
Replacing global sourcing with deep localisation: the role of social capital in building local supply chains

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Abstract: With globalisation still on the rise firms precede 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 localisation. Drawing on social capital theory, we examine the role that social capital pillars can play for the successful outcome of deep localisation projects. Here, we make use of the unique situation that deep localisation offers and focus on social capital in network relationships. Through applying case study methodology, we compare successful and non-successful cases, analysing data from an automotive OEM as well as 1st and 2nd 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.

Keywords: global and local sourcing; local supply chains; social capital; buyer-supplier relationships.

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1 Introduction: moving from global to local sourcing by following a deep localisation 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; Giunipero et al., 2018). 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, 2003). 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 localisation. Literature, however, has barely touched upon this topic and is arguably scarce. Consequently, firms miss guiding lines on how to successfully localise. In the broad field of economics, localisation 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; Amendolagine et al., 2019). Further, the notion of localisation is also found in human resource and organisation studies, focusing on replacing foreign human capital, i.e., global expatriates, by local labour (Fryxell et al., 2004; Lam and Yeung, 2010). Sourcing theory, though, has not paid much attention to localisation of components, let alone sub-components. Eberhardt et al. (2004) conduct one of the few studies emphasising component localisation. In their research, the authors discuss internal and external factors that foster or inhibit localisation attempts. More recently, the concept of re-shoring or back-shoring (Ellram et al., 2013; 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 summarise that even though current literature has established a basic picture of localisation, it still lacks the understanding of how localisation is actually conducted. In the study at hand we in particular focus on localisation of the supply chain and, with it, of domestic sub-components, involving a triad of 1st-tier as well as 2nd-tier suppliers. In our study, this highly in-depth form of local sourcing, the integration of domestic sub-tier suppliers into localisation activities is defined as *deep localisation*. This ‘depth’ that we refer to draws the distinction from localisation as described before: while localisation puts emphasis on establishing a local first-tier supplier portfolio, deep localisation 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:

RQ1 How is deep localisation conducted, how can global sourcing be replaced with domestic sourcing?

The concept of deep localisation only functions if suppliers are found that satisfy the standards set by firms. This is in particular critical in industries characterised by a strong network structure and reliance on capable suppliers (Wagner et al., 2009). If satisfying suppliers cannot be found, deep localisation 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 (Lockström and Lei, 2013). The question arises if there could be any theoretical approach from which to borrow in order to explain deep localisation. From the theoretical perspective, social capital theory has been considered for studying relationships between individuals and organisations (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 localisation procedures could thus be fruitful for explaining successful outcomes. As such, a second research question can be postulated:

RQ2 How does the presence (or absence) of social capital explain success of deep localisation activities?

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

- 1 Through outlining a systematic process for deep localisation, the study gives insights into how firms in low-cost countries can actively pursue their localisation strategy. Here, we will in particular discuss the importance of the relation between OEM and 1st-tier as well as 2nd-tier suppliers. With mirroring global sourcing theory, deep localisation, 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 organisational outcomes are affected by social capital and where parties are positioned in the supply chain (Preston et al., 2016). Through utilising the unique situation of deep localisation, involving multiple tiers, our study will also look into this proposition.
 - c We will take a closer look at the current operationalisation of social capital found in literature.

Here, the initial conceptualisation 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 et al. (2011) call for a refinement of measurements, the paper at hand utilises its case study methodology in order to propose extended items.

The study will be organised as follows: Firstly, literature on the limitations of global sourcing is presented as the basis for deep localisation. Subsequently social capital as explanatory variable is introduced. In the following, through analysing a successful and a non-successful case, the concept of deep localisation 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.

2 Literature review

2.1 *Global sourcing vs. deep localisation*

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, 2003) 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 should not always be considered the right choice (Kotabe and Murray, 2018), since it 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:

- 1 regulations such as quotas and trade restrictions
- 2 logistics due to possible transport delays
- 3 cultural differences in terms of language, customs or even business practices
- 4 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 realise 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.

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, 1998; Kankanhalli et al., 2005). 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 organisations (Ahuja, 2000; Tsai and Ghoshal, 1998), 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; Chen et al., 2018). Here, also the role of social capital during the internationalisation of firms and the sought for opportunities on a global scale is discussed (Tian et al., 2018; Urzelai and Puig, 2018).

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
- 3 structural capital, referring to links and social ties that exist between firms (Nahapiet and Ghoshal, 1998; Tsai and 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; Whipple et al., 2015). Some studies also consider cognitive and structural capital as antecedents of relational capital (Carey et al., 2011; Horn, 2014; Preston et al., 2016). The next sections will consider the dimensions individually.

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 and 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, 1998; Uphoff and Wijayaratra, 2000). 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) and Adler and Kwon (2002). More recently, Roden and Lawson (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 localisation might benefit from a certain level of cognitive capital being present for a successful outcome.

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, 1997; Villena et al., 2011), or, as Nahapiet and Ghoshal (1998, p.244) put it, “who you reach and how you reach them.” Following this logic, the level of structural capital can be characterised 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 characterising 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 localisation.

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., 2000). 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 and 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’ (Das et al., 2006; Maloni and Benton, 1997). Following this, without trust and commitment a relationship would stay superficial and the fulfilment of deep localisation would be difficult to achieve.

2.2.4 Social capital operationalisation: current measurements miss in-depth focus

Initially conceptualised by Nahapiet and Ghoshal (1998), many studies have followed their lead of operationalising social capital through a further distinction into cognitive, structural and relational dimensions (Kale, 2000; Lawson et al., 2008; Villena et al., 2011; Carey et al., 2011; Gelderman et al., 2016). 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 operationalise 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 picture 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 operationalisation 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, 2013; 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, socialising and friendship fostering could be assessed (Wang et al., 2013) 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, 2005), 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.

3 Methodology: a case study approach to outline deep localisation

The study at hand extends sourcing literature as well as literature on social capital theory to the specific context of deep localisation. In particular, the impact of social capital on the outcome of deep localisation 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 labour 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., 2011). 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:

- 1 direct sourcing, focusing on the traditional buyer-supplier relationship
- 2 intermediated sourcing, the involvement of a third party such as wholesalers
- 3 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 labour force (Osland and Björkman, 1998; Nassimbeni and Sartor, 2007). Having a localised 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 minimise 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).

3.1 Data collection

In our study, the focus for conducting case studies lies on a German automotive OEM operating in China as well as its 1st and 2nd 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
- 2 maximisation of likelihood that a relation between concepts exists.

To serve this purpose, we selected the two most recent deep localisation 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-localised and savings achieved, and the other was not, as deep localisation failed, and savings were not realised. As such, we defined success in deep localisation projects based on:

- 1 the actual achieved localisation of sub-suppliers
- 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 localisation 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 characterised 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 1st-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 2nd tier supplier located in Germany. The goal of this deep localisation project was

therefore to replace the foreign, German 2nd tier supplier with a domestic Chinese supplier.

The non-successful case had its origin within the Interior commodity. The 1st-tier supplier was providing vacuum pipes to the OEM, while a sub-component, certain connectors, still had to be sourced from an US 2nd tier supplier. Again, the goal of the deep localisation 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 1st and 2nd tier suppliers involved externally, and comprised the majority of people who contributed, the main actors who experienced the projects first hand (Table 1). Next to using interviews as the main source, secondary data was collected from the OEM to itail 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 1 Overview participants

#	<i>Company category</i>	<i>Area of operations</i>	<i>Participant successful case</i>	<i>Participant non-successful case</i>
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	1st-tier	Operations	Head of operations	Int. business manager
14	1st-tier	Sales	Key account manager	Key account manager
15	2nd-tier	Sales	Key account manager	Key account manager
16	2nd-tier	Sales	Key account manager	Key account manager

Throughout the interviews, we firstly tried to establish an overarching picture of deep localisation and the process behind it. Therefore, we asked participants about their general understanding of deep localisation, 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 localisation process and responsibilities were fully gapsed. Subsequently, we focused on examining the role of social capital in the cause of the two

deep localisation 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 emphasising 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 localisation projects. As before, for every question participants were asked to elaborate on their answers. The detailed overview of questions can be found in Table 3.

Table 2 Social capital interview items

<i>Social capital</i>		<i>2nd order factors</i>	<i>Items</i>
Cognitive capital	1	Shared values and norms	<ul style="list-style-type: none"> • Similar mindsets/ideas • Common beliefs about rights/wrongs • Following underlying rules
	2	Overlaps of objectives	<ul style="list-style-type: none"> • Awareness of other parties objectives • Match of objectives • Effort to align goal
Structural capital	1	Infrastructure actor exchange	<ul style="list-style-type: none"> • Conduction of common activities/workshops • Project reviews in place • Usage of electronic exchange mechanisms
	2	Quantity of interaction	<ul style="list-style-type: none"> • Frequent interaction with buyer/supplier personnel • Frequent interaction at different levels • Frequent interactions across functions
	3	Nature of communication	<ul style="list-style-type: none"> • Social activities throughout the project • Favours during the project • Common trouble fighting/problem solving
Relational capital	1	Trust	<ul style="list-style-type: none"> • Sharing of sensitive information • Belief that other party acted in best interest • Other party keeps promises made
	2	Commitment	<ul style="list-style-type: none"> • Mutual respect and sacrifices • Active common work • 'Team member' feeling

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. An interview framework was developed in order to ensure comparability of the answers given (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 3 Interview questions

<i>Type</i>		<i>Interview questions</i>
General questions deep localisation	1	What is your understanding of deep localisation? What does it mean for you?
	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?
	3	Which were the steps you took in order to move the project ahead? Which were your key performance indicators (KPIs)?
	4	With whom did you interact throughout the project(s), which were other parties you had to deal with and when?
General questions social capital	5	How did the interaction between you and the other parties look like?
	6	Which roles did goals and values play for you and the other parties during the project(s)?
	7	Speaking about the relationship between you and the other parties (buyer, 1st-tier, 2nd-tier) during the project(s), how can this be characterised?
Specific questions social capital	8	Did you and the other parties (buyer, 1st-tier, 2nd-tier) have similar mindsets/ideas and to which extent? Please elaborate
	9	Did you and the other parties (buyer, 1st-tier, 2nd-tier) have common beliefs about rights/wrongs and to which extent? Please elaborate
	10	Did you and the other parties (buyer, 1st-tier, 2nd-tier) follow underlying rules and to which extent? Please elaborate
	11	Were you and the other parties (buyer, 1st-tier, 2nd-tier) aware of each other objectives and to which extent? Please elaborate
	12	Did you and the other parties (buyer, 1st-tier, 2nd-tier) have matching objectives and to which extent? Please elaborate
	13	Did you and the other parties (buyer, 1st-tier, 2nd-tier) make efforts to align goals and to which extent? Please elaborate
	14	Did you and the other parties (buyer, 1st-tier, 2nd-tier) conduct common activities/workshops? Please elaborate
	15	Did you and the other parties (buyer, 1st-tier, 2nd-tier) have project reviews in place and to which extent? Please elaborate
	16	Did you and the other parties (buyer, 1st-tier, 2nd-tier) use electronic exchange mechanisms and to which extent? Please elaborate
	17	Did you and the other parties (buyer, 1st-tier, 2nd-tier) frequently communicate with each other personnel, at different levels and across functions? Please elaborate
	18	Did you and the other parties (buyer, 1st-tier, 2nd-tier) have also purely social activities together and to which extent? Please elaborate

Table 3 Interview questions (continued)

<i>Type</i>	<i>Interview questions</i>	
Specific questions social capital	19	Did you and the other parties (buyer, 1st-tier, 2nd-tier) exchange favours (e.g., granted more time) and to which extent? Please elaborate
	20	Did you and the other parties (buyer, 1st-tier, 2nd-tier) engage in common trouble fighting and to which extent? Please elaborate
	21	Did you and the other parties (buyer, 1st-tier, 2nd-tier) share sensitive information and to which extent? Please elaborate
	22	Did you and the other parties (buyer, 1st-tier, 2nd-tier) believe that every party acted in others best interest? Please elaborate
	23	Did you and the other parties (buyer, 1st-tier, 2nd-tier) have project reviews in place and to which extent? Please elaborate
	24	Did you and the other parties (buyer, 1st-tier, 2nd-tier) kept promises made and to which extent? Please elaborate
	25	Did you and the other parties (buyer, 1st-tier, 2nd-tier) have mutual respect for each other? Please elaborate
	26	Did you and the other parties (buyer, 1st-tier, 2nd-tier) have project reviews in place and to which extent? Please elaborate
	27	Did you and the other parties (buyer, 1st-tier, 2nd-tier) actively work together to the fullest? Please elaborate
28	Did you and the other parties (buyer, 1st-tier, 2nd-tier) share the feeling of belonging to the same team? Please elaborate	

3.2 Data analysis

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 finalised, 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 localisation 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, 1st-tier and 2nd-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 localisation 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. The obtained data was then analysed 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 4 gives more detail about how these tests are composed and applied in the study at hand.

Table 4 Validity and reliability

<i>Test</i>		<i>Case study tactic</i>	<i>Phase of research</i>	<i>Used in present study</i>
Construct validity	1	Usage of multiple sources of evidence (interviews, archival data)	Data collection composition	✓
	2	Establish chain of evidence: multiple interviewees with complementing answers		
	3	Have key informants review draft case study report		
Internal validity	1	Do pattern matching	Data analysis	✓
	2	Do explanation building		
External validity	1	Identify commonalities as well as differences among cases	Research design	✓
	2	Use replication logic in multiple case studies: Conduction of cross-case analysis		
Reliability	1	Use of case study protocol as guideline for research	Data collection	✓
	2	Develop case study database containing recordings, questionnaires, notes, etc.		

Source: Yin (2009)

4 Results

Before going into detail about the effect of social capital on the outcome of deep localisation activities, we understand the need to give more insights into how the project process of deep localisation 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 localisation 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 localisation strategy per se.

4.1 Four phases define the deep localisation process

The deep localisation process as conducted by the OEM in China is mainly driven by the purchasing function. In fact, for the company the approach of deep localising sub-components is considered a major purchasing strategy and tool. Since the purpose of deep localisation is to take advantage of the enormous market scope in order to achieve cost targets and optimise 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 ital the value of this

strategy for the company. In principal, the deep localisation process can be distinguished into four phases, which will be introduced in the following:

4.1.1 Phase 1: setting up task force team and identifying potential material groups

The first step of the deep localisation 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 localised as well as the complexity of the project. Firstly, material groups with sub-components still being imported to China are analysed 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 realised 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.

4.1.2 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 utilising the local material, this step is extremely crucial for the project outcome. Also, the 1st-tier supplier assembling the components is involved in this step and, subsequently, supports in identifying potential 2nd-tier suppliers that have the abilities of completing the task. Here, usually two options exist: either a foreign, 2nd-tier supplier, who is already producing the material/sub-component, is asked to localise 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.

4.1.3 Phase 3: follow-up of deep localisation processes by task-force

After the 2nd-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, 1st and 2nd-tier suppliers, on the external side. Preferably, the 2nd-tier supplier is then determined suitable and selected accordingly. Arguably, selecting 2nd-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:

- 1 the buyer can exert the bargaining power it might have over the 1st-tier supplier in order to push for an agreement
- 2 contractual specifications or technical requirements that have been negotiated between buyer and 1st-tier in the past allow the buyer to intervene and enforce a localisation
- 3 buyer and 1st-tier have an outstanding relationship driving the 1st-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 1st and 2nd-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 1st-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, 1st and 2nd-tier suppliers are options to report on progress made as well as difficulties encountered.

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 fulfils the necessary requirements and can be implemented by the 1st-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 localisation process is led by purchasing, both have the final say about the utilisation 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.

4.2 Comparing successful and non-successful cases: examining the effect of social capital on deep localisation success.

After having focused on how the deep localisation process looks like, the next section will pay more attention to theoretical foundations. As mentioned above, a good relationship between buyer and 1st-tier supplier was described as an important attribute for the buying firm when influencing the supplier selection of the 2nd-tier. In the

following we will now look into how social capital that underlies every relationship affects the outcome of deep localisation projects during the project conduction.

Table 5 Results for cognitive capital

<i>Social capital</i>	<i>2nd order factors</i>	<i>Successful case</i>	<i>Non-successful case</i>
Cognitive capital	1 Shared values and norms	<ul style="list-style-type: none"> • Similar mindsets among all parties • Existing common beliefs about right and wrongs • All parties follow underlying rules 	<ul style="list-style-type: none"> • Similar mindsets among all parties • Existing common beliefs about right and wrongs • All parties follow underlying rules
	2 Overlap of objectives	<ul style="list-style-type: none"> • Parties are aware of other objectives • <i>Objectives of all parties match to some extent</i> • <i>Efforts are made to align goals</i> 	<ul style="list-style-type: none"> • Parties are aware of other objectives • <i>Objectives do not match</i> • <i>Lacking efforts to align goals between parties</i>

4.2.1 Cognitive capital

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 1st-tier supplier, as well as internally between purchasing and R&D could only be determined during one project. In the successful case, the 1st-tier supplier even made the first move and contacted the OEM to pursue the chance of deep localising 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 localisation project. They would have preferred to proceed with a localised western supplier in order to minimise 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 1st-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 2nd-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.” (1st-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 2nd-tier supplier, which eventually proved to be difficult to perform. Table 3 sums up the results, displaying differences in ital.

4.2.2 Structural capital

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 1st-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 2nd-tier suppliers. In fact, the whole project process here was characterised 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 1st-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 1st-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 2nd 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.” (1st-tier)

The project progress was reviewed, though not on a regular basis, using telephone calls and email exchanges. Between purchasing and the 2nd-tier supplier the interaction frequency was high and information was exchanged on a weekly basis. Though, input and support from the 1st-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 2nd-tier supplier would result in a project failure, the 1st-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.” (1st-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 6 Results for structural capital

<i>Social capital</i>	<i>2nd order factors</i>	<i>Successful case</i>	<i>Non-successful case</i>
Structural capital	1 Infrastructure actor exchange	<ul style="list-style-type: none"> • <i>Regular workshops with all parties</i> • <i>Weekly telephone conferences to review project status</i> • <i>Information sharing via email</i> 	<ul style="list-style-type: none"> • <i>Two workshops during the whole project process</i> • <i>Only project review between purchasing and 2nd tier supplier</i> • <i>Information sharing via email</i>
	2 Quantity of interaction	<ul style="list-style-type: none"> • <i>Weekly interaction between parties</i> • <i>Involvement of management through corporate management meetings</i> • <i>Cross-functional interaction when needed</i> 	<ul style="list-style-type: none"> • <i>Frequent interaction between purchasing and 2nd tier supplier only</i> • <i>Escalation to management level</i> • <i>Insufficient cross-functional coordination</i>
	3 Nature of communication	<ul style="list-style-type: none"> • <i>Social activities after workshops</i> • <i>No exchange of favours</i> • <i>Common trouble fighting implicated though not necessary</i> 	<ul style="list-style-type: none"> • <i>No social activities</i> • <i>No exchange of favours</i> • <i>Common trouble fighting not possible for lacking involvement of 1st-tier supplier and willingness on behalf of R&D and quality</i>

4.2.3 Relational capital

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 1st-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 approach the project outcome, mainly purchasing and the 2nd-tier supplier have been accountable for it. While the 1st-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 7 Results for relational capital

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

5 Discussion, implications, limitations: how social capital in network relationships can affect the success of common projects

Our study investigated the process of deep localisation as well as the role of social capital within the underlying network composition between buyer as well as 1st and 2nd 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 localisation 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 localisation. Further, the application of social capital theory for explaining success in deep localisation 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 operationalise 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 localised 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 localisation 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 localisation. 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 1st-tier supplier in order to screen the local market for sub-tier suppliers that are able to:

- a achieve the desired savings
- 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 1st-tiers only. As such, the research at hand sheds light on an alternating form of supplier selection which is done commonly with the 1st-tier supplier focusing on sub-suppliers only. Further, as our study showed, during the project's 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 localisation 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 localisation only works given the right circumstances between buyer and 1st-tier supplier, the 1st-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-organisational projects in networks amongst buyer and multiple tiers of suppliers, considering a triadic relationship. The case examples showed that while between buyer and 2nd-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 1st-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-localising sub-components and materials did not turn out to be the relationship between buyer and 2nd-tier supplier, who was actually conducting the localisation efforts, but between buyer and 1st-tier supplier. While in both cases the 2nd-tier suppliers strongly tried to contribute, the projects succeeded or failed depending on the 1st-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 localisation 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., 2011b), Resulting in preferential treatment and resource allocation of the 1st-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 1st-tier supplier would be more tempted to allocate its best personnel and know-how in order to support localisation activities. As such, it becomes possible to connect the preferred customer status with success in deep localisation projects as it eases goal alignment and ensures commitment. In fact, this situation might already exist during our successful case, characterised by voluntary sharing of information and ideas prior to the start of the project by the 1st-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 localisation and the dependence of its successful conduction on the level of social capital present. Although these cases were fully analysed 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 generalisability, 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 localisation 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 localisation projects, through following a quantitative approach. Also, focus should be laid on different industries where deep localisation 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 operationalisation 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 2nd 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. This could also be tested quantitatively.

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 favour one supply chain over the other, would they be attracted by a firm that is not their direct customer?

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