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Master thesis

Business Administration – Purchasing and Supply management

Social capital and its dimensions and their influence on supplier resource allocation, a multi-group analysis.

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Abstract

Over the past few decades, buyer-supplier relationships have evolved into strategic partnerships, and procurement has become an integral part of the business strategy. This is due to the increased scarcity of good suppliers and resources. Based on social capital theory, this study delves into the effects of the three dimensions of social capital and their effect on supplier resource allocation. Through inter-linked surveys, this research examines how internal dynamics influence external relationships. A total of 30 suppliers, 29 purchasers and 26 others participated in this study. Using the data from the suppliers a multi-group analysis was conducted, splitting up the group into a high supplier dependence and a low supplier dependence. Even though all tested hypotheses were insignificant and thus not supported, the path coefficients gave substantial effects. Embedded partnership approaches have a positive effect on supplier resource allocation and are useful when the supplier is dependent on the buyer, in contrast to transactional partnership approaches. Goodwill trust is an important factor that positively influences the allocation of supplier resources regardless the level of supplier dependence. Internal integration and competence trust are factors that hardly have a positive influence or even a negative influence, on supplier resource allocation. To conclude that firms cannot be viewed as monolithic entities as they have multiple people with different goals and opinions. This is an important takeaway that should not be neglected by managers.

1.   Introduction

Back in the 1970s, the purchasing function was merely administrative, only acting as the function responsible for purchasing goods for the lowest price possible (McIvor et al., 1997). In the years that followed, it was pointed out that the purchasing function plays a vital role in the value chain and thus in the performance of an organisation and it was not rare to see an excessive 60% spend of sales revenue on bought-in goods and services (McIvor et al., 1997). Nowadays, the strategic importance of the purchasing function has been acknowledged as it creates value and enhances operational, financial, and market performance (Carr & Smeltzer, 1999; Foerstl et al., 2016; Narasimhan & Das, 2001). Currently, the main task of the purchasing function remains the securing of resources and accessing suppliers (Bastholm & Munksgaard, 2020). In this process, the negotiation aspect also plays a significant role as it entails factors such as pricing, delivery terms, shipment schedules, and quality standards (Thomas et al., 2013). An important aspect of executing these tasks is handling both internal and external actors in a complex intra-and inter-organisational setting as next to the supplier, internal actors may have different preferences regarding the supplier or product (Brattström & Faems, 2018). This information sharing is crucial, as the purchasing function needs to collect and deliver appropriate information that ensures on-time delivery of inputs that meet the firm's quality and cost targets which contribute to the continuity and efficiency of the core processes (Richter et al., 2019).

Not only the purchasing function has become more important, but so are the buyer-supplier relationships that come with it. The decreasing number of suppliers leads to more dependency on the buyer side, leading to suppliers focusing on a customer they prefer to share resources with, forcing buying companies to seek opportunities to make themselves attractive to a supplier (Baxter, 2012; Ellis et al., 2012). When being perceived as attractive, and having generally satisfied the supplier, preferred customer status may have been granted by the supplier (Hüttinger et al., 2012; Ramsay et al., 2013; Schiele et al., 2012). Preferred customer status is defined by (Steinle & Schiele, 2008, p. 11) as: "a firm has preferred customer status with a supplier if the supplier offers the buyer preferential resource allocation". Having such a preferential status is essential, as next to better access to resources, it also provides benefits such as financial, human, organisational, intellectual, and physical assets (Hunt & Davis, 2008; Newbert, 2008), and the partnership has developed to such a strategic level that it becomes nearly indispensable (Nollet et al., 2012).

The person responsible for the buyer-supplier relationship is called the boundary spanner (Cai et al., 2021; Hald, 2012). This person is the key link to connect the internal and

external environment and has primarily two tasks: information processing and external representation (Aldrich & Herker, 1977). It is about processing information well into their own organisation and communicating the right thing to the external relationship (Tushman & Scanlan, 1981). Either side is reliant on the information shared by the boundary spanner. External representation concerns connecting to other suppliers and possibly starting new relationships (Norlyk Jørgensen et al., 2022). The boundary spanner is an important function playing a key role in obtaining resources from the supplier and the development of the relationship, due to the interaction and personal relationship they have (Weller et al., 2021). As these tasks are executed in an internal and external environment, it should not be neglected that the intra-firm role a boundary spanner holds is as important as the inter-firm relationship (Z. J. Zhao & Anand, 2013).

Earlier research has thus shown that boundary spanners and preferred customer status play a significant role in mobilising supplier resources above competitors (Hunt & Davis, 2008; Newbert, 2008; Norlyk Jørgensen et al., 2022). Another likely important factor influencing supplier resource allocation is supplier dependence, as it is not unthinkable that a supplier invests more resources in a buyer that has a large impact on their operations (Pulles et al., 2014). Because of this factor, a multi-group analysis will be executed to look at the differences between a high and low-dependent group.

In the current literature, buyer-supplier relationships are often conceptualised from a firm's perspective, neglecting the subsystems it contains such as departmental/functional actors or individuals, leading to potential misalignment of perceptions the supplier holds towards the customer (Hald, 2012). Organisations are seen as single entities, with the same vision and interests. But they are not, a buyer-supplier relationship is more than two single organisations and they consist of different departments, different functions and thus different opinions and expectations (Lumineau & Oliveira, 2018; March, 1962). Hence, buyer-supplier relationships are described as political battlefields, as different internal dynamics can influence the development of the relationship (Brattström & Faems, 2018).

This paper builds on social capital to investigate the effects on supplier resource allocation. Even if firms are being viewed as monolithic entities, it still contains social capital and it plays a significant role. While the monolithic view may overlook certain internal complexities, social capital focuses on the relationships and interactions between these organisations. Using social capital theory, this paper delves into the effects of the three dimensions of social capital in buyer-supplier relationships, and provide insights that can help strengthen the relationship, improve resource allocation strategies, and enhance overall

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performance. Social capital has three dimensions that all have a different view on the relationship. Structural capital will examine the relationship approach from a purchaser perspective, whereas cognitive capital focuses on the level of integration from an internal perspective. Relational capital focuses on the level of trust and commitment a purchaser has towards the supplier.

This research paper aims to explain the effect of the constructs, placed under the three dimensions of social capital, on supplier resource allocation, using supplier dependence as a factor to distinguish two supplier groups. Based on this objective, the following research question is central in this paper: "Through a social capital theory scope, which dynamics of the internal organisation are influencing the external relationship with the supplier, and what is the influence of supplier dependence?"

The contributions of this research are multiple. Previous research has mainly had a focus on organisations as a single entity neglecting all subsystems it has. This research used the three dimensions of social capital and the constructs embedded and transactional partnership approach, internal integration, goodwill and competence trust and supplier commitment. Making a distinction in a multigroup analysis based on the level of supplier dependence and their effect on supplier resource allocation. We found that a relationship cannot only build on formal aspects and relational aspects are an important factor, but this does not have to be overstressed as that can be at the cost of the allocation of resources. Competence trust from the supplier even led to a negative relationship. Further, we expand the literature by looking at the social capital dimensions and their effect on low and high supplier dependence.

This paper is structured as follows. First, we review the current literature by discussing supplier resource allocation, social capital and its three dimensions and the operationalization of these dimensions. Next, we develop the hypothesis based on the current literature and show this in a research model. Then we describe the research methodology, in which we provide information about the case company and the sample and discuss the validity and reliability of the constructs used. In the next chapter, the results of the data analysis are summarised, and the research model is filled in. The final chapter concludes this research, by discussing the results and providing theoretical and practical contributions, while we also discuss the limitations of this study.

2. Literature review

2.1. Supplier resource allocation

The purpose of buyer-supplier relationships is to exchange goods and services for money (Pulles et al., 2022). However, these goods and services are not easily accessed, as they are acquired through interactive social processes, in which actors from different organisations interact with each other and thereby exchange resources (Lutz & Ellegaard, 2015). There are plenty of different supplier resources that can be grouped into innovation and physical resources (Weller et al., 2021). Physical resources are materials used in the process or resources such as sales personnel's attention; development capacity; production capacity; logistics scheduling prioritisation or service and problem solution capacity (Pulles et al., 2019). Innovation resources are more technical knowledge that can be used to improve processes or develop new products. Some of the supplier resources such as standard components or basic advice can be accessed more easily, but more in-depth knowledge such as technological know-how is more complex and scarcer, thus harder to mobilise (Kragh et al., 2022).

Supplier resource allocation is often linked to preferred customer status (Baxter, 2012; Schiele et al., 2011). As it is known that supplier resources are scarce, this leads to buyers competing over resources and often gaining advantages at the expense of other buying organisations (Baxter, 2012; Ellis et al., 2012). This competitiveness results in buyers trying to influence the supplier's resource allocation by becoming attractive and generally satisfying the supplier (Pulles et al., 2016, 2019). Simply put, before integrating supplier's resources, the purchasing organisation must coordinate internally on how they are going to obtain these resources in the first place. As such, supplier resource mobilisation is a key process, that links internal and external integration (Ellegaard & Koch, 2012)

2.2. Social capital theory

Relationships offer a wide scale of benefits such as knowledge, resources, and technologies (Hughes & Perrons, 2011). In a buyer-supplier relationship exchanges of these benefits occur through social processes in which actors interact, share information and form relationships based on mutual interest (Horn et al., 2014). These exchanges occur more often if a higher amount of social capital is present between the two organisations (Hughes & Perrons, 2011). Central to the social capital theory are the connections among individuals and the norms of reciprocity and trustworthiness arising from this (Bhandari & Yasunobu, 2009). Ostrom (2000, p. 176) defines social capital as the shared knowledge, understandings, norms, rules, and expectations about patterns of interactions that groups of individuals bring to a recurrent

activity. Whereas Inkpen and Tsang (2005, p. 150-151) define social capital as: "the aggregate of resources embedded within, available through, and derived from a network of relationships possessed by an individual or organisation. Thus, through repeated interactions among parties, social capital can be developed (Pan et al., 2022).

In different disciplines, there is increased use of the concept social capital. These vary from business, political science, economics, sociology and education (Adler & Kwon, 2002). As this research is focused on the business discipline, social capital can be used to describe several outcomes: value delivery; firm performance; network strength; intellectual capital and learning, and entrepreneurial network growth (Batt, 2008). All instrumental to firm growth. Other benefits of social capital are facilitating the spread of knowledge and innovation, reducing costs of conducting day-to-day affairs, doing business, and stimulating cooperative and socially minded behaviour (Batt, 2008). For these reasons, relationships are easier in an environment with a significant level of social capital present. As dense networks facilitate coordination and communication, leading to a collective approach to solving problems (Putnam, 1995).

In the research of Nahapiet and Ghoshal (1998), they laid the foundation of the three dimensions of social capital that are still used today, namely: structural, cognitive, and relational capital. Structural capital describes how a social system and the network of relations around a person work, and it defines network ties, roles, rules, and procedures. The cognitive dimension refers to shared understandings such as goals, values, and vision. Relational capital describes the personal relationships people developed, driven by trust, norms, obligations, and expectations. Even though that social capital is referred to as three different dimensions, they are, in fact, highly interrelated (Nahapiet & Ghoshal, 1998).

2.2.1. Structural capital

The structural dimension relates to the properties of a social system and the relationship network (Nahapiet & Ghoshal, 1998) as it consists of network ties, and it describes the configuration of linkages between people or units. Structural capital makes exchanging information in buyer-supplier relationships easier and creates opportunities to gain new knowledge (Jääskeläinen et al., 2022). It includes roles, rules, precedents, and procedures (Uphoff & Wijayaratna, 2000) and these aspects are important for decision-making, mobilising resources, communicating efficiently, coordinating activities, and resolving conflicts (Uphoff, 2000), as they create obligations and expectations. Without these aspects, the functioning of social structures and collective actions becomes more difficult (Uphoff & Wijayaratna, 2000). Simply put, structural capital concerns the people you know in a network of social relationships

(W. Zhao et al., 2011). Structural capital is, compared to cognitive and relational capital, tangible as it can be easily measured by who knows who in a network, how are parties connected, in what way and how they interact with each other (Claridge, 2018). It is the network of people who an individual knows, and upon whom benefits such as information and assistance can be counted on. Important aspects of these networks are the density, connectivity, hierarchy and appropriability of the relationships (Davenport & Daellenbach, 2011).

2.2.2. Cognitive capital

Cognitive capital refers to resources that have a shared meaning for different actors in the same network (Nahapiet & Ghoshal, 1998). This type of capital provides a set of norms of acceptable behaviour (A. R. Anderson & Jack, 2002) and helps to prevent miscommunication and to achieve goals (Jaaskelainen et al., 2022). Cognitive capital can be divided into shared goals and shared culture (Inkpen & Tsang, 2005). Shared goals are a collective goal of actors in the same network and allow actors to work for mutual benefit under a collective understanding of the task (Inkpen & Tsang, 2005). They are more than just documented goals as they are a shared belief that the actor's interests are represented and will stimulate the relationship (Claridge, 2018). Strong shared goals make individual actors prioritise the relationship over their individual needs, leading to more cooperation and collaboration in the buyer-supplier relationship (Uhlaner et al., 2015). For a supplier to commit to a buyer-supplier relationship, shared goals are an important driver (Patrucco et al., 2020). Shared culture refers to the collective understanding of rules and norms that govern the network (Inkpen & Tsang, 2005). Cultural linkages make it easier to transfer knowledge (Inkpen & Tsang, 2005) as shared language, part of shared culture, is critical for social interaction (Eiteneyer et al., 2019).

2.2.3. Relational capital

Relational social capital insists that competitive advantage can be achieved based on relations (Koufteros et al., 2010), and is the opposite of structural social capital as it is aimed at direct relations between actors and the relational outcomes of these interactions (Inkpen & Tsang, 2005). The relational dimension focuses on the nature and quality of the relationship that has been developed over time (Claridge, 2018). One of the most important aspects of relational capital is trust as it plays a key role in knowledge sharing within a network (Powell et al., 1996) and it is the basis of joint behaviour and productive cooperation (Newton, 2001). Other key factors are trustworthiness, norms and sanctions, obligations and expectations, and identity and identification (Nahapiet & Ghoshal, 1998). The presence of the aspects of relational

capital between the two parties means recognition and commitment to the other side of the buyer-supplier relationship. It helps to bring vision towards the same goal, intensify obligations, improve collective efficacy, and empower collective action (Claridge, 2018).

2.2.4. Operationalisation of the three dimensions of social capital

In this research social capital, is the guiding principle. Aforementioned are the three different dimensions social capital has, and what they are. In this subparagraph these three dimensions will be elaborated on further and how they will be used in this research. Social capital is a known theory with known measurements, however, in this paper, this theory will be slightly adapted to fit this research. Four main constructs central in this research, partnership approach, internal integration, trust and commitment will all be placed under one of the three dimensions of social capital. It is important to understand the operationalisation of these constructs and how they will be used regarding their effect on supplier resource allocation in this specific research.

Structural capital will be operationalised based on how the buying organisation approaches the relationship and what their intention is with the relationship. A purchaser can either adopt an embedded or a transactional partnership approach (Brattström & Faems, 2018). This can be seen as either a relational or contractual governance, viewed from a relationship view (Ferguson et al., 2005). However, since this construct is used from a purchaser's view towards the buyer-supplier relationship, only embedded or transactional partnerships will be used in this context. Embedded partnerships focus more on social relations and shared norms in informal structures that develop over time (Poppo et al., 2008). Successful relationships do not only build on formal aspects, but also on the relational aspects of a relationship (Brattström & Faems, 2018). Transactional relationships deal with the formal aspect of a relationship, and they discuss contract terms such as price, quantity and quality, important aspects in defining the output of the relationship. By capturing these rights and duties of both parties, transactional partnerships ensure that problems cannot easily arise (Cao & Lumineau, 2015). However, transactional partnerships also indicate a lack of trust due to the number of contracts an organisation may have (Ghoshal & Moran, 1996; Poppo & Zenger, 2002).

Cognitive capital will be operationalised via internal integration. To achieve common goals and objectives, it is required to interact, collaborate and align with the other party involved. This phenomenon is called integration (Pagell, 2004), and its positive outcomes can be observed both within the internal organisation and in interactions with the external environment (Horn et al., 2014). This study specifically focuses on the internal aspect of the

buying organisation, providing reason to only use internal integration. Meaning that the cognitive capital aspect is viewed from the buyer's perspective. Internal integration is also known as cross-functional integration (Horn et al., 2014).). It is described by Montoya-Weiss et al., (2001, p. 65) as: "the magnitude of interaction and communication, the level of information sharing, the degree of coordination, and the extent of joint involvement across functions". Other elements of internal integration are joint planning; cross-functional teams; cross-functional job rotation; process-oriented work routines, and practices of permanent cross-functional employee placements (Flynn et al., 2010; Germain & Iyer, 2006; Ghoshal & Gration, 2002; Paulraj et al., 2006; Powell et al., 1996). Internal integration creates an environment that encourages knowledge sharing, collaboration, learning, and the development of shared mental models. This brings out the best of multiple departments as intellectual capabilities are combined (Horn et al., 2014).

The final dimension, relational capital, will be operationalised based on two constructs, namely trust and commitment. These aspects are being viewed from the supplier's side towards the buying organisation. Trust is seen as an essential mechanism between two parties in a buyer-supplier relationship (Garbarino & Johnson, 1999) and is defined as: "a willingness to rely on an exchange partner in whom one has confidence" (Moorman et al., 1993, p. 82). Trust seems like a small aspect of a relationship, however, it can be the biggest hurdle to achieving strategic alliances, as it is reported that one-third of strategic alliances failed due to a lack of trust (Sherman & Sookdeo, 1992). Trust can only exist if one party believes in the other party their reliability and integrity (Morgan and Hunt, 1994). There are two types of trust, namely goodwill and competence trust. Goodwill trust refers to a trust that goes beyond contractual boundaries (Ireland & Webb, 2007). For instance, a high level of goodwill trust means that both parties are more willing to share knowledge and information informally (Roy et al., 2004). Competence trust regards the firm's expectations of whether the other party can fulfil activities based on resources and capabilities (Das & Teng, 2001; Roy et al., 2004).

The other operationalisation for relational capital is commitment, which is defined by Morgan and Hunt (1994, p. 23) as: "an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum effort at maintaining it; that is, the committed party believes the relationship endured indefinitely". As this construct is viewed from a supplier's perspective, it is about loyalty, dedication and responsibility towards the buyer. Three different components of commitment have been defined in the literature (Gundlach et al., 1995). The instrumental component regards the investments made in a relationship, the attitudinal component may be described as a psychological attachment, and

the temporal component indicates that the relationship exists over time. Just as trust, commitment is perceived as essential for a long-term relationship (Garbarino & Johnson, 1999). Both trust and commitment are subtle forces which go unnoticed until a problem occurs in the relationship.

3.   Hypotheses
3.1   The effect of structural capital on supplier resource allocation

As mentioned earlier, structural capital as a dimension of social capital theory will be researched by either a transactional or embedded partnership approach. This paper aims at researching the buyer-supplier relationship the case company has. In these buyer-supplier relationships, the buying organisation can maintain two common approaches in dealing with the suppliers. In some cases, they make a one-time purchase without the intention of further engagement. However, more often, the buying organisation establishes a deeper relationship with a supplier due to repeated purchases of a specific product or service. These are the two types of approaches a buying organisation could apply, either a transactional or embedded partnership approach, and both are effective ways of obtaining resources (Brattström & Faems, 2018). These governance mechanisms are used to structure formal and informal aspects, and enhance buyer-supplier relationships and overall firm performance (Wacker et al., 2016). The embedded partnership approach displays a greater impact on firm performance than a transactional approach, but this transactional approach is complementary to the embedded partnership approach (Wacker et al., 2016). Kim, Choi and Skilton (2015) proposed that in relationships with a focus on establishing commitment in a relationship, trust will be high, information is freely shared and relational norms and shared values govern conflict resolution. On the other hand, there are relationships in which the intention lies on the immediate benefit from the transaction, in which trust and commitment are low, information is shared selectively, and self-interests govern conflict resolution (Kim et al., 2015).

The difference between embedded and transactional partnerships lies in their depth and duration (Brattström & Faems, 2018). Embedded partnerships are more long-term oriented, have increased cooperation for new products or services, ensure that sensitive information can be freely shared and create a willingness to go the extra mile for each other (Kim et al., 2015). Suppliers will feel acknowledged in these relationships, and will likely reciprocate this behaviour by allocating more resources (Pulles et al., 2014) These embedded partnerships are less costly, as contracts are expensive to set up and monitor (Dyer & Singh, 1998), and besides, during uncertain times when resources are scarce, it enhances supplier performance as the

buying organisation is preferred above competitors (Cannon et al., 2000). That is why the following hypothesis is developed:

H1a: An embedded partnership approach is positively related to the allocation of suppliers' resources.

Transactional partnerships, on the other hand, rely on clear agreements to prevent problems from arising as quickly but are less motivating to do more outside of the contract (Cao & Lumineau, 2015). Contracts facilitate buyer-supplier coordination, reduce conflict, and guarantee both sides receive either the payment or the product (Ferguson et al., 2005). However, these contracts are expensive and costly to monitor, and, precisely because of the contract, trust is being undermined and relational performance is reduced, leading to more conflicts (Bai et al., 2016). As the focus is solely on the transaction, there is no long-term vision between the two parties, and the supplier may be less inclined to invest additional resources in this relationship (Liu et al., 2009). Based on these effects, the following hypothesis is developed:

H1b: A transactional partnership approach is negatively related to the allocation of supplier's resources

3.2 The effect of cognitive capital on supplier resource allocation

Cognitive capital, as a dimension of social capital theory will be looked into via the construct internal integration. Integration is closely linked to firm performance. There are multiple types of integration, but this research focuses on internal integration as it is one of the most important determinants (Narasimhan & Das, 2001). Internal integration is closely related to social capital, as the underlying aspects of a buyer-supplier relationship are interaction and collaboration (Hughes & Perrons, 2011). Organisations that effectively integrate across different departments gain a competitive advantage through cross-functional strategic agreements (Schütz et al., 2020). Highly integrated buying-organisations share information, communicate effectively, and have common goals. As a result suppliers have to invest less time in negotiations and problem-solving (Bals et al., 2009; Lambert et al., 2005).

On the other hand, low integration between the purchaser and other internal functions leads to a lack of information between functions, resulting in uncoordinated behaviours from both functions. Inconsistent communication may result in initiatives failing or delivering only

a small part of the expected outcome. Suppliers receive mixed signals, forcing them to invest more resources in the relationship, such as scheduling additional meetings or redoing work by making changes to an already designed or produced product (Ellegaard & Koch, 2012). These additional efforts could come at the expense of the relationship. A good example of low internal integration is shown in the research of Brattström & Faems (2018). Technology managers responsible for production did not want to become too dependent on suppliers to maintain secrecy about their core technologies and maximise individual rents through tendering. The board of directors wanted the exact opposite as they preferred establishing a long-term relationship with full commitment and transparency. As they both had a different view of the approach, it resulted in the supplier being more cautious, and not willing to do business as quickly as before. In contrast, high internal integration leads to less time wasted on reaching agreements, resulting in a positive effect on supplier resource allocation.

H2: Internal integration is positively related to the allocation of supplier's resources

3.3   The effect of relational capital on supplier resource allocation

As discussed in this research, relational capital as part of social capital, focuses on trust and commitment. Trust is an important basis for the good functioning of an inter-organisational relationship (Ireland & Webb, 2007). Trust is generally seen as a positive factor influencing the allocation of supplier resources (E. Anderson et al., 1987; Ridings et al., 2002), and earlier research has demonstrated a link between trust and better product quality and lower production cost (Li et al., 2007).

Goodwill trust, in particular, refers to a higher allocation of resources between partners (Ridings et al., 2002). When there is goodwill trust between the buyer and supplier, they understand each other well, and neither party fears opportunistic behaviour from the other side (Pulles et al., 2014). This increased trust leads to riskier but more beneficial behaviour that is not possible with less trusted organisations (Lambe et al., 2001; Roy et al., 2004). Within the social capital theory, goodwill trust plays a significant role as suppliers are more willing to share and exchange physical and innovation resources in an accurate and timely way when committed to a trust-based relationship (Inkpen, 2001).

The other type of trust is competence trust, which involves an organisation having confidence in the other's technological abilities or expertise (Mayer et al., 1995). A competent buyer can lead to a supplier benefiting from supplier development programs, enhancing supplier

performance (Krause, 1997). When the supplier sees that the buying organisation is competent and perceives obvious trust from the buyer, this may lead to increased supplier performance (Terpend & Ashenbaum, 2012). In response to this perceived trust, the supplier feels motivated to reciprocate this behaviour (Pulles et al., 2014). This trust leads to several benefits, as the supplier feels a strong willingness to meet the demands of the buying organisation and actively contributes to their mutual success. This includes allocating more resources, participation in strategic initiatives and engagement in joint-problem solving (Pulles et al., 2014; Terpend & Ashenbaum, 2012).

Suppliers' perceiving buyer's trust in the relationship will make them confident that the buyer does not leave them directly, and it provides the possibility to establish long-term relationships. This confidence and the abovementioned reciprocity, causes the supplier to invest additional resources in the relationship. Therefore, the following hypotheses are developed:

H3a*: Goodwill trust from the supplier is positively related to the allocation of the supplier's resources*

H3b*: Competence trust from the supplier is positively related to the allocation of the supplier's resources*

The other aspect of relational capital is commitment. In this research, commitment refers to the supplier's willingness to provide resources to support the ongoing relationship with the buying organisation. Commitment is closely linked to trust, as inter-organisational trust develops over time when both parties in a relationship gain an understanding of mutual commitments (Ring & van de Ven, 1994). However, commitment is also seen as the critical factor determining the success, or failure, of a buyer-supplier relationship (Sharma et al., 2015) as it increases satisfaction and performance (Nyaga et al., 2010).

In the relationship, commitment is demonstrated by allocating various resources, such as time, money, or facilities, to the other party in the relationship (Monczka et al., 1998). Supplier commitment leads to increased knowledge on the buyer's side (Yoon & Moon, 2019), enhances new product development (Tsai, 2009), and is essential for achieving innovation (Ellis et al., 2012; Patrucco et al., 2020). When both parties have mutual commitments based on trust, they feel obliged to meet each other's needs. Similar to trust, when the supplier is committed, they become inclined to fulfil the buyer's demands, leading to reciprocating behaviour by the

supplier and thus a higher resource allocation towards the buyer (Pulles et al., 2014). As a result, a positive effect of supplier commitment on the allocation of supplier resources is expected.

H4: Commitment from the supplier is positively related to the allocation of the supplier's resources

In Figure 1 the research model of this study can be found.

Figure 1

Conceptual model
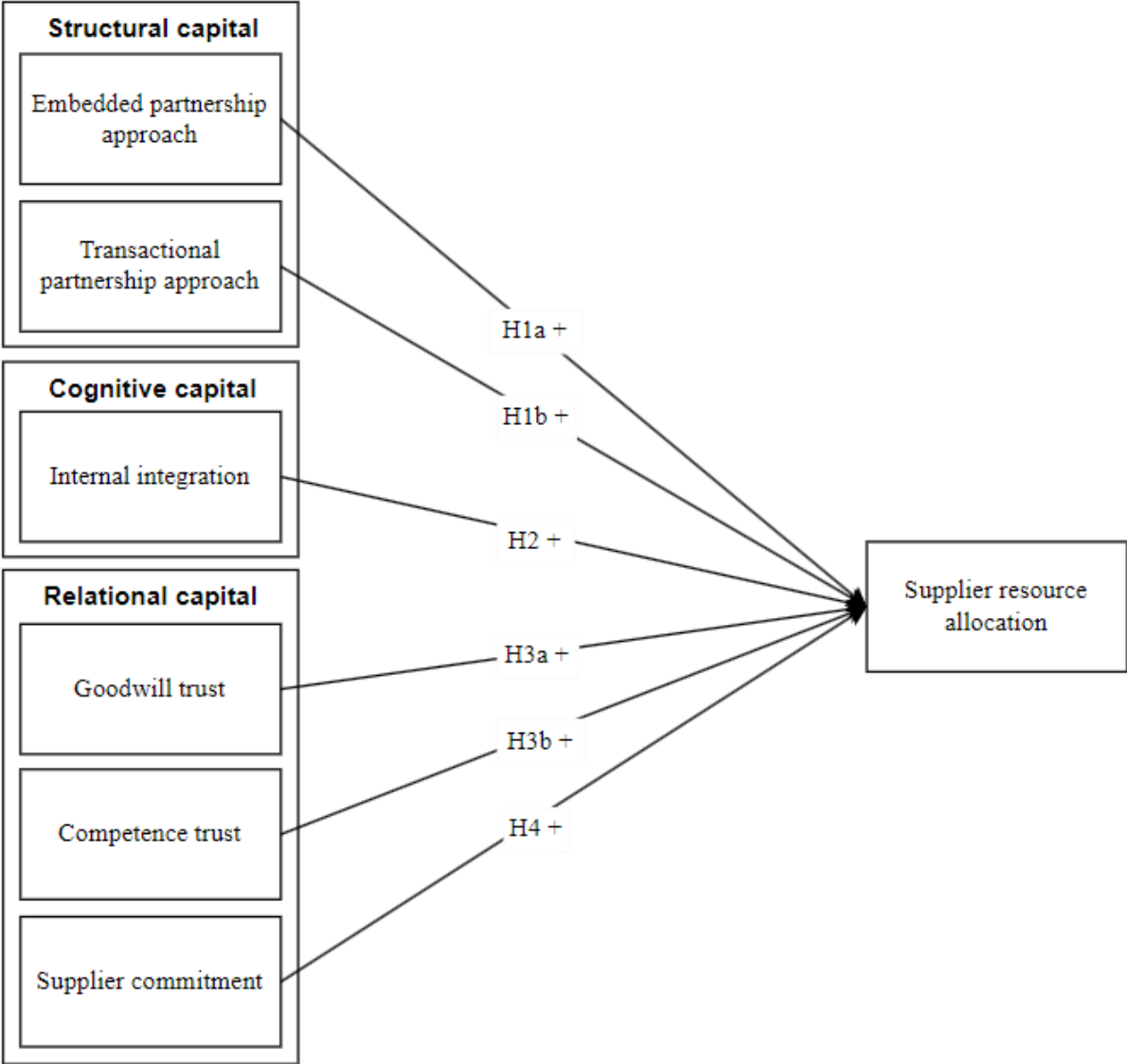
3.4   The effect of the social capital dimensions with a high and low supplier dependence

As mentioned earlier, a buyer can establish two types of partnerships with a supplier to obtain supplier resources. Embedded partnerships are focused on the social aspects of a relationship, as successful relationships are not only built on formal aspects (Brattström & Faems, 2018). Social capital theory emphasizes the significance of interpersonal connections, shared norms, and reciprocity within these partnerships (Bhandari & Yasunobu, 2009; Poppo et al., 2008). Embedded partnerships, instead of self-interested and contract-based partnerships, revolve around mutual understanding and shared objectives. When the buyer accounts for a small share in the supplier's turnover, there will not be much supplier dependence, meaning that the buyer holds no significant power over the supplier (Pulles et al., 2014). The goal is to establish cooperative practices and maximize joint benefits. But most importantly, in an embedded partnership, the supplier will feel appreciated by the buyer and is likely to reciprocate this behaviour by allocating more resources. As the supplier is less dependent, and the focus is more on the relational aspects, the following hypothesis is developed:

H5a: The positive effect of an embedded partnership approach on supplier resource allocation will be stronger if the supplier is less dependent on the buying organisation.

The transactional partnership approach mainly focuses on the formal aspects of the relationship. As suggested by social capital theory, it deals with rules, expectations (Ostrom, 2000) and contract terms such as price (Cao & Lumineau, 2015), which create obligations within the relationship. When a buying organisation accounts for a significant share in the supplier's turnover, it holds a certain level of power (Brennan & Turnbull, 1999), as the supplier becomes more dependent on the buyer.

Since transactional partnerships deal with the formal aspects of a relationship, there is a significantly smaller number of relational aspects present. The buying organisation accounting for a large share in the turnover may threaten to go somewhere else if they do not meet new contract details (Pulles et al., 2014). The supplier will be dependent on the supplier meaning that it will invest more resources in the relationship and starts to behave towards the buying organisation (Pulles et al., 2014). Because of this, it is expected that a transactional partnership approach is more effective to get resources from the supplier when the supplier is more dependent on the buying organisation.

H5b: *The negative effect of a transactional partnership approach on supplier resource allocation will be stronger if the supplier is more dependent on the buying organisation.*

Hypothesis 3 in the single group analysis suggested that internally integrated organisations are getting more resources allocated by them via suppliers. The impact of internal integration on resource allocation will not be influenced by the supplier's dependence on the buying organisation. However, considering the overall effect of dependence in a buyer-supplier relationship, it does play a significant role. If the supplier is dependent on the buying organisation, because this party accounts for a high share in the turnover for example (Pulles, 2022), the dependent supplier will try to please the buying organisation. Either because the relatively small supplier aims to expand their market share through this buyer (Bloom & Perry, 2001) or because they fear being replaced by the buyer and losing their business altogether. To reduce this uncertainty the dependent supplier strives to maintain a good relationship with the buyer and allocate resources accordingly (Elking et al., 2017). That is why the following hypothesis is proposed.

H6: *The positive effect of internal integration on supplier resource allocation will be stronger if suppliers are more dependent on the case company.*

Trust in a partnership is an important foundation of strategic partnerships, and the level of financial investments in each other does not always outweigh its significance. If there was no trust, then organisations tend to prioritize the direct economic benefits of a relationship (Geyskens et al., 1996). This means, that in buyer-supplier relationships were the supplier is not dependent on the buying organisation, because this buyer may have a small share in the turnover, this can be a disadvantage as there are fewer economic benefits. Nevertheless, these organisations can focus on other essential aspects of the relationship, in particular trust. When both parties trust each other, the emphasis on the direct economic benefits diminishes, as the commitment to continue the relationship becomes more important (Pulles et al., 2014). The positive effect of trust is thus expected to be stronger when the supplier is not dependent on the buying organisation.

H7a: *The positive effect of goodwill trust from the buyer on supplier resource allocation will be stronger if suppliers are less dependent on the case company.*

H7b: *The positive effect of competence trust from the buyer on supplier resource allocation will be stronger if suppliers are less dependent on the case company.*

Commitment plays a vital role in sustaining a buyer-supplier relationship. When the supplier is highly dependent on the buying organisation, often due to the significant share of turnover they represent, they become almost indispensable. Both parties may value the relationship and are motivated to maintain it (Andaleeb, 1996). However, a supplier's intention to continue the relationship may not always be a voluntary one. Research by Geyskens et al., (1996) reveals that as one side of the relationship becomes more dependent on the other, the level of commitment increases. Based on this, the following hypothesis is proposed.

H8: *The positive effect of commitment from the supplier, on supplier resource allocation will be stronger for suppliers that are dependent on the buying organisation.*

4. Methodology

4.1 Sample and data collection

The research conducted was done using surveys which means this is a quantitative study. Quantitative research, a survey in this case, was chosen to answer the formulated hypotheses as they aim to explain relationships between variables and generalize results for a larger population (Williams, 2021) This research is aimed at explaining the relationships between social capital variables and their effect on supplier resource allocation, providing a sufficient reason to use the survey research method. Quantitative methods are particularly useful for collecting data in a short time, and the ease to replicate (Williams, 2021). After collecting all the data, several tests were conducted to assess the validity and reliability of the data, afterwards a regression analysis was performed to assess the conceptual model. The statistical software that was used for these tests was IBM SPSS Statistics.

This study was conducted in a company offering a wide range of different rehabilitation services. It is a relatively small company, having only 85 employees and a turnover of €XXX.XXX. They focus on four main segments, orthopaedic instrument and shoe making, thermal stockings and mamma care. Their focus is on the east of the Netherlands, and they have multiple locations in this region, however, their headquarters is based in Enschede. In the nearby future, they plan to accommodate all locations in Enschede.

The goal of this research is to measure which internal dynamics influence the external relationship. This is done via three types of surveys, to measure both the internal and external

aspects. One survey was for the supplier, one for the main contact person responsible for purchasing aspects and one for another internal colleague who has regular contact with the given supplier. Meaning that for every supplier that filled in a survey, two people from the case company filled in a survey. Despite that the case company did not have a separate purchasing function, together with the management, a selection of people was chosen that would fill in the purchaser survey. These people are the main contact person for that company and have regular contact about products or other contract terms.

The suppliers for this research were selected based on the total spending of the case company. Financial data was collected and for each supplier, their share in spend was calculated. As the case company did not have a lot of suppliers, also suppliers with a relatively low spend were included in this research. In the end, a total of 41 suppliers were selected for this research and contacted in March 2022. In this e-mail, they were notified about the upcoming research and introduced to the research topic. It was stressed that the answers given would be strictly confidential and only the research team of the University of Twente would see the answers. After sending the introduction e-mails, it was found out that five companies did not exist anymore or were not recognized by any person working for the case company, in combination with a very small spend this was enough to exclude them from the research. One week after the introduction e-mail an e-mail was sent via Qualtrics including the link to the supplier survey. Suppliers were able to fill in the survey. Suppliers who did not directly fill in the survey were reminded by calling the company and sending a reminding e-mail. One week later the companies were friendly reminded once again via a phone call. This part continued until the desired number of responses was in. During the data collection, it was still necessary to connect the right internal people for some suppliers. This was ultimately not successful for all companies, which meant three suppliers did not participate in the survey. Another three suppliers explicitly mentioned they would prefer not to share this information, or the case company was too small and irrelevant for the supplier to invest time in. In total this led to 30 suppliers participating, resulting in a response rate of 73,2 percent. For the purchasers, a total of 29 surveys were filled in, and 26 surveys were collected for the internal other. Based on the original selection of 41 supplier relationships, this is a response rate of 70.7 and 63.4 per cent. After combining all surveys and removing missing data, the final sample size is 85 surveys.

As shown in Table 1, four suppliers did not answer the personal questions in the survey. Most respondents have an operational function. Nearly all suppliers were in the Netherlands, however, some did have locations outside the Netherlands as well. The suppliers were relatively small companies based on the number of employees working there, as 67,7% have fewer than

50 employees. On average, the case company has a relationship length of 19,2 years with the suppliers. The case company provided spending data, making it possible to assess non-response bias. The average spend of the respondents was €105.157 and for the nonrespondents, it was €23.879, although in absolute value this is a relatively large difference, the comparative tests showed no significant difference.

Table 1.

Profile of suppliers (n=30)

	Frequency		**Frequency**
Function		*Country*	
Executive	26,7%	Netherlands	76,7%
Strategic	6,7%	Belgium	6,7%
Operational	53,3%	Germany	3,3%
Not specified	13,3%	Not specified	13,3%
Number of employees		*Relationship length*	
< 10	30,0%	0 – 10 years	23,3%
10 – 50	36,7%	11 – 20 years	30,0%
51 – 100	10,0%	21 – 30 years	23,3%
> 100	10,0%	> 30 years	10,0%
Not specified	13,3%	Not specified	13,3%

In Tables 2 and 3 information about the participating purchasers and internal colleagues can be found. All four purchasers and twelve internal colleagues who were asked to participate in the research participated, this also means that they filled out multiple surveys.

Table 2

Profile of purchasers (n=4)

	Frequency		**Frequency**
Work experience		*Organizational tenure*	
0 – 10 years	0%	0 – 10 years	25%
11 – 20 years	50%	11 – 20 years	25%
> 20 years	50%	> 20 years	50%

Table 3

Profile of internal other (n=12)

	Frequency		**Frequency**
Work experience		*Organizational tenure*	
0 – 10 years	0%	0 – 10 years	16,7%
11 – 20 years	33,3%	11 – 15 years	33,3%
21 – 30 years	16,7%	16 – 20 years	25,0%
> 30 years	50,0%	> 20 years	25,0%

4.2 Measures

Below a description of the measures that were used to test the hypotheses can be found. Table 4 provides an overview of the measurement items used and their factor loadings. The used constructs were measured on a seven-point Likert scale ranging from 1 ("strongly disagree) to 7 ("strongly agree). The indicator and internal consistency reliability of the used constructs were also measured (Hair et al., 2021). IBM SPSS Statistics was used to conduct these tests. To meet the indicator reliability, a threshold of 0.707 needs to be passed (Benitez et al., 2020). Internal consistency reliability consists of Cronbach alpha and composite reliability (Hair et al., 2021), holding a minimum of 0.7 for both composite reliability (Fornell & Larcker, 1981) and Cronbach alpha (Nunnally, 1978). An overview of the internal consistency reliability factors can be found in Table 5.

In Table 4 the measurement scales of Pulles et al., (2022) that were used to measure the dependent variable of this research, supplier resource allocation, can be found. Supplier resource allocation can be defined as physical and innovation resources, as described in the literature review. With this construct, it is measured to what degree the buying organisation has preferential resource allocation by its supplier. Since this research and its hypothesis make no difference between which type of resource allocation, the outcome of these questions was combined, and the average value was used to test the hypothesis. All used measurement items met the required thresholds and were thus, reliable.

The structural dimension of social capital was measured via both a transactional and an embedded partnership approach. These constructs were measured based on Brattström and Faems (2018). This is measured from the purchaser's and internal other's side. A transactional partnership is focused purely on the transaction and the formal aspects of the relationship with no intention to expand this relationship. Whereas an embedded partnership is about working together towards mutual goals, collaborating, and having a buyer-supplier relationship in a partnership way. One question for transactional partnership approach is removed due to the

negative factor loading (-0.46), which is below the threshold of 0.707 (Benitez et al., 2020). This question is removed as it also negatively influenced Cronbach alpha and composite reliability. After removal, internal consistency reliability was also met for the transactional partnership construct.

Internal integration was measured based on earlier research by Zhao et al., (2011) and Horn et al., (2014). They provided measurement scales for internal integration that were adopted in this study. Internal integration is required to achieve mutual goals across departments and is measured through the level of interaction and collaboration between these departments of the buying organisation. That is the reason why this construct is measured in both the purchaser and internal surveys. In the end, their scores were combined by adding these together to calculate an average value. For this construct, no problems were occurring when checking the reliability of the measured construct.

Trust, measured via goodwill and competence trust is based on the paper of Pulles et al., (2014) and is the willingness to have confidence in the other party to whom one can rely (Moorman et al., 1993). This is measured from a supplier's perspective towards the buyer. As explained in the literature review, goodwill trust goes beyond contractual boundaries, and this was measured to which extent the supplier can rely on the buying organisation and in how far both parties can benefit from the agreement. Competence trust is the trust from a supplier in the buyer's expertise to fulfil the expectations and obligations in the relationship. All measurement items passed the required threshold for reliability.

Commitment was measured from the supplier's side. The supplier was asked to which extent they are devoted to the buyer-supplier relationship and how they see the future of their relationship. This was based on the earlier research of Nyaga et al., (2010). Supplier commitment and actions create an urge for reciprocity on the buyer's side to have mutual benefits. For the construct commitment, all factors were sufficient for reliability.

Lastly, for the multigroup analysis, supplier dependence was added to differentiate the group into a high and low-dependent supplier. After receiving all data the group was split up based on the median. This construct was measured based on the paper of Terpend and Krause (2015) and the questions were aimed at the level of dependence on the case company. One question measuring supplier dependence had a negative factor loading (-0.58), which is below the threshold of 0.707 (Benitez et al., 2020) and was also negatively influencing Cronbach alpha and composite reliability. For this question also applies that after removal internal consistency reliability was met.

Table 4

Overview of measurement items

Construct	Measurement item	Factor loadings
Physical resource allocation (supplier survey)	Compared to our other customers…	
	…we grant this customer priority in the utilization of our production facilities/equipment	0.77
	…we give this customer priority in the allocation of our production capacity	0.93
	…we allocate our scarce materials to this customer in case of capacity bottlenecks	0.84
Innovation resource allocation (supplier survey)	Compared to our other customers…	
	…we are willing to share key technological information with this customer	0.87
	…we share our best ideas with this customer first	0.88
	…we dedicate more innovation resources to the relationship with this customer	0.93
Transactional partnership approach (purchaser and internal survey)	In dealing with this supplier…	
	…I see them as a transactional supplier	Removed
	…I view our intentions as competitive	0.90
	…I consider them as opportunistic actor	0.92
Embedded partnership approach (purchaser and internal survey)	In dealing with this supplier…	
	…I seek to establish cooperative practices	0.88
	…I am sharing information more openly	0.89
	…I seek to maximize joint benefits	0.80
Internal integration (purchaser and internal survey)	My department often interacts with other departments in dealing with this supplier	0.78
	We have good communication with other departments regarding this supplier	0.93
	My department has good collaborations with other departments in dealing with this supplier	0.96
	My department and other departments work as a team regarding this supplier	0.87

Goodwill trust (supplier survey)	We can rely on this customer to help us in ways not required by our agreement with them	0.89
	We can depend on this customer to always treat us fairly	0.78
	This customer takes initiatives for mutual benefits that exceed contractual agreements	0.91
Competence trust (supplier survey)	We feel that this customer is a highly capable partner	0.82
	This customer is very capable of providing value to my firm	0.88
	We can trust that this customer has the managerial and technical capabilities to do what it says it will do	0.85
Supplier commitment (supplier survey)	We are committed to this buyer	0.89
	We expect this relationship to continue for a long time	0.89
	We expect this relationship to strengthen over time	0.84
Supplier dependence (supplier survey)	If <case company> would stop buying from us, we could easily replace their volume with sales from other buyers	0.81
	If the relationship with <case company> was terminated, it would not hurt our operations.	0.94
	We are very dependent on <case company>	Removed

4.3 Data validity and common method bias

Abovementioned are the measurement items and their reliability, but before concluding the research model other tests were conducted to assess the validity of the model, convergent validity, and discriminant validity (Hair et al., 2021). An overview of these values can be found in Table 5. For these tests, IBM SPSS Statistics was also used. For convergent validity, the average variance extracted was examined. The minimum threshold to exceed is 0.50, to explain at least half of the variance (Fornell & Larcker, 1981). All constructs met this requirement as shown in Table 5, indicating convergent validity. Taking the square root of these AVE values, discriminant validity can be examined (Fornell & Larcker, 1981). Provided in Table 6 are these values and all of them are greater than correlations with other constructs, thus the requirements for discriminant validity are met.

Table 5

Average variance extracted (AVE), Composite Reliability (CR) and Cronbach's Alpha.

Construct	Number of items	Mean	SD	AVE	CR	Cronbach's α
1. Supplier resource allocation	6	4.27	1.20	0.76	0.95	0.94
2. Transactional partnership approach	2	3.79	0.98	0.75	0.85	0.85
3. Embedded partnership approach	3	4.48	0.81	0.74	0.89	0.82
4. Internal integration	4	4.61	0.69	0.79	0.94	0.90
5. Goodwill trust	3	4.90	1.18	0.74	0.90	0.82
6. Competence trust	3	5.82	0.84	0.72	0.89	0.80
7. Supplier commitment	3	6.19	0.70	0.76	0.90	0.82
8. Supplier dependence	2	4.38	1.04	0.76	0.87	0.80

Lastly, due to the data being collected from surveys, the presence of common method bias needs to be assessed as this can threaten the results (Podsakoff & Organ, 1986). This is done via the Harman's single-factor test by putting all constructs into a factor analysis. No factor was found to explain more than 50 per cent of the variance, as the highest factor was 40.7 per cent.

Table 6

Mean, standard deviation and correlation matrix.

Construct	1	2	3	4	5	6	7	9
1. Supplier resource allocation	**0.87**							
2. Transactional partnership approach	-0.14	**0.86**						
3. Embedded partnership approach	0.16	-0.02	**0.86**					
4. Internal integration	0.30	0.15	0.31	**0.89**				
5. Goodwill trust	0.49*	-0.10	0.00	0.25	**0.86**			
6. Competence trust	0.34	-0.25	-0.25	0.14	0.75**	**0.85**		
7. Supplier commitment	0.57**	0.02	-0.22	0.17	0.63**	0.51**	**0.87**	

| 8. Supplier dependence | -0.29 | -0.19 | 0.23 | -0.24 | -0.22 | 0.11 | -0.36 | **0.87** |

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

5. Results

After conducting the tests for validity and reliability, we tested the hypothesis by assessing the conceptual model via regression analysis. At this point, it was confirmed that the small sample size in this research would indeed have an impact on the results. Due to this small sample size, none of the hypotheses reached a significance level of 0.05. Because of this, a cut-off value of ± 0.2 for the beta value is considered a substantial effect. Meaning that if a path coefficient is above 0.2 or below -0.2 we provide substantial support for the hypothesis.

First, the effects of the social capital dimensions and their constructs on supplier resource allocation were tested, making no difference in the dependence of the supplier (H1-H4). After testing these hypotheses, a multigroup analysis was conducted (H5-H8). In this multigroup, the group was divided into two groups based on their level of dependence. Hypothesis 1a suggested that an embedded partnership has a positive effect on supplier resource allocation, there is a substantial, but non-significant positive effect found ($\beta = 0.204$, $p = 0.500$). Hypothesis 1b is also substantially supported, as the negative effect of a transactional partnership approach on supplier resource allocation is above the cut-off value ($\beta = -0.299$ $p = 0.184$), however, this result is still insignificant. Hypothesis 2 suggested that internal integration is positively related to supplier resource allocation. The path coefficient is negative, and the result is insignificant ($\beta = -0.027$, $p = 0.936$)., that is why hypothesis 2 is not supported. Hypothesis 3a and 3b suggested that both goodwill and competence trust positively influence supplier resource allocation. Goodwill trust shows a positive path coefficient ($\beta = 0.431$, $p = 0.208$) and is substantially supported. Competence trust shows a negative path coefficient ($\beta = -0.407$, $p = 0.368$), and although it is above the cut-off value to be considered substantially supported, a positive effect was expected. Both hypotheses 3a and 3b are insignificant. Hypothesis 4 suggested that commitment from the supplier is positively related to the allocation of resources. We found a strong positive relation is found ($\beta = 0.696$, $p = 0.078$), and it exceeds the cut-off value. Hypothesis 4 is thus substantially supported, but not-significant.

Figure 2

Path coefficients of the single-group analysis
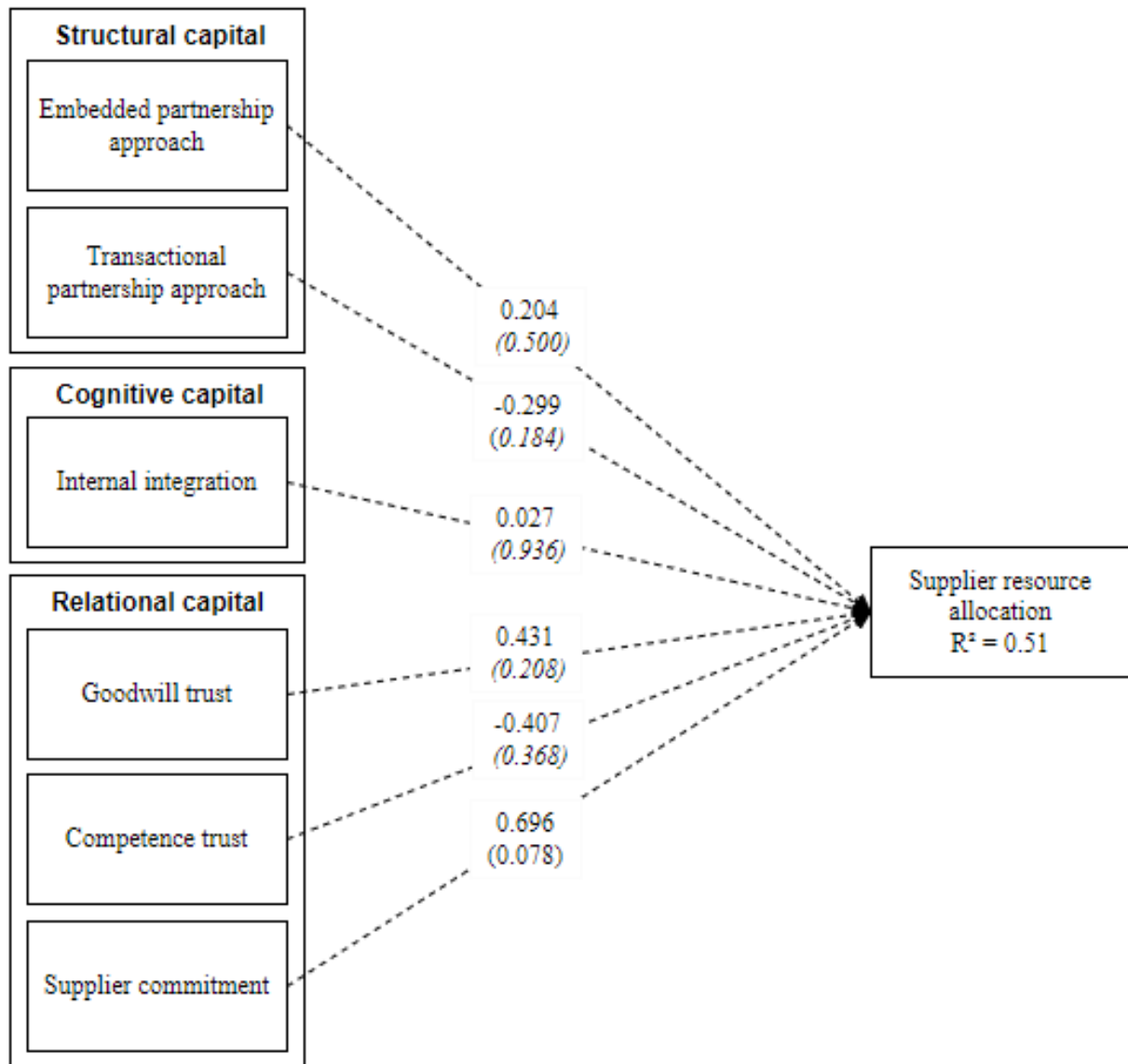
Path coefficients and p-values (in brackets). Dashed paths indicate nonsignificant results.

Table 7

Single group test

Hypothesis	Path coefficient (β)	Significance (*p*)	Support?
H1a – Embedded partnership approach → supplier resource allocation (+)	0.204	0.500	Subst. supported
H1b – Transactional partnership approach → supplier resource allocation (-)	-0.299	0.184	Subst. supported

|			
H2 – Internal integration → supplier resource allocation (+)	0.027	0.936	Not supported
H3a – Goodwill trust → supplier resource allocation (+)	0.431	0.208	Subst. supported
H3b – Competence trust → supplier resource allocation (+)	-0.407	0.368	Not supported
H4 – Commitment → supplier resource allocation (+)	0.696	0.078	Subst. supported

5.1 Multigroup analysis

To test whether the level of dependence of the supplier affects supplier resource allocation, the sample was divided into two groups (H5-H8). This was done by taking the median of the supplier dependence score (Median = 4.0) and making two new datasets, one being the high-dependent supplier group (N = 13 and average supplier dependence = 3.23) and the other being the less dependent supplier group (N = 13, average supplier dependence = 4.31). Out of the original sample of 30 suppliers 4 did not fill in this survey question and were not taken into consideration in the multigroup analysis. After separating the two groups, the hypotheses (H5-H8) were tested. As the aim of the multi-group analysis is to test if there is a substantial difference between the low-dependent and high-dependent group, are the two values of the groups not too close together. A cut-off value of ± 0.3 for the delta was used to distinguish a difference.

Hypothesis 5a suggested that the embedded partnership approach is stronger if there is a low supplier dependence (*low dependent β = -0.410, high dependent, β = 0.325, Δ = 0.725*), meaning that this hypothesis has a substantial, non-significant, and unexpected negative effect not supporting this hypothesis. Hypothesis 5b proposed that the positive effect of a transactional partnership approach is stronger if there is a higher supplier dependence (*low dependent β = 0.067, high dependent, β = -0.234, Δ = 0.301*), meaning that this hypothesis has a substantial, non-significant and unexpected negative effect, not supporting this hypothesis. Hypothesis 6 suggested that the positive effect of internal integration would be stronger if suppliers are more dependent (*low dependent β = -0.629, high dependent, β = 0.088, Δ = 0.717*). This hypothesis is not supported. Even though there is a substantial delta effect, the positive effect of internal integration in a high-dependence group is not above the cut-off value as proposed in the single-group analysis. Hypothesis 7a and 7b suggested that the positive effect of goodwill trust and competence trust would be stronger if the supplier is less dependent on the buying organisation.

Hypothesis 7a can be substantially supported (*low dependent β = 0.766, high dependent, β = 0.224, Δ = 0.542*), but remains non-significant. Hypothesis 7b cannot be supported, nor substantially supported as it does not meet the cut-off value of the delta (*low dependent β = -0.101, high dependent, β = =0.053, Δ = 0.154*). The final hypothesis (H8) suggested that the positive effect of commitment would be bigger if the supplier is dependent on the buyer. This hypothesis is substantially supported, but still non-significant (*low dependent β = -0.674, high dependent, β = 1.099, Δ = 1.773*).

Figure 3

Path coefficients of the multi-group analysis
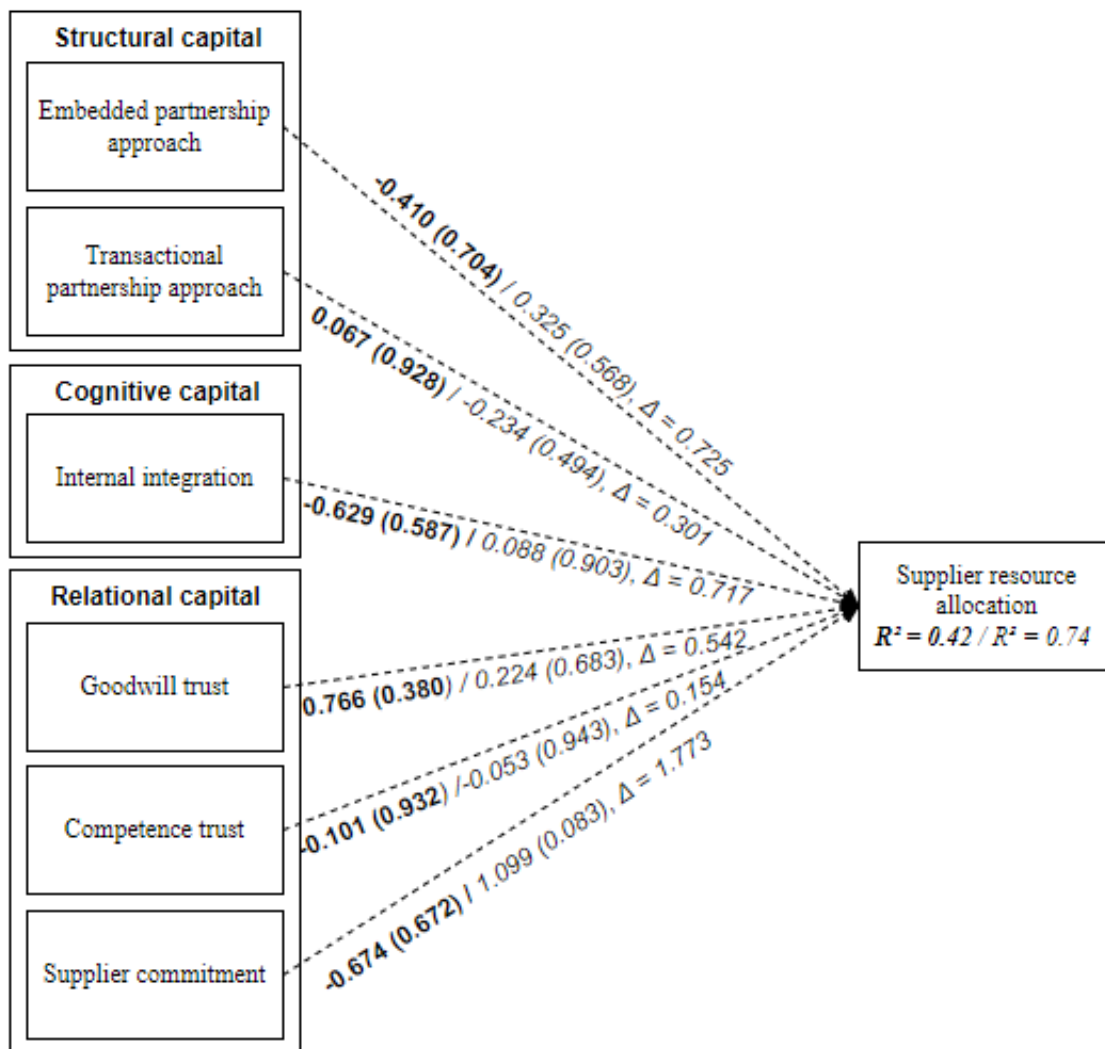
Path coefficients and p-values (in brackets). **Bold = low dependent** / *Italic = high dependent*
Delta (*Δ)* indicate the difference between the groups
Dashed paths indicate nonsignificant results.

Table 8

Multigroup analysis

Hypothesis	Delta (Δ)	Significance (*p*)	Support?
H5a – Embedded partnership approach → supplier resource allocation (low dependence)	0.725	0.494	Subst. supported
H5b – Transactional partnership approach → supplier resource allocation (high dependence)	0.301	0.704	Subst. supported
H6 – Internal integration → supplier resource allocation (high dependence)	0.717	0.903	Subst. supported
H7a – Goodwill trust → supplier resource allocation (low dependence)	0.542	0.380	Subst. supported
H7b – Competence trust → supplier resource allocation (low dependence)	0.154	0.932	Not supported
H8 – Commitment → supplier resource allocation (high dependence)	1.773	0.083	Subst. supported

6.   Discussion

Firms have started to recognize the cruciality of obtaining resources to continue their core business. As the function of the purchasing department is no longer only purchasing goods and services, it is becoming increasingly strategic (Carr & Smeltzer, 1999; Foerstl et al., 2016; Narasimhan & Das, 2001). This also means that more people are part of the overall process. However, in practice, organisations are seen as single entities not considering the subsystems it contains, and thus neglecting different perceptions one might have (Hald, 2012).

The aim of this study is twofold. We used social capital theory and its dimensions to dive into buyer-supplier relationships and look at which internal dynamics play a role in influencing supplier resource allocation and what their effects are when there is a high or low supplier dependence. This study used multiple constructs that were placed under the dimensions of social capital theory, measuring them explicitly. Even though all results were insignificant, it was shown that the presence of structural capital, via an embedded partnership approach positively influences supplier resource allocation, whereas a transactional partnership approach has a negative effect. An embedded partnership has a positive effect when the supplier is dependent on the buyer, but this effect becomes negative when the buyer maintains a transactional partnership approach. The presence of cognitive capital via the level of internal integration also positively influences, even though it is at a bare minimum. This effect is rather

negative when the supplier is not dependent on the buyer. Relational capital has a positive effect on supplier resource allocation for goodwill trust and supplier commitment, competence trust negatively influences supplier resource allocation. For competence trust, it does not matter whether the supplier is dependent on the buyer or not, all effects are negative. Goodwill trust is even more positive when the supplier is not dependent, whereas commitment is significantly more positive when the supplier is highly dependent. These findings contribute to the current literature that includes social capital as a framework to research its effect on supplier resource allocation.

6.1   Theoretical contributions

First, in terms of structural capital, this study hypothesized that adopting an embedded partnership approach would have a positive effect on supplier resource allocation, while a transactional approach would be more negative. In the research of Brattström and Faems (2018), they explored the effects of the partnership approach and found that both stimulate supplier resource allocation, but this does not apply in this study as it was found that a transactional approach has a substantial negative effect. The findings of Brattström and Faems (2018) also do not entirely apply in the situation when the supplier is not dependent on the buyer. In such cases, the results are reversed. Suppliers are more willing to establish a deep relationship by allocation more resources when they are not dependent. Being dependent makes you more alert to the dangers the relationship may bring, such as becoming too dependent or even being acquired by the buying firm. This study also explored the impact of a transactional approach. While it was expected that a dominant buyer would exploit the relationship (Pulles et al., 2014), the findings in this study showed a different outcome. A transactional approach is found to be more effective in low-dependency situations. This might be explained by Ghoshal and Moran (1996) and Poppo and Zenger (2002) who found that transactional partnerships indicate a lack of trust and opportunistic behavior. Brattström and Faems (2018) have also indicated that only formal aspects are not enough to have a viable relationship. Even though a positive relationship was found, between a transactional approach and supplier resource allocation in a low-dependence setting, it is so low that it cannot be effectively used. However, this provides a reason for future research.

Second, regarding cognitive capital, the construct internal integration was used. However, this construct has shown to be insufficient as a comprehensive measurement of cognitive capital, as it solely focused on the internal aspect. Cognitive capital is about culture and shared norms. Nonetheless, this research still examined the effect of internal integration on

supplier resource allocation. Looking at the study of Horn et al., (2014), who used social capital theory to investigate the effects of internal integration on external integration, they found an indirect positive effect, creating space for exchanging resources. In this study, a minimal positive coefficient was found for internal integration on supplier resource allocation. But in the case that the supplier is not dependent on the buyer, internal integration has a substantial negative effect. This outcome might be explained by Brattström and Faems (2018), who found that suppliers no longer allocated resources to the buying organisation when lacking internal integration. Another explanation might be that the organisation's internal integration, such as emails, meetings and planning, might be too time-consuming coming at the cost of focusing on the supplier.

Third, we contribute to the relational capital literature by researching the effect of trust and commitment on supplier resource allocation. As expected, since there is plenty of research in this field (Ellegaard, 2006; Pulles et al., 2014), trust should have a positive impact on supplier resource allocation and enhances supplier performance (Krause, 1997). That is also what we hypothesized, but this also comes with the challenging task to add new insights to the academic literature. Trust is seen as an effective way to enhance relationships, particularly when the buyer does not have high purchasing volumes and must obtain resources through alternative means, trust in this case. Goodwill trust has a substantial positive effect, but it was expected that this would be even more positive when the supplier is dependent on the buying organisation. This was the other way around, as the coefficients were significantly higher in a low-dependence group than in a high-dependent group. A remarkable finding is the unexpected negative relationship between competence trust and supplier resource allocation, in contrast to earlier research (Pulles et al., 2014; Terpend & Ashenbaum, 2012). As Terpend and Ashenbaum (2012) focused on trust in general, this single dimension of trust might have a different influence. Other explanations for this finding might be that this construct might not be measured accordingly, or a potential third variable might be influencing this relationship. These explanations are more likely, as trust is an often-used measurement item. As this is a single case that found a negative effect, no real conclusions can be drawn from this finding and additional research should be conducted to exclude if this was a one-time finding. Regarding the aspect of commitment in the context of relational capital, no unusual results were found. Geyskens et al., (1996) proposed that the level of commitment might not always be a voluntary one, but a must. This is also reflected in this research if you look at the non-dependent side, here is the level of commitment negative.

6.2   Practical contributions

The practical contributions are insights into what organisations could do to improve their resource allocation of suppliers and gain a competitive advantage. Even though the results found in this research are insignificant, we talk about substantial effects, providing insights into the relation of variables and their effects on supplier resource allocation. To obtain supplier resources, it is found that managers should focus on the relational aspects of a relationship. Successful relationships are not only built on formal aspects (Brattström & Faems, 2018). It was shown in the results that an embedded partnership approach is more successful than a transactional approach. The focus should also be on receiving trust from the supplier. It seems simple to have but is quite the hurdle (Sherman & Sookdeo, 1992). Establishing these strong relationships also leads to faster supplier commitment, which was also found to have a positive effect on supplier resources. Receiving competence trust was found to negatively influence the allocation of supplier resources, but it is not advisable to already make practical contributions about this construct, as it needs to be researched more. The boundary spanner plays an important role in this strategy. This research has also shown that boundary spanners should realize that organisations are not single entities, but organisations with different functions and departments, thus different people with different goals, opinions, expectations, and perspectives. It is important to recognize this and focus on the relational aspects of a buyer-supplier relationship. Given the case company's limited number of suppliers and purchasing volume, the practical recommendation is to concentrate on the relational aspects with a select group of suppliers. This approach can lead to more effective supplier resource allocation.

6.3   Limitations and further research

This research, like any other study, has several limitations to be taken into consideration when interpreting the conclusions. First, the application of the social capital theory was not entirely accurate. Instead of measuring the whole dimension of social capital, it was measured by a construct that represented that dimension, the partnership approach in the case of structural capital. Especially in the cognitive dimension, this was not measured accordingly, as internal integration was only measured from an internal view. Future research towards this topic should use the theory more accordingly.

The analysis also had its imperfections. First of all, SPSS was used to do the regression. The analysis would be better if it was done via SmartPLS as it is recommended, something that was found out afterwards. Looking at the multi-group analysis, it also had limitations. The sample size for distinguishing between high and low dependence was too limited, with only 30

supplier surveys included. Furthermore, the analysis itself was not executed appropriately, besides needing a higher sample, invariance should also be calculated.

Looking at the limitations that were not directly in hand, the case company used is relatively small meaning that it did not have a large supplier base to select suppliers from. Only 41 suppliers were appointed to participate. This approach led to suppliers participating who were barely known within the case company, making it more difficult to point the right internal people to the right customer. This was an overall problem in this study as the case company did not have people in a purchasing function. The limitation of this is that there were only a selective number of people chosen to participate in this research and it could be that, because they do not hold the right position, they might have not been able to give a good opinion in the purchaser or the internal other survey, respectively. Because of this, the sample size is only 85 surveys, which is too low.

The last limitation that must be considered is the accuracy of the answers. As this research is fully in English and the companies participating are Dutch, there might be a language barrier causing them to not completely understand some questions. Besides, there might have been socially desirable answers as the participants had to reflect on their organisation and might not give their honest opinion.

Further research should include a larger sample size to get more grounded results and to make a good distinction in a multigroup analysis, in an organisation in which the functions are clearly defined. For further research, other constructs related to social capital theory could be used. Especially the way how buyer-supplier relationships are approached and their effect on supplier performance has not been researched properly.

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