

Tobias Bohnenkamp

# Global Sourcing or Deep Localization: A Social Capital Perspective





**GLOBAL SOURCING OR DEEP LOCALIZATION:  
A SOCIAL CAPITAL PERSPECTIVE**

*Tobias Bohnenkamp*



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# **CHAPTER 1: THESIS BACKGROUND AND RESEARCH STRUCTURE**

Buying firms increasingly rely on their suppliers to create output. Consequently, relationships between buying and supplying firms steadily rise in importance. This might be in particular the case for firms operating and producing in low-cost countries, such as China, where, due to the culture-bound strong focus on social relations, relationships tend to develop even beyond the regular business connection. In China, manufacturing firms more and more intensively follow a deep localization strategy, moving away from global sourcing towards an active establishment of purely local supply chains, requiring strong cooperation with suppliers.

This dissertation examines the concept of deep localization through the lens of social capital as underlying basis of all buyer-supplier relations, the role that social capital plays as well as the effects and performance implications it entails. Chapter 1 introduces the theoretical background, outlines the research questions and presents the subsequent five chapters (Chapters 2, 3, 4, 5, 6).

## 1.1 Motivation and main research question

Considering the increased importance that ties between different organizations have gained over the last decades in terms of contributing to the creation of value, buyer-supplier relationships have been found more and more as a source of a sustainable competitive advantage (Krause et al., 2007). They can be considered especially critical when focusing on global sourcing, the sourcing of goods from suppliers on an international scale (Schiele et al., 2011a), and the rise of firm dependence on value creation executed by suppliers (Quesada et al., 2006). Forming and maintaining these relationships however is often seen challenging and considered rather complex (Johnston et al., 2004, Narasimhan and Nair, 2005). Yet, since companies increasingly outsource activities to their suppliers and thus grant them more responsibilities (Schiele et al., 2015) while their supply bases consolidate and include smaller numbers of key suppliers (Eggert and Ulaga, 2010), being able to successfully manage relationships becomes a necessary requirement. This becomes especially crucial for firms producing in low-cost countries, such as China, where more and more firms enforced through local content requirements or as part of their regional strategy (Lockstroem et al., 2010), abandon the global sourcing focus and increasingly follow domestic sourcing approaches. Some firms even go as far as establishing whole supply chains locally, starting from material extraction up to component assembly, a practice to which this dissertation refers to as deep localization. Figure 1 tries to illustrate this.

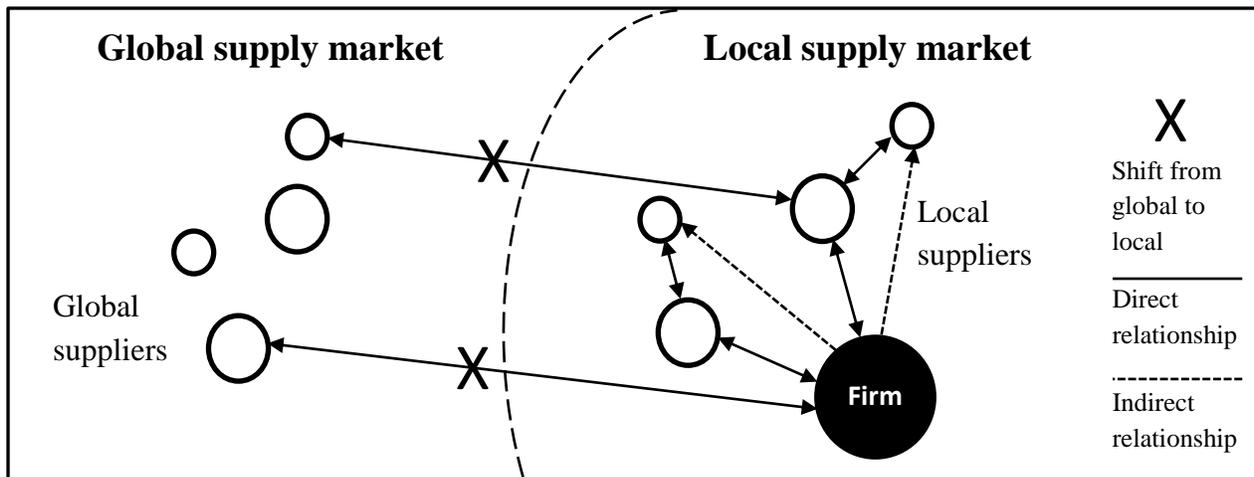


Figure 1: Explaining Deep Localization

Since firms at the end of supply chains, however, can barely dictate their suppliers which sub-suppliers to select, the kind of relationship buying firms have with their suppliers may well be the tip on the scales whether deep localization can be completed successfully or not.

From the theoretical perspective, social capital theory has been considered for studying relationships between individuals and organizations (Ahuja, 2000b, Tsai and Ghoshal, 1998b). With social capital being present in an inter-organizational relationship between buyer and supplier, the exchange of resources can be facilitated (Hughes and Perrons, 2011b) and performance increased (Lawson et al., 2008, Whipple et al., 2015). Literature further suggests that social capital allows both buyers and suppliers to access and leverage resources tied within the relationship (Villena et al., 2011). Accordingly, the presence of social capital reduces the risk of conflicts and contrarily promotes cooperative behavior due to the shared visions and trusting relations it emphasizes. Due to its diversity and undeniable importance for all relationships, social capital has found wide applications, from sourcing theory, in particular while focusing on global sourcing (Horn et al., 2014), up to research on opportunism (Villena et al., 2011) amongst buying and supplying firms. Given this broad array of application possibilities that social capital entails, the concept has already achieved a high extent of theoretical sufficiency. On the other hand however, literature is still seeking input factors, attributes that cause social capital in a buyer-supplier relationship to form, as well as output factors, effects that accumulated social capital can have on other variables. As a consequence, the following primary research question is formulated:

***How can social capital contribute to successfully managing buyer-supplier relationships and which are its requirements of and implications for organizations following a deep localization approach?***

This dissertation focuses in particular on how social capital in the buyer supplier relationship develops out of its presence in intra-organizational relations and continues to explore its meaning for the behavior and contribution of suppliers pursuing joint organization goals. Next to this, we show how social capital finds application in practice by linking it to sourcing theory.

## **1.2 Theoretical background**

In order to explore deep localization as well as the role that social capital and buyer-supplier relationships play, this dissertation builds on two research streams, (1) global sourcing theory as well as, predominantly, on (2) social capital theory and explores different applications of social capital throughout the buyer-supplier relationship context, in particular in a sourcing setting from the perspective of deep localization. Whereas the significance of global sourcing gained increased recognition throughout the last decades, its definition was long suffering from inconsistency. The most popular definitions have been made by Arnold (1989, p.26), referring to global sourcing as making use of “purchasing potential on a worldwide level” or Quintens et al. (2006) who understand global sourcing as an activity with the purpose of obtaining resources on a worldwide scale in order to further develop the competitive position of a company. Based on the premise that location-specific advantages can be exploited (Kotabe & Murray, 2004; Arnold, 1997), global sourcing has been related to create several benefits: As such, not only cost reasons have been named of facilitating the rise of global sourcing (Nassimbeni, 2006), also the sought for higher quality products (Monczka et al., 2009), resources (Volberda et al., 2010), innovations (Steinle & Schiele, 2008) or supply base extensions (Handfield, 2004), just to name a few, have been mentioned as advantages of sourcing globally. Literature has also directly linked global sourcing to social capital theory, with social capital, through positively impacting internal and external integration, or in other words intra, - and inter-organizational relationships, facilitating global sourcing success (Horn, Schiele & Scheffler, 2014). Having its origin in sociology, social capital is commonly defined as “goodwill available to individuals or groups” (Adler and Kwon, 2002, p. 23). As such, it connects a variety of actors through establishing social relations, or social ties (Coleman, 1988, Portes, 1998) among them, from which the actors then can draw and benefit. Consequently, social capital takes over the function of a, though intangible, resource that only members of the relationship can access and exploit to their advantage, whereas all other parties external to the relation are left out (Nahapiet & Ghoshal, 1998). Therefore, social capital also accounts for the contextual factors in which the resource exchange takes place (Kankanhalli et al.,

2005b). Conceptually, social capital differs from physical capital in that it is contained in the relations between actors which explains its value and potential for generating competitive advantages, as relations are difficult to imitate. Further, while its character is of public good which any party might utilize, its dependence on close social ties implies that its use is potentially exclusionary (Edelman et al., 2004). Given an increased focus on social capital theory in academia during the last years (Tsai and Ghoshal, 1998b, Krause et al., 2007, Lawson et al., 2008), research has considered its appearance and function in the interplay of individuals and organizations (Tsai and Ghoshal, 1998b, Ahuja, 2000a). Also, in the context of supply chain management it has been applied (e.g. Krause et al., 2007, Lawson et al., 2008, Horn et al., 2014, Hartmann and Herb, 2014, Koka and Prescott, 2002). Although recent studies pay attention to the link between social capital and performance (Gelderman et al., 2016) or supplier satisfaction (Schiele et al., 2015) the exact role it assumes in the value creation of firms still remains rather unclear (Hughes and Perrons, 2011a), and will further be considered in this dissertation. As such, through bringing together global sourcing and social capital theory we more closely examine buyer-supplier relationships in common sourcing projects and which factors need to be considered that play a crucial role in defining the successful completion of these projects.

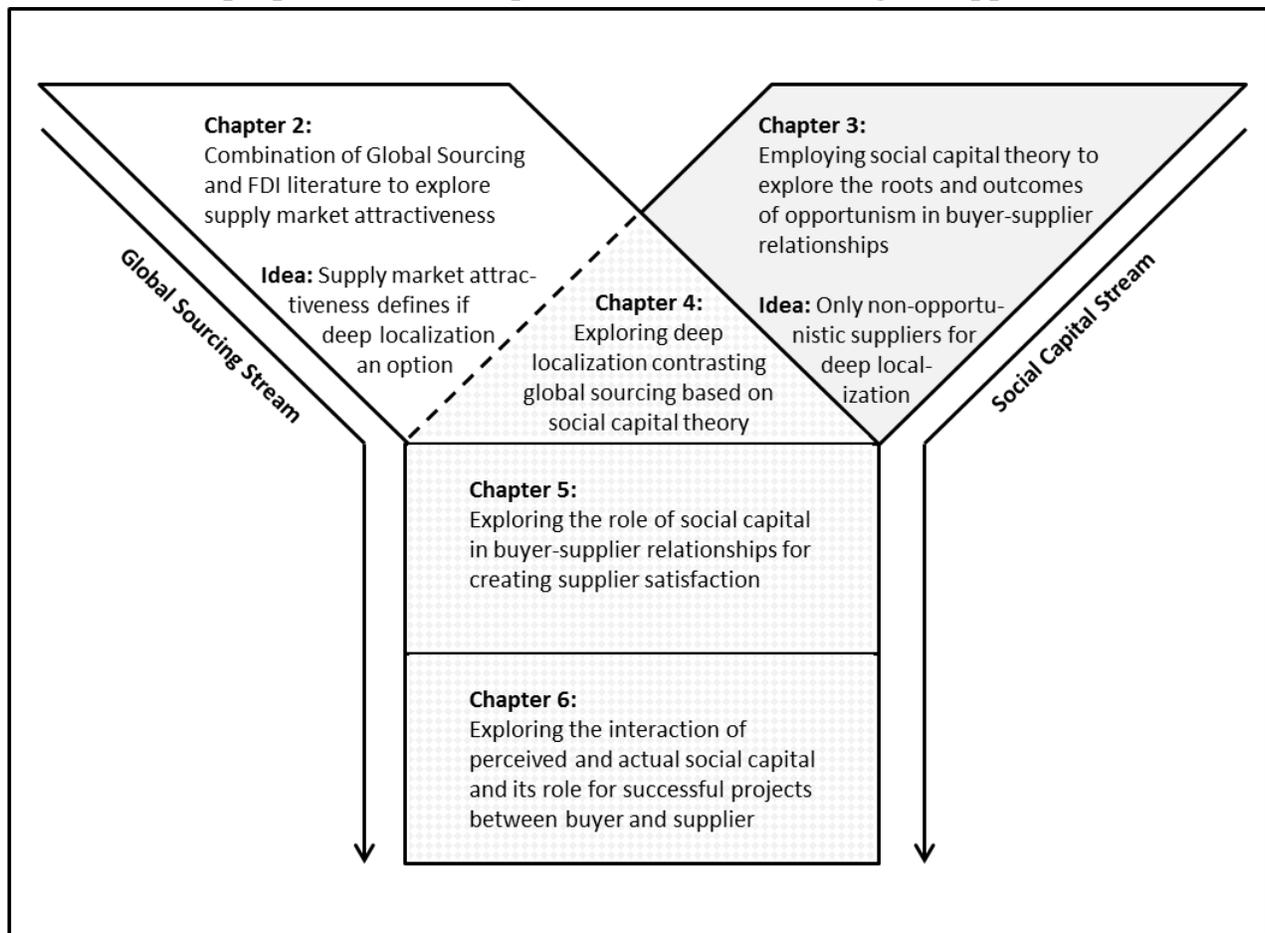
### **1.3 Research focus and methodology**

In order to explore deep localization and the role of buyer-supplier relationships, this dissertation, as introduced before, brings together two research streams, with the first one focusing on global sourcing and the second one putting emphasis on social capital theory (see figure 2).

While Chapter 2 combines global sourcing literature with theory on foreign direct invest, or FDI, in order to examine the attractiveness of local supply markets, chapter 3 follows the social capital stream through exploring the role of accumulated social capital in buyer-supplier relationships, and its effect in preventing opportunism and creating innovation and strategic benefits. The premise here is that those suppliers acting non-opportunistically are then suitable to conduct deep localization activities with. As such, both chapters lay the groundwork for

chapter 4, which combines both global sourcing and social capital literature through outlining the concept of deep localization contrasting global sourcing, and the significance of social capital in completing deep localization activities successfully. Literature has also pointed towards the importance of supplier satisfaction as substantial basis for creating output between buyer and supplier. Chapter 5 therefore looks more closely into the relationship between social capital and supplier satisfaction and derives possible performance implication applicable also for deep localization. Finally, Chapter 6 examines social capital itself, how the perception of internal social capital can lead to developing external social capital and how this might affect success in joint buyer-supplier projects.

The following sub-sections introduce motivation and background of each chapter and outline the proposed research questions and methodological approaches.



**Figure 2: Dissertation outline**

### **1.3.1 Chapter 2: Supply market attractiveness: Employing FDI insights to expand the global sourcing criteria set**

Given an increased focus on globalization and the worldwide procurement of goods, firms are generally understood of having to operate past local borders, being forced to compete for domestic as well as foreign suppliers (Sinha et al., 2011), adopting a global sourcing strategy due to changes in the structure of competition (Trent and Monczka, 2005). While, the picture of global sourcing is already well established in academia, the interim phase between the decision to source globally and the actual execution of the sourcing activity, the selection of possible target regions and countries, has been considered by only few studies (Maltz et al., 2011). Evidently, in order to conduct purpose – and successful sourcing activities, finding and choosing attractive supply markets is a major concern for firms, especially since they are hardly able to search every single market for suppliers. In line with this, Yenyurt et al. (2007) define market attractiveness as market relating factors motivating firms to operate in a specific country. The research at hand considers market attractiveness as market specific factors which trigger sourcing activities in a certain country.

A literature stream, in which the attractiveness of a market is of similar importance, focuses on foreign direct investment, or FDI (Gripsrud and Benito, 2005). FDI allows firms to access scarce resources such as labor and knowledge in order to strengthen their strategic position and enables them to generate rents through exploiting firm specific capabilities by investing in a foreign market Chen and Chen (1998), (Rugman, 1986). Arguably, following the implications of FDI can also serve well for predicting market attractiveness. As such, through bringing both streams of literature together, the research aims to answer the first research question (RQ1):

*Which factors characterize an attractive supply market? What can global sourcing theory learn from FDI in terms of choosing attractive supply markets? How can the global sourcing criteria set be expanded?*

In order to investigate the research question, an extensive literature review was conducted initially. The purpose of this was to outline the motivations for both

global sourcing and FDI and thus determine characteristic that define a market as attractive for purchasers. Subsequently, theory was brought together with practice: A series of discussions with practitioners, here purchasers originating from a big multinational company, was conducted in order to determine whether characteristics of market attractiveness suggested in literature, actually play a role for practice.

### **1.3.2. Chapter 3: Does supplier opportunism lead to buyer opportunism? A social capital perspective**

Once buying firms have prioritized markets according to their attractiveness, started their sourcing activities and left their first footprint in this market, building relationships with suppliers becomes an important goal to ensure that their long-term perspectives are pursued. When considering business relationships, however, positives as well as negatives have to be taken into account: According to Williamson (1985), opportunism, further defined as “self-interest seeking with guile is regarded inherent to many business relationships. Consequently, understanding and managing opportunism has increasingly gained in importance, following the trend of outsourcing business activities and moving from an integrated manufacturing unit towards a network of specialized actors. While however suppliers may make hollow promises in order to get the business, buyers might oblige to the same conditions. As found by Hawkins, Pohlen and Prybutok (2013), environmental surroundings as well as individual characteristics can impact whether buying firms act opportunistically or not. Also, the buyers’ perception of the supplier behavior might influence opportunistic actions (Liu et al., 2010).

What are the antecedents of opportunism? Identifying them would support in detecting and potentially avoiding critical relationships. As suggested by Hartmann and Herb (2014), social capital, being the underlying meaning of every relationship, could provide answers. This research therefore employs social capital theory as lens. Further, next to considering antecedents to opportunism, also possible consequences should not be neglected. While negative effects of opportunism on transaction costs (Dahlstrom and Nygaard, 1999) or financial performance (Gassenheimer et al., 1996, Nunlee, 2005) have been described, the implications for

firm performance including innovation or strategic benefits appears to be understudied. Hence, the second research question (RQ2) comprises the following:

*Does the perception of supplier opportunism explain the observation of subsequent buyer opportunism (or vice-versa)? Are there common antecedents to buyer and supplier opportunism? Do buyer and supplier opportunism affect the firms performance in terms of innovation and strategic advantage generation?*

In order to provide answers, we surveyed a cross-industry sample of 1000 buying firms. Participants had to assess an excellent performing supplier and a disappointing supplier. With this setting we paid attention to the suggestion of Ulaga and Eggert (2006) to distinguish between two fundamental dimensions. Eventually, the questionnaires from 84 respondents represented data for 168 buyer-supplier relations. The data was then analyzed using Smart PLS as well as OLS for confirmatory purposes.

### **1.3.3 Chapter 4: Replacing global sourcing with deep localization: The role of social capital in building local supply chains**

While global sourcing, generally understood as sourcing goods from suppliers on an international scale (Schiele et al., 2011a), gained increased importance throughout the last decades (Quintens et al., 2006), domestic or local sourcing is often considered the lowest and least sophisticated level of sourcing strategies (Trent and Monczka, 2003b). In low-wage countries, such as China, however, more and more foreign, though locally established, firms increase their efforts to integrate domestic suppliers into their sourcing activities: Reasons range from local content requirements, over following a regional strategy, up to preventing common risks associated with global sourcing (Lockstroem et al., 2010) (Trent and Monczka, 2005, Tsai et al., 2008). Some firms even go as far as establishing the whole supply chain locally, from material extraction up to the assembly of the final item. In other words, these firms do not only put emphasis on having a local first-tier supplier portfolio, they actively get involved in replacing foreign sub-tier suppliers with

local alternatives, a practice that we define as deep localization. Literature unfortunately has not or only to a small extent (Eberhard et al., 2004) touched upon this topic, hence not much is known about how deep localization is conducted. Further the concept of deep localization only functions if suppliers are found that satisfy the standards set by firms. This is in particular critical in industries characterized by a strong network structure and reliance on capable suppliers (Wagner et al., 2009). Since a lacking skill-set among low-cost country suppliers still seems to be rather common than exceptional, the employment of collaborative capabilities becomes a key factor in dealing and building relationships with suppliers (Lockstroem et al., 2013). From the theoretical perspective, social capital theory has been considered for studying relationships between individuals and organizations (Ahuja, 2000; Tsai and Ghoshal, 1998), and thus might also play an important role in deep localization. The following research question is formulated (RQ3):

*How is deep localization conducted, how can global sourcing be replaced with domestic sourcing? How does the presence (or absence) of social capital explain success of deep localization activities?*

In order to investigate this research question, we applied a multiple case study, comparing a successful and a non-successful deep localization project as conducted at an automotive corporation in China. Key informants included employees working in Purchasing, R&D or Quality Assurance of our focal company as well as key accountants and operations managers from 1<sup>st</sup>-tier and 2<sup>nd</sup>-tier suppliers involved in the two deep localization projects. In total, 32 interviews were conducted. The interview data was enriched using secondary data provided by our focal company including process charts and reports.

### **1.3.4 Chapter 5: The relational primacy: Examining social capital and supplier satisfaction**

Reflecting upon the increased recognition that inter-organization ties have gained over the last decades in terms of contributing to the creation of value, buyer-

supplier relationships and thus the accumulation of social capital have been considered more and more as a source of a sustainable competitive advantage (Krause et al., 2007). Consequently, being able to successfully deal with their supplier relations becomes highly significant for buying firms, also given the fact that suppliers have constraints on resources they can devote to their customers (Hüttinger et al., 2014). In order to prevent that those resources end up being used by competitors, maintaining supplier satisfaction can be considered a solution (Schiele et al., 2011b, Schiele et al., 2012, Ellis et al., 2012b). While literature has proposed a link between the presence of social capital and supplier satisfaction, research has not yet empirically tested a possible relationship. This is unfortunate, given the significance of social capital for buyer supplier relationships, facilitating the exchange of resources (Hughes and Perrons, 2011b) or increasing firm performance (Lawson et al., 2008, Whipple et al., 2015). As such, the following research question (RQ4) is formulated:

*How does social capital influence supplier satisfaction?*

To empirically examine this research question, a questionnaire was sent to a sample of 1386 suppliers located in China. Participants had the option to fill in the questionnaire in English or Chinese ensuring its understandability and likely increasing the number of responses. Eventually 140 complete questionnaires were received. The data analysis was conducted using Smart PLS.

### **1.3.5 Chapter 6: Mirror, mirror on the wall: How internal inconsistency within buying firms prevents supplier cooperation**

As already indicated in the introduction as well as in the chapter above, the value of inter-organizational relationships has gained increased recognition over the last decades, being considered a fruitful source for achieving sustainable competitive advantages (Krause et al., 2007). Since a fundamental change in supply chain organization has resulted in increasing responsibilities for suppliers (Schiele et al., 2015), being able to bind parties together becomes especially crucial. As has been outlined before, from the theoretical perspective, social capital theory has been

considered for studying relationships between individuals and organizations (Ahuja, 2000b, Tsai and Ghoshal, 1998b). Building external relationships between buyer and supplier, however, only works if smooth running internal cross-functional relationships are in place (Zhao et al., 2011). Interestingly, research on how suppliers perceive internal social capital within the buying organization and, in turn, how this perception influences the emergence and development of external social capital within the relationship between buyer and supplier are, a priori, neglected in literature. This is unfortunate as this understanding could improve future cooperation between buyer and supplier. A context, where this configuration based on social capital can be considered very important, is China, given its strong focus on social relations (Li et al., 2014). Building social capital or, with regard to the Chinese context, Guanxi, as a form of social capital (Yang, 1994, Nie et al., 2011), can therefore be understood a means to succeed in the Chinese market. Given the vast amount of firms and potential competitors, doing business in China might not be easy: Here, becoming preferred customer of Chinese suppliers might be solution and social capital in the relationship between buyer and supplier a means to achieve this (Blonska, 2010). Hence, the following research question (RQ5) is depicted:

*To what extent does the presence of internal social capital a supplier perceives from its customer firm influence building external social capital with this customer? How does the presence (or absence) of social capital influence the achievement of the preferred customer status and does this in turn affect the outcome of projects with suppliers?*

Similar as described before, in order to empirically examine this research question, a questionnaire was send to a sample of 1386 suppliers located in China. Participants had the option to fill in the questionnaire in English or Chinese ensuring its understandability and likely increasing the number of responses. Eventually 140 complete questionnaires were received. The data analysis was then conducted using Smart PLS.

## **1.4 Research outline and contributions**

As introduced before, the dissertation consists of five separate articles that add to the understanding of how firms select markets according to their attractiveness and subsequently build relationships with suppliers based on social capital. In sum, we not only contribute to literature on global sourcing but also dive deeper into the relationship specifics between buyer and suppliers through examining the development of social capital as well as its consequences on project performance. Figure 3 outlines the structure of the dissertation. In the following, the contributions per chapter are introduced.

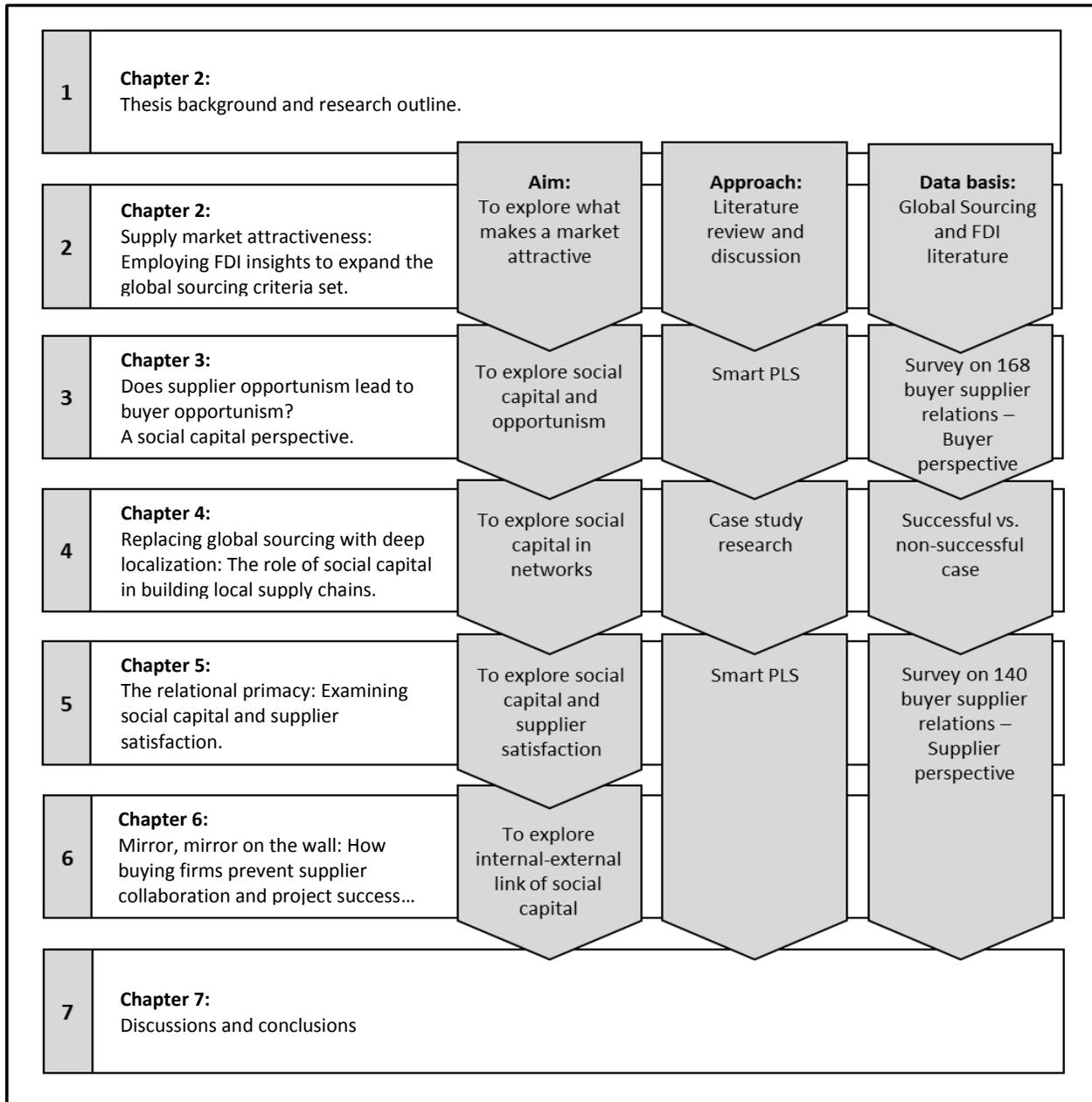
Chapter 2 gives insights into factors that firms, respectively their purchasers consider, when deciding about which market to source from, factors that characterize the supply market as attractive. As such, through additionally employing literature on FDI, this part of the dissertation extends the global sourcing criteria set, contributing the stream of sourcing literature (Schiele et al., 2011a). Next to this, through utilizing knowledge of practitioners, the identified global sourcing criteria set characterizing supply market attractiveness are further grouped into separate dimensions or potentials, that allow analyzing and ranking supply markets based on criteria a firm deems most important. As such, we provide firms in the process of making their sourcing decision with a guideline to select an appropriate market.

Chapter 3 moves on to the phase where a supply market has been chosen and suppliers selected. Here, it further puts emphasis on buyer-supplier relationships and particularly looks at social capital as the underlying basis of it. As such, this part of the dissertation examines how social capital can support in preventing opportunism (Anderson, 1988, Wathne and Heide, 2000, Williamson, 1979) in buyer-supplier relationships. Our study contributes through analyzing buyer and supplier opportunism, and hence the role that social capital employs in counteracting both, simultaneously. Further, the study provides unique insights for opportunism research by looking into the interacting relationship between opportunism on buyer and supplier side, whether buyers perceive that their supplier is acting opportunistically and whether they respond with equally opportunistic counter measures. Additionally, this dissertation section contributes through

underlining the performance outcomes of opportunism from buyer and supplier, its effect on innovation and the achievement of strategic benefits.

Chapter 4 sheds light on the role that the accumulation of social capital (Villena et al., 2011) can play in common projects between buyer and supplier. Through using the understudied concept of deep localization as the basis, this section outlines how social capital in the relationship between two firms can contribute to the successful outcome of common projects. Here the unique situation of deep localization is further utilized to examine the function that social capital can take in network or triadic relationships. Furthermore, our study contributes to the existing stream of sourcing literature, in particular literature on global sourcing (Horn et al., 2013), by introducing deep localization as a reverse approach to global sourcing, focusing purely on the domestic or local component of sourcing. Here, the study introduces a step-by-step approach to deep localization and provides firms with a guideline on how to gradually increase their local content rate.

Chapter 5 pays attention to the outcomes of social capital being present in a buyer-supplier relationship. In particular, this dissertation section examines the role that social capital plays in creating satisfaction among suppliers (Schiele et al., 2015). Given the increased reliance on capable suppliers on one side as well as limited resource capacity of suppliers on the other side (Huettinger et al., 2014), having satisfied suppliers can be considered a first step towards the insurance of supply. As such, through employing social capital as antecedent to supplier satisfaction, firms might find another means, grounded on theory, to build relationships with their suppliers going beyond the common business context, to eventually access external resources that are not available to competitors. Considering supplier satisfaction from a Chinese point of view might further provide new insights. Finally, chapter 6 studies the interacting effect of internal and external social capital, how suppliers perceive internal social capital from their customer and in turn how this affects the development of external social capital between buyer and supplier. Prior research has roughly considered a similar approach while however focusing on the internal-external integration link and omitting the supplier perspective (Horn et al., 2014).



**Figure 3: Structure of dissertation**

As such, the study contributes by looking into antecedents to the development of social capital in buyer-supplier relationships. Further this part of the dissertation digs into the outcomes of present (respectively absent) social capital, similarly to chapter 5, by considering its effect on becoming preferred customer (Blonska, 2010) of local Chinese suppliers and in turn on successfully completing projects with

them. Consequently, chapter 6 also adds to the understanding of how the preferred customer status can function in China and further provides firms operating in China with a means on how to succeed commonly.

## **CHAPTER 2: SUPPLY MARKET ATTRACTIVENESS – EMPLOYING FDI INSIGHTS IN ORDER TO EXPAND THE GLOBAL SOURCING CRITERIA SET**

Given an increased focus on globalization and the worldwide procurement of goods, firms have to make decisions about which target region to source from. Since regional characteristics can have an impact on short as well as long term success of sourcing performances, purchasers are required to consider carefully whether regions have advantages over others. In this chapter, we address regional characteristics that guide sourcing decisions, factors that influence the perception of supply market attractiveness among purchasers. Based on the theories of global sourcing and foreign direct investment, we provide an overview of attributes that are relevant according to literature. In particular, our contribution is to extend the criteria set of global sourcing by employing insights of foreign direct investment (FDI) literature. Further, through building on interviews and discussions with practitioners, we show what purchasers actually consider an attractive market. We conclude by providing a framework for the selection of a supply market and show how knowledge of FDI can support global sourcing decision making.

## **2.1. Introduction: Premises of global sourcing and FDI as predictors of market attractiveness among purchasers**

Having to operate past local borders, firms are now forced to compete for domestic as well as foreign suppliers in order to meet price and quality expectations of their customers (Sinha et al., 2011). In the worldwide search for suppliers with a variety of capabilities, purchasing then often takes the lead approach (Holcomb and Hitt, 2007). From this perspective, globalization accordingly entails a need to manage resources proactively on a global basis when looking and moving past local borders (Yeniyurt et al., 2013, Kotabe and Mudambi, 2009), which has not only been acknowledged in business practices but has also received extensive recognition in business research and academia (Trent and Monczka, 2003b, Trent and Monczka, 2003a, Quintens et al., 2006). Due to changes in the structure of competition, many MNCs have been forced to adopt a global sourcing strategy (Trent and Monczka, 2005). Hence, nowadays most larger companies are engaging in international sourcing activities to some extent (Horn et al., 2013). However, even though knowledge about the global sourcing processes is well established, only few studies consider the interim phase between the decision to source globally and the actual execution, namely the selection of possible target regions and countries (Maltz et al., 2011). Evidently, in order to conduct purpose – and successful sourcing activities, finding and choosing attractive markets is a major concern for firms, especially since they are hardly able to search every single market for suppliers. In line with this, Yeniyurt et al. (2007) define market attractiveness as market relating factors motivating firms to launch brands in a specific country. For our purposes, we reformulate it and consider market attractiveness as market specific factors which trigger sourcing activities in a certain country.

Yet, market attractiveness is not only an issue in purchasing practices but also affects FDI decisions (Gripsrud and Benito, 2005). According to Chen and Chen (1998), FDI allows firms to access scarce resources such as labor and knowledge in order to strengthen their strategic position. Further, exploiting firm specific capabilities following an investment in foreign markets enables firms to generate rents (Rugman, 1986). Therefore, FDI can also serve well as a predictor for supply

market attractiveness. In fact, knowledge of FDI might even enhance the global sourcing criteria set by handing purchasers another tool for analyzing markets. Thus, being aware of FDI criteria could improve global sourcing activities. Since to our knowledge, no scholar has yet focused on the interplay of global sourcing and FDI, even though the problem of finding attractive markets is quite similar to both theories, a research gap emerges. Thus, the following research questions can be formulated:

*Which factors characterize an attractive supply market? What can global sourcing theory learn from FDI in terms of choosing attractive supply markets? How can the global sourcing criteria set be expanded?*

Accordingly, the objective of this paper is to provide information of why purchasers prefer certain regions over others, through employing both, global sourcing and FDI literature. By doing so, we are able to examine more closely the role FDI can play and how it can enhance global sourcing theory. In order to achieve this goal, the study will use interviews and discussions with purchasers from a large German multinational enterprise (MNE) operating in the automotive industry, who are involved in regional sourcing decision making.

The paper is organized as follows: we first examine the literature of global sourcing as well as FDI on factors that can facilitate regional supply market attractiveness. We then distinguish the factors on the basis of whether they are unique to global sourcing or FDI theory or whether they are important among both theories. Subsequently, we will show how practitioners view market attractiveness.

## **2.2 Theoretical considerations: Theories on global sourcing and FDI indicate supply market attractiveness**

This section gives an introduction to global sourcing and FDI literature. In particular, it will outline factors than can play a role in influencing the attractiveness of a regional supply market. These factors identified will later be presented to purchasers in order to capture the opinion of practitioners. Also, a synthesis of both theories will show in which areas global sourcing and FDI have

commonalities as well as where both theories differ, and thus where factors underlying FDI can be an addition to global sourcing.

In order to retrieve the information, Google Scholar and Scopus were accessed. Here, English as well as German publications were considered. Key words for the literature search included amongst others combinations such as “global sourcing & advantages”, “global sourcing & benefits” or “global sourcing & attractiveness” on the global sourcing theory side, and “foreign direct investment & advantages”, “foreign direct investment & benefits” or “foreign direct investment & concept”. For our purposes, especially the advantages and benefits were regarded most important since they give an explanation of why both theories are applied and therefore how attractiveness is influenced from both perspectives. In order to capture input not specific to a certain research field, we did not limit our search to a certain group of journals.

### **2.2.1 Global sourcing: Cost factors are still considered the main reason for country selection**

Global sourcing has gained increased significance throughout the last decades, though was long suffering from inconsistency in terms of concept definition (Quintens et al., 2006). One of the most popular definitions is given by Arnold (1989, p. 26) who refers to it as the utilization of “purchasing potential on a worldwide level”. Quintens et al. (2006) build on and complement this definition by defining global sourcing as an activity to search and obtain “goods, services and other resources on a possible worldwide scale, to comply with the needs of the company and with a view to continuing and enhancing the current competitive position of the company” (p. 171).

Global sourcing and the possible creation of a competitive advantage is based on the premise, that location-specific advantages, such as access to local supply, as well as company-specific competencies, e.g. the pooling of common requirements, can be exploited (Kotabe and Murray, 2004, Arnold, 1997). The former, in particular, indicates factors that enable the location to stand out of the crowd and differentiate. As such, they can be characterized as predictors of market attractiveness, influencing the degree to which a market is perceived favorable and

thus impacting sourcing decisions. In the following, an overview about how attributes of global sourcing affect market attractiveness is presented.

### ***2.2.1.1 Cost reduction: The prime motive for global sourcing activities***

Not surprisingly, when it comes to attractive foreign markets to source from, cost reasons seem to be the most predominant attribute (Nassimbeni, 2006, Maltz et al., 2011, Lorentz et al., 2015). Accordingly, most firms seek to acquire goods at the lowest cost possible (Cho and Kang, 2001, Trent and Monczka, 2003a). Especially labor and production costs are considered most important since they strongly affect revenue potential (Sanders et al., 2007). The lower these costs are in a market, the higher is their attraction to purchasers. Further, they are also found to differ across industries: As pointed out by Paul and Wooster (2010), manufacturing sectors, such as the automobile industry, are strongly sensitive to labor costs while firms operating in the service sector are attracted to markets with lower administrative costs. Moreover, favorable currency-exchange rates are also an issue to be considered, since they enable further cost saving opportunities (Nassimbeni, 2006, Monczka et al., 2009). Additionally, Nassimbeni (2006) points out that purchasers also observe the inflation rate when it comes to cost factors. Since naturally high inflation rates coincide with increased costs, firms are more attracted by countries with a lower, optimally stable level. Ergo, the more beneficial these rates are, the higher is the market attractiveness to firms.

### ***2.2.1.2 Quality: Higher quality goods and products as facilitator of market attractiveness***

Yet, cost factors are not the only reason to prefer regions over others when conducting global sourcing activities. Since higher quality standards and the availability of higher quality goods and services are considered especially important for the survival in today's business environment, quality is also referred to as a criterion that purchasers cannot risk omitting in regional sourcing decisions (Handfield, 1994, Cho and Kang, 2001, Trent and Monczka, 2003a, Petersen et al.,

2000). While in the past, the insurance of high quality used to be an especially “stumbling block for worldwide sourcing (Monczka et al., 2009, p. 191), associating low price with low quality, nowadays the development in quality management improved general standards. In fact for this reason, many areas are able to guarantee a relatively high quality level. An efficient and effective use of technology are said to enable the achievement of high quality while simultaneously keeping costs low (Cho and Kang, 2001). For firms, the introduction of products with outstanding quality can result in the reputation as a quality leader, being more attractive to consumers who are willing to pay more for this. As follows, having the reputation as a high quality provider can support countries in triggering the perception of market attractiveness among firms and their purchasers.

### ***2.1.1.3 Access to limited sources: The opportunity to extend the supply base through the availability of capable suppliers improves market attractiveness among purchasers***

Often relatively few sources for items exist, requiring purchasing to operate globally in order to have access to a limited number of suppliers (Monczka et al., 2009, Handfield and Nichols, 2004). Consequently, the ambition to extend the supply base in order to create a greater product mix (Handfield, 1994) can play a role in terms of market attractiveness. Logically, a market that provides the firm with alternative sources to a limited contingent can be characterized as attractive. Also, extending the supply base can be seen as a means to introduce competition to domestic suppliers, encouraging them to improve their performance (Monczka et al., 2009). As such, a regional market that provides capable suppliers in addition to the domestic portfolio is naturally considered preferential for purchasers, though, obviously, a market without feasible suppliers would not be taken into account in the first place. Further, the focus on the extension of the supplier portfolio, the consequential need for intensified communication and an eventually possible closer cooperation coincides with the concept of relational advantages or network resources (Dyer and Singh, 1998, Lavie, 2006) which take into account collaboration and alliances between buying and supplying firms in order to achieve

a competitive advantage. Reformulating this for our purposes, supply market attractiveness increases with (1) the availability of competent local partners and (2) the chance of forming beneficial alliances with them.

#### ***2.1.1.4 Access to resources: The availability of resources in a certain market can facilitate its attractiveness***

When referring to global sourcing, its basic purpose, the international procurement of resources of any kind, should not be omitted. Accordingly, it can be argued that access to locally unavailable products (Volberda et al., 2010), to technologies (Schiele et al., 2011a) and to scarce and distinctive resources (Lewin and Sager, 2009) influences how attractive a market is perceived by purchasers. Obviously, a high availability of resources which are critical for firms renders its attractiveness high. I.e. since new technology solutions are often developed in Taiwan or South Korea, firms who want to gain access have to source from these regions (Monczka et al., 2009). Consequently, a limited choice coincides with higher attractiveness, the simple economic understanding of supply and demand. Despite this, it is though brought into question whether rather standard factors such as the availability of raw material or skilled workers are still able to make a greater difference, since they, due to low-cost transport and globalization, are available everywhere and can be obtained by every firm (Acs and Storey, 2004). Yet, being a well-recognized global sourcing advantage, it is included for our purposes.

#### ***2.1.1.5 Other factors relevant to global sourcing: Innovation, intellectual property or governmental behavior are not to be neglected***

Further attractiveness facilitating factors may include the chance for collaborative innovation (Steinle and Schiele, 2008, Schiele, 2008), the standard of intellectual property (IP) protection in a market (Maltz et al., 2011) as well as the sought for more efficient production (Sinha et al., 2011). In terms of innovation, the availability of industry clusters can trigger the knowledge transfer between firms and thus be a reason to locate in the market (Schiele, 2008). Relating to this, the

protection of IP might not be an issue for firms intending to source simple components and resources, however becomes more crucial with an increasing level of technological complexity and intensity (Naghavi et al., 2011). Naturally, firms developing complex, R&D intensive technologies will consider more carefully whether to source from a country with higher risks of IP theft. Relating to this the sought for innovation opportunities, could eventually become a source of risk, considering the long term perspective: Not only can a decline in innovation reduce the companies competitiveness and thus affect supply market attractiveness, but also offer local suppliers the chance to gain knowledge and innovation capacity, enabling them to become competitors in the future (Rasheed and Gilley, 2005).

Also, regional governments can contribute to an attractive market (and even compete among each other) for foreign firms through introducing stimulating policies that grant companies benefits: As such, governments employ methods of currency devaluations or installing free trade and enterprise zones in order to increase the attractiveness of country and companies (Bregman et al., 2015). The presence of competitors can thus also be a sign of whether a regional government provides benefits for businesses. As a matter of fact, per se, the presence of firms' competitors in a market can already be a sufficient motive to approach it. Firms closely observe how competitors are performing. Since they do not want to be at a disadvantage they try to imitate their successful moves (Monczka et al., 2009). Consequently, markets that serve a competitor well are being considered highly attractive to source from. Though, this is accordingly the reason least mentioned, as firms do not want to be thought of as copying the competitors practices. Lastly, cultural as well as physical distance are mentioned to influence global sourcing decisions and thus also have implication for market attractiveness (Cho and Kang, 2001). As such, a strong cultural difference can lead to complications and communication problems, and thus negatively impact the attractiveness of the market (Winkler et al., 2008). Further, physical distance is not only related to higher transportation costs but can also lead to higher risks during the transport. Arguably, the lower these distances are, the lower are the risks involved and therefore the higher is the market attractiveness. The next section will introduce how literature on FDI views market attractiveness and which attributes play a role.

## **2.2.2 FDI: Factors influencing investment decisions determine the perception of regional attractiveness**

The theory on FDI considers investments which involve long-term relationships in one economy in an enterprise other than that of the foreign investor (UNCTAD, 2007). According to Gripsrud and Benito (2005), manufacturing firms employ FDI in order to exploit advantages in terms of production costs and access to scarce resources while firms operating in different industries are attracted by highly unsaturated demand. As a consequence, the labor and product markets as well as their accessibility are economic factors influencing country attractiveness and such the conduction of investment activities (Böckem and Tuschke, 2010). Other frameworks classify determinants of locational attractiveness into demand to be expected in the chosen location, factor costs to be faced, the number of local and foreign firms active in the same location as well as public policies executed (Crozet et al., 2004).

Dunning (1998) and Dunning and Lundan (2008) compile four different types of FDI, depending on the nature of advantages companies are seeking: FDI with focus on seeking resources, on seeking markets, on seeking efficiency and finally on seeking strategic assets, which are characterized by different company motives for foreign investments and, consequently, different factors facilitating market attractiveness. It should be noted though that lines between these FDI types are porous and factors blend, making perfect alignment and allocation impossible (Ellram et al., 2013c). Arguably, firms hardly decide for a certain FDI type and rather focus on a combination of underlying factors which go in line with their strategy. More recently, Basile and Kayam (2015) conduct an extensive literature review on determinants of MNE's location choice, distinguishing between horizontal, vertical, export-platform and complex-vertical FDI, which are variants of Dunning's version. The following sections present the factors that affect market attractiveness when it comes to FDI decisions.

### ***2.2.2.1 Resource seeking FDI: The need to acquire and exploit resources as determinant of market attractiveness***

Resource seeking FDI focuses, as implied, on the grounds of accessibility of resources. Accordingly, companies invest in order to access resources at the right price and quality, resources that are not available in the home country (Dunning, 1998). Dunning and Lundan (2008) distinguish between three motives for resource seeking: Accordingly, (1) firms are attracted by any kind of physical resources such as minerals, materials or products in order to optimize production processes. These companies are attracted by high quality process infrastructure enabling the exploitation, upgrading and export of the resources (Dunning, 1998). Secondly, (2) firms, especially from manufacturing industries with high real labor costs, are attracted by regions with available cheap and und unskilled human resources. As pointed out by Krugman and Venables (1995), real wages usually rise in core regions and fall in the periphery, thus possibly shifting market attractiveness in the long run. Moreover, when it comes to labor force and human capital, employment rates are becoming an issue, with high unemployment levels being associated with decreased labor costs, but difficulties for finding qualified labor force (Brixy and Grotz, 2007). Since further, high unemployment rates lead to lower demand, it has a negative influence on location decisions of companies. Finally, (3) in terms of resource-seeking, firms are attracted by the possibility for acquiring technological capabilities and management skills. Per se, being attracted by the need to exploit resources is considered traditional FDI theory (Rugman, 1986, Böckem and Tuschke, 2010).

### ***2.2.2.2 Market seeking FDI: A large and fast growing market as motive for investment decisions and increasing market attractiveness***

With market seeking FDI, firms target large and growing markets which have the potential for greater marketing opportunities (Chaudhuri and Mukhopadhyay, 2014)). Apart from being attracted by prospects a growing market prospects, Dunning and Lundan (2008) refers to four reasons that trigger market seeking

investments: Accordingly, (1) the presence of customers and suppliers in a certain region can facilitate its attractiveness, since it allows for increased business opportunities. Further, (2) improving the understanding of local cultures and tastes is considered crucial when attempting to serve a market. As such, investing in a market in order to have contact to local cultures and consumers can be attractiveness stimulating. Also, (3) the opportunity for local production can be a factor that creates market attractiveness. This is seen true if production and transaction costs are lower than the costs of distant supply. Therefore, especially for geographically dispersed regions, market seeking investments are considered essential. Consequently also the quality of local infrastructure and transport costs are taken into account, however vary in importance across manufacturing sectors (Arauzo-Carod et al., 2010). According to Ambroziak (2014), infrastructural endowments positively impact productivity, increase accessibility and thus create positive externalities that improve local attractiveness and investment probabilities. Relating to this, tariffs and non-tariff trade barriers are highly important when seeking new markets. Logically, the lower these barriers are, the lower are the total transportation costs and consequently the higher is the market attractiveness. Fourth (4) the possibility for creating a presence in the market, can be an interesting motive for firms to invest in it, also in terms of aggressive or defensive actions against competitors as well as to provide access to higher demand (Gripsrud & Benito, 2005). Finally, the behavior of local governments is a factor not be neglected (Dunning, 2008) since they can provide benefits for firms and removing obstacles hindering or slowing down economic activities (Chaudhuri & Mukhopadhyay, 2014). These may include tax incentives, capital remissions and the provision of local partners for knowledge exchange (Bartik, 1994). That so called business climate determines the ability of locations to attract firms and promote growth (Plaut and Pluta, 1983).

### ***2.2.2.3 Efficiency seeking FDI: Cost competitiveness and the pursuit of low production costs facilitate the perception of market attractiveness***

Efficiency seeking investments are conducted by firms that strongly pay attention to cost-competitiveness, firms that are sensitive to cost structures of products and

processes. As pointed out by Dunning (2008), firms are attracted by two points when it comes to efficiency seeking FDI: (1) the opportunity of taking advantage of differences in terms of availability and costs of factor endowments in different regions, such as labor and capital. Further, (2) firms favor regions which offer the chance for exploiting economies of scale and scope. Since the condition for successful investments in terms of efficiency are highly developed and open locations, it often takes place in regionally integrated markets (Dunning, 1993). A mentioned factor that further plays a role here is inflation which influences a country's cost-competitiveness (Botrić and Škuflić, 2006). Following this, the lower the inflation rate is in a certain country, the higher is its attractiveness for investors.

#### ***2.2.2.4 Strategic asset seeking FDI: The acquisition of knowledge-based assets through locally available innovation centers triggers market attractiveness***

The run for strategic assets is an issue when conducting foreign market investments. These assets are characterized as being mainly of knowledge-based nature and considered necessary for protection and enhancement of specific advantages investing firms hold (Dunning, 1998). As such, technological change has increased in importance as a location factor (Ambroziak, 2014). Following this, firms try to enhance their dynamic competitive advantage through choosing locations around geographically dispersed local innovation centers (Chaudhuri & Mukhopadhyay, 2014). Since according to Hausmann (1996, p. 4) innovation occurs from learning by “being there”, being located to an innovative industry can be considered a trigger to stimulate the innovation process, and thus a factor of attractiveness for firms. Consequently, geographical spillovers are seen a good reason for certain location choices (Koo, 2007). Thus, the availability, and ultimately the costs, of knowledge-based assets, increases their locational attractiveness and the need to acquire them in foreign markets constitutes an important motive for FDI. Further, specialized clusters and, thus, opportunities for agglomerative entrepreneurial activities are considered important, encouraging competitiveness and cooperation (Capello, Fratesi, Resmini, 2011). In fact, the relation between buyers and suppliers as well as competitors was found to impact the occurrence of foreign market entries

(Martin et al., 1998). Summing up, the need for knowledge-based assets and innovation and their availability in a certain market influences its attractiveness.

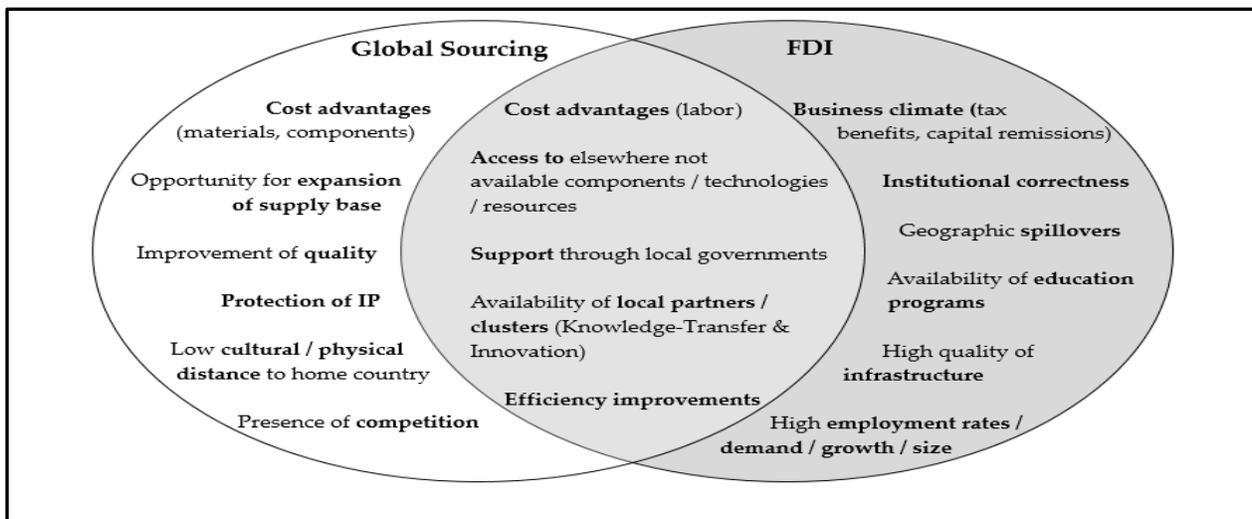
#### ***2.2.2.5 Others: Institutional Factors characterizing the political and economic environment influence the attractiveness of a market***

Finally, underlying all FDI types are factors which are determined by regional governments, so called institutional factors that are present for reasons of policies and political actions. Consequently, they do not differ for a certain type of FDI. These factors broadly include government stability, democratic accountability, functioning of bureaucracy, stable, reliable, transparent legal and regulatory framework, easiness to create a company, lack of corruption, transparency, enforcement of contract law, security of property rights as well as efficiency of justice and prudential standards (Dumludag et al., 2007, Bénassy-Quéré et al., 2007). To put it simple, just, stable and transparent political practices leave little room for unethical behavior such as corruption. Consequently, this leads to a market of higher openness since it decreases economic, social and political risk factors (Pournarakis and Varsakelis, 2004). As a result, a market of this kind is preferential for firm operations. For our purposes we aggregate these variables under the attribute of institutional correctness. The higher the level of institutional correctness, the more attractive a certain region is for companies.

### **2.2.3 Identified factors in global sourcing and FDI literature**

Figure 4 summarizes the factors that could be identified in literature. Not only were global sourcing and FDI factors displayed, but also the interface between both theories. Arguably, certain factors only relevant to FDI theory might also play a role in terms of global sourcing. As shown, global sourcing literature determines market attractiveness by means of rather tangible facts, for instance the cost level and with it different types of costs that arise or the quality standard that is given in a certain country. Since global sourcing literature is directly related to purchasing practices where potential is assessed through raw facts and numbers, this micro-

level focus appears comprehensible. In contrast to this, FDI observes the market as a whole, also taking into account macro-economic factors such as growth potential of a market as well as its employment rates. From an investors’ position, this broad view makes sense, since all factors that are eventually able to influence returns (positively and negatively) have to be considered when deciding about where to locate an investment. Therefore, the combination of global sourcing and FDI literature is beneficial for our purposes as it reveals factors specific to supply management, such as production costs and the availability of suppliers, and factors that characterize the market as a whole, including institutional policies and market growth and size, providing a comprehensive overview of attractiveness facilitating variables. As follows, FDI might be able to enhance factors relevant to global sourcing, by providing purchasers a different perspective.



**Figure 4: Attractiveness facilitating factors in global sourcing and FDI literature**

### 2.3 Empirical spotlight: Supply market attractiveness in a practical setting

The choice of the supply market and the consequential advantages and disadvantages it implies for regional sourcing processes have been widely acknowledged in practice. Firms have to consider whether to enter possibly distant, new-to-the-firm markets

and carry the risks, or rely on possibly less risky, home markets which potentially grant less or different benefits. In order to attain a better understanding about how purchasers view markets and perceive attractiveness, this section describes the results of an open discussion and interviews with regional sourcing officers as well as commodity buyers of a German MNE operating on a global scale.

### **2.3.1 Open discussion: Incorporating practice into academic research**

In this study, open discussions and interviews were applied, allowing including the knowledge of practitioners into academic research. To proceed with this method, a group of people, in our case three purchasers, were encouraged for an open, casual-like discussion, similar to a World-Café (Hoffmann, 2012), focusing on the central research question. The participants included a regional sourcing officer, responsible for different regions and sourcing offices across the globe as well as two commodity buyers who eventually make sourcing decisions and issue the purchase order. Due to their first-hand knowledge about foreign market sourcing they were considered experts for our purposes. The participants were randomly selected and approached via emails as well as telephone calls. The meeting then took place at the headquarters of the multinational firm where the participants were first introduced to the topic of supply market attractiveness and to the resulting facilitators as indicated by global sourcing and FDI literature. In the following, they were asked to discuss this result, comment on the factors found in literature and to explain their own experiences and sourcing practices. During the discussion, a moderator kept track of comments and arguments, and how the purchasers perceived an attractive supply market themselves. Also, they were invited to group the factors they found relevant. With a comparable set of three different people who were selected and approached in the same way as for the focus discussion, also interviews were conducted. Since interviews were found to create more knowledge than focus group discussions (Fern, 1982), they were considered a useful addendum. They lasted about one hour each and were taped in order to provide an accurate rendition of what was said (Yin, 2009). Again, the list of factors was presented on which the interviewees had to comment on through applying their own experiences. For both, the focus group discussion as well as the interviews, coding was not necessary

since relevant factors were already identified in literature beforehand and needed to be verified or rejected.

**Table 1: Attractiveness facilitating factors evaluated by purchasers**

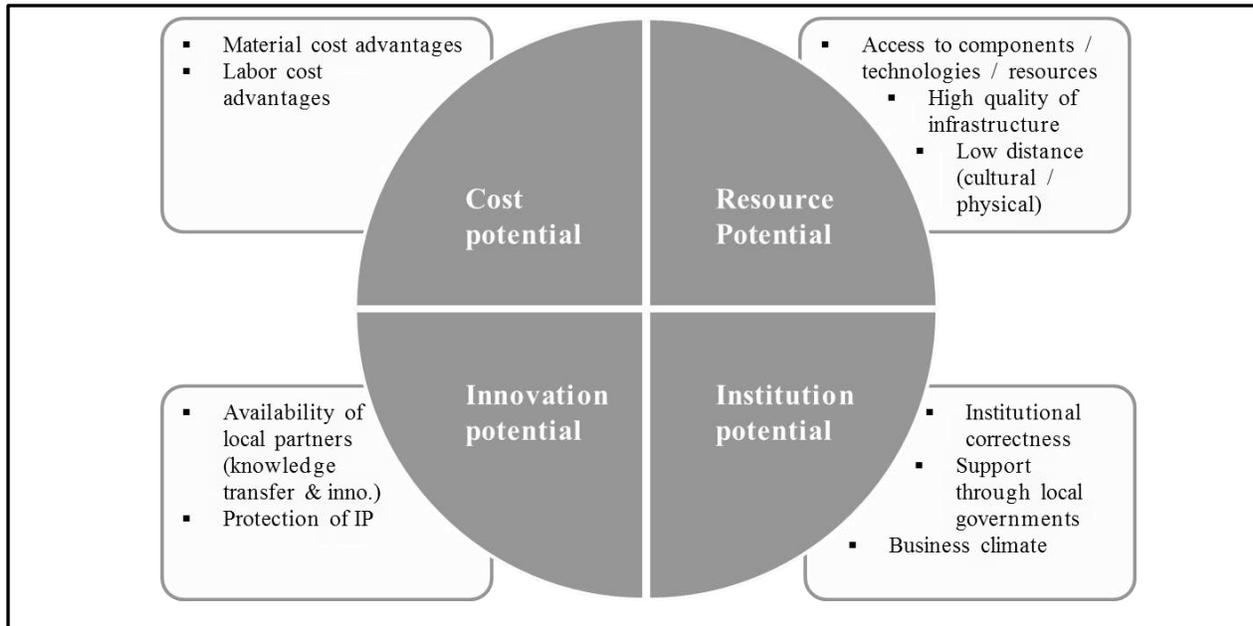
Global Sourcing	Global Sourcing & FDI	FDI
Cost advantages (material & components) ✓	Cost advantages (labor) ✓	Business Climate (tax advantages and capital remissions) ✓
Opportunity for supply base expansion X	Access to elsewhere not available components / technologies / resources ✓	Institutional correctness ✓
Improvement of quality X	Support though local Governments ✓	Geographic spillovers ✓
Protection of IP ✓	Availability of local partners / clusters (knowledge transfer & innovation) ✓	Availability of education programs (development of local HR) X
Low cultural / physical distance ✓	Efficiency improvements (higher productivity) X	High quality of infrastructure ✓
Presence of competition X		High employment rates /demand / growth / size X

Table 1 summarizes the detailed result. As can be seen, in a practical setting, factors underlying FDI theory are clearly considered by purchasers when it comes to making sourcing decisions. On the other hand, not all attributes of global sourcing are found to play a major role for purchasers.

After having characterized factors as attractiveness facilitating or not, the purchasers were invited to indirectly take part in the analysis through forming categories. The set that was developed combined theory with practice and indicated what the purchasers perceive most favorable when selecting a region over another. Here, the interviews worked well to validate the outcome of the discussion since the result was comparable.

Also, figure 5 presents the developed categories and sub-factors and shows that a market can be evaluated according to four potentials. When evaluating countries or markets, table 1 as well as figure 5 can function as a checklist for practitioners, as a

tool that allows for ratings in accordance with supply market attractiveness. A more detailed discussion of the result will be introduced subsequently.



**Figure 5: Four potentials characterizing the supply market**

### **2.3.2 Cost potential: The number one factor for ensuring market attractiveness**

As already indicated in global sourcing literature, cost reasons seemed to be the most relevant and predominant factor when selecting a sourcing region. This is comprehensible since at the end of the day purchasers are being evaluated according to the amount of savings they create. A market that offers the potential of creating favorable cost structures compared to other markets is therefore clearly preferred. Also, a distinction is not made between savings in terms of lower material prices or lower labor costs, as also mentioned in FDI literature. Similarly, higher productivity caused by efficiency improvements that results from sourcing in a certain region, ultimately leading to cost advantages given the same output, is considered. Since suppliers provide cost-breakdowns, consisting of material, production and labor costs that add up to the price they demand, all cost factors are

important to purchasers. Arguably, as material costs make up the greatest piece of the pie depending on the component, they are regarded a significant lever to create savings, having the highest impact on the final price within the cost structure. Summing up, for the purchasers interviewed a market that provides the lowest costs possible is highly attractive.

### **2.3.3 Resource potential: Access to elsewhere not available products as important facilitator**

The resource potential a market has to offer in terms of natural resources and technologies was mentioned as an indicator of attractiveness among the purchasers interviewed. Clearly, a high degree of resource availability was considered preferential over a lower degree, which is naturally comprehensible for the reasons of guaranteeing a constant flow of materials and technologies. As such, a low availability would require local suppliers to source from other regions themselves, being restricted by higher transport costs, tariffs and other risk factors, which could eventually result in higher cost structures for the purchasers. Also, related to the resource potential of the market, its size as well as the given infrastructure are seen highly important: While a huge market can coincide with the high availability of resources, a developed infrastructure would imply more efficient processing of resources, in terms of faster and less-costly transportation. Finally it was pointed out that resource potential obliges a rather subjective judgement, depending on commodity affiliation and technological specificity of the sourced object. While purchasers responsible for electric components are highly attracted by technology availability and less by raw materials, buyers belonging to the metal commodity have the opposite view. After all, the resource potential the market has to offer increases its attractiveness to purchasers, may it refer to resources in terms of technology or raw materials.

### **2.3.4 Innovation potential: Opportunity for knowledge transfer and development is considered favorable**

The opportunity for gaining access to innovation and knowledge transfers is also considered a factor that attracts sourcing activities. Accordingly, purchasers observe a market concerning its innovative abilities, whether the suppliers located in the market have innovative potential, whether they are located to an innovative cluster or industry that they can profit from, and whether a knowledge transfer or exchange with them is possible and beneficial. Here, also the IP protection in the region was mentioned to play a non-neglectable role, however essentially in case of intended bilateral information flows, from buyer to supplier and vice versa. Again, in terms of innovation it was pointed out by a purchaser working in the metal commodity that also here an attractive supply market can be rather subjective: In general, innovation opportunities are argued to be important when purchasers consider markets. However for rather non-strategic -, or critical items which do not allow for a high degree of innovation, being an innovative market does not necessarily improve its attractiveness.

### **2.3.5 Institution potential: Local governments are a factor not to be neglected**

Institutional correctness is a term that all purchasers without exception viewed highly important for sourcing activities and their perception of market attractiveness. Without having stable and transparent policies a country is not considered for sourcing activities, since these also affect supplier behavior. In this sense, a lack of stability and transparency would not allow for long-term planning and therefore impose risks to the firm. Also, corruption, e.g. in form of bribery, was considered a disruptive factor that interferes with compliance regulations. Therefore, a market with this condition does not constitute a business case for the purchasers and is less attractive.

Likewise, an indicator of institution potential is the degree of support that is provided by local governments. As already pointed out in literature, this can be in form of tax advantages, lower tariffs for transportation or others. Here, the purchasers also distinguished between sourcing's intended for the home market and

for local affiliates. In case of the latter, government support is understood to have a direct impact on the affiliate and thus stronger influences market attractiveness, while for global activities it is considered a nice-to-have factor, however less important for the final sourcing decisions.

## **2.4 Conclusion: FDI provides global sourcing theory with further insights**

This paper sought to give a better understanding of regional supply market attractiveness from the perspective of practitioners. As one main contribution, the paper built a link between global sourcing and FDI literature, and pointed out how global sourcing can profit from having an understanding of FDI. Further, the paper identified factors that characterize regional markets as attractive and favorable for sourcing activities. Finally, through conducting interviews and discussions with purchasers of a German automotive MNE, including commodity buyers and regional sourcing officers dealing with regional sourcing offices, and thus having direct access to foreign markets, categories were formed containing the most significant attributes of supply market attractiveness. The subsequent paragraphs shed light on scientific as well managerial contributions the paper has to offer.

### **Scientific Implications**

From a scientific perspective, this paper digs into global sourcing and FDI literature and seeks to provide a comprehensive overview of how supply market attractiveness is characterized. As such, it in particular tries to contribute by focusing on how FDI theory can be used in order to expand the global sourcing criteria set. More specifically, three main implications are identified:

(1) Firstly, this paper fills a research gap and contributes to science through providing categories that can be considered a first attempt of how supply market attractiveness can be operationalized and measured. Accordingly, four potentials are determined, characterizing an attractive supply market, which are (i) its cost potential, (ii) its resource potential, (iii) its innovation potential, and (iv) the

institution potential the market has to offer. Science can further benefit from these categories as they provide a basis for research to come.

- (2) Further, the utilization of FDI can be understood as a means for improving global sourcing criteria. While cost, resource and innovation potential are categories which can strongly be found in global sourcing literature, institution potential is barely considered or even ignored. The reason behind this might be the fact, that it is less tangible and does not immediately come to mind when talking about global sourcing activities and factors that characterize a supply market as attractive. At this point, our study shows that institution potential, how institutions behave and govern the market, can indeed play a role in global sourcing decisions and should be examined more closely. Consequently, this study improves the understanding of global sourcing through employing FDI insights.
- (3) Finally, another interesting scientific implication this paper offers relates to the fact that not all attributes of the global sourcing theory were considered relevant for purchasers. While according to theory the availability of high quality items and the option to extend the supply base are incentives that trigger the conduction of global sourcing, this study shows that both factors are not considered highly relevant anymore when it comes to sourcing from foreign supply market and thus does not influence the perception of market attractiveness. This could surely be due to our limited sample, though reworking certain aspects of the global sourcing theory should not be neglected.

### **Managerial Implications**

From a managerial point of view, this paper points to what purchasers have to look at when considering foreign country sourcing with little or no prior information. Further, it implies that purchasers should also take into account insights from FDI literature, in order to optimize global sourcing activities. In particular, we would like to underline three main implications:

- (1) In order to achieve a relatively comprehensive first overview, purchasers should seek to gather country specific information based on the four market potentials identified in this study. With this information at hand, they are then able to

estimate whether a certain market they are looking at will be worth approaching. In this sense, being aware of the potentials can guide purchasers and firms who consider implementing a global purchasing strategy and thus constitute a first support tool in form of a checklist. This can especially be of value for firms that are not highly established yet on an international scale and thus do not have the experience in foreign market sourcing.

- (2) However, before starting with an in-depth analysis, purchasers have to be aware of the item they intend to source as its nature could influence the perceived importance of the four potentials. In case of high complexity and technological specificity, purchasers should look for markets with a high innovation potential since this could result in better solutions and in the long run positively affect the further development of the item. Here, cost and resource potential might be less crucial. On the other hand, a very simple item with low complexity might turn the scales. Then, cost and resource potential could become most important in order to e.g. create the targeted savings and should therefore strongly be considered when evaluating the market. Though, following this, a certain degree of subjectivity is present when it comes to supply market attractiveness.
- (3) In particular, the institution potential comprises attributes that must not be neglected from the purchaser's point of view. This might not come directly into mind when thinking about global sourcing decisions, however was considered crucial for the successful outcome and long term prospect of the sourcing activity. Consequently, purchasers should not only focus on raw facts and pure tangible information, but more closely consider whether institutional attributes are well in place or might be a potential risk factor that could lead to an undesirable outcome possibly even affecting company reputation in the long run.

Following the implications stated before, the study provided a glimpse on supply market attractiveness from the purchasing point of view, used FDI literature in order to improve the global sourcing criteria set, and eventually introduced a guideline on how to estimate market potential at the initial phase of global sourcing. Though, the study does not come without limitations. The first limitation of this study is the small amount of participants that took part, affecting the generalizability of the study. Further, the strong focus on the automotive industry

could influence the outcome. Future research should extend the scope of this study by involving more respondents from different firms located in different industries. Moreover, since supply market attractiveness can be characterized as a complex construct, this paper rather offers a first exploration of the topic. In order to give more insights and increase generalizability, the study should be supplemented through a stronger empirical analysis using quantitative methods. Also, interesting would be a distinction between the purchaser roles. Perhaps a pure focus on one certain type of purchaser might lead to a different result. Further, research should take a deeper look into the institutional perspective of global sourcing.



## **CHAPTER 3: DOES SUPPLIER OPPORTUNISM LEAD TO BUYER OPPORTUNISM? A SOCIAL CAPITAL PERSPECTIVE**

In light of increasingly tight buyer-supplier relationships, opportunism is a problem of increasing relevance. So far, opportunism has mainly been researched as a detrimental action by suppliers and interpreted with an institutional economics lens. Recent conceptual work, however, has argued for more a behavioral approach to operations management, suggesting benefits of taking a social capital perspective on opportunism. Based on a large empirical sample of buyer-supplier relations, this chapter provides an empirical study employing social capital as theoretical lens. Further, it analyzes both, supplier opportunism and buyer opportunism. Findings did not support the expectation that supplier opportunism will be countered by buyer opportunism in a single relationship. However, social capital in form of cognitive and relational capital has been found as a good predictor of opportunism. We propose new measures for structural capital. Further the study confirms the detrimental effect of opportunism on performance of the buyer-supplier relationship, highlighting the mediating role of innovation as building block of relational competitive advantage.

### **3.1 Introduction: Considering buyer and supplier opportunism and its behavioral antecedents**

Opportunism, commonly defined as “self-interest seeking with guile” (Williamson, 1985, p. 47) is considered to be inherent to many business relations, due to its embeddedness in human nature, and a central concept in transaction cost economics. This, certainly, does not imply that all parties are opportunistic all the time; they do not necessarily have to be regarded as opportunistic to the same degree, though even among parties acting less opportunistically “most have their price” (Williamson, 1979, p. 234). Consequently, understanding and managing opportunism has increasingly gained in importance, following the trend of outsourcing business activities and moving from an integrated manufacturing unit towards a network of specialized actors. Two reasons, which have a substantial impact on opportunism, have played a prominent role fostering this trend: open innovation and the core competence movement.

In terms of innovation generation, firms moved from closed, intra-firm ways to innovate to open, inter-firm forms of innovation (Chesbrough, 2003, Edquist, 1997). While in 1992 only one-fifth of the most technology-intensive companies were relying heavily on external sources of technology, a panel study revealed the number to have increased to 85 percent by 2000 (Roberts, 2001). In effect this means that the common form for firms to innovate nowadays is in the context of buyer-supplier relationships. However, joint buyer-supplier innovation tends to be contingent upon one condition: intensive interaction, embedded in close ties between the firms. These collaborations create dependencies and are thus potentially subject to opportunistic behavior, the “dark side of embedded ties in business-to-business innovation” (Noordhoff et al., 2011, p. 34). Likewise, the plea for firms to concentrate on their core competencies and outsource the remaining activities reduced firms’ depth of production (Prahalad and Hamel, 1990, Wernerfelt, 1995). As a consequence on the strategic level, firms, in pursuit of a competitive advantage, find it increasingly difficult to achieve advantages through command on superior internal resources and instead having to rely on privileged access to external resources, i.e. on suppliers (Pulles et al., 2014a, Hunt and Davis, 2012). Recent supply chain management literature therefore emphasizes the

concept of rivalry in supply markets (Ellram et al., 2013a, Ellegaard and Koch, 2012) and the need to become a preferred customer of leading suppliers (Schiele et al., 2012).

While suppliers may make hollow promises in order to get a contract and subsequently act different than expected, the same can hold true for buyers. What is surprising, though, is that, with few exceptions, research on supply chain opportunism focuses on supplier opportunism, only. However, depending on environmental surroundings and individual characteristics sourcing professionals have been found to act opportunistically towards their suppliers (Hawkins et al., 2013). Furthermore, a study with suppliers indicated their perception that depending on the supplier's commitment, buyers may express more or less opportunistic behavior (Liu et al., 2010). An interesting research question arises:

*Does the perception of supplier opportunism explain the observation of subsequent buyer opportunism (or vice-versa)?*

Possibly, a business relationship as such can be characterized as “opportunistic”. Next to the interplay of buyer and supplier opportunism, also understanding the antecedents to opportunism is crucial. Identifying such factors could give an indication of the likelihood that a particular buyer-supplier relation will be affected by opportunistic behavior, either buyer or supplier induced. Identifying such antecedents would yield managerial implications in the form of criteria helping to identify and avoid potentially critical relationships. In an attempt to shed light on the antecedents of opportunism, Wang and Yang (2013) conduct a meta-analysis, identifying environmental, dyadic process and organization factors, while however not considering a distinction between buyer and supplier opportunism. Thus, since most research still mainly puts emphasis on understanding the outcomes of opportunism, the causes of opportunism, remain understudied (Kang and Jindal, 2015). As opposed to most previous research, which usually focused on explaining supplier opportunism and in rare occasion's buyer opportunism, this research analyzes both at the same time. Interestingly, such an analysis of “double moral hazard” has been asked for recently (Steinle et al., 2014, p. 135). Here, through following the buyer perspective, we particularly focus on buyer and perceived supplier opportunism. Thus, a second research questions emerges:

*Are there common antecedents to buyer and supplier opportunism?*

In order to answer this question, our study is taking up the suggestion to employ social capital theory as explanatory antecedent to opportunism (Kim et al., 2012, Wang et al., 2013a, Hartmann and Herb, 2014). As such, and to be more precise, our paper will test how the dimensions of social capital do affect (or not) opportunism, thus contributing to existing literature verifying first empirical results (Kim et al., 2012; Wang et al., 2013).

Next to this, our paper will further look into the consequences of opportunism within a buyer-supplier relationship. Previous studies have focused on e.g. increased transaction costs (Dahlstrom and Nygaard, 1999) or negative financial performances (Gassenheimer et al., 1996, Nunlee, 2005) as outcomes of opportunistic actions. Also, the effect of opportunism of project performance (Um and Kim, 2018) and relationship performance (Luo et al., 2015) has been examined. The relation between opportunism and firm performance including innovation and the achievement of strategic advantages, however, appears to be understudied. As such, this paper takes up the call for more research on the performance implications of opportunism (Hawkins et al., 2008, Liu et al., 2010), by testing buyer and supplier opportunism's impact on innovation and strategic advantage generation in business-to-business relationships. Hence, a third research question is formulated:

*Do buyer and supplier opportunism affect the firms performance in terms of innovation and strategic advantage generation and, if so, how?*

Following these research questions, our paper intends to fill three research gaps: (1) While previous studies have mostly examined supplier opportunism and, to a smaller extent, buyer opportunism, they fail to consider both types at the same time. Also, interacting effects between buyer and supplier opportunism have been neglected until now. As such, literature lacks insights into how buyers react when perceiving that their suppliers are acting opportunistically. Thus, the study at hand intends to contribute through filling the research gap by analyzing dyadic relationships between buyer and supplier.

(2) So far buyer and supplier opportunism were mainly approached from transaction costs perspective. This is unfortunate, given that behavioral aspects of buyer-

supplier relations are left out of the picture. Through taking into account the view point of social capital theory, we aim to acknowledge the exchange mechanisms underlying buyer-supplier relationships. Here, social capital is examined as antecedent to both buyer and supplier opportunism.

(3) Our study intends to contribute through not only examining antecedents to buyer and supplier opportunism but also possible performance outcomes in terms of innovation and the generation of strategic advantages. Since providing a deeper understanding about the opportunism-performance relationship has been asked for in prior studies, we intend to fill this research gap.

The subsequent part of this paper is organized as follows: first, the relevant literature on opportunism and on social capital in the context of buyer-supplier relations is reviewed, so that testable hypotheses can be formulated. In the next section sampling, measurement construction and analysis of the results of a survey yielding information on 168 business relationships is discussed, including satisfying relationships as well as relationships being considered insufficient from the buyer perspective. As such, in order to obtain answers to our research questions, we asked participants to distinguish between an excellent performing and disappointing supplier and fill out the survey twice. Finally, implications, conclusions and limitations are acknowledged.

## **3.2 Theory and hypotheses: Opportunism and social capital**

### **3.2.1 Opportunism as impediment to close buyer-supplier collaboration**

When referring to opportunism, literature commonly discusses activities including breach of contract, cheating or stealing. Also, dishonesty and the mis-presentation or withholding of information fall under the terminology of opportunism (Anderson, 1988, Wathne and Heide, 2000, Williamson, 1979). Opportunism received great attention as a main attribute in transaction cost economics (Williamson, 1975), in which it was seen as embedded in human nature, leading to vast discussions among scholars. Since not every relationship can clearly be characterized by opportunistic actions, the assumption of opportunism resulted in criticism (Conner and Prahalad, 1996, Kogut and Zander, 1996). In fact, for this reason Ghoshal and Moran (1996)

even consider transaction cost economics as bad for practice. Yet, since scholars involved in the theory understand most individuals as being “engaged in business-as-usual, with little or no thought to opportunism, most of the time” (Williamson, 1993, p. 98), their position becomes difficult to challenge (Chen et al., 2002). And, as already pointed out earlier, given the right incentive, opportunism cannot be excluded (Williamson, 1979).

Literature makes the distinction between manifold forms of opportunism in buyer-supplier relationships. While some distinguish between strong and weak opportunism (Luo, 2006, Masten, 1988) others refer to “active” and “passive” opportunism (Wathne and Heide, 2000). The difference between strong and weak opportunism lies in the form of its physical nature. Whereas strong opportunism considers the violation of contractual agreements, weak opportunism includes the violation of relational, commonly understood, norms. Similarly, active opportunism is referred to as actively taking advantage of new circumstances and events, while passive opportunism implies opportunistic action resulting from the refusal to adapt to these new circumstances. Also, blatant and subtle opportunism are identified, with blatant opportunism being an obvious attempt and subtle opportunism an unapparent attempt of acting opportunistically (Muris, 1981). All have in common, though, the assumption that opportunism represents a purely selfish behavior, ignoring the consequences for others actors (Lai et al., 2005).

Why does opportunism occur (or not)? An extensive review of the literature identified five main antecedents attributed to buyer-supplier relations causing opportunism, in order of effect size: goal congruence, communication, cultural sensitivity, norms and dependence (Wang and Yang, 2013). *Goal congruence* refers to the similarity in goals, objectives and targets actors have concerning a particular project, which has been identified as a primordial success factor in collaborative projects preventing opportunism from developing (Wong et al., 2005). A high level of *communication* has been found to reduce opportunism too, because it creates transparency and supports the formation of common goals (Crosno and Dahlstrom, 2008). In this context, not only direct communication between buyer and supplier plays a role: Recent literature further discusses the communication with and through governmental institutions as cause as well as mitigation to opportunistic actions on both buyer and supplier side (Wang et al., 2016; Zeng et al., 2017).

*Cultural sensitivity* refers to a globally acting firm's awareness of and adaptation to host countries' business culture. The accentuated occurrence of opportunism in global sourcing activities has been found to materialize, presumably because exporters may expect importers to be able to monitor them less intensively than domestic partners (Lee, 1998). Further, *relational norms*, being understood as commonly shared behavior expectations of decision makers, influencing exchange relationships between firms, are considered having an impact on the degree of opportunism (Heide and John, 1992). As such, through employing role integrity and solidarity, relational norms seem to negatively impact the occurrence of opportunism (Gundlach et al., 2005, Brown et al., 2000, Lai et al., 2005). Also, *dependence* plays a role when it comes to the roots of opportunism. It considers situations in which rewards are only available within a buyer-supplier relationship and not outside (Lambe et al., 2001, Thibaut and Kelley, 1959). The link between dependence and opportunism is quite straightforward: actors may feel tempted to explore the situation of dependence of their exchange partner, as the latter may not have the chance to counter-act, precisely for one partner being more dependent on the relationship's results than the other. In this regard, also a certain asymmetry in terms of size between buying and supplying firm is considered (Villena & Craighead, 2017).

There are also other relevant antecedents, namely contractual formalization and governance emphasis (corporate strategy) and environmental volatility (Wang and Yang, 2013). Especially the latter, when regarding market volatility, is understood of having an impact on opportunism (Schilling and Steensma, 2002, Skarneas et al., 2002). More recently, Yan and Kull (2015) considered the impact of product complexity on opportunism, going beyond influences of the relational context. Yet, since characteristics like uncertainty cannot fully be avoided in business-to-business relationships, as they refer to the overall market situation, influencable mechanisms are needed, mitigating the opportunism problem, which is inherent to buyer-supplier relations. Social capital theory might provide such mechanisms.

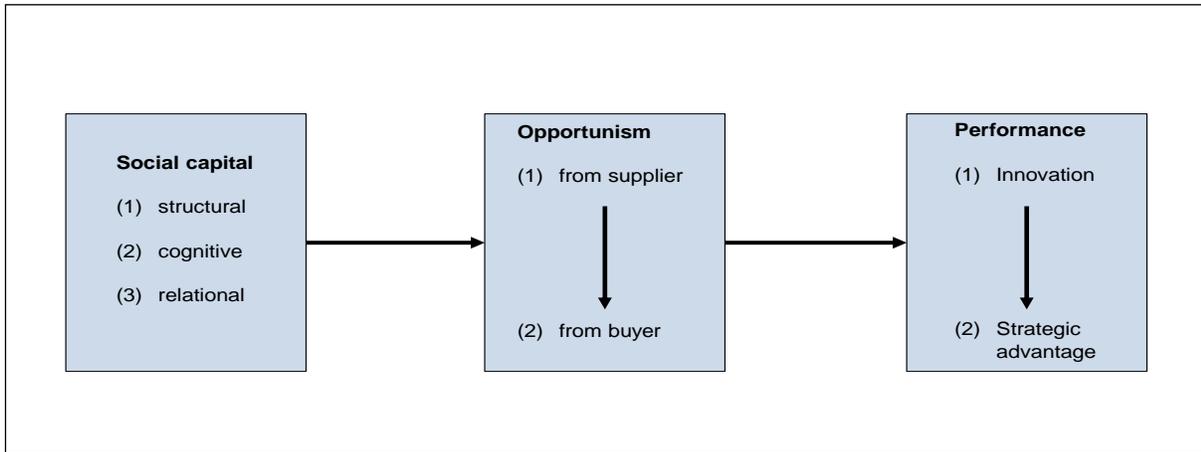
### **3.2.2 Classifying business relationships through cognitive, relational and structural social capital**

Originating from the science of sociology, social capital is understood as “goodwill available to individuals or groups” (Adler and Kwon, 2002, p. 23). It connects different actors through social relations, or social ties (Coleman, 1988, Portes, 1998), allowing them to draw and benefit from the relationship. In this way, social capital also functions as resource that members of the relationship can use for their advantage, while actors outside of it are left without access (Nahapiet & Ghoshal, 1998). Therefore, social capital also accounts for the contextual factors in which resource exchange takes place (Kankanhalli et al., 2005b). Conceptually, social capital differs from physical capital in that it is contained in the relations between actors which explains its value and potential for generating competitive advantages, as relations are difficult to imitate. Its character is of public good, but its dependence on close social ties means that its use is potentially exclusionary (Edelman et al., 2004).

Given an increased focus on social capital theory in academia during the last decade (Tsai and Ghoshal, 1998b, Krause et al., 2007, Lawson et al., 2008), research has considered its appearance and function in the interplay of individuals and organizations (Tsai and Ghoshal, 1998b, Ahuja, 2000a). Also, in the context of supply chain management it has been applied (e.g. Krause et al., 2007, Lawson et al., 2008, Horn et al., 2014, Hartmann and Herb, 2014, Koka and Prescott, 2002). Although recent studies pay attention to the link between social capital and performance (Gelderman et al., 2016) or supplier satisfaction (Schiele et al., 2015) the role it assumes in the value creation of firms still remains rather unclear (Hughes and Perrons, 2011a).

Why would social capital matter for firms and how does it relate to opportunism? Still from a sociological perspective, Portes (1998) highlights three main benefits incurring in the presence of abundant social capital: (1.) social control, (2.) family support and (3.) benefits through network access. In a business-to-business context firms strive for privileges through better access to a network, which is the economic rationale for expecting performance benefits through social capital. In the context of opportunism, however, the first benefit becomes prominent: social control. In the

same way as private members do not want to risk the benefits of their relation and therefore accept its inherent rules, it can be assumed that also corporate actors respect rules of conduct in order to avoid challenging the relationship, in case social capital has developed. As such, the underlying assumption is that in the presence of social capital actors will act different and refrain from opportunism.



**Figure 6: Basic Research Model**

In the following, testable propositions will be derived, starting by elaborating in more detail on the dimensions of social capital and their assumed influence on opportunism. To build propositions, this research adopts the dimensions of social capital theory as described by Nahapiet and Ghoshal (1998b), which have found wide application in a business context and may well develop towards being the standard (Hartmann and Herb, 2014). Nahapiet and Ghoshal suggested that the co-creation and exchange of resources between firms is facilitated when (1) there are structural links or social ties between firms (structural capital), (2) firms have a shared vision and interpretations of the relationship (cognitive capital) and (3) the firms have a strong relationship built on trust (relational capital) (Wasko and Faraj, 2005a, Nahapiet and Ghoshal, 1998b, Tsai and Ghoshal, 1998a). During the last decades, some studies suggested the emergence of relational capital out of cognitive and structural capital (Carey et al., 2011; Lawson et al., 2006). In this paper we follow the stream of literature that is, also recently, still considering three dimensions of social capital to an equal extent (Schiele et al., 2015; Whipple,

Wiedmer & Boyer, 2015). Consequently, this paper will test the effect of cognitive, structural and relational capital on opportunism.

### **3.2.3 Hypotheses: Occurrence of opportunism, presence of social capital, and its effect on exchange outcome**

In principle, both sides of an exchange, buyer and seller, are free to commit opportunism. However, relations in a B2B environment are usually characterized by repeated and intensive interactions, in particular if goods are bought for serial production. As such, business relationships tend to have a history, which means that participants have a chance to adjust their own behavior over time (Dwyer et al., 1987b, Klein et al., 2007). For instance, they may react opportunistically too, in the presence of perceived moral hazard by the partner; though in a complex and nonlinear pattern (Nair et al., 2009). In line with this, Carter and Stevens conducted experiments on electronic auctions, concluding that supplier perceptions of opportunism by the buyer tended to increase over time, in case of a continuous application of auctions (Carter and Stevens, 2007). Also based on the notion of the evolving nature of inter-firm relationships, Liu and colleagues (Liu et al., 2010) surveyed suppliers on their perception of buyer's opportunism. They found out that depending on a calculative supplier attitude (acting on a strict cost-benefit analysis) or a loyalty-based supplier behavior (continuing a relationship because of allegiance and faithfulness due to similarity in values or familiarity) buyer's opportunistic reaction varied. Their research indicated that a supplier's loyalty commitment may help to decrease buyer opportunism. Differently formulated: Supplier opportunism (or not) may lead to buyer opportunism (or not, respectively). In a more recent setting, Trada and Goyal (2017) examine the role that the perception of being treated unfairly plays for firm opportunism. Here, they considered three distinctive forms of unfairness including (1) distributive unfairness, the perceptions that rewards are distributed unequally, (2) procedural unfairness, the perception of unjust decision-making and resource allocation as well as (3) interactional unfairness, the perception of being treated with respect and dignity. Their findings show that while indeed all three forms significantly influence the rise of opportunism, distributive unfairness has the strongest impact, confirming

earlier findings of Zaefarian et al. (2016) as well as Crosno and Dahlstrom (2011). Consequently, and utilizing these indications for our purpose, buying firms perceiving an unfair or even opportunistic treatment may respond in the same manner.

Thus, based on the notion of an evolutionary character of a business exchange, it can be postulated:

***H.1** If buyers perceive opportunistic behavior by the supplier they will react in a similarly opportunistic way, thus there is a coincidence of supplier and buyer opportunism in an exchange relationship.*

Structural social capital refers to links between individuals or organizations, as well as the way and frequency of how they are employed (Burt, 1997a, Villena et al., 2011). Nahapiet and Ghoshal refer to the “overall pattern of connections between the actors – that is, who you reach and how you reach them.” (1998, p. 244). If actors from diverse functions encounter multiple channels for interaction and frequently use them, high levels of structural capital are present in an exchange relation. Structural social capital facilitates the exchange of resources (Zaheer and Bell, 2005) and the exchange of reliable and diverse information (Koka and Prescott, 2002, Villena et al., 2011). Empirical findings stress the effect of structural capital on ‘information volume’ and ‘information diversity’ (Koka and Prescott, 2002). Enabling access to diverse and non-redundant information, structural capital becomes beneficial for parties in a relationship, whereas its absence complicates the acquisition of important information (Villena et al., 2011). Consequently, a structured flow of information, the reception of information at the right time, and the possibility to validate this information can be beneficial for partnering entities (Chen et al., 2009; Villena et al., 2011). According to Barney (1991), those structural configurations then allow for the utilization of valuable resources which can eventually result in competitive advantages. Structural capital can have direct and indirect effects on opportunism. The indirect effect refers to structural capital being a condition that allows actors to interact. As such, repeated contacts may directly establish a minimum level of adherence to social norms, whose absence has been found to be an important antecedent of opportunism (Hawkins et al., 2008). Further direct effects result from the intensive exchange of

information which is likely to reduce uncertainty and, importantly, to increase transparency. Transparency, in turn, makes it more difficult for partners to commit opportunism, once there is little hope of it not becoming known (Hartmann and Herb, 2014). In particular in international relationships structural capital was found to be an important antecedent to successful relations and might contribute to reducing opportunistic behavior induced by misinterpretations (Horn et al., 2014). Hence, it can be proposed that:

***H2.1*** *With structural capital present in a buyer-supplier relationship, less opportunistic behavior displayed by buyer / supplier occurs.*

Unlike structural capital, the cognitive dimension of social capital is more difficult to grasp as it includes shared interpretations between entities as well as a common understanding of goals, norms and values (Tsai and Ghoshal, 1998b, Uphoff and Wijayaratna, 2000a). More precisely: “Common values and shared vision, [are] the major manifestation of the cognitive dimension of social capital” (Tsai and Ghoshal, 1998a, p. 466). Consequently, if in an exchange relationship those factors for all parties involved overlap, a high degree of cognitive capital is present. As an outcome, a consensus on strategic goals or processes will then be an advantage for actors within the relationship (Adler and Kwon, 2002, Atuahene-Gima and Murray, 2007). As postulated by Parkhe (1993), similarities in terms of corporate cultures can facilitate corporate success of buyer-supplier relationships. This might even be more the case when geographic factors come into play, with buyers and suppliers located in the same regional cluster (Pulles and Schiele, 2013). Considering the antecedents of opportunism, the lack of norms has been promoted. Shared business values can be interpreted as a form of shared norms of conduct. The presence of cognitive capital is, therefore, likely to reduce opportunism. As such, through the possibility of suppressing opportunism, cognitive capital further comprises a means to decrease monitoring costs and enforce commitment (Ouchi, 1980a). This goes along with the notion that in the absence of shared visions and values, expectations towards the relationship may be different, requirements less aligned and room for misinterpretation large (Hartmann and Herb, 2014). All of this, again, has strong implications for opportunistic action. Finally, if actors have achieved goal congruence, which by definition is the case in the presence of

cognitive capital, there is no reason left to commit opportunistic behavior (Wang et al., 2013a). In fact, goal congruence is further argued to improve the achievement of mutual benefits (Tsai and Ghoshal, 1998b), and thus: Why would actors work against their own goals and the possibility of joint returns? Therefore, it seems fair to postulate:

***H2.2** With cognitive capital present in a buyer-supplier relationship, less opportunistic behavior displayed by buyer / supplier occurs.*

Finally, the relational dimension of social capital, as already implied by its terminology, focuses on interaction-built relationships that entities have developed between each other (Nahapiet & Ghoshal, 1998). Based on Granovetter and Swedberg (1992) concept of relational embeddedness, relational capital is expressed by trust, friendship, and respect between the partners (Kale et al., 2000b), thus being a requirement for effective collaboration. Similar to structural capital, literature suggests a positive effect on resource allocation resulting from the presence of relational capital (Tsai & Ghoshal, 1998; Wasko & Faraj, 2005; Anderson, Lodish and Weitz, 1987). This is the case since trusted actors are expected to comply with the trustee's wishes (Ridings, Gefen & Arinze, 2002). Also commitment, being defined as the durable intention to develop and sustain a buyer-supplier relationship in the long-term (Anderson and Weitz, 1992), is understood to play a role in forming relational capital (Wasko and Faraj, 2005). It is considered a parties predisposition to remain in the relationship due to positive effect, feeling of unity and emotional attachment (Blonska et al., 2013, Palmatier et al., 2007) and consequently underlined as important attribute of relational capital.

As found in literature, relational capital is argued to reduce the risk of opportunism (Kale et al., 2000b). In fact, through built-up trust in a transaction oriented relationship, concerns about opportunistic behavior are fewer and the willingness for behavioral transparency is given (Jarillo, 1988). The main reason for this may be that the presence of trust and respect can increase information flow, both in intensity and quality, thus reducing the risk for opportunism (Hartmann and Herb, 2014). Further, intensive and trusted information exchanges may reduce single-sided dependency, as the relationship deepens and creates more value for both

parties with increased costs for a dissolution (Hartmann and Herb, 2014, Wang et al., 2013a). Hence, it can be proposed that:

***H2.3 With relational capital present in a buyer-supplier relationship, less opportunistic behavior displayed by buyer / supplier occurs.***

The assumed problem of opportunism in a B2B relation, next to its ethic aspect (Hawkins et al., 2013), results from its assumed detrimental effects on the performance of the exchange relation in question. As discussed in the introduction, the trend towards open innovation and the core competence movement increases the relevance of the opportunism problem in business exchange. Therefore, this study tests opportunism's performance implication for joint innovation efforts and the generation of strategic advantages. While there have been ample advantages reported on the benefits of early supplier integration and joint innovation in buyer-supplier relations (Johnsen, 2009). Accordingly, buying firms may profit from supplier contribution through increased performance (Krause et al., 2007, Bernardes and Zsidisin, 2008, Nyaga et al., 2010, Hausman, 2001). As such, suppliers can provide resources including ideas and capabilities that might result in advantages for buying firms which would not have been achieved otherwise (Koufteros et al., 2012, Rungsithong et al., 2017). In this way, suppliers are also able to contribute to the generation of innovations. Since however firms are competing for similar resources in the same supply base, the capability of obtaining better resources from suppliers than competing firms is advantageous (Hunt and Davis, 2008). Consequently, becoming preferred customer of innovative suppliers in order to gain prime access to these resources can be considered critical (Hüttinger et al., 2012).

Contrasting to the positive effects of supplier involvement, supplier obstructionism has also been a phenomenon observed quite often (Freytag et al., 2012, Primo and Amundson, 2002, Zsidisin and Smith, 2005). One of the assumed reasons for failure of suppliers to contribute to innovation is supplier opportunism. If suppliers perceive opportunistic conduct by the buyer, suppliers become less willing to invest in the relationship, which, however, is necessary in the case of innovation generation (Mooi and Frambach, 2012). Suppliers need to make a choice to which buyers they dedicate their scarce resources, such as laboratory time or project

engineers (Schiele, 2012, Ellis et al., 2012a). Noticing opportunistic behavior by a particular buyer may induce its suppliers to show preference to their other customers. Considering the particular need for open and honest interaction in case of joint collaboration projects and the competition buyer's face for the commitment of competent suppliers, this paper positions:

***H3.1** Buyer / supplier opportunism reduces the supplier's contribution to innovation for and with the buyer.*

Eventually, firms strive for achieving a competitive advantage compared to their peers. However, the more they are dependent on partners in order to realize this, the more important it gets to gain privileged access to and full commitment of suppliers. In turn, such as discussed in the introduction, opportunism becomes a factor impeding the generation of a competitive advantage. Lavie (2006) was one of the first authors to understand this link between supplier opportunism and competitive advantages of the focal firm: "...the more opportunistic the firms participating in the alliance are, the smaller the potential relational rents ex ante will be, since firms that recognize potential opportunistic behavior of partners tend to limit the scope of collaboration and knowledge transfer, which are critical to the creation of relational rents..." (Lavie, 2006, p. 646) If a business exchange is characterized by opportunism, firms may not invest enough resources in this relationship, thus eventually preventing it from developing its full potential. Therefore, here it is hypothesized:

***H3.2** Buyer / supplier opportunism reduces the chance to generate strategic advantages out of this exchange relationship.*

Firms that want to stand out must do or own something unique. This admittedly rough definition for the achievement of a competitive advantage was already captured in the basic resource based view (Barney, 1991), arguing that firms must own specific resources as a condition for competitive superiority. Later on extended through a far more relational perspective (Dyer and Singh, 1998), not only the resources of the firm were considered but also resource endowment, having access to resources through alliances, was taken into account. In fact, as proposed by Lavie (2006), the value a firm can attain through employing internal resources is

dependent on complementarities shared with alliance partners. In other words, without networks, partnerships and transactional coordination, the achievement of a competitive advantage is difficult. Accordingly, through inter-firm knowledge sharing and information exchange, alliance partners have the potential to innovate more effectively (Dyer and Singh, 1998, Lavie, 2006). As such, innovative collaboration allows both partners to adapt to and learn about each other's processes (Dyer and Ouchi, 1993). Consequently, new technologies can be accessed or created as well as new capabilities developed (Wynstra et al., 2001). Yet, innovation with partners does not only entail new technologies, it is also of further strategic importance since it provides the chance to commonly map technological trends, allowing companies to match future product needs with technological opportunities (Handfield et al., 1999, Van Echtelt et al., 2008), and thus can lead to a competitive advantage. Therefore, we postulate:

*H3.3 Innovation benefits support the formation of strategic competitive advantages.*

### **3.3 Data collection and analysis**

#### **3.3.1 Sampling: Buyer-supplier relationship assessment from the buyer's perspective**

In order to test the postulated hypotheses, a quantitative approach was chosen. Using a survey is considered most appropriate for a study investigating opportunism since it creates a greater social distance between respondent and interviewer, allowing for a higher tendency of receiving honest answers (Loosveldt and Sonck, 2008). In fact, the presence of interviewers may reduce people's perception of privacy and anonymity (de Leeuw, 1992). As respondents might provide inaccurate information out of fear of being judged negatively by the researcher and in case they feel their privacy is being invaded (Knapp and Kirk, 2003), applying survey research is inevitable. Certainly, on the other hand, not even full anonymity might prevent the occurrence of social desirability biases in all cases (Williams, Hartman, & Cavazotte, 2010). This study is no exception, thus social

desirability needs to be considered when evaluating results.

Before sending the survey to the participants, pre-testing with selected purchasers (Forza, 2009) was conducted with the purpose of ensuring that questions are easily understandable and items are measuring what they are supposed to measure. The pre-test resulted in minor adjustments of the final questions. Invitations to participate in the survey were then distributed among firms exceeding €200 million of turnover and belonging to the German manufacturing industry. In order to ensure generalizability, firms from all sectors were included. Eventually, a sample containing 1000 different firms was used. Respondents were invited to participate in the survey through an e-mail that contained a link to a homepage with the questionnaire, and eventually 84 usable (complete) questionnaires were received. Considering 401 clicks to the homepage, a response rate of 20.9% is comparable to other studies using online survey instruments (e.g. Briggs et al., 2010). The number of clicks can be seen appropriate for calculating the response rate since it clearly indicates the amount of people who actually received the survey information and started filling it through following the link. Compared to using the firm e-mail addresses as calculation basis, which might include errors for e.g. reasons of outdated contact information, or a lack of participation agreements (Kortmann, 2015), the number of clicks is more accurate. As such, it is often applied in web survey research (Sauermann & Roach, 2013). Following the suggestion made by Ulaga and Eggert (2006) who propose to make a distinction between two fundamental dimensions, the respondents assessed an *excellent performing supplier* and a *disappointing supplier*, both of which they had dealt with recently and knew well, and thus filled in the questionnaire twice. Further they were asked to write down the names of these two suppliers on separate sheets of paper and answered the questionnaire for both the suppliers. Therefore, the questionnaires from 84 respondents represented data for 168 buyer-supplier relations. In order to minimize the social desirability bias, in particular concerning the questions on own opportunistic behavior, we maintained the full anonymity of all informants throughout the survey process. To test for non-response bias, we compared the data from early respondents to late respondents, which did not reveal any significant differences (Armstrong and Overton, 1977). Among the respondents, 59.5% were purchasing managers, 34.5% were purchasers, and 6% served in other roles, such as

supply chain managers with constant contact to suppliers. Comparative *t*-tests showed no significant differences between respondents from purchasing functions and other functions with respect to this study's key variables. The average tenure of the respondents was 8.9 years, indicating a highly knowledgeable set of respondents. Concerning the assessed suppliers on average the buying firm was purchasing an estimated 2% (1.2%) of the total turnover of this firm, with which a business relation existed for an average of 14 (10.2) years in the case of excellent (disappointing) suppliers.

### **3.3.2 Measures: Extending existing measures to capture the strategic dimension of a relationship**

Multi-item scales were used to operationalize the variables. A 5-point Likert scale with end points of 'strongly disagree' and 'strongly agree' was set up to measure the items. New items had to be developed for the 'innovation' dependent variable only, assessing not the power of innovation of a supplier per se, but in particular the supplier's willingness to offer innovations to this particular buyer. These items concerned whether the buyer was considered preferred customer or innovation partner, whether the supplier voluntarily shared new ideas with the buyer, and whether suggestions for improvements were instantaneously implemented on the supplier side. The basis for the measures was the preferred customer theory (Hüttinger et al., 2014) implying that achieving a preferred customer status of suppliers can grant buying firms preferential access to supplier technology and innovations, as well as the measures of supplier contribution to buyer-supplier innovation that have been utilized by Pulles et al. (2014b). The measures for structural social capital were taken from Villena et al. (2011), using items such as the frequency of interaction as well as multiple connections on diverse hierarchical levels in order to quantify the variable. As such, the measures refer to communication practices between buyer and supplier, how they are established and how deep they reach. Here it was assumed that e.g. the higher the interaction frequency is the greater is the degree of structural capital that exists. Since the measures were developed based on further acknowledged studies in the field, e.g. Tsai and Ghoshal (1998b), the measures employ a broad foundation and

are considered most feasible for the study at hand.

In terms of cognitive capital the measures used by Villena et al. (2011) as well as Krause et al. (2007) were applied, referring to shared cultures, goals and vision between the buying and supplying party. The authors employ very specific questions to capture the level of cognitive capital, which are thus considered a means to increase the accuracy and deepness in the current study. To formulate it differently, to answer this question the purchasers had to assess whether they and their suppliers are on the same line, whether they share common targets to a greater extent or whether their two firms function according to the same business values.

Lastly in terms of social capital measurement, the measures for relational capital were modelled according to Villena et al. (2011) as well as Lawson et al. (2008). They included the closeness of personal interaction and the existence of mutual respect and trust. Putting it simple, the more trustworthy the purchasers consider their supplier the closer their personal relations are assumed to be and thus the greater the degree of relational capital is.

In order to measure perceived supplier opportunism we relied on a set of measures for ex-post opportunism which have already been applied by several studies, but originally go back to Jap and Anderson (2003), dealing with the suppliers' reaction to occurring problems such as the effort to introduce improvements or the willingness to accept responsibility. Also, providing false information as well as false accusations is part of the measures. Understandably, the perception of e.g. receiving false information implies a degree of opportunism. Further, the fact that these measures have been employed on a greater basis makes it feasible for the study at hand, improving its comparability. When filling in the survey, the purchasers had to refer to past events with suppliers they know well.

The origin of the instrument for the dependent variable "competitive advantage" was again provided by Jap and Anderson (2003). Here we were especially interested to know whether the purchasers consider the relationships with their suppliers as fruitful, whether the relationship could have even resulted in a competitive advantage for both parties. A high value on the measures applied here refers to a high degree of strategic benefits. The measure for buyer opportunism is based on items used by Blonska et al. (2013), which we reformulated to fit not the supplier but the buyer perspective. In particular the purchasers were asked if the

supplier's interests are taken into account when making decisions and whether they were treated with honesty.

Further, several control variables were included in the study. The length of the buyer-supplier relationship (in years) was included, following the suggestion of Coulter and Coulter (2002), who argue that with an increasing relationship length, additional information about the supplier can be accumulated, and the asymmetries can be reduced, which may have an influence on opportunism. Finally the cultural distance of the supplier from the buyer, respectively the awareness of cultural sensitivity in terms of business practices, was included, in order to take into consideration the argument from opportunism research that in particular in cross-cultural settings opportunism may occur (Wang and Yang, 2013). Here it was assumed that culture plays a role for social capital as well as opportunism. The cultural phenomenon of Guanxi for example plays a role in the social context when it comes to buyer-supplier collaboration (Luk et al., 2008) as well as when it comes to opportunism and parties their social ties to hide information and benefit themselves (Leung & Wong, 2001). Except for the single item measures for the controls, the entire measurement model consisted of reflective latent variables.

In order to evaluate the suitability of our measurement model for a subsequent PLS analysis, here the protocol of analysis proposed by Hair et al. (2014) was followed. Thus, several efforts were made to check the reliability and validity of all constructs used for this study. Average variance extracted (AVE), composite reliability (CR) (Fornell and Larcker, 1981, Wetzels et al., 2009b) as well as factor loading (Edwards and Bagozzi, 2000, Hair et al., 2006) were used to evaluate internal consistency and reliability of our constructs, given their reflective nature (Edwards and Bagozzi, 2000).

All values clearly exceeded the required thresholds for composite reliability of 0.7 and an average value extracted of 0.5 (Bagozzi and Yi, 1988, Henseler et al., 2009). Concerning factor loadings, except for one item all loadings exceeded the threshold value of 0.708. In line with Hulland (1999) and Hair et al. (2014) however, the item "buyop\_1" was kept. Next, the discriminant validity was checked. An indicator's outer loading on a construct should be higher than all its cross loadings with other constructs, which was the case with all items used in this study. A more demanding test for discriminant validity is the Fornell-Larcker criterion (Fornell and Larcker,

1981). Accordingly, latent variables more successfully explain their own indicators' variance, if the AVE of a latent variable is higher than squared correlations between this variable and other latent variables. Table 2 shows that the square roots of the AVE scores (in bold on the diagonal) are all larger than the cross-correlation scores. The results collectively provide strong evidence of discriminant validity.

Further, we applied Harman's one factor test (Podsakoff and Organ, 1986) for assessing common method variance (CMV). As the data used in this research was collected with the help of a questionnaire, CMV could possibly affect, the relationships modeled. In order to complete this test, a component factor analysis was performed in which all items were included. Here, the underlying assumption is that CMV would pose a threat, if most of the variance was due to one general factor (Podsakoff and Organ, 1986). In the research at hand, 23.79% was explained by the first factor.

**Table 2: Fornell-Larcker Criterion**

Latent variables	SC str.	SC cog.	SC rel.	Buyer Opp.	P. Supplier Opp.	Inno. Bf	Strat. Bf.	Con. Culture	Con. Length
SC structural	<b>0.887</b>								
SC cognitive	0.451	<b>0.900</b>							
SC relational	0.421	0.676	<b>0.867</b>						
Buyer Opp.	0.198	0.421	0.407	<b>0.765</b>					
P. supplier Opp.	-0.252	-0.643	-0.674	-0.289	<b>0.838</b>				
Innovation Bf.	0.508	0.699	0.635	0.339	-0.513	<b>0.873</b>			
Strategic Bf.	0.374	0.688	0.679	0.364	-0.563	0.700	<b>0.833</b>		
Con. Culture	0.113	0.071	0.065	0.060	-0.045	0.067	0.035	<b>1.000</b>	
Con. Length	-0.252	-0.283	-0.218	-0.163	0.164	-0.222	-0.224	-0.246	<b>1.000</b>

PLS itself, being also used later for analyzing the data, offers another approach to assess a possible common method bias through introducing the variance inflation factor, or VIF. As examined by Kock (2015), the “occurrence of a VIF greater than 3.3 is proposed as an indication of pathological collinearity, and also an indication that the model may be contaminated by common method bias” (p.7). Consequently, the model can be considered free of common method bias, if every factor-level VIF, as a result of a full collinearity test, is equal to or lower than 3.3. In our case, all factors were found well below this threshold of 3.3, with the highest VIF having a value of 2.462 (see Appendix, table 21). Therefore, common method would not pose a threat.

Further, the unmeasured latent methods factors test as described by Podsakoff et al. (2003) was conducted, based on the approach discussed by Liang et al. (2007). A common method variance factor, or common latent factor (CLF), including all principal constructs indicators was introduced. Subsequently, the degree to which the variance of each indicator was explained by the principal construct, also understood as substantive variance, as well as by the common method variance factor was calculated. As shown in table 22 (see Appendix), the substantive variance averaged around 0.731 while the average method based variance was 0.018, resulting in a ratio of substantive to method based variance of 40:1. Following this result, CMV may not be regarded a concern. Finally, we also followed the CLF approach (Liang et al., 2007) and compared the regression weights of the model including the common factor with the regression weights of the model without common factor (see Appendix, table 23), using the standardized PLS values. Since the difference between both weights did not exceed the threshold of 0.2, a common method bias can be considered unlikely. On the basis of good results for the measurement model following all different methods applied, further analysis testing the hypotheses can be performed.

### **3.3.3 Analysis: Testing the hypotheses with the help of a PLS model**

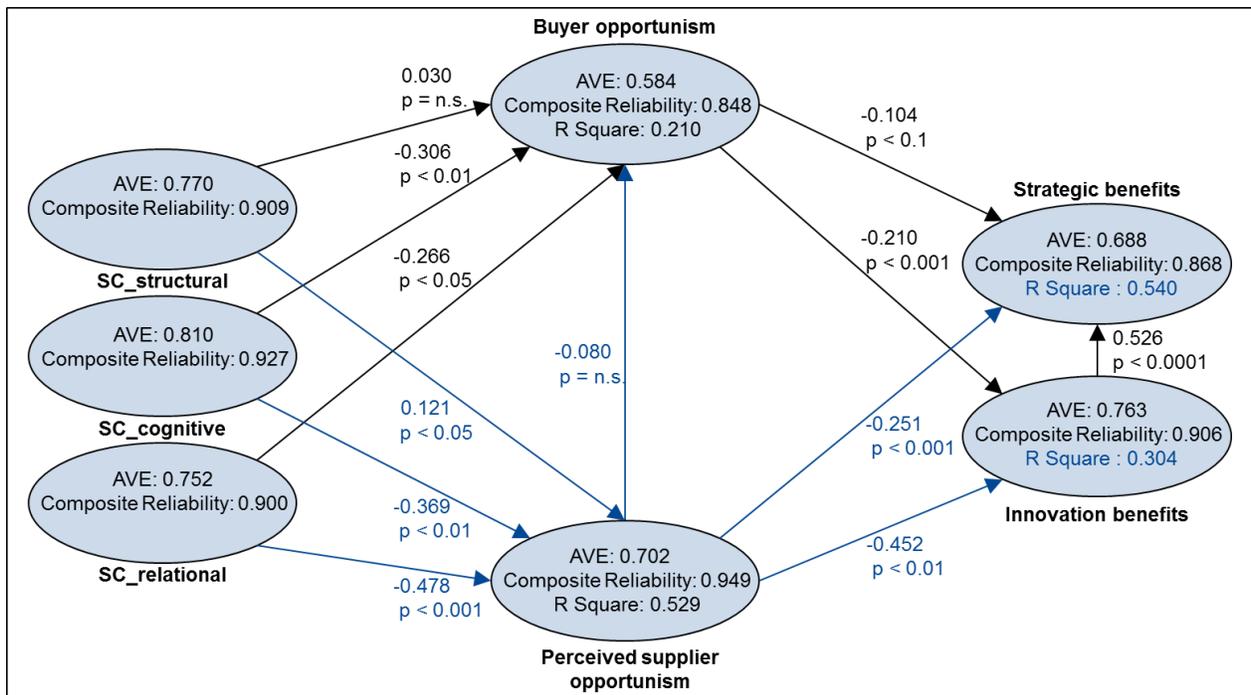
To test the hypotheses, partial least squares structural equation modeling (PLS-SEM) was used (Fornell and Cha, 1994). More specifically, we used SmartPLS software (Ringle et al., 2005), which is a well-known software package in this field.

Its application in marketing as well as operations and supply literature has become quite widespread and promising for the assessment of success drivers of certain target constructs in recent years (Hair et al., 2011, Peng and Lai, 2012). Yet, arguably, PLS has not been entirely free of criticism: Roenke and Evermann (2013) for example, amongst others, point out that PLS is often used for wrong analytical purposes, does not have the capabilities to estimate smaller sample sizes and incorporates a publication bias for positive results. Though, in an attempt to investigate the critics, Henseler et al. (2014) manage to successfully reject them and eventually consider PLS a useful addition to the “statistical toolbox” (p.202). As such, we proceed with this method. Though, in order to validate the results, we will apply a multiple regression analysis based on OLS next to it.

Compared to covariance-based SEM techniques, model complexity, as used in our study, does not pose a severe restriction to PLS, since PLS modeling at any moment only estimates a subset of parameters (Wetzels et al., 2009a). Also, through estimating the parameters in the model, PLS is well equipped to prevent constraints of co-variance based structural equation models (Bagozzi and Yi, 1989, McDonald et al., 2002). Working through a series of regressions, the sample size requirement for PLS does not differ from regression analysis. For this reason, it is fair to argue that results offered by PLS are robust, even if smaller sample sizes are given. PLS researchers often determine the minimum sample size to be ten times the largest number of structural paths that lead to any endogenous variable (Henseler et al., 2014). Our sample size of 168 well exceeds this minimum requirement. Further, Monte Carlo simulations have revealed PLS to offer more accurate estimates for samples smaller than 250 cases, which fits to our case (Reinartz et al., 2009). Since PLS-SEM is generally more favorable with smaller sample sizes and more complex models, we opted for its application in the present analysis. A limitation of PLS is the so-called “PLS-bias”, which refers to this method’s slight overestimation of the measurement model and underestimation of the relationships in the structural model, which has to be taken into account when discussing results (Hair et al., 2014).

The primary evaluation criteria for the structural model in PLS-SEM are the  $R^2$  measures. With all  $R^2$  exceeding 0.206 the predictive validity within the model is high. Hair et al. (2011) underline in this context that the judgment of what  $R^2$  level

is high depends on the specific research discipline. For instance,  $R^2$  results of 0.20 are considered high in disciplines such as consumer behavior. In that regard, significance is one aspect of analysis, and the effect size is another often neglected, but highly relevant, issue in what has been termed “customer centric science” (Aguinis et al., 2010). To assess the effect size, we used Cohen’s effect size test, and we report the resulting  $f^2$  below (Cohen, 1988). Bootstrap re-sampling (Nevitt and Hancock, 2001) with replacement using 5000 rounds was used in order to assign measures of accuracy to our sample.



**Figure 7: Research model – Results**

Hypothesis 1 referred to the link between buyer and supplier opportunism. Contrary to the expectations, no significant relation was found ( $\beta = 0,08$ ;  $p = n. s.$ ). Apparently, the perception of supplier opportunism did not lead to the same behavior by the buyers. In order to verify this result and shed more light on the link between buyer and supplier opportunism we further conducted a multi-group analysis (Sarstedt et al., 2011): As such, we split our sample into two groups of which the first one included respondents reporting on a high level of perceived

supplier opportunism, while group number two only contained those respondents that did not, or only to a small extent, perceive opportunistic actions from their supplier. Subsequently, the two data groups were loaded into the PLS algorithm in order to examine whether there is a statistically significant difference between group one and two. Following our hypothesis, the group experiencing a high degree of supplier opportunism should also respond with a higher degree of buyer opportunism. After re-running the algorithm, results however indicate a non-significant difference between both groups; in other words, the degree of reported buyer opportunism was not significantly higher for group one than for group two. Ergo, supplier opportunism per se does not seem to possess enough explanatory power to give rise to buyer opportunism.

In terms of social capital and its relation to opportunism, most hypotheses find support, one exception being the path from structural capital to buyer opportunism ( $\beta = 0,030$ ;  $p=n.s.$ ). Further, structural social capital was found to be weakly, but significantly related to supplier opportunism ( $\beta = 0,122$ ;  $p<0.05$ ;  $f^2= 0.023$ ), however with a different than expected sign. Hypothesis 2.1, thus, does not find support in this sample. Concerning the interaction effects cognitive social capital was found to have a negative effect on buyer opportunism ( $\beta = -0,306$ ;  $p<0.01$ ;  $f^2= 0.056$ ) and likewise on supplier opportunism ( $\beta = -0,369$ ;  $p<0.01$ ;  $f^2= 0.152$ ). Both paths are highly significant, lending support for Hypothesis 2.2. Hypothesis 2.3 on the negative effect of relational capital on buyer ( $\beta = -0,266$ ;  $p<0.05$ ;  $f^2= 0.033$ ) and on supplier opportunism ( $\beta = -0,478$ ;  $p<0.001$ ;  $f^2= 0.244$ ) found support. In particular, the presence of relational capital quite strongly explains the absence of supplier opportunism (and vice-versa).

The expected performance effects of opportunism on innovation found some support, both for their link from the buyer's perspective ( $\beta = -0.210$ ;  $p<0.01$ ;  $f^2= 0.06$ ) as well as from the supplier's opportunism ( $\beta = -0.452$ ;  $p<0.001$ ;  $f^2= 0.270$ ), lending support to hypothesis 3.1. Results indicate that opportunism has a medium strong effect on innovation performance of the supplier. The expected performance effects of opportunism on strategic advantages (hypothesis 3.2) found partial support, only: while the path from supplier opportunism to strategic benefits is quite significant ( $\beta = -0.251$ ;  $p<0.001$ ;  $f^2= 0.096$ ), the direct influence of buyer opportunism on strategic benefits was found to be weak ( $\beta = -0.104$ ;  $p<0.1$ ;  $f^2=$

0.020). Hypothesis 3.3, finally, was strongly supported ( $\beta = 0.526$ ;  $p < 0.0001$ ;  $f^2 = 0.420$ ). Innovation benefits strongly explain the achievement of strategic benefits, the path not only being highly significant, but also showing a large effect according to Cohen (1992).

In order to verify the PLS results introduced above we employed an additional regression analysis based on OLS using IBM SPSS 23. Not surprisingly, the output did not differ in terms of path significance. The detailed correlations can be found in table 3.

**Table 3: PLS vs. SPSS correlations**

<i>Paths</i>	<b>PLS Calculation</b>		<b>SPSS Calculation</b>	
	<i>Beta Coefficients</i>	<i>p-Value</i>	<i>Beta Coefficients</i>	<i>p-Value</i>
Structural Capital → Buyer Opportunism	0,030	> 0,1 – n.s.	0,036	> 0,1 – n.s.
Structural Capital → P. Supplier Opportunism	0,121	< 0,05	0,113	< 0,001
Cognitive Capital → Buyer Opportunism	-0,306	< 0,01	-0,315	< 0,005
Cognitive Capital → P. Supplier Opportunism	-0,369	< 0,1	-0,387	< 0,1
Relational Capital → Buyer Opportunism	-0,266	< 0,05	-0,238	< 0,05
Relational Capital → P. Supplier Opportunism	-0,478	< 0,001	-0,451	< 0,001
P. Supplier Opportunism → Buyer Opportunism	-0,080	> 0,1 – n.s.	-0,065	> 0,1 – n.s.
Buyer Opportunism → Strategic Benefits	-0,104	< 0,1	-0,107	< 0,05
P. Supplier Opportunism → Strategic Benefits	-0,251	< 0,001	-0,237	< 0,001
Buyer Opportunism → Innovation	-0,210	< 0,001	-0,206	< 0,005
P. Supplier Opportunism → Innovation	-0,452	< 0,01	-0,446	< 0,001
Innovation → Strategic Benefits	-0,526	< 0,0001	-0,573	< 0,005

Next to verifying our hypotheses, we also tested for mediation. As such, we checked whether buyer and supplier opportunism might potentially mediate the effect of structural, cognitive and relational capital on innovation benefits and strategic benefits. In order to do so we performed another bootstrapping analysis using again SmartPLS and examined the indirect effects within our model. While buyer opportunism did not prove to mediate the relationship between the three social capital dimensions and innovation respectively strategic benefits (with all p-values >0.1), the indirect effects through supplier opportunism were all significant (see Appendix, table 26). Consequently it is fair to postulate that perceived supplier opportunism is indeed taking a mediating role.

### **3.4 Discussion, contribution and limitations: The mediating role of perceived opportunism**

This paper departed from three research questions: Is supplier opportunism countered by buyer opportunism? Are there be common antecedents to both, buyer and supplier opportunism? And: Would there be an effect of buyer and supplier opportunism on the generation of innovation and a strategic advantage? In order to answer these questions, a survey with a sample of buyers was conducted employing social capital measures.

Concerning the first question on the coincidence of buyer and supplier opportunism the data of this survey did not lend support. Apparently, in our sample many cases exist in which only one party acted opportunistically. Still, the fact that in some cases buyers reported to have acted opportunistically themselves is intriguing and has not be found in prior research. With regard to the second research question, with the help of social capital theory a common set of antecedents could be identified, explaining both buyer and supplier opportunism. While structural capital appeared to be less important, the existence (or not) of cognitive and relational capital could be a good predictor of opportunism. As such, while the answer to the question of why buyers act opportunistically cannot be directly linked to the perception of supplier opportunism, underlying factors described by the presence (or absence) of cognitive and relational capital well play a role. Finally,

considering the third research question, this study confirmed the detrimental effect opportunism has on the performance of the buyer-supplier relationship in question, highlighting the mediating role suppliers' contribution to joint innovation plays.

This study contributes to research and practice in a variety of ways. Previous studies on opportunism in buyer-supplier relations were mostly transaction cost oriented, thus neglecting the behavioral aspects of exchange processes. Introducing social capital theory revealed to be a rewarding amplification of the perspective. Next, most research up till now was focused on explaining supplier opportunism, only. This study contributes by analyzing both sides of the interacting dyad. Finally, this research closes a research gap by not only explaining the occurrence of opportunism but by also testing its performance outcomes. Accordingly, this study contributes to the opportunism literature, social capital theory development and to the management of buyer-supplier relations particularly in a number of ways:

(1) A first remarkable result of this study is the non-significance of the relation between supplier and buyer opportunism. Both variables are normally distributed, i.e. the analyzed sample does contain cases of self-reported buyer opportunism, the first finding of its kind. As such, it is rather surprising that also the conduction of a multi-group analysis, distinguishing between two groups reporting on high and low degrees of perceived supplier opportunism, did not provide different insights. Apparently, perceiving opportunistic behavior from their suppliers does not immediately trigger an opportunistic action from the buyer side as response. Thus, the question arises, as to why buyers sometimes (have to) accept apparent opportunism by their suppliers. Effective supplier monopolies could be an answer (Steinle et al., 2014). Another aspect, already mentioned by Williamson comes to mind: sometimes tolerating opportunism may be cheaper than sacrificing the benefits the relation is still generating. Certainly though, this might also be dependent on the actors themselves: Being not fully rational, the question arises whether they are able to foresee opportunistic actions and prepared to react upon them? Also, simply perceiving opportunism might not be sufficient to, if anything, justify opportunistic counter-actions; buyers might not possess complete and reliable facts strengthening their perception. By itself, this finding adds to a realistic

description of the reality of buyer-supplier interaction, which in academic research sometimes appears to be rather collaboration oriented.

- (2) Social capital theory has shown to contribute to understanding opportunism, such as conceptually suggested, among others, by Hartmann and Herb (2014). This has implications for opportunism research asking to extend this line of reasoning, therewith paving a path to close the “behavioral gap” in operations research in general and in opportunism research in particular. This study’s findings support and extend the first empirical results on social capital theory’s contribution to opportunism research (Wang et al., 2013a, Kim et al., 2012). Thus, why does a buyer act opportunistically? Based on our findings, not as a reaction to perceived supplier behavior, but because of underlying factors in the relationship with its supplier, which can be described by social capital theory in form of cognitive and relational social capital. Next to this, our study also contributes through outlining a mediating role that opportunism can play on the relation between social capital and innovation and strategic benefits. Interestingly, however, this mediation effect only holds true for perceived supplier opportunism, whereas the mediating role of buyer opportunism was found to be non-significant. Apparently buying firms regard their own opportunistic actions as less severe for achieving innovative and strategically important output through the relation with their suppliers. The perception of supplier opportunism on the other hand is considered by buying firms to inhibit or reduce the positive impact of a relationship based on accumulated social capital that has been described by for example Krause et al. (2007). This finding can also be set in relation to the results of (Zhu et al., 2017) arguing that supplier opportunism is taking a mediating role between business ties and firm performance. An explanation for this might be that buyers are more outside focused and put more emphasis on managing their suppliers than assessing the impact of their own actions: As such, once perceiving supplier opportunism throughout the relationship with the supplier, buying firms feel the need to act and observe more carefully, hence limiting possible benefits (Mooi and Frambach, 2012). All in all, and as outlined before, whereas the emergence of opportunistic actions can be described through social capital, opportunism (or in our case perceived supplier opportunism) mediates the relation between social

capital and innovation and strategic benefits, thus potentially outlining two sides of the same coin. As such, our findings nicely complement the research of Zhu et al. (2017).

- (3) As opposed to Wang et al. (2013a) in the present sample structural capital did not reveal to be a good explanatory antecedent to opportunism. A reason for these contradictory findings could be found through taking a closer look at the operationalization of that variable: while Wang et al. focused on the positive aspects of interaction, the measure used in this research more neutrally asked respondents to describe frequency and anatomy of the interaction on different levels and among different functions. On the one hand, there may be cultural issues involved here: while in China (the locus of Wang et al.'s study) gifts are still allowed, Europe and even stronger the United States saw a sharp decline in the acceptance of such business practices. On the other hand, the difference in results may lead to a suggestion, which extends beyond this particular study and refers to the application of social capital theory in general. In future research it might be beneficial to split the assessment of structural capital into three variables. Here, an idea that could be tested is to firstly assess the (1) infrastructure available for actor exchange (institutional chances for interactions, such as regular review gatherings, steering committees as well as physical proximity and the availability of electronic exchange mechanisms). Subsequently, research could proceed through capturing the (2) quantity and intensity of the interaction (similar to the measure used here), and finally advance through evaluating the (3) nature of communication (such as socializing and friendship fostering, like the Wang et al. measures, or, possibly, trouble-fighting or even spiteful communication). Extending the idea of a further differentiation in measuring social capital, it might also be worthwhile to split the assessment of cognitive capital into two variables: shared values / adherence to same norms in general and overlap of common objectives for this particular project / exchange. Such a split could make conceptually sense (for instance, in regional clusters common norms may be more easy to find, which still does not mean that all inter-cluster exchange projects have the same targets (Pulles and Schiele, 2013a, Rutten et al., 2010)). From the perspective of opportunism research, which was shown to be fruitfully linked to social capital theory, a split

pays tribute to the clear distinction between norms and goal congruence found in opportunism studies (Wang and Yang, 2013). Finally, relational capital could be assessed by measuring trust and commitment separately. This would make particular sense if competitive advantages resulting out of the buyer-supplier relation are to be assessed, which present findings encourage to do.

- (4) From a managerial perspective, findings of this study do have a couple of implications. Building up cognitive and relational capital is likely to be a tool to reduce the danger of opportunism – both with the partner firm, as in the own organization. Practically, the importance of cognitive capital, i.e. shared norms, may ask to re-evaluate global sourcing activities. In fact, also from a marketers' perspective, this would imply that in terms of preventing opportunistic behavior, local sourcing activities might be favored. Marketers would thus have to balance global and local sourcing practices and consider whether e.g. cost advantages, that can come along with global sourcing, are preferred over local sourcing, which might bear fewer risks relating to buyer-supplier opportunism. The importance of shared goals, then, could be addressed by investing substantial time to jointly develop goals, targets, objectives specific to the particular relation, such as exercised during the partnering movement in the 1990s (Macbeth, 1994).
- (5) This study is the first to measure opportunism's performance impact on strategic benefits and on supplier's innovation contribution. The newly developed innovation measure proved to be strongly mediating between opportunism and achievement of competitive advantages. Introducing innovation benefits as variable increased the  $r^2$  of the competitive advantage measure by 0.2 to reach a very high value of 0.54. This has at least three implications: For innovation research the encouraging relevance of the new measure asks to explore the strategic content of collaborative innovation decisions more thoroughly. For strategic management these findings indicate that a stronger link to innovation as determinant of competitive advantage may be worth the effort. And for opportunism research this finding shows the fundamental impact opportunism has on innovation generation, which in the present study, exceeds the direct impact on competitive advantage generation.

Of course the limitations of this study have to be acknowledged as well. For instance, data have been collected just from the buying side and not from the supplying side with a relatively small sample of 84 participants. With regard to the accuracy and objectivity of the result, a dyadic and more extensive research design would have allowed coupling and comparing the answers from two sides. Thus, since the latter was not possible, opportunistic behavior by the supplier is measured here as a perception of the buyer. However, the behavior the supplier displayed might have other causes than selfish intention, for instance incompetence. Also, other reasons for opportunistic behavior could have played a role, such as strong cost pressures or simply a change in persons involved. Findings should therefore be considered as preliminary. Furthermore, as discussed above, it could be that the traditional measurement of social capital employed here is culturally sensitive. Instead of assuming a global transferability of our findings - in countries with distinctively different non-Western cultures - findings should be validated taking cultural differences into account. Based on Wang et al.'s study (2013a) China would be a typical candidate for being looked upon carefully. Finally, the existence of a social desirability bias cannot be completely excluded. Even though a maximum degree of anonymity was guaranteed through the usage of an online survey tool, the risk of answering questions in a socially desirable way might still be present to a certain extent. This then could explain the lack of evidence for hypothesis 2 and worth a further analysis in the future.

## **CHAPTER 4: REPLACING GLOBAL SOURCING WITH DEEP LOCALIZATION – THE ROLE OF SOCIAL CAPITAL IN BUILDING LOCAL SUPPLY CHAINS**

With globalization still on the rise firms proceed building their global supply bases in order to defend or improve their position against domestic as well as international competitors. However, when focusing on low-cost countries this picture turns reverse. Caused by government policies as well as purchasing strategies employed, more and more firms decide to shift their focus from global to local sourcing. Some firms even go as far as establishing entirely local supply chains, a strategy also understood as deep localization. Drawing on social capital theory, we examine the role that social capital pillars can play for the successful outcome of deep localization projects. Here, we make use of the unique situation that deep localization offers and focus on social capital in network relationships. Through applying case study methodology, we compare successful and non-successful cases, analyzing data from an automotive OEM as well as 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers. Results indicate that social capital can have a facilitating effect. The study extends literature on global sourcing and social capital theory and suggests important implications for research and practice.

## **4.1 Introduction: Moving from global sourcing to local sourcing by following a deep localization approach**

Global sourcing, generally understood as sourcing goods from suppliers on an international scale (Schiele et al., 2011a), gained increased importance throughout the last decades (Quintens et al., 2006). As a result, due to the high degree of outsourcing activities, firm dependence on value creation executed by suppliers is rising simultaneously (Quesada et al., 2006). The focus of the study at hand discusses a different perspective: In contrast to global sourcing, domestic or local sourcing has often been considered the lowest and least sophisticated level of sourcing strategies (Trent and Monczka, 2003b). As firms develop and progress they tend to move away from purely local sourcing strategies towards more globally oriented approaches for purposes of defending their current market position or achieving advantages over competitors (Conner and Prahalad, 1996). For multi-nationals operating in low-wage countries, such as China, the picture looks different. Here, more and more foreign, though locally established, firms increase their efforts to integrate domestic suppliers into their sourcing activities, be it to satisfy local content requirements, as part of their regional strategy (Lockstroem et al., 2010), or, generally speaking, to deal with common risks associated with global sourcing (Trent and Monczka, 2005, Tsai et al., 2008). In our study, the shift from global to local suppliers and, with it, the replacement of internationally produced parts with domestic items is understood as localization. Literature, however, has barely touched upon this topic and is arguably scarce. Consequently, firms miss guiding lines on how to successfully localize. In the broad field of economics, localization appears as firm relocation in changing industry settings (Meyer et al., 2012). As such, it can also be linked to foreign direct investment and location choice (Rasiah et al., 2008, Bohnenkamp and Schiele, 2017). Further, the notion of localization is also found in human resource and organization studies, focusing on replacing foreign human capital, i.e. global expatriates, by local labor (Fryxell et al., 2004, Lam and Yeung, 2010). Sourcing theory, though, has not paid much attention to localization of components, let alone sub-components. Eberhardt and colleagues (2004) conduct one of the few studies emphasizing component localization. In their research, the authors discuss internal

and external factors that foster or inhibit localization attempts. More recently, the concept of re-shoring or back-shoring (Ellram et al., 2013c, Foerstl et al., 2016, Bals et al., 2016) has gained increased attention, with firms re-focusing on domestic markets for e.g. cost and efficiency reasons. Re- or back-shoring, however, would assume the previous conduction of off-shoring activities that might not be found in the case of low-wage countries. Consequently, it is fair to summarize that even though current literature has established a basic picture of localization, it still lacks the understanding of how localization is actually conducted. In the study at hand we in particular focus on localization of the supply chain and, with it, of domestic sub-components, involving a triad of 1<sup>st</sup> tier as well as 2<sup>nd</sup> tier suppliers. In our study, this highly in-depth form of local sourcing, the integration of domestic sub-tier suppliers into localization activities is defined as *deep localization*. This “depth” that we refer to draws the distinction from localization as described before: While localization puts emphasis on establishing a local first-tier supplier portfolio, deep localization goes even further by attempting to implement the whole supply chain locally, starting from material extraction up to component assembly. This however comes with increased difficulties, since firms at the end of supply chains can barely dictate their suppliers which sub-suppliers to select. Naturally, the following research question arises:

*How is deep localization conducted, how can global sourcing be replaced with domestic sourcing?*

The concept of deep localization only functions if suppliers are found that satisfy the standards set by firms. This is in particular critical in industries characterized by a strong network structure and reliance on capable suppliers (Wagner et al., 2009). If satisfying suppliers cannot be found, deep localization remains an ambitious but rather ineffective procedure. When considering triads between buyer, supplier and sub-supplier, the challenges even increase. Since a lacking skill-set among low-cost country suppliers still seems to be rather common than exceptional, the employment of collaborative capabilities becomes a key factor in dealing and building relationships with suppliers (Lockstroem et al., 2013). The question arises if there could be any theoretical approach from which to borrow in order to explain deep localization. From the theoretical perspective, social capital theory has been

considered for studying relationships between individuals and organizations (Ahuja, 2000; Tsai and Ghoshal, 1998). In fact, as argued by Hughes and Perrons (2011), the exchange of resources can be facilitated through developing social capital within the relationship between buyer and supplier. Employing social capital theory for examining the relationship perspective during deep localization procedures could thus be fruitful for explaining successful outcomes. As such, a second research question can be postulated:

*How does the presence (or absence) of social capital explain success of deep localization activities?*

Answering these two research questions, our study will contribute to two research streams:

(1) Through outlining a systematic process for deep localization, the study gives insights into how firms in low-cost countries can actively pursue their localization strategy. Here, we will in particular discuss the importance of the relation between OEM and 1<sup>st</sup> tier as well as 2<sup>nd</sup> tier suppliers. With mirroring global sourcing theory, deep localization, following a reverse approach by applying local sourcing only, will add to the existing stream of sourcing literature.

(2) Contrary to the mainstream of existing literature on social capital in buyer-supplier relationships focusing on dyadic relationship settings (Carey et al., 2011), (a) this study examines social capital in a triad or network composition. Since past research has already suggested that a purely dyadic focus on social capital could be too narrow (Whipple et al., 2015), we therefore intend to fill a research gap. Next to this, (b) further research has proposed that there might be differences between how organizational outcomes are affected by social capital and where parties are positioned in the supply chain (Preston et al., 2016). Through utilizing the unique situation of deep localization, involving multiple tiers, our study will also look into this proposition. Finally, (c) we will take a closer look at the current operationalization of social capital found in literature. Here, the initial conceptualization of Nahapiet and Ghoshal (1998) and, based on it, applications of Carey et al. (2011) as well as Villena et al. (2011) seem to have emerged as the standard set of measuring social capital. Though, whether these measures truly grasp the full scope of social capital is arguable. Following Carey's (2011) call for

a refinement of measurements, the paper at hand utilizes its case study methodology in order to propose extended items.

The study will be organized as follows: Firstly, literature on the limitations of global sourcing is presented as the basis for deep localization. Subsequently social capital as explanatory variable is introduced. In the following, through analyzing a successful and a non-successful case, the concept of deep localization is discussed and the impact of social capital in a triad or network relationship on the project outcome explored, followed by a discussion of the research findings.

## **4.2 Theoretical considerations**

### **4.2.1 Global Sourcing vs. deep localization: Local advantages over global expansion**

Global sourcing has gained increased significance throughout the last decades, being defined as “purchasing potential on a worldwide level” (Arnold, 1989, p.26) or sourcing of goods and items on an international scale (Schiele et al., 2011a). Advantages mentioned in literature are numerous, including amongst others the creation of cost savings (Monczka and Morgan, 2000, Tsai et al., 2008), the access to possibly better quality and the introduction of competition for the domestic supply base (Trent and Monczka, 2003b) or access to new technologies and markets (Ettlie and Sethuraman, 2002).

Predominantly driven by cost reasons, companies in many industries abandoned their local-for-local focus and started to pursue global sourcing approaches, shifting attention towards low-cost countries (Christopher et al., 2011, Monczka and Morgan, 2000). Next to the benefits involved, however, global sourcing can also entail a number of obstacles: As such, global sourcing increases the lengths of supply networks and makes them more complex through involving more partners (Christopher and Peck, 2004). For this reason, global supply chains are far more difficult to handle than local ones (MacCarthy and Atthirawong, 2003). Several other challenges arise with sourcing on a global scale: Cho and Kang (2001) distinguish between four factors, including (i) regulations such as quotas and trade restrictions, (ii) logistics due to possible transport delays, (iii) cultural differences in

terms of language, customs or even business practices, and (iv) exchange rate instability. Others add that predicted increases in terms of production efficiency might be offset by lower quality (Trent and Monczka, 2005, Axelsson et al., 2005). Horn et al. (2013) point to the total cost of a global sourcing move to be considered a priori, since failures to realize expected benefits often result in expensive back-sourcing activities.

Having discussed these limits (Steinle and Schiele, 2008) that come along with global sourcing, abandoning ambitions of sourcing globally for strong, competitive domestic supply bases might not seem too far-fetched. This could in particular be the case in buyer-supplier projects that require close collaboration, as the value of social relationships is gradually lost with increasing distance, indicating that local suppliers should be preserved (Sorenson and Baum, 2003). Also, local supply chains are seen to be more agile and responsive, which can be advantageous under periods of demand fluctuations (Jin, 2004). Going as far as Porter (1990, p.103), “having a competitive domestic supplier industry is far preferable to relying even on well-qualified foreign suppliers”. If companies are located in a region or even nation that are in the position to achieve a critical density and quantity of suppliers, those companies are able to offset competitors with different locations (Brenner, 2004), as there is no immediate need to source from abroad.

#### **4.2.2 Social capital: Cognitive, structural and relational capital as basis of buyer-supplier ties**

Having its origins in sociology, social capital is understood as goodwill available to individuals or groups, being grounded on social relations (Adler and Kwon, 2002). In this sense, social capital refers to resources available to a network of relationships, be it of actual or potential nature, and accounts for contextual factors in which resource exchange takes place (Nahapiet and Ghoshal, 1998a, Kankanhalli et al., 2005a). These however are not of physical kind but contained in the relations between actors, thus implicating social ties that are difficult to imitate, potentially generating a competitive advantage (Edelman et al., 2004). During the last decade, social capital theory has gained increased attention among scholars (Krause et al., 2007; Lawson et al., 2008). As such, it has been considered for studying

relationships between individuals and organizations (Ahuja, 2000b, Tsai and Ghoshal, 1998b), or at more recent and specific state in the field of supply chain management focusing on buyer and supplier interactions (Hartmann and Herb, 2014, Horn et al., 2014).

Social capital can be further divided into its dimensions as described by Nahapiet and Ghoshal (1998) and validated by Hartmann and Herb (2014). They distinguish between (1) cognitive capital, such as shared visions and interpretations firms have of the relationship, (2) relational capital, including trust that strengthens the relationship, as well as (3) structural capital, referring to links and social ties that exist between firms (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). As pointed out by Schiele et al. (2015), while taking the supplier perspective, a high level of these dimensions being present can be positively associated with a higher degree of satisfaction. In literature there further seems to be the consensus on the positive effect of these dimensions on performance outcomes (Roden and Lawson, 2014, Gelderman et al., 2016, Matthews and Marzec, 2012). Some studies also consider cognitive and structural capital as antecedents of relational capital (Carey, 2011; Horn, 2014; Preston et al., 2016). The next sections will consider the dimensions individually.

#### ***4.2.2.1 Cognitive capital: Sharing mind-sets and values as important sourcing attributes***

The cognitive dimension of social capital refers to common values and visions that relationship partners share (Tsai & Ghoshal, 1998). Underlying these are shared interpretations, such as language, or common goals in terms of norms and beliefs which contribute to the understanding of the social system (Tsai and Ghoshal, 1998b, Uphoff and Wijayarathna, 2000b). In other words, having a similar mind-set greatly increases the level of cognitive capital. Relating this to industries, the latter is especially the case if buyer and supplier share the same business values and goals. In that case, the presence of cognitive capital provides key benefits through enabling a consensus on strategic goals and processes that both parties might nourish and prosper from (Atuahene-Gima and Murray, 2007, Adler and Kwon, 2002). More recently, Roden et al. (2014), while examining the configurations of

the social capital dimensions, provide evidence that relationship adaptations might substitute for cognitive capital. In terms of sourcing, cognitive capital can be expected to positively affect the outcome (Horn et al., 2014). In particular in sourcing projects that require the collaboration of buyer and supplier, cognitive capital has value: Goal congruency and shared values, as implied by cognitive capital, can foster success of individual alliances through creating common interests (Coleman, 1994). Since naturally a common interest for firms is the achievement of targets, cognitive capital can bound parties together. Also, cooperating with suppliers that share same visions due to natural empathy is easier than with those whose ideals firstly have to pass through assimilation (Skipper et al., 2008). Consequently, it is fair to postulate that also deep localization might benefit from a certain level of cognitive capital being present for a successful outcome.

#### ***4.2.2.2 Structural capital: The right structures as basis for information exchange***

Within the social context of relationships, patterns of connections between parties exist. These patterns of connections are understood as structural capital which defines how they can be used and how frequent they occur (Burt, 1997b, Villena et al., 2011), or, as Nahapiet and Ghoshal (1998) put it, “who you reach and how you reach them” (p. 244). Following this logic, the level of structural capital can be characterized as high if relationship partners encounter and use multiple channels of interaction. In this way the exchange of information can be facilitated (Koka and Prescott, 2002, Villena et al., 2011) and the exchange of resources improved (Zaheer and Bell, 2005). In other words, the common usage of resources is enhanced through clarity, transparency on actions and processes fostered by a strong and consistent flow of information. This is stressed by empirical findings reporting the positive effect of structural capital on “information flow” and “information diversity” (Koka and Prescott, 2002). Consequently, the existence of structural capital benefits the relationship whereas its absence has negative consequences (Villena et al., 2011). Relating this to sourcing theory, structural capital is understood to positively impact success of common sourcing projects (Horn et al., 2014). Structural capital can help buyer and suppliers to overcome

communication barriers through providing structures and means upon which to interact and share information, being considered as one of five building blocks characterizing a solid buyer-supplier relationship (LaLonde (1998). In fact, especially dense network structures are seen to be beneficial, fostering information exchange (e.g. Villena et al., 2011), creating transparency within projects. As transparency could support in reviewing project progress and with it identify problems, the presence of structural capital could also become an important issue in terms of deep localization.

#### ***4.2.2.3 Relational capital: Trust and commitment eases the access to resources***

Relational capital is expressed by trust, friendship and mutual respect between the partners (Kale et al., 2000a). The content is based on the works of Granovetter and Swedberg (1992) focusing on embeddedness and relationships people have developed with each other, and considered as being closely connected to the dimensions of structural and cognitive capital. Arguably, if parties in a relationship share common business goals and ideas as well as holding a dense net of interactions, relational capital might be more likely to develop (Tsai & Ghoshal, 1998b). Since both parties are expected to regard each other as more trustworthy than those with whom they do not have any commonalities, the finding is comprehensible. In the same way, a relationship based on trust requires frequent interaction and the means to do so. Interestingly, if trust and commitment are present, the information flow and intensity are increased (Hartmann and Herb, 2014). Also in terms of sourcing, relational capital can be considered of importance (Horn et al., 2014). According to Villena et al. (2011), a trusting and collaborative relationship enables firms to gain access to and leverage resources provided by suppliers. This is in particular the case when the relationship is considered “strategic” (Maloni & Benton, 1997; Das Narasimhan & Talluri, 2006). Following this, without trust and commitment a relationship would stay superficial and the fulfilment of deep localization would be difficult to achieve.

#### ***4.2.2.4 Social capital operationalization: Current measurements miss in-depth focus***

Initially conceptualized by Nahapiet and Goshal (1998), many studies have followed their lead of operationalizing social capital through a further distinction into cognitive, structural and relational dimensions (Kale, 2000; Lawson, 2008; Villena et al. 2011, Carey et al, 2011, Gelderman et al, 2016 etc). Here, cognitive capital is often measured by focusing on whether or not relationship partners share norms, values, goals and visions. In terms of structural capital, research in particular puts emphasis on the frequency of interaction within a relationship at multiple levels. As such, respondents are asked whether interaction between both parties, between various departments or between various levels is promoted. Finally, for measuring relational capital prior studies focus on characteristics of the relationship, considering the existence of trust, friendship or mutual respect between parties involved.

What most studies have in common is the fact that they operationalize the social capital dimensions as second order factors and measure them. This however has the clear disadvantage that a broad theoretical concept, as is social capital, is given a focus which might not grasp the complete pictures and would lead to a lack of measurement accuracy and precision. Conceptually, though, it would make sense to further split the assessment of the dimensions into single variables and conduct an individual measurement. This would allow the social capital operationalization to account for a more sufficient scope.

Following this, we suggest differentiating cognitive capital as two variables: shared values / adherence to same norms in general as well as overlap of common objectives for this particular project / exchange. Such a split would be reasonable since, for instance, in regional clusters, common norms may be more easy to find, which however still does not imply that all inter-cluster projects have the same targets (Pulles and Schiele, 2013b, Rutten et al., 2010). This would also pay tribute to the perspective of social capital in opportunism research where a clear split between norms and goal congruence was found (Wang and Yang, 2013).

Structural capital could be split into three variables: First, assessing the infrastructure available for actor exchange. This would give a good indication about

the institutional chances for interaction, such as regular review gatherings, steering committees as well as physical proximity and available electronic exchange mechanisms. Second, capturing the quantity and intensity of interaction, being similar to how structural capital is measured in past studies, and third evaluating the nature of communication. Here, socializing and friendship fostering could be assessed (Wang et al., 2013b) or, possibly, trouble-fighting and even spiteful communication.

Finally, relational capital could be assessed through measuring trust and commitment separately. Whereas trust reflects the reliability and faithfulness of parties in a relationship (Moran, 2005) and develops when positive past interactions lead to the expectations of positive future interactions (Wasko and Faraj, 2005b), commitment is the incline to remain in the relationship for reasons of positive affect or attachment towards the other party (Kumar et al., 1994). Consequently, the distinction between both variables could well explain relational capital.

### **4.3 Methodology: Case study approach to outline deep localization**

The study at hand extends sourcing literature as well as literature on social capital theory to the specific context of deep localization. In particular, the impact of social capital on the outcome of deep localization projects as well as on the interactions within triadic relationships is considered. Given a clear lack of research on this topic, the study at hand follows an exploratory approach extending current theories (Glaser and Strauss, 2006, Handfield and Melnyk, 1998). Providing a relatively full understanding of the studied object (Meredith, 1998) and allowing for creative insights into phenomena, enhancing validity and reliability of the study, contrasting survey research (Voss et al., 2002), the approach of using case methodology can be considered highly applicable. For illustrative purposes, the Chinese market is selected as the appropriate study setting, where local supply chains are actively established and direct contacts expanded to the sub-tier level. As postulated by several scholars, China constitutes a significant source of supply for foreign firms, though needs to be considered with care giving a change of patterns in global sourcing (Nassimbeni and Sartor, 2007, Schoenherr, 2009, Hultman et al., 2012). By now for decades, the country has been in the focus of multinational corporations

and due to its huge potential, with expanding markets and low labor costs, represents a key region for sourcing activities (Eberhardt et al., 2004, Salmi, 2006). Furthermore, consistency and reliability in terms of supply seem to have become a key characteristic of the Chinese market (Maltz et al., 2009). Overall, the opportunity to lower costs seems to be the number one advantage of sourcing from and in China, while Sinha et al. (2011) add that the sought for efficiency improvements as well as the maintenance of flexibility and entrance to new markets are further selection criteria which China can serve.

Nassimbeni and Sartor (2007) distinguish between three types of sourcing in China: (i) direct sourcing, focusing on the traditional buyer-supplier relationship, (ii) intermediated sourcing, the involvement of a third party such as wholesalers, and (iii) imposed sourcing, referring to governmental requirements to source from Chinese suppliers. In our case, since serving the Chinese market optimally is less complicated if the production facilities are located in China as well, imposed sourcing applies. This local content requirement is in particular imposed on “strategic”, high-tech industries, enabling a know-how transfer from Western companies to Chinese ones and with it the acquisition of key competences and improvement of professional skills by the local labor force (Osland and Björkman, 1998; Nassimbeni and Sartor, 2007). Having a localized procurement in China though can also be advantageous for the western firms. As postulated by Kotabe and Murray (2004), exchange rates can have huge impacts and distinguish successful and non-successful sourcing projects. Consequently, companies operating in Asian countries might consider a move towards more local operations in order to minimize effects of fluctuating exchange rates (Kotabe and Murray, 2004). In this way also the commitment of Chinese suppliers could be ensured, which might be more difficult to achieve with greater physical distance in the supply relationship (Salmi, 2006).

#### **4.3.1 Data collection: Successful vs. non successful case of deep localization**

In our study, the focus for conducting case studies lies on a German automotive OEM operating in China as well as its 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers. According to Dul and Hak (2007), the first choice to be made in case study research is the selection of

candidate cases. This is done through following two principles: (1) Convenience as well as the (2) maximization of likelihood that a relation between concepts exists. To serve this purpose, we selected the two most recent deep localization cases that the OEM had conducted, a successful and a non-successful one, in order to ensure that participants could still recall all activities and steps that took place. For both cases, the criteria were that the projects had to be completed, while one was considered successful, as the sub-tier supplier could be deep-localized and savings achieved, and the other was not, as deep localization failed and savings were not realized. As such, we defined success in deep localization projects based on (1) the actual achieved localization of sub-suppliers as well as on (2) the achievement of the OEMs financial goals, the intended savings, and hence selected the cases accordingly. Next to these criteria, we also considered the nature of parts themselves when selecting potential cases: As such, we ensured that the complexity and novelty of parts did not play a role in the outcome of deep localization projects. This was done through discussing the selected parts with technical specialists of the OEM to verify that producing these was neither easy nor too complex, respectively that the technology used in these parts was neither outdated nor extremely new.

In the automotive industry, parts that are sourced are generally distinguished according to the material group, or “commodity”, they belong to. As such, the commodities are characterized by the nature of parts, the material they consist of, the technologies they employ or where in the car they end up. Generally, five different commodity groups are differentiated: Exterior, Interior, Metal, Powertrain and Electric. The successful case that was selected in our study originated from the Exterior commodity of the OEM. While the 1<sup>st</sup> tier supplier was already located in China, supplying the OEM with sealing parts that would end up in e.g. car doors, the raw material EPDM, a rubber granulate, had to be sourced from abroad, originating from a 2<sup>nd</sup> tier supplier located in Germany. The goal of this deep localization project was therefore to replace the foreign, German 2<sup>nd</sup> tier supplier with a domestic Chinese supplier.

The non-successful case had its origin within the Interior commodity. The 1<sup>st</sup> tier supplier was providing vacuum pipes to the OEM, while a sub-component, certain connectors, still had to be sourced from an American 2<sup>nd</sup> tier supplier. Again, the goal of the deep localization project was to replace to foreign with a domestic

Chinese supplier.

The data for the case study itself was then selected using semi-structured interviews. For the purpose of data triangulation (Eisenhardt, 1989, Choi and Hong, 2002), informants originated from different departments and functional areas within the OEM, as well as from 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers involved externally, and comprised the majority of people who contributed, the main actors who experienced the projects first hand (table 4). Next to using interviews as the main source, secondary data was collected from the OEM to underline the accuracy of the observations made. This data included, amongst others, recent process charts, protocols from workshops that had been conducted in the past, reports from technical and quality sides as well as supplier information and pricing overviews and served to understand the background of both cases more clearly. As put by Hallen and Eisenhardt (2012), this triangulation of data ensures confidence in the accuracy of the results.

**Table 4: Participant Overview**

#	Company category	Area of Operations	Participant Successful Case	Participant Non-successful Case
1	OEM	Purchasing	Purchasing director	Purchasing director
2	OEM	Purchasing	Local Content Analyst	Local Content Analyst
3	OEM	Purchasing	Local Content Analyst	Local Content Analyst
4	OEM	Purchasing	Commodity Buyer Exterior	Commodity Buyer Interior
5	OEM	Purchasing	Commodity Buyer Exterior	Commodity Buyer Interior
6	OEM	Purchasing	Purchasing Officer	Purchasing Officer
7	OEM	R&D	Technical Supplier Manager	Technical Supplier Manager
8	OEM	R&D	System Technician Sealing	System Technician Pipe
9	OEM	Quality	Head of Supplier Audit	Head of Supplier Audit
10	OEM	Quality	Head of Quality Lab	Head of Quality Lab
11	OEM	Quality	Supplier Quality Controller	Supplier Quality Controller
12	OEM	Finance	Controller Material Costs	Controller Material Costs
13	1 <sup>st</sup> Tier	Operations	Head of Operations	Int. Business Manager
14	1 <sup>st</sup> Tier	Sales	Key Account Manager	Key Account Manager
15	2 <sup>nd</sup> Tier	Sales	Key Account Manager	Key Account Manager
16	2 <sup>nd</sup> Tier	Sales	Key Account Manager	Key Account Manager

Throughout the interviews, we firstly tried to establish an overarching picture of deep localization and the process behind it. Therefore, we asked participants about their general understanding of deep localization, with whom they had to deal

throughout the projects, what their own role was as well as which steps they took. Open ended questions ensured that the deep localization process and responsibilities were fully gasped. Subsequently, we focused on examining the role of social capital in the cause of the two deep localization projects. Here, the questions started broad in order to obtain a general idea of how the relationship between the different parties looked like. As such, participants were asked to comment on their relationship through emphasizing exchange mechanisms or the outlining the characteristics of the relationship they observed. Afterwards, the questions were then more closely leaned towards social capital as depicted in literature (e.g. Villena et al., 2011; Blonska et al., 2013): Participants were asked about e.g. their understanding of trust and commitment and how this was present (or not) during the deep localization projects. As before, for every question participants were asked to elaborate on their answers. The detailed overview of questions can be found in the appendix, table 27.

The participants themselves originated from Purchasing, Quality, R&D and Finance departments of the OEM, as well as from Sales and Operation on the both supplier sides. During the interviews, while some participants were familiar with both cases, others, such as the suppliers, only reported on the case they have been involved in. Using multiple participants and data sources is commonly understood a means to increase the data reliability (Leonard-Barton, 1990, Boyer and McDermott, 1999) and to provide stronger validation of constructs. The set of interview participants was approached by means of formal emails as well as telephone calls. Also, since many interviews were conducted with Chinese native speakers, questions in English as well as in Chinese were provided to ensure full clarity: For this purpose, English questions were firstly translated into Chinese by an independent Chinese native speaker and subsequently back-translated into English by a second independent Chinese native speaker in order to guarantee meaning conformity.

All interviews lasted about one hour. A interview framework was developed in order to ensure comparability of the answers givens (Yin, 2009). In total, 32 expert interviews were conducted which, according to Eisenhardt (1989), can be considered an acceptable number, given that the phenomenon was clearly observable. In order to ensure the exactness of the interview results, the interviews

conducted were taped if possible, providing an accurate rendition of what was said (Yin, 2009).

**Table 5: Social capital interview items**

Social Capital	2 <sup>nd</sup> Order Factors	Items
Cognitive Capital	1. Shared Values & Norms	<ul style="list-style-type: none"> <li>▪ Similar mindsets / ideas</li> <li>▪ Common beliefs about rights / wrongs</li> <li>▪ Following underlying rules</li> </ul>
	2. Overlaps of Objectives	<ul style="list-style-type: none"> <li>▪ Awareness of other parties objectives</li> <li>▪ Match of objectives</li> <li>▪ Effort to align goal</li> </ul>
Structural Capital	1. Infrastructure Actor Exchange	<ul style="list-style-type: none"> <li>▪ Conduction of common activities / workshops</li> <li>▪ Project Reviews in place</li> <li>▪ Usage of electronic exchange mechanisms</li> </ul>
	2. Quantity of Interaction	<ul style="list-style-type: none"> <li>▪ Frequent interaction with buyer / supplier personnel</li> <li>▪ Frequent interaction at different levels</li> <li>▪ Frequent interactions across functions</li> </ul>
	3. Nature of Communication	<ul style="list-style-type: none"> <li>▪ Social activities throughout the project</li> <li>▪ Favors during the project</li> <li>▪ Common trouble fighting / problem solving</li> </ul>
Relational Capital	1. Trust	<ul style="list-style-type: none"> <li>▪ Sharing of sensitive information</li> <li>▪ Belief that other party acted in best interest</li> <li>▪ Other party keeps promises made</li> </ul>
	2. Commitment	<ul style="list-style-type: none"> <li>▪ Mutual respect and sacrifices</li> <li>▪ Active common work</li> <li>▪ “Team member” feeling</li> </ul>

### 4.3.2 Data analysis: Within in-case and cross-case analysis to obtain results

Following the case study approach as suggested by Eisenhardt (1989), we started to write the case histories. In order to ease this process, the voice recordings were transcribed into text-form. After the interviews were finalized, a first draft case study report was created and in turn re-discussed with the participants of the interviews in order to ensure a maximum degree of accuracy and objectivity: Here,

participants were given the chance to point out errors in case they have been misunderstood. Especially for determining an accurate and complete deep localization process, the secondary data as provided by the OEM proved to be a useful compliment: As such, the documents did only provide relevant background information but further allowed to detect differences between secondary data and interview responses, which then in turn could be re-addressed to the participants and clarified.

The exploration of the data received was then firstly done through a within-case analysis. Here we examined both cases according to their internal characteristics. In particular, attention was paid to outlining the specifics of social capital accumulation between buyer, 1<sup>st</sup>-tier and 2<sup>nd</sup>-tier supplier. In the subsequent step, a cross-case analysis followed where both, the successful and non-successful case, were compared. This did not only allow us to reconfirm and specify the process that lies behind deep localization but also identify commonalities and differences in terms of social capital accumulation. As such, it allowed verifying whether certain attributed of cognitive, structural and relational capital were present in one case while missing in the other one.

**Table 6: Validity and Reliability, Sourcing: Yin (2009)**

Test	Case Study Tactic	Phase of Research	Used in present study
Construct Validity	<ol style="list-style-type: none"> <li>1. Usage of multiple sources of evidence (interviews, archival data)</li> <li>2. Establish chain of evidence: Multiple interviewees with complementing answers</li> <li>3. Have key informants review draft case study report</li> </ol>	Data Collection Composition	✓
Internal Validity	<ol style="list-style-type: none"> <li>1. Do pattern matching</li> <li>2. Do explanation building</li> </ol>	Data Analysis	✓
External Validity	<ol style="list-style-type: none"> <li>1. Identify commonalities as well as differences among cases</li> <li>2. Use replication logic in multiple case studies: Conduction of cross-case analysis</li> </ol>	Research Design	✓

Reliability	<ol style="list-style-type: none"> <li>1. Use of case study protocol as guideline for research</li> <li>2. Develop case study database containing recordings, questionnaires, notes etc.</li> </ol>	Data Collection	✓
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The obtained data was then analyzed through examining key-words in order to find a pattern among different interviews. Results were validated using four tests proposed by Yin (2009), focusing on construct validity, internal validity, external validity as well as reliability. Table 6 gives more detail about how these tests are composed and applied in the study at hand.

#### **4.4 Results: Social capital contributes to success in deep localization**

Before going into detail about the effect of social capital on the outcome of deep localization activities, we understand the need to give more insights into how the project process of deep localization actually looks like and which parties are involved. As such, we also used the interviews to gain more in depth understanding on the conduction of deep localization activities. Participants were therefore not only asked to report on their relationships throughout the process but also on the process itself. The results are depicted in the following. Hence, before approaching specific cases, the focus shall lie on the deep localization strategy per se.

##### **4.4.1 Four phases define the deep localization process**

The deep localization process as conducted by the OEM in China is mainly driven by the purchasing function. In fact, for the company the approach of deep localizing sub-components is considered a major purchasing strategy and tool. Since the purpose of deep localization is to take advantage of the enormous market scope in order to achieve cost targets and optimize saving potentials this is comprehensible. The focus on lower costs becomes particularly predominant when having to out-compete low-budget competition, being in most cases of domestic Chinese origin.

Quarterly appearances in corporate management meetings of the OEM for reporting on results underline the value of this strategy for the company. In principal, the deep localization process can be distinguished into four phases, which will be introduced in the following:

#### ***4.4.1.1 Phase 1: Setting up task force team and identifying potential material groups***

The first step of the deep localization process is the formation of a task force, consisting of Purchasing as lead function and Quality, R&D and Finance as supporting entities. Ideally, throughout project, weekly meetings of the task force team are conducted, which though vary depending on the criticality of the item to be deep localized as well as the complexity of the project. Firstly, material groups with sub-components still being imported to China are analyzed according to whether domestic alternatives exist and whether these alternatives bear the potential of creating savings. This is done through internal coordination within the purchasing function as well as with support of Finance: Commodity buyers are involved in order to identify potentials. As they possess detailed market overviews for components they are responsible for, they are able to give estimations on cost savings that could be realized through replacing western suppliers with China based suppliers. Also, the finance department is involved at this stage in order to confirm the accuracy of the identified cost savings. Finance, amongst others, has knowledge of factors such as taxes and import fees` and can therefore calculate the cost benefit of sourcing locally.

#### ***4.4.1.2 Phase 2: Selecting material and identifying suppliers***

After having identified potential material groups, the material with the highest cost reduction potential is selected. Together with R&D and the quality department, specifications to be fulfilled by the material as well as by the potential sub-tier supplier are clarified. Since western technical and quality standards need to be maintained while utilizing the local material, this step is extremely crucial for the project outcome. Also, the 1<sup>st</sup>-tier supplier assembling the components is involved

in this step and, subsequently, supports in identifying potential 2<sup>nd</sup>-tier suppliers that have the abilities of completing the task. Here, usually two options exist: Either a foreign, 2<sup>nd</sup>-tier supplier, who is already producing the material / sub-component, is asked to localize and open a manufacturing branch in China requiring higher investments if the branch is non-existent yet, or an entirely local Chinese supplier needs to be selected. Due to lower risks and less required effort than for qualifying non-affiliated local suppliers, the first option is usually preferred by R&D and Quality. Though, this choice does not always exist for reasons of different location strategies pursued by the suppliers. Especially in the latter case, close cooperation with the prospective sub-tier supplier is thus required in order to reach the expected component standards.

#### **4.4.1.3      *Phase 3: Follow-up of deep localization processes by task-force***

After the 2<sup>nd</sup>-tier supplier has been identified, his potential is evaluated based on technical specifications made. This is done during a kick-off workshop together with all parties involved, including Purchasing, R&D and Quality on the internal and both, 1<sup>st</sup> and 2<sup>nd</sup>-tier suppliers, on the external side. Preferably, the 2<sup>nd</sup>-tier supplier is then determined suitable and selected accordingly. Arguably, selecting 2<sup>nd</sup>-suppliers that do not have a direct business relationship with a buyer is not a procedure that can be considered common and outlines the differences to regular supplier selection processes. The selection of sub-tiers only works under certain circumstances: Either, (1) the buyer can exert the bargaining power it might have over the 1<sup>st</sup> tier supplier in order to push for an agreement, (2) contractual specifications or technical requirements that have been negotiated between buyer and 1<sup>st</sup>-tier in the past allow the buyer to intervene and enforce a localization, or (3) buyer and 1<sup>st</sup>-tier have an outstanding relationship driving the 1<sup>st</sup>-tier to voluntary commit and agree to the buyers' wishes.

After the selection took place, the task force ensures that track is being kept and the targets are achieved. This usually involves a high degree of coordination efforts between the 1<sup>st</sup> and 2<sup>nd</sup>-tier suppliers externally as well as between the different departmental functions internally. Reporting of reached milestones and progress made becomes daily task. Purchasing as the lead function stays in constant contact

with the suppliers and distributes relevant information to the other functions. In case a local Chinese supplier was chosen, R&D and the quality department become especially sensitive and active. Next to material and component tests being conducted at the 1<sup>st</sup>-tier supplier, R&D and Quality of the OEM perform separate tests to ensure that western technical specifications and quality standards are met to the fullest. At this point, they also have a direct reporting line to the suppliers. Ideally, also regular meetings and further workshops between the OEM, 1<sup>st</sup> and 2<sup>nd</sup>-tier suppliers are options to report on progress made as well as difficulties encountered.

#### **4.4.1.4      *Phase 4: Release of local materials and sub-components***

The last phase finally decides whether the project outcome is successful and whether virtual savings can become reality. In this phase Quality as well as R&D need to confirm that the local component fulfills the necessary requirements and can be implemented by the 1<sup>st</sup>-tier supplier. After this has been done, the component is released, which means that Purchasing is able to source it locally under the given conditions. Being able to decide if a local component can eventually be used or not also indicates the immense power Quality and R&D have in the sourcing process: Even though the deep localization process is led by Purchasing, both have the final say about the utilization of local (sub-) components and could eventually block through giving veto. In cases like these, escalating the problem to the management level would be a tool applied by Purchasing, which though renders ineffective if the part was rejected for quality and technical issues possibly affecting the safety of passengers.

#### **4.4.2 Comparing successful and non-successful cases: Examining the effect of social capital on deep localization success**

After having focused on how the deep localization process looks like, the next section will pay more attention to theoretical foundations. As mentioned above, a good relationship between buyer and 1<sup>st</sup> tier supplier was described as an important

attribute for the buying firm when influencing the supplier selection of the 2<sup>nd</sup> tier. In the following we will now look into how social capital that underlies every relationship affects the outcome of deep localization projects during the project conduction.

#### **4.4.2.1 Cognitive capital: Lacking overlap of goals**

Comparing the successful case with the non-successful case, both cases display a high degree of norm and value conformity with parties reporting on having the same mind-sets and following the same thoughts, though the picture changes when it comes to goal congruence. Overlapping objectives between the OEM and the 1<sup>st</sup> tier supplier, as well as internally between Purchasing and R&D could only be determined during one project. In the successful case, the 1<sup>st</sup> tier supplier even made the first move and contacted the OEM to pursue the chance of deep localizing a sub-component to potentially create savings. Following this, all parties involved got together and agreed upon the project timeline and next steps. Also, discussions were led to align goals with each other as good as possible. Resulting from these efforts, naturally targets did not match completely, though did not restrict each other.

*“Planning rounds at start of the project ensured that parties were on the same level. We tried to play with open cards in order to align. In some cases, e.g. between Purchasing and R&D, it was already clear before that goals could not match completely, though we managed to deal with these situations in the best way possible”. (Technical Supplier Manager)*

Compared to this, the non-successful case depicted the contrary. Here, the Purchasing department on behalf of the OEM identified a potential and tried to push the topic ahead. Goals could however not be aligned: Internally, Quality and R&D expressed displeasure with the supplier choice. Accordingly they argued that Purchasing had chosen price over quality standards and firstly did not agree with the deep localization project. They would have preferred to proceed with a localized western supplier in order to minimize risks. Through escalating the project to management level the decision was made to give the Chinese supplier a

chance. Externally, goals and KPIs did not match as the 1<sup>st</sup> tier supplier saw a chance of further business and preferred the strategy of involving him for manufacturing the sub-component in-house as well and showed disappointment with the decision of Purchasing to go with a different 2<sup>nd</sup> tier supplier.

*“We knew this company and arguably their price was extremely low. However, we had hoped to get the chance of supplying this component ourselves as we had proven to deliver outstanding quality. Unfortunately we could not compete on this low price scale.”(1<sup>st</sup> tier)*

As such, the project encountered diverging opinions from the start which never allowed for finding common track again. Efforts to align goals were made, however failed. Subsequently the project had to be continued primarily between the OEM and the 2<sup>nd</sup> tier supplier, which eventually proved to be difficult to perform. Table 7 sums up the results, displaying differences underlined.

**Table 7: Results for cognitive capital**

Social Capital	2 <sup>nd</sup> Order Factors	Successful Case	Non-successful Case
Cognitive Capital	1. Shared Values & Norms	<ul style="list-style-type: none"> <li>▪ Similar mindsets among all parties</li> <li>▪ Existing common beliefs about right and wrongs</li> <li>▪ All parties follow underlying rules</li> </ul>	<ul style="list-style-type: none"> <li>▪ Similar mindsets among all parties</li> <li>▪ Existing common beliefs about right and wrongs</li> <li>▪ All parties follow underlying rules</li> </ul>
	2. Overlap of Objectives	<ul style="list-style-type: none"> <li>▪ Parties are aware of other objectives</li> <li>▪ <u>Objectives of all parties match to some extent</u></li> <li>▪ <u>Efforts are made to align goals</u></li> </ul>	<ul style="list-style-type: none"> <li>▪ Parties are aware of other objectives</li> <li>▪ <u>Objectives do not match</u></li> <li>▪ <u>Lacking efforts to align goals between parties</u></li> </ul>

#### **4.4.2.2      *Structural capital: Lacking interaction and information exchange***

Similar to cognitive social capital, also differences could be found in terms structural social capital between the successful and non-successful case. In both cases, kick-off workshops were conducted, first information shared and specifications clarified. In the successful case, this however was pursued more proactively: Purchasing, Quality and R&D on behalf of the OEM as well as the 1<sup>st</sup> tier supplier on external side were present to align and also push the topic ahead internally. Similar workshops were conducted several times. They were used to discuss open points, questions or to tackle occurring problems, at progressing stages also with the 2<sup>nd</sup> tier suppliers. In fact the whole project process here was characterized by regular meetings and discussion between the OEM and the two suppliers. Telephone conferences took place on a weekly basis. All these procedures ensured that track was always kept fostering a high degree of transparency and a culture of open information sharing. Especially concerning the 1<sup>st</sup> tier supplier, open information sharing was highly valued.

*“I think the supplier liked us and wanted to share his ideas with us. He was very active and tried to push the project”. (Commodity Buyer)*

On the other hand, the non-successful project started with a workshop not involving every party: The 1<sup>st</sup> tier supplier did not feel required to join. In total, two workshops took place during the whole project process. Contrasting the successful case, pro-activity here was only displayed by Purchasing, targeting cost savings, as well as the 2<sup>nd</sup> tier supplier. This went on into meetings and discussions mostly taking place between these two parties and with a lower frequency than in the successful case.

*“Since our customer wanted to proceed with this company, we did not feel the need to engage proactively. Instead we chose to wait for further suggestions. This was also due to capacity reasons.”(1<sup>st</sup> tier)*

The project progress was reviewed, though not on a regular basis, using telephone calls and email exchanges. Between Purchasing and the 2<sup>nd</sup> tier supplier the interaction frequency was high and information was exchanged on a weekly basis.

Though, input and support from the 1<sup>st</sup> tier supplier was greatly missing and had to be requested constantly, resulting in lacking efficiency. As it became apparent that problems on behalf of the 2<sup>nd</sup> tier supplier would result in a project failure, the 1<sup>st</sup> tier supplier did not actively step in to support, making common trouble fighting difficult.

*“There was not much we could have done. After all it was not our responsibility to fix quality issues at components we do not supply.”(1<sup>st</sup> tier)*

Also internally other departments were involved to a lower extent, and if involved tried to challenge the project itself. As such, common trouble fighting, again, proved ineffective. This also shows that the nature of communication between the projects was a different one: While common trouble fighting did in fact not work out during the non-successful case, several participants of the successful projects reported that it was not necessary but would have functioned if needed. Furthermore, even though the nature both projects did not allow for a high degree of social activities, the participants of the successful project stated that at least workshops always ended with common meals, allowing for off-work talks. This did not happen during the non-successful case.

**Table 8: Results for structural capital**

Social Capital	2 <sup>nd</sup> Order Factors	Successful Case	Non-successful Case
Structural Capital	1. Infrastructure Actor Exchange	<ul style="list-style-type: none"> <li>▪ <u>Regular workshops with all parties</u></li> <li>▪ <u>Weekly telephone conferences to review project status</u></li> <li>▪ <u>Information sharing via email</u></li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Two workshops during the whole project process</u></li> <li>▪ <u>Only project review between Purchasing and 2<sup>nd</sup> tier supplier</u></li> <li>▪ <u>Information sharing via email</u></li> </ul>
	2. Quantity of Interaction	<ul style="list-style-type: none"> <li>▪ <u>Weekly interaction between parties</u></li> <li>▪ <u>Involvement of management through corporate management meetings</u></li> <li>▪ <u>Cross-functional interaction when needed</u></li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>Frequent interaction between Purchasing and 2<sup>nd</sup> tier supplier only</u></li> <li>▪ <u>Escalation to management level</u></li> <li>▪ <u>Insufficient cross-functional coordination</u></li> </ul>
	3. Nature of Communication	<ul style="list-style-type: none"> <li>▪ <u>Social activities after workshops</u></li> <li>▪ <u>No exchange of favors</u></li> <li>▪ <u>Common trouble fighting implicated though not necessary</u></li> </ul>	<ul style="list-style-type: none"> <li>▪ <u>No social activities</u></li> <li>▪ <u>No exchange of favors</u></li> <li>▪ <u>Common trouble fighting not possible for lacking involvement of 1<sup>st</sup> tier supplier and willingness on behalf of R&amp;D and Quality</u></li> </ul>

#### 4.4.2.3 *Relational capital: Lacking commitment and trust in the other party*

Regarding the category of relational capital, in both cases, trust was very important for all parties. Confidential information was shared and doubts in other parties did not seem to play a role to a greater extent.

*“We did not waste any thought that they [the suppliers] would betray us and I am sure this feeling was mutual. After all, everyone would benefit through costs savings and a stronger partnership.” (Commodity Buyer)*

In the non-successful case however, Purchasing stated that R&D internally as well as the 1<sup>st</sup> tier supplier externally probably did not have the best interest in mind due to their counterproductive actions, which was however not confirmed by other parties. Though, one might argue that while for Purchasing the creation of savings is in the best interest of the company, R&D has the same view when it comes to quality of technology, trying to prevent massive reputation losses for the firm. Similarly, commitment, actively trying to achieve the best project outcome, was shown to have been present to a lesser extent in the non-successful case. Apart from this, a lack of respect for each other did not play a role in either case. Parties in the business relationships knew each other, and expected to continue their relationship also in the future. In the non-successful case, when it came to actively approaching the project outcome, mainly Purchasing and the 2<sup>nd</sup> tier supplier have been accountable for it. While the 1<sup>st</sup> tier supplier isolated itself from team efforts and was not considered fully committed to the project, internally Quality and R&D acted similarly and did not do more than follow minimum required efforts.

**Table 9: Results for relational capital**

Social Capital	2 <sup>nd</sup> Order Factors	Successful Case	Non-successful Case
Relational Capital	1. Trust	<ul style="list-style-type: none"> <li>▪ Sensitive information is shared</li> <li>▪ <u>Other parties acted in best interest</u></li> <li>▪ Other parties interest important for participants</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sensitive information is shared</li> <li>▪ <u>Other parties acted not always in best interest</u></li> <li>▪ Other parties interest important for participants</li> </ul>
	2. Commitment	<ul style="list-style-type: none"> <li>▪ Parties have mutual respect for each other</li> <li>▪ <u>Pro-active work among parties involved</u></li> <li>▪ <u>Parties felt like team members</u></li> </ul>	<ul style="list-style-type: none"> <li>▪ Parties have mutual respect for each other</li> <li>▪ <u>Lacking pro-activity, counterproductive moves by 1<sup>st</sup> tier and internal functions</u></li> <li>▪ <u>Limited team-member feeling</u></li> </ul>

## **4.5 Discussion, implications, limitations: Social capital in network relationships can affect the success of common projects**

Our study investigated the process of deep localization as well as the role of social capital within the underlying network composition between buyer as well as 1<sup>st</sup> and 2<sup>nd</sup> tier supplier. Contrary to the predominant belief in literature implying that firms should not limit their sourcing activities to the domestic environment (Steinle and Schiele, 2008), our study shows that this is exactly what is happening when following a deep localization strategy, such as being pursued in the Chinese automotive industry. Applying theory on, in particular, the limits of global as well as the benefits of local sourcing proved to be a solid framework for the concept of deep localization. Further, the application of social capital theory for explaining success in deep localization projects turned out to be fruitful: Not only did our study show that social capital occupies a crucial role in facilitating successful project outcomes, but also we were able to identify slight but intriguing differences in terms of social capital accumulation among parties involved in triadic relationships. Next to this, the measures applied to operationalize social capital proved to have practical relevance in subdividing and enhancing the individual social capital dimensions. Consequently, the measures can be considered of accounting more thoroughly for the broad scope that social capital theory is enclosing.

Turning to the first research question, our study, applying case study methodology, was able to outline a four-step approach being used in industry to increase the level of localized parts and replace global with domestic sourcing. As such, it can be seen as a guideline for firms that intend to succeed on a market which has the potential for low-cost production. Though, it must be clear that without internal as well as external alignment upon the steps to take, deep localization will be hard to accomplish. One of the key factors to this four-step approach is the formation of a task force team involving members of different departments, bundling the firm's know-how. This is in line with literature on the importance of cross-functional teams, providing ample benefits through integrating diverse perspectives and allowing for an open information flow (Smits and Kok, 2012; Tsai and Hsu, 2014). Hence, our study also provides a link between literature on cross-functional teams

and deep localization. As was shown, the task force team of the OEM firstly identifies potential material groups as well as the highest costs reduction potential and subsequently cooperates with the 1<sup>st</sup>-tier supplier in order to screen the local market for sub-tier suppliers that are able to (a) achieve the desired savings and (b) provide sufficient quality standards that allow replacing global suppliers. This is by itself interesting, since members of a supply chain barely select sub-tiers commonly. As the gap in literature on buying firms involved in sub-tier supplier selection shows, such a situation is rather extraordinary and not on line with ordinary supplier selection processes involving 1<sup>st</sup>-tiers only. As such, the research at hand sheds light on an alternating form of supplier selection which is done commonly with the 1<sup>st</sup>-tier supplier focusing on sub-suppliers only. Further, as our study showed, during the projects active communication of goals and milestones is indispensable. Common workshops between all parties thus regularly become part of the agenda. For firms that intend pursue a deep localization strategy, the implementation of regular workshops between all parties involved is therefore crucial to create transparency and address critical topics. Also, as was addressed before, deep localization only works given the right circumstances between buyer and 1<sup>st</sup>-tier supplier, the 1<sup>st</sup>-tiers willingness of letting the buying firms influence its own supplier selection.

One of a possible circumstance or precondition was approached through the second research question, focusing on the role the relationship between buyer and suppliers or, more precisely, the presence of social capital accumulated within the relationship is playing. As has already been established in the past, social capital in buyer-supplier relationships and performance outcomes can be linked positively (Lawson et al., 2008; Krause et al., 2007; Whipple et al., 2015). Contrasting this research, our study paid special attention to inter-organizational projects in networks amongst buyer and multiple tiers of suppliers, considering a triadic relationship. The case examples showed that while between buyer and 2<sup>nd</sup>-tier suppliers a high level of social capital existed during both the successful and non-successful project, a comparably high social capital concentration between buyer and 1<sup>st</sup>-tier could only be found in the successful case. This might suggest that in networks, certain relationships are of higher value for achieving project success than others: Particularly crucial for deep-localizing sub-components and materials

did not turn out to be the relationship between buyer and 2<sup>nd</sup>-tier supplier, who was actually conducting the localization efforts, but between buyer and 1<sup>st</sup>-tier supplier. While in both cases the 2<sup>nd</sup>-tier suppliers strongly tried to contribute, the projects succeeded or failed depending on the 1<sup>st</sup>-tier supplier's willingness to participate actively. Consequently, it is therefore possible to argue that in relationships involving multiple partners, not only the existence of social capital per se is important for the outcome but also where it is accumulated. In order to ensure that social capital is accumulated at the right location our results suggest that firms should invest in their critical relationships, possibly forming alliance-partnerships (Narasimhan and Nair, 2005, Wittmann et al., 2009) with their suppliers. In this way, the level of social capital between all parties present could be nourished. The predominant selection of alliance partners for conducting deep localization projects would thus constitute a means for reducing project failures. Arguably, however, if the low-hanging fruits have been picked, companies are naturally left with cases more difficult to accomplish. If that happens, transparency and openness should be a common basis to facilitate processes. Similarly, the pursuit to become preferred customer of suppliers could also be a path to follow (Steinle and Schiele, 2008, Schiele, 2012, Schiele et al., 2011c), Resulting in preferential treatment and resource allocation of the 1<sup>st</sup>-tier supplier, the preferred customer status could allow buyers to easily access and approach sub-tier supplier without being their direct customer and having contractual relationships in place. Further, the 1<sup>st</sup>-tier supplier would be more tempted to allocate its best personnel and know-how in order to support localization activities. As such, it becomes possible to connect the preferred customer status with success in deep localization projects as it eases goal alignment and ensures commitment. In fact, this situation might already exist during our successful case, characterized by voluntary sharing of information and ideas prior to the start of the project by the 1<sup>st</sup>-tier supplier as well as the reference to likeability of the OEM made by purchasing side.

Despite the contributions our study adds to the existing literature, some limitations exist. First, only two cases were selected in order to introduce the topic of deep localization and the dependence of its successful conduction on the level of social capital present. Although these cases were fully analyzed using data triangulation through a variety of sources with diverse backgrounds as well as matching

secondary data provided by the OEM, selecting different and/or more cases could have affected the result, also in terms of generalizability, which arguably many case studies do not account for sufficiently. Second, only data from one firm, an automotive OEM in China was selected. Choosing different firms also performing deep localization activities might have led to different answers, despite the fact that the nature of joint-buyer supplier projects, grounded on the social capital dimensions, is comparable.

Consequently, future research should enhance our research setting with more cases, successful and non-successful ones, and possibly also validate our results, indicating the facilitating role of social capital in deep localization projects, through following a quantitative approach. Also, focus should be laid on different industries where deep localization activities are conducted. Such a benchmarking approach would increase the value for managerial decision makers. Moreover, future studies should further examine the role of social capital in network relationships. This could possibly be done by focusing closer on the tier-structures, taking the perspective of firms centrally located within the supply chain. Additionally, research should validate our operationalization of social capital in quantitative studies. At this point, research might also find it useful to, if possible, further enhance our measures. Due to the scope limitations of the case study approach, our 2<sup>nd</sup> order factors might not have been sufficiently accounted for in their entirety. As coming to mind in terms of cognitive capital is the idea that not only shared values and the overlap of objectives play role in the relationship between parties, but also the degree to which management style and the perception of success, in other words corporate culture, match. Conceptionally, future research could further examine the limits of the preferred customer status: Does the theory only take into account dual relationships between buyer and supplier, or can the preferred customer status be extended upwards the supply chain? Would sub-tier suppliers favor one supply chain over the other, would they be attracted by a firm that is not their direct customer?



## **CHAPTER 5: THE RELATIONAL PRIMACY – EXAMINING SOCIAL CAPITAL AND SUPPLIER SATISFACTION**

Given a fundamental change in supply chain organization buying firms increasingly have to deal with a smaller number of key suppliers that employ extended value adding responsibilities. Buying firms thus have to pay attention to establish relationships with these suppliers in order to prevent the risk of resource scarcity. Satisfying suppliers and ideally becoming their preferred customer becomes top priority for buying firms in order to out-compete the competition. Before this becomes possible, however, firms are in need to establish relationships with their suppliers. In literature, social capital theory has been considered for studying relationships between buyer and supplier, however without quantitatively linking it to the concept of supplier satisfaction. This chapter therefore tries to establish this link. Surprisingly, we only find partial support: A “relational primacy” seems to be prominent, with structural and cognitive dimensions revealing limited explanation power. A possible answer for this result might be found in the Chinese context of our research.

## **5.1 Introduction: Supplier scarcity and resource limitations give rise to closer buyer-supplier relationships**

Reflecting upon the increased recognition that inter-organization ties have gained over the last decades in terms of contributing to the creation of value, buyer-supplier relationships have been considered more and more as a source of a sustainable competitive advantage (Krause et al., 2007). Forming and maintaining these relationships however is often seen challenging and considered rather complex (Johnston et al., 2004, Narasimhan and Nair, 2005). Yet, since companies increasingly outsource activities to their suppliers and thus grant them more responsibilities (Schiele et al., 2015) while their supply bases consolidate and include smaller numbers of key suppliers (Eggert and Ulaga, 2010), being able to successfully manage relationships becomes a necessary requirement. In fact, given that suppliers have constraints on capacities and resources they can devote to their customers (Hüttinger et al., 2014), supplier scarcity becomes a risk for firms they have to mitigate (Bode et al., 2011). As such, creating satisfaction among the suppliers and in turn being considered their preferred customer can be a solution (Schiele et al., 2011b, Schiele et al., 2012, Ellis et al., 2012b).

Here, in order to answer the question of how supplier satisfaction can be achieved, Huettinger and colleagues (2014) identified 28 antecedents that firms should consider. One year later, Schiele et al. (2015) approached this from a more theoretical standpoint, proposing a link between supplier satisfaction and the presence of social capital. From the theoretical perspective, social capital theory has been considered for studying relationships between individuals and organizations (Ahuja, 2000b, Tsai and Ghoshal, 1998b). With social capital being present in an inter-organization relationship between buyer and supplier, the exchange of resources can be facilitated (Hughes and Perrons, 2011b) and performance increased (Lawson et al., 2008, Whipple et al., 2015). Literature further suggests that social capital allows both buyers and suppliers to access and leverage resources tied within the relationship (Villena et al., 2011). Accordingly, the presence of social capital reduces the risk of conflicts and contrarily promotes cooperative behavior due to shared visions and trusting relations it emphasizes. Given this, social capital can likely be considered a piece of the puzzle to achieve supplier

satisfaction.

To this date, however research has not yet empirically tested a relationship between social capital and supplier satisfaction (Schiele et al., 2015). This is unfortunate, given that the strong reliance on capable though scarce suppliers would demand an even clearer understanding on how to satisfy them. Consequently, in order to fill this research gap, this study will aim to answer the following research question:

*How does social capital influence supplier satisfaction?*

Through answering the research question, our study will contribute in two directions:

(1) Through quantitatively testing the link between the presence of social capital and supplier satisfaction, our study will further extend social capital theory towards a framework of resource mobilization in buyer-supplier relationships.

As such, through employing social capital as antecedent to supplier satisfaction, firms might find another means, grounded on theory, to build relationships with their suppliers going beyond the common business context, to eventually access external resources that are not available to competitors. Further, through surveying suppliers we will follow the call for more research on social capital from the supplier perspective (Gelderman et al., 2016).

(2) Next to this, our study will also take a closer look at the current operationalization of social capital and how it has been applied in research over the last decades. While the initial conceptualization of Nahapiet and Ghoshal (1998) and, built on it, further applications of Carey et al. (2011) as well as Villena et al. (2011) seem to have emerged as the standard of measuring social capital, it is arguable whether these measurements fully grasp the scope of social capital. Consequently, and following Carey's (2011) call for a further refinement of measurements, the study at hand will quantitatively examine possible extensions. Here, we additionally intend to measure the dimensions underlying social capital as second order constructs. While in recent years more abstract levels of constructs, including several dimensions and levels, have been used for reasons of reducing model complexity (Becker et al., 2012; Jarvis et al., 2003), such a split has not been applied to the concept of social capital. Therefore, our study also will also try to fill this gap.

The paper will be organized as follows: Through conducting an extensive literature review, all variables will be introduced. Subsequently, the focus will lie on the research methodology, findings will be presented and discussed, and eventually with concluding the paper, future research possibilities and limitations of our study will be presented.

## **5.2 Theoretical considerations**

### **5.2.1 Supplier Satisfaction: Potential to obtain supplier benefits**

Satisfaction within a relationship is understood as the perceived feeling of fulfillment when certain goals, targets or simply outcomes are achieved (Benton and Maloni, 2005, Essig and Amann, 2009). For several decades, literature has only considered satisfaction from the customer point of view (Dwyer et al., 1987a, Walter et al., 2003) as crucial for business success, whereas the focus on satisfaction of suppliers has been neglected. Only by the beginning of the new century, research more and more began to comprehend the value that supplier satisfaction can contribute to firm competitiveness (Wong, 2000, Benton and Maloni, 2005, Schiele et al., 2012, Hüttinger et al., 2014, Pulles et al., 2016). By definition, supplier satisfaction emerges if the outcome from the relationship with the buying firm meets or exceeds the expectations of the supplier (Schiele et al., 2012). As such, it relates to a positive evaluation of the working relationship both parties have (Dwer et al., 1987; Huettinger et al., 2014). In other words, supplier satisfaction results from the perceived value in the relationship between the supplier and his customer (Pulles et al., 2016). Several studies have since paid attention to the antecedents of supplier satisfaction, i.e. the conditions that firms can provide to achieve a state of relationship that causes supplier to be satisfied: Whereas Benton and Maloni (2005) pay attention to mediated power sources that can promote supplier satisfaction, Leenders et al. (2005) consider tools such as the establishment of long-term commitments or internal information sharing as means to facilitate supplier satisfaction. Others, such as Ghijssen et al. (2010) focus on direct and indirect strategies that buying firms can employ in order to increase the level of satisfaction among their suppliers. Huettinger et al. (2014), based on a literature

review, go as far as outlining 28 antecedents that can affect supplier satisfaction. Though, no matter which suggestion to follow, once supplier satisfaction is achieved, buying firms have the opportunity to profit from a preferential resource allocation, being considered their suppliers preferred customer (Steinle and Schiele, 2008).

The next section will now focus on introducing the concept of social capital.

### **5.2.2 Social capital theory: Cognitive, structural and relational capital define the concept**

Social capital theory, having its roots in sociology, is grounded on social relations that underlie relationships between individuals and groups (Adler and Kwon, 2002). As such it refers to resources, of actual or potential nature that include contextual factors on which the resource exchange is based and that can be accessed by different actors within a relationship (Nahapiet and Ghoshal, 1998a, Kankanhalli et al., 2005a). Since those resources are not of physical nature but contained in the relations between parties, social capital accumulated in social ties is difficult to imitate and has the potential to create a competitive advantage (Edelman et al., 2004).

In academics the notion of social capital has been used as theoretical lens for studying relationships between individuals and organizations (Ahuja, 2000b, Tsai and Ghoshal, 1998b), or at more recent state in the field of supply management focusing on buyer and supplier interactions (Hartmann and Herb, 2014, Horn et al., 2014). It is further distinguished into three dimensions including (1) cognitive capital, (2) structural capital and (3) relational capital (Nahapiet and Ghoshal, 1998). Whereas the majority of studies examine these dimensions as in parallel existing constructs, others also consider cognitive and structural capital as antecedents of relational capital (Carey et al., 2011, Horn et al., 2014, Preston et al., 2016). A form of social capital that can strongly be found in the Chinese context is Guanxi (Yang, 1994). Having its roots as a cultural construct, Guanxi has been proven valuable within business relationships and consequently studied extensively over the last decade (Yang and Wang, 2011). Through incorporating social embeddedness (Ring and Van de Ven, 1994, Granovetter, 1985), Guanxi is built on inter-organizational

trust that can resolve conflicts (Nicholson et al., 2001) (Carolyn et al., 2002) and allows firms to pursue long-term oriented goals (Dunning and Kim, 2007). Similar to the general understanding of the social capital concept, Guanxi is based on the assumption that common norms and social interactions enable firms to establish bonds and linkages that can influence their performance (Nie et al., 2011).

The cognitive dimension of social capital refers to common values and visions that relationship partners share (Tsai & Ghoshal, 1998). They also include common goals, norms and beliefs contributing to the understanding of the social system, as well as shared interpretations, such as language or signs (Uphoff and Wijayaratna, 2000b, Tsai and Ghoshal, 1998b). A high level of cognitive capital therefore implicates that these attributes are shared by both relationship partners to a high extent. In this way, cognitive capital enables a consensus on strategic goals and processes that both parties might benefit from (Adler and Kwon, 2002, Atuahene-Gima and Murray, 2007). In fact, as determined by Gelderman (2016), compared with the other two dimensions, shared cognitive capital exerts the biggest impact on the strategic performance of suppliers. Roden and Lawson (2014) on the other hand, while examining the configurations of the social capital dimensions, provide evidence that relationship adaptations might substitute for cognitive capital.

Within the social context of relationships, patterns of connections between parties exist. These patterns of connections are understood as structural capital which defines how they can be used and how frequent they occur (Burt, 1997b, Villena et al., 2011), or, as Nahapiet and Ghoshal (1998) put it, “who you reach and how you reach them” (p. 244). A high level of structural capital can therefore be found if both actors within a relation utilize multiple channel of interaction to facilitate the information and resource exchange (Koka and Prescott, 2002, Villena et al., 2011, Zaheer and Bell, 2005). In other words, the common usage of resources is enhanced through clarity, transparency on actions and processes fostered by a strong and consistent flow of information. This is stressed by empirical findings reporting the positive effect of structural capital on “information flow” and “information diversity” (Koka and Prescott, 2002). Consequently, while structural capital, for example in terms of means to communicate, can benefit the relationship between actors, its complete absence has negative consequences (Villena et al., 2011).

Relational capital is expressed by trust, friendship and mutual respect between the

partners (Kale et al., 2000a, Carey et al., 2011) as well as reciprocity (Mathwick et al., 2007). The content is based on the works of Granovetter and Swedberg (1992) focusing on embeddedness and relationships people have developed with each other. Relational capital is built through exchanges between relationship partners (Blonska et al., 2013) and considered as being closely connected to the dimensions of structural and cognitive capital. Arguably, if parties in a relationship share common business goals and ideas as well as holding a dense net of interactions, relational capital might be more likely to develop (Tsai & Ghoshal, 1998). Since both parties are expected to regard each other as more trustworthy than those with whom they do not have any commonalities, the finding is comprehensible. In the same way, a relationship based on trust requires frequent interaction and the means to do so. Interestingly, if trust and commitment are present, the information flow and intensity are increased (Hartmann and Herb, 2014).

### **5.2.3 Hypotheses: Considering social capital as antecedent to supplier satisfaction**

As introduced before, cognitive social capital can be closely related to the sharing of goals and values between parties in a relationship (Tsai and Ghoshal, 1998; Villena et al. 2011). As such, if the goals and values of both parties correspond to a high extent, a high level of cognitive capital is present. Consequently, buyer and supplier that share both attributes are able to develop an understanding of each other's processes, strategies and long-term targets (Adler and Kwon, 2002) that can be beneficial for the own as well as common planning activities. Further, the presence of cognitive capital might thus also go in line with a certain degree of similarity in terms of corporate culture. As shown by Parkhe (1993), such a similarity has a positive effect on business success of a buyer-supplier relationship. Next to this, the reduction of opportunistic behavior is then also seen as a key benefit (Ouchi, 1980b, Villena et al., 2011). Also, as shown by Gelderman (2016), the presence of cognitive capital strongly impacts the strategic performance of suppliers. Following this reasoning, H1.1 has been formulated. Next to this, literature further argues that trust and commitment are only likely to develop if parties that participate in the relationship have goals and values that are in line with

each other's (Barber, 1983; Nahapiet and Ghoshal, 1998, Carey et al., 2011). In other words, parties which are not aligned on their targets and ambitions, and thus do not understand each other, cannot be expected to grow trust or commitment (Adler and Kwon, 2000). Consequently, and in order to complete our model, we argue that the presence of cognitive capital positively affects the development of relational capital, as is depicted in H1.2.

***H1.1** The presence of cognitive social capital in the relationship between buyer and supplier positively influences the emergence of supplier satisfaction.*

***H1.2** The presence of cognitive social capital in the relationship between buyer and supplier positively influences the emergence of relational capital.*

Structural capital on the other hand has been depicted as pattern of connections between firms (Villena et al., 2011). Utilizing these structural ties, such as the sharing of information, external resources can be accessed (Dyer and Singh, 1998) that might have the potential to create a competitive advantage. Since especially the exchange of the right information at the right time is considered important, dense social structures between parties have been argued of being highly beneficial for firms (Zaheer and Bell, 2005). Also, information accuracy and reliability can be achieved in this way (Chen et al., 2009, Villena et al., 2011). As such, structural social capital through providing the means of exchanging knowledge with the right people at the right time (Nahapiet and Ghoshal, 1998) enables intensifying cooperation and collaboration between buyer and supplier, which has been assumed to positively impact satisfaction among suppliers (Essig and Amann, 2009). Consequently and based on this reasoning, H2.1 has been formulated.

Similar with cognitive capital, structural capital can also be related to the development of relational capital. Enabling both parties to interact, exchange information and ideas, which allows buyer and supplier to achieve transparency and with it prevent information asymmetries and opportunistic behavior (Kale et al., 2000). Parties that are aware of each other's actions need to have less fear of exploitation and are able to engage and fully commit to the relationship. Higher levels of reciprocity might be the result (Carey et al. 2011). Hence, H2.2 was formulated.

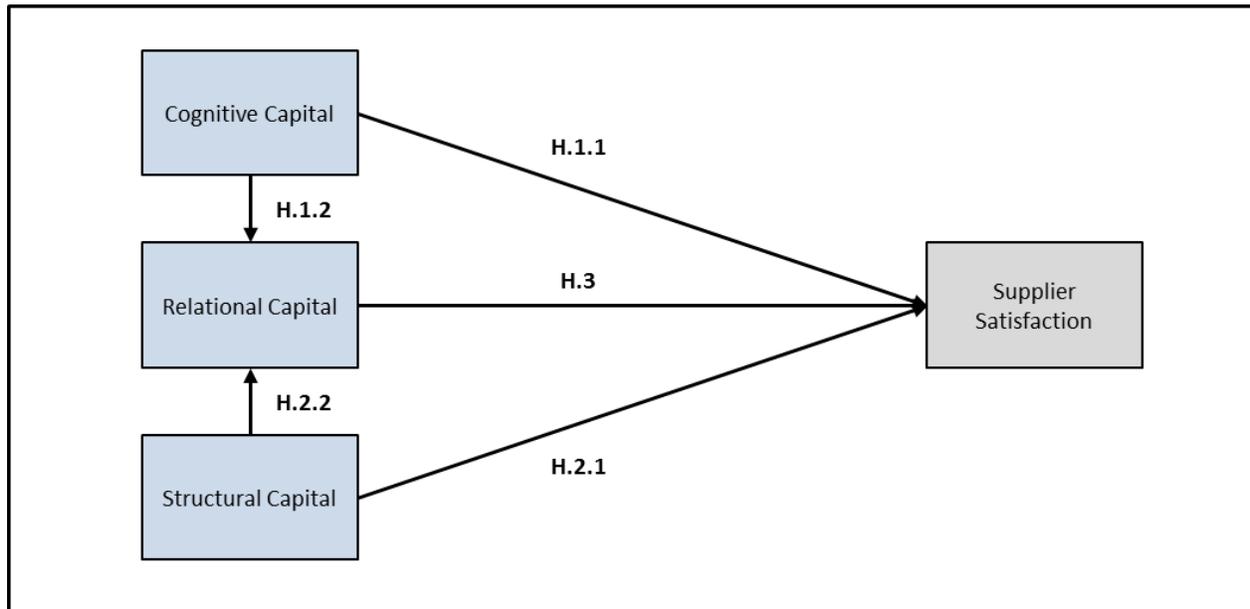
**H2.1** *The presence of structural social capital in the relationship between buyer and supplier positively influences the emergence of supplier satisfaction.*

**H2.2** *The presence of structural social capital in the relationship between buyer and supplier positively influences the emergence of relational capital.*

Finally, in terms of relational social capital, trust and commitment (Zhao and Cavusgil, 2006, Villena et al., 2011) as well as reciprocity (Blonska, 2013) have been argued to be the defining factors. Being closely connected to cognitive and structural social capital, relational capital is considered to prevent the risk of opportunistic actions as well as leakages of knowledge (Kale et al., 2000). As such, it can be considered likely to increase supplier satisfaction, since the supplier has to fear fewer risks. In their study in 2010, Nyaga et al. further discover that while collaborative activities positively affect supplier satisfaction, trust and commitment function as mediators. Consequently, since relational capital is grounded on both attributes, it is fair to argue that relational capital itself also positively influences the emergence of supplier satisfaction. Thus H3 has been formulated.

**H3** *The presence of relational social capital in the relationship between buyer and supplier positively influences the emergence of supplier satisfaction.*

Figure 8 summarizes the above mentioned hypotheses. The next section will now introduce the methods used in our study to test the hypotheses. As such, the background of data collection as well as the applied measurements is introduced.



**Figure 8: Research model – Social capital and supplier satisfaction**

## **5.3 Research Methodology**

### **5.3.1 Data collection: Survey research as methodological approach**

The aim of the paper is to investigate the links between the social capital dimensions and supplier satisfaction as well as between the preferred customer status and outcomes of common projects between buyer and supplier. For this purpose, a sample of 1386 suppliers located in China was randomly selected. All of the suppliers are operating in the automotive industry and can be equally divided among the five automotive commodity groups including interior, exterior, metal, electric and powertrain. The automotive industry was chosen as the setting of our study for the major role it is playing in the world economy (Taylor and Taylor, 2009). Also, the automotive industry, due to its high requirements in terms of quality as well as intellectual property protection (Holweg et al., 2008), poses challenges for the establishment of relationships while simultaneously assigning relationships between buyer and supplier a crucial role (Lockstroem, 2010). Consequently, the setting fits nicely to our research goal. In order to ensure that no outside effect was influencing our model, we included several control variables.

These included the affiliation of the supplier, whether it is of domestic or foreign origin, the commodity to which it belonged, the proximity, i.e. the duration that suppliers needed to visit their customer, as well as the size of the supplying firm. The suppliers were then approached via email containing a link to a web portal. Here, they had the option to answer questions in the English or Chinese language. This was done to ensure that even non-English speaking local Chinese suppliers had the chance to participate. For guaranteeing that the implication of English and Chinese questions matched to the fullest and did not lose meaning in the translation process, two independent Chinese native speakers were involved: The first native speaker translated the English questions into Chinese, while the second native speaker translated them back into English. Afterwards, the original and back-translated English questions were compared, which resulted in minor adjustments of the Chinese translation. Eventually, 140 usable questionnaires were received, equalling a response rate of 9%.

### **5.3.2 Measurements: The need for further refinement**

Wherever possible, existing measurements from previous studies were taken over for this research. The conduction of in-depth interviews with experts from a large manufacturer active in China as well as a suppliers before sending out the questionnaire allowed for a subsequent further refinement. In terms of scaling, five-point Likert scales were used, ranging from 1=strongly disagree to 5=strongly agree. The measurement items as well as the values of Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) can be found in the Appendix.

Regarding the measurement of social capital, being initially conceptualized by Nahapiet and Goshal (1998), several following studies have taken over their approach of distinguishing between the cognitive, structural and relational social capital dimensions (e.g Kale, 2000; Lawson, 2008; Villena et al., 2011; Carey et al., 2011). Hence, also the applied measurements have been largely replicated: While cognitive capital is regularly measured through putting emphasis on sharing norms, values and visions between relationship partners, structural capital is considered by focusing on the frequency that parties interact with each other and at which

organizational level this interaction is taking place. Finally, previous studies apply relational capital through paying attention to relationship characteristics, whether there is trust, friendship or mutual respect in the relationship between two parties. The most commonly used operationalization of social capital and how it has been applied over the past two decades is depicted in table 10.

Arguably though, measuring the three social capital constructs accordingly might result in a too narrow focus: Since social capital is a rather broad concept that includes every aspect of the relationship between buyer and supplier, the existing measures could entail the risks of lacking measurement accuracy and precision. In other words, while covering certain facets of social capital, the existing measures might not paint the whole picture. Conceptually, it would make sense to define further sub-categories of affiliation for each construct which would allow the social capital operationalization to account for a wider and more comprehensive scope. Going in line with this, we therefore propose to also measure the three dimensions of social capital as second order constructs. Being considered artifacts consisting of different elements, second-order constructs are captured without measurement error due to the reflective nature of the measurement (Van Riel et al., 2017). According to literature, using more abstract levels of constructs including several dimensions, i.e. second-order constructs, has already been applied during recent years in order to reduce model complexity (Becker et al., 2012), and can also be applicable to social capital.

Starting with cognitive social capital, we suggest to extend the existing measures of shared values / adherence to same norms by a second category considering the overlap of common objectives for the particular project or exchange. This addition would be reasonable since, for instance, in regional clusters, finding common norms may be more easy, though would not imply that projects within the certain cluster also do have the same target (Pulles and Schiele, 2013; Rutten et al., 2010). Consequently it would make sense to explore whether parties are aware of each others targets and whether they are making the effort to align them. Further, this operationalization of cognitive capital would also pay tribute to research on social capital and opportunism where a clear distinction between norms and goal congruence was made (Wang and Yang, 2013).

Structural social capital we would suggest to extend by two further categories:

While currently the major focus of structural social capital lies on the frequency of interaction between parties, the infrastructure that these parties use to communicate and exchange information is omitted. This however is crucial, since without the necessary means for interaction, the frequency that buyer and supplier actually get in contact with each other is also negatively affected. As such, we would further include items that consider the interaction infrastructure, be it common project reviews that are in place or the conduction of common activities, similar to the measures applied in Carey et al. (2011). Next to this, a third category would be the nature of communication, the way that buyer and supplier deal with each other. Here, socializing or fostering of friendship (Wang et al., 2013) could be assessed, as well as common trouble fighting. This would give an indication about whether buyer and supplier have a rather platonic business relationship with emphasis on filling out and evaluating quotations, or whether it goes beyond this towards a relationship of partner-like communication and exchange of ideas.

Finally, relational capital could be measured through distinguishing between trust, commitment and reciprocity, as has been applied already in Blonska et al. (2013). Whereas trust is reflecting the reliability and faithfulness in a relationship, developing with positive experiences of interaction that lead to the expectations of positive future interactions (Moran, 2005; Wasko and Faraj, 2005), commitment is the incline to remain in the relationship due to attachment and positive affect towards the other party (Kumar et al., 1994). This is also linked to reciprocity, through which parties feel the need to compensate an action they have experienced from others (Hoppner and Griffith, 2011). Consequently, combining these three categories within relational social capital would likely enhance the concept. Here, items include amongst others the consideration of own interests as well as others, the willingness to remain in the relationship as well as well as a feeling of indebtedness towards the other party.

**Table 10: Historic measurements of social capital in two decades**

Author	Year	Cognitive Capital	Structural Capital	Relational Capital
Tsai & Ghoshal	1998	<ul style="list-style-type: none"> <li>• Sharing of same ambitions and visions</li> <li>• Pursuit of collective goals and missions</li> </ul>	<ul style="list-style-type: none"> <li>• Time spent on social interaction</li> <li>• Close contact during social interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Reliability and trust of not being taken advantage of</li> <li>• Keeping promises made to other party</li> </ul>
Jap	1999	<ul style="list-style-type: none"> <li>• Parties have different goals</li> <li>• Parties have compatible goals</li> <li>• Support each other's goals</li> <li>• Parties share same goals</li> </ul>		<ul style="list-style-type: none"> <li>• Promises made are reliable</li> <li>• Honesty in dealing with each other</li> <li>• Trust each other</li> <li>• Consider others interests</li> <li>• Help each other</li> </ul>
Kale et al.	2000			<ul style="list-style-type: none"> <li>• Personal interaction at multiple levels</li> <li>• Mutual respect at multiple levels</li> <li>• Mutual trust at multiple levels</li> <li>• Friendship and reciprocity among parties</li> </ul>
Krause et al.	2007	<ul style="list-style-type: none"> <li>• Sharing of same business values</li> <li>• Parties agree on what is best for the relationship</li> <li>• Sharing of goals for business</li> </ul>	<ul style="list-style-type: none"> <li>• Proprietary information is shared</li> <li>• Frequent information exchange</li> <li>• Informing on events that may affect other party</li> </ul>	<ul style="list-style-type: none"> <li>• Expectation to also work together in the future</li> <li>• Relationship is long-term in nature</li> </ul>
Lawson et al.	2008			<ul style="list-style-type: none"> <li>• Personal interaction at multiple levels</li> <li>• Mutual respect at multiple levels</li> <li>• Mutual trust at multiple levels</li> </ul>
Carey et al.	2011	<ul style="list-style-type: none"> <li>• Agreement on what is in best interest of relation</li> <li>• Sharing of same business values</li> <li>• Other party does not share same goals (reversed)</li> <li>• Sharing of same ambitions and vision</li> </ul>	<ul style="list-style-type: none"> <li>• Taking place of social events</li> <li>• Conduction of joint workshops</li> <li>• Conduction of team building exercises</li> <li>• Co-location between parties</li> </ul>	<ul style="list-style-type: none"> <li>• Close interaction at multiple levels</li> <li>• Mutual respect at multiple levels</li> <li>• Mutual trust at multiple levels</li> <li>• High levels of reciprocity among parties</li> </ul>
Villena et al.	2011	<ul style="list-style-type: none"> <li>• Similar values and management style</li> <li>• Similar approaches to business dealings</li> <li>• Compatible goals and objectives</li> <li>• Same vision of business in</li> </ul>	<ul style="list-style-type: none"> <li>• Frequent interaction between personnel</li> <li>• Frequent interaction across different levels</li> <li>• Frequent interaction across different functions</li> </ul>	<ul style="list-style-type: none"> <li>• Close, personal interaction between parties</li> <li>• Mutual respect between parties</li> <li>• Mutual trust between parties</li> <li>• Friendship and reciprocity</li> </ul>

		relationship		between parties
Horn et al.	2014	<ul style="list-style-type: none"> <li>• Ask other party for advice and counsel</li> <li>• Encourage other party to come up with suggestions for improvement</li> <li>• The other party is collaborative</li> </ul>	<ul style="list-style-type: none"> <li>• Close social relationship with other party</li> <li>• Employees like to spend time with other party</li> <li>• Feeling of indebtedness for what the other party has done</li> </ul>	<ul style="list-style-type: none"> <li>• Other party considers own interests as well as ours</li> <li>• Trust that other party keeps our best interest in mind</li> <li>• Other party is honest</li> <li>• Want to remain in relation</li> <li>• Attraction towards other party</li> </ul>
Li & Ye	2014	<ul style="list-style-type: none"> <li>• Sharing the same visions and ambitions</li> <li>• Sharing the same goals</li> <li>• Sharing the same values</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of close relationship with other party</li> <li>• Frequent communication with other party</li> <li>• Other party is very well-known</li> </ul>	<ul style="list-style-type: none"> <li>• Other party considers own welfare as well as ours</li> <li>• Under changing circumstances, the other party still offers support</li> <li>• Understanding in case demands cannot be met</li> </ul>
Roden & Lawson	2014	<ul style="list-style-type: none"> <li>• Agreement on what is in best interest of relation</li> <li>• Sharing of same business values</li> <li>• Other party does not share same goals (reversed)</li> <li>• Sharing of same ambitions and vision</li> </ul>	<ul style="list-style-type: none"> <li>• Taking place of social events</li> <li>• Conduction of joint workshops</li> <li>• Conduction of team building exercises</li> <li>• Co-location between parties</li> </ul>	<ul style="list-style-type: none"> <li>• Close interaction at multiple levels</li> <li>• Mutual respect at multiple levels</li> <li>• Mutual trust at multiple levels</li> <li>• High levels of reciprocity among parties</li> </ul>
Whipple et al.	2015	<ul style="list-style-type: none"> <li>• Same vision for business relationship</li> <li>• Pursuit of collective goals and mission</li> <li>• Relationship has common purpose</li> <li>• Parties view each other as partners</li> <li>• Parties have total agreement on vision</li> </ul>	<ul style="list-style-type: none"> <li>• Interaction on real-time basis</li> <li>• Collective achievement of goals</li> <li>• Development of mutual understanding</li> <li>• Sharing of ideas, information and responses</li> </ul>	<ul style="list-style-type: none"> <li>• Other party is concerned about our success</li> <li>• Trust each other that best interest is kept in mind</li> <li>• Other party considers own welfare as well as ours</li> </ul>
Gelderman et al.	2016	<ul style="list-style-type: none"> <li>• Sharing of same norms and values</li> <li>• Sharing of same business philosophy</li> <li>• Sharing of same goals</li> <li>• Sharing of same vision</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of frequent interaction</li> <li>• Promotion of frequent interaction between departments</li> <li>• Promotion of frequent interaction at multiple levels</li> </ul>	<ul style="list-style-type: none"> <li>• Relation characterized by interpersonal interactions</li> <li>• Relation characterized by trust</li> <li>• Relation characterized by friendship</li> <li>• Relation characterized by mutual respect</li> </ul>
Preston et al.	2017	<ul style="list-style-type: none"> <li>• Sharing of same ambitions</li> <li>• Sharing of same vision of business</li> <li>• Sharing of similar corporate culture</li> </ul>	<ul style="list-style-type: none"> <li>• Formal interaction at multiple levels</li> <li>• Frequent intra-organization interaction at multiple levels</li> <li>• Frequent inter-organizational interaction at multiple levels</li> </ul>	<ul style="list-style-type: none"> <li>• Mutual trust at multiple levels</li> <li>• Mutual respect at multiple levels</li> <li>• Parties follow similar pattern on how to best cooperate</li> <li>• Similar approach of fostering teamwork</li> </ul>

		between parties		
Son et al.	2017	<ul style="list-style-type: none"> <li>• Willingness to change for benefit of relationship</li> <li>• Sharing of similar values</li> <li>• Sharing of similar vision about importance of relation</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of system and method for information sharing</li> <li>• Sharing of standardized information</li> <li>• Sharing of customized information</li> </ul>	<ul style="list-style-type: none"> <li>• Relationship is based on trust</li> <li>• Commitment to maintaining a close relationship</li> <li>• Parties avoid abusing power in the relationship</li> </ul>

Next to the social capital operationalization, the items of Huettinger et al. (2014) were used in order to measure the concept of supplier satisfaction. Here the focus especially lied on whether working with the business partner was pleasant and whether the decision to cooperate would be taken again. Further details on the chosen measurements of our study can be found in the Appendix. The following section focuses on how the obtained data was analyzed.

### 5.3.3 Data analysis: Using a partial least squares equation model

For testing the hypotheses we carried out a partial least squares equation modeling, short PLS-SEM (Fornell & Cha, 1994) and checked both, the model with and without second order constructs. For this purpose, the software SmartPLS (Ringle et al., 2005), which has been characterized as fruitful for obtaining robust findings (Chin, 1998), was utilized in combination with IBM SPSS in order to double-check obtained findings, in particular when carrying out the confirmatory factor analysis. Findings were further re-confirmed using PLS-C. In order to increase the measurement accuracy of the sample, bootstrapping was applied (Nevitt & Hancock, 2001). Table 11 includes the detailed path coefficients as well as the t-values. For assessing internal consistency and reliability of our constructs, composite reliability (CR) as well as average variance extracted (AVE) and factor loadings were used (Fornell and Larcker, 1981; Wetzels et al, 2009; Edwards and Bagozzi, 2000). The assessment of the indicator reliability was conducted by analyzing individual item loadings: Here, due to the high amount of indicators located to the social capital constructs, some items showed contained low loadings or were correlating with each other, thus affecting each others explanatory power, and had to be removed. Further, two items with factor loadings of 0.6x were retained, all

other loadings well exceed the threshold of 0.7 (Henseler et al., 2009). Eventually, five well-working items were obtained for explaining the constructs of relational and cognitive capital, eight well-working items were found well-applicable for the structural capital construct. Details about these particular items are listed in the Appendix.

In terms of convergent reliability, the analysis showed that all items strongly correlate with the construct they are related to. As such, all values exceed the threshold of 0.7 for CR, 0.5 for AVE and 0.7 for Cronbach's alpha (Edwards & Bagozzi, 2000; Fornell & Larcker, 1981). Additionally, in order to test for discriminant validity, the Fornell-Larcker criterion (Fornell and Larcker, 1981) was used: Since the squared roots of the AVE scores are all larger than cross-correlations scores, no concern was found. For assessing common method variance (CMV), the unmeasured latent methods factors test as described by Podsakoff et al. (2003) was conducted. As such, a common method variance factor including all principal constructs indicators was introduced. As shown in table 31 (see Appendix), the substantive variance averaged around 0.661 while the average method based variance was 0.018, resulting in a ratio of substantive to method based variance of 37:1. Further, also the variance inflation factor (VIF) can be used to assess common method bias. As pointed out by Kock (2015), the "occurrence of a VIF greater than 3.3 is proposed as an indication of pathological collinearity, and also an indication that the model may be contaminated by common method bias" (p.7). Consequently, the model can be considered free of common method bias, if every factor-level VIF, as a result of a full collinearity test, is equal to or lower than 3.3. In our case, all factors were found well below this threshold of 3.3, with the highest VIF possessing a value of 2.9075 (see Appendix, table 32). Therefore, common method would not pose a threat. Following these results, CMV may thus not be regarded a concern.

In order to test social capital as a second order construct, we applied the two-stage approach as introduced by Ringle et al. (2012). As indicated by its name, it contains two separate steps: At first, the latent variable scores of the first-order construct were obtained (van Riel et al., 2017). This was done through running the PLS algorithm and our model in way as has been done already above. As such, the second-order constructs was not included yet. Subsequently in the second step, the

obtained scores of the first-order construct served as variable of the second order construct. In this way, the measurement of the first-order construct could be reduced to single-items (van Riel et al., 2017), having the statistical advantage of avoiding multicollinearity among indicators. Consequently, we used frequency of interaction, nature of communication and infrastructure actor exchange as first-order constructs defining the second-order construct structural capital, shared goals and overlap of objectives as first-order construct affecting cognitive capital, while trust, commitment and reciprocity were related to relational capital. After running the model once more, this time including the second-order constructs, scores could be obtained.

Additionally, in order to even better understand the relationships among the social capital dimensions themselves as well as between them and supplier satisfaction we also conducted a polynomial regression analysis (Edwards, 1994; Shanock et al., 2010). Being relatively unknown to the field of purchasing and supply management, polynomial regression is enjoying increasing popularity in literature on innovation (Lee et al., 2017) or organizational behavior (Caniels and Veld, 2016). Through using polynomial regression with response surface analysis it is possible to investigate a three-dimensional view of relationships (Edwards and Parry, 1993). For our purpose, and since polynomial regression only allows for having two independent variables at ones (X and Y axes), we conducted three analyses: We tested the relations between (1) cognitive and structural capital on the one hand and relational capital on the other hand, between (2) relational capital and structural capital on the one hand and supplier satisfaction on the other hand, as well as between (3) relational capital and cognitive capital on the one hand and again supplier satisfaction on the other hand. Following the suggestions of Shanock et al. (2010), we firstly examined discrepancies between the independent variables to ensure that variance was sufficient to perform polynomial regression. Through computing standardized scores of the independent variables we were able to ensure that cases were evenly distributed. We then conducted the polynomial regression employing 5000 bootstrap samples and using the Excel spreadsheet of Shanock et al. (2010) to create a three-dimensional view of the three before described relationships. Significance levels of .05 were applied in the analyses.

## **5.4 Findings: Significances of partial nature**

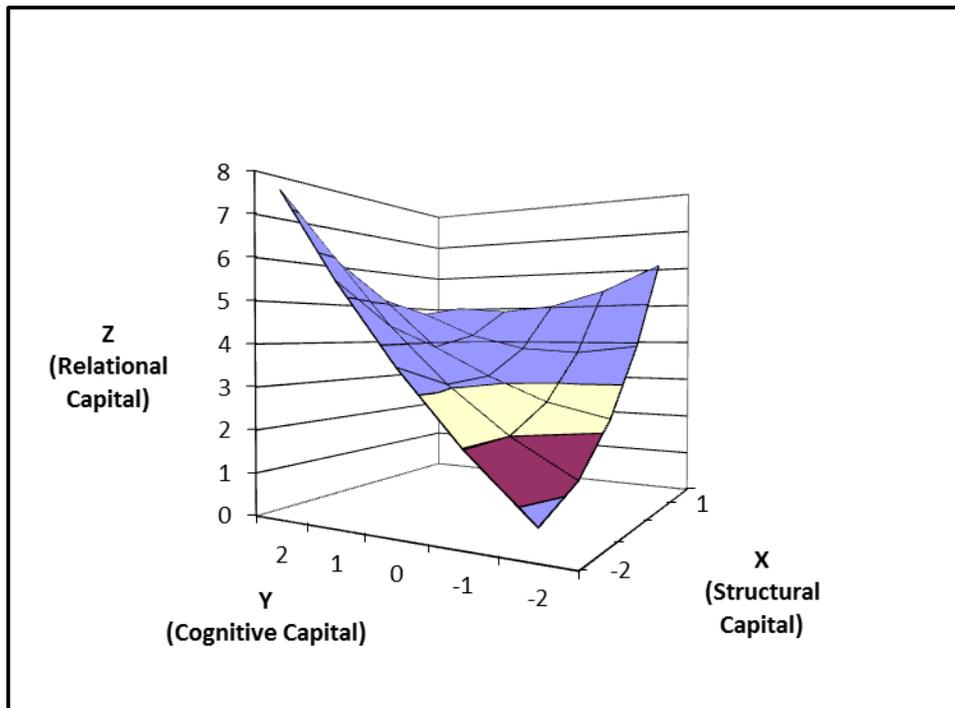
The results of our study show that the predictive validity of our model can be considered high. About 2/3 of the variance in relational capital can be explained through the inclusion of cognitive and structural capital. Here, only a small difference was found between the model without measuring social capital as second-order constructs ( $R^2 = 0.698$ ) and with second-order constructs ( $R^2 = 0.627$ ). Compared to this, the variance in supplier satisfaction varied to a larger extent: While measurement without second-order constructs showed an explained variance of supplier satisfaction through relational capital by 51.1%, this number increased to 64.4% when including second-order constructs. Next to this, the estimated were highly significant: They all exceed t-values of 4.145. Hypothesis 1 states that cognitive capital positively influences supplier satisfaction (1.1) and relational capital (1.2). Here, only the second path can be strongly supported with t-value exceeding 9.337 and a  $\beta$  of 0.628. The first path, however, was found non-significant ( $t = 1.158$ ,  $\beta = 0.141$ ). The same pictures is displayed for hypothesis 2, which referred to structural capital and proposes that structural capital positively affects supplier satisfaction (2.1) as well as relational capital (2.2). Once more, only the second path is found significant with a t-value of 4.168 and  $\beta$  of 0.278. The relationship between structural capital and supplier satisfaction however does not hold ( $t = 0.935$ ,  $\beta = 0.076$ ). Finally, hypothesis 3 examined the relationship between relational capital and supplier satisfaction. For this hypothesis we found strong support, with a t-value of 4.529 and a  $\beta$  of 0.556. The control variables we included, affiliation, commodity, proximity as well as size had no statistically significant effect on our findings. A summary can be found in the table below.

**Table 11: Path coefficients I**

Second-order construct?	Path / Hypothesis	Path coefficient	t-value	p-value
<b>Without</b>	Cognitive SC → Supplier Satisfaction (H1.1)	0.141	1.158	> 0.1, non-significant
	Cognitive SC → Relational SC (H1.2)	0.628	9.337	< 0.001, significant
	Structural SC → Supplier Satisfaction (H2.1)	0.076	0.935	> 0.1, non-significant
	Structural SC → Relational SC (H2.2)	0.278	4.168	< 0.001, significant
	Relational SC → Supplier Satisfaction (H3)	0.556	4.529	< 0.001, significant
<b>With</b>	Cognitive SC → Supplier Satisfaction (H1.1)	0.081	0.746	> 0.1, non-significant
	Cognitive SC → Relational SC (H1.2)	0.577	7.767	< 0.001, significant
	Structural SC → Supplier Satisfaction (H2.1)	0.037	0.629	> 0.1, non-significant
	Structural SC → Relational SC (H2.2)	0.290	4.145	< 0.001, significant
	Relational SC → Supplier Satisfaction (H3)	0.633	5.580	< 0.001, significant

Next to our analysis in PLS, we further examined the relationships among the social capital dimensions as well as between them and supplier satisfaction through employing a polynomial regression. Figure 9 shows the three-dimensional response surface for the relationship between cognitive and structural capital on the one hand as well as relational capital on the other hand, and can be interpreted with the help of four surface test values including slope and curvature along the lines  $X = Y$  and  $X = -Y$  (see table 35). As shown, both the slope  $a1$  as well as the curvature  $a4$  were found significant. This implies that while cognitive and structural capital mutually support each other in forming relational capital ( $a1$ ), relational capital is relatively low when both are in agreement and increases the more discrepancy between

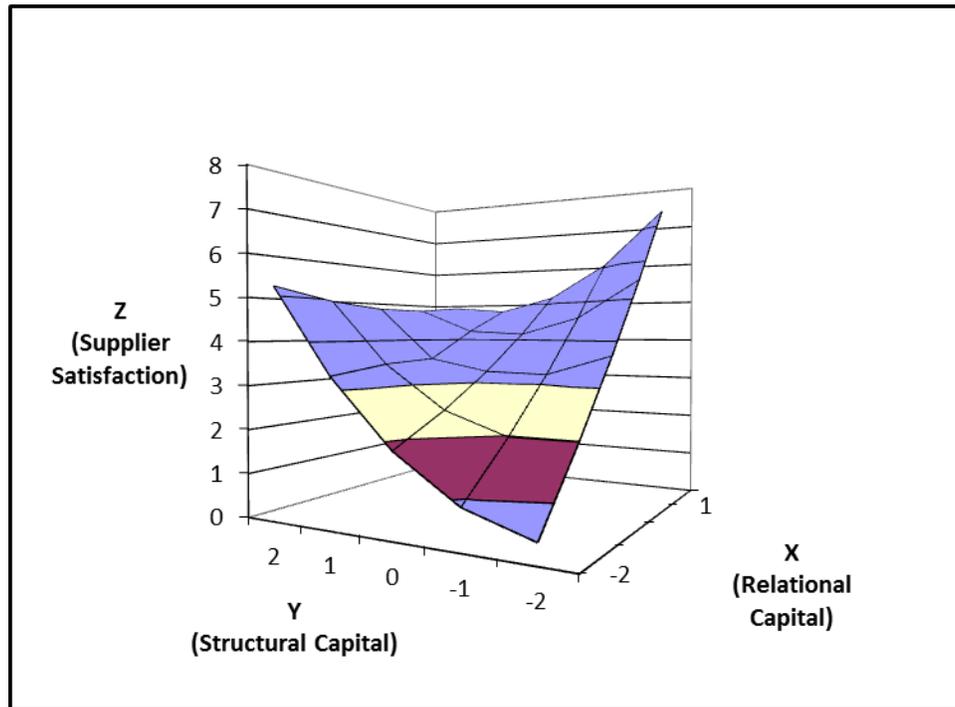
cognitive and structural capital exist (a4). Figure 9 nicely displays this result, showing the stable and significant slope (a1) in the middle of the figure, while also pointing to the fact that both cognitive and structural capital work well in explaining relational capital apart from each other, displayed on the left and right edges of the figure 9 (a4). Also, cognitive capital seems to influence the emergence of relational capital to a stronger degree compared with structural capital.



**Figure 9: Polynomial regression – Surface model 1**

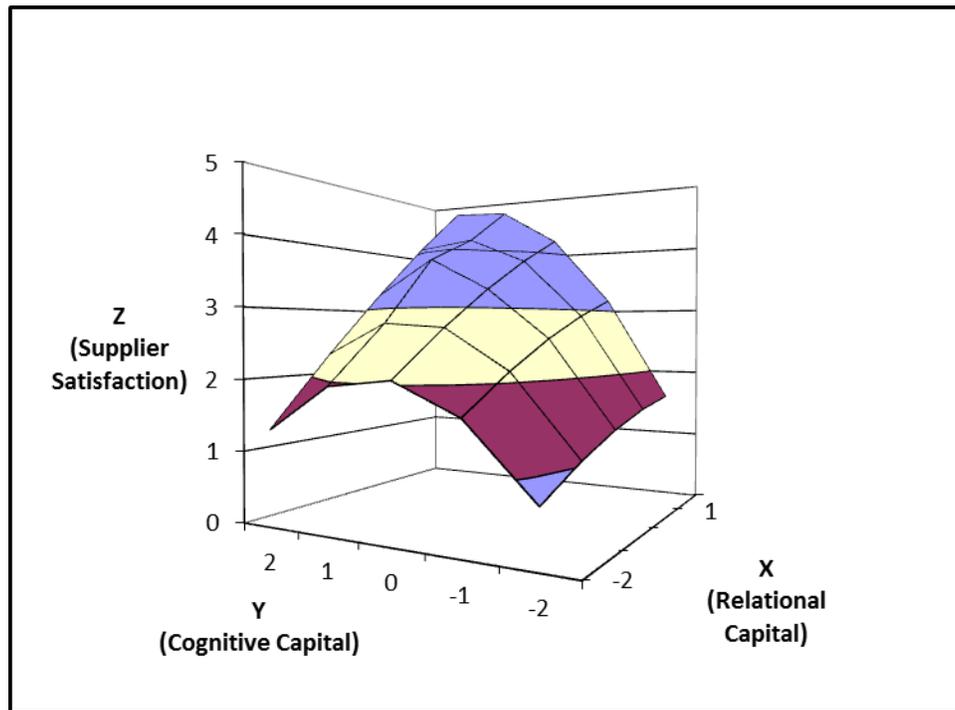
Concerning the relationship between having social capital in the buyer-supplier relationship and achieving supplier satisfaction we performed two analyses, firstly with relational and structural capital and secondly with relational and cognitive capital being the independent variables on X and Y axes. Focusing on the first one, only the slope (a1) was found to be significant (see table 35). Again, this implies that higher levels of both structural and relational capital are related to higher levels of supplier satisfaction. Figure 10 points towards this with the slight but obvious elevation in the middle of the figure. Also, there seems to be a certain degree of discrepancy involved between relational and structural capital considering the

curvatures and elevations on the left and right hand side of the figure, which however did not find significant support. What becomes apparent though is the comparably stronger effect of relational capital.



**Figure 10: Polynomial regression – Surface model 2**

Finally, also for the relationship between relational and cognitive capital on the one hand and supplier satisfaction, only the slope ( $a_1$ ) was found significant. Again, this implies that relational and cognitive capital support each other in creating supplier satisfaction, which is shown nicely in figure 11. Also, compared to figure 10 as described before, the effect of these two social capital dimensions working together seems to be by far higher than their individual contribution. Both curvatures however did not find any significant support. Still, looking at the individual effect of both social capital dimensions, relational capital seems to have a stronger impact on supplier satisfaction compared to cognitive capital.



**Figure 11: Polynomial regression – Surface model 3**

## **5.5 Discussion and Conclusion**

### **5.5.1 Discussion and implications: Relational capital with significant effect**

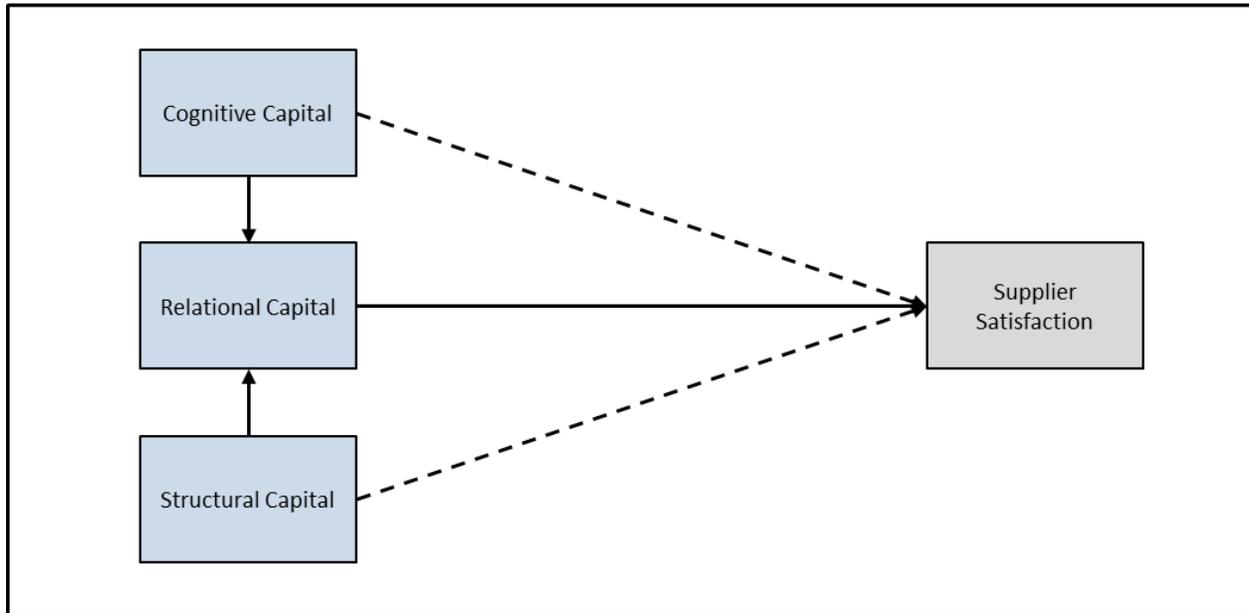
The study at hand paid attention to social capital theory and its role as antecedent of supplier satisfaction. As such, we in particular considered the three dimensions of social capital, namely cognitive, structural and relational capital and the effect they have on the development of a relationship a supplier would consider satisfying. This study therefore suggested that every dimension of social capital would positively influence the emergence of supplier satisfaction, as has been proposed by past research (e.g. Essig and Amann, 2009). Our findings however reveal a different picture: We only find partial support for the effect of social capital on supplier satisfaction. Both, the relationship between cognitive and supplier satisfaction as well as between structural capital and supplier satisfaction have found to be insignificant. Relational capital on the other hand can be depicted to

strongly affect the emergence of supplier satisfaction, a relational primacy seems to play a role. The findings of PLS and our polynomial regression are hence also well in line, with the latter depicting a stronger effect of relational capital in a context with only two independent variables. This result might appear quite surprising however on a second thought it is also not too far-fetched: Suppliers might perceive structural capital as a means to communicate and interact with their customer. While this seems to be a necessity in order to keep the relationship alive and carry on with common projects, simply conversing on a regular basis and exchanging information might be a good start but would also proof meaningless without certain output. As such it must not be a surprise that the existence of structural capital per se does not lead to supplier satisfaction. A similar picture appears for cognitive capital: While sharing goals and values, and even aligning them might be an important necessity for suppliers to conduct common projects with their customers and commonly work into the right direction, it does not necessarily mean that these goals will also be reached. Since supplier satisfaction naturally emerges if the supplier also sees a benefit in the exchange relationship (Huettinger et al. 2014), sharing goals and values might simply not be sufficient. Relational capital on the other hand includes trust and commitment to the relationship as well as reciprocity that the relationship will also be continued in the future (Blonska et al., 2013). For suppliers, this would imply that they have a perspective of not only proceeding with the current business but also having future business opportunities with their customer. Moreover, through having a relationship based on trust and commitment, suppliers might see less risk in the relationship of e.g. opportunistic actions. This would explain the strong positive relationship between relational capital and supplier satisfaction. Another explanatory factor that should not be neglected is the setting our study took place in: Since we focused on the Chinese market and exclusively gathered data from Chinese suppliers, the purely relational aspects of a relationship might be of higher value than in other countries: Guanxi comes to mind, a Chinese form of social capital, that is based on trust and allows firms to create bonds with other firms in order to commonly pursue goals and boost performance (Yang, 1994, Nicholson et al., 2001). Guanxi, and the Chinese setting, would certainly help to explain the strong significance of relational capital on supplier satisfaction. As such, the question remains whether this remarkable relational

primacy we found in our study is truly the general understanding of suppliers when it comes to their satisfaction, or a rather circumstantial phenomenon. All in all our findings provide additional insights for the literature on supplier satisfaction. While prior studies from Huettinger et al. (2012) or Vos et al. (2016) focus on the rather technical antecedents of supplier satisfaction, we extend this view through building the concept of supplier satisfaction on the theory of social capital.

Next to this, this research looked into the intertwined connections between the social capital dimensions. While structural and cognitive capital have been revealed ineffective when it comes to supplier satisfaction, we still found an indirect effect that after all underlines the importance of both dimension: In line with Carey et al. (2011), our study confirms the facilitating effect of cognitive and structural capital on the development of relational capital. Both types of social capital thus should not be neglected, also supporting the line of thought in social capital theory. Figure 12 shows the adjusted model based on our findings.

Also, the polynomial regression here contributes to these findings by looking further at the interaction between structural capital and cognitive capital. As such, while both were found to mutually support each other, also the discrepancy amongst both dimensions seems to affect the formation of relational capital, with high discrepancy leading to an increase in relational capital. In other words and summing up the result, while cognitive and structural capital work well together as well as apart, any of them need to be present at a high level in order to support the formation of relational capital within the buyer-supplier relationship. With this, our findings further enhance the theoretical understanding of social capital.



**Figure 12: Research model – Adjusted**

Having discussed the findings of our research itself, we should further not leave out the contributions to the measurement of social capital our study made. As such, we proposed and tested extended measurements for social capital allowing to grasp a wider scope compared to previous operationalization's. In particular the items defined for structural capital turned out to be effective, further extending the concept of structural capital from a frequency based dimension towards also communication infrastructure and nature of communication. Also, we were able to not only confirm the measurements using a regular model, though we also tested them as second-order constructs. Here, all defined sub-dimensions of social capital proved to be a good fit and should be further considered as measurement tools in studies to come.

### **5.5.2 Managerial implications: Need to consider trust and commitment as prime factors**

From a managerial perspective our study is of particular interests outlining dimensions that have to be considered for creating satisfaction amongst suppliers.

As such, here it is important to underline once more that only for relational capital a significant effect on supplier satisfaction was found, implying that soft aspects underlying a relationship such as trust and commitment are most crucial in contrast to factors that are more tangible and easy to observe, such as the frequency of communication or goal alignment. Nevertheless, cognitive and structural capital must not be neglected: Given our results, managers might wonder how to evoke higher levels of relational capital, thus higher levels of trust, commitment or reciprocity among their suppliers? The answer to this question can also be found embedded within the social capital theory. While neither cognitive nor structural capital might have a significant effect when it comes to the creation of supplier satisfaction, both are indispensable in order to develop a functioning and harmonious, trust based relationship. Especially in China, where the extent of doing business is still on the rise, managers should be well aware that, after all, every relationship can be broken down to the possession of relational capital; once this is not present, managers might find it difficult to proceed with their approaches in dealing with suppliers. The results of our polynomial regression analysis provide firms with further insights into how this trust based relationship, based on relational capital, can be achieved. Accordingly, firms do not necessarily have to focus on goal and value alignment (cognitive capital) as well as on establishing communication structures (structural capital) at the same time. As shown by our results, a focus on either one of them might suffice to achieve relational capital within the buyer-supplier relationship and thus create satisfaction among their suppliers.

### **5.5.3 Limitations and future research**

As it is with every research, also our study is not free of limitations. The most obvious one refers to the setting of our study: Our whole sample originated from China, known for its special kind of buyer-supplier relationships and its importance of Guanxi. Therefore, it cannot be excluded that also our results were affected by these locational circumstances. Future studies should therefore try to replicate our research in a different environment, or attempt to include suppliers from several countries at once. Further, with a response rate of only 9%, the study might not be

representative of whole group of suppliers in the automotive sector. Even though we included several control variables, non-response bias might be a risks. As already suggested by Vos et al. (2016), a response rate of >20% in supply management research should be pursued in order to limit the risk of non-reponse bias. Finally, future research should try to use our extended measures when focusing on social capital theory. Further, future research should also proceed with modeling social capital as second-order construct.

## **CHAPTER 6: MIRROR, MIRROR ON THE WALL – HOW INTERNAL INCONSISTENCY WITHIN BUYING FIRMS PREVENTS SUPPLIER COOPERATION**

Given a fundamental change in supply chain organization, buying firms increasingly have to deal with a smaller number of key suppliers that employ extended value adding responsibilities. Buying firms thus have to pay attention to establish relationships with these suppliers in order to prevent the risk of resource scarcity. While social capital theory has been considered as the basis of relationships between buyer and supplier, the effect of internal social capital within a firm on the development of external social capital with another firm is understudied. This especially holds when focusing on the perception that suppliers have about their customer organization's internal relations. Since already this perception could define whether a relationship is meant to last or not, gaining an understanding of this situation can be crucial for relationship management.

Therefore, this chapter tests the effect of perceived internal social capital on the emergence of external social capital. Further, the influence of the social capital dimensions on achieving the preferred customer status and in turn on project success with Chinese suppliers is tested. With this, our study contributes to the further development of social capital theory.

## **6.1 Introduction: Establishing a link between internal and external social capital**

Over the last decades, the value of inter-organizational relationship has gained increased recognition, being considered a fruitful source for achieving sustainable competitive advantages (Krause et al., 2007). Nowadays being able to bind parties together becomes especially crucial: On the one hand a fundamental change in supply chain organization has resulted in increasing responsibilities for suppliers (Schiele et al., 2015), on the other hand supply bases are more often consolidated in order to include a smaller number of key suppliers (Eggert and Ulaga, 2010). Consequently, since the availability of resources is limited and suppliers have constraints on whom they can devote these resources to (Schiele et al., 2015) having close, social relationships with them becomes top priority for buying firms. From the theoretical perspective, social capital theory has been considered for studying relationships between individuals and organizations (Ahuja, 2000b, Tsai and Ghoshal, 1998b). Building external relationships between buyer and supplier, however, only works if smooth running internal cross-functional relationships are in place, if the different organizational functions within a firm are well integrated and aligned (Zhao et al., 2011). As shown by Horn et al. (2014), the presence of internal social capital can be considered a prerequisite for the emergence of external social capital. Though, while the authors surveyed a sample of purchasing managers, the supplier perspective was omitted. Interestingly, research on how suppliers perceive internal social capital within the buying organization and, in turn, how this perception influences the emergence and development of external social capital within the relationship between the supplier and this specific buyer are, a priori, neglected in literature. The neglect in literature on the relationship between perception and result, though, is unfortunate given that this understanding could improve future cooperation between buyer and supplier through providing buying firms with a mirror outlining how their external image might possible affect their business partnerships and success. As such, the interplay between perceived internal social capital and the development of external social capital could further enhance supply management as well as B2B marketing literature. Intending to close

this gap, our study, through the pursuit of a quantitative approach, will aim to answer the following research question:

*To what extent does the presence of internal social capital a supplier perceives from its customer firm influence building external social capital with this customer?*

A context, where this configuration based on social capital can be considered very important, is China, given its strong focus on social relations (Li et al., 2014). Since China has become the most important supply market in the world, companies increase their efforts to integrate domestic suppliers into their sourcing activities for accessing the potential of the local supplier base and, predominantly for foreign companies located in China, to fulfil local content requirements (Lockström and Lei, 2013). Building social capital or, with regard to the Chinese context, Guanxi, as a form of social capital (Yang, 1994, Nie et al., 2011), can therefore be understood a means to succeed in the Chinese market. This becomes particularly important when considering the vast amount of firms, and thus potential competitors, that have entered the market in sought for cheap though qualified sources. Unfortunately, since suppliers have constraints on capacities and resources they can devote to their customers (Hüttinger et al., 2014), supplier scarcity becomes a risk for firms they have to mitigate (Bode et al., 2011). Becoming preferred customer (Schiele et al., 2011; Huettinger et al., 2012) and receiving preferential treatment could therefore be a way to circumvent this risk. Though, how to become preferred customer? Also here, social capital could be a key concept to answer this question: While testing supplier development as an antecedent to preferential supplier behavior, Blonska (2010) utilized social capital as mediating variables through differentiating between structural, cognitive and relational capital. Findings partially confirmed a positive effect, with only structural capital being significant. Our study will take up the idea of using social capital as basis for the preferred customer status while also bringing it to a low-cost country context. Following this, we intend to answer the following research question:

*How does the presence (or absence) of social capital influence the achievement of the preferred customer status?*

Further, especially understanding the relationship between preferred customership and successful project outcomes with local suppliers could be of strong interests for firms operating in low-cost countries, such as in China: Given the strong need to build a domestic supply base, or in other words to “localize”, enforced through governmental requirements (Lockstrom et al., 2011, Nassimbeni and Sartor, 2007, Eberhardt et al., 2004), firms would have to strongly cooperate with their suppliers in order to catch up a loss in terms of quality or competitiveness. This could even go as far as collaborating with suppliers to implement local sub-tier suppliers into their supply chains for achieving certain local content rates. Through becoming preferred customer, firms could grant access to external resources (Schiele et al., 2012), that might even include a direct line to sub-tier suppliers. Literature however has not yet considered the preferred customer status, in a low-cost country context, such as the Chinese context. Again, this gap in literature is unfortunate, given that in Chinese society with its strong reliance on Guanxi, being preferred customer could have a reverse effect: Suppliers might feel less challenged to deliver outstanding results due to the already established Guanxi with their customer (Nie et al., 2011). In other words, while a high accumulation of social capital could positively affect awarding the preferred customer status, the implication might not be the same for successful project outcomes in China. In order to shed light on this situation, the following research question is formulated:

*How does the preferred customer status affect the outcome of projects?*

By answering the two research questions, our paper will contribute in two directions:

(1) Firstly, our study will further extend the cohesive research on social capital in buyer-supplier relationships, specifically paying attention to the supplier point of view, and thus answering calls for more supplier-centric research (Carey et al., 2011). By considering the influence of perceptions suppliers have of their buyers internal relationships on the quality of their external relations between both parties, our study will provide indications to forming and sustaining inter-organizational relationships.

(2) Secondly, through testing the effect of the social capital dimension on becoming preferred customer, our study will confirm whether social relations between buyer

and supplier can already be considered an antecedent to the preferred customer status. A prior study of Blonska (2010) could only confirm this partially. In our study, this social capital-preferred customer relationship is particularly interesting since the low-cost country context of our research setting emphasizes the importance of relationships, from the individual up to the organizational level. While one might argue that the preferred customer status naturally emerges once a benevolent relationship exists and social capital is present to a high extent, this picture might look different in a context where everyone puts efforts on building good relationships with everyone around him. Might social capital then still be a sufficient decision making criteria of whom to award the preferred customer status? Our study will shed light on this topic.

(3) Finally, this study will further look into the outcomes of the preferred customer status while focusing on a context where many foreign firms struggle when it comes to dealing with domestic firms and building relationships with them (Lockstroem et al., 2010, Kotabe and Murray, 2004, Pyke et al., 2000, Millington et al., 2005). In particular, we will confirm the effect of being preferred customer on project success with Chinese suppliers. Since the preferred customer status has not been tested in another cultural setting, its applicability might also differ which could lead to strong implications for firms operating in China.

The following chapters will be organized as follows: Through conducting an extensive literature review, all variables will be introduced. Subsequently, the focus will lie on the research methodology, followed by a presentation of findings and limitations.

## **6.2 Theoretical considerations**

### **6.2.1 Social capital theory: Cognitive, structural and relational capital define the concept**

Social capital, being grounded on social relations, is understood as goodwill that is available to individuals as well as groups (Adler and Kwon, 2002). It can be referred to as resources, of actual or potential nature, that are available to different actors within a relationship and that comprises contextual factors underlying the

resource exchange (Kankanhalli et al., 2005a, Nahapiet and Ghoshal, 1998a). As such, social capital considers social ties that are difficult to imitate and potentially able to generate a competitive advantage (Edelman et al., 2004). In academics the notion of social capital has been used as theoretical lens for studying relationships between individuals and organizations (Ahuja, 2000b, Tsai and Ghoshal, 1998b), or at a more recent state in the field of supply management focusing on buyer and supplier interactions (Hartmann and Herb, 2014, Horn et al., 2014). In the Chinese context, Guanxi has been considered as a form of social capital (Yang, 1994). Guanxi has been proven valuable within business relationships in China (Yang and Wang, 2011) and, similar to the general understanding of the social capital concept, it is built on inter-organizational trust that can resolve conflicts (Nicholson et al., 2001) as well as on common norms and social interactions that can even influence firm performance (Nie et al., 2011). Nahapiet and Ghoshal (1998) further divide social capital into three separate dimensions, distinguishing between (1) cognitive capital, (2) structural capital and (3) relational capital. While the majority of studies examine these dimensions as in parallel existing constructs, others also consider cognitive and structural capital as antecedents of relational capital (Carey et al., 2011, Horn et al., 2014, Preston et al., 2016).

Common values and visions shared by actors within a relationship are underlying the cognitive dimension (Tsai and Ghoshal, 1998). They also include common goals, norms and beliefs contributing to the understanding of the social system, as well as shared interpretations, such as language or signs (Uphoff and Wijayarathna, 2000b, Tsai et al., 2008). A high level of cognitive capital therefore implicates that these attributes are shared by both relationship partners to a high extent. In this way, cognitive capital enables a consensus on strategic goals and processes that both parties might benefit from (Atuahene-Gima and Murray, 2007, Adler and Kwon, 2002).

Structural social capital refers to pattern of connections between parties as well as how they can be used and how frequent they occur (Burt, 1997b, Villena et al., 2011). A high level of structural capital can therefore be found if both actors within a relation utilize multiple channel of interaction to facilitate the information and resource exchange (Koka and Prescott, 2002, Villena et al., 2011). The common usage of resources is enhanced through clarity, transparency on actions and

processes fostered by a strong and consistent flow of information. This is stressed by empirical findings reporting the positive effect of structural capital on “information flow” and “information diversity” (Koka and Prescott, 2002).

Finally, the relational dimension of social capital, being based on the notion of Granovetter and Swedberg (1992) refers to embeddedness and to the relationships that actors have developed. It is considered closely connected to cognitive and structural capital, and further expressed through trust, friendship as well as mutual respect that partners have for each other (Kale et al., 2000a) (Kale et al., 2000). Arguably, if parties in a relationship share common business goals and ideas as well as holding a dense net of interactions, relational capital might be more likely to develop (Tsai & Ghoshal, 1998). In the same way, a relationship based on trust requires frequent interaction and the means to do so. Interestingly, if trust and commitment are present, the information flow and intensity are increased (Hartmann and Herb, 2014).

The majority of studies focusing on social capital have been conducted from the buyer point of view, omitting the supplier perspective. Gaining understanding on not only the buyer but also the supplier side is however crucial for relationship management. Also, influencing external factors, such as the firm environment, that might affect the emergence and development of social capital within a relationship, have not been discussed to a larger extent, thus being introduced subsequently.

### **6.2.2 The preferred customer status as a means to obtain resources from suppliers**

As put by Schiele et al., (2012), the preferred customer concept can be considered a mirror of the notion introduced by Trent (2005) who discussed the “preferred supplier”. The preferred customer concept is based on the idea that buying firms are able to influence their suppliers behavioral intentions in order to be awarded with a status allowing them to receive favorable treatment over other firms (Schiele et al., 2012). As such, it refers to the underlying assumption that suppliers are restricted by a limited amount of resources they can provide to their customers and that these customers may not be treated equally in terms of resource allocation (Mitsubishi

and Greve, 2009). Consequently, some customers receive favorable allocation while others have to rely on the remainder (Dyer and Hatch, 2006). Therefore, since obtaining better resources relative to competitors might result in a competitive advantage (Hult et al., 2006, Capron and Chatain, 2008), firms must pay attention to the moves of other firms in the supply base and aim to outcompete them for achieving preferential resource allocation themselves (Ellram et al., 2013b, Steinle and Schiele, 2008, Schiele, 2012). In this sense, from a strategic point of view, through combining external resources (Dyer and Singh, 1998) and providing firms with an advantage over competitors, the preferred customer status can enable them to achieve higher performance outcomes (Pulles et al., 2016). Examples of the mentioned favorable treatment could include first offering of new ideas and innovations, preferred resource allocation in case of capacity shortages or the delegation of the best personnel to common projects (Bew, 2007, Steinle and Schiele, 2008). Blonska (2010), while studying the effect of supplier development investments on becoming preferred customer, also found a link between the presence of social capital and the preferred customer status, considering social capital a mediator.

### **6.2.3 Hypotheses: Considering the effect of internal on external social capital and its input on becoming preferred customer**

The study at hand considers internal social capital perceived by suppliers present at their customer organizations as well as external social capital developing between suppliers and their customer as a result from this. Firms that incorporate a high level of internal social capital are likely to foster a highly collaborative organizational environment as departments share the same values and goals, respectively are able to align their departmental interests for the common purpose (Leana and Pil, 2006, Sparrowe et al., 2001, Madhavaram and Hunt, 2017). They can be understood to practice extensive cooperation as well as communication on a functional level (Rosenzweig et al., 2003, Sherman et al., 2000). As such, employees from different functions work together in teams, exchange ideas regularly and provide their insights based on their diverse backgrounds. Utilizing a

collaborative environment like this, buyer and supplier have the nourishing basis to build up or develop external social capital together (Narasimhan and Kim, 2001). Through common meetings with people from different organizational functions of his customer, the supplier could perceive this collaborative environment, the accumulation of internal social capital and acknowledge it as stimulating.

Employing the view of cognitive capital, internal cognitive capital would imply that departments, as well as employees working within these departments, share the same values and have a common understanding of what the goals of the their company are and how they can contribute together in the best possible way to achieve them (Tsai and Ghoshal, 1998; Uphoff and Wijayaratra, 2000). This unification in terms of goal alignment and values, departments would also exhibit to the outside world. As such, they are able to encourage the communication of these shared goals and values to other organizations (Thompson and Fine, 1999). Thus, for suppliers perceiving internal cognitive capital from their customers it would be less difficult to understand what the customer is aiming for and find common grounds to align their goals, since all departments of the customer organization speak the same “language”. Consequently, the suppliers would consider it valuable to develop external cognitive capital with their customer in order to reach their own goals more effectively. Following this, H1.1 has been formulated.

***H1.1** The perception of internal cognitive capital is positively related to the development of external cognitive capital.*

In terms of structural capital, internal structural capital would imply that departments within the organization would utilize multiple channels of interacting with each other (Nahapiet and Ghoshal, 1998; Villena et al., 2011). In other words, a high level of internal structural capital would entail intra-organizational communication through a variety of means, including not only the exchange of information via emails but also by personal and direct interaction in cross-functional meetings. Also, the frequencies of how the departments communicate as well as the hierarchical levels they use then define internal structural capital (Burt, 1997; Villena et al., 2011). For suppliers it could be relatively easy to perceive whether internal structural capital is present at their customer’s organization or not:

Through visiting their customer or through having common project meetings, the suppliers could easily assess whether the information they receive from various parties is accurate and reliable (Chen et al., 2009, Villena et al., 2011) as well as, most importantly, aligned. Since information reliability provides the suppliers with planning security and prevents problems, the suppliers can be expected to develop external structural capital with their customer in order to access the customer's internal network and gain knowledge through it. Accordingly, H1.2 was formulated.

***H1.2** The perception of internal structural capital is positively related to the development of external structural capital.*

Finally, internal relational capital refers to trust and commitment that departments have for and share with each other (Lee and Cavusgil, 2006). A high degree of internal relational capital thus implies that departments trust each other to follow up on promises made and commit themselves to a common purpose for their firm. On the other hand, internal relational capital also prevents opportunistic behavior among departments and their employees (Kale et al., 2000; Villena et al., 2011) through leaking or withholding relevant information in order to e.g. decrease other parties' reputation and vice versa increase their own chances of promotion. Literature also argues that (internal) cognitive and structural capital are both positively related to the accumulation of relational capital (Tsai and Ghoshal, 1998; Carey et al., 2011; Horn et al., 2014).

From the supplier point of view, the trust and commitment present within their customer's organization can be perceived from meetings with this customer, through the way departments that are dealing with the supplier interact with each other, how transparent they communicate as well as how aligned and familiar with each other they appear. The presence of internal relational capital could urge the supplier to also feel more secure about the information that is received as well as dedicated towards the common goal and project outcome. Having less to worry about being taken advantage of (Tsai and Ghoshal, 1998), the supplier could more openly share his resources and commonly improve both organizations' performance (Lawson et al., 2008; Gelderman, 2016). Consequently, external relational capital would develop, being reflected in H1.3.

***H1.3 The perception of internal relational capital is positively related to the development of external relational capital.***

As previously introduced, buying and supplying firms which share goals and values to a greater extent are said to be part of a relationship which is based on a high level of cognitive capital (Tsai and Ghoshal, 1998; Villena et al. 2011). Since this may lead to similar interpretations of situations and events (Boland and Tenkasi, 1995), both buyer and supplier will more strongly recognize the value of their relation, facilitating communication and exchanges (Tsai and Ghoshal, 1998). Similarity also plays a role considering corporate culture: As put by Parkhe (1993), sharing a similar corporate culture can positively impact business success between buyer and supplier. In this instance, supplier performance increases with the presence of cognitive capital (Gelderman, 2016). At the same time, also opportunistic actions can be reduced (Ouchi, 1980b, Villena et al., 2011). Consequently, alignment of goals as well potential future prospects can induce the supplier to proactively back-up and support the buying firm, thus further investing into the relationship (Jap, 1999). Therefore, the following hypothesis is formulated:

***H.2.1 External cognitive capital in the relationship between buyer and supplier positively affects being awarded the preferred customer status.***

On the other hand, structural capital, by utilizing the pattern of connections between buyer and supplier (Villena et al., 2011) enables the sharing of information through which external resources can be accessed (Dyer and Singh, 1998). Since this might allow both parties to create a competitive advantage, literature has characterized privileged access to resources as the most important benefit for buying firms (Coleman, 1998). As emphasized by Jap (1999), this preferential treatment of buying firm by their suppliers can emerge out of reciprocal buyer-supplier relations. Further, through forming dense structures between buyer and supplier facilitating the flow of information (Zaheer and Bell, 2005), accuracy and reliability of information can be increased (Chen et al., 2009, Villena et al., 2011). Therefore, collaboration and cooperation between both parties can be improved (Nahapiet and Ghoshal, 1998), which in turn might trigger the supplier to do

business with preferably this specific buyer. Based on this reasoning, H2.2 has been depicted.

***H.2.2** External structural capital in the relationship between buyer and supplier positively affects being awarded the preferred customer status.*

Finally, relation capital being defined through trust, commitment and reciprocity (Zhao and Cavusgil, 2006, Villena et al., 2011) (Blonska, 2013) between buyer and supplier can be considered closely related to the preferred customer status. Since the privileged access to resources has been argued to depend on the quality of the relationship between both parties (Jap, 1999), relational capital prevents the risk of opportunistic actions (Kale et al., 2000), increases the relationship performance (Morgan and Hunt) and thus encourages the supplier to willingly share resources with the specific buyer. Consequently it is fair to postulate:

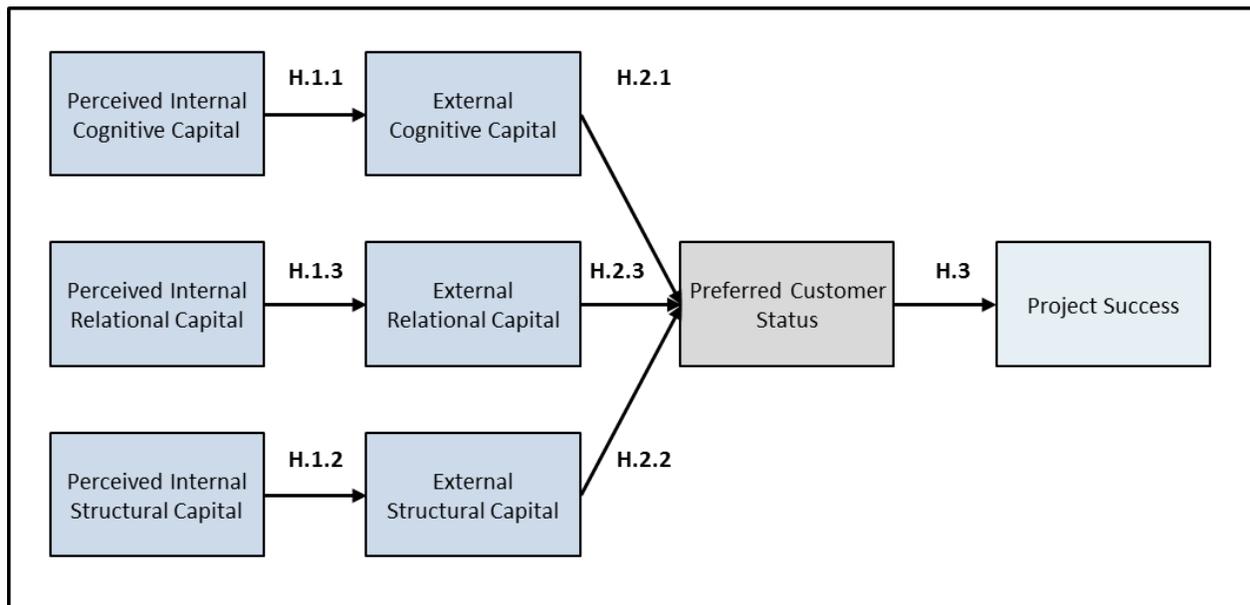
***H.2.3** External cognitive capital in the relationship between buyer and supplier positively affects being awarded the preferred customer status.*

Firms that are able to be awarded the preferred customer status from their suppliers, have several advantages that might become valuable during common projects: The most obvious advantage of course is the preferential treatment in terms of resource allocation (Bew, 2007). This does not only refer to the suppliers themselves but also to the human capital, the personnel that is assigned to the preferred customer (Steinle and Schiele, 2008). Arguably, if more expertise and knowledge in form of “better” employees is accumulated, also common projects between buyer and supplier are more likely to succeed. Having the best employees assigned to a project could be especially crucial in China where foreign firms struggle with e.g. quality standards of local suppliers (Wilkinson et al., 2005; Lockstroem et al., 2010). High knowledgeability could increase the chance of success. Further, being preferred customer also comes with the benefit of unique cost saving opportunities (Bew, 2007). The suppliers might apply a more benevolent pricing behavior (Schiele et al., 2011). While this itself does not seem likely to affect project outcomes in a direct way, buyers might have to pay less, not only for the product itself, but also in form of invest intended for e.g. the tooling sets of suppliers

necessary for the production lines. Consequently, spending less money is more likely to lead to a positive business case, which in turn could also influence whether a project is approved and successful, or not.

Arguably though, and as has been described before, when dealing with suppliers located in China, the preferred customer status, due to its strong underlying connection to social exchanges and relations (Huettinger et al., 2014), might be established as a result of emerging Guanxi between buyer and supplier. Guanxi itself has been proven to decrease supplier performance and increase the risk of opportunistic actions (Nie et al., 2011). This is in line with the research of Villena and colleagues (2011) focusing on the dark side of buyer-supplier relationships. They determined that identification-based trust resulting from (high levels of) accumulated social capital can entail the risk of opportunism. Their findings were later on confirmed by Wang et al. (2013). As such, through building the preferred customer status on a high accumulation of social capital in China, its possible positive effect might diminish. However, since a clear contribution of the preferred customer to firm value creation has been found (Huettinger et al., 2012), we formulate H3, despite being curious about whether it might hold. Figure 13 summarizes all proposed hypotheses.

***H3*** *The preferred customer status positively influences project outcomes with local Chinese suppliers.*



**Figure 13: Research model: Internal – external linkage of social capital**

## 6.3 Research Methodology

### 6.3.1 Data collection: Survey research as methodological approach

With the goal of investigating the effect of perceived internal social capital on the emergence of external social capital, our research started off with a small-scale pre-study (Forza, 2009). In order to ensure that suppliers are indeed able to perceive the accumulation of internal social capital at their customer firm, a group of five experts from diverse departments, including R&D, Purchasing and Quality, of a multinational German automotive manufacturer located in China was interviewed: The experts who were dealing with suppliers on a daily basis were given the questionnaire intended for the suppliers and had to comment on its feasibility and ideally agree on it. The same procedure was repeated with two key-accountants selected from random suppliers. All experts confirmed the study applicability. Based on the positive outcome of the pre-study, a sample of 1386 suppliers located in China was selected. The suppliers originated from the portfolio of the German multinational. In order to ensure that no outside effect was influencing our model,

we included several control variables. These included the affiliation of the supplier, whether it is of domestic or foreign origin, the commodity to which it belonged (i.e. interior, exterior, powertrain, metal and electric), the proximity, i.e. the duration that suppliers needed to visit their customer, as well as the size of the supplying firm. The suppliers were approached via email that contained a link to a web portal where they had the option to either answer questions in English or Chinese. This should ensure that even non-English speaking participants were able to fill in the questionnaire. For guaranteeing that the implication of English and Chinese questions matched to the fullest and did not lose meaning in the translation process, two independent Chinese native speakers were involved: The first native speaker translated the English questions into Chinese, while the second native speaker translated them back into English. Afterwards, the original and back-translated English questions were compared, which resulted in minor adjustments of the Chinese translation. In order to minimize bias, suppliers from each commodity group dividing the purchasing department, including exterior, interior, metal, electric and powertrain, were equally selected. Eventually, 140 usable questionnaires were received, equalling a response rate of 9%.

### **6.3.2 Measurements: Utilizing proven items**

The measurements used in this research were mostly adapted from previous studies. A conduction of in-depth interviews with experts from the focal company allowed for a subsequent further refinement. In terms of scaling, five-point Likert scales were used, ranging from 1=strongly disagree to 5=strongly agree. Perceived internal as well as external social capital were measured using the same items for ensuring comparability. As such, suppliers had to fill out the same questions twice, once for their internal relations between departments and subsequently for the relations with their customer. Further, structural, cognitive and relational capital were broken down into three 2<sup>nd</sup> order constructs which could be measured individually, allowing for a finer grasp of the concept. Structural capital was then measured focusing on quantity and nature of interaction as well as means used for exchanging information. Items from Villena et al. (2011), Roden and Lawson (2014) and Wang et al. (2013b) were applied. The measurements for cognitive capital

focused on whether goals and values are shared between parties, whether they overlap and whether corporate culture and management style match. Measures of Villena et al. (2011), Jap (1999) and Yeung et al. (1991) were applied. Here the focus in particular lied on whether the corporate culture of both supplier and customer is comparable. Relational capital was measured through a distinction into trust, commitment and reciprocity as outlined by Blonska et al. (2013). In order to measure the preferred customer construct, we applied the measurements as used in Schiele et al. (2012), which have found good applicability in diverse studies. One item though was added by us, specifically asking about the suppliers' willingness to grant the customer access to his own supplier. Finally, project success was operationalized by considering the measurement used by Horn et al. (2014) in order to capture global sourcing success. We adjusted these measures for our purpose through removing its global sourcing focus. A detailed overview of the applied measurement can be found in the Appendix.

### **6.3.3 Data analysis: Applying partial least squares structural equation modeling**

To test the hypotheses, partial least squares structural equation modeling (PLS-SEM) was carried out (Fornell and Cha, 1994). In particular, the software SmartPLS (Ringle et al., 2005) was used to carry out a confirmatory factor analysis. The PLS approach has been characterized as useful for obtaining robust findings (Chin, 1998). Next to this, obtained findings, in particular when carrying out the confirmatory factor analysis, were double-checked using IBM SPSS. Bootstrapping (Nevitt & Hancock, 2001) was applied to increase measurement accuracy to the used sample. The detailed path coefficients of our model can be found in table 12. Due to the reflective nature of our constructs, internal consistency and reliability were assessed using composite reliability (CR) (Fornell & Larcker, 1981; Wetzels et al., 2009) in combination with average variance extracted (AVE) and factor loadings (Edwards & Bagozzi, 2000). Individual item loadings were analyzed in order to assess indicator reliability: As it turned out, certain items of perceived as well as external social capital were loading on each other, thus affecting each others explanatory power. This might have been due to the fact that same questions were

posed for internal and external social capital as well as due to the high amount of indicators located to each construct. As a result, these items had to be removed, eventually leaving five items per construct. Further, one item with factor loading of 0.6 x was retained, all other loadings well exceed the threshold of 0.7 (Henseler et al., 2009). Details about the items as well as about which items were retained and which had to be removed can be found in the Appendix.

Focusing on convergent reliability, the analysis found that all items strongly correlate with the construct they are related to. As such, all values exceed the threshold of 0.7 for CR, 0.5 for AVE and 0.7 for Cronbach's alpha (Edwards & Bagozzi, 2000; Fornell & Larcker, 1981). Further, the Fornell-Larcker criterion was used to test for discriminant validity. Also here, no concern was found (see Appendix). For assessing common method variance (CMV), the unmeasured latent methods factors test as described by Podsakoff et al. (2003) was conducted. A common method variance factor including all principal constructs indicators was introduced. As shown in table 39, the substantive variance averaged around 0.711 while the average method based variance was 0.020, resulting in a ratio of substantive to method based variance of 36:1. Following this result, CMV may not be regarded a concern.

## **6.4 Findings: Strong significance of internal-external social capital linkage**

The findings of this study paint a clear picture concerning the effect of perceived internal social capital on the emergence of external social capital between buyer and supplier. Also, positive results were obtained regarding the relation between the presence of social capital and the preferred customer status as well as in turn on project success between buyer and supplier. The statistical power among the significant estimates runs high with all exceeding t-values of 3.156. Hypothesis 1 was focusing on the effect that social capital perceived by the supplier might have on the development of external social capital between buyer and supplier. All three paths found strong support: While H1.1 was found significant with a t-value of 12.626 and a  $\beta$  of 0.731, H1.2 found equally strong support, based

on a t-value of 11.866 and a  $\beta$  coefficient of 0.748. The same result holds for H1.3, indicated by a t-value of 15.208 and a  $\beta$  of 0.748.

Hypothesis 2 looked into the effect of social capital on becoming preferred customer of Chinese suppliers. Surprisingly, only H2.3 focusing on relational capital as antecedent to the preferred customer status was found significant with a t-value of 3.156 and a  $\beta$  of 0.417. H2.1 (t-value = 0.678;  $\beta$  = 0.079) and H2.2 (t-value = 0.912;  $\beta$  = 0.101) however found no statistically significant support. Finally, hypothesis 3 proposing an effect of being preferred customer on project success with local Chinese suppliers again found strong support. Here, a t-value of 4.704 and a  $\beta$  of 0.387 were obtained. The control variables we included, affiliation, commodity, proximity as well as size had no statistically significant effect on our findings.

**Table 12: Path coefficients II**

<b>Path / Hypothesis</b>	<i>Path coefficient</i>	<i>t-value</i>	<i>p-value</i>
Perceived cognitive SC → External cognitive SC ( <b>H1.1</b> )	0.731	12.626	< 0.001, significant
Perceived structural SC → External structural SC ( <b>H1.2</b> )	0.704	11.866	< 0.001, significant
Perceived relational SC → External relational SC ( <b>H1.3</b> )	0.748	15.208	< 0.001, significant
External cognitive SC → Preferred Customer ( <b>H2.1</b> )	0.079	0.678	> 0.1, non-significant
External structural SC → Preferred Customer ( <b>H2.2</b> )	0.101	0.912	> 0.1, non-significant
External relational SC → Preferred Customer ( <b>H2.3</b> )	0.417	3.156	< 0.1, significant
Preferred Customer → Project Success ( <b>H3.1</b> )	0.387	4.704	< 0.1, significant

## **6.5 Discussion and conclusion**

### **6.5.1 Discussion and implications**

The study at hand examined the role that the perception of internal social capital at the buying firm has for local Chinese suppliers in building external social capital with this particular firm. As such, we in particular considered the three dimensions of social capital that are cognitive, structural and relational capital and their internal-external linkage. Further, through analyzing the effect that the presence of external social capital can have on becoming preferred customer and in turn on succeeding in joint buyer-supplier projects, we are able to determine a direct outcome that a potential internal misalignment on the buyer side can have for future projects with its supplier. Looking at the results that the study at hand contributes, our initial assumption about the influence of perceived internal social capital on the development of external social capital has been proven of having strong validity. As such, not only are suppliers well able to perceive the accumulation of internal social capital within their customer organization, a remarkable first finding, but also this in turn leads them to build external social capital with their customer themselves. This positive direct relationship between perceived internal and external social capital has not been found in literature till date. Consequently, and thus adding to existing literature on social capital, social capital in the relationship between buyer and supplier develops over time if goals and values are common, if structures of communication and information exchange are in place as well both parties are committed to each other (Tsai and Ghoshal, 1998), however only under the precondition that internal social capital is already well established. As such, and further theorizing, the internal dimension of social capital that defines intra-organizational linkages can therefore be considered an antecedent to the development of the external dimension of social capital, ergo the inter-organizational linkages.

Next to this, our study looked into the effect that social capital dimension might have on becoming preferred customer (Blonska, 2010). Here, we only found partial support: While the presence of structural as well as cognitive capital did not have a significant influence on the preferred customer status, only relational capital had a

significant impact. This is surprising, and stays in contrast to what Blonska (2010) reported: According to our results not structural capital, i.e. the means of interaction (Villena et al., 2011), plays a role in becoming preferred customer, but relational capital, the trust, commitment and reciprocity that parties bring into the relationship. To formulate it differently, and in line with our reasoning, if the supplier perceives that social capital in form of three dimensions is present within the buying organization, he will in turn develop external social capital with this buyer. Awarding the buyer with the preferred customer status, however, then does not depend on whether both firms share goals or have structures in place that supports their information exchange, but purely on the commitment that the buying firm pays toward the relationship as well as the trust that both parties develop for each other. Since it is however unlikely, that relational capital will develop without structural and cognitive capital being present (Horn et al, 2014; Gelderman, 2016), their importance should not be neglected. Further, our study paid attention to implications the preferred customer status might have for completing joint buyer-supplier project successfully. Here, we showed that being preferred customer of local Chinese suppliers can be considered an important antecedent to successful project completion. As such, our study proved the applicability of the preferred customer concept in a China centered setting. Since our study is dealing with Chinese suppliers, the findings should also be considered carefully: Guanxi, the Chinese form of social capital, still plays a big role in all business relationships in China. While the preferred customer measurement has been proven successful in the Chinese context, it might though be closely related to Guanxi, the exchange of favors to reach a “preferential” outcome. It could thus be hard to distinguish whether a buying firm is truly the preferred customer of a supplier or whether he simply has a high degree of Guanxi with its supplier that has developed over time.

### **6.5.2 Managerial implications**

From a managerial perspective, our study shows remarkable results that might find strong recognition in the fields of supply management and B2B marketing: Following our results, buying firms are well advised to consider how they appear in front of their suppliers, how they communicate and cooperate internally. Omitting

this outside perspective might lead to a relationship between buyer and supplier with less trust, commitment and collaboration, which eventually could also result in decreased relationship output, e.g. success in common projects.

Next to this, the development of relational capital with suppliers in China appears to be key for achieving a preferred customer status with them. As such, firms operating in China should pay close attention to how they deal with their Chinese suppliers. Buyers should ask themselves the questions: Are we committed enough to the relationship with our supplier and does the supplier recognize this? From the way we behave, can our supplier consider us trustworthy? Do we give our supplier the feeling that the relationship has a future, do we reciprocate his efforts? Once these questions can be confirmed, buying firms have to chance to become preferred customer which according to our results has strong performance implications for common projects and is thus an important finding for firms that would like to engage in a business relationship with a Chinese supplier, respectively are already doing business with them. As such, while, also being victim to the cultural influence, doing business in China and with Chinese suppliers might not always be easy and certainly not always fruitful, firms that are able to become their preferred customer, increase their likelihood of finalizing common projects successfully. Obviously, this however would firstly require an investment of time into the relationship.

### **6.5.3 Limitations and future research**

As it is the case in most studies, also our study has certain limitations. As such, the fact that our sample originated from China, a setting where relationships play a special role also from the cultural perspective, it cannot be excluded that results were affected by these circumstances. Consequently it might be worthwhile to replicate our research in a different environment. Further, with a response rate of only 9%, the study might not be representative of whole sample of suppliers in the automotive sector. Even though we included several control variables, non-response bias might be a risks. As already suggested by Vos et al. (2016), a response rate of >20% in supply management research should be pursued in order to limit the risk of non-reponse bias.



## **CHAPTER 7: SUMMARY OF RESEARCH FINDINGS**

This dissertation discussed deep localization in the context of global sourcing and analyzes how social capital in the relationship between buying and supplying firms can contribute, how it develops and which effects it can have for the relationship itself as well as for performance outcomes during common projects. Chapter 7 outlines the key findings of the preceding chapters and discusses their implications in the light of the proposed research questions. Additionally, theoretical and practical implications as well future research directions are introduced.

## 7.1 Main findings

This dissertation examines the main research question “*How can social capital contribute to successfully managing buyer-supplier relationships and which are its requirements of and implications for organizations following a deep localization approach?*”. As such, through combining literature on global sourcing and social capital, the dissertation focuses on deep localization as contrast to global sourcing, which role social capital plays and how social capital between buyer and supplier can be accumulated to support deep localization, i.e. what influences the formation of social capital, and what the performance implications are for common projects between buyer and supplier.

Firstly, we look into how firms create the means for forming buyer-supplier relationships, the significance of social capital and how it performs in practice as well as how it develops. In chapter 2 the dissertation introduces the concept of supply market attractiveness, which factors buying firms consider when selecting a market to operate in and to source from. Initially, this might seem unrelated to the main research question, however sets the ground work for building relationships with suppliers. Once a market has been selected, buying firms proceed to search for suppliers and seek building relationships with them in order to succeed in the market of their choice. Chapter 2 therefore combined global sourcing literature with literature on foreign direct investment in order to outline criteria that buying firms have to take into consideration. Based on this, four market potentials are identified according to which a market can be characterized. In chapter 4 we dive further into the selected market, in our case China, and highlight the importance of social capital when moving from global sourcing towards deep localization. In chapter 6 the development of social capital within a buyer-supplier relationship is examined. Here, we emphasize that suppliers perceiving the presence of social capital within their customer organization are also more likely to build social capital within the relationship with their customer.

We conclude that while the characteristics of the market, the attributes that make it attractive to operate in, are the first cornerstone for increasing business success, the significance of social capitals should not be neglected once being part of a buyer-supplier relationship intended for the long-term.

Secondly, our findings underline the performance implications that social capital can have for firms. In chapter 5 our research finds empirical support that social capital in the relationship between buyer and supplier positively influences supplier satisfaction. Results therefore underline that social capital can play a greater role in securing supply, as supplier satisfaction is considered to limit the risk that resource scarcity on the supplier side might in fact negatively impact the buying firm (Huettinger et al., 2014). Chapter 6, further, takes a similar approach by investigating and outlining the importance of social capital for achieving the preferred customer status, which can define the success of common projects and hence provides implications for the successful completion of deep localization projects as well. Additionally, chapter 3 shows that social capital also prevents opportunism on buying and supplying side which is found to negatively influence innovation and strategic benefits.

## **7.2 Findings and theoretical contributions per chapter**

In the following paragraphs answers to the proposed research questions are provided which have been investigated throughout chapters 2 to 6. Based on an extensive literature review on global sourcing and foreign direct investment, *chapter 2* provides evidence of how buying firms characterize supply market attractiveness. As such, the study provides evidence firms do not only consider purely cost driven factors when selecting a market but also factors that go beyond by considering the behavior of institutions or the availability of local partners. In particular, from a theoretical perspective, the study fills a research gap, by attempting to operationalize supply market attractiveness: Here, we identify four potentials that all together define whether a market can be considered attractive for firms including its cost potential, its resource potential, its innovation potential and finally the potential of institutions the market has to offer. Next to this, through employing insights of foreign direct investment, the study further improves the understanding of global sourcing. While cost, resource and innovations are strong reasons to pursue a sourcing strategy according to the original global sourcing theory, the potential of institutions for adding to firm success is often neglected in literature. Consequently, foreign direct investment further extends the global

sourcing perspective and should be examined more closely for global sourcing decisions. Additionally, the discussion with practitioners further outlines that not all attributes relating to global sourcing were considered relevant. While according to theory the availability of high quality items and the option to extend the supply base are incentives that trigger the conduction of global sourcing, the study shows that both factors are not considered highly up-to-date anymore when it comes to sourcing from foreign supply market and thus does not influence the perception of market attractiveness. As such, chapter 2 indicates that global sourcing theory could profit from an examination of its timeliness.

*Chapter 3* then considers the phase when a market has been selected, suppliers chosen and a buyer-supplier relationship established. Here, we in particular focus on the “dark side” of buyer supplier relationships (Villena et al., 2011) by looking into the interaction of buyer and supplier opportunism, thus whether the perception of supplier opportunism leads to the emergence of buyer opportunism, and further employ social capital theory to examine the antecedents of opportunism. Also, we further examine the outcomes of opportunism, its effect on the generation of innovation and strategic benefits by utilizing a sample of 168 different buyer-supplier relationships. Firstly, concerning the relationship between buyer and supplier opportunism, the study did not find support. Apparently, in our sample many cases exist in which only one party acted opportunistically. Still, the fact that in some cases buyers reported to have acted opportunistically themselves is intriguing and has not been found in prior research. Though, perceiving opportunistic behavior from their suppliers might not immediately trigger an opportunistic reaction from the buyer side as response. Secondly, with the help of social capital theory a common set of antecedents could be identified, explaining both buyer and supplier opportunism. While structural capital appeared to be less important, the existence (or not) of cognitive and relational capital could be a good predictor of opportunism. As such, while the answer to the question of why buyers act opportunistically cannot be directly linked to the perception of supplier opportunism, underlying factors described by the presence (or absence) of cognitive and relational capital well play a role. Finally, the study further contributes through outlining the detrimental effect that opportunism has on the performance of the buyer-supplier relationship in terms of innovation as well as on achieving strategic

advantages.

*Chapter 4* introduced the concept of deep localization, based on global sourcing theory, and highlights the benefits of social capital in a buyer-supplier relationship as well as its effect on successful outcomes of common deep localization projects between buyer and supplier. Contrary to the predominant belief in literature implying that firms should not limit their sourcing activities to the domestic environment (Steinle and Schiele, 2008), our study shows that this is exactly what is happening when following a deep localization strategy. Through applying case study methodology we compare successful and non-successful cases of deep localization and examine them on basis of accumulated social capital. Exploiting the unique situation of deep localization the study analyzes triadic relationships involving buyer, 1<sup>st</sup>-tier supplier as well as 2<sup>nd</sup>-tier supplier. Here, we do not only show that social capital occupies a crucial role in facilitating successful project outcomes, but we are also able to identify slight but intriguing differences in terms of social capital accumulation among parties involved in triadic relationships. The contributions to literature are twofold: Firstly, we are able to outline a four-step approach used in industry to increase the level of localized parts and replace global with domestic sourcing. As such, it can be seen as a guideline for firms that intend to succeed in a market which has the potential for low-cost production. One of the key factors to this four-step approach is the formation of a task force team involving members of different departments, being in line with literature on the importance of cross-functional teams (Smits and Kok, 2012; Tsai and Hsu, 2014). Further, and quite extraordinary, with deep localization our study does not only introduce a reverse approach to global sourcing but also provides insights into a supplier-selection process for local sub-suppliers that is jointly conducted between buyer and 1<sup>st</sup>-tier supplier. Secondly, our study contributes through introducing the role and impact of social capital to the success of joint buyer-supplier projects focusing on triadic or network relationships, involving not only one but three members. As such, while the study shows the facilitating effect of social capital on project success, we also find that not only the existence of social capital per se is important for the outcome but also where it is accumulated. Social capital between buyer and 1<sup>st</sup>-tier supplier seems to play the more crucial role, suggesting the formation of alliance partnerships (Narasimhan and Nair, 2005, Wittmann et al.,

2009).

*Chapter 5* pays attention to social capital theory and its role as antecedent of supplier satisfaction through quantitatively analyzing a sample of 140 local Chinese suppliers. As such, we in particular consider the three dimensions of social capital, namely cognitive, structural and relational capital and the effect they have on the development of a relationship that a supplier would consider satisfying. While the study initially suggests that every dimension would positively influence the emergence of supplier satisfaction, as proposed by prior research (e.g. Essig and Amann, 2009), our findings reveal however that only relational capital is strongly influencing whether a supplier is satisfied or not. An explanation to this could be twofold: While relational capital, bringing trust, commit and reciprocity to the relationship, provides suppliers with future perspectives (Blonska et al., 2013), cognitive as well as structural could rather be seen as necessities in order to keep a relationship on-going. Also, the China-centric setting of our study could play a role, since purely relational aspects of a relationship might be of higher value than in other countries: Guanxi comes to mind, a Chinese form of social capital, that is based on trust and allows firms to create bonds with other firms in order to commonly pursue goals and boost performance (Yang, 1994, Nicholson et al., 2001). All in all, our findings contribute to literature by providing additional insights on the emergence of supplier satisfaction. While prior studies from Huettinger et al. (2012) or Vos et al. (2016) focus on the rather technical antecedents of supplier satisfaction, we extend this view through building the concept of supplier satisfaction on the theory of social capital.

Finally, *chapter 6* examines the role that the perception of internal social capital at the buying firm has for local Chinese suppliers in building external social capital with this particular firm., through once more quantitatively analyzing a sample of 140 local Chinese suppliers.

As such, we in particular consider the three dimensions of social capital that are cognitive, structural and relational capital and their internal-external linkage. Further, through analyzing the effect that the presence of external social capital can have on becoming preferred customer and in turn on succeeding in joint buyer-supplier projects such as deep localization, we are able to determine a direct outcome that a potential internal misalignment on the buyer side can have for future

projects with its supplier. Our findings show that indeed perceived internal social capital influences the emergence of external social capital. Further, while only relational capital affects whether a buying firm is awarded the preferred customer status, the impact of being preferred customer on concluding projects successfully is confirmed. The study contributes to literature not only through showing that a supplier is able to perceive whether the buying firm has social capital present internally, but also through proposing that social capital in the relationship between buyer and supplier develops over time if goals and values are common, if structures of communication and information exchange are in place as well both parties are committed to each other (Tsai and Ghoshal, 1998), however only under the precondition that internal social capital is already well established. As such, the internal dimension of social capital that defines intra-organizational linkages can therefore be considered an antecedent to the development of the external dimension of social capital, ergo the inter-organizational linkages. Next to this, through testing the effect of social capital on becoming preferred customer and in turn on achieving project success, the study contributes to the understanding of how social capital between buyer and supplier can facilitate becoming preferred customer and further significantly influences inter-organizational benefits. The finding that only relational capital positively impacts the preferred customer status stays in contrast to the findings of Blonska (2010), and might be a Chinese phenomenon. In this context, we hence suggest that the role of guanxi and how it can be distinguished from being preferred customer should not be neglected.

### **7.3 Managerial implications**

Next to the theoretical implications this dissertation contributes, it also provides implications for managers and practitioners. Taking a look at supply market attractiveness, which has to be considered before starting a sourcing, our study, through outlining four market potentials with their underlying attributes, gives managers a tool for their decision making process: As such, we provide insights by offering buying firms and their purchasers a guideline on what to look out for when making choices about where to source from. In particular weighting the market potentials against each other might support firms since it allows scaling markets

and matching the market characteristics with the firm specific needs. Firstly however, purchasers have to be aware of the item they intend to source as its nature could influence the perceived importance of the four potentials. For example, in case of high complexity and technological specificity, purchasers should look for markets with a high innovation potential since this could result in better solutions and in the long run positively affect the further development of the item. Here, cost and resource potential might be less crucial. We therefore advise to rank different markets (e.g. on country basis) based on the four potentials in order obtain specific strengths and weaknesses.

Once a market is selected, firms proceed with their sourcing activities and establish relationships with their suppliers. Here, opportunism is a risk that may occur and that should not be neglected. From the managerial perspective, building up cognitive and relational capital is likely to be a tool to reduce the danger of opportunism – both with the partner firm, as in the own organization. Firms are therefore advised to build up trust and commitment with the other party and align goals and values with the other party as good as possible since otherwise opportunistic action might result in a decline of innovations and strategic benefits which could eventually risk firm survival. The importance of shared goals, then, could be addressed by investing substantial time to jointly develop goals, targets, objectives specific to the particular relation, such as exercised during the partnering movement in the 1990s (Macbeth, 1994). Also, since shared norms and values more easily overlap for firms with a similar cultural background, firms may re-evaluate their global sourcing activities. Possibly, focusing more strongly on local sourcing activities could entail fewer risks relating to buyer-supplier opportunism.

Local sourcing activities are also the focus of deep localization, as has been discussed previously. Through introducing the deep localization process as conducted in China, our study provides managers with another tool, here to increase their local content in the market of their choice. In particular, throughout this process managers are advised to constantly form cross-functional teams that allow supervising and keeping track. Also regular meetings and workshops seem indispensable for successfully completing deep localization projects with supplier and sub-suppliers. What has also become obvious is the fact that a high degree of social capital allocated within the relationship between buyer and 1<sup>st</sup>-tier supplier is

crucial: Since buying firms are dependent on the support of their supplier in localizing the supply chain and selecting local sub-suppliers, this is comprehensible. Managers are therefore advised to form alliance partnerships with their suppliers and potentially select suppliers which have awarded the preferred customer status in order to increase the likelihood of common project success.

Focusing on social capital as antecedent to supplier satisfaction, our study is of particular interest for managers and practitioners dealing with suppliers. As such, our study outlines the social capital dimensions that have to be considered for creating satisfaction among supplier in China. Here, only relational capital has an effect on supplier satisfaction, implying that soft aspects underlying a relationship such as trust and commitment are most crucial in contrast to factors that are more tangible and easy to observe that is the frequency of communication or goal alignment. Nevertheless, cognitive and structural capital must not be neglected: Given our results, managers might wonder how to evoke higher levels of relational capital, thus higher levels of trust, commitment or reciprocity in the relationship with their suppliers? The answer to this question can also be found embedded within the social capital theory. While neither cognitive nor structural capital might have a significant effect when it comes to the creation of supplier satisfaction, both are indispensable in order to develop a functioning and harmonious, trust based relationship. Especially in China, managers should be well aware that, after all, every relationship can be broken down to the possession of relational capital; once this is not present, managers might find it difficult to proceed with their approaches in dealing with suppliers.

Next to this, managers are well advised to consider how they appear in front of their suppliers, how they communicate and cooperate internally. Omitting this outside perspective might lead to a relationship between buyer and supplier with less trust, commitment and collaboration, which eventually could also result in decreased relationship output, e.g. success in common projects such as in deep localization. Next to this, the development of relational capital with suppliers in China appears to be key for achieving a preferred customer status with them. As such, firms operating in China should pay close attention to how they deal with their Chinese suppliers. Even though doing business in China and with Chinese suppliers might not always be easy and certainly not always fruitful, firms that are

able to become their preferred customer, increase their likelihood of finalizing common projects successfully.

Overall, this dissertation provides managers and practitioners with tools on how to select markets, find suppliers and build relationships with them. Especially firms intending to operate and succeed in China might find our propositions meaningful. Focusing on social capital theory proved to be a good basis for analyzing the concept of deep localization as well as for our recommendations.

## **7.4 Future research**

Considering the contributions this dissertation adds to existing literature it also opens a path for future research that might be worthwhile to follow. As such, we introduce opportunities for further advancing research on sourcing and buyer supplier relationships.

Firstly, through illustrating the concept of supply market attractiveness we explored how buying firms might identify attractive markets. As such, we outlined four potentials firms may consider for their decision making process. Future research could further enhance this knowledge through linking the four market characteristics to supplier characteristics. Next to considering markets according to firm needs, the understanding of how the markets shape their suppliers would allow buyers to prepare for dealing with certain types of suppliers that may inhabit the market. Additionally, this would also provide the opportunity further explore whether market and supplier characteristics allow drawing conclusions on the type of corporate cultures that may prevail.

Secondly, focusing on buyer-supplier relations, the dissertation further focused on the dark side of relationships (Villena et al., 2011), introducing opportunism on buyer and supplier side. While we did not find an effect of perceived supplier opportunism on the emergence of buyer opportunism, a different setting in terms of market or culture, as discussed before, could lead to a different result. As such, when considering opportunism and the results of our study, future research may further explore taking cultural differences into account. As it might be the case for social capital, also opportunism could be culturally sensitive. Future research might bring more light to this issue.

Thirdly, we have introduced social capital and its role in network or triadic relationship, using the concept of deep localization as corner stone. While we have shown that accumulation of social capital plays an important role in the relationship between buyer and 1<sup>st</sup>-tier supplier, its significance for the relation between buyer and 2<sup>nd</sup>-tier appeared to be rather limited. Future research could therefore further look into the relations that play a role for firms in networks, how they develop, and whether there are indeed more and less important relationships. Next to this, considering cognitive capital, not only shared values and the overlap of objectives might play role in the relationship between parties, but also the degree to which management style and the perception of success, in other words corporate culture, match. This could also be tested quantitatively being in line with our suggestion stated before. Additionally, we have proposed that being preferred customer might strongly contribute in network relationships as it is the case in deep localization. Future research could further examine the limits of the preferred customer status: Does the theory only take into account dual relationships between buyer and supplier, or can the preferred customer status be extended upwards the supply chain? Would sub-tier suppliers favor one supply chain over the other, would they be attracted by a firm that is not their direct customer?

Fourthly, we have further examined social capital through considering its output, its effect on increasing supplier satisfaction. Here, we have found a certain relational primacy, the significance of only relational capital on creating satisfaction among suppliers. Since we conducted the study underlying this chapter in a purely Chinese setting, the result might be another example of the cultural sensitivity accompanying social capital. As it was the case before, future research could further expand our understanding of the social capital and supplier satisfaction linkage. Here, research would profit from a validation of our findings in a different, culturally less specific, setting. Also, supplier satisfaction is also addressed commonly with the concept of customer attractiveness, together forming a means for achieving the preferred customer status. Consequently, future research may also test the connection between social capital and customer attractiveness. Lastly, this dissertation also paid attention to the before mentioned preferred customer status. In particular we combined it directly with social capital through firstly confirming the linkage of internal and external social capital, subsequently

testing the effect of external social capital on becoming preferred customer and finally exploring the role of being preferred customer on concluding common projects with suppliers successfully. Similar to the chapter before, also the last part of the dissertation, using a sample of Chinese supplier, might be victim of locational circumstances, the importance of relationships in China and the role Guanxi is playing. Choosing a different study setting using a different pool of globally located suppliers might change the picture. Future research could therefore follow the path of validating our findings in rather globally oriented setting. Further, again focusing on the Chinese market, the importance of Guanxi in the Chinese culture is non-neglectable. Besides this we found a significant effect of being preferred customer on project success. A question that arises would then be how the preferred customer concept and Guanxi can be distinguished? Or are both rather two sides of the same coin? Future research might look into it and more closely examine the preferred customer concept in China as well as its association with Guanxi.

## 7.5 Academic output per chapter

Since the dissertation is of cumulative nature, it is based on five separate papers (chapter 2 to 6). Below list summarizes the individual publications.

**Chapter 2.** Bohnenkamp, T., Schiele, H., 2017. Supply market attractiveness: Employing FDI insights to expand the global sourcing criteria set.

This paper was published in *Supply Management Research*, 2017. A prior version was presented at the Autouni Research Colloquium, Wolfsburg, Germany, 2015.

**Chapter 3.** Steinle, C., Schiele, H., Bohnenkamp, T., 2018. Does supplier opportunism lead to buyer opportunism? A social capital perspective.

This paper is currently under review in the second round at the *Journal of Business & Industrial Marketing*, a decision is expected shortly. A prior version was accepted as a competitive paper for the 24<sup>th</sup> IPSERA conference in Amsterdam, the Netherlands, 2015. It was further presented during the proceedings of the 21<sup>st</sup>

IFPSM summer school at the University of Twente, Enschede, the Netherlands, 2016.

**Chapter 4.** Bohnenkamp, T., Schiele, H., de Visser, M., 2018. Replacing global sourcing with deep localization: The role of social capital in building local supply chains.

This paper is currently under review at the International Journal of Procurement Management. A prior version was accepted as a competitive paper for the 26<sup>th</sup> IPSERA conference in Balatonfured, Hungary, 2017. It was also presented at the Autouni Research Colloquium, Wolfsburg, Germany, 2016 as well as during the proceedings of the 21<sup>st</sup> IFPMS summer school at the University of Twente, Enschede, the Netherlands, 2016.

**Chapter 5.** Bohnenkamp, T., Schiele, H., de Visser, M., 2018. The relational primacy: Examining social capital and supplier satisfaction in China.

This paper is ready for submission. A prior version was accepted as a working paper for the 27<sup>th</sup> IPSERA conference in Athens, Greece, 2018.

**Chapter 6.** Bohnenkamp, T., Schiele, H., de Visser, M., 2018. Mirror, mirror on the wall: How internal inconsistency within buying firms prevents supplier cooperation.

This paper is ready for submission. A prior version was accepted as a working paper for the 27<sup>th</sup> IPSERA conference in Athens, Greece, 2018.



# APPENDIX

## **Chapter 3**

### **Measurements**

**Table 13: Measures of Cognitive Capital**

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- |   |   |
|---|---|
| 1. This supplier and my firm share the same business values           | <i>Adapted from e.g. Krause (2007),<br/>AVE = 0.810, CR = 0.927, <math>\alpha = 0.84</math></i> |
| 2. We often agree on what is in the best interest of the relationship |   |
| 3. We shares our goals for this business                              |   |
- 

**Table 14: Measures of Relational Capital**

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- |   |   |
|---|---|
| 1. The relationship with this supplier is characterized by close, personal interaction at multiple levels | <i>Adapted from e.g. Lawson (2008),<br/>AVE = 0.752, CR = 0.900</i> |
| 2. The relationship with this supplier is characterized by mutual respect at multiple levels              |   |
| 3. The relationship with this supplier is characterized by mutual trust at multiple levels                |   |
-

**Table 15: Measures of Structural Capital**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. My firm promotes frequent and intensive interaction with personnel of this supplier</li> <li>2. My firm promotes interaction with this supplier's personnel across different levels (e.g., managers and engineers)</li> <li>3. My firm promotes interaction with this supplier's personnel across different functions (e.g., logistics and marketing)</li> </ol> | <p><i>Adapted from e.g. Villena (2011), AVE = 0.770, CR = 0.909</i></p> |
|--|---|

**Table 16: Measures of perceived Supplier Opportunism**

- |  |   |
|--|---|
| <p>When a problem occurs, how often will the supplier do the following? (1= Hardly Ever, 7= Very often)</p> <ol style="list-style-type: none"> <li>1. The supplier makes hollow promises</li> <li>2. The supplier is aloof toward us</li> <li>3. The supplier "window dresses" his efforts to improve</li> <li>4. The supplier expects us to pay for more than our fair share of the costs to correct the problem</li> <li>5. The supplier is unwilling to accept responsibility</li> <li>6. The supplier makes false accusations</li> <li>7. The supplier provides false information</li> <li>8. The supplier fails to provide proper notification</li> </ol> | <p><i>Adapted from e.g. Jap &amp; Anderson (2003), p. 1697, AVE = 0.702, CR = 0.949, <math>\alpha = 0.90</math></i></p> |
|--|---|

**Table 17: Measures of Buyer Opportunism**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. The supplier can always count on us following through on our promises</li> <li>2. When making decisions, we consider the supplier's interest as well as our own</li> <li>3. The supplier can trust that we keep his best interest in mind</li> <li>4. We are honest with this supplier</li> </ol> | <p><i>Adapted and adjusted from Blonska (2013), AVE = 0.584, CR = 0.848</i></p> |
|---|---|

**Table 18: Measures of Strategic benefits**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. The two parties in the relationship have both gained strategic advantages over their competitors.</li> <li>2. The relationship has not resulted in strategic advantages for the two parties. (R)</li> <li>3. The two parties in the relationship have gained benefits that enable them to compete more effectively in the market place.</li> <li>4. The relationship has not resulted in strategically important outcomes. (R)</li> </ol> | <p><i>Adapted from Jap &amp; Anderson (2003),<br/>AVE = 0.688, CR = 0.868</i></p> |
|---|---|

**Table 19: Measures of Innovation benefits**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. We are preferred innovation partner of the supplier</li> <li>2. The supplier voluntarily approaches us with new ideas and suggestions</li> <li>3. Our suggestions for improvements are instantaneously implemented on the supplier side</li> </ol> | <p><i>Based on Pulles et al. (2014), Ganesan (1994)<br/>AVE = 0.763, CR = 0.906</i></p> |
|--|---|

## Statistics

**Table 20: Item Loadings**

<i>Items</i>	<i>SC str.</i>	<i>SC cog.</i>	<i>SC rel.</i>	<i>Buyer Opp.</i>	<i>P. supplier opp.</i>	<i>Inno benefits</i>	<i>Strat benefits</i>	<i>Con. Culture</i>	<i>Con. Length</i>
SC_str_1	<b>0.880</b>								
SC_str_2	<b>0.827</b>								
SC_str_3	<b>0.922</b>								
SC_cog_1		<b>0.851</b>							
SC_cog_2		<b>0.935</b>							
SC_cog_3		<b>0.911</b>							
SC_rel_1			<b>0.851</b>						
SC_rel_2			<b>0.935</b>						

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SC_rel_3	<b>0.911</b>			
Buyop_1		<b>0.666</b>		
Buyop_2		<b>0.846</b>		
Buyop_3		<b>0.791</b>		
Buyop_4		<b>0.747</b>		
Supop_1			<b>0.885</b>	
Supop_2			<b>0.861</b>	
Supop_3			<b>0.859</b>	
Supop_4			<b>0.754</b>	
Supop_5			<b>0.849</b>	
Supop_6			<b>0.810</b>	
Supop_7			<b>0.876</b>	
Supop_8			<b>0.800</b>	
Cinno_1				<b>0.882</b>
Cinno_2				<b>0.879</b>
Cinno_3				<b>0.859</b>
Ccomp_1				<b>0.898</b>
Ccomp_2				<b>0.840</b>
Ccomp_3				<b>0.834</b>
Ccomp_4				<b>0.755</b>
Con_length				<b>1.000</b>
Con_Culture				<b>1.000</b>

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**Table 21: Variance inflation factor (VIF)**

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<b>Latent variables</b>	<b>Buyer Opportunism</b>	<b>P. Supplier Opportunism</b>	<b>Innovation Benefits</b>	<b>Strategic Benefits</b>
Structural Capital	1.330	1.299		
Cognitive Capital	2.206	1.917		
Relational Capital	2.462	1.976		
Buyer Opportunism			1.091	1.154
Supplier Opportunism	2.123		1.091	1.385

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**Table 22: Common Method Variance analysis I**

<i>Loadings</i>	<i>Construct loading (CL)</i>	<i>CL<sup>2</sup></i>	<i>Method factor loading (MFL)</i>	<i>MFL<sup>2</sup></i>
SC_str_1	0.859	0.738	0.038	0.001
SC_str_2	0.857	0.734	-0.029	0.001
SC_str_3	0.917	0.841	-0.011	0.0001
SC_cog_1	1.058	1.119	-0.237	0.056
SC_cog_2	0.834	0.696	0.115	0.013
SC_cog_3	0.822	0.676	0.103	0.011
SC_rel_1	1.019	1.038	-0.297	0.088
SC_rel_2	0.854	0.729	0.060	0.004
SC_rel_3	0.775	0.601	0.179	0.032
Buyop_1	0.788	0.621	-0.110	0.012
Buyop_2	0.757	0.573	0.091	0.008
Buyop_3	0.694	0.482	0.089	0.008
Buyop_4	0.838	0.702	-0.079	0.006
Supop_1	0.766	0.587	-0.135	0.018
Supop_2	0.74	0.548	-0.136	0.018
Supop_3	0.894	0.799	0.041	0.002
Supop_4	0.915	0.837	0.178	0.032
Supop_5	0.731	0.534	-0.135	0.018
Supop_6	1.037	1.075	0.225	0.065
Supop_7	0.939	0.882	0.071	0.005
Supop_8	0.711	0.506	-0.097	0.009
Cinno_1	0.909	0.826	-0.034	0.001
Cinno_2	1.009	1.018	-0.151	0.023
Cinno_3	0.702	0.493	0.186	0.035
Ccomp_1	0.839	0.704	0.066	0.004
Ccomp_2	0.986	0.972	-0.164	0.027
Ccomp_3	0.761	0.579	0.078	0.006
Ccomp_4	0.744	0.554	0.017	0.0001
<i>Average</i>	<i>0.848</i>	<i>0.731</i>	<i>-0.002</i>	<i>0.018</i>

**Table 23: Common latent factor approach**

<i>Loadings</i>	<i>Construct loading with common factor</i>	<i>Construct loading without common factor</i>	<i>Difference</i>
SC_str_1	0.859	0.878	0.019
SC_str_2	0.857	0.842	0.015
SC_str_3	0.917	0.912	0.005
SC_cog_1	1.058	0.875	0.183
SC_cog_2	0.834	0.933	0.099
SC_cog_3	0.822	0.910	0.088
SC_rel_1	1.019	0.846	0.173
SC_rel_2	0.854	0.933	0.079
SC_rel_3	0.775	0.925	0.15
Buyop_1	0.788	0.735	0.053
Buyop_2	0.757	0.801	0.044
Buyop_3	0.694	0.736	0.042
Buyop_4	0.838	0.800	0.038
Supop_1	0.766	0.881	0.115
Supop_2	0.74	0.855	0.115
Supop_3	0.894	0.859	0.035
Supop_4	0.915	0.764	0.151
Supop_5	0.731	0.846	0.115
Supop_6	1.037	0.849	0.188
Supop_7	0.939	0.879	0.06
Supop_8	0.711	0.794	0.083
Cinno_1	0.909	0.881	0.028
Cinno_2	1.009	0.889	0.12
Cinno_3	0.702	0.850	0.148
Ccomp_1	0.839	0.894	0.055
Ccomp_2	0.986	0.851	0.135
Ccomp_3	0.761	0.824	0.063
Ccomp_4	0.744	0.758	0.014

**Table 24: Construct Reliability and Validity**

<i>Latent Variable</i>	<i>Cronbach's Alpha</i>	<i>rho_A</i>	<i>Composite Reliability</i>	<i>Average Variance Extracted</i>
SC structural	0.850	0.881	0.909	0.770
SC cognitive	0.882	0.884	0.927	0.810
SC relational	0.834	0.882	0.900	0.752
Buyer Opp.	0.769	0.793	0.848	0.584
P. supplier Opp.	0.939	0.945	0.949	0.702
Innovation Bf.	0.845	0.847	0.906	0.763
Strategic Bf.	0.852	0.863	0.868	0.688
Con. Culture	1.000	1.000	1.000	1.000
Con. Length	1.000	1.000	1.000	1.000

**Table 25: Descriptives**

<i>Latent Variable</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Maximum</i>	<i>Minimum</i>
SC structural	2.821	1.036	5	1
SC cognitive	2.651	0.900	5	1
SC relational	2.536	0.927	5	1
Buyer Opp.	2.260	0.701	4	1
P. supplier Opp.	3.845	0.914	5	2
Innovation Bf.	2.946	0.973	5	1
Strategic Bf.	2.936	0.371	4	2
Con. Culture	3.434	1.056	5	1
Con. Length	12.101	8.178	40	1

**Table 26: Mediation effect p. supplier opportunism**

<i>Relationship with p. supplier opportunism as mediator</i>	<i>t-value</i>	<i>p-value</i>
Structural capital → p. supplier opportunism → innovation benefits	2.060	0.040 (significant, <0.05)
Cognitive capital → p. supplier opportunism → innovation benefits	4.285	0.000 (significant, <0.001)
Relational capital → p. supplier opportunism → innovation benefits	5.281	0.000 (significant, <0.001)
Structural capital → p. supplier opportunism → strategic benefits	2.074	0.039 (significant, <0.05)
Cognitive capital → p. supplier opportunism → strategic benefits	4.486	0.000 (significant, <0.001)
Relational capital → p. supplier opportunism → strategic benefits	6.070	0.000 (significant, <0.001)

## Chapter 4

**Table 27: Interview questions**

Type	Interview questions
General questions deep localization	<ol style="list-style-type: none"> <li>1. What is your understanding of deep localization? What does it mean for you?</li> <li>2. When you think about the project(s), what was the role you took? What were the responsibilities and tasks you performed and at which phase of the project?</li> <li>3. Which were the steps you took in order to move the project ahead? Which were your key performance indicators (KPIs)</li> <li>4. With whom did you interact throughout the project(s), which were other parties you had to deal with and when?</li> </ol>
General questions social capital	<ol style="list-style-type: none"> <li>5. How did the interaction between you and the other parties look like?</li> <li>6. Which roles did goals and values play for you and the other parties during the project(s)?</li> <li>7. Speaking about the relationship between you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) during the project(s), how can this be characterized?</li> </ol>
Specific questions social capital	<ol style="list-style-type: none"> <li>8. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) have similar mindsets/ideas and to which extent? Please elaborate</li> <li>9. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) have common beliefs about rights / wrongs and to which extent? Please elaborate</li> <li>10. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) follow underlying rules and to which extent? Please elaborate</li> <li>11. Were you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) aware of each other objectives and to which extent? Please elaborate</li> <li>12. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) have matching objectives and to which extent? Please elaborate</li> <li>13. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) make efforts to align goals and to which extent? Please elaborate</li> <li>14. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) conduct common activities / workshops? Please elaborate</li> <li>15. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) have project reviews in place and to which extent? Please elaborate</li> <li>16. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) use electronic exchange mechanisms and to which extent? Please elaborate</li> <li>17. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) frequently communicate with each other personnel, at different levels and across functions? Please elaborate</li> <li>18. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) have also purely social activities together and to which extent? Please elaborate</li> <li>19. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) exchange favors (e.g. granted more time) and to which extent? Please elaborate</li> <li>20. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) engage in common trouble fighting and to which extent? Please elaborate</li> <li>21. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) share sensitive information and to which extent? Please elaborate</li> <li>22. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) believe that every party acted in others best interest? Please elaborate</li> <li>23. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) have project reviews in place and to</li> </ol>

- 
- which extent? Please elaborate
24. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) kept promises made and to which extent? Please elaborate
  25. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) have mutual respect for each other? Please elaborate
  26. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) have project reviews in place and to which extent? Please elaborate
  27. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) actively work together to the fullest? Please elaborate
  28. Did you and the other parties (Buyer, 1<sup>st</sup>-tier, 2<sup>nd</sup>-tier) share the feeling of belonging to the same team? Please elaborate
-

## **Chapter 5**

**Table 28: Measurements**

<b>Construct</b>	<b>Category</b>	<b>Items</b>	<b>Content</b>	<b>Origin</b>	<b>Retained</b>
Structural Capital	Infrastructure Exchange	SC_str_1	...conducted common activities...	Loosely based on Roden and Lawson (2014)	<b>Yes</b>
		SC_str_2	...had common project reviews...		<b>Yes</b>
		SC_str_3	...used internal linking systems...		<b>Yes</b>
		SC_str_4	...had also purely social activities...		No
		SC_str_5	...made use of located in proximity...		No
	Frequency of interaction	SC_str_6	...frequently communicated with each other...	Villena (2011)	<b>Yes</b>
		SC_str_7	...frequently communicated at different levels.		<b>Yes</b>
		SC_str_8	...frequently communicated between functions.		<b>Yes</b>
	Nature of communication	SC_str_9	...exchanged concessions throughout project...	Based on Villena (2011), Krause et al. (2007)	No
		SC_str_10	...solved/prevents problems commonly...		No
		SC_str_11	...easily found agreements jointly...		<b>Yes</b>
		SC_str_12	...constructively addressed conflicting topics...		<b>Yes</b>
Relational Capital	Trust	SC_rel_1	...considered own interest as well as others...	Blonska (2013)	<b>Yes</b>
		SC_rel_2	...trusted each other to keep best interest...		No
		SC_rel_3	...counted on each other following promises...		No
	Commitment	SC_rel_4	...found it pleasant to work with each other...	Blonska (2013)	No
		SC_rel_5	...wanted to remain in the relationship...		<b>Yes</b>
		SC_rel_6	...were attracted by the other party...		No
	Reciprocity	SC_rel_7	...considered relationship mutually beneficial...	Blonska (2013)	<b>Yes</b>
		SC_rel_8	...felt indebted because of other party's deeds.		<b>Yes</b>
		SC_rel_9	...expected to work together in future projects.		<b>Yes</b>
Cognitive Capital	Shared Norms	SC_cog_1	...same interpretation of situations / business...	Villena (2011)	<b>Yes</b>
		SC_cog_2	...common understanding what is allowed...		<b>Yes</b>
		SC_cog_3	...had same vision of business relationship...		<b>Yes</b>
		SC_cog_4	...viewed each other as partners...		No
	Overlap of	SC_cog_5	...were aware of each other objectives/KPIs...	Loosely	<b>Yes</b>

objectives			based on Jap (1999)	
	SC_cog_6	...were aligned on objectives/ matched...		No
	SC_cog_7	...made efforts to align goals...		No
	SC_cog_8	...had similar targets...		<b>Yes</b>
Supplier Satisfaction	Satis_1	...very satisfied with overall relationship...	Huetting- er (2014)	<b>Yes</b>
	Satis_2	...pleased to have customer as business partner.		<b>Yes</b>
	Satis_3	...do it again, choose same customer...		<b>Yes</b>
	Satis_4	...did not regret decision to do business...		<b>Yes</b>

**Table 29: Fornell-Larcker Criterion II**

Latent variables	SC str.	SC rel.	SC cog.	Suppl. Satis	Con. aff.	Con. size	Con. comm.	Con. prox.
SC structural	<b>0.730</b>							
SC relational	0.702	<b>0.813</b>						
SC cognitive	0.680	0.808	<b>0.836</b>					
Suppl Satis.	0.548	0.713	0.634	<b>0.795</b>				
Con. affili.	0.121	0.097	0.024	0.016	<b>1.000</b>			
Con. size	0.229	0.130	0.188	0.084	-0.045	<b>1.000</b>		
Con. comm.	0.015	-0.015	-0.046	-0.009	-0.229	0.124	<b>1.000</b>	
Con. prox.	-0.012	-0.028	0.003	-0.011	0.074	0.061	-0.075	<b>1.000</b>

**Table 30: Item Loadings and Cross-Loadings**

<b>Items</b>	<i>SC str.</i>	<i>SC rel.</i>	<i>SC cog.</i>	<i>Suppl. Satis.</i>	<i>Con affil.</i>	<i>Con. size</i>	<i>Con. prox.</i>	<i>Con. comm.</i>
SC_str_1	<b>0.743</b>	0.492	0.443	0.361	0.073	0.160	0.110	-0.038
SC_str_2	<b>0.745</b>	0.519	0.442	0.427	0.117	0.160	0.067	-0.031
SC_str_3	<b>0.704</b>	0.547	0.493	0.395	0.001	0.177	0.082	0.068
SC_str_6	<b>0.738</b>	0.549	0.502	0.314	0.079	0.122	0.024	-0.035
SC_str_7	<b>0.771</b>	0.513	0.469	0.384	0.114	0.146	-0.046	-0.036
SC_str_8	<b>0.723</b>	0.397	0.459	0.370	0.085	0.143	-0.059	-0.050
SC_str_11	<b>0.739</b>	0.543	0.560	0.441	0.178	0.177	-0.055	0.036
SC_str_12	<b>0.675</b>	0.514	0.585	0.483	0.052	0.182	-0.036	0.001
SC_rel_1	0.587	<b>0.771</b>	0.643	0.493	0.183	0.111	-0.051	0.010
SC_rel_5	0.577	<b>0.859</b>	0.689	0.690	0.056	0.104	-0.024	-0.027
SC_rel_7	0.577	<b>0.849</b>	0.675	0.564	0.090	0.105	-0.016	0.021
SC_rel_8	0.586	<b>0.778</b>	0.601	0.548	0.071	0.115	-0.074	0.000
SC_rel_9	0.531	<b>0.805</b>	0.570	0.597	-0.000	0.095	0.110	-0.122
SC_cog_1	0.585	0.628	<b>0.857</b>	0.515	0.009	0.172	-0.049	0.022
SC_cog_2	0.488	0.636	<b>0.794</b>	0.493	-0.055	0.184	-0.078	-0.060
SC_cog_3	0.632	0.785	<b>0.901</b>	0.623	-0.005	0.138	-0.085	-0.011
SC_cog_5	0.541	0.595	<b>0.742</b>	0.350	0.101	0.153	-0.004	-0.031
SC_cog_8	0.586	0.543	<b>0.877</b>	0.629	0.062	0.149	0.023	0.075
Satis_1	0.473	0.514	0.467	<b>0.676</b>	0.205	0.106	-0.067	-0.122
Satis_2	0.430	0.621	0.571	<b>0.878</b>	-0.075	0.053	-0.004	0.038
Satis_3	0.452	0.579	0.497	<b>0.881</b>	0.028	0.053	0.039	0.016
Satis_4	0.384	0.549	0.465	<b>0.724</b>	-0.084	0.063	-0.008	0.014
Con_Aff..	0.121	0.097	0.025	0.013	<b>1.000</b>	-0.045	-0.229	0.074
Con_Size	0.218	0.130	0.189	0.084	-0.045	<b>1.000</b>	0.124	0.061
Con_Prox.	-0.012	-0.028	0.001	-0.010	0.074	0.061	<b>1.000</b>	-0.075
Con_Comm	0.017	-0.015	-0.046	-0.010	-0.229	0.124	-0.075	<b>1.000</b>

**Table 31: Common Method Variance analysis II**

<b>Items</b>	<i>Construct loading (CL)</i>	<i>CL<sup>2</sup></i>	<i>Method factor loading (MFL)</i>	<i>MFL<sup>2</sup></i>
SC_str_1	0.854	0.729	-0.128	0.016
SC_str_2	0.757	0.573	-0.016	0.000
SC_str_3	0.565	0.319	0.150	0.023
SC_str_6	0.808	0.653	-0.065	0.004
SC_str_7	0.956	0.914	-0.202	0.041
SC_str_8	0.909	0.826	-0.197	0.039
SC_str_11	0.523	0.274	0.238	0.057
SC_str_12	0.439	0.193	0.254	0.065
SC_rel_1	0.678	0.460	0.103	0.011
SC_rel_5	0.803	0.645	0.061	0.004
SC_rel_7	0.953	0.908	-0.113	0.013
SC_rel_8	0.643	0.413	0.147	0.022
SC_rel_9	0.979	0.958	-0.190	0.036
SC_cog_1	0.968	0.937	-0.121	0.015
SC_cog_2	0.904	0.817	-0.126	0.016
SC_cog_3	0.768	0.590	0.147	0.022
SC_cog_5	0.758	0.575	-0.010	0.000
SC_cog_8	0.797	0.635	0.085	0.007
Satis_1	0.512	0.262	0.202	0.041
Satis_2	0.935	0.874	-0.069	0.005
Satis_3	0.992	0.984	-0.136	0.018
Satis_4	0.673	0.453	0.059	0.003
<b><i>Average</i></b>	<b><i>0.799</i></b>	<b><i>0.661</i></b>	<b><i>0.0016</i></b>	<b><i>0.018</i></b>

**Table 32: Variance inflation factor (VIF) II**

<b>Latent variables</b>	Supplier Satisfaction
Structural Capital	1.8627 (< 3.3)
Cognitive Capital	2.6028 (< 3.3)
Relational Capital	2.9075 (< 3.3)

**Table 33: Construct Reliability and Validity II**

<i>Latent Variable</i>	<i>Cronbach's Alpha</i>	<i>rho_A</i>	<i>Composite Reliability</i>	<i>Average Variance Extracted</i>
SC structural	0.875	0.876	0.901	0.533
SC relational	0.871	0.874	0.907	0.661
SC cognitive	0.892	0.905	0.921	0.700
Supplier Satisfaction	0.800	0.814	0.871	0.632
Con_Aff..	1.000	1.000	1.000	1.000
Con_Size	1.000	1.000	1.000	1.000
Con_Prox.	1.000	1.000	1.000	1.000
Con_Comm	1.000	1.000	1.000	1.000

**Table 34: R Square**

<i>Latent Variable</i>	<i>Without second-order construct</i>		<i>Without second-order construct</i>	
	<i>R Square</i>	<i>R Square adjusted</i>	<i>R Square</i>	<i>R Square adjusted</i>
Relational Capital	0.698	0.693	0.627	0.636
Supplier Satisfaction	0.511	0.507	0.644	0.636

**Table 35: Polynomial regression result**

<b>Relation</b>	<b>Type</b>	<b>X = Y (as related to Z)</b>	<b>X = -Y (as related to Z)</b>
<b>Cognitive &amp; Structural → Relational</b>	Slope	<b>a1:</b> 0.000 (significant)	<b>a3:</b> 0.140 (non-significant)
	Curvature	<b>a2:</b> 0.288 (non-significant)	<b>a4:</b> 0.031 (significant)
<b>Relational &amp; Structural → Supplier Satisfaction</b>	Slope	<b>a1:</b> 0.000 (significant)	<b>a3:</b> 0.149 (non-significant)
	Curvature	<b>a2:</b> 0.145 (non-significant)	<b>a4:</b> 0.232 (non-significant)
<b>Relational &amp; Cognitive → Supplier Satisfaction</b>	Slope	<b>a1:</b> 0.000 (significant)	<b>a3:</b> 0.910 (non-significant)
	Curvature	<b>a2:</b> 0.169 (non-significant)	<b>a4:</b> 0.615 (non-significant)

## **Chapter 6**

**Table 36: Measurements II**

Construct	Category	Items	Content	Origin	Retained	
					Per. SC	Ext. SC
Structural Capital	Infrastructure Exchange	SC_str_1	...conducted common activities...	Loosely based on Roden and Lawson (2014)	Yes	Yes
		SC_str_2	...had common project reviews...		No	Yes
		SC_str_3	...used internal linking systems...		Yes	No
		SC_str_4	...had also purely social activities...		No	No
		SC_str_5	...made use of located in proximity...		No	No
	Frequency of interaction	SC_str_6	...frequently communicated with each other...	Villena (2011)	No	Yes
		SC_str_7	...frequently communicated at different levels.		Yes	Yes
		SC_str_8	...frequently communicated between functions.		No	Yes
	Nature of communication	SC_str_9	...exchanged concessions throughout project...	Based on Villena (2011), Krause et al. (2007)	Yes	No
		SC_str_10	...solved/prevents problems commonly...		No	No
		SC_str_11	...easily found agreements jointly...		Yes	No
		SC_str_12	...constructively addressed conflicting topics...		No	No
Relational Capital	Trust	SC_rel_1	...considered own interest as well as others...	Blonska (2013)	No	Yes
		SC_rel_2	...trusted each other to keep best interest...		Yes	No
		SC_rel_3	...counted on each other following promises...		Yes	No
	Commitment	SC_rel_4	...found it pleasant to work with each other...	Blonska (2013)	Yes	No
		SC_rel_5	...wanted to remain in the relationship...		No	Yes
		SC_rel_6	...were attracted by the other party...		Yes	No
	Reciprocity	SC_rel_7	...considered relationship mutually beneficial...	Blonska (2013)	Yes	Yes
		SC_rel_8	...felt indebted because of other party's deeds.		No	Yes
		SC_rel_9	...expected to work together in future projects.		No	Yes
Cognitive Capital	Shared Norms	SC_cog_1	...same interpretation of situations / business...	Villena (2011)	No	Yes
		SC_cog_2	...common understanding what is allowed...		Yes	Yes
		SC_cog_3	...had same vision of business relationship...		No	Yes
		SC_cog_4	...viewed each other as partners...		No	Yes
	Overlap of objectives	SC_cog_5	...were aware of each other objectives/KPIs...	Loosely based on	Yes	Yes
		SC_cog_6	...were aligned on objectives/ matched...		Yes	No

	SC_cog_7	...made efforts to align goals...	Jap (1999)	Yes	No
	SC_cog_8	...had similar targets...		Yes	No
Preferred Customer	PrefCu1	...we made sacrifices for customer...	Schiele et al. (2012)		No
	PrefCu2	...we were on our customer's side...		Yes	
	PrefCu3	...allocated best resources to customer...		Yes	
	PrefCu4	...granted customer access to own suppliers...		Yes	
	PrefCu5	...treated customer with lower priority...			No
	PrefCu6	...offered better service to this customer...			Yes
Project Success	Success1	...satisfied with how project progressed...	Horn et al. (2014)		Yes
	Success2	...project goals were achieved...		Yes	
	Success3	...project was within schedule...		Yes	
	Success4	...project was done efficiently...			No

**Table 37: Fornell-Larcker Criterion III**

Latent variables	Ext SC cog.	Ext. SC rel.	Ext. SC str.	Per. SC cog.	Per. SC rel.	Per. SC str.	Pref. Cust.	Proj. Succ.	Con. size.	Con. com.	Con. pro.	Con. aff.
Ext. SC cognitive	<b>0.836</b>											
Ext. SC relational	0.798	<b>0.813</b>										
Ext. SC structural	0.596	0.628	<b>0.785</b>									
Per. SC cognitive	0.797	0.781	0.692	<b>0.868</b>								
Per. SC relational	0.762	0.799	0.661	0.792	<b>0.864</b>							
Per. SC structural	0.639	0.635	0.725	0.693	0.709	<b>0.795</b>						
Preferred Customer	0.480	0.546	0.411	0.466	0.425	0.351	<b>0.799</b>					
Project Success	0.620	0.583	0.604	0.549	0.618	0.503	0.387	<b>0.925</b>				
Con. size.	0.188	0.131	0.185	0.139	0.139	0.267	0.082	0.115	<b>1.000</b>			
Con. com.	-0.045	-0.018	0.017	-0.048	-0.086	0.075	0.101	-0.066	-0.045	<b>1.000</b>		

Con. prox.	-0.018	-0.025	-0.049	-0.026	-0.019	-0.036	0.064	0.010	-0.229	0.124	<b>1.000</b>	
Con. affil.	0.040	0.099	0.120	0.128	0.086	0.049	0.053	0.071	0.074	0.061	-0.075	<b>1.000</b>

Table 38: Item Loadings and Cross loadings II

Items	Ext SC cog.	Ext. SC rel.	Ext. SC str.	Per. SC cog.	Per. SC rel.	Per. SC str.	Pref. Cust.	Proj. Succ.	Con. size.	Con. com.	Con. pro.	Con. aff.
Ext.Cog1	<b>0.848</b>	0.628	0.502	0.638	0.628	0.595	0.350	0.529	0.172	-0.049	0.022	0.009
Ext.Cog2	<b>0.809</b>	0.637	0.387	0.556	0.543	0.447	0.408	0.396	0.184	-0.078	-0.060	-0.055
Ext.Cog3	<b>0.888</b>	0.757	0.553	0.752	0.611	0.518	0.439	0.596	0.138	-0.085	-0.011	-0.005
Ext.Cog4	<b>0.872</b>	0.676	0.530	0.635	0.721	0.580	0.444	0.533	0.147	-0.020	-0.000	0.102
Ext.Cog5	<b>0.752</b>	0.594	0.502	0.657	0.559	0.523	0.359	0.516	0.153	-0.004	-0.031	0.101
Ext.Rel1	0.656	<b>0.775</b>	0.506	0.596	0.619	0.534	0.419	0.503	0.111	-0.051	0.010	0.183
Ext.Rel5	0.704	<b>0.854</b>	0.498	0.639	0.694	0.497	0.552	0.479	0.104	-0.024	-0.027	0.056
Ext.Rel7	0.672	<b>0.855</b>	0.528	0.679	0.706	0.580	0.431	0.490	0.105	-0.016	0.021	0.090
Ext.Rel8	0.689	<b>0.784</b>	0.537	0.707	0.689	0.563	0.328	0.506	0.115	-0.074	0.000	0.071
Ext.Rel9	0.597	<b>0.794</b>	0.495	0.553	0.564	0.386	0.475	0.394	0.095	0.110	-0.122	-0.000
Ext.Str1	0.456	0.491	<b>0.750</b>	0.520	0.464	0.503	0.385	0.428	0.160	0.110	-0.038	0.073
Ext.Str2	0.443	0.591	<b>0.741</b>	0.507	0.568	0.521	0.398	0.488	0.160	0.067	-0.031	0.117
Ext.Str6	0.503	0.548	<b>0.820</b>	0.595	0.554	0.570	0.322	0.485	0.122	0.024	-0.035	0.079
Ext.Str7	0.488	0.511	<b>0.820</b>	0.554	0.514	0.633	0.273	0.442	0.146	-0.046	-0.036	0.114
Ext.Str8	0.446	0.397	<b>0.788</b>	0.536	0.489	0.605	0.237	0.525	0.143	-0.059	-0.050	0.085
Per.Cog2	0.725	0.674	0.557	<b>0.823</b>	0.638	0.601	0.384	0.487	0.148	0.017	-0.023	0.020
Per.Cog5	0.670	0.635	0.629	<b>0.840</b>	0.638	0.585	0.427	0.456	0.106	-0.067	-0.032	0.156
Per.Cog6	0.601	0.698	0.637	<b>0.924</b>	0.716	0.665	0.429	0.501	0.113	-0.054	-0.020	0.138
Per.Cog7	0.686	0.731	0.670	<b>0.926</b>	0.708	0.642	0.414	0.502	0.101	-0.002	-0.001	0.119
Per.Cog8	0.677	0.643	0.505	<b>0.820</b>	0.630	0.505	0.362	0.428	0.132	-0.107	-0.039	0.124
Per.Rel2	0.698	0.705	0.584	0.715	<b>0.899</b>	0.651	0.386	0.602	0.117	-0.154	-0.028	0.127
Per.Rel3	0.702	0.719	0.612	0.704	<b>0.899</b>	0.650	0.372	0.612	0.127	-0.049	0.043	0.123
Per.Rel4	0.611	0.700	0.557	0.661	<b>0.866</b>	0.618	0.318	0.561	0.133	-0.079	-0.041	0.034
Per.Rel6	0.523	0.621	0.521	0.594	<b>0.786</b>	0.529	0.368	0.386	0.115	-0.071	-0.025	0.057
Per.Rel7	0.646	0.705	0.612	0.640	<b>0.847</b>	0.609	0.391	0.493	0.108	-0.019	-0.031	0.026
Per.Str1	0.509	0.457	0.673	0.586	0.571	<b>0.809</b>	0.333	0.441	0.199	0.039	0.002	0.055
Per.Str3	0.490	0.487	0.460	0.508	0.561	<b>0.771</b>	0.252	0.418	0.220	0.093	-0.022	0.110
Per.Str7	0.481	0.497	0.522	0.484	0.512	<b>0.761</b>	0.250	0.409	0.204	0.100	0.010	-0.019
Per.Str9	0.558	0.574	0.684	0.634	0.616	<b>0.834</b>	0.298	0.404	0.226	-0.019	-0.113	0.028
Per.Str11	0.489	0.484	0.470	0.509	0.549	<b>0.797</b>	0.236	0.314	0.219	0.028	0.002	0.021
PreCu2	0.472	0.501	0.378	0.421	0.445	0.348	<b>0.845</b>	0.423	0.015	0.041	0.087	0.073
PreCu3	0.394	0.429	0.303	0.346	0.314	0.270	<b>0.857</b>	0.257	0.133	0.173	0.063	-0.086

PreCu4	0.442	0.508	0.362	0.438	0.364	0.339	<b>0.850</b>	0.304	0.112	0.033	0.069	0.145
PreCu6	0.195	0.234	0.243	0.240	0.438	0.076	<b>0.621</b>	0.196	-0.013	0.113	-0.068	-0.000
Success1	0.603	0.559	0.584	0.524	0.601	0.477	0.380	<b>0.810</b>	0.088	-0.110	0.037	0.121
Success2	0.584	0.539	0.562	0.519	0.564	0.485	0.396	<b>0.833</b>	0.128	-0.022	0.046	0.022
Success3	0.517	0.514	0.519	0.470	0.545	0.424	0.272	<b>0.782</b>	0.105	0.047	-0.078	0.047
Con. Size	0.188	0.130	0.186	0.139	0.139	0.267	0.082	0.115	<b>1.000</b>	0.124	0.061	-0.045
Con. Com.	-0.046	-0.015	0.023	-0.048	-0.086	0.075	0.101	-0.066	0.124	<b>1.000</b>	-0.057	-0.229
Con. Prox	-0.018	-0.028	-0.048	-0.026	-0.019	-0.036	0.064	0.010	0.061	-0.075	<b>1.000</b>	0.074
Con. affil.	0.039	0.097	0.120	0.127	0.085	0.049	0.053	0.071	-0.045	0.229	0.074	<b>1.000</b>

**Table 39: Common Method Variance analysis III**

<i>Loadings</i>	<i>Construct loading (CL)</i>	<i>CL<sup>2</sup></i>	<i>Method factor loading (MFL)</i>	<i>MFL<sup>2</sup></i>
Ext.Cog1	0.940	0.884	-0.096	0.009
Ext.Cog2	1.132	1.281	-0.352	0.124
Ext.Cog3	0.796	0.634	0.101	0.01
Ext.Cog4	0.713	0.508	0.178	0.032
Ext.Cog5	0.603	0.364	0.157	0.025
Ext.Rel1	0.685	0.469	0.097	0.009
Ext.Rel5	0.920	0.846	-0.068	0.005
Ext.Rel7	0.834	0.696	0.020	0.000
Ext.Rel8	0.495	0.245	0.310	0.096
Ext.Rel9	1.113	1.239	-0.342	0.117
Ext.Str1	0.717	0.514	-0.055	0.003
Ext.Str2	0.788	0.621	0.054	0.003
Ext.Str6	0.810	0.656	0.036	0.001
Ext.Str7	0.791	0.626	-0.007	0.063
Ext.Str8	0.817	0.667	-0.029	0.001
Per.Cog2	0.590	0.348	0.251	0.063
Per.Cog5	0.837	0.701	0.004	0.000
Per.Cog6	0.993	0.986	-0.073	0.005
Per.Cog7	0.994	0.988	-0.069	0.005
Per.Cog8	0.905	0.819	-0.097	0.009
Per.Rel2	0.897	0.805	0.003	0.000

*Appendix*

Per.Rel3	0.849	0.721	0.056	0.003
Per.Rel4	0.949	0.901	-0.069	0.005
Per.Rel6	0.950	0.903	-0.182	0.033
Per.Rel7	0.684	0.468	0.177	0.031
Per.Str1	0.717	0.514	0.091	0.008
Per.Str3	0.782	0.612	-0.027	0.001
Per.Str7	0.685	0.469	0.161	0.026
Per.Str9	0.952	0.906	-0.164	0.027
Per.Str11	0.851	0.724	-0.073	0.005
PrefCu2	0.734	0.539	0.136	0.018
PrefCu3	0.908	0.824	-0.072	0.005
PrefCu4	0.809	0.654	0.063	0.004
PrefCu6	0.763	0.582	-0.163	0.027
Success1	0.879	0.773	0.061	0.004
Success2	0.901	0.812	0.031	0.001
Success3	0.998	0.996	-0.092	0.008
<b><i>Average</i></b>	<b><i>0.832</i></b>	<b><i>0.711</i></b>	<b><i>-0.001</i></b>	<b><i>0.020</i></b>

**Table 40: Construct Reliability and Validity III**

<b>Latent Variable</b>	<i>Cronbach's Alpha</i>	<i>rho_A</i>	<i>Composite Reliability</i>	<i>Average Variance Extracted</i>
External SC - cognitive	0.891	0.897	0.920	0.699
External SC - relational	0.871	0.875	0.907	0.661
External SC - structural	0.844	0.849	0.889	0.615
Perceived SC - cognitive	0.917	0.917	0.938	0.753
Perceived SC - relational	0.915	0.918	0.936	0.747
Perceived SC - structural	0.855	0.868	0.894	0.631
Preferred Customer	0.812	0.856	0.875	0.639

*Appendix*

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Project Success	0.917	0.943	0.947	0.856
Control Variable - Size	1.000	1.000	1.000	1.000
Control Variable - Commodity	1.000	1.000	1.000	1.000
Control Variable - Proximity	1.000	1.000	1.000	1.000
Control Variable - Affiliation	1.000	1.000	1.000	1.000

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## SAMENVATTING – SUMMARY IN DUTCH

De relaties die tussen verschillende organisaties zijn opgebouwd zijn de afgelopen decennia in belang toegenomen als bijdrage aan de creatie van waarde. Hierdoor worden koper-leverancier-relaties steeds vaker aangemerkt als een bron van duurzaam concurrentievoordeel. In deze context heeft de terminologie van *global sourcing*, het inkopen van goederen van leveranciers op internationale schaal, een brede toepassing gevonden. Aangezien bedrijven hun activiteiten steeds meer uitbesteden aan hun leveranciers en hen dus meer verantwoordelijkheden toekennen, komt het uiteraard aan op de noodzaak om deze relaties op een succesvolle wijze te managen.

In landen zoals China wijken bedrijven steeds vaker af van de focus op *global sourcing* en wordt de binnenlandse *sourcing*-benadering gevolgd. Zelfs wanneer de hele *supply chain* lokaal actief wordt opgezet, wordt deze strategie ook gezien als een vorm van *deep localisation*. Omdat bedrijven aan het einde van toeleveringsketens hun leveranciers nauwelijks kunnen dicteren welke toeleveranciers ze dienen te selecteren, is het soort relatie dat inkopende bedrijven hebben met hun leveranciers bepalend of *deep localization* met succes kan worden voltooid of niet. Vanuit het theoretische perspectief is de *social capital theory* overwogen voor het bestuderen van relaties tussen individuen en organisaties.

Hoewel het concept van *social capital* al een hoge mate van theoretische toereikendheid heeft bereikt, is de literatuur nog steeds zoekende naar inputfactoren, attributen die *social capital* in een koper-leverancier-relatie veroorzaken, en naar outputfactoren, effecten die geaccumuleerde *social capital* kan hebben op andere variabelen. Hierop voortbouwend onderzoekt dit proefschrift daarom de belangrijkste onderzoeksvraag: "Hoe kan *social capital* bijdragen aan het succesvol beheren van koper-leverancier-relaties en wat zijn de vereisten en implicaties voor organisaties die een *deep-localization*-benadering volgen?" Als zodanig, door het combineren van literatuur over *global sourcing* en *social capital*, richt het

proefschrift zich op *deep localization* in contrast met *global sourcing*, welke rol *social capital* speelt en hoe *social capital* tussen koper en leverancier kan worden geaccumuleerd om *deep localization* te ondersteunen. Verder wordt in dit proefschrift gekeken naar factoren die van invloed zijn op de vorming van *social capital* en welke prestatie-implicaties dit met zich meebrengt voor gemeenschappelijke projecten tussen koper en leverancier. Om de onderzoeksvraag te beantwoorden, wordende de volgende stappen gevolgd: (1) Hoofdstuk 2 richt zich op het schetsen van de bredere context van *global sourcing*. Gebaseerd op een uitgebreide literatuurstudie over *global sourcing* en buitenlandse directe investeringen, geeft hoofdstuk 2 het bewijs van de manier waarop inkoopondernemingen kenmerkend zijn voor aantrekkelijkheid op de aanbodmarkt.

Het onderzoek heeft aanwijzing gevonden dat bedrijven niet alleen rekening houden met puur kostengeoriënteerde factoren bij het selecteren van een markt, maar ook met factoren die verder gaan dan het focussen op het gedrag van instellingen of de beschikbaarheid van lokale partners. In het bijzonder, vanuit een theoretisch perspectief, vult de studie een onderzoekskloof in door de aantrekkelijkheid van de aanbodmarkt te trachten te operationaliseren. Door dit te doen, worden in hoofdstuk 2 lokale toeleveringsmarkten gekarakteriseerd, hetgeen uiteindelijk zou kunnen bepalen of *deep localization* de moeite van het overwegen waard is.

(2) In hoofdstuk 3 wordt aandacht besteed aan de fase waarin een markt is geselecteerd, leveranciers zijn gekozen en een relatie tussen koper en leverancier tot stand is gebracht. Hier ligt de focus op koper-leverancier-relaties, in het bijzonder op de interactie tussen koper en leverancier-opportunisme. Door gebruik te maken van een steekproef van 168 verschillende koper-leverancier-relaties, onderzoekt de studie de rol die *social capital* speelt als antecedent voor opportunisme, of koper- en leveranciersopportunisme een interactie-effect hebben en ten slotte het effect van opportunisme op het genereren van innovatie en strategische voordelen. Uit de resultaten blijkt dat *social capital* werkt als een antecedent voor opportunisme door kopers en leveranciers, die beide een negatieve invloed hebben op de innovatie en strategische voordelen. Een interactie-effect tussen beide typen opportunisme kan echter niet worden vastgesteld.

(3) Hoofdstuk 4 introduceert het concept van *deep localization*, gebaseerd op

*global sourcing*-theorie, en belicht de voordelen van *social capital* in een koper-leverancier-relaties, evenals het effect op succesvolle resultaten van veelvoorkomende *deep-localization*-projecten tussen koper en leverancier. Door het toepassen van de methodologie van de casestudy vergelijkt dit hoofdstuk succesvolle en niet-succesvolle gevallen van *deep localization* en onderzoekt deze op basis van geaccumuleerd *social capital*. Het hoofdstuk schetst niet alleen een aanpak in vier stappen die bedrijven kunnen toepassen om hun toeleveringsketen te lokaliseren, maar beschrijft ook de rol die *social capital* speelt in netwerkrelaties.

(4) Hoofdstuk 5 besteedt aandacht aan de *social-capital*-theorie en haar rol als antecedent van de tevredenheid van leveranciers door het kwantitatief analyseren van een steekproef van 140 leveranciers. Door de drie dimensies van *social capital* te beschouwen, namelijk cognitief, structureel en relationeel kapitaal, bieden bevindingen aanvullende inzichten in de opkomst van leverancierstevredenheid. Het hoofdstuk onderstreept dat, in tegenstelling tot wat de literatuur voorstelt, alleen relationeel kapitaal een significant effect vertoont, terwijl zowel cognitief als structureel kapitaal geen rol spelen bij het beïnvloeden of een leverancier tevreden is met de relatie met zijn klant of niet.

(5) Tot slot onderzoekt hoofdstuk 6 de rol die de perceptie van intern *social capital* bij de inkoopfirma heeft voor leveranciers bij het opbouwen van extern *social capital* bij deze specifieke onderneming, door opnieuw een steekproef van 140 leveranciers kwantitatief te analyseren. Verder, door het analyseren van het effect dat de aanwezigheid van extern *social capital* kan hebben op de voorkeursklant en op zijn beurt in gezamenlijke projecten van koperleverancier zoals *deep localization*, is de studie in staat om een direct resultaat te bepalen dat een mogelijke interne fout in afstemming op de koperskant kan hebben voor toekomstige projecten met zijn leverancier. Bevindingen tonen aan dat inderdaad waargenomen intern *social capital* de opkomst van extern *social capital* beïnvloedt, terwijl het verband tussen *social capital*, de voorkeursklant en het succes van het project wordt bevestigd.

Deze dissertatie geeft verder inzicht in zowel de opkomst als de resultaten van *social capital* terwijl tegelijkertijd het concept van *deep localization* wordt onderzocht. Vandaar dat dit onderzoek niet alleen bijdraagt tot het begrip van *social capital*, maar ook de *sourcing*-theorie uitbreidt door de introductie van een

omgekeerde benadering van *global sourcing*, een aanpak die volledig is bedoeld om ten volle gebruik te maken van lokale marktpotentialen.

## **ABOUT THE AUTHOR**

Tobias Bohnenkamp started his academic journey in 2010 at the University of Twente where he joined the Bachelor program “International Business Administration”. During the three year period, Tobias specialized on supply management as a major. After graduating in 2013, he decided to further deepen his knowledge in this field and moved on to Rotterdam School of Management, Erasmus University, to pursue the Master program “Supply Chain Management” and obtained the degree one year later. After having completed Bachelor and Master studies, Tobias chose to combine academia with practice and was selected by a German automotive MNE to enrol in their industry PhD program. After having spent one year at the German headquarters, focusing on regional procurement strategies, Tobias was sent to Beijing, China, in order to complete his PhD on the topic of deep localization. Currently, Tobias Bohnenkamp is employed as project manager at the MNE in China, where he is coordinating the sourcing activities of joint venture organizations in the field of new engine projects.



Considering the increased importance that ties between different organizations have gained over the last decades in terms of contributing to the creation of value, buyer–supplier relationships have been found more and more as a source of a sustainable competitive advantage. In this context, the terminology of global sourcing, sourcing goods from suppliers on an international scale, has found wide application. Since companies increasingly outsource activities to their suppliers and thus grant them more responsibilities, being able to successfully manage these relationships naturally emerges as necessary requirement. In countries such as China, firms increasingly tend to abandon the global sourcing focus and follow domestic sourcing approaches, going even as far as actively establishing the whole supply chain locally, a strategy also understood as deep localization.

The questions that arise are: How is deep localization conducted? Which roles do buyer–supplier relationships, in particular the social capital underlying them, play? And, how can social capital contribute to successful project outcomes between buyer and supplier? Based on qualitative as well as quantitative research, this study provides answers to these questions while deriving practical recommendations.

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