 15 counties. The internal management of county governments was not centrally directed until recently, when the Ministry of the Interior streamlined the organizational structures of county governments (in 2009) and consolidated the internal audit function that previously existed in all county governments into one internal audit unit.

From 2004 until 2014 the Ministry of the Interior was headed by two ministers – the Minister of Regional Affairs and the Minister of the Interior. The county gov-

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[1] Since September 2015 under the Ministry of Finance.

ernments together with other issues related to the regional development were under the Minister of Regional Affairs.

Local governments (rural municipalities and towns) are autonomous. During the past decades the number of municipalities has been slightly decreased due to the mergers of some municipalities. The mergers have been non-mandatory but highly encouraged by the central government. The biggest municipality is the capital city Tallinn whose population forms almost 1/3 of the Estonian population.

The global financial crisis that started in 2008 hit new democracies harder than old ones (Peters et al. 2011). The peak of the financial crisis in Estonia was in 2009, when the GDP fall of Estonia was the third largest in the European Union (Raudla 2013). In the absence of monetary policy measures – Estonia's currency was pegged to the euro – the government had to find ways for internal consolidation and cost savings. Estonia undertook extensive fiscal consolidation (Staehr 2010, cited in Raudla and Kattel 2011). In addition to cutting back the salaries, laying off civil servants and other fiscal-austerity measures (see Raudla 2013 for a detailed overview) various centralization measures, including a merger of several governmental agencies, were used during the peak of the financial crisis (Peters et al. 2011).

The lack of strong guarantees concerning salary cuts or layoffs for the civil servants and the almost non-existing trade-union culture in Estonia facilitated the cuts to the operational expenses of the government (Raudla 2013).

It is important to note that the austerity measures taken by the government were supported by the public opinion: the majority of the population favored fiscal discipline. The fiscal discipline in 2009 was especially important, as the prospect of joining the euro area had become more real than ever before and Estonia was devoted to fulfill the Maastricht debt and deficit criteria (Raudla 2013; Raudla and Kattel 2011).

The financial accounting legislation is drafted in the Ministry of Finance. Also, the coordination of public-sector financial accounting is the task of the Ministry of Finance. The accounting legislation is aligned with the international accounting standards (Tikk 2010). As early as 2004 the Minister of Finance issued a decree (general rules for the organization of the accounting and financial reporting of the state and state-accounting entities) that was taken into use as the Estonian equivalent to the International Public Sector Accounting Standards (Tikk 2010). This meant that Estonia became one of the few countries in the world where a full accrual-based accounting principle was adopted for financial accounting in the public sector (Wynne 2007, cited in Tikk and Almann 2011).

In line with the general "paper-free public sector" approach of the government, the Ministry of Finance has aimed to digitalize public-sector accounting. The idea that all public-sector organizations should employ a common software for financial accounting is not novel. As early as 1994 the Ministry of Finance explored the possibility to introduce a common accounting software (Agresso) in the public sector. The project was started, but its implementation failed. Due to this negative experience, the Ministry of Finance had to refrain from suggesting the adoption of (another) common software.

Since then the Ministry of Finance has focused on establishing public-sector accounting rules and consolidating the accounting function from small accounting entities to their parent entities. In parallel, however, the Ministry of Finance continued pursuing the idea of a common software for the whole public sector that would have enabled an automatic consolidation of data into a common database. Faced by the resistance to change and the autonomy of the other public-sector organizations the hands of the Ministry of Finance were tied, and it could not impose centralization. Even though the Ministry had the support of the National Audit Office who pointed to the uneven quality of public-sector accounting and suggested reducing the number of accounting entities, there was no consensus among the Ministers whether the financial accounting (and possibly other back-office functions) should be centralized to the ministerial level.

3.3 CASE I: Tallinn City

The consolidation of shared services in Tallinn was initiated by the mayor of Tallinn who held the office between 1999 and 2001. Coming from the private sector and being a co-founder of an Estonian private bank, the mayor insisted on improving the financial management of Tallinn City (hereinafter City). The City recruited a financial director, who took office in 2000. At that time no common principles for public-sector financial accounting existed. Each City organization had its own accounting system, and the quality of accounting was uneven. The annual accounts of the City had received negative opinions from auditors (in 2000 from Ernst & Young, in 2001 from PwC). Both audits pointed to the fragmentation of accounting and to the various problems thereof.

In 2000 a report was ordered from the consulting company KPMG that focused on the accounting software used in the City. The report concluded that the financial accounting in the city was decentralized. Out of 289 different organizations 45% had decided to buy accounting services from private-sector service providers, others employed in-house accountants.

Relying on these reports, the financial director of the City proposed that in order to solve the problems outlined by auditors and to increase the efficiency and effectiveness of the City's accounting organization, a centralization of the accounting was needed.

For the reorganization of the City's financial management a consulting company (PwC) was hired. The consulting company drafted an extensive financial-management model for the City by the end of May 2002. In essence the model foresaw streamlining the business processes of the City and consolidating accounting from the different City organizations – around 300, incl. schools and kindergartens – to the central City government level.

The main goal of the project was to increase the quality of the accounting and reporting throughout the City. Importantly, cost saving was not seen as the main goal of the project. As was clarified in the project outline, the cost-saving measures in the public sector often led to a reduction of quality that had to be compensated somehow. Therefore eventually the cost-saving measures might turn out to be costlier than maintaining the initial system.

However, even though the main goal of the project was not cost reduction, the calculations included in the project plan showed a promising potential to save costs.

An important part of the project was the introduction of a common (ERP) software. The software vendor was not known in advance, and in order to find appropriate software the procurement of the software was planned. The tender documentation was prepared again with the help of the consultant from the PwC.

The Tallinn City accounting centralization project was in a way ahead of its time. Even though the Ministry of Finance favored the reduction of the number of accounting entities, the existing accounting legislation did not foresee the possibility to centralize accounting in the City so that instead of 289 different accounting entities (City organizations) there would have been only one (the City). However, the change of the accounting legislation was on its way. As the change was expected to become effective on 1 January 2004, the City made its centralization plan accordingly. The project was expected to last from Fall 2002 until 1 January 2004. The project drafters realized that the project was very complicated, and its implementation was challenging. A special project-implementation team was foreseen. The team members were to be released from their other obligations and were expected to focus solely on the implementation of the project.

The project was approved by the City government in August 2002. This gave the green light to the implementation of the model.

3.4 CASE II: Regional (county) governments

The SSC for regional governments was initiated in the Ministry of the Interior in Fall 2008. The project leader who initiated and led the drafting of the business case was invited to the Ministry of the Interior (in 2008) mainly because of his experience with a similar project in the Ministry of Justice.

The project leader initiated the project rather independently. He gathered a team of key persons in the Ministry of the Interior who helped him to draft a business case. During the project-preparation stage the project leader and his team visited the courts' accounting center of the Ministry of Justice – with which the project leader had been working before – to learn from its experience. The concept of the project was worked out in less than a year, and the business case was drafted by the four officials (incl. the project leader) of the Ministry of the Interior in one month (July-August 2009).

In the project scope there were three main tasks: 1. Centralization of the financial accounting of county governments. 2. Centralization of the financial accounting of the agencies of county governments (orphanages). 3. Centralization of the payroll and personnel accounting of county governments.

The main goals of the project were the improvement of the accounting quality, the improvement of statistical and analytical comparability of county governments, the introduction of a common accounting software (SAP), the overall reduction of human resources needed for accounting and creating preparedness for the possible general centralization of the central government accounting.

It was believed that the creation of a common accounting center would lead to efficiency, as the accounting service would be provided by a professional accounting center that employed highly qualified professionals, who were relieved from other tasks that were not directly related to their profession.

As the project was in the area of responsibility of the Minister of Regional Affairs (who shared the Ministry of the Interior with the Minister of the Interior), it was decided that the accounting center should be located outside the capital city. Therefore it was possible to consider the project a measure of regional policy.

Although all county governments could compete for getting the accounting center to be established in their region, the location of the center was decided in advance. The accounting center was established as a department of one county government that had vacant office space, but most importantly had a person that was seen as capable of leading the implementing stage of the project.

The project was communicated to the regional governments shortly before the implementation started. As the Minister of Regional Affairs had issued a decree for the centralization of the accounting in the county governments, it meant that there was no room for argument anymore.

The project was implemented in less than five month (by 1 January 2010) and was considered a great success.

3.5 CASE III: Central government

The shared service consolidation project of the central government was initiated in the Ministry of Finance in Spring 2009. The idea of creating a single stand-alone accounting center for public-sector accounting had been circling around in the Ministry of Finance already for some time. The financial crisis opened a window of opportunity to implement that idea. In order to get the political support for the idea, it was taken to the Cabinet meeting of 26 March 2009. After the Prime Minister had proposed to consolidate the accounting of the central government into a single stand-alone accounting center, the Ministry of Finance had a mandate to draft a project plan. For drafting the project plan a PwC consultant with previous experience from the Tallinn City project was hired.

While the initial idea was to centralize the financial accounting function, the project plan went further. Relying on the best practices' database of the PwC the plan suggested the adoption of a shared-service-center model. In addition to the financial accounting other support services (HR accounting and procurement) were proposed for consolidation. The project plan referred to the public-sector SSC projects in the UK and Finland, noting that the Finnish Kieku project had made it possible to save 13% of the financial-accounting costs and 30% of the personnel-accounting costs.

While drafting the project plan the consultant held several meetings with people from different organizations that could provide input into the project plan. Some of the people consulted had previous experience with accounting consolidation in the public sector. However, most of the project planning and discussions took place within the Ministry of Finance, and the officials of the Ministry of Finance formed the core of the project working group.

According to the initial project plan the main goals of the project were cost reduction (up to 2/3 of the relevant costs), availability of good-quality support services for all organizations, standardization of processes and adoption of a common IT system.

The project was to be implemented using a big-bang strategy (see Raudla and Tammel 2015 for a typology of reform models for creating SSCs). The consultant who drafted the project was convinced that the radical change was the most effective: during the interview, when discussing the Kieku project in Finland and the implementation problems of the Estonian central government project he stated that "in democracies you don't build pyramids". The top officials of the Ministry of Finance were also supportive of the radical reform strategy.

In the middle of 2009, a project leader with a previous radical reform experience from the public sector was asked to come to lead the project. During 2009 the project leader used all ways (mainly informal) to get necessary support for the project plan. However, as the initial consolidation plan was too ambitious for the government, the project was changed several times and additional documents were produced to convince the government. The plan that the government finally approved was a compromise. It did not foresee the creation of a separate stand-alone shared service center but the consolidation of accounting up to the ministerial level and the adoption of a common software SAP.

The implementation of the project started in 2010. Although it should have been completed by the end of 2013, the project is ongoing at the moment of writing this article (Fall 2015). As a parallel development the top officials of the Ministry of Finance and the Ministry of Justice agreed to create a State Shared Service Centre in 2012 on the basis of the already existing Courts' accounting center.

4. Discussion

All three case studies point in the same direction: the creation of shared service centers is driven by active agents in the public sector. In Tallinn City the main change agent was the mayor, whose initiation was taken over by the financial director of the City. In the case of regional governments the main change agent was the project leader. In the case of the central government the project leader who managed to gain the acceptance to the SSC project was hired once the project was already initiated, and it was realized that in order to succeed a radical reformer with previous public-sector consolidation experience was needed.

All these main change agents occupied posts in the top management of their organizations and had migrated from private-sector organizations or public-sector organizations that had implemented a new practice. This corresponds to the insight from our theoretical framework, which suggests that agents who possess a superior position, resources, appropriate expertise and cognitive reasoning are better equipped to deem new practice appropriate and to win legitimacy battles.

As for the legitimacy battles, we expected that in a mature organizational field where the rules, norms and behavior patterns are established, a radical change is unlikely, or very challenging at least. It was generally known (from past experience) that any attempt to centralize public-sector accounting would be resisted both by the accountants and the heads of public-sector organizations. In search for legitimacy for their projects, the change agents therefore did not aim to gain legitimacy from the organizational field, but targeted the key persons who would provide necessary support for the project. In order to avoid legitimacy battles the project initiating stage was largely hidden from public view.

The theorization of the financial accounting consolidation projects involved both framing the problems and justifying the need for centralization/consolidation. In the case of Tallinn City the framing was done by the external auditors, who expressed a negative opinion regarding the annual accounts of the City. Subsequent reports that were ordered from the consulting companies pointed to the weaknesses of the financial management of the City and provided a solution to the framed problem. In the case of county governments the project leader, together with his team, both framed the problem and justified the project. In the case of central government the problem was framed by the top management of the Ministry of Finance with the help of a consultant.

Finally, our theoretical framework suggests that theorization does not lead to automatic change, and the way the institutional entrepreneurs connect their projects to the other actors in the organizational field determines their success. As we already noted in terms of legitimacy, the change agents did not connect their projects to the other players in the organizational field. In a way this can be seen as a strategy taken in order to escape from legitimacy battles. Similarly, the theorizing was not used to win over the other organizations in the field but to convince the key decision-makers. Therefore, while the theoretical framework suggests that the projects are crafted to fit the conditions of the field, the projects in practice were drafted to appeal the decision-makers. This deviation from our theoretical framework has several possible explanations.

Firstly, the main change agents were not "truly embedded" in the organizational field and hence cannot be termed "institutional entrepreneurs". None of them was an accountant by profession. Also, they joined the organization shortly before or during the initiating stage of the project; therefore they did not have strong ties with the organizational field. Even though the chief accountants of the organizations that led the change were supportive (or, in the case of the central government, insisted on centralization), they did not have the necessary will or power to become institutional entrepreneurs themselves. Therefore instead of a single institutional entrepreneur there was a collective institutional entrepreneurship behind the initiation of each of these projects. High-level accountants from the organizational field provided the necessary input into the projects, while the position, experience and leadership skills of the project leaders helped to gain the support of the necessary key persons.

Secondly, central to all these projects was the adoption of an ERP system. This meant that the functionality of the ERP system largely determined the scope of standardization and new business processes. The change was therefore transformative, and it was believed that the model developed by the consulting company (in the case of Tallinn City) or prescribed by the existing SAP functionality (in the case of county governments and the central government) largely determined the new structures and processes. Hence, engaging other (opposing) actors in the initiation process would not have contributed much to the build-up of the new system.

Thirdly, the Estonian political-administrative culture made it possible to leave other organizations in the field aside while introducing a radical reform. Pragmatic search for efficiency and effectiveness (often through a wider use of ICT) characterizes both Estonian politics and public administration.

Finally, the initiation of these SSCs was characterized by the absence of strong veto players at that stage. The ability to get the initiation of an SSC backed by a legislative act was very important. Once the implementation of the project was officially decided, the opponents of the project had no possibility to resist change.

5. Conclusion

Using the insights from institutional entrepreneurship, this study aimed at explaining the initiating stage of shared service centers in the public sector. It was found that SSCs were not initiated by a single embedded institutional entrepreneur. The main change agent was not embedded in the organizational field and joined the organization to initiate the change project or to gain legitimacy for the already initiated project that otherwise would have lacked sufficient political support. The main change agent formed a coalition with like-minded officials that were able to provide necessary input to the project. As none of the members of the group would have succeeded in initiating the change alone, this coalition can be termed collective institutional entrepreneurship.

Problems were framed in various reports and business cases. Business cases played a major role, as they problematized the existing situation and suggested solutions to problems. While there were discussions over the details of the business case, the necessity for administrative restructuring was not questioned at the political level. The absence of an ideological divide over administrative restructuring can be explained by the Estonian reform context but also by the fact that business cases downplayed or did not even mention possible implementation problems. It is worrying as it seems to be a common strategy that leaves decision-makers and managers largely unaware of the difficulties encountered when implementing and developing SSCs (Knol et al. 2014).

While the concept of institutional entrepreneurship stresses that the way the institutional entrepreneurs connect their change projects to the activities and interests of other actors in the organizational field determines their success (Maguire et al. 2004), the evidence from current cases does not seem to confirm this. The change projects were initiated not by gaining legitimacy from the field but by winning over the key decision-makers and leaving aside other players that could potentially question the legitimacy of the project. Hence, the absence of the power dimension seems to be an important weakness of the concept of institutional entrepreneurship.

The study poses an intriguing question to SSC scholars. Namely, whether the public administrations all over the world are currently dealing with a wave of new (and developing) client-oriented collaborative strategies or with a wave of (re)centralization? It is noteworthy that all the studied administrative restructuring projects were initiated as centralizations. While the difference between centralization and an SSC is well established in the expert literature, it seems very difficult to draw a clear line between centralization and an SSC in practice. As the literature on shared services indicates, there is no generic public-sector SSC model; SSCs evolve over time and are expected to constantly improve their processes, quality and client orientation. Therefore we cannot downplay the possibility that an SSC that was initiated as a centralization project becomes customer-oriented sooner or later. Even though it has been suggested that engaging all stakeholders at the initiating stage determines the success of an SSC (Grant et al. 2007), the lack of empirical evidence does not allow us to be fully convinced.

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7. Õpetamine

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