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Implementing shared service centres in Big 4 audit firms: an exploratory study guided by institutional theory

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Abstract

Purpose – This study aims to investigate why and how shared service centres (SSCs) are implemented as well as how they affect audit firm practice and audit quality.

Design/methodology/approach – In this qualitative study guided by the theoretical framework of institutional theory, the authors conducted 25 semi-structured interviews in seven European countries, including 16 interviews with audit partners from Big 4 firms, 6 with audit team members, 2 with interviewees from second-tier audit firms and 1 with a member of an oversight body.

Findings – The authors show that the central rationale for audit firms to implement SSCs is economic rather than external legitimacy. The authors find that SSC implementation has substantial effects on audit practices, particularly those related to standardisation, coordination and monitoring activities. The authors also highlight the potential impacts on audit quality.

Originality/value – By exploring the motivation for and effects of SSC implementation amongst audit firms, the authors offer insights into the best practices related to subsequent change processes and audit quality.

Keywords Audit firm practices, Audit quality, Exploratory study, Institutional theory, SSC, SSC implementation, Shared service centres

Paper type Research paper

1. Introduction

Using institutional theory as a theoretical lens, we investigate why audit firms implement shared service centres (SSCs) and how the change process of SSC implementation affects audit firms that implement an SSC. SSC are defined as a collaboration in which a subset of business functions is assigned to a new, semi-autonomous business unit (Bergeron, 2003). The specification of a business unit extends beyond company-internal work cooperation, such as group audits. In general, SSCs provide common and well-defined services to an organisation independently (Ulbrich, 2006); hence, the label "internal outsourcing firm" is applied (Ulbrich *et al.*, 2008). Since starting in the service industry about 3 decades ago, SSCs have expanded to other industries (Schulman *et al.*, 1999). Although not in widespread use in auditing, they can reduce costs and improve service quality in the face of market competition and declining audit fees whilst keeping the control and knowledge within the firm hierarchy (Herbert and Seal, 2012). The advancement of technological tools for auditing (Arnold, 2016) and increasing shortage of qualified personnel (Daugherty *et al.*, 2012) further underscore the

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advantages of SSCs for carrying out routine tasks (Daugherty and Dickins, 2009). According to Daugherty *et al.* (2012), approximately 5% of USA Big 4 audit firms use an offshore SSC and this percentage is expected to increase to 8–10%. Yet, little research has examined the motives for and impacts of SSC implementation in the auditing industry. This is rather surprising since the change within audit processes is extensive and the strive to increase audit efficiency via SSC brings the challenge of commercialism vs professionalism to the fore. Based on the institutional theory framework, we use a qualitative study to investigate changes amongst audit firms that implement SSCs.

Scholars of institutional theory argue that when professions expand internally, they create a vacuum wherein resources are transferred owing largely to the absence of formal institutions (Suddaby and Viale, 2011). Although audit oversight institutions such as Germany's former German Audit Oversight Commission (APAK) and the US Public Company Accounting Oversight Board (2012) monitor new developments in this area, investigations into how SSC practices, offshoring arrangements and related structures affect the operation and organisation of audit firms are lacking (Hanes, 2013). Moreover, audit firms generally do not publicly disclose their SSC implementation (Whitehouse, 2009), nor are they legally required to do so, even when the SSC is located abroad. Although considered as a part of the audit firm, SSC employees do not work at client premises or communicate directly with clients.

To the best of our knowledge, this study is the first to investigate the implementation and operation of SSCs in the audit industry. The extant literature concentrates on audit offshoring and the perceived impact on audit quality. Only one qualitative study (Downey, 2018) investigates audit offshoring and its driving forces. SSC are a means for importing the effectiveness and efficiency of audits and for solving further current problems of the industry, for example, staff shortages. However, changes in the audit production process must always be in line with ensuring audit quality and professionalism. Therefore, our study also addresses the complex tension of professionalism vs commercialism (Sharma and Sidhu, 2001). Our study also enhances learning opportunities from industry benchmarking, since we describe different facets of SSC design and for non-Big-4 firms that might benefit from the implementation experiences of Big 4 firms when they consider using SSC at a later stage. Moreover, regulators and supervisory bodies have to deal with the phenomenon of SSC, in order to fulfil their tasks satisfactorily. Our study provides substantial insights which should be valuable for the fulfilment of their tasks (to what degree is there a need for control by oversight bodies, to what degree is there a need for regulation SSC?). Finally, external users of audited financial statements are not aware of the use of SSC. For them, our observations may be helpful in order to generate, for instance, positive audit quality perceptions. From a theoretical perspective, we have more effectively investigated the institutional change process, its drivers and the major challenges associated with gaining legitimacy and possible audit quality effects. Using an inductive approach (Malsch and Salterio, 2016), our qualitative research draws on the constructivism and relativist ontologies (Denzin and Lincoln, 2018) by adopting theory as a data framework to enhance the understanding of the research topic (Power and Gendron, 2015).

Institutional theory is widely used to analyse the adoption and diffusion of organisational practices (Kostova and Roth, 2002). Some argue that this theory should delve more deeply into the inner workings of organisational structure, management and coordination (Greenwood *et al.*, 2014). Others call for more field research in auditing (e.g. Malsch and Salterio, 2016). Furthermore, the organisational transformation of auditing addresses also calls regarding the examination of commercialism and professionalism in auditing (Dermarkar and Hazgui, 2022). Our exploration of SSC-related change amongst auditors addresses these calls. Our data mostly come from 25 interviews conducted in Germany as well as data from Austria, the Netherlands, Italy, Spain, Denmark and the UK Our interviewees are highly qualified, as we mainly rely on audit partners, some of whom oversee their firms' SSCs. Additionally, we conduct six interviews with respondents who have, on average, 3–4 years of experience in German Big 4 audit firms but who are not yet chartered accountants, thus allowing comparisons between partner and audit team perspectives.

Our study provides practical insights by documenting and comparing how auditors implement, perceive and use SSCs. Whilst, based on our dataset, SSCs are only applied by Big 4 audit firms, we find that economic rationales (e.g. recruitment and staffing efficiency) drive SSC implementation, whereas external legitimacy does not. Moreover, auditors appear to be highly secretive in disclosing their use of SSCs. Interpreted against the discussion of professionalism and commercialism this means that the implementation of SSC in the context of auditing is an exemplary case in that auditors focus economic interests whilst not actively managing public interests and external legitimacy. As documented in prior literature, the justification from a logic of professionalism takes place via the perception of a higher audit quality induced by SSC (Dermarkar and Hazgui, 2022). Our study also identifies implementation challenges (e.g. coordination, standardisation) as well as parallels with theoretical predictions, particularly the need for the internal legitimacy of SSC usage. We document how audit firms address these challenges and enhance the internal legitimacy of SSCs, whilst ensuring that implementation does not lower audit quality. Finally, our study identifies the possible positive (e.g. standardisation, optimisation, time savings, staffing opportunities) and negative (e.g. standardisation and coordination challenges) effects on audit quality, as perceived by auditors.

Our study also contributes to constructivist auditing research by documenting the drivers of and change processes resulting from SSC implementation. We use a qualitative approach to increase research diversity and address recent criticism that auditing research focusses too heavily on archival data (Malsch and Salterio, 2016). We also widen the geographic focus of the research to include onshore SSCs, which are common in European audit firms. We complement US-based research, which is mainly experimental, by adopting a qualitative interview approach to gather detailed data on perceptions, opinions and attitudes. The resulting insights provide a useful basis for follow-up research.

The remainder of the paper is structured as follows. Section 2 describes the theoretical background, literature and research questions against the backdrop of institutional theory. Sections 3 and 4 discuss the method and findings, respectively. Section 5 concludes and identifies the study's limitations.

2. Shared service centres and the associated challenges for audit firms

2.1 Theory of institutional change

Institutional theory examines the practices of actors embedded in the organisational and institutional infrastructure, which derives from the formal and informal mechanisms that enable or constrain field activities and dynamics (Hinings *et al.*, 2017). A major research field of institutional theory is how institutions change over time (Coccia, 2018), and a fundamental example of this change is organisational legitimacy. Suchman (1995, p. 574) defines legitimacy as a generalised perception or assumption, such as that gained through long-term financial performance, that an entity's actions are desirable, proper, or appropriate for its stakeholders. Legitimacy is thus a matter of organisational survival (Greenwood *et al.*, 2017, p. 28). Since DiMaggio's (1988) challenge to provide an explanation of institutional change, much has been developed in institutional theory. However, the central role of legitimacy remains unchanged. Organisations either change to increase legitimacy, or organisations endowed with the highest level of legitimacy are often early adopters and drive institutional change (e.g. organisational prestige as a driving force) and finally, external drivers such as technological innovation and economic pressure trigger institutional change ultimately within the boundaries of legitimacy. Institutional change in combination with legitimacy also induces dynamics for the entire market. By striving for legitimacy, organisations have a central motivation to adopt similar structures, comprehensively described by the phenomenon of homogenisation or so-called isomorphism. Legitimacy in combination with economic logic may also lead to tensions within organisations. Organisations supposedly adopt new organisational structures to enhance their legitimacy and then decouple these same structures from their practices in order to maintain technical efficiency in a competitive quest for survival (Greenwood *et al.*, 95). Conversely, Institutional theory argues that new practices driven by economic motives create potential for a "gold rush" (Suddaby and Viale, 2011), which might generate tension in efforts to achieve legitimacy. Sherer and Lee (2002), for example, show for large law firms that economic motives drives institutional change, but that legitimacy enables institutional change.

In auditing, the analysis of institutional change against the backdrop of legitimacy and economic logics is always of particular relevance. Due to the sensitive role of auditing for capital markets, regulators and oversight bodies closely observe changes within audit organisations. Institutional models suggest two different rationales for why organisations adopt certain practices (Mensi-Klarbach and Leixnering, 2019). First, according to DiMaggio and Powell (1983), organisations adopt practices to make economic gains and establish legitimacy, but these goals can conflict with efficiency objectives. This alternative view does not define change as the outcome of market-driven rationalisation processes, but rather as the result of institutional dynamics, such as legitimacy concerns (Beckert, 2010). The second rationale, according to Fogarty *et al.* (1991), differentiates between the institutional setting and economic rationality. For example, Robson *et al.* (2007) treat audit firms' economic situation as a separate driving force of organisational transformation. Others argue that segregating economic and institutional imperatives is empirically difficult and conceptually problematic, because efficiency as a social expectation represents a source of legitimacy (Höllerer, 2013; Mensi-Klarbach *et al.*, 2019; Lounsbury, 2007; Meyer, 2004). Legitimacy as a key social resource facilitates access to economic resources and thus contributes to efficiency (Gregoric *et al.*, 2017; Mensi-Klarbach *et al.*, 2019; Perrault, 2015).

In these ways, the economic and institutional imperatives are intertwined. Interestingly, the same logic applies to the discussion of commercialism and professionalism in the auditing literature (Dermarkar and Hazgui, 2022). We therefore base our analysis on the notion that both economic and institutional imperatives are highly intertwined constructs, but we treat them in two stages to investigate the SSC implementation decisions of audit firms. This is in line with Greenwood *et al.* (2002), who formulate a model of institutional change, including a sequence of economic and institutional rationales as its motives. In their model, commercial pressure, as an exogenous driver of institutional change, may precipitate such change, but diffusion requires a normative justification. As often experienced in evolutionary institutional change, new developments also create new opportunities to engage in wrongdoing (e.g. Greenwood *et al.*, 2017, p. 750). Tolbert and Zucker's (1996, p. 181) model explains the sequence of three institutionalisation phases: habitualisation, which is the generation of new structural arrangements and formalisation of practices; objectification, which is the process of organisational decision-makers agreeing on the value of new practices; and sedimentation, which occurs when positive outcomes are continuously promoted by the advocacy group and become accepted by resistant groups inside and outside the institution.

2.2 Background and prior research

Bergeron (2003) defines an SSC as a collaboration in which a subset of business functions is assigned to a new, semi-autonomous business unit designed to promote efficiency, value generation, cost savings and improved services for internal users of the parent firm. In contrast to competence centres and centres of excellence, which mostly play advisory roles in the organisation, SSCs focus on economies of scale and continuous work processes (Marciniak, 2012). Thus, unlike a back office, which supports the front office, an SSC is directly embedded in a company's core business (Wang and Wang, 2007).

A key advantage of an SSC is its ability to combine a centralised and decentralised business model. Centralisation models offer economies of scale and scope by eliminating activity and resource duplication, but they take a long time to respond to change and neglect the needs of business units (Janssen and Joha, 2006). Decentralisation models respond quickly to change and the needs of business units, but resource duplication makes them inefficient. By bundling resources and delegating control over them to business units, the SSC allows business units to concentrate on core processes, thereby improving organisational service quality (Janssen and Joha, 2006). Furthermore, the concentration of services in a common organisational unit optimises support processes in the same way as the firm's core business units (Ulbrich *et al.*, 2008), with more streamlined communication, greater transparency and improved control (Lindvall and Iveroth, 2011). Service provision then becomes more consistent across the organisation (Cooke, 2006) by using the best technology (Herbert and Seal, 2013; Ulbrich, 2006). Further, service pace and flexibility (Lindvall and Iveroth, 2011) also improve because of the enhanced specialisation within the SSC. Overall, centralising services throughout the firm enhances cross-group learning and best practices.

SSCs are often established in developing countries (Daugherty *et al.*, 2014). The benefits of offshoring SSCs include the low costs due to lower wages, a skilled multilingual workforce and time zone differences that allow more comprehensive service delivery. The risks include the adoption of long-term, complex and costly processes (Herbert and Seal, 2012), which require clearly defined services in terms of priority, price and quality (Kastberg, 2014) as well as sufficient capacity. Any planning uncertainties can substantially lower service quality or increase costs. Another major risk is that core business units will not accept the services provided by the SSC (Raudla and Tammel, 2015); for example, employees may continue to consult their onsite managers instead of using the SSC (Westerhoff, 2006). Daugherty *et al.* (2012) also investigate the extent to which offshoring audit tasks affects the educational needs of future personnel: data from a panel discussion amongst partners from the seven largest accounting firms reveal the need for audit team members to have various technical, communication, supervisory, project management and cultural skills.

Striking an efficient balance between centralisation and decentralisation is difficult when trying to offer customised services and standardise internal processes and solutions (Raudla and Tammel, 2015). Threats to SSC service quality include communication and collaboration issues (Cooke, 2006) as well as a lack of clarity over the ownership and control of the SSC (Westerhoff, 2006). Cultural and language differences between the firm and SSC employees can exacerbate these threats and, in turn, raise costs. Finally, it can be difficult to find skilled and motivated employees to provide support services solely from the SSC, which offers fewer career opportunities than the core business unit. One strategy to address these problems is to rotate employees between the SSC and domestic firm. However, according to Daugherty *et al.* (2014), the job transfer from high-wage to low-wage economies might trigger a public backlash.

Auditing is a sensitive task of considerable importance for capital markets. It is embedded within a special environment and regulatory framework that pose unique challenges for SSC implementation. Whilst SSCs are described as enhancing efficiency, the audit environment poses special conditions for audit production. Beyond economic and commercial logics, auditors must also adhere to a professional logic defined as auditors devoting themselves to serving the public interest (Dermarkar and Hazgui, 2022). Both professionalism and commercialism are prevailing logics in the accounting and auditing field that create tension in the processual design of the audit production (Dermarkar and Hazgui, 2022). In contrast to other service industries, auditing can not only push efficiency and follow commercial logics without taking the logic of professionalism into account. Furthermore, confidentiality is crucial in the audit process and must be taken into account when implementing SSC. Therefore, auditing is a particular setting for SSC implementation and previous results from other industries might not be generalisable for auditing. SSC at audit firms are not dealt with explicitly beyond the general regulations of International Standards on Auditing (ISA) 320, ISA 220, ISA 200 and the general prescriptions of the International Auditing and Assurance Standards Board (IAASB) Framework for Audit Quality.

Based on audit committee member assessments, Dickins and Daugherty (2011) find a slight preference for not offshoring audit tasks because of the potential reduction in audit quality and confidentiality. However, the successful operation of SSCs requires constant monitoring (Daugherty *et al.*, 2014), especially because they do not face the same market competition as externally outsourced services. Thus, the main concern is the difference between the actual and perceived impact on audit quality (Daugherty *et al.*, 2014). For example, Chan and Moser (2015) investigate the perceptions of senior client management of the impact of audit offshoring on audit quality and find that audit clients more familiar with audit offshoring are less concerned about its potential to diminish audit quality. However, these same clients are concerned about data security and confidentiality and they want more transparency about audit firms' offshoring practices.

Most research on the external assessments of offshore auditing shows that external stakeholders are biased against the use of SSCs. Daugherty *et al.* (2014) investigate the effect of offshoring tasks that require different levels of judgement on the damages awarded by potential jurors as a result of audit failure. Their results indicate that jurors award greater damages against auditors that outsource auditing tasks than auditors that conduct these tasks in-house, although damages are not influenced by the level of judgement of the audit task. In an experiment by Lyubimov *et al.* (2013) comparing jurors' perceptions of in-house and outsourced audit procedures, the authors find that jurors assess higher-than-expected punitive damages for audit failures at domestic offices because jurors understand such failures in domestic offices that have close geographic and organisational proximity to a lesser degree. Further, they show that work completed by a domestic office has higher expected quality and lower risk than outsourced tasks.

Downey (2018) examines the impact of offshoring-related changes in the design of staff auditors' work on audit performance. Using in-depth exploratory interviews and an experimental setting, she reveals that a driving factor of offshoring is creating enhanced opportunities for in-house staff by employing offshore auditors to complete basic audit tasks. However, her interviewees indicate that in-house auditors often complete work started by the SSC, perhaps because of an interaction effect revealed by the experimental results: performance declines when the audit work is perceived as less significant.

2.3 Research questions

Our investigation uses the theoretical framing of institutional theory to explore the implementation and use of SSCs in auditing and the organisational and institutional changes associated with these SSCs. New practices affect audit processes and audit quality. Audit oversight institutions such as the former APAK in Germany and Public Company Accounting Oversight Board in the US are increasingly monitoring new developments related to the use of SSCs in the auditing industry (Whitehouse, 2009). The effects of these offshoring arrangements or structures on audit risk remain unclear (Hanes, 2013; Public Company Accounting Oversight Board, 2012). The institutional theory literature has thus called for a deeper exploration of these issues (Greenwood *et al.*, 2014). Our examination of

SSC implementation in audit firms addresses this call. We thus pose the first two research questions:

RQ1. Why do audit firms implement SSCs?

RQ2. How does the institutional setting of auditing change after SSC implementation?

There is no single agreed definition of audit quality that can be used as a standard against which actual performance can be assessed (Financial Reporting Council (FRC), 2006, p. 16). Therefore, in line with prior literature (e.g. Harber *et al.*, 2023; Power and Gendron, 2015; Malsch and Gendron, 2011), we refrain from defining audit quality and refer to the IAASB audit quality framework. The IAASB framework for audit quality states that quality depends on five elements (p. 5 inputs: inputs, process, outputs, key interactions with the financial reporting supply chain and contextual factors). The use of SSC is primarily related to inputs and process. That is, knowledge, skills and experience of auditors and the time allocated to them to perform the audit, as well as the rigor of the audit process and quality control procedures. Although a qualitative study with auditor subjects cannot test the real impact of SSCs on the market assessment of audit quality, it can yield important information about auditors' notions of the impact of SSC practices on audit quality. According Power and Gendron (2015) it is of considerable interest for auditing research how auditors in their day-to-day endeavours produce and reproduce facts about independence and audit quality, since it reveals facts upon which, for example, archival research builds upon. Therefore, they call for a qualitative approach to investigate audit quality in order to complement archival research (Power and Gendron, 2015). The market assessment of audit quality also corresponds largely with the external legitimacy of SSC practices. Our investigation therefore analyses the consequences of SSC practices with regard to auditors' notions of audit quality and assessments of external legitimacy, which leads to our third research question:

RQ3. How does SSC implementation affect auditors' assessments of audit quality?

3. Research method

Because the literature does not deal comprehensively with the increasing use of SSCs in audit firms, we employed an exploratory and qualitative approach. This approach is suitable for closing gaps in auditing research, especially with regard to how audit firms operate (Yin, 2015). Our inductive approach examines data from most specific to most general and thereby aligns with most field research in auditing (Malsch and Salterio, 2016).

As previously mentioned, the paradigm of our qualitative research is constructivism based on a relativist ontology (Denzin and Lincoln, 2018). For auditing research, this implies a key difference in relation to the position of theory and theorising used in positivistic research. According to Power and Gendron (2015), constructivist researchers tend to use theory as a framework to recognise and understand the novel aspects of an audit practice. A close fit between theory and data is unnecessary and probably unhelpful. Rather, the focus is on producing credible, trustworthy and useful insights. We follow the recommendation for qualitative research in auditing by using the conceptual framework of institutional theory for organisational and institutional change.

Data were collected through in-depth, semi-structured interviews (Lee and Humphrey, 2006) based on a literature-based theoretical background and comprising discussions with three partners from three Big 4 audit firms. The primary objective of these interviews was to gain insights into the various issues and themes covered in the interview guide (see Appendix). Questions were designed to be as open-ended as possible to allow participants to articulate their responses without explicit boundaries (Fontana and Frey, 2005).

Originally, interviews were conducted with 19 interviewees. Using theoretical sampling, participants were selected purposefully to ensure they had the required expertise and relevant "big picture" viewpoints. Apart from one representative of a public oversight body, most of our participants were partners in audit firms, some with direct responsibility as project managers for the SSC or heads of a technical competence centre. We ensured that all interviewees had a similar understanding of an SSC. For example, during the first interviews with two partners from Big 4 audit firms, we confirmed that only Big 4 audit firms currently use SSCs. Additionally, we conducted interviews with 6 auditors who are not at the partner level (ranks ranging from associate to manager) in order to capture the audit team perspective. With this complementary analysis we also avoid possible confirmation bias at the audit partner level (i.e. the audit partners might have searched for or favoured information confirming their decision to implement an SSC).

We used the concept of saturation to determine the sample size (Guest *et al.*, 2006). Accordingly, we stopped after 11 interviews with German subjects. To account for those findings driven by the particularities of the German setting, we additionally talked to eight partners from other European countries (two from Spain, two from the Netherlands, one from Italy, one from the UK, one from Denmark and one from Austria). These interviews revealed country-specific idiosyncrasies related to the percentage of audit hours delegated to an SSC and relative preferences for onshoring and offshoring, but they mainly confirmed our overall findings. All interviewees whom we approached responded positively. Even auditors who viewed SSC information as confidential, whether out of fear that clients may use the interview information to negotiate lower fees or that oversight bodies might become even more concerned about this topic, agreed to participate. Still, we cannot rule out bias in the interview responses. Therefore, to broaden the perspective, we also collected data through supplementary interviews with six audit team members from Big 4 audit firms.

The original interviews were conducted between November 2015 and September 2016 and the supplementary interviews were completed in 2019. They were conducted either at the offices of the audit firm (in Frankfurt, Hamburg, Hannover, Stuttgart and Düsseldorf) or by phone. Interviews with German and Austrian interviewees were conducted in German and all others in English. The interviews ranged from 15 min (e.g. non-Big 4 audit firm partners with no SSC) to 73 min. At the beginning of each interview, participants were assured that their responses and firms would remain anonymous. The interview sessions followed the interview guide (see Appendix) and additional information was often volunteered at various points. Follow-up questions were crafted to provide interviewees with opportunities to express and develop their views, whilst ensuring that the main research themes were covered. At the end of the interviews, after all the core issues had been discussed, participants were asked to share other relevant areas. Table 1 summarises the information on the interviewees.

We asked for and received permission to record all interviews except one (interviewee I6). We transcribed the recorded interviews verbatim and edited the transcripts thoroughly for accuracy. For interviewee I6, we took notes and transcribed them within 24 h. All the transcripts were analysed manually. To ensure correctness and completeness, we also used qualitative procedures and imported our interview data into MAXQDA (version 2018.2), a software package for managing and analysing qualitative research data.

The data analysis involved themes from our interview guide (see Appendix), complemented by additional themes raised by interviewees. Thus, we applied a combination of deductive and inductive coding. One researcher conducted the content analysis, progressively developed a thematic coding framework to categorise the themes raised by interviewees and coded all the data. A second author independently recoded the data and compared the two code sets. Differences were resolved through discussions between the authors and the codes were modified accordingly. Table 2 summarises our hierarchical coding scheme, showing several sub-codes (mainly inductive coding) referring to an

Identifier	Gender	Function/special SCC responsibility?	Big 4 vs non-Big 4	Firm location	SSC location	Interview format	Interview length (minutes)
I1	Male	Partner/-	Non-Big 4	Germany	–	Phone	15
I2	Female	Partner/Yes	Big 4	Germany	Germany, Poland	Phone	28
I3	Male	Partner/Yes	Big 4	Germany	Germany, Poland	Phone	30
I4	Male	Partner/-	APAK	Germany	–	Phone	21
I5	Male	Partner/-	Big 4	Germany	Germany	In person	41
I6	Male	Partner/Yes	Big 4	Germany	Germany	In person	73
I7	Male	Partner/-	Non-Big 4	Germany	–	Phone	16
I8	Male	Partner/Yes	Big 4	Netherlands	India	Phone	44
I9	Male	Partner/Yes	Big 4	UK	India	Phone	31
I10	Male	Partner/No	Big 4	Spain	Spain	Phone	33
I11	Male	Partner/Yes	Big 4	Spain	Spain	Phone	30
I12	Male	Partner/Yes	Big 4	Germany	Germany	In person	47
I13	Male	Partner/Yes	Big 4	Germany	Germany	In person	47
I14	Male	Partner/-	Big 4	Denmark	–	In person	42
I15	Male	Partner/Yes	Big 4	Austria	Austria	In person	40
I16	Male	Partner/Yes	Big 4	Netherlands	India	Phone	29
I17	Male	Partner/Yes	Big 4	Italy	Italy	Phone	34
I18	Male	Partner/Yes	Big 4	Germany	Germany, India	Phone	73
I19	Male	Partner/-	Big 4	Germany	Germany	Email	–
I20	Male	Manager/-	Big 4	Germany	Germany	Phone	32
I21	Male	Senior Associate/-	Big 4	Germany	Germany	In person	32
I22	Male	Senior Associate/	Big 4	Germany	Germany	Phone	31
I23	Male	Senior Associate/-	Big 4	Germany	Germany	In person	22
I24	Male	Senior Associate/-	Big 4	Germany	Germany, India	Phone	28
I25	Male	Associate/-	Big 4	Germany	Germany, India	Phone	48

Note(s): APAK: German Audit Oversight Commission; SSC: shared service centre
Source(s): Authors' own creation/work

Table 1.
Characteristics of the 25 interviewees

overarching topic (deductive coding) and grouped under a common representative code for the topic.

4. Analysis

We concentrated our analysis on four aspects: (1) the state of SSC implementation, (2) the main drivers of SSC implementation (RQ1), (3) the changes in the audit process due to SSC implementation (RQ2) and (4) the consequences for audit quality (RQ3).

4.1 State of SSC implementation

Most of the firms in our sample began implementing SSCs around the same time. Our data also indicated that SSC development likely began in Europe, probably in Germany, about

Table 2.
Coding framework

Code	Sub-code
Reasons/advantages	Efficiency
	Affordable workforce
	Specialisation
	Training effect
	Standardisation
	Improved documentation
	Process optimisation
	Relief of audit team
	Improved communication with the client
	Solving the problem finding junior staff
	Attractive work for certain groups
	High audit quality
	Saving time during audits (fast close)
	Better motivation amongst the audit team
	Relief from the busy-season problem
	Special advantages of foreign SSCs
Problems	Additional effort
	Costs of additional quality controls
	Coordination effort
	Interface problem
	Occupancy of SSCs
	Quality deficiencies
	Communication between the SSC and client
	Training of junior staff
	Lack of willingness to change
	Coordination needs
	Personal responsibility
	Loss of time
	Lack of proximity to the client
	Special problems of foreign SSCs
Technological aspects	Proportion of the audit volume
	Size
	Timing of the implementation
	Future potential
	Localisation
	Human resources
	Non-Big 4
Quality assurance	
Prior experience	
Acceptance/disclosure	Third parties
	Client
	Internally

Note(s): SSC: shared service centre
Source(s): Authors' own creation/work

10 years ago. Three of the Big 4 audit firms in Germany had well-established SSCs and a fourth started a pilot SSC project around the time we performed the interviews. Citing data privacy concerns, some firms exclusively used onshore SSCs that can be accessed by network members in smaller neighbouring countries. Other firms outsourced various non-confidential auditing services (e.g. assessing risk and capital market data and developing presentations) to Eastern Europe. In the Netherlands and UK, outsourcing SSCs to India was more common. SSCs in Europe generally employed up to 200 employees, whereas those in India, which performed a wide array of audit and non-audit services, can employ up to 15,000 employees.

4.1.1 Share of work delegated to SSCs. The share of work managed by an SSC was comparable between the audit firms in our sample. In most cases, the average percentage of audit hours conducted by an SSC was 3–6%. Interviewed audit partners predicted that this percentage could increase to 10% over time. The utilisation intensity of SSCs seemed to differ across Big 4 audit firms based on the timing of the first SCC implementation; accordingly, firms that established an SSC earlier benefited from that experience. Consequently, the volume of audit procedures delegated to an SSC also varied across Big 4 audit firms, from 5 to 10%. An exception was Spain, where one audit partner suggested much higher percentages between 20 and 25%.

The impact of digitalisation, data analytics and Big Data were somewhat unclear, with one interviewee citing an increase in the importance of SSCs:

> The relevance of data analytics is increasing and our traditional staff lack the related competence. Therefore, we are establishing competence centres to provide support such as for data migration. Such centres could be considered as a sub-type of an SSC. (I18)

Another mentioned that Big Data could make SSCs redundant:

> Big Data may revolutionise audit approaches in such a way that major parts of the audit run automatically. Then, a delegation of audit procedures to an SSC would no longer be necessary. (I4)

We found that audit firms used SSCs as extensively as possible and many firms kept a manual of tasks for outsourcing to their SSCs. One audit partner (I9) stated that nearly any task could be outsourced to the SSC, but most were repetitive routine tasks that could be automated, standardised and modularised (e.g. reconciliations, confirmation letters, journal entry testing). One audit firm started by delegating about 30 tasks to its SSC, which later expanded to nearly 140, reflecting the positive experience with and increased expertise of the SSC (I12). Moreover, the manual of this same audit firm listed only 70 tasks as eligible for outsourcing due to cost constraints.

4.1.2 Type of work delegated to SSCs. Interviewee I17 reiterated a common theme amongst respondents that SSCs are the most useful for processing simple tasks:

> If professional judgement is required, we could not delegate [the procedure] to off-client site teams; they would have to be within the standard staffing. (I17)

These simple tasks include creating and maintaining family trees for independence checks, updating publicly available client information, rolling forward audit files and prior year financial statement information, managing deliverables, collecting data from affiliated companies for group audits, preparing data for information technology (IT) applications, checking incoming and outgoing invoices, conducting audit procedures on fixed and current assets and other operating income and expenses, reviewing and presenting tax obligations and conducting correctness checks. Firms with both onshore and offshore SSCs often delegate different tasks to each.

As the SSC gains experience, it can handle more complex tasks such as analysing IT and clients' economic and legal environments, conducting environmental controls, testing revenue, performing general cut-off tests, working through notes and checklists, checking whether the information in financial statements complies with accounting regulations and critically reviewing audit reports. A Dutch auditor provided the most extensive elaboration on the audit procedures conducted by the SSC:

> Main services: Services at all stages of the external audit process: planning, testing and completion phases of audits. For example, roll forward and audit file setup, loading general ledger into audit tooling, preparation of lead schedules, analytical procedures, confirmations, reconciliations, test of details, control testing, valuations, IDEA/CAATS/MUS routines, preparation of deliverables, financial statement procedures including mathematical accuracy, internal consistency, prior year

> check, version control and audit of notes to accounts, process flowcharting, monitoring group audit reporting and performance audit compliance checklist. Other services: XBRL-tagging, internal audit procedures, data analytics and professional practice support. (I16)

Furthermore, SSC also support organisational tasks such as setting up various audit templates and in creating our audit interfunctions (internal communication within the audit firm) such as audit instruction or other platforms that have to be set up.

4.1.3 Type of audit firm that uses SSCs. An audit firm must have a sufficient size to recoup the costs and ultimately profit from implementing an SSC, which explains why Big 4 audit firms use them. Non-Big 4 audit firms might have insufficient resources to invest in SSC implementation or insufficient tasks to recoup the subsequent cost savings. Our data indicate that non-Big 4 firms do not use SSCs in their audit processes and that second-tier firms might discuss SSCs but generally do not implement them. The use of SSCs thus seems to be concentrated amongst larger audit firms. One Big 4 audit partner described a lack of competitive engagement in the use of SSCs amongst non-Big 4 audit firms:

> Currently, the next ten [largest firms] are not ready for an SSC . . . they are far behind the development within our firm. In five or ten years, they might be able to implement an SSC. They also will have utilisation problems. (I3)

Interviewees from non-Big 4 audit firms confirmed this perception. In the future, these firms may cooperate in order to generate scale effects. However, such cooperation could cause legal problems (e.g. data privacy issues) that cancel out any benefits of scale effects.

4.2 Drivers of institutional change (RQ1)

4.2.1 Economic rationale as a driver of institutional change. Audit firms are embedded in a market environment. According to the economic imperative of institutional theory, audit firms profit by maximising efficiency. As such, the institutional theory of change stresses the importance of increasing returns associated with adherence to certain processes. Successful practices create self-reinforcing feedback processes, rewarding those that adopt them. As adoption increases, the gains for others and costs of non-compliance increase (Scott, 2010). Bundling resources and delegating control over them to an SSC or another business unit should thus generate economies of scale for audit firms (Janssen and Joha, 2006). Indeed, a key advantage of SSCs is their reduced audit costs, as stressed by one of the audit partners:

> Many organisations, including ours, will make the argument that it is not all about costs. But in reality, it is very much about costs. . . . Our business faces cost pressures like any other commercial company. . . . We are in a competitive environment with the other Big 4. We have defined new and different ways of delivering our services with the same quality standard at the lowest price possible. The big driver is lower cost for equivalent services to the client. (I9)

As in every service industry, it is crucial for audit firms to manage staff costs. We found that audit firms use SSCs to lower audit production costs; one example is the decreased labour costs because of the lower salaries paid to SSC staff. Furthermore, in line with the general theoretical discussion on SSCs (Cooke, 2006; Herbert and Seal, 2013; Lindvall and Iveroth, 2011; Ulbrich, 2006), they yield more benefits as they gain experience. SSC staff specialise in a defined set of specific, often less sophisticated audit procedures. This expertise offers two benefits: it decreases the time required for such tasks and prevents an inefficient cycle whereby novice auditors learn the simpler task and then move onto more sophisticated tasks. As one interviewee described it,

> In the past, more trivial audit procedures were performed by audit team members in the first year of their career, without their having experience in, say, the preparation of confirmation letters. Nowadays, SSC staff do the same work continuously, which enhances efficiency. (I10)

SSCs can also increase the chances of finalising audits in a timely and cost-effective way:

> From my point of view, the key advantage of an SSC lies in the quicker processing of audit procedures because audit teams often lack the necessary human resources. We have always said that audit quality has the highest priority. Therefore, we, the audit team, make faster progress because repetitive and relatively simple tasks are delegated to the SSC and the SSC works faster due to specialisation. (I20)

> Our audit team workforce is too small to perform the audit completely within the team. Thus, the use of SSCs reduces our weekly working time. (I22)

SSCs also have lower recruitment costs. Many western countries have insufficient adequately qualified junior staff (Daugherty *et al.*, 2012) compared with Eastern Europe and Asia. Over the past 2 decades, the audit profession has lost much of its appeal [1]. It is often easier to hire staff for SSCs because their qualification requirements are lower and they offer more flexible work arrangements. Nevertheless, staff acquisition is decisive for the success of an SSC. In some cases, SSC staff are highly qualified; for example, a certified auditor in a high-stress position may opt to take a less stressful position at an SSC. Compared with SSC staff in Germany, SSCs located abroad (e.g. Poland, India) tend to employ more staff with a university education. In one Spanish audit firm, many SSC staff members had a university education but lacked professional qualifications because they did not have the required practical experience. Another Spanish audit firm had a pyramid staff structure in which the people at the top level held auditing qualifications, those at the middle level had bachelor qualifications, and those at the bottom had no academic qualifications. A similar structure was described in a German SSC:

> Not only does the head of the SSC have an auditing qualification, but also the group leaders are public accountants. . . . A group consists of between five and 10 employees. (I2)

In these scenarios, the education of junior staff might decline because they never learn how to perform the tasks delegated to the SSC. However, audit firms also use SSCs as training facilities for junior staff. One Italian audit firm hires interns to work in the SSC for about six months between their bachelor's and master's programmes, which provides training and increases the chances that they will apply to the audit firm upon finishing their programmes:

> We deliberately train potential candidates in the SSC. It is a preliminary stage. Young employees should become attached to the organisation and introduced to routine procedures. (I15)

Using an SSC makes it easier to recruit staff in peak seasons by offering part-time and temporary contracts with increased flexibility (Lindvall and Iveroth, 2011). Additionally, because several audit firms implement SSCs in India, the likelihood that their capacity is sufficiently used increases and the audit firm therefore does not have to pay its staff when no work is available. One interviewee mentioned that having employees with flexible working times is an advantage because of the time variance in demand for SSC services. Furthermore, the audit team used the time zone advantage by sending work to be completed overnight at the SSC, with results available the next day.

Members of audit teams also share the view of audit partners that the use of SSC leads to cost reduction, saves time in the audit production and contributes to a faster completion of the audit process. However, they also point out many challenges and describe SSC as relieving pressure on the audit team and as increasing audit efficiency.

4.2.2 Legitimacy as a driver of institutional change. Institutional theory assumes that organisations must gain legitimacy. As previously mentioned, legitimacy is the perception that the actions of an entity are desirable, proper, or appropriate in terms of socially constructed norms, beliefs, or definitions (Suchman, 1995). Legitimacy is bestowed on an organisation by both external and internal stakeholders. External stakeholders include regulators, oversight and enforcement bodies, analysts and field-level actors such as peer auditors. Whilst public information regarding SSC is scarce, since auditors do not publicly disclose information on SSC, they convey, monitor and enforce social expectations of appropriate conduct on the basis of information collected through various channels (Greenwood *et al.*, 2017, p. 5). Internal legitimacy is the acceptance or normative validation of an organisational strategy or goal via the consensus of its participants (Drori and Honig, 2013). External legitimacy occurs when external stakeholders accept firm objectives such as accumulating resources, attracting clients and investors and being perceived as a bona fide member of the community (Drori and Honig, 2013). In the auditing industry, internal legitimacy comes from actors within the audit firm and is thus more process-related (RQ2). External legitimacy aligns closely with the audit firm's endeavours to maximise the market's evaluation of audit processes and is therefore a central objective of audit firms.

According to most interviewed audit partners, external stakeholders – besides the boards of their clients – are not actively informed about SSC implementation in audit firms. SSCs are not mentioned in auditor reports or in reports to governance entities. Thus, users of audited financial statements may be unaware that some audit procedures are performed by an SSC. Interviewees did not think that such information would be relevant to external stakeholders, especially if the SSC is located in the same country as the audit firm. For example, one audit partner said,

> It is questionable whether this is relevant. I do not see a major difference between the performance of those audit procedures by junior staff in the first year or by an SSC. In both cases, the findings have to be reviewed by the responsible manager and partner. (I5)

Another interviewee assumed that indirect stakeholders (i.e. audit clients that buy consulting services from the audit firm, some of which are provided by an SSC) know about the existence and use of SSCs by audit firms. Another partner even expected negative reactions from stakeholders due to biased information:

> I really believe that investors would perceive the use of an SSC negatively. According to my experience, such reactions always happen when individuals do not completely understand the activities of others. I already see press article headings such as 'In the future, audit firms will let audits be carried out in India', without saying that only audit tasks of very low complexity are sent there. (I18)

One auditor felt that SSCs should be mentioned in the auditor report under certain circumstances:

> I would mention it in the audit report if the volume of delegated work was material because the audit scope is a core element to be reported. (I8)

Chan and Moser (2015) show that audit clients want high transparency about the use of outsourcing. Accordingly, unlike external stakeholders, clients usually know about the use of SSCs because audit firms provide this information in a separate section of the proposal and again in the engagement letter signed by clients. According to one auditor, the higher the volume of audit procedures delegated to an SSC, the higher the likelihood that such information was provided in the proposal and engagement letter. Further, audit firms that do not mention the SSC in their proposals or engagement letters usually inform clients during audit planning so that the client can provide consent. One Spanish audit partner described a client's surprise at learning about the SSC:

> At the beginning, it was a surprise for them because it was an innovation in the Spanish audit market. But now it is very common. They know the SSC. They know the activities. (I10)

Audit firms also discussed the use of an SSC with audit committees and supervisory boards. Frequently, a representative of the SSC even works at the client location. One audit firm increased client acceptance by passing on efficiency gains in the form of forwarding electronic signatures to clients' customers and creditors. Some audit firms even advertised the use of an SSC in commercial presentations and newsletters:

> I know that for big clients we previously organised tours of the SSC office to show them what we are doing there and our level of professionalism. Because sometimes when you talk with clients about the SSC, they feel that it is about doing research in a dark room. It helps to show them the team, the structure, and the procedure. (I10)

Although some clients (mainly private companies) prefer their audits to be done by a single audit team, larger clients (which typically use outsourcing themselves) tend to understand its advantages (e.g. intense price competition, resulting in lower audit fees). The degree of client acceptance is thus generally high:

> Clients are only critical when the quality of the audit procedures performed by the SSC is poor such as when the sample selection does not make sense. However, this mainly happens in the initial year of the SSC and is normally communicated to the audit team, resulting in satisfactory changes. (I2)

Against this backdrop of high client acceptance, the reluctance of audit firms to publicly disclose the use of SSCs is surprising. Some auditors attributed this reluctance to price concerns:

> We do not advertise the fact very openly to be honest. One reason is that as soon as we reveal that we transferred X percent to an SSC, the client asks us for a share of the synergies. This is an argument we don't want to hear in price discussions. (I12)

Another interviewee explained that audit firms want to keep their competitive advantage hidden as long as possible:

> If tomorrow everybody knows about the model, they [competitors] can copy it and we lose our competitive advantage. (I17)

In sum, whereas the audit firm usually informs its clients about the SSC, it does not communicate this information publicly, either because audit firms assume this information is not decision-useful or because they want to avoid a potential public backlash. Using an SSC is an audit practice that may affect stakeholders' perceptions and assessments of audit production and thus the legitimacy of the audit. The decision not to disclose information on the use of an SSC to the users of audited financial statements might be interpreted twofold. First, if users perceive the SSC positively, audit firms would miss a chance to enhance legitimacy. Second and more likely, non-disclosure would be accompanied by the fear that knowledge about the implementation of an SSC might be perceived negatively and thereby threaten legitimacy. Our analysis therefore reveals that an economic rationale drives the implementation of SSCs in the first place. It has already been discussed in the previous literature that striving for higher audit efficiency that follows a commercialisation logic is a dangerous path that could even damage the professionalism of auditors. At the very least, one can expect a prevailing commercialisation logic to emphasise positive effects of audit efficiency, such as a positive impact on audit quality (Dermarkar and Hazgui, 2022).

4.3 Change process due to SSC implementation (RQ2)

4.3.1 Challenges associated with SSCs. Implementing an SSC is not trivial. To institutionalise any new practice, including an SSC, its internal legitimacy must be established, usually through bottom-up practices adopted through individual agency, as opposed to institutional logics and efficiencies promoted by organisational leaders. Institutionalisation means infusing value beyond the technical requirements of the task (Selznick, 1994, p. 233) and it is accompanied by the deinstitutionalisation of existing norms and practices (Dacin *et al.*, 2002). Thus, only a small subset of practices becomes institutionalised (Scott, 2010) after acceptance from spatially dispersed, heterogeneous actors with varying resources (Drori and Honig, 2013).

According to our analysis, the internal acceptance of an SSC is crucial within audit firms. SSCs are profitable only if their capacities are adequately used, which in turn requires acceptance within the firm. As with most institutional changes, the implementation of an SSC developed in a trial-and-error manner leads to several organisational and institutional changes to audit practice and auditor behaviour. One partner explained it as follows:

> Audit teams dislike handing over competence, particularly when audit procedures are performed by a kind of black box. Therefore, without investing time and effort to increase internal acceptance, it would be extremely difficult to run a high-quality SSC in a profitable manner. (I2)

The stability and integration of a new practice requires commitment (Selznick, 1994, p. 232). The directors of an audit firm must believe in the benefits of the SSC and be willing to change. When an SSC is implemented by one office of the audit firm, other offices must be willing to participate. Significant effort may be required to convince audit teams of the benefits.

As the major challenge, most interviewees focussed on the efficiency gains, noting that SSCs might result in a loss of efficiency by incurring start-up and quality control costs. Some mentioned the indirect impacts of SSCs on efficiency such as the additional coordination effort needed between the audit team and SSC:

> The main disadvantage is related to the potential discoordination between the face-to-face audit team and people working with you in the SSC. (I10)

ISA 220(revised).35 requires the engagement partner to ensure that the engagement team undertakes consultation, particularly on difficult or contentious matters and that the SSC staff participates in such consultation. An effective interaction between the engagement team and SSC staff involved in the audit is essential (IAASB Framework for Audit Quality). Interface problems with regard to data delivery from the client to SSC also lower audit efficiency:

> Interface problems cost an enormous amount of additional time for the audit team, but also for the SSC and client. Sometimes, this loss of time is so extensive that it would have been better if an audit team member had performed the audit procedure. (I2)

Moreover, whereas audit members can bridge the busy and less busy seasons because of their professional education and the provision of non-audit services, the SSC faces a utilisation problem. SSCs may also suffer problems related to human resources, as substantiated by the following assertion:

> Working councils are more anxious to protect SSC employees; the staff are less career-orientated, less willing to work overtime, and less flexible. Some SSC employees think that they actually do top-quality jobs and request salary increases. Thus, the SSC causes additional problems at the staff level. (I13)

Audit team members stress the initial difficulties of implementing SSCs and high costs of setting up the processes with the SSC. According to audit team members, problems lead to a considerable increase in workload and can be time-consuming since coordination is much more difficult.

In sum, an SSC is advantageous only when its net efficiency and effectiveness are positive according to auditors' beliefs. The biggest challenges to generate internal legitimacy are the standardisation of audit work and coordination problems as well as changes in the monitoring processes during the change process.

4.3.2 Standardisation of audit work and coordination problems. SSCs generate efficiency gains through economies of scale by identifying, standardising and then institutionalising best practices. Standardisation contributes to more comparable audit findings and a more cohesive global audit approach. One of our interviewees explained this advantage as follows:

> For me, the standardisation of working papers is an important advantage because I immediately know where I have to look . . . and there is no need to start rethinking the working papers for each case. . . . This also simplifies the review processes. (I5)

The standardisation of audit procedures is a work-intensive endeavour and our analysis revealed several major obstacles. For example, it can be challenging to standardise coordination efforts between the core audit team and SSC. Audit team members emphasise the effort involved in setting up a standardised process and the initial difficulties that arise. Auditors also cannot monitor the SSC as closely as they can monitor in-house activities. Any flaws in the standards can have major consequences. Moreover, standardisation reduces the ability to adapt audit procedures to specific client characteristics. Audit team members note that not all documents entering the system can always be standardised and this leads to additional work and increased documentation. A need for post-processing regularly leads to additional work for audit team members.

Standardisation also conflicts with the principle of the personal responsibility of the auditor and restricts professional judgement. Finally, standardisation can negatively impact the audit process (Francis, 1994; Power, 1995). Engagement team members including involved SSC staff, must communicate relevant and reliable information to appropriate parties within the audit firm or to the engagement partner (ISA 220(revised). The spatial separation of audit team members and SSC is seen as challenging in terms of obtaining direct and efficient communication between the audit team and the SSC. The importance of standardisation and coordination is expressed by the audit team members, as they state that whenever a process is not standardised and routine, there are problems. Audit team members described the coordination and communication problems as follows:

> For example, in the past it could happen that misstatements were detected but not adequately communicated, and ultimately, our workload was higher than performing the task myself. (I23)

> If the SSC employee was already involved in the audit of a certain client in prior years, the audit team is relieved. Contrarily, if the employee is involved in a certain audit for the first time or even did work for the SSC in their first season, the audit team is more burdened. [. . .] it requires additional communication, and I would have spent less time performing the procedures myself. (I25)

In the interviews, audit team members emphasised that if you tell the SCC exactly what you want when completing the task, the quality is right, but that this can take a considerable amount of time. Communication between auditor and client is of particular importance. SSCs can hinder communication with the client, through the loss of face-to-face contact, which must be alleviated by additional coordination, as described by both audit team members and audit partners. One interviewed audit partner put it as follows:

> Communication with the client is a serious problem. The audit team has direct contact with the client. Who will contact the client if the SSC has questions? If the SSC calls the client, there will be a lack of familiarity and it might confuse the client to have several contacts. If the audit team raises the questions, there might be a loss in efficiency because a satisfactory answer requires a set of queries. Also, if the data delivery from the client to the SSC does not work adequately, the audit team, the SSC, and the client will have to spend a lot of additional time. Thus, such indirect contact increases the costs of communication and coordination. (I5)

Offshoring causes further problems. One Big 4 audit firm uses a local SSC in Germany and a global one in India, with mixed results. Whereas the German SSC mainly posed problems during implementation, the Indian SSC has ongoing issues. As Indian colleagues cannot communicate directly with clients, tasks must be explained to them in great detail to avoid queries, which in turn results in a significant loss of time:

> Collaboration with the German SSC functions very well and tasks are processed rapidly. If there is room for improvement, it is possible to pass on the problem to the SSC and in the following year changes can be observed. . . . Concerning the Indian colleagues, the general opinion within audit teams is that they should be in charge only of very simple tasks. . . . Frequently, deadlines are not met. . . . More demanding audit procedures like tests of control are performed more quickly if we do them ourselves. . . . We spend on average 25% of the audit hours needed by the Indian SSC on reworking. . . . The problem is less that employees of the Indian SSC make mistakes, but their feedback is often incomplete. (I21)

Another interviewee expressed a different view:

> The more the colleague is integrated and the more intensively the tasks are explained, the better the results. . . . Of course, the frustration level will be extremely high if I wait a week for results, assuming that the task has been done, and then have to perform it myself again. . . . In addition, it is important to ensure regular communication. This is difficult with the Indian colleagues because they hesitate to admit that they did not understand the task. (I22)

If the SSC is located abroad, further coordination problems arise because of client approvals and other time-consuming tasks such as data anonymisation for data stored on a server abroad. Confidentiality is a fundamental principle of ethics for professional accountants (IESBA, 2018; 110.1 A1). All accountants and their staff must respect the confidentiality of any information acquired as a result of professional and business relationships (IESBA, 2018; R114.1) and they must remain alert to this principle when disclosing or sharing information within the firm or network (IESBA, 2018; R310.11). During transborder data flows, data protection is more complicated and may not comply with the principle of confidentiality.

The audit firm also must coordinate with the different and complex legal environments of its SSC. For instance, regulations differ across countries (e.g. some prohibit audit team members from holding shares in audited companies). Communication is also more problematic due to different languages and accents, cultural and lifestyle differences and time zone issues, as expressed by both audit partners and audit team members. An interviewee from Italy summarised some of the problems related to SSC locations:

> First, we needed to decide about finances. There's always a trade-off between finances and quality. We need an appropriate level of control over the structure. This is the exclusively businesswise point of view. On the other hand, our regulator is somewhat sceptical about having these tasks performed outside the country. We also have some possible issues about confidentiality when data are assessed outside our national borders. (I17)

Audit teams often hire permanent staff to facilitate the collaboration between the SSC and audit team. This person may even work at the client location as a fully integrated member of the audit team. This position reflects an institutional change in response to proximity challenges. Digitalisation and IT tools also help solve coordination problems during SCC implementation, as one interviewee expressed:

> We have an IT application in which we make the various requests for the procedures we want done by the SSC. The application allows us to check who is going to be responsible for each task, who the supervisors are, the timetable to finish the procedure, and the current situation at the end of the day. . . . So the coordination for me now is really fantastic. (I10)

Despite the cost advantages of digitalisation, the additional effort needed for standardisation and coordination remains an intrinsic challenge whenever using SSCs.

4.3.3 Changes in monitoring processes. SCC implementation affects auditors' beliefs about audit processes, especially the functional pressure for deinstitutionalisation (Oliver, 1992). For example, as previously mentioned, auditors cannot monitor the SSC as closely as they can in-house activities. The auditor must exercise professional judgement in planning and performing the audit of financial statements (e.g. ISA 200.16). The engagement partner shall take responsibility for the direction and supervision of the members of the engagement team and the review of their work (ISA 220(revised).29). This means that the engagement partner must also monitor audit evidence provided by SSC staff. Thus, the lack of control associated with SSCs can be problematic for auditors who must uphold the principle of personal responsibility. They may prefer not to delegate competencies to a third party or work with indirect findings, as one respondent explained:

> It requires a different mindset as to how you do your work because you are working with a part of the team that is not located in the same location as the rest of the onshore team. Getting used to that way of working is a factor. Understanding how you can work with the remote team . . . [is critical]. (I9)

Audit firms must establish and maintain a system of quality control to ensure compliance with professional standards and regulation requirements (ISA 220(revised).2; International Standard on Quality Management (ISQM) 1.1, 0.14). This requires sufficient personnel with suitable competence and capabilities (ISA 220(revised).26; ISQM1.32). To achieve an appropriate level of audit quality, staff must be sufficiently knowledgeable, skilled and experienced and have sufficient time allocated to perform the audit work (IAASB Framework for Audit Quality). The audit firm and the engagement partner must assign appropriate personnel to audit engagements to ensure that they are appropriately performed (ISQM1.31). The use of SSCs pose additional challenges in conjunction with quality control. Similar arguments apply to engagement quality reviews (ISA 220(revised).36; SQM2). Additionally, the IAASB Framework for Audit Quality prescribes that a reasonable degree of staff continuity is necessary. Therefore, the auditor must consider the potentially higher turnover rate in SSCs when assessing staff continuity. The use of SSCs also poses additional quality control challenges. Similar arguments apply to engagement quality reviews (ISA 220(revised).36; SQM2). Limited oversight can slow the progress of essential tasks for internal legitimacy such as acceptance, especially if the resistance to change is difficult to detect (Canning *et al.*, 2018). Scott (2010) describes several strategies that audit firms can use to encourage the acceptance of new norms and practices: (1) increasing returns to create a self-reinforcing feedback process that rewards adopters, (2) promoting normative commitment to the process beyond rationality and (3) objectifying the idea that the new beliefs are taken for granted.

In some cases, the decision to use an SSC is fully relegated to the engagement partner or manager responsible for the audit, who assumes personal responsibility for its suitability and client acceptance. Audit teams may also be able to decide whether and to what extent to use the SSC, although they are often required to delegate a certain percentage of their audit hours to it. Other teams are required to use the SSC. One audit firm prepared reports (e.g. internal surveys) to show the degree to which auditors and audit teams used the SSC. The partner then discussed the SSC tasks with the audit team, examined any issues and suggested appropriate future tasks for the SSC. The non-use of an SSC also has consequences for the audit team leader, as demonstrated by the following comment:

> An audit team leader who does not use the SSC at all and cannot justify it has a need to explain. It could be a theme during staff appraisals and negatively affect the assessment. (I15)

The interviews revealed that the willingness to accept and use the SSC must be developed through informal and formal communication such as conversations, briefings and partner meetings. It helps if audit teams understand how the SSC conducts audit procedures and if auditors have well-defined contacts to encourage communication under the new organisational structure. One audit firm, for example, started with a pilot test phase. Team members were invited to identify tasks that could be handled by an SSC. Experienced auditors then applied that knowledge during the initial SSC implementation. Over time, the repeated and increased use of the SSC led to acceptance and the SSC became a de facto part of the audit firm. Overall, this organisational and institutional acceptance is crucial for SSC success.

4.4 SSC effects on audit quality (RQ3)

High audit quality is crucial for the audit industry. Audit firms therefore implement practices that deliver the same or higher audit quality with higher efficiency. In this way, SSCs can improve audit quality, as indicated by this auditor's statement:

> Our main motivation for the implementation of the SSC was to increase audit quality because the audit procedures passed to the SSC were often poorly performed before. Now, we have observed an increase in quality. (I6)

Audit team members supported this view, especially for standardised and repetitive audit work. SSCs can also enhance audit effectiveness if their staff are skilled in specific tasks:

> I think that people should develop additional specific expertise and then they can get to the point where they are very effective and super-efficient [in comparison to audit teams] with a wide span of people who are able to do everything. (I17)

Additionally, the use of standardised audit procedures helps optimise processes by enabling audit teams to focus on tasks that require a high degree of discretion and sophistication and tasks that are more relevant for clients. This optimisation improves client relationships by prioritising important issues (e.g. those related to accounting estimates), which in turn improves external legitimacy. As one German interviewee noted:

> This enables us to use the time spent at the premises of the client on really important issues of a more judgemental nature, which are also of greater interest to the client. This also improves the relationship between the audit team and client. (I5)

Time savings might also result in the avoidance of audit delays. Moreover, audit quality requires that an engagement team has sufficient time allocated to perform the audit work (IAASB Framework for Audit Quality) and the use of SSC may help in fulfilling this requirement. Assuming that audit team members prefer not to carry out certain tasks, delegating those tasks to the SSC means they can perform more interesting audit work. In this way, the use of an SSC might raise employee satisfaction and motivation. Another advantage of an SSC is that it can help address the busy-season problem when junior staff may not be fully available. One representative of an audit oversight body even acknowledged the possibility of enhanced audit quality, which seems to conflict with the former APAK prioritising the monitoring of SSCs based on concerns about audit quality:

> It is possible that individuals working in an SSC specialise in performing such audit procedures and therefore provide higher audit quality than those performing them together with other audit procedures. (I4)

Auditors did acknowledge potential pitfalls such as quality issues:

> The first years were characterised by quality deficiencies. One reason was that we outsourced work that was not suitable for the SSC. The standardisation only improved over time and we learned on both sides. (I12)

Audit team members also confirmed that the SSC output occasionally had errors, which still needed to be addressed. Identifying the root causes of these errors is more challenging, however, due to the reduced insights into the SSC production process compared with tasks handled in-house:

> Unfortunately, I discovered a couple of times that the results delivered by the SSC were deficient and I had to rework. This results in a major loss of time and makes it even more difficult to meet deadlines. (I20)

One respondent noted that despite these issues, the SSC is preferred to an intern or another associate:

> If an employee of the SSC performs a certain task the first time, I would prefer this to a member of the audit team in the same situation because the employees of the SSC normally receive introductory training. Furthermore, in the past, such tasks were normally performed by interns who left the audit firm after a short period, whereas the employees of an SSC normally stay for a longer period of time. (I20).

Nevertheless, the lack of direct contact with the client can lower audit quality, as one interviewee from Austria noted:

> A disadvantage is that auditors do not get to know all the elements of their own craft. Another risk that always applies to outsourcing is that the engagement auditor has reduced control over SSC activities. (I15)

However, any efficiency gains from SSC implementation are worthless if audit quality falls and the firm reputation suffers. Interviewees stressed that the quality of SSC services is adequate but noted the necessity of additional quality control efforts such as internal quality assurance systems that monitor the work delegated to an SSC to ensure quality control and adequate staffing. As one interviewee stated,

> We have always said that audit quality has the highest priority. Therefore, we do not make use of all the potential usages of an SSC. . . . In fact, SSC services must be of a high standard. Otherwise, they will not be accepted by its internal customers. (I2)

Other ways to ensure quality include carefully selecting SSC employees for their expertise, personality and motivation (see Section 4.2); providing sufficient training; and using standard tools and templates with predefined steps. When SSC workgroups have clear and consistent training instructions, it increases the comparability of the audit findings and decreases the probability of poor performance. Moreover, the individual performing the audit procedures has a complete set of questions, thus decreasing the likelihood of incompleteness. Subsequent reviews are also simplified because anomalies can be identified easily.

Certified auditors often oversee the SSC. Sometimes, directors of SSCs or even the heads of workgroups have auditing qualifications, which increases audit quality. Another instrument for ensuring adequate audit quality is the strict application of the "multiple eye" principle in which the leader of a group reviews its findings, which are reviewed by the head of the SSC. Audit teams and engagement partners then check the SSC work in detail to ensure it adheres to the principle of personal responsibility. As one respondent explained:

> For each piece of work executed by means of a resource, an experienced reviewer is assigned to review it to ensure its adequate quality before sending it onshore. A quality review process is in place where a manager is designated to review the deliverables already sent onshore to ensure high quality in the future. Feedback is taken from onshore via e-tools to provide improved work products. (I16)

Some audit firms perform a complete internal audit of their SSCs. Others assign staff to review SSC processes or conduct annual surveys on satisfaction with the SSC's work, which is especially important when the SSC is physically distant, making direct supervision and familiarity with staff more challenging. Finally, during SSC implementation, audit firms learn how to address start-up problems and quality deficiencies:

> In our firm, the number of services delegated to our SSC has increased year by year, the quality of the provided services has stabilised over time, and the internal transparency of this quality has increased, too. (I2)

Our analysis of the drivers of SSC implementation revealed that audit firms did not actively seek the external legitimacy of their SSC. In the case of SSCs, it might be that consensus within the internal test phase has not been reached, as evidenced by the struggle for internal legitimacy within their audit firms. Even so, audit quality is highly relevant to external stakeholders. Thus, an opaque information environment as it relates to SSC use may adversely affect public opinion. Again, adopting the institutional theory perspective, evidence on the effectiveness of new practices, positive market feedback and improved audit quality outcomes would increase legitimacy and encourage wider diffusion (Hardy and Maguire, 2017).

5. Conclusion

This study is the first to investigate why audit firms implement SSCs, how they operate them in a changing organisational and institutional environment and SSCs' impacts on audit quality. Based on interviews with 16 audit partners from Big 4 firms in seven European countries, six audit team members of Big 4 firms, two non-Big 4 audit partners and one representative from an oversight body, we provide important insights into the configuration of SSCs; drivers of SSC implementation; and associated change processes, challenges and effects on audit quality. Our study was guided by institutional theory. In line with the paradigm of constructivism, we applied theoretical concepts as a framework to enhance the understanding of previously unappreciated aspects of SSCs in the auditing industry rather than merely confirming the theory (Power and Gendron, 2015).

First, our analysis provided interesting and indeed useful results on the status of SSCs and how auditors perceive them. Based on the anecdotal evidence we gathered so far, the SSC are only applied by Big 4 audit firms, but not by non-Big-4 audit firms. We found high consistency in how audit firms use SSCs and expect that they will be used increasingly in future audit work. Our study also revealed similarities in the timing, share and type of work delegated to SSCs; the type of audit firm that uses SSCs; and how SSCs are implemented. Since institutional theory predicts that audit firms have an incentive to adopt similar structures to enhance legitimacy, this result is line with the theoretical predictions. It also shows that although the change process due to SSCs is not in a later stage of institutionalisation, audit firms already exhibit similar structures, indicating that despite the lack of public disclosure on SSC implementation, non-public information is available within the auditor community.

Second, our study investigated the drivers of SSC implementation in audit firms. Against the backdrop of institutional theory, which suggests two main motivations for change (i.e. an economic rationale and an institutional rationale), our study found that economic gains were the main driver of setting up an SSC. In particular, the specialised skills of the SSC, along with standardised tools and procedures and effective recruitment and staffing, increased audit efficiency. However, we also learnt about some of the economic pitfalls such as the costs of additional coordination efforts. Surprisingly, the external legitimacy of SSCs was not pursued actively by audit firms. In fact, our analysis showed that auditors avoid disclosing information about the SSC to their clients and are highly secretive when communicating SSC activities to external stakeholders. One motivation for this secrecy is to establish competitive advantage. Auditors also see no need to actively communicate the application of SSCs in many cases because they are not seeking external legitimacy but rather the economic benefits of SSC implementation. It has already been discussed in the previous literature that striving for higher audit efficiency that follows a commercialisation logic is a dangerous path that could even damage the professionalism of auditors. At the very least, one can expect a prevailing commercialisation logic to emphasise positive effects of audit efficiency, such as a positive impact on audit quality (Dermarkar and Hazgui, 2022). From a theoretical point of view, our results showed that the institutionalisation process is incomplete. As documented in institutional theory, exogenous drivers such as commercial pressure are driving the change process. This indicates that external legitimacy has to be promoted in the next step.

In an auditing context where audit quality is dependent on market perceptions, such institutionalisation is even more important. According to the model of Tolbert and Zucker (1996), SSC implementation therefore already exhibits the generation of new structural arrangements and formalisation of practices (habitualisation) as well as a certain consensus amongst organisational decision-makers on the value of new practices (objectification). However, the promotion of outcomes to both advocates and resistors, at least amongst external stakeholders, is incomplete (sedimentation).

Third, by exploring the change processes associated with SSC implementation, we found a similar process to that described in the institutional change literature: the trial-and-error approach to solving major challenges and attaining internal legitimacy. The interviews revealed that the internal legitimacy of SSCs was crucial for successful audit processes. Auditors faced two major challenges in this regard. First, using SSCs requires a high standardisation of audit work and additional coordination efforts, which require investment and can threaten the principle of self-responsibility and professional scepticism, especially in multi-country settings where face-to-face contact may be limited or absent. Audit firms alleviated these challenges by exchanging personnel and using standard digital tools. Second, using SSCs affects how auditors conduct and design their audits. The use of SSCs means that auditors have less control over their audit teams. We found that the acceptance issues arising from this loss of control were major challenges to the internal legitimacy of new practices. Audit firms addressed these concerns by reinforcing SSC institutionalisation (e.g. increasing returns for SSC users, fostering internal commitment to using the SSC, supporting an organisational culture where SSCs are an assumed part of the audit process).

Fourth, we found that SSC implementation affected actual and perceived audit quality, including aspects such as standardisation, optimisation, time savings, quality control, staffing opportunities and coordination and communication challenges. Auditors perceived the implementation of new practices within the audit process as legitimate when audit quality stayed consistent or even improved and they imposed several internal quality assurance mechanisms to ensure this legitimacy such as standardising procedures and tools, clarifying responsibilities and monitoring. However, we also observed that audit quality assessments from market and external legitimacy were not actively pursued, risking public pushback. As a possible explanation, we refer to the insights of institutional theory, which indicate that economic imperatives are first addressed, followed later by institutional imperatives.

Our analysis of SSC implementation offers several avenues for future research. First, future research could delve deeper into the impacts of SSCs on audit efficiency by investigating the audit fee effects. It would be of major interest to investigate the effectiveness of SSCs and investors' perceptions of that effectiveness. Second, as audit quality in this paper follows the IAASB definition and auditors' perceptions it leaves open the question of external users' perceptions of audit quality (DeAngelo, 1981). Therefore, an experiment on the impact of SSCs and their different task complexities on external legitimation could have relevant implications for both audit firms and regulators. Access to audit mandates would facilitate insights into the effect of SSCs on audit effectiveness and quality. Additionally, a stakeholder analysis might shed light on the legitimacy of SSC processes within audit firms. Third, future research could follow up on our findings on internal legitimacy by investigating audit team perceptions using methodologies such as surveys, interviews and experiments. Fourth, it would be worth exploring the development of the different tasks outsourced to SSCs. Finally, the nearshoring and offshoring aspects of SSC implementation and use might yield important information.

We acknowledge the limitations of our methodology. Our study focussed on European countries only. Future research should collect additional evidence from other regions such as the US. The semi-structured interview method used here provided a rich data set, but the limited sample size means that our results provide only descriptive evidence on the dimensions of SSC and are not necessarily representative or generalisable to a wider population. For example, we cannot rule out that the application of SSC is only limited to Big 4 audit firms. Moreover, this method was subject to interviewer bias. In addition, we cannot exclude the possibility that the interviewees gave biased responses due to strategic or political considerations (e.g. to present their audit firm in the best possible light). Furthermore, our study was based mainly on the perceptions of audit firm partners. We tried to alleviate this bias by also interviewing six members of audit teams and including their opinions and views. Finally, the digitalisation of audits will likely result in the further automation and standardisation of audit procedures, leading to the use of data analytics and artificial intelligence in the audit domain. This change could result in a broader scope of SSC activities or even make SSCs redundant (Appelbaum *et al.*, 2017).

Note

1. The number of participants in professional audit exams has declined in some European countries (Germany: 1,079 in 2008 to 619 in 2018 (WPK, 2008; WPK, 2018)).

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Appendix

Interview guide for the interviews

(1) Does your company use an SSC?

(2) Are there any different types of SSCs (high vs low expertise)?

(3) In which geographic areas are these SSCs located?

(4) Which tasks are delegated to the SSC?

(5) Which qualifications do the employees of the SSC have?

(6) What are the reasons for using SSCs?

(7) Do you use these services? If not, why not?

(8) What is your previous experience of SSCs?

(9) Are quality assurance measures used? If yes, which ones?

(10) What do you think are the benefits of SSCs?

(11) Have these advantages also been confirmed?

(12) What are the (potential) problem areas?

(13) Are your clients familiar with the use of SSCs?

(14) Is it desired that the public is aware of the existence of SSCs?

(15) If yes, how are SSCs perceived?

(16) Is the use of SSCs somehow communicated (e.g. an application to a tender, auditor's report, report to those charged with governance, transparency report)?

(17) Would your company still decide to use an SSC today?

(18) How do you assess the future of the SSC in your company (increased use vs reduced use vs closure)?

(19) Are there any special problems with SSCs in connection to auditing firms? Are there any approaches to solve these problems?

(20) What about your competitors? Have you ever asked yourself if your competitors use SSCs? What do you know about this? Is there a pressure of competition to use SSCs?

(21) Do you have any comments that are important and have not been covered by my questions?

Source(s): Authors' own creation/work.

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