

# Towards a Conceptual Model of HRSS: Leveraging Intellectual Capital Configuration to Create Value for End-Users

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## Abstract

Human Resource Shared Services (HRSS) are established to reap the benefits of both centralization and decentralization through bundling intellectual capital and offering HR services that are adapted to the needs of clients and end-users. As a result, HRSS are believed to create value for end-users: employees, managers and HR professionals. However, our understanding of HRSS value creation is limited and therefore, this paper presents a conceptual model that explains value creation of HRSS. The underlying theoretical notion of this model can be found in the theory of intellectual capital, which starts from the central thesis that value is created by leveraging the knowledge and knowing capabilities of organizations. As intellectual capital is conceptualized into three interrelated categories (human, organizational and social capital), it is expected that the interrelations among these categories create value. Therefore, we propose that the human capital of HRSS is related with value creation as organizational and social capital partially mediate this relationship. Yet the degree of influence of human, organizational and social capital on value creation depends on which HR services type is offered. As a result, we assume that the relationship between human capital and value creation, and the mediating effect of organizational and social capital is moderated by the type of HR service that is offered.

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## Introduction

The concept of Human Resource Shared Services (HRSS) is implemented by many organizations in order to effectively and efficiently sourcing HR activities and resources. The central notion of HRSS refers to the bundling of HR activities and resources within a single, organizational unit (that we also call HRSS) that delivers HR services which are shared among and adapted to the needs of internal clients at the organizational level (the business unit) and end-users at the individual level (managers, employees and HR professionals) (Cooke 2006; Farndale et al. 2009; Redman et al. 2007; Ulrich 1995). Several of such organizational units can be distinguished, like HR Shared Service Centers that offer transactional HR services or Centers of Expertise that deliver transformational HR services (Farndale, Paauwe, & Hoeksema, 2009; Ulrich, 1995). Although these organizational units offer different HR services, they all fall within the realm of HRSS and to avoid confusion, we will use the comprehensive concept of HR Shared Services. Common examples of HR services which are offered by HRSS include pay rolling, self-service applications for personnel record keeping, or call centre support for end-users concerning self-service.

The primary motive for establishing an HRSS is to create value (i.e. an effective and efficient delivery of HR services) (Farndale et al., 2009; Janssen & Joha, 2006; Strikwerda, 2004). In this paper, we explicitly focus on value creation for *end-users* as value can only be evaluated by those who receive HR services (Lepak, Smith, & Taylor, 2007), which are employees, managers and HR professionals in the case of HRSS (Cooke, 2006; Ulrich, 1995). According to previous research, to create value, HRSS *should* consider multiple success factors like correct service scope, good communication with end-users, or senior management commitment (Cooke, 2006; Farndale et al., 2009; Reilly, 2000; Strikwerda, 2004). Although these success factors are expected to facilitate value creation, they do not reveal *how* HRSS create value (Ulrich 1995; Strikwerda 2006; Farndale et al. 2009). As a result, our conceptual understanding of the mechanisms that underlie value creation for end-users by HRSS is limited (Strikwerda, 2004).

To improve our conceptual understanding of HRSS value creation, we develop a conceptual model by applying the theory of intellectual capital which departs from the central thesis that value is created by leveraging the knowledge and knowing capabilities of organizations (Nahapiet & Ghoshal, 1998; Youndt, Subramaniam, & Snell, 2004). We choose to apply this theory as knowledge and knowing capabilities are the prime resources which are bundled within HRSS (Redman, Snape, Wass, & Hamilton, 2007; Ulrich, 1995) and which are expected to have the strongest influence on value creation (Farndale et al., 2009). To clarify what intellectual capital represent, previous research conceptualizes intellectual capital into three categories: human, organizational and social capital (Yang & Lin, 2009; Youndt &

Snell, 2004; Youndt et al., 2004). Yet this conceptualization lead scholars to treat human, organizational and social capital as constructs which are unrelated to one another (Youndt et al., 2004). As a result, previous research mostly studied to which extent these three independent IC categories affect value creation (K. Walsh, Enz, & Canina, 2008; Yang & Lin, 2009; Youndt & Snell, 2004). However, Youndt et al. (2004) argue that this approach leads to a simplified representation of reality because it fails to recognize the interrelatedness of these IC categories as a mechanism for value creation. As a result, our understanding of how intellectual capital creates value is rather limited (Youndt et al., 2004). To improve our understanding, Youndt et al. (2004) argue that we should study interrelations among IC categories and therefore, they focus on intellectual capital profiles which consist of an *aggregation* of human, organizational and social capital. Yet aggregation of these categories still does not reflect their interrelatedness because it refers to a collection or stock of knowledge and knowing capabilities. Therefore, we choose to focuses on the IC *configuration* of organizations which emphasizes that the interrelations among human, organizational and social capital make up mechanisms that affect the creation of value.

Given the need to advance our understanding of HRSS value creation, this paper aims to develop a conceptual model that links the intellectual capital configuration of HRSS with value creation for end-users. By doing so, this paper will contribute to the field by giving an insight in the mechanisms that create value of HRSS and also increases our understanding of how intellectual capital affects value creation as we focus on the interrelations among human, organizational and social capital.

The remainder of this paper is structured as follows. First, we will give a more specific outline of HRSS and we will define value creation by HRSS. After that, we will discuss the theoretical background of intellectual capital and describe the intellectual capital of HRSS. Third, we will present our conceptual model that links the intellectual capital configuration of HRSS with HRSS value creation. Finally, we discuss and suggest directions for future research.

## **Human Resource Shared Services**

In this paper, an HRSS is understood as *a (semi)autonomous business unit within an organizational entity that bundles intellectual capital to provide HR services to its end-users, while the features of these HR services are determined by its clients*. First, HRSS is a (semi)autonomous business unit within an organization that offers HR services to end-users. This implies that HRSS is a business-within-a-business. Second, HR activities and HR resources are bundled or combined within HRSS (Janssen and Joha 2006; Janssen et al. 2007; Redman et al. 2007; Ulrich 1995). The prime HR resources which are bundled in HRSS and

which enable the execution of HR activities are the knowledge and knowing capabilities of HRSS (Farndale & Paauwe, 2008; Farndale et al., 2009; Ulrich, 1995) which resemble *intellectual capital* (Stewart, 1997). Given that intellectual capital is centrally bundled within HRSS, one could consider HRSS as a centralized staff function. The centralization of staff functions ensures a high degree of corporate-level control but at the expense of client focus and responsiveness. However, clients that are served by HRSS have a degree of ownership over HRSS and partially determine the features of the HR services which they receive (Janssen & Joha, 2006; Strikwerda, 2004). As a result, HRSS are expected to reap the benefits of both centralization and decentralization, while minimizing their drawbacks: centralization offers economies of scale and scope, yet is also harms client/end-user focus, whereas decentralization increases client/end-user focus at the expense of cost increases due to e.g. duplication (Janssen & Joha, 2006; Strikwerda, 2004). Therefore, HRSS are expected to achieve cost reductions and quality improvements simultaneous (Janssen & Joha, 2006; Redman et al., 2007). These potential benefits could be considered as the value of HRSS.

### **A definition of HRSS value creation**

To define value creation of HRSS, we argue that value creation refers to both *use value* and *exchange value* (Bowman & Ambrosini, 2000; Lepak et al., 2007). Use value refers to the quality of a service as perceived by end-users in relation to their needs. Exchange value refers to the monetary amount paid by end-users to sellers to capture the use value of a focal service (Lepak et al., 2007). Given this, use value in the case of HRSS is defined as the quality of an HR service as perceived by end-users in relation to their needs. However, in an HRSS arrangement, the clients of HRSS (the business units) pay for the delivery of HR services (Strikwerda, 2004), whereas end-user need to expend effort in order to receive use value from HRSS (Cooke, 2006). Therefore, we define exchange value in the case of HRSS as the amount of effort expended by end-users for the capture of HRSS use value. After all, both definitions suggest that HRSS value creation depends on the perceived value of HR services as offered by HRSS and the willingness of end-users to spend time in order to capture value. This definition implies that HR services play an important role in the perceptions of end-users towards value creation by HRSS, which leads us to discuss the HR services in more detail.

### **HR service segmentation in HRSS**

Previous research distinguishes between two types of HR services which are offered by HRSS: transactional and transformational HR services (Farndale et al., 2009; Redman et al., 2007; Ulrich, 1995; Ulrich, Younger, & Brockbank, 2008b). Both types of HR services serve different end-user needs. For instance, transactional HR services are delivered to meet the

administrative needs of HRSS end-users (Lepak, Bartol, & Erhardt, 2005; Ulrich, 1995). Examples of transactional HR services include: benefits administration, record-keeping or compensation administration (Carrig, 1997; Ulrich, 1995). In contrast, transformational HR services are delivered to transform the human resources of an organization or to transform the organization itself (Ulrich, 1995). Examples of these transformational HR services are services like staffing, training or development.

A distinction between service types is called service segmentation (Batt, 2000; Keltner, 1999). As a result of service segmentation, service organizations offer services that have different characteristics. To exemplify service segmentation in HRSS we focus on the following characteristics which are commonly used in service literature: end-user co-production, end-user contact and service customization (Bowen & Ford, 2002; Heskett, 1986; Mills & Moberg, 1982; Skaggs & Youndt, 2004; Tansik, 1990).

#### *End-user co-production*

End-user co-production refers to the degree of end-user effort in the service production process. For instance, service organizations require clients to increasingly execute tasks (e.g. self-service in restaurants), whereas others reduce the effort of clients (e.g. being served by table attendants). Previous research demonstrated that transactional HRSS primarily deliver HR services by the means of self-service (Farndale et al., 2009) which results in high levels of end-user co-production (Cooke, 2006; Farndale et al., 2009; Ulrich et al., 2008b). Regarding transformational HRSS, we expect that end-users do not have sufficient knowledge to co-produce as they call in the HRSS for knowledge they do not possess (Ulrich, 1995; Ulrich et al., 2008b). Auh et al. (2007) demonstrated that low levels of end-user knowledge result in low levels of end-user co-production (Auh, Bell, McLeod, & Shih, 2007; Lengnick-Hall, 1996). Therefore, end-user co-production is considered relatively low when transformational HR services are offered.

#### *End-user contact*

End-user contact refers to the degree of interaction between customers and service employees (Skaggs & Youndt, 2004; Tansik, 1990). Levels of end-user are considered to be low when transactional HR services are offered as end-users mostly interact with remote IT systems (Cooke, 2006). When transformational HR services are offered, service employees are expected to partner with end-users during the service production process (Ulrich et al., 2008b), resulting in high levels of end-user contact.

### *Service customization*

Service customization refers to the degree to which service organizations customize their services to the needs of individual end-users (Skaggs & Youndt, 2004). Transactional HR services are considered to be standardized (Cooke, 2006; Farndale et al., 2009; Ulrich, 1995; Ulrich et al., 2008b) as end-user needs concerning administrative activities are similar. Therefore, we expect that customization is low when transactional HR services are offered. High levels of standardization will harm effective service delivery when transformational HR services are offered given that end-user needs vary in this case (Ulrich et al., 2008b). Given this, we expect that levels of customization are high in the case of transformational HRSS.

|                       | <b>End-user<br/>co-production</b> | <b>End-user<br/>contact</b> | <b>Service<br/>customization</b> |
|-----------------------|-----------------------------------|-----------------------------|----------------------------------|
| Transactional HRSS    | High                              | Low                         | Low                              |
| Transformational HRSS | Low                               | High                        | High                             |

Table 1: Characteristics of HRSS

## **Theoretical Background: Bundling Resources through Employing Intellectual Capital in HRSS**

We define *intellectual capital* as the aggregate of knowledge and knowing capabilities that an organization is able to leverage with the aim of creating value. Knowledge refers to both *explicit* and *tacit knowledge*. Explicit knowledge is knowledge that can be expressed explicitly and reflected upon (Cook & Brown, 1999; Gourlay, 2006), whereas tacit knowledge refers to all ‘unarticulated elements of human knowledge’ (Miller 2008 p. 937). Although we make a distinction between explicit and tacit knowledge, knowledge is not considered to be objective (Cook & Brown, 1999; Gourlay, 2006; Kakabadse, Kakabadse, & Kouzmin, 2003; Miller, 2008; Polanyi, 1966; Tsoukas, 2003; Walshman, 2005) given the assumption that ‘all knowledge is either tacit or rooted in tacit knowledge’ (Polanyi, 1966: 7). According to Polanyi (1966), every individual holds his or her own personal assumptions, beliefs and frames of reference which cannot be expressed explicitly. Therefore, people always interpret knowledge tacitly (Miller, 2008). Knowledge is also considered to be static and something people possess, because it is not necessarily always in use (Cook & Brown, 1999): when a person is sleeping s/he still has knowledge of e.g. mathematics. This implies that knowledge falls within the epistemology of possession (Cook & Brown, 1999). Yet the theory of Polanyi (1966) stresses that knowledge is also action-oriented and is used in action, which calls for the notion of knowing (Cook & Brown, 1999; Kuhn & Jackson, 2008).

Knowing is supposed to be part of action when we interact with the world (Cook and Brown 1999; Kuhn and Jackson 2008; Orlikowski 2002). If we talk about someone who is 'knowing' (e.g. in maths) we focus on what that person is actually doing, which is employing knowledge to conduct specific tasks (e.g. solving a mathematic problem). Thus, knowing falls within the epistemology of *action* which implies that knowing is not a precondition for action (Cook & Brown, 1999). Yet, knowing does imply that knowledge is an precondition for action and knowing because knowledge enables action (Cook & Brown, 1999; Kuhn & Jackson, 2008).

A strategic context is needed in order to classify whether knowledge and knowing capabilities are valuable (Stewart, 1997): knowledge and knowing capabilities are of no value if no one knows what to do with them. Therefore, as Stewart (1997) argues, one needs to take into account a strategic orientation in order to determine the value of knowledge and knowing. Youndt et al. (2004) claim that organizations should utilize their knowledge and knowing capabilities in order to create value: that is, leveraging it in the process of value creation.

### **IC configuration: interrelations among human, organizational and social capital**

Knowledge and knowing capabilities that are leveraged to create value reside at the individual, organizational and network level, which makes intellectual capital a multidimensional construct (Bontis 1998; Edvinsson 1997; Nahapiet and Ghoshal 1998; Petty and Guthrie 2000; Youndt et al. 2004). Organizations not only leverage the knowledge of individual employees, but also the knowledge embedded within processes, protocols and databases or knowledge derived from relationships with e.g. end-users (Youndt et al., 2004). For the purpose of this paper, we conceptualize intellectual capital in three categories: *human capital*, *organizational capital* and *social capital*.

Human capital refers to the knowledge and knowing capabilities of individual employees as represented in their knowledge, skills and experiences. These are knowledge and knowing capabilities that are owned by employees (Youndt et al., 2004).

Organizational capital refers to the knowledge and knowing capabilities which are codified, and embedded or stored within databases, protocols and processes. Organizational capital is what stays within organizations when employees leave and therefore, organizations are the ones that actually own it (Bukh, Larsen, & Mouritsen, 2001).

Social capital represents knowledge and knowing capabilities which are mobilized through social relationships (Nahapiet & Ghoshal, 1998; Youndt et al., 2004). As Coleman (1988) argues, social capital should be defined by its function which implies that social relationships facilitate the actions of social actors (Coleman, 1988; Portes, 1998). As a support for

Coleman's (1988) definition of social capital, previous research demonstrated that social actors use social relationships to mobilize and exchange knowledge resources (Coleman, 1988; Collins & Smith, 2006; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). To explain these exchanges, sociologists (Burt, 1997; Coleman, 1988) and management theorists (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998) study relational characteristics (e.g. trust, norms) and structural characteristics (e.g. density, closure, structural holes) of social networks. Although relational and structure characteristics are important for knowledge mobilization, intellectual capital literature views social capital *only* as the mobilization of knowledge by means of social relationships (e.g. our employees share knowledge) (Reed, Lubatkin, & Srinivasan, 2006; Youndt et al., 2004).

We consider human, organizational and social capital to be interrelated, given that these IC categories are coexisting and dependent on one another (Cabrita & Bontis, 2008; Reed et al., 2006; Youndt et al., 2004). Ruta (2009), for example, demonstrated that organizational capital facilitates the development of human capital as employees learn from knowledge stored within databases. These databases also contain information about the expertise of specific employees, which facilitates the exchange of knowledge by means of social relationships as it enables employees to search for and contact one another to directly exchange knowledge (Ruta, 2009). The exchange of knowledge among social actors also facilitates learning and improves knowledge of individuals (Coleman, 1988), whereas human capital and social capital create organizational capital as employees combine and store their knowledge in processes, protocols and databases (Newell, Tansley, & Huang, 2004; J. P. Walsh & Ungson, 1991). Several survey studies revealed that human, organizational and social capital are significantly related (Bollen, Vergauwen, & Schnieders, 2005; Yang & Lin, 2009).

As such findings reveal the interrelatedness and coexistence of human, organizational and social capital, we adopt a configuration approach that focuses on the interrelations between these capitals as mechanisms to create value. This is what we call the intellectual capital configuration.

### **The intellectual capital of HRSS**

In order to reveal the intellectual capital configuration of HRSS and to draw interrelations between the human, organizational and social capital of HRSS, we define and conceptualize the human, organizational and social capital of HRSS.

The human capital within HRSS is defined as the knowledge and knowing capabilities of service employees within HRSS as represented in their knowledge, skills and experiences. To unfold the elements of human capital within HRSS, we apply HR competencies (Boselie & Paauwe, 2005; Brockbank & Ulrich, 2002), service competencies (Russ-Eft, 2004) and call



centre competencies (Hampson, Junor, & Barnes, 2009; Taylor & Bain, 1999) as these competencies also represent knowledge, skills and experiences of employees (Han, Chou, Chao, & Wright, 2006).

We propose that the human capital within HRSS is made up of four elements (see table 1): HR Technology, HR Delivery, Communication, and Strategic Contribution. First, to effectively deliver HR services by means of information technology / web-based channels (Cooke, 2006; Farndale et al., 2009), service employees should possess knowledge and knowing capabilities to use such technology and web-based channels, which represents *HR Technology* (Boselie & Paauwe, 2005; Han et al., 2006; Meisinger, 2005). Second, to provide HR services effectively, HRSS service employees need to possess technical HR capabilities (Huselid, Jackson, & Schuler, 1997). This requires *HR Delivery* which includes knowledge and knowing capabilities of service employees to effectively design and deliver HR services such as training, staffing or personnel record keeping (Han et al., 2006; Kochanski & Ruse, 1996; Paauwe & Boselie, 2005; Ulrich & Brockbank, 2005). Third, to ensure an effective delivery of HR services, service employees are expected to effectively communicate with end-users (Boselie & Paauwe, 2005; Farndale et al., 2009): e.g. listen intently to end-users, probe for clarification and provide transparent information (Hampson et al., 2009; Russ-Eft, 2004; Taylor & Bain, 1999). This requires *Communication* which represents knowledge and knowing capabilities of service employees to effectively write and communicate with end-users (Hampson et al., 2009; Taylor & Bain, 1999). Finally, as HRSS offer expertise on organizational change and strategy development (Farndale et al., 2009; Ulrich, 1995; Ulrich et al., 2008b), service employees should possess the HC element *Strategic Contribution* which includes knowledge and knowing capabilities to provide transformational HR services (Boselie & Paauwe, 2005; Buckley & Monks, 2004; Meisinger, 2005).

We distinguish three organizational capital elements within HRSS: IT and HR processes, protocols and databases (see table 1). First, HRSS offer IT-based employee and management self-service (ESS / MSS) applications (Cooke, 2006; Farndale et al., 2009). These application house HR and IT processes which guide end-users in self-serving. Second, service employees rely on knowledge embedded within protocols and scripted texts to inform end-users (Cooke, 2006; Farndale et al., 2009). Besides that, these protocols and scripted texts (e.g. frequent-asked-questions: FAQ) are also published on HR portals to directly inform end-users. Third, HRSS accumulate a vast amount of data about end-users which is stored in databases. Examples of such data are sick leave, performance or resignations (Cooke, 2006; Farndale et al., 2009). Service employees rely on knowledge stored in databases in order to inform end-users (Hampson et al., 2009).

We distinguish social capital of HRSS in two elements: internal and external social capital (Reed et al., 2006; Yang & Lin, 2009) as knowledge is exchanged among service employees

within HRSS but also between the service employees and end-users (Ulrich, 1995; Youndt et al., 2004). Thus, social capital is internal when knowledge and knowing capabilities are mobilized through social relationships among service employees within HRSS and external when knowledge and knowing capabilities are mobilized through social relationships between the HRSS service employees and end-users.

| <b>Intellectual Capital</b> |                        | <b>Definition: knowledge and knowing capabilities ...</b>   |
|-----------------------------|------------------------|---|
| Human Capital               | HR technology          | ... of service employees to use technology and web-based channels by which HR services are delivered                                    |
|                             | HR delivery            | ... of service employees to provide transactional HR services and HR services that transform the human resource base of an organization |
|                             | Communication          | ... of service employees to effectively write and communicate with end-users  |
|                             | Strategic contribution | ... of service employees to provide transformational HR services.   |
| Organizational Capital      | IT and HR processes    | ... embedded within a series of actions that result in the production of an HR service  |
|                             | Protocols              | ... stored in manuals or online documents   |
|                             | Databases              | ... stored as a structured set of data held on a computer   |
| Social Capital              | Internal               | ... mobilized through social relationships among service employees within the HRSS  |
|                             | External               | ... mobilized through social relationships between the HRSS service employees and end-users   |

Table 2: Intellectual capital of HRSS

## **Proposing Relationships between HRSS Intellectual Capital Configuration and Value Creation**

The human capital of service firms and HR professionals influences performance. Previous research demonstrated that high levels of human capital result in high levels of service quality (Liao, Toya, Lepak, & Hong, 2009) and firm performance (K. Walsh et al., 2008; Yang & Lin, 2009). Also, the human capital of HR professionals is positively related with their effectiveness (Boselie & Paauwe, 2005; Brockbank & Ulrich, 2002; Han et al., 2006) and HR professionals expect that the four human capital elements have a strong influence on the

effectiveness of HRSS (Ulrich, Brockbank, Johnson, Sandholtz, & Younger, 2008a). These findings suggest that the human capital within HRSS is directly related with value creation of HRSS. Yet other findings reveal that human capital and firm performance are not significantly related (Reed et al., 2006; K. Walsh et al., 2008). Additionally, Boselie and Paauwe (2005) demonstrated that strategic contribution and HR technology are not significantly related with the effectiveness of HR professionals. Therefore, previous studies provide conflicting evidence for the human capital – value creation relationship.

Given these conflicting findings, we suggest that the human capital within HRSS is both directly and indirectly related with value creation. As human, organizational and social capital are interrelated, we propose that, at a minimum, the relationship between human capital and value creation is mediated by both organizational and social capital (see: figure 1). In the section below, we will outline this argument.

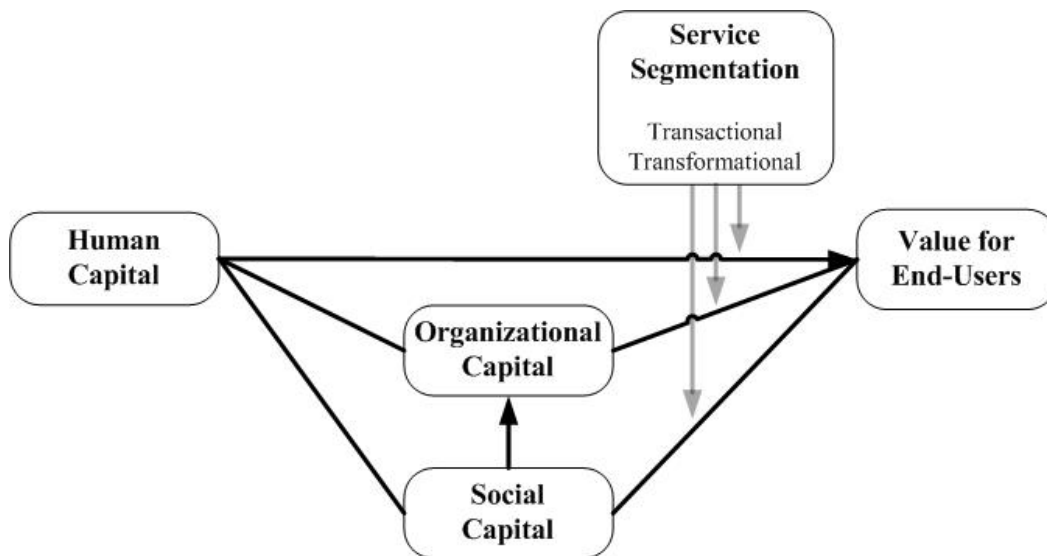


Figure 1: Conceptual framework: IC configuration for value creation

Organizational capital is believed to be developed as employees codify and store their knowledge and knowing capabilities in processes, databases or protocols (Hansen, Nohria, & Tierney, 1999; Reed et al., 2006; Ruta, 2009; Youndt et al., 2004). Additionally high levels of human capital result in high levels of organizational capital (Bollen et al., 2005; Yang & Lin, 2009). Therefore, the human capital within HRSS is expected to be related with organizational capital within HRSS. Previous research also revealed that organizational capital positively affects value creation (Reed et al., 2006; Tuli, Kohli, & Bharadwaj, 2007; K. Walsh et al., 2008; Yang & Lin, 2009; Youndt & Snell, 2004). Several studies (Hansen et al., 1999; Tuli et al., 2007) provide evidence that service employees store knowledge embedded in service experiences, summaries of projects and end-user requirements to build

an organizational memory of both effective and ineffective service provisions. In turn, this is believed to facilitate an effective service provision (Tuli et al., 2007). Case study evidence on HRSS suggest that ‘high-quality HR processes are important to the efficient running of the organization’ (Redman et al., 2007: 1499) and ‘for shared services to be effective, processes must be created or improved to ensure that shared services result in customer needs being met’ (Ulrich 1995: 13). Finally, end-users consult HR portals to inquire for knowledge that is stored in online documents and databases (Cooke, 2006). Service employees within HRSS develop these documents and databases and therefore, their human capital creates value for end-users as it is stored in HR portals. These findings suggest that the human capital within HRSS creates value through the organizational capital within HRSS.

Edvinsson and Malone (1997) argue that human capital only creates value if employees can rely on organizational capital that supports them to create value. For example, as a *precondition* for the effective running of an HRSS, it should have in place proper processes (Farndale et al., 2009; Redman et al., 2007; Ulrich, 1995). This implies that the human capital of service employees only creates value if service employees are supported by proper processes. Hansen et al. (1999) demonstrated that service employees couple their human capital with codified knowledge in protocols and databases. In the case of HRSS, service employees have to make use of databases that house information on end-users to inform end-users (Cooke, 2006; Farndale et al., 2009). We expect that the human capital of these service employees do not create value if these databases are not in place or house irrelevant information. Therefore, we expect that organizational capital mediates the relationship between human capital and value creation. In combination with the direct relationship between human capital and value creation (Brockbank & Ulrich, 2002; Yang & Lin, 2009), we propose the following:

*Proposition 1: The human capital within HRSS is directly related with value creation and this relationship is also mediated by the organizational capital within HRSS.*

The acquirement and assimilation of knowledge from social ties is a function of the knowledge that is currently held by individuals or organizations (Cohen & Levinthal, 1990; Lane & Lubatkin, 1998). Nahapiet and Ghoshal (1998) argue that shared knowledge facilitates the exchange of knowledge, which implies that the human capital of service employees partially affects knowledge exchange. Also, employees within HRSS should have knowledge and knowing capabilities in the field of communication to elicit knowledge from social relationships. As previous research demonstrated, high levels of human capital result in high levels of social capital (Cabrita & Bontis, 2008; Yang & Lin, 2009). Therefore, the human capital within HRSS is expected to be related with social capital of HRSS. Previous

research also revealed that social capital affects the performance of service organizations (Cabrita & Bontis, 2008; Yang & Lin, 2009; Youndt et al., 2004). For instance, Tuli et al. (2007) demonstrated that service employees effectively solve end-user problems when service employees and end-users share knowledge about end-user requirements. Hansen et al. (1999) demonstrated that consultants share knowledge about past projects to provide services more effectively, whereas services employees within HRSS are expected to share experiences and knowledge among one another in order increase performance (Ulrich, 1995). These findings suggest that the human capital within HRSS indirectly creates value through the social capital within HRSS.

Opposing, a direct relationship between human capital and value creation implies that employees create value as individuals. Yet individual service employees mostly create value if their human capital is coupled with those of other service employees (Hansen et al. 1999). As Boxall (1996) argues, the potential value of human capital can be realized by creating a human process advantage which refers to co-operation and bringing about an interplay between knowledge and knowing capabilities of individuals. To facilitate this, the human capital of service employees should be mobilized through social relationships (Boxall, 1996). Given these findings, we suggest that the *internal* social capital of HRSS mediates the relationship between the human capital within HRSS and value creation.

Given that services are jointly produced by services providers and end-users, both parties need to exchange information and knowledge (Bowen & Ford, 2002) and therefore, the effectiveness of HRSS dependent on the relationship with end-users (Farndale et al., 2009; Redman et al., 2007). Concerning service employees, their inputs are considered to be their human capital. Yet end-users also need to share information about e.g. their needs or requirements to enable an effective delivery of a service (Bowen & Ford, 2002; Tuli et al., 2007). Therefore, the human capital of HRSS creates value if it is combined with knowledge and information retrieved from end-users. As this requires the mobilization of knowledge resources between service employees and end-users, we argue that the relationship between human capital and value creation is also mediated by *external* social capital. In combination with the direct relationship between human capital and value creation (Brockbank & Ulrich, 2002; Yang & Lin, 2009), we propose the following:

*Proposition 2: The human capital within HRSS is directly related with value creation and this relationship is also mediated by the internal and external social capital of HRSS.*

Bollen et al. (2005) demonstrated that higher levels of external social capital result in higher levels of organizational capital. This can be explained as end-user feedback and requirements

are used to improve the processes and protocols that enable the delivery of services (Bollen et al., 2005). Nahapiet and Ghoshal (1998) suggest that social capital affects the creation of new forms of organizational knowledge (i.e. organizational capital) as employees share, pool and integrate their knowledge. Also, employees exchange and combine knowledge in order to improve or develop processes and protocols (Newell et al., 2004) and high levels of internal and external social capital result in high levels of organizational capital (Yang & Lin, 2009). Given this, we expect that the social capital of HRSS is positively related with the organizational capital within HRSS.

*Proposition 3: The internal and external social capital within HRSS is directly and positively related with the organizational capital within HRSS.*

### **The Contingent Effect of Service Segmentation**

The strength of the relationship between human capital and value creation, as well as the mediating effects of organizational and social capital are expected to differ as a result of service segmentation in HRSS as service segmentation has an influence on the relationships between intellectual capital categories and value creation (Reed et al., 2006; K. Walsh et al., 2008). For instance, the influence of organizational capital on performance is the stronger when standardized services are offered, whereas human capital has a stronger influence on performance in the case of customized services (Reed et al., 2006; K. Walsh et al., 2008).

Several authors (Lengnick-Hall, 1996; Skaggs & Youndt, 2004) argue that high levels of end-user contact and customization, and low levels of co-production force service organizations to rely on their human capital. This is expected as these characteristics results in high levels of uncertainty which inserted in the service production process. As a result of customization, service organizations are more open to demand variability when they try to meet specific end-users needs. In turn, higher levels of demand variability result in higher levels of uncertainty (Tansik, 1990). High levels of end-user contact are associated with higher levels of uncertainty as well, because end-users have the opportunity to intervene in the service production process (Mills & Morris, 1986; Tansik, 1990). When levels of co-production are low, service organizations increase the range of options end-users can choose from which results in high levels of uncertainty (Mills & Morris, 1986). High levels of uncertainty need to be coupled with high levels of human capital in order to deal with uncertainty. Opposing, low levels of end-user contact and customization, and high levels of co-production results in low levels of uncertainty which are inserted in the service production process (Lengnick-Hall, 1996; Mills & Turk, 1986; Tansik, 1990). Therefore, service employees are expected to need

a limited set of knowledge and knowing capabilities to deal with uncertainty as high levels of human capital are considered superfluous and do not necessarily result in higher levels of value (Skaggs & Youndt, 2004).

As transformational offer customized services and grant high levels of end-user contact and low levels of co-production, they experience higher levels of uncertainty compared with transactional HRSS. Therefore, we expect that human capital has a stronger influence on value creation in the case of transformational HRSS.

*Proposition 4: The direct effect of human capital within HRSS on value creation is stronger when HRSS offer transformational HR services.*

Low levels of customization and high levels of co-production cause end-user inquiries to be relatively standard (Tansik, 1990) and as a result, service organizations are expected to strongly rely on their organizational capital (Batt, 2000; Hansen et al., 1999). Hansen et al. (1999) observed that service firms which deal with standardized inquiries mainly rely on codified knowledge and knowing capabilities (i.e. organizational capital). The same is the case in transactional HRSS where service employees are mainly trained to quickly trace knowledge that is stored within databases and HR information systems (Cooke, 2006). Also, transactional HRSS rely on HR portals that house knowledge which is embedded online documents. In this case the reuse of codified knowledge is highly desirable as service employees are repeatedly confronted with similar problems in the course of time (Hansen et al., 1999). Transformational HRSS experience higher levels of demand variability due to low levels of co-production and high levels of customization (Skaggs & Youndt, 2004). As standardized processes and codified knowledge limitedly enable service employees to respond to demand variability (Bowen & Ford, 2002), reuse of codified knowledge is less effective in the case of transformational HRSS. For instance, Batt (2000) observed that only 6.2% of service employees that provide customized services rely on protocols in contrast to 52.9% of services employees that provide standardized services. Finally, the influence of organizational capital on performance is the strongest when demand variability is low (K. Walsh et al., 2008). Therefore, we expect that organizational capital has a stronger mediation effect on the relationship between human capital and value creation in the case of transactional HRSS as they experience low levels of demand variability.

*Proposition 5: The mediating effect of organizational capital within HRSS on the relationship between the human capital within HRSS and value creation of HRSS is stronger when HRSS offer transactional HR services.*

Increases in uncertainty requires end-users and service employees to increasingly exchange information or knowledge to reduce uncertainty (Bowen & Ford, 2002). This implies that external social capital is more critical for transformational HRSS as they experience high levels of uncertainty. Yet high levels of knowledge exchange potentially result in high levels of uncertainty as end-users insert variability in service production processes (Mills & Morris, 1986; Tansik, 1990). Therefore, transactional HRSS are expected to keep levels of external social capital as low as possible to ensure that levels of uncertainty remain low.

Hansen et al. (1999) demonstrated that service firms mainly invest in face-to-face knowledge exchange among service employees when customized services offered as the human capital of service employees in isolation is not sufficient to deliver these services. Therefore, the human capital of individual service employees needs to be coupled, which requires internal knowledge exchange (Hansen et al., 1999). Also, service employees need to exchange tacit knowledge as customized services are offered (Hansen et al. 1999). The exchange of tacit knowledge is primarily facilitated by means of social relationships (De Jong, De Ruyter, & Lemmink, 2004; Hansen et al., 1999). Therefore, we expect that it is essential for transformational HRSS to couple their internal social capital and human capital to create value. Service firms do not heavily invest in both organizational and internal social capital to facilitate knowledge exchange, because investing in both is too costly (Hansen et al. 1999). As transactional HRSS already heavily rely on organizational capital, we expect that transactional HRSS do not heavily invest and rely on internal social capital as well. Therefore, we expect that internal and external social capital has a stronger mediation effect on the relationship between human capital and value creation in the case of transactional HRSS.

*Proposition 6: The mediating effect of social capital of HRSS on the relationship between the human capital within HRSS and value creation of HRSS is stronger when HRSS offer transformational HR services.*

## **Discussion**

In this paper, we have built on the theory of intellectual capital to develop a model that conceptualizes HRSS value creation as perceived by end-users (employees, line managers and HR professionals). The need for this conceptual model was reflected in the fact that previous research did not conceptually explore or empirically demonstrate how HRSS value is created.

We started from the premise that organizations centrally bundle intellectual capital within a single (semi)autonomous organizational unit — called HRSS — and leverage this intellectual



capital to deliver HR services. Combined with the fact that the features of these HR services are partially determined by the clients (business units) of HRSS, HRSS are believed to reap the benefits of both centralization and decentralization, while minimizing the drawbacks of both. As a result, HRSS are believed to realize increases in both efficiency and effectiveness in HR service delivery.

We have argued that intellectual capital plays a central role in the creation of HRSS value. As argued by others and demonstrated by empirical findings, intellectual capital — here defined as the aggregate of knowledge and knowing capabilities that an organization is able to leverage with the aim of creating value — is strategically valuable for service organizations and affects their performance (Kong, 2008; Reed et al., 2006; K. Walsh et al., 2008). Moreover, the most critical HR resource that is bundled within HRSS is believed to be its knowledge and knowing capabilities (Farndale et al., 2009; Ulrich, 1995). As a result, HRSS are expected to leverage their intellectual capital configuration – comprising interrelations among human, organizational and social capital – to create HRSS value. This lead us to propose that human capital both directly related with value creation and indirectly as the human capital – value creation relationship is mediated by organizational and social capital of HRSS.

We also suggested that the relative influence of human, organizational and social capital is not the same for all HRSS as they offer either transactional and transformational HR services (Farndale et al., 2009; Ulrich, 1995). The direct relationship between human capital and value creation, and the mediating effect of social capital is stronger in the case of transformational HRSS, whereas the mediating effect of organizational capital is stronger when transactional HR services are offered. Therefore, service segmentation is considered to moderate the relationship between the IC configuration of HRSS and value creation by HRSS.

As our conceptual model explains how HRSS employ their IC configuration in order to create value for its end-users, it opens the way for a future empirical investigation of HRSS value creation. However, we acknowledge that this paper does not present a description of HRSS value as perceived by end-users. Based on the literature on service management, HRM and intellectual capital, we only described how intellectual capital might create HRSS value by adopting dependent variables that act as surrogates for HRSS value (e.g. service quality or HR performance / effectiveness). Yet relatively little is known about how end-users actually perceive HRSS value. Therefore, further research should be conducted to explore how end-users perceive the value of HRSS. In turn, this should offer the opportunity to investigate empirically how intellectual capital affects HRSS value creation.

Moreover, although the various elements of HRSS human capital have been explored in this paper, we have remained silent on how these elements in particular affect HRSS value creation in the specific cases of transactional and transformational HRSS. In this paper, we

suggested that human capital elements are equally valuable. Yet the findings of Ulrich et al. (2008a) suggest that transactional and transformational HRSS rely on different human capital elements to create value. For instance, the relative influence of the human capital elements of *HR delivery* and *HR technology* on the performance of services providers is stronger in the case of transactional HRSS, whereas the relative influence of *strategic contribution* on the performance of services providers is stronger in the case of transformational HRSS (Ulrich et al., 2008a). Given the findings of Ulrich et al. (2008a), we conclude that future research should examine which human capital elements explain the creation of HRSS value within both transactional and transformational HRSS.

In conclusion, we establish that our conceptual framework gives improved insight into the creation of HRSS value. Yet the concept of *HRSS value creation* is not yet fully clear. This suggests a need for a future empirical investigation that reveals end-users' perceptions of HRSS value. Furthermore, further research should be conducted into the relative impact of the human capital elements when HRSS offer either transactional or transformational HR services.

## References

- Adler, P. S., & Kwon, S. (2002). Social Capital: Prospects for a New Concept. *Academy of Management Review*, 27(1), 17-40.
- Auh, S., Bell, S. J., McLeod, C. S., & Shih, E. (2007). Co-production and Customer Loyalty in Financial Services. *Journal of Retailing*, 3, 359-370.
- Batt, R. (2000). Strategic Segmentation in Front-Line Services: Matching Customers, Employees and Human Resource Systems. *International Journal of Human Resource Management*, 11(3), 540-561.
- Bollen, L., Vergauwen, P., & Schnieders, S. (2005). Linking Intellectual Capital and Intellectual Capital Property to Company Performance. *Management Decision*, 43(9), 1161-1185.
- Boselie, P., & Paauwe, J. (2005). Human Resource Function Competencies in European Companies. *Personnel Review*, 34(5), 550-566.
- Bowen, J., & Ford, R. C. (2002). Managing Service Organizations: Does Having a 'Thing' Make a Difference? *Journal of Management*, 28(3), 447-469.
- Bowman, C., & Ambrosini, V. (2000). Value Creation Versus Value Capture: Towards a Coherent Definition of Value in Strategy. *British Journal of Management*, 11, 1-15.
- Boxall, P. (1996). The Strategic HRM Debate and the Resource-Based View of the Firm. *Human Resource Management Journal*, 6(3), 59-75.
- Brockbank, W., & Ulrich, D. (2002). *The New HR Agenda: 2002 HRCS Executive Summary*. Ann Arbor: University of Michigan Business School.
- Buckley, F., & Monks, K. (2004). The Implications of Meta-Qualities for HR Roles. *Human Resource Management*, 14(4), 41-56.
- Bukh, P. N., Larsen, H. T., & Mouritsen, J. (2001). Constructing Intellectual Capital Statements. *Scandinavian Journal of Management*, 17, 87-108.
- Burt, R. S. (1997). The Contingent Value of Social Capital. *Administrative Science Quarterly*, 42, 339-365.
- Cabrita, M., & Bontis, N. (2008). Intellectual Capital and Business Performance in the Portuguese Banking Industry. *International Journal of Technology Management*, 43(1), 212-237.
- Carrig, K. (1997). Reshaping Human Resources for the Next Century - Lessons from a High Flying Airline. *Human Resource Management*, 36(2), 277-289.

- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, 35, 128-152.
- Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology*, 94, S95-S120.
- Collins, C. J., & Smith, K. G. (2006). Knowledge Exchange and Combination: The Role of Human Resource Practices in the Performance of High-Technology Firms. *Academy of Management Journal*, 49(3), 544-560.
- Cook, S. D. N., & Brown, J. S. (1999). Bridging Epistemologies: The Generative Dance between Organizational Knowledge and Organizational Knowing. *Organization Science*, 10(4), 381-400.
- Cooke, F. L. (2006). Modeling an HR Shared Service Center: Experience of an MNC in the United Kingdom. *Human Resource Management*, 45(2), 211-227.
- De Jong, A., De Ruyter, K., & Lemmink, J. (2004). Antecedents and Consequences of the Service Climate in Boundary-Spanning Self-Managing Service Teams. *Journal of Marketing*, 68, 18-35.
- Farndale, E., & Paauwe, J. (2008). Restructuring the HR Function: HR Shared Service Centers in the Netherlands. In G. Martin, M. Reddington & H. Alexander (Eds.), *Technology, Outsourcing, and Transforming HR*.
- Farndale, E., Paauwe, J., & Hoeksema, L. (2009). In-sourcing HR: Shared Service Centers in the Netherlands. *International Journal of Human Resource Management*, 20(3), 544-561.
- Gourlay, S. (2006). Conceptualizing Knowledge Creation: A Critique of Nonaka's Theory. *Journal of Management Studies*, 43(7), 1415-1436.
- Hampson, I., Junor, A., & Barnes, A. (2009). Articulation Work Skills and the Recognition of Call Centre Competences in Australia. *Journal of Industrial Relations*, 51(1), 45-58.
- Han, J., Chou, P., Chao, M., & Wright, P. M. (2006). The HR Competencies-HR Effectiveness Link: A Study in Taiwanese High-Tech Companies. *Human Resource Management*, 45(3), 391-406.
- Hansen, M. T., Nohria, N., & Tierney, T. (1999). What's Your Strategy for Managing Knowledge? *Harvard Business Review*, 77(2), 106-116.
- Heskett, J. L. (1986). *Managing in the Service Economy*. Boston: Harvard Business School Press.

- Huselid, M. A., Jackson, S. E., & Schuler, R. S. (1997). Technical and Strategic Human Resource Management Effectiveness as Determinants of Firm Performance. *Academy of Management Journal*, 40(1), 171-188.
- Janssen, M., & Joha, A. (2006). Motives for Establishing Shared Service Centers in Public Administrations. *International Journal of Information Management*, 26, 102-115.
- Kakabadse, N. K., Kakabadse, A., & Kouzmin, A. (2003). Reviewing the Knowledge Management Literature: Towards a Taxonomy. *Journal of Knowledge Management*, 7(4), 75-91.
- Keltner, B. (1999). *Strategic Segmentation: The Strategy-Capabilities Link in Services*. Unpublished manuscript.
- Kochanski, J. T., & Ruse, D. H. (1996). Designing a Competency-Based Human Resource Organization. *Human Resource Management*, 35(1), 19-33.
- Kong, E. (2008). The Development of Strategic Management in the Non-Profit Context: Intellectual Capital in Social Service Non-Profit Organizations. *International Journal of Management Reviews*, 10(3), 281-299.
- Kuhn, T., & Jackson, M. H. (2008). Accomplishing Knowledge: A Framework for Investigating Knowing in Organizations. *Management Communication Quarterly*, 21(4), 454-489-455.
- Lane, P. J., & Lubatkin, M. (1998). Relative Absorptive Capacity and Interorganizational Learning. *Strategic Management Journal*, 19, 461-477.
- Lengnick-Hall, C. A. (1996). Customer Contribution to Quality: A Different View of the Customer-Oriented Firm. *Academy of Management Review*, 21(3), 791-824.
- Lepak, D. P., Bartol, K. M., & Erhardt, N. L. (2005). A Contingency Framework for the Delivery of HR Practices. *Human Resource Management Review*, 15, 139-159.
- Lepak, D. P., Smith, K. G., & Taylor, M. S. (2007). Value Creation and Value Capturing: A Multilevel Perspective. *Academy of Management Review*, 32(1), 180-194.
- Liao, H., Toya, K., Lepak, D. P., & Hong, Y. (2009). Do They See Eye to Eye? Management and Employee Perspectives of High-Performance Work Systems and Influence Processes on Service Quality. *Journal of Applied Psychology*, 94(2), 371-391.

- Meisinger, S. R. (2005). The Four Cs of the HR Profession: Being Competent, Curious, Courageous, and Caring about People. *Human Resource Management, 44*(2), 189-194.
- Miller, K. D. (2008). Simon and Polanyi on Rationality and Knowledge. *Organization Studies, 29*(7), 933-955.
- Mills, P. K., & Moberg, D. J. (1982). Perspectives on the Technology of Service Operations. *Academy of Management Review, 7*(3), 467-478.
- Mills, P. K., & Morris, J. H. (1986). Clients as Partial Employees of Service Organizations: Role Development in Client Participation. *Academy of Management Review, 11*(4), 726-735.
- Mills, P. K., & Turk, T. (1986). A Preliminary Investigation into the Influence of Customer-Firm Interface on Information Processing and Task Activities in Service Organizations. *Journal of Management, 12*(1), 91-104.
- Nahapiet, J., & Ghoshal, S. (1998). Social Capital, Intellectual Capital and the Organizational Advantage. *Academy of Management Review, 23*(2), 242-266.
- Newell, S., Tansley, C., & Huang, J. (2004). Social Capital and Knowledge Integration in an ERP Project Team: The Importance of Bridging and Bonding. *British Journal of Management, 15*, s43-s57.
- Paaauwe, J., & Boselie, P. (2005). Human Resource Function Competencies in European Companies. *Personnel Review, 34*(5), 550-566.
- Polanyi, M. (1966). *The Tacit Dimension*. London: Routledge and Kegan Paul.
- Portes, A. (1998). Social Capital: Its Origins and Applications in Modern Sociology. *Annual Reviews in Sociology, 24*, 1-24.
- Redman, R., Snape, E., Wass, J., & Hamilton, P. (2007). Evaluating the Human Resource Shared Services Model: Evidence from the NHS. *International Journal of Human Resource Management, 18*(8), 1486-1506.
- Reed, K. K., Lubatkin, M., & Srinivasan, N. (2006). Proposing and Testing an Intellectual Capital-Based View of the Firm. *Journal of Management Studies, 43*(4), 867-893.
- Reilly, P. (2000). *HR Shared Services and the Realignment of HR* (Vol. 368). Brighton: Institute of Employment Studies.
- Russ-Eft, D. (2004). Customer Service Competencies: A Global Look. *Human Resource Development International, 7*(2), 211-231.

- Ruta, C. D. (2009). HR Portal Alignment for the Creation and Development of Intellectual Capital. *International Journal of Human Resource Management*, 20(3), 562-577.
- Skaggs, B. C., & Youndt, M. A. (2004). Strategic Positioning, Human Capital, and Performance in Service Organizations: A Customer Interaction Approach. *Strategic Management Journal*, 25, 85-99.
- Stewart, T. A. (1997). *Intellectual Capital*. London: Nicholas Brealey Publishing.
- Strikwerda, J. (2004). *Shared Service Centers: Van Kostenbesparing naar Waardecreatie*. Assen: Koninklijke Van Gorcum BV.
- Tansik, D. A. (1990). Balance in Service Systems Design. *Journal of Business Research*, 20, 55-61.
- Taylor, P., & Bain, P. (1999). An Assembly Line in the Head: Work and Employee Relations in the Call Centre. *Industrial Relations Journal*, 30(2), 101-117.
- Tsai, W., & Ghoshal, S. (1998). Social Capital and Value Creation: The Role of Intrafirm Networks. *Academy of Management Journal*, 41(4), 464-476.
- Tsoukas, H. (2003). Do We Really Understand Tacit Knowledge. In M. Esterby-Smith & M. A. Lyles (Eds.), *Handbook of Organizational Learning and Knowledge*. Cornwall: Blackwell.
- Tuli, K. R., Kohli, A. K., & Bharadwaj, S. G. (2007). Rethinking Customer Solutions: From Product Bundles to Relational Processes. *Journal of Marketing*, 71, 1-17.
- Ulrich, D. (1995). Shared Services: From Vogue to Value. *Human Resource Planning*, 18(3), 12-23.
- Ulrich, D., & Brockbank, W. (2005). *The HR Value Proposition*. Boston: Harvard Business School Press.
- Ulrich, D., Brockbank, W., Johnson, D., Sandholtz, K., & Younger, J. (2008a). *HR Competencies: Mastery at the Intersection of People and Business*. Alexandria: Society for Human Resource Management.
- Ulrich, D., Younger, J., & Brockbank, W. (2008b). The Twenty-First-Century HR Organization. *Human Resource Management*, 47(4), 829-850.
- Walsh, J. P., & Ungson, G. R. (1991). Organizational Memory. *Academy of Management Review*, 16(1), 57-91.

- Walsh, K., Enz, C. A., & Canina, L. (2008). The Impact of Strategic Orientation on Intellectual Capital Investments in Customer Service Firms. *Journal of Service Research, 10*(4), 300-317.
- Walshman, G. (2005). Knowledge Management Systems: Presentation and Communication in Context. *Systems, Signs & Actions, 1*(1), 6-18.
- Yang, C., & Lin, Y. (2009). Does Intellectual Capital Mediate the Relationship between HRM and Organizational Performance? Perspective of a Healthcare Industry in Taiwan. *International Journal of Human Resource Management, 20*(9), 1965-1984.
- Youndt, M. A., & Snell, S. A. (2004). Human Resource Configurations, Intellectual Capital and Organizational Performance. *Journal of Managerial Issues, 16*(3), 337-360.
- Youndt, M. A., Subramaniam, M., & Snell, S. A. (2004). Intellectual Capital Profiles: An Examination of Investments and Returns. *Journal of Management Studies, 41*(2), 335-361.