Why sharing is synergy

The role of decentralized control mechanisms and centralized HR capabilities in creating HR shared service value

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Abstract

Purpose – HR shared service centers (SSCs) have been claimed to innovate human resource management service delivery by centralizing resources and decentralizing control and, in doing so, create value for other business units. In response, to explain the value of HR shared services for the business units served, the purpose of this paper is to test hypotheses on the joint influence of HR SSC operational and dynamic capabilities and of control mechanism usage by the business units.

Design/methodology/approach – A survey methodology was applied to collect data among business unit representatives from 91 business units in 19 Dutch organizations. The data were analyzed using structural equation modeling in AMOS.

Findings – This study found that the use of formal control mechanisms (e.g. contracts, service-level agreements) relates negatively with HR shared service value, but that this relationship becomes positive once mediated by informal control mechanisms (e.g. trust and shared language) and operational HR capabilities. Furthermore, it shows that the dynamic capabilities of HR SSCs relate positively to HR shared service value for the business units, but only because of their effect on operational capabilities.

Originality/value – Whereas previous studies into HR SSCs have examined the two antecedents independently, this study shows how organizational control and capabilities interrelate in explaining the value of HR shared services.

Keywords Quantitative, Dynamic capabilities, Value, Control mechanisms, HR capabilities,
HR shared service centers

Paper type Research paper

Introduction

Increasingly, organizations are centralizing human resource management (HRM) activities in an HR shared service center (SSC) (Farndale *et al.*, 2009; Richter and Brühl, 2017). In the literature, the HR SSC is defined as a hybrid organizational unit that bundles resources (e.g. human capital, information technologies, and organizational processes) to perform consolidated HR activities that are controlled by those it serves: the decentralized business units (Farndale *et al.*, 2009; Maatman *et al.*, 2010; Meijerink, Bondarouk, and Kees Looise, 2013). Driven by the belief that HR SSCs increase the quality of HRM services and simultaneously reduce their costs (Cooke, 2006; Janssen and Joha, 2006), academic studies started to examine HR shared service value, which refers to the utility of the services provided by an HR SSC in terms of the trade-off between their benefits and their costs (Meijerink *et al.*, 2016). Indeed, empirical studies have provided initial evidence that HR SSCs do increase the value of HRM services (Redman *et al.*, 2007; McCracken and McIvor, 2013;

Hofman and Meijerink, 2015) and, in so doing, help HR business partners to adopt a more strategic role (Farndale *et al.*, 2009; Meijerink and Bondarouk, 2013) and support the business units served in committing and retaining their employees (Wildes and Parks, 2005; Gilbert *et al.*, 2011).

Despite highlighting the relevance of maintaining high levels of HR shared service value, these studies have examined selected antecedents in isolation when seeking to explain the value of HR shared services (Richter and Brühl, 2017). This is striking given that research suggests that the value-creating potential of HR SSCs lies in their hybrid nature and, specifically, in the fact that they integrate centralization and decentralization models (Ulrich, 1995; Janssen and Joha, 2006; Meijerink, Bondarouk, and Kees Looise, 2013). HR SSCs integrate both approaches in that they centralize resources for the consolidated provision of HR services, but decentralize the control over these services to the business units served (Strikwerda, 2004; Maatman *et al.*, 2010). Accordingly, some researchers have examined the centralization features of SSCs in terms of how they bundle, integrate, and hence advance resources for creating high-level value (Cooke, 2006; Maatman and Bondarouk, 2014). Others have examined the control (or governance) mechanisms that are used in decentralizing control and thus ensuring that HR SSCs create value for the business units (Farndale *et al.*, 2009; Coelho *et al.*, 2012). Although these studies have empirically uncovered the resources and control mechanisms of HR SSCs, we know relatively little about how they interrelate in explaining the value of HR shared services (Richter and Brühl, 2017). Without gaining a better understanding of how HR SSCs, through integrating these centralization and decentralization features, provide high value to the local business units, it is likely that managers and employees will remain suspicious about the advantages of HR SSCs and may have to engage in guesswork in deciding which HR SSC features (centralization, decentralization, or both) they should invest in to ensure that their HR SSC provides high value.

To gain a better understanding of the features that enable HR SSCs to create high value, we examine how centralized resource deployment and decentralized control interrelate in explaining HR shared service value. In doing so, we formulate and test hypotheses on the joint relationships between HR SSC operational and dynamic capabilities and control mechanism usage by the business units in determining HR shared service value for business units.

The contributions of this paper are threefold. First, we add empirical nuances regarding the interrelationships among dynamic capabilities, operational capabilities, and value. Some have suggested an explicit direct link between dynamic capabilities and value (Griffith and Harvey, 2001; Helfat and Peteraf, 2009), whereas others have questioned the existence of such a linkage (Bowman and Ambrosini, 2003; Ambrosini and Bowman, 2009). We contribute by addressing whether dynamic capabilities directly, or indirectly through the mediating effect of operational capabilities, relate to HR shared services value. Second, this paper provides further insight into the role of various control mechanisms. While some have argued that formal controls (e.g. service-level agreements) and informal controls (e.g. tie strength, trust) are alternatives (Farndale *et al.*, 2010), others have claimed that both are necessary and interdependent in creating high value (Meijerink and Bondarouk, 2013). Here, this study contributes by showing how formal and informal control mechanisms interrelate in explaining HR shared service value. Finally, previous studies into HR SSCs have independently examined capabilities and control whereas, in theory, organizational control and resources may be interrelated in explaining value (Mahoney and Pandian, 1992; Bergh, 1995). By studying both antecedents in an integrated way, we shed more light on how organizational control and capabilities interrelate in explaining value creation for the business units served by an HR SSC.

This paper proceeds as follows. First, we conceptualize HR shared service value and explain how HR SSCs integrate centralization and decentralization models to justify our focus on the link between capabilities, control mechanisms, and value. We then proceed to construct hypotheses on these linkages (as shown in Figure 1), followed by a discussion on our methodology. After presenting the research results obtained from a survey among 91 business units in 19 organizations that operate HR SSCs, we conclude with a discussion on the implications of our study.

Theoretical background and hypotheses

Conceptualizing HR shared service value

HR shared service value refers to the utility of the services provided by an HR SSC in terms of the trade-off between their benefits and costs to a business unit (Meijerink *et al.*, 2016). This definition highlights two important features of HR shared service value. First, it is the clients of the HR SSC that benefit from, and incur the costs of, HR shared services. In the literature, the decentral business units are considered to be the clients of the HR SSC because they control the HR SSC's activities, finance the HR SSC's operations, and decide which services the HR SSC should provide to meet their needs (Ulrich, 1995; Maatman and Bondarouk, 2014). Here, the decentral business units refer to the organizational units that are grouped on the basis of a selected business function, region/market segment served, or product/service provided. As such, the decentral business units that are served by an HR SSC are part of the organization's "operating core" which is tasked with the provision of products and/or services to external clients (Mintzberg, 1979). Research has shown that these business units are largely provided with so-called "transactional" HRM shared services, such as personnel record keeping, payroll administration, and information provision, that aim to meet the administrative needs of the business units (Farndale *et al.*, 2009; Meijerink, Bondarouk, and Maatman, 2013).

Second, HR shared service value amounts to a trade-off between the benefits that business units receive from transactional HR shared services vs the costs they incur in obtaining these benefits. In the first place, these benefits involve the HR SSC performing transactional HR activities in an errorless, reliable, and timely manner (Cooke, 2006). Furthermore, the transactional HR activities of HR SSCs can also provide strategically important benefits to the business units. For example, several studies have found that local HR business partners are provided the opportunity to spend more time on providing strategic advice to business unit managers when the HR SSCs provide their services in a timely and reliable manner (McCracken and McIvor, 2013; Maatman and Bondarouk, 2014). Furthermore, research has shown that providing high-quality transactional HRM services enables the business units to better commit and retain their employees (Wildes and Parks, 2005; Gilbert *et al.*, 2011).

At the same time, realizing these benefits comes at a cost to the business units, in the first place because they pay a monetary fee for the services provided by an HR SSC (Strikwerda, 2004). Furthermore, the business units incur so-called non-monetary costs reflecting the time,
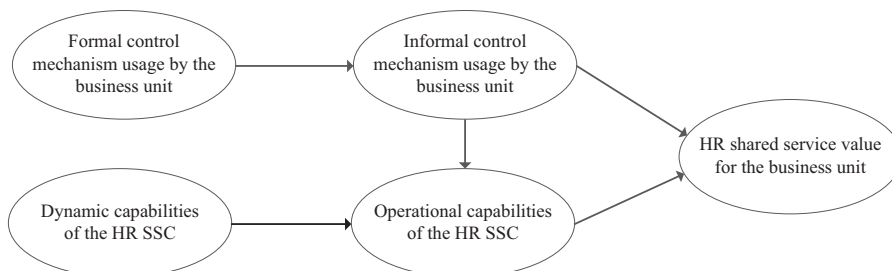

Figure 1.
Conceptual model for explaining HR shared service value

effort, and energies they spend on, for example, controlling the SSC's operations or negotiating with the HR SSC which services it ought to provide and against which conditions to ensure that the HR SSC provides the desired benefits. Consequently, the value of HR shared services increases when the HR services provided by an HR SSC meet the administrative and/or strategic needs of the business units and/or reduce the monetary and non-monetary costs for meeting these needs.

Identifying centralization and decentralization features that affect HR shared service value
A model that is popular in explaining the value of (HR) shared services is the so-called critical success factor model. As noted in a recent literature study by Richter and Brühl (2017)[1], this model has gradually developed through multiple exploratory case studies that empirically derived success factors for an effective SSC. Many critical success factors have been identified including intensive collaboration between the HR SSC and the business units (Farndale *et al.*, 2009; McCracken and McIvor, 2013), standardization of HR processes (McIvor *et al.*, 2011), best practice sharing within the HR SSC (Cooke, 2006), updating HR SSC staff skills (Redman *et al.*, 2007), and involving end-users (Meijerink and Bondarouk, 2013). Although this model presents a comprehensive overview of critical success factors, it does not categorize and prioritize these factors in terms of creating high HR shared service value. Therefore, we follow others in arguing that, to synthesize these dispersed factors in explaining HR shared service value, the value of HR shared services depends on two key factors: the centralization of resources and the decentralization of control (Maatman *et al.*, 2010; Meijerink and Bondarouk, 2013).

This focus is in line with the conceptual notion that HR SSCs improve HR service delivery by integrating centralization and decentralization models (Ulrich, 1995; Janssen and Joha, 2006). That is, when establishing HR shared services, organizations centralize resources and activities in a (semi-) autonomous business unit: the HR SSC. One the one hand, this should reduce costs by eliminating duplications across business units while, on the other, it should improve HR service delivery by pooling dispersed resources in creating an advanced capability-base (Maatman and Bondarouk, 2014). At the same time, the bundling of resources and activities into an HR SSC does not amount to a centralized organizational model since, at least in theory, a corporate entity does not decide on, or control, the activities performed by the HR SSC (Ulrich, 1995; Strikwerda, 2004). Instead, the decentral business units served are in control. This involves the business units choosing, together with the HR SSC, "the type, level, and quality of services they want from the *center*, at the price they are willing to pay" to ensure that the SSC meets their needs (Quinn *et al.*, 2000, p. 13, italics added). On this basis, proponents have argued that HR SSCs combine the benefits of the centralization and decentralization models, while reducing their drawbacks and, in doing so, improve the benefits and reduce these costs dimensions of HR service value (Janssen and Joha, 2006; Farndale *et al.*, 2010). In line with these conceptual insights, we focus on the decentralization and centralization features of HR SSCs, in terms of the control mechanisms used by the decentral business units and the central bundling of resources in an HR SSC, as critical success factors that explain the value of HR shared services.

Decentralized control and HR shared service value: the role of control mechanisms
A major reason why the decentralization of control helps to secure high-level HR shared service value is because it ensures compliance on the part of the HR SSC (Farndale *et al.*, 2010). This idea is consistent with agency theory which proposes that agents (here the HR SSCs) are opportunistic and thus would, if pursuing goals that conflict with those of the principal (here the business units), engage in self-serving behavior at the expense of the principal's interests (Jensen and Meckling, 1976; Eisenhardt, 1985). In HR SSC environments, goals are likely to conflict for three reasons. First, the HR SSCs might

operate on the basis of a different logic than the business units served. As an example, conflicts in interests might occur when the HR SSC management desires to create strategic value by acting as a strategic business partner, whereas the business units simply request efficient HR services against low costs (Farndale *et al.*, 2009). Second, HR SSCs serve multiple business units which differ in their expectations and therefore require an HR SSC to pursue different goals, for example, to reduce costs or to innovate HR services (Redman *et al.*, 2007; Knol *et al.*, 2014; Hofman and Meijerink, 2015). Finally, HR SSCs often have to satisfy the interests of other stakeholders (e.g. board of directors) that have different interests than those pursued by the local business units (Strikwerda, 2004; Meijerink, Bondarouk, and Maatman, 2013). As a result of these conflicting goals, misalignment might occur, and only limited value created for specific business units.

To ensure compliance, the decentral business units can use two types of control mechanisms: formal and informal controls (Jaworski and MacInnis, 1989). Formal controls represent "arm's length" relationships where an agent is constrained through output controls. In HR SSC environments, these formal controls involve the use of service-level agreements that specify criteria against which services should be delivered as well as user surveys and performance data that measure criteria such as frequency, quality, and costs (Redman *et al.*, 2007; Farndale *et al.*, 2009, 2010). Informal controls, on the other hand, aim to nurture the relationship between the agent and the principal (Koulikoff-Souviron and Harrison, 2006) and secure the agent's performance through collaboration, integration, and joint decision making by the principal and the agent (Germain *et al.*, 2008). In an HRM environment, the business units rely on informal controls to govern the relationship with the HR SSC, for example by jointly developing and improving HR shared services to ensure that these services match their needs (Reilly and Williams, 2003; Meijerink and Bondarouk, 2013).

Although it is tempting to assume that both formal and informal control mechanisms are directly related to HR shared service value, the reality is more complex. Formal controls are best used when the principal is not dependent on the agent, and thus is able to keep the agent at arm's length (Dyer, 1996; Uzzi, 1997). However, in HR SSC environments, there are two reasons why the business units are not independent of the HR SSC. First, most organizations adopt a "truck system" where the business units are only allowed to purchase HRM services from the HR SSC, and thus cannot easily sanction the SSC by switching to another service provider (Strikwerda, 2004; Farndale *et al.*, 2009; Meijerink and Bondarouk, 2013). Second, the business units and the HR SSC are highly interdependent since centralized and decentralized processes provide mutual inputs (Redman *et al.*, 2007; McCracken and McIvor, 2013; Meijerink and Bondarouk, 2013). This reciprocal interdependence (Thompson, 1967) between the HR SSC and the business units makes the use of arm's length control less effective. Instead, the SSC and the business units have to collaborate and share information to achieve the common goals that follow from their interdependent relationship (Thompson, 1967; Jaworski and MacInnis, 1989; Koulikoff-Souviron and Harrison, 2006). It is therefore in the interest of the business units to draw on informal relationships, which leads us to assume that the degree of informal control applied by a business unit relates positively and directly to the HR value of shared services for the business unit.

However, the interdependent nature of the HR SSC – business unit relationship – does not make formal controls redundant. Formal controls could serve as a support function in implementing informal controls. For example, service-level agreements and end-user surveys can signal to the business units whether bottlenecks are occurring in interdependent HR processes. As such, the assessment of service quality, as a use of formal control, could serve as the starting point for collaboration between the business units and the SSC in developing a joint understanding of how to improve HR service delivery. Therefore, although formal controls are unlikely to relate directly with value for the business units through sanctioning/rewarding the behavior of the SSC, they may well relate

indirectly with HR shared service value through enabling the business units to better enact informal control mechanisms:

> *H1.* The use of informal control mechanisms by a business unit fully mediates the positive relationship between the use of formal controls by the business unit and HRM shared service value for the business unit.

Centralized resources and HR shared service value: the role of capabilities
Another reason why HR SSCs can create high-level value is because they bundle, integrate, and hence advance resources such as human capital (i.e. knowledge and skills of HR professionals) and organizational capital (i.e. knowledge codified in HR databases, processes, or manuals) (Meijerink, Bondarouk, and Kees Looise, 2013). Various researchers have however argued that bundling valuable resources is not sufficient to create high-level HR service value and that these resources should instead be deployed in performing value-creating activities (Espino and Padrón, 2006; Sparrow and Braun, 2008; Lockett *et al.*, 2009). Accordingly, value is seen as being created when organizations deploy capabilities that are built through bundling, structuring, and leveraging resources (Sirmon *et al.*, 2007).

In line with these ideas, we study whether the value of HR shared services follows from the capabilities of HR SSCs, which refer to their capacity to purposefully perform a specific task or activity (Maatman and Bondarouk, 2014). The words "capacity" and "purposefully" have two important implications. First, capacity refers to the ability (derived from the integrated resources) to perform an activity to the minimum acceptable level and, moreover, it implies a minimum level of reliable replication. As such, one can only infer a capability when the HR SSC demonstrates that it is able to repeatedly carry out selected activities. Second, the word "purposefully" implies a degree of intent, meaning that the capabilities are reflected in repeated demonstrations of the ability to engage in deliberate activities. As already noted, HR SSCs perform such activities for the decentral business units (Strikwerda, 2004; Knol *et al.*, 2014). However, HR SSCs have a limited resource capacity and, therefore, have to be selective in allocating resources and/or offering a selected set of HR services to a particular business unit (Redman *et al.*, 2007). Research has shown that business units compete to obtain beneficial resources from the SSC (Knol *et al.*, 2014) and differ in their reports of the HR SSC's capabilities (Maatman and Bondarouk, 2014). As such, HR SSC capabilities are salient to the extent that an HR SSC demonstrates the capacity to repeatedly and purposefully perform activities for a specific business unit.

HR SSCs engage in a wide range of activities and thus can rely on a variety of capabilities for performing them (Farndale *et al.*, 2009; Meijerink, Bondarouk, and Maatman, 2013). To increase clarity, we follow others in distinguishing two types of capabilities: operational capabilities and dynamic capabilities (Teece and Pisano, 1994; Helfat and Peteraf, 2009). Operational capabilities refer to the capacity of an organization to repeatedly perform its day-to-day activities. For HR SSCs, these day-to-day activities involve carrying out transactional HRM activities, such as record keeping, payroll administration, and answering employees' questions on the usage of HR information technologies. Therefore, the operational capabilities of the HR SSC describe the capacity to repeatedly and purposefully perform administrative activities for a business unit (Maatman *et al.*, 2010; Maatman and Bondarouk, 2014). Helfat and Peteraf (2009) describe dynamic capabilities as the capacity of an organization to purposefully create, extend, or modify its resource base to respond to environmental changes. The administrative needs of the business units will be subject to such changes. As an example, changes in labor laws and regulations will require the HR SSC to update its service portfolio to ensure that the organization and its business units are compliant (Paauwe and Boselie, 2003). Furthermore, technological advancements create opportunities for increased efficiency in day-to-day HRM service provision (Bondarouk and Ruël, 2009).

Most importantly, the needs of the business units for selected HRM services may change when their strategic goals, to which HRM services contribute, alter. To meet these changes, HR SSCs need dynamic capabilities, that is, the capacity to repeatedly and purposefully expand and/or renew the HR services provided to the business units (Maatman *et al.*, 2010; Maatman and Bondarouk, 2014).

Given the administrative nature of the work that most HR SSCs engage in, it is natural that an HR SSC requires operational capabilities to provide value to its clients since it needs such abilities to support the SSC on a day-to-day basis. The relationship between dynamic capabilities and HR shared service value is likely to be somewhat indirect (Bowman and Ambrosini, 2003; Ambrosini and Bowman, 2009) because although an HR SSC might possess the ability to sense improvement opportunities, this will be of limited value unless the HR SSC is capable of translating these opportunities into new HR services which it can be offered effectively on a day-to-day basis. That is, a changed resource base is an insufficient condition for creating value since renewed resources will not meet client needs unless they are effectively leveraged (Bowman and Ambrosini, 2003). As such, changes to the resource base only help to create value to the extent that this enables the HR SSC to provide its day-to-day services in a more efficient or better manner to the business units. In other words, dynamic capabilities support value creation for the business units to the extent that they improve the operational capabilities of an HR SSC (Maatman and Bondarouk, 2014). Therefore, we hypothesize that dynamic capabilities are likely to be indirectly related to service value through building operational capabilities:

H2. The operational capabilities of an HR SSC fully mediate the positive relationship between its dynamic capabilities and HR shared service value for the business unit.

In addition to explaining why dynamic capabilities affect HR shared service value, we also expect operational capabilities to explain why informal control mechanisms are related to HR shared service value, for two reasons. First, informal control mechanisms likely contribute to maintaining and extending the operational capabilities of the SSC since capability building requires collaboration and knowledge exchange. In HR shared service environments, knowledge exchange is necessary for capability building because the interdependencies between the HR SSC and the business units mean that input from the business units is required to provide the HR SSC with the capacity to serve them on a day-to-day basis (Meijerink and Bondarouk, 2013). Previous research has shown that interpersonal trust is strongly associated with knowledge sharing (Uzzi, 1997; McEvily *et al.*, 2003). In particular, Uzzi (1997) found that social relationships characterized by high levels of trust are significantly more effective in stimulating knowledge transfer than arm's length relationships. Furthermore, several studies have shown that trust is significantly and positively related to HR capability building (Sumelius *et al.*, 2008; Mäkelä *et al.*, 2012). Since informal control mechanisms are conducive to building trusting and strong relationships, we would expect them to relate positively with the operational capabilities of the HR SSC.

Second, a key feature of operational capabilities is that they involve the capacity of the HR SSC to perform day-to-day activities for a specific business unit. Due to the limited resource capacities, HR SSCs will have to select which capabilities to deploy and thus differentiate in the degree to which they support individual business units (Redman *et al.*, 2007; Knol *et al.*, 2014). Therefore, it is in the interest of each business unit to do its best to ensure that the HR SSC deploys its capabilities for that business unit. One way in which this can be achieved is through using informal control mechanisms that enable the business unit to trust that the SSC will leverage its scarce resources appropriately. As an example, supply chain management researchers have shown that strong and trusting relationships are positively associated with the degree to which a supplier is willing to share its scarce resources with a focal client (Pulles *et al.*, 2014). Since informal control mechanisms help to

develop trust, we assume that the use of informal controls increases HR shared service value for the specific business unit through its capacity to ensure that the HR SSC is willing to leverage their resources into operational capabilities that benefit that business unit.

In fact, we assume that the relationship between informal control mechanisms and HR shared service value is mediated by the operational capabilities of the HR SSC. Namely, as noted by others, control mechanisms are effective to the extent that they influence the behavior of the agent (Eisenhardt, 1985; Germain *et al.*, 2008; Farndale *et al.*, 2010). This implies that the use of control mechanisms by a business unit only impacts the value of HR shared services when it motivates the HR SSC to engage in value-creating behavior. As noted before, one of these value-creating behaviors of the HR SSC is the bundling, structuring, and leveraging resources to repeatedly and purposefully perform administrative activities for a business unit (Sirmon *et al.*, 2007; Maatman *et al.*, 2010; Maatman and Bondarouk, 2014). Accordingly, the use of informal control mechanisms likely influences HR shared service value to the extent that it motivates the HR SSC to deploy its operational capabilities for a selected business unit. There are however additional value-creating behaviors that may be impacted by informal control mechanism usage. For instance, an HR SSC might be more willing to customize its HR services to the unique needs of a business unit it has strong and trusting relationships with (Knol *et al.*, 2014) or decide to take over additional HRM services which reduces the non-monetary costs incurred by the business units for having their administrative needs satisfied (Redman *et al.*, 2007). As these examples suggest, informal control mechanisms can impact HR shared service value through multiple pathways other than the leveraging of operational capabilities by an HR SSC. Accordingly, we expect that operational capabilities play a partial mediating role in explain the relationship between informal control mechanisms and HR shared service value:

H3. The operational capabilities of an HR SSC partially mediate the positive relationship between the use of informal control mechanisms by a business unit and HR shared service value for that business unit.

Methodology
Study design and participants
In order to test our hypotheses, we drew on survey data from a sample of business unit representatives from 19 Dutch organizations that have an HR SSC. In line with the notion that the use of control mechanisms and the deployment of capabilities can vary across business units (Knol *et al.*, 2014; Hofman and Meijerink, 2015), we decided to collect data at the business unit level. Previous research has shown that, in most cases, control over the HR SSC is exercised by an HR professional (e.g. HR director, HR manager, or HR advisor) who is affiliated with a specific business unit in developing service-level agreements or user satisfaction surveys, and who collaborates with the HR SSC to improve and develop new services (Redman *et al.*, 2007; Meijerink, Bondarouk, and Maatman, 2013). Further HR professionals, as content experts as well as formal client representatives, are considered the most appropriate source to report on the degree to which the HR SSC repeatedly and purposefully engages in HR activities for the selected business unit (Sumelius *et al.*, 2008). Therefore, in addition to obtaining information on the HR shared service value for the business units, we surveyed one HR professional for each business unit for information on the use of control mechanisms and the capabilities of the HR SSC.

To avoid having to rely on a convenience sample, we first constructed a sampling frame of Dutch organizations with an HR SSC. This was based on personal contacts and referrals, enquiries through LinkedIn, and snowball sampling. This resulted in a sampling frame of 95 organizations. The sampling procedure itself consisted of two phases. First, personal invitations were sent to the HR director or manager of the HR SSC of each of the 95 organizations inviting

them to participate in the research. In total, 19 organizations agreed to participate, an inclusion rate of 20 percent. The sample means of the 19 participating organizations were compared to those of 27 that reported back to us and decided not to participate to address concerns over potential sampling bias. Results from t-tests and χ^2 tests indicated that the participating organizations did not differ significantly from those that did not in terms of the number of years of HR SSC operation (t (42) $= 0.583$, $p = 0.56$), number of workers served by the HR SSC (t (42) $= 1.11$, $p = 0.27$), and industry (χ^2 (1) $= 3.04$, $p = 0.08$). All the participating organizations were operating in the Netherlands, with five of them being subsidiaries of foreign-owned multinationals, five subsidiaries of a domestic-owned multinational corporation, and nine being an indigenous organization. The majority of the indigenous organizations were public organizations, including three municipalities, two ministries, and two semi-public transport organizations. Of the 12 privately owned organizations, seven were operating in the service industry, including telecommunications, corporate advisory services, and retailing, and five were operating in manufacturing industries such as aviation, steel, and electrical systems. The participating organizations had HR SSCs that employed between 5 and 500 HR SSC service professionals ($\mu = 86$; SD $= 123$) and served between 5 and 40 business units ($\mu = 13$, SD $= 9$) with between 1,300 and 130,000 workers working across these business units ($\mu = 18,818$; SD $= 32,439$). As in previous HR SSC studies, the HR SSCs in our sample mainly offered transactional HR services, such as personnel record keeping, payroll administration, and information provision. Given the relative novelty of the shared services concept, the HR SSCs had been in operation for only four years on average (SD $= 2$).

During the second phase of sample identification, all 129 business units of the 19 organizations were potential participants. These 129 business units were operating in different regions of the Netherlands. Therefore, we relied on an online survey methodology, involving the use of web-based surveys, as this allows to collect data from respondents that operate in different locations against low costs, yet with running the risk of having insufficient response rates (Couper, 2000; Cobanoglu et al., 2001). Accordingly, we invited the HR professionals who were formally responsible for controlling the HR SSC's operations for each of these business units to complete an online survey. Invitations were sent by e-mail which included a link to the online questionnaire. A potential risk involved in sending e-mail invitations is that they end up in the respondents' spam/junk mail folders (Couper, 2000). To avoid this risk, we pilot tested our web-based approach among all 19 organizations and found that our invitation was directly sent to the respondents' e-mail inbox (rather than junk mail). The business unit representatives had four weeks to complete the online questionnaire and received two reminders by e-mail. Respondents might perceive a risk that their online responses are "intercepted" by their employer (Couper, 2000). Therefore, we informed the business unit representatives that their completed surveys were delivered directly to the research team to assure them of the confidentiality of their responses. Similar to other web-based surveys, we used a forced-entry technique to avoid missing values. To reduce the likelihood that this forced-entry technique would induce non-differentiation between questions in a respondent's ratings, we kept the survey as short as possible and placed each of the items for measuring a specific variable on different webpages. Furthermore, for each respondent, we calculated the standard deviation of the items for each variable since a standard deviation of "0" would signal potential "straightlining" of answers. In this check, none of the respondents' responses had a 0 standard deviation for any of the variables, which suggests that they did not "straightline" their answers.

To maximize the response rate, we employed various response techniques such as sending pre-notification e-mails one week prior to the survey, publicizing the goals and importance of the research, adding a covering letter to the survey (stating the organization's commitment to the research, guaranteeing anonymity, and sponsorship of the HR SSC management), and sending two follow-up reminders. In total, 91 of the 129 invited business

unit representatives (i.e. HR professionals) completed the survey, a response rate of 71 percent. The business units included, and represented by the HR professionals, had an average size of 1,919 employees (SD = 3,483) and had been making use of shared HR service delivery for an average of 4 years (SD = 2 years).

Measurement of the main variables
Unless stated otherwise, established scales were used to measure the variables of interest, with answers based on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Two researchers, both proficient in Dutch and English, translated the established items from English into Dutch and back again to ensure that the items were correctly represented. The Appendix provides an overview of the measurement scales used for the independent and dependent variables.

Capabilities of the HR SSC. We were unable to identify an existing scale to measure the dynamic and operational capabilities of HR SSCs. Several studies had developed scales that measured the strategic HR capabilities of subsidiaries in multinational corporations (Mäkelä *et al.*, 2012) and corporate HR departments (Park *et al.*, 2004). However, none of these scales measured the capabilities of HR SSCs, let alone differentiated between their operational and dynamic capabilities. As already noted, HR SSCs mostly execute transactional/operational HRM activities (Farndale *et al.*, 2009; Meijerink, Bondarouk, and Maatman, 2013) and therefore rely on different capabilities than, for example, corporate HR departments which mainly engage in transformational/strategic HRM activities (Mäkelä *et al.*, 2012). As such, given our interest in both the dynamic and operational capabilities of HR SSCs, we decided to develop a new scale to measure both types of HR SSC capabilities.

We based our capabilities scale on a case study we undertook of a Dutch HR SSC that involved interviews with nine of its managers. In line with the conceptualizations of Helfat and Peteraf (2009), Teece and Pisano (1994), and Maatman *et al.* (2010) who define capabilities as the capacity to purposefully perform a specific task or activity, these interviews focused on both the resources deployed as well as the activities performed by the HR SSC. From this, we developed two scales. The first, the operational capability scale, measures the capacity of the HR SSC to provide day-to-day administrative services for the business unit (three items, e.g. "In my view, the HR SSC demonstrates the capacity to repeatedly and purposefully provide administrative HR services to my business unit"). The second, the dynamic capability scale, measures the capacity of the HR SSC to repeatedly and purposefully expand and/or renew the HR services provided to the business units (three items, e.g. "In my view, the HR SSC demonstrates the capacity to repeatedly and purposefully develop new HR services). After this item generation procedure, we asked four HR SSC experts (two academics and two experienced HR SSC managers) to review the items and assess the scales" content validity. Later, using think-out-loud procedures, we pre-tested the items among four business unit representatives. We made small adjustments to the items after each pre-test session where necessary. We next conducted a confirmatory factor analysis to check the consistency of the operational and dynamic capability scales. To test whether the capability scales indeed measured two conceptually distinct constructs, we estimated a confirmatory factor model of two inter-correlated factors. This two-factor model had an acceptable fit ($\chi^2_{(8)} = 0.98$; NFI = 0.97; GFI = 0.97; root mean square error of approximation (RMSEA) = 0.01) and therefore was retained for testing our hypotheses. Both the operational and dynamic capability scales had acceptable Cronbach's αs (0.80 and 0.89, respectively).

Control mechanisms used by the business unit. The scales of Jaworski and MacInnis (1989) and Kale *et al.* (2000) were used to determine the extent to which the business units' representatives relied on formal and informal control mechanisms, respectively. Originally, these scales had been used to measure the output control of either individual employees or

alliances and, therefore, were reworded to fit the HR SSC context. For example, one of the items "If my performance goals were not met, I would be required to explain why" was changed to "The business unit I represent requires an explanation if the established goals of the HR SSC are not met." One item from the Jaworski and MacInnis (1989)scale ("My pay increases are based upon how my performance compares with my goals") was excluded because the pay increases and annual budgets of an HR SSC and its managers are usually determined by a corporate department and not by the business units (Meijerink, Bondarouk, and Maatman, 2013). As such, the scales were adapted to measure the extent to which business units rely on formal and informal control mechanisms for controlling HR SSC operations. We estimated a confirmatory factor model of two inter-correlated factors to assess the consistency of the formal and informal control scales, and these were reflected by four and five items, respectively. This model however had a poor fit ($\chi^2_{(25)} = 1.98$; NFI $= 0.89$; GFI $= 0.89$; RMSEA $= 0.10$), largely because one item ("The business unit I represent establishes specific goals for the HR SSC") had a poor factor loading of 0.45. On the basis that, conceptually, this item measures the development of output criteria, rather than the output of an HR SSC that the formal control variable is intended to measure, we concluded that it was acceptable to delete this item. The revised two-factor model, without this item, then had an acceptable fit ($\chi^2_{(18)} = 1.18$; NFI $= 0.95$; GFI $= 0.95$; RMSEA $= 0.04$) and was therefore retained for testing our hypotheses. Both the operational and dynamic capability scales had acceptable Cronbach's αs (0.82 and 0.91, respectively).

HR shared service value for the business unit. To measure the value of HR shared services for the business unit, we relied on an adapted version of the two-item scale of Cronin *et al.* (2000). This scale was originally applied to measure service value, and therefore we reworded it to measure the value of HR shared services. The two items became: "In my view, the value of the HR SSC's service delivery for my business unit is very high" and "Compared to what my business unit have had to give up (the sum of effort, money, time, and energy), the extent to which the service delivery by the HR SSC satisfies its HR-related needs is very high." The inter-item correlation was 0.77 ($p < 0.001$), indicating an acceptably consistent scale. The reliability of the scale was good, with Cronbach's α of 0.87.

Control variables
We controlled for the confounding effect of two variables which we had asked the business unit representatives to report.

Years served by the SSC. Research shows that, business units differ in the length of time they have been served by the HR SSC because most organizations phase in the going live of their HR SSC (Farndale *et al.*, 2009; Meijerink and Bondarouk, 2013). We would expect that the longer a business unit has made use of HR shared services, the more experience it has with how to control the HR SSC's operations. Furthermore, capability building is dependent on the experience of the client (Mäkelä *et al.*, 2012). Consequently, we control for the years that a business unit has been served by the HR SSC because we expect this to have a confounding effect.

Business unit size. We expect business units that employ a large number of employees to have more power (Ferner *et al.*, 2012) than smaller business units in enacting control mechanisms, and thus to be better able to ensure that the SSC leverages its capabilities to meet their own interests. Therefore, we control for business unit size, which we measure as the number of employees working within a business unit.

Data analysis
We employed structural equation modeling (SEM) to test our hypotheses. It is possible that we relied on a nested data structure given that the observations of the business unit

representatives are not independent while they share an HR SSC. Therefore, to first test for independence, we used Hierarchical Linear Modeling (Raudenbush and Bryk, 2002) to estimate a null model in which independent variables were not specified, and determined the significance level of the organizational-level variance (τ_0^2) and the business unit-level (or residual) variance (σ^2) of the intercept of the HR shared service value construct. Only the residual variance was found to be significant ($\tau_0^2 = 0.17$, $p = 0.10$; $\sigma^2 = 0.56$, $p < 0.001$), indicating that organizations do not significantly differ in terms of the average value of HR shared services for the business units. In other words, our observations on the business unit level are independent and, therefore, we are justified in applying traditional SEM using AMOS.

SEM is particularly suited for testing our mediating hypotheses since it allows to simultaneous estimate different regression equations and test the significance of indirect effects involving path models. We used maximum-likelihood estimation and report on the χ^2 statistics and significance levels. Since χ^2 significance is affected by the sample size and correlational effect sizes, we also used Hu and Bentler's (1999) fit criteria, including the comparative fit index (CFI), Tucker-Lewis index (TLI), and the RMSEA. A well-fitting model was defined as one that had an RMSEA below 0.06, and CFI/TLI values above 0.95.

Findings
Descriptive statistics
The means, standard deviations, and correlations among the capabilities, control mechanisms, and HR shared service value are presented in Table I. Most of the proposed independent variables are indeed significantly and positively related to HR shared service value, the notable exception being formal control which is negatively, albeit not significantly, related to HR shared service value. Furthermore, formal and informal control mechanisms are significantly and positively related to each other, as are operational and dynamic capabilities. Finally, the use of informal control mechanism and operational capabilities are significantly and positively correlated. Although these findings provide preliminary support for all our hypotheses, what is not clear from Table I is the degree to which there is full or partial mediation among the variables of interest. For this, we need to compare models and consider the path analysis results.

Model comparisons and overall model fit
Our hypothesized model (Figure 1) implies that informal control mechanisms and operational capabilities mediate the relationships between both formal control mechanisms and dynamic capabilities and HR shared service value. To analyze whether full or partial mediation was present in our model, we examined whether two alternative models that included direct paths from formal control mechanisms (Alternative Model 1) and from dynamic capabilities (Alternative Model 2) to HR shared service value would lead to a

Variable	M	SD	1	2	3	4	5	6
1. Years served by the SSC	4.27	2.64						
2. Business unit size	1,919	3,483	−0.09					
3. Formal control	3.06	0.96	0.01	0.12				
4. Informal control	2.93	0.94	0.12	−0.03	0.32**			
5. Dynamic capabilities	3.14	0.98	0.20	0.16	−0.04	0.14		
6. Operational capabilities	3.29	0.88	0.21*	0.12	−0.18	0.21**	0.37**	
7. HR shared service value	2.98	0.84	0.23*	0.02	−0.20	0.39**	0.28**	0.51**

Notes: $n = 91$ business units. *$p < 0.05$; **$p < 0.01$

Table I.
Descriptive statistics and correlations among the study variables

significant improvement in model fit compared to our hypothesized model (i.e. Figure 1). Table II presents the fit statistics for these alternative models.

As can be seen from Table II, our hypothesized model already fitted the data very well. In Alternative Model 1, we added a direct path from formal control mechanisms to HR shared service value. Adding this path significantly improved the model fit ($(\Delta\chi^2(1) = 10.37, p < 0.01$), indicating that informal control mechanisms partially mediate the relationship between formal control mechanisms and HR shared service value. We then proceeded to extend this model further by including a direct path from dynamic capabilities to HR shared service value (i.e. Alternative Model 2). As shown in Table II, Alternative Model 2 did not fit the data significantly better than Alternative Model 1 ($\Delta\chi^2(1) = 1.45, p = 0.23$). Furthermore, the direct relationship between dynamic capabilities and HR shared service value in Alternative Model 2 was not significant ($\beta = 0.12, p = 0.22$), implying that the two variables are, at most, indirectly related. On the basis of the model comparisons, we concluded that Alternative Model 1 was the best fitting model ($\chi^2(128) = 139.14, p = 0.24$; CFI = 0.99; TLI = 0.98; RMSEA = 0.03) and therefore used this for testing our hypotheses. This alternative model is shown in Figure 2.

Testing the hypotheses

H1 states that a business unit's use of informal control mechanisms fully mediates the positive relationship between its use of formal control mechanisms and the value it obtains from the HR shared services. As Figure 2 shows, there is a significant and positive

Model	χ^2	df	$\Delta\chi^2$	CFI	TLI	RMSEA	Comparisons
Hypothesized model	149.51	129		0.97	0.97	0.04	
Alternative Model 1[a]	139.14	128	10.37**	0.99	0.98	0.03	Alternative Model 1 compared to Hypothesized Model
Alternative Model 2[b]	137.69	127	1.45	0.99	0.98	0.03	Alternative Model 2 compared to Alternative Model 1

Notes: $n = 91$ business units. [a]Adds the direct path from formal control mechanism usage to HR shared service value; [b]adds the direct path from dynamic capabilities to HR shared service value. **$p < 0.01$

Table II.
Model comparison
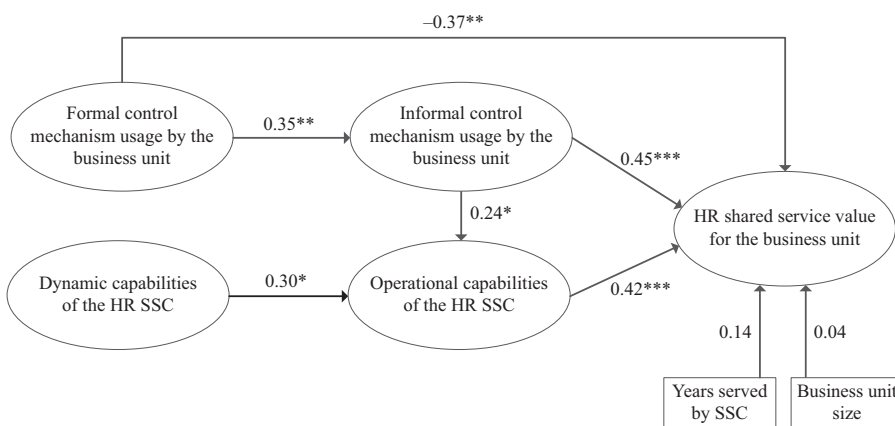
Notes: $n=91$ business units. Fit indexes: $\chi^2(128)=139.14, p=0.24$, CFI=0.99, TLI=0.98, RMSEA=0.03. Measurement model not shown due to space restrictions. *$p<0.05$; **$p<0.01$; ***$p<0.001$

Figure 2.
Estimated path coefficients for the final model

relationship between formal control usage and informal control usage ($\beta = 0.35$, $p < 0.01$) as well as between informal control usage and HR shared service value ($\beta = 0.45$, $p < 0.001$). The fact that the direct path between the use of formal control mechanisms and HR shared service value is significant and negative ($\beta = -0.37$, $p < 0.001$) is an indication of partial rather than full mediation. We therefore conducted a Sobel test, which confirmed that the positive relationship between formal control usage and HR shared service value is indeed significantly reduced by the mediating role of informal control usage ($z = 2.20$, $p < 0.05$). Therefore, *H1* is supported.

H2 states that the operational capabilities of an HR SSC fully mediate the relationship between its dynamic capabilities and HR shared service value for a business unit. As Figure 2 shows, there is a significant and positive relationship between dynamic capabilities and operational capabilities ($\beta = 0.30$, $p < 0.05$) and another between operational capabilities and HR shared service value ($\beta = 0.42$, $p < 0.001$). The fact that adding a direct path between dynamic capabilities and HR shared service value did not improve the structural model (as described in the previous section) is indicative of full rather than partial mediation. A Sobel test confirmed that the strength of the relationship between dynamic capabilities and HR shared services value is significantly reduced by the full mediating role of operational capabilities ($z = 1.95$, $p < 0.05$). As such, *H2* is supported.

H3 states that the operational capabilities of an SSC partially mediate the relationship between a business unit's use of informal control mechanisms and the HR shared service value to that business unit. As Figure 2 shows, there is a significant and positive relationship between informal control usage and operational capabilities ($\beta = 0.24$, $p < 0.05$) and another between operational capabilities and HR shared service value ($\beta = 0.42$, $p < 0.001$). The significant and positive ($\beta = 0.45$, $p < 0.001$) direct path between the use of informal control mechanisms and HR shared service value is indicative of partial rather than full mediation. A Sobel test confirmed that the strength of the relationship between informal control mechanisms and HR shared service value is significantly reduced by the mediating role of operational capabilities ($z = 1.66$, $p < 0.05$). These findings support *H3*.

Discussion and conclusions
Researchers, motivated by promises that HR SSCs create value for decentral business units by integrating centralization and decentralization models, have studied the capabilities and control mechanisms of HR SSCs. Some studies have shown that HR SSCs do indeed improve HR service value for local business units (Redman *et al.*, 2007; McCracken and McIvor, 2013; Hofman and Meijerink, 2015). Although HR SSCs combine centralization and decentralization models, it remains unclear how an HR SSC's capabilities and control mechanisms interrelate in explaining HR shared service value. To explore this issue, we examined the interrelationships among an HR SSC's operational and dynamic capabilities and the usage of control mechanism by business units in an attempt to explain the value of HR shared services for the business units they serve. Below, we discuss the theoretical and practical implications of our results.

Implications for research and practice
First, a key finding of our study is that formal control mechanisms only positively contribute to HR shared service value when they are used for building trusting and collaborative relationships. As such, our study contributes to resolving the literature debate on how different means of controlling an HR SSC's operations relate to one another. While some have argued that formal and informal control mechanisms can substitute for each other (Farndale *et al.*, 2010), others have claimed that they are interdependent in generating high HR shared service value (Meijerink and Bondarouk, 2013). We add to this debate by showing that neither view is entirely valid insofar as our results imply that formal control

mechanisms are dependent on the use of informal control mechanisms for bringing about high-level HR shared service value, but not the other way around.

Furthermore, our results highlight the dual nature of formal control mechanisms in that their direct relationship with HR shared service value is negative. This duality implies that there is a need to theorize upon and study what we call "control-in-use"; that is, how control mechanisms are put into action by business units. It seems that formal control mechanisms are unlikely to increase the benefits obtained from HR shared services if they are merely used as a sanctioning device. In practice, business units cannot effectively sanction the HR SSC because of the use of truck systems and interdependent HR delivery processes that make them dependent on the HR SSC (Meijerink and Bondarouk, 2013; Knol *et al.*, 2014). Under these conditions, practitioners can best use formal control mechanisms as a "signaling device" to inform both the SSC and their clients that the shared service processes have become stuck. In this way, formal mechanisms can serve as a driver for collaborative initiatives (i.e. the use of informal control mechanisms). Given this finding, we recommend future studies seeking to explain the value of HR shared services to differentiate between two types of formal control-in-use: one that is aimed at sanctioning the HR SSC and another that aims to signal whether the business unit and the HR SSC need to collaborate for solving mutual problems, while recognizing that only the latter is likely to positively contribute to HR shared service value.

Second, our results suggest that adopting a social capital perspective can be highly instrumental in improving and explaining HR shared service value. This claim is motivated by our finding that the use of informal control mechanisms is directly and positively related to HR shared service value. The implication for HR SSC practitioners is that they should rely on informal controls to build strong and trusting relationships. This can be effectuated through installing user boards or employing account managers (Meijerink and Bondarouk, 2013). In fact, in some cultures, building trusting relationships is key to organizational success. For example, research has shown that Chinese people stress the necessity of *guanxi* to note that firms (or business units in our case) cannot access resources without building reciprocal relationships with those that supply needed resources (Davies *et al.*, 1995). Accordingly, although our results stress the importance of relying on informal control mechanisms, we expect these control mechanisms most strongly add to high HR shared service value in countries where relationships are strongly conducive to business success. According to social capital theorists (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998), the relationship between social actors is multidimensional in nature and can be described in terms of structural features (e.g. tie strength), relational features (e.g. trust, reciprocity), and cognitive features (e.g. shared language and norms). Each of these three features is embedded in the use of informal control mechanisms, where they aim to develop strong and trusting relationships that allow principals and agents to develop common goals and a shared language (Jaworski and MacInnis, 1989; Koulikoff-Souviron and Harrison, 2006; Germain *et al.*, 2008). Previous research has shown that these distinct dimensions synergize and reinforce one another in predicting desired outcomes (Tsai and Ghoshal, 1998), which probably explains why informal control mechanisms are so effective in explaining HR shared service value. Therefore, in explaining why the decentralization of control helps create high-level HR shared service value, future studies could benefit from breaking down the structural, relational, and cognitive dimensions of informal control mechanisms and examine their interplay.

Third, our results show that operational capabilities partially mediate between the use of informal control mechanism and HR shared service value. This implies that building trusting relationships influences HR shared service value by motivating the HR SSC to leverage its scarce resources for those business units they have strong relationships with. At the same time, the observed partial mediating effect also implies that mediators, other than operational capabilities, explain how informal controls and HR shared service value are related. Here we can think of other value-creating HR SSC activities that result from

informal control mechanisms, such as HR SSCs that customize their HR services to the unique needs of a business unit they have strong relationships with (Knol *et al.*, 2014) or perform additional HRM services which reduces the non-monetary costs incurred by the business units for having their administrative needs satisfied (Redman *et al.*, 2007). As such, we hope that future studies build on our results by uncovering additional pathways that explain how the usage of informal controls results into high HR shared service value.

Fourth, our study adds to the literature on dynamic capabilities. In this literature stream, some have proposed a direct link between dynamic capabilities and value (Griffith and Harvey, 2001; Helfat and Peteraf, 2009), whereas others have questioned the existence of such a linkage (Bowman and Ambrosini, 2003; Ambrosini and Bowman, 2009). Our results support the latter view and imply that dynamic capabilities indirectly influence service value for clients by allowing the HR SSC to improve and renew its day-to-day operations. This implies that HR SSCs should not only invest in their operational capabilities, but should also invest in their dynamic capabilities (Maatman *et al.*, 2010; Maatman and Bondarouk, 2014). Previous research has shown that HR service providers can build their capabilities by hiring workers that have ample experience with enacting HRM roles (Mäkelä *et al.*, 2012). Furthermore, our results show that business units' managers can contribute to capability development by building strong and trusting relationships with the HR SSC. This is also in line with research showing that innovation performance (which likely is a prerequisite for building dynamic capabilities) is a function of the intensity of social relationships (Tsai and Ghoshal, 1998). As such, both the recipient and provider of HR shared services have to contribute to building the dynamic capabilities of an HR SSC. At the same time, we should acknowledge that we restrictively viewed dynamic capabilities as the capacity of an HR SSC to improve and expand its own operations. It is however possible that HR SSCs develop other types of dynamic capabilities, such as ones to improve the operations of the business units served. This is most likely to take place within HR SSCs that provide transformational HR services such as organizational development or management development since it is these activities that help to transform/change the human capital base of their clients (Maatman *et al.*, 2010; Meijerink, Bondarouk, and Maatman, 2013). As such, it is likely that the dynamic capabilities of transformational HR SSCs relate directly with HR shared service value for the business units. As such, future studies could build on our results by assessing whether the type of HRM service provided determines whether the effect of dynamic capabilities on HR shared service value is direct or indirect.

Finally, an important implication of our research is that the centralization and decentralization features of an HR SSC are interdependent in explaining HR shared service value. Whereas previous studies have focused on isolated antecedents of HR shared service value (Richter and Brühl, 2017), our results highlight that centralization features (i.e. operational capability deployment) mediate the positive relationship between decentralization features (i.e. formal and informal control usage by the business units) and HR shared service value. This suggests that business unit managers should primarily use their decentralized control rights to monitor HR SSC performance and to collaborate with HR SSC managers because this will ensure that the HR SSC develops and leverages its knowledge of HR policies and regulations, management information, and consolidated business processes (Meijerink and Bondarouk, 2013; Maatman and Bondarouk, 2014). Mediating effects have frequently been studied in strategic HRM research to uncover the contents of the black box between HRM practices and performance (Paauwe and Boselie, 2003). In HRM shared service research, this black box remains largely unopened, although key success factors have been uncovered but without explaining why they have a positive effect on HR shared service value. Although we have lifted the lid of this black box, future studies can extend our model by including additional success factors related to centralization (e.g. balancing standardization vs customization of HRM processes or best practice sharing) to explain why the decentralization of control boosts the value of HR shared services.

Limitations and future research
As with any study, the results and implications of our study should be interpreted in light of its limitations. First, within each business unit, information on all our variables was reported by a single respondent, and this exposes our results to the risk of common method bias. However, the survey included additional variables, such as the number of shared services provided, co-production by employees, and the degree of HR service customization, which reduces the risk of common method bias that could follow from testing of respondents' implicit theories to an acceptable level.

Second, because we used cross-sectional data to test our hypotheses, one should not draw any conclusions on the causality in the observed relationships. For example, it is likely that the negative relationship between the level of HR shared service value and the use of formal control mechanisms is caused by a high level of the former resulting in a reduced felt need for the latter. Similarly, it seems reasonable that operational capabilities could influence the dynamic capabilities of the SSC since existing knowledge is supportive in the search for and absorption of new knowledge. Therefore, we would encourage research that uses longitudinal data to hopefully confirm our findings and suggestions regarding causality.

Finally, we studied the degree to which business units rely on specific control mechanisms. However, it is possible that HR SSC managers do not experience the presence of these controlling forces, and thus are not motivated to align their interests with those of a business unit. Furthermore, business unit representatives might fail to use the control mechanisms at their disposal effectively (Meijerink and Bondarouk, 2013), and thus the degree to which control mechanisms affect the creation of HR shared service value may be limited. Therefore, it would be valuable if future research were also to assess the degree to which HR SSC management experiences the use of control mechanisms by the decentralized business units.

Conclusions
In this study, we have attempted to explain how the centralization and decentralization features of HR SSCs interrelate in explaining the value of HR shared services for the business units. In so doing, we have shown that the consolidated dynamic capabilities of an SSC are positively related to service value through improving its operational capabilities. Furthermore, the results show that the use of formal control mechanisms by the business units positively contributes to shared service value through their capacity to institute the use of informal control mechanisms. As such, we believe that our study offers an enhanced insight into the creation of HR shared service value and paves the way for future research into how SSCs and their business units can together improve performance through the centralization of resources and the use of decentralized control mechanisms.

Note
1. See also the work of Knol *et al.* (2014) for a review of the SSC literature.

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Appendix. Measurement scales used

Formal control mechanisms

- The business unit I represent establishes specific goals for the < HR SSC > (e.g. SLAs, contracts, or service charters).

- The business unit I represent monitors the extent to which the < HR SSC > achieves the established goals.

- The business unit I represent requires an explanation if the established goals of the < HR SSC > are not met.

Informal control mechanisms

- In my view, at different levels, there is close, personal interaction between representatives from the < HR SSC > and my business unit.

- In my view, at different levels, the relationship between < HR SSC > and my business units is characterized by mutual respect.

- In my view, at different levels, the relationship between < HR SSC > and my business units is characterized by mutual trust.

- In my view, at different levels, the relationship between < HR SSC > and my business units is characterized by intensive collaboration among representatives of both parties.

- In my view, the relationship between < HR SSC > and my business unit is characterized by high reciprocity between both parties.

Dynamic capabilities
- In my view, < HR SSC > demonstrates the capacity to repeatedly and purposefully extend the number of HR services provided.

- In my view, < HR SSC > demonstrates the capacity to repeatedly and purposefully expand its HR service delivery scope.

- In my view, < HR SSC > demonstrates the capacity to repeatedly and purposefully develop new HR services.

Operational capabilities
- In my view, < HR SSC > demonstrates the capacity to repeatedly and purposefully provide administrative HR services to my business unit.

- In my view, < HR SSC > demonstrates the capacity to repeatedly and purposefully relieve my business unit from the processing of HRM administration.

- In my view, < HR SSC > demonstrates the capacity to repeatedly and purposefully process data to provide HR management information to my business unit.

HR shared service value
- In my view, the value of < HR SSC > 's service delivery for my business unit is very high.

- Compared to what my business unit has to give up (the sum of effort, money, time, and energy), the extent to which the service delivery by < HR SSC > satisfies its HR-related needs is very high.

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