# Methods and tools for managing remote sourcing and future expectations– A qualitative study

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**ABSTRACT**

*Global sourcing has received a lot of attention in the last decades. Yet, there is still a lack of research on remote sourcing, a special form of global sourcing which is concerned with buying firms having a high share of intercontinental suppliers. Being geographically far from suppliers poses specific challenges for buying firms. Therefore, the aim of this study was to examine which methods/ tools suppliers use to manage remote suppliers. Further, it was investigated which future expectations purchasers have towards remote sourcing. A qualitative study in form of interviews with 15 purchasers was performed. Purchasers used supplier performance evaluation/ monitoring and supplier relationship building methods the most, while supplier integration received the least attention. The findings partly supported existing literature. The Principal Agent Theory and Social Capital Theory could be connected to the findings, while there was no support for the Cluster Theory. No purchaser stated explicit measures on how the firm penetrates remote clusters. Furthermore, despite a clear preference for local sourcing, the general opinion was that remote sourcing is likely to remain relevant in the future. Purchasers prefer local sourcing because the proximity makes communication easier. Yet, mainly due to price reasons, remote sourcing is a necessity. However, the possibility to move sourcing closer was not ruled out. The resulting implications of this study are that firms should find a balance between having a strong relationship with their suppliers, but also critically assess their performance to react early enough in case of problems. Furthermore, the purchasers should look for each product individually whether to source locally or globally and examine thoroughly whether remote sourcing brings the supposed benefits.*

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# 1. IMPORTANCE OF GLOBAL SOURCING AS PROCUREMENT STRATEGY

The world has become continuously more globalised in the past three decades (Antras, Fort, & Tintelnot, 2017, p. 2514), which has led managers to realise the importance of improving the performance of global supply chains (Trent & Monczka, 2003b, p. 607). Therefore, the relevance of global sourcing has increased, which has been widely discussed in literature in the last years (Bregman, Peng, & Chin, 2015; Stanczyk, Cataldo, Blome, & Busse, 2017; Wieland, Bals, Mol, & Handfield, 2020) and benefits and drawbacks have been researched (Stanczyk et al., 2017; Vos, Scheffler, Schiele, & Horn, 2016).

Dankbaar (2007) defines global (out)sourcing as establishing contractual agreements with suppliers in low wage countries in order to move parts of manufacturing there. By outsourcing non-core activities to foreign countries, organisations expect a competitive advantage in terms of better price, quality and product innovation (Dankbaar, 2007, p. 272). Researchers have recognised the relevance of global sourcing as a strategic procurement tool (Trent & Monczka, 2003a, p. 28) and use foreign suppliers explicitly as part of their procurement strategy (Hong & Holweg, 2005, p. 13). Other authors also recognise the importance of having a suitable global sourcing strategy. Considering the high turnover that is spent on external purchases, it is necessary for firms to establish top management commitment, international language capabilities, global sourcing structures and processes, and global sourcing business capabilities in order to be competitive in the global market (Petersen, Prayer, & Scannell, 2000, p. 36).

Despite the extensive research on global sourcing, existing literature has not yet distinguished enough between global sourcing from countries which are close to a buying firm's home country, and sourcing from countries which are located far away. As stated by Golini and Kalchschmidt (2011, p. 87), large geographical distances increase transportation costs and longer lead times make fast decision making more difficult. This is one indicator for the importance of differentiating between "remote" global sourcing and "close" global sourcing. Both should be viewed separately, as they pose their own problems and risks, a topic which has not received a lot of attention in literature yet.

Therefore, for this research the term remote sourcing will be used. Remote sourcing can be defined as global sourcing with the condition that a high share of suppliers have their location in a different continent. It is concerned with the problems that occur when suppliers are located geographically far from the buying firm. As stated above, remote sourcing is relevant in a globalising world and used by buying firms. However, dealing with remote suppliers can pose challenges. Therefore, the purpose of this study is to examine which methods and tools companies use to professionalise remote sourcing and manage their remote suppliers. The aim is to contribute to existing literature that dealt with sourcing methods with the possibility to gain new findings. Based on that, the following research question has been developed:

*RQ1: Which tools and methods do firms use to professionalise remote sourcing?*

Furthermore, this study will investigate which future expectations purchasers have for remote sourcing. The question is whether the trend of remote sourcing will continue, or if companies prefer alternatives in the future. Since there is a lack of literature regarding the future of remote sourcing, the aim of this research is to provide an overview of purchasers' future

expectations. For that, the following research question has been formulated:

*RQ2: Wat are the future expectations regarding the importance of remote sourcing?*

In order to answer these questions, first existing literature will be reviewed. Since the key concept remote sourcing is new, the global sourcing literature will provide the foundation for the literature review. First, the term global sourcing will be defined and examined what existing literature says about tools and methods as well as trends for remote sourcing. The second part of the literature review consists of explanatory theories that can be applied to remote sourcing and the buyer supplier relationship. After this, the methodology for data collection will be explained. Furthermore, the empirical findings will be presented, and based on the analysis of those, the research questions will be answered. The discussion will examine to what extent the findings can help to support existing literature. Concluding, recommendations and limitations will be elaborated.

## 2. LITERATURE REVIEW

### 2.1 Definition, methods and tools, and future of remote sourcing

*2.1.1 Remote sourcing, a special form of global sourcing through sourcing from intercontinental suppliers – essential yet controversial*

The subject of this research is remote sourcing, which needs to be distinguished from global sourcing. Remote sourcing is a new concept, which so far does not have a widely recognised definition. It deals with the case that a large share of a buying firm's suppliers are located in a different continent. Remote sourcing can be described as a special form of the general term global sourcing, but more specified in a way that it focuses on the fact that entire supplier networks are located abroad. Stentoft, Mikkelsen, and Johnsen (2015, p. 3) define global sourcing specifically as procurement from geographically remote suppliers. A study by von Haartman, Brian, Coug, and Bengtsson (2015, p. 1301) distinguishes purchasing in two groups, regional and global. Regional purchasing refers to buying within the same continent while global purchasing is buying from a different continent. However, the distinction between inter and intracontinental sourcing has otherwise not been widely discussed in literature. The lack of distinction between both cases can also be seen by the definition of Golini and Kalchschmidt (2011, p. 86), who simply describe global sourcing as procurement from a different geographical area than the buying firms'. This research is specifically concerned with global sourcing from intercontinental suppliers; hence the term remote sourcing will be used. Remote sourcing is essentially global sourcing but focuses on large distances between buyer and supplier. To summarise, remote sourcing means purchasing to a large extent from intercontinental suppliers. Global sourcing literature that focuses on foreign sourcing will be used as the foundation of this literature review.

Trent and Monczka (2005, p. 24) have attempted to define the term global sourcing and distinguish it from other terms such as international sourcing, since both terms are still used interchangeably. While international sourcing is more limited to the transactions between buyer and their international suppliers, "Global sourcing, […], involves integrating and coordinating common items, materials, processes,

technologies, designs and suppliers across worldwide buying, design and operating locations." (Trent & Monczka, 2005, p. 24). According to Loppacher, Cagliano, and Spina (2011), global sourcing consists of two dimensions. The first one is sourcing internationalisation in order to exploit the best sources available. Secondly, centralised purchasing to unite all the policies, processes and technologies that are used in the different purchasing departments. This requirement for centralised purchasing strategies indicates how important well developed global sourcing strategies are for companies (Loppacher et al., 2011, p. 158). Trent and Monczka (2003a) explain that firms begin to see the advantages of early supplier integration, supplier selection, evaluation and development as ways to collaborate with suppliers and create synergies (Trent & Monczka, 2003a, p. 36). Companies use global sourcing strategies to enhance the efficiency and effectiveness of their procurement activities in order to maintain a competitive advantage (Loppacher et al., 2011, p. 158).

As proposed by Kotabe and Murray (2018), there are several reasons for and against global outsourcing. Reasons for outsourcing are the strategic focus, strategic flexibility, avoiding bureaucratic costs and relational rent, which refers to valuable relationships with suppliers by co-creating innovations, knowledge transfer and reduction of costs. Nonetheless, there are several reasons against global sourcing. These include hollowing out (loosing competitive advantage due to lack of creating own, distinctive products), opportunistic behaviour from the supplier, rising transaction and coordination costs, and limited learning opportunities (Kotabe & Murray, 2018, pp. 372-373). Additionally, Pyke (1998, p. 8) states that with increased global sourcing the complexity and uncertainty of a firm's operation can increase. Further, a trusting relationship between buyer and supplier is more difficult to build, due to different time-zones, cultures, and languages. These problems show the necessity for tools and methods in order to manage remote sourcing, which will be introduced in the following section

### 2.1.2 Different tools for managing problems with remote sourcing exist, yet no overarching framework

Research has shown different approaches on how to professionalise global sourcing. The approaches go from focusing on internal resources, to emphasising the relationship component between buyer and supplier. Since no framework covers these aspects altogether, own categories will be developed. Three papers provide the basis to summarise these approaches and split them in categories. The first paper is by Trent and Monczka (2005), who identify seven factors of achieving global sourcing excellence. From those the following were relevant for this topic: 1. Rigorous and Well-Defined Processes; 2. Availability of Needed Resources; 3. Integration Through Information Technology; 4. Supportive Organisational Design; 5. Structured Approaches to Communication (Trent & Monczka, 2005, p. 30). Since these factors focus on the firms' internal capabilities to manage remote sourcing, they provide the basis for the first category: *1. Establishing a global sourcing infrastructure*. The next paper from Steinle and Schiele (2008, p. 11) discusses the concept of the preferred customer status, which can help to gain preferential access to the supplier's resources. The aim of pursuing a preferred customer strategy is to gain superior treatment from the supplier, compared to other customers (Hüttinger, Schiele, & Veldman, 2012, p. 1195). This highlights the importance of buyer-supplier interactions, in order to gain preferential treatment from the supplier. This

relationship aspect is the foundation for the following categories: *2. Enhancing quality and innovation*; which focuses on the interactions between buyer and supplier to ensure product quality and foster innovation. The next category is: *3. Communication in the buyer supplier relationship.* This category complements 2., because it focuses on the social aspect, meaning how and to what extent do both parties communicate to maintain a good relationship. Golini and Kalchschmidt (2011) research about the role of inventory which provided the foundation for the last category: *4. Mitigating supply risk*; meaning which methods are firms using to for managing problems in the supply chain. These will be further elaborated in the following.

The first category is *Establishing a global sourcing infrastructure.* There is a need for information sharing between purchasing units and international purchasing offices with skilled personal. This refers to a supportive organisational design (Trent & Monczka, 2005, p. 30). According to Seshadri (2005, p. 6) "Many firms not only centralized procurement functions, but also started global sourcing offices." Next to organisational infrastructure, a suitable IT infrastructure is essential in order to support purchasing decisions. Selen and Ashayeri (2008) mention the concept of Business Intelligence (BI) which refers to systems, that process data in such a way that it becomes useful information. BI can be applied for measuring operational efficiency and further buyer/supplier interactions. Measuring these interactions could be beneficial in terms of managing relationships and identifying factors to increase supplier satisfaction (Selen & Ashayeri, 2008, p. 349).

The next category is methods for *Enhancing innovation and quality* through supplier selection, integration, performance and development. A tool for increasing innovative potential with suppliers, is supplier integration in New Product Development (NPD). The largest benefit from integrating suppliers in NPD is improvement of product quality (Primo & Amundson, 2002, p. 49). An aspect that needs to be considered for successful supplier integration is the right selection of suppliers in the first place. Buying firms should select a supplier that has the necessary capabilities and the right culture to work on the product collaboratively (Petersen, Handfield, & Ragatz, 2005, p. 384). In addition to that, assessing supplier's quality is essential as well. As found by Bayo-Moriones, Bello-Pintado, and Merino-Diaz-de-Cerio (2011, p. 265), when materials are sourced from low-cost countries, there is a reasonable concern regarding the quality and accordance to the standards of developed countries. In order to manage global sourcing in accordance to firm's requirements, a basis for QM can be provided by demanding the fulfilment of certain standards from suppliers, such as ISO certifications (Bayo-Moriones et al., 2011, p. 257). Another tool is supplier development. As defined by Daniel R Krause (1997, p. 12), supplier development can be defined as "any effort of a firm to increase performance and/or capabilities to meet the firm's short- and/or long-term supply needs." These efforts can include "[…] goal setting, supplier evaluation, performance measurement, supplier training, and other related activities." (Daniel R. Krause, Handfield, & Tyler, 2007, p. 529).

Another category is *Building the buyer supplier relationship.* When building relationships with remote suppliers communication is crucial in remote sourcing, since the lack of personal contact with remote suppliers makes relationship building more challenging (Körber & Schiele, 2020, p. 5). Having a relationship between buyer and supplier however crucial. As aforementioned, the preferred customer status can help to gain superior treatment from the supplier. In order to achieve the status, it can be beneficial to focus on the social

relationship aspect instead of focusing on outcomes (Hüttinger et al., 2012, p. 1203). This shows the importance of building a good relationship with a supplier, because it can result in preferential treatment. One way to build a relationship are traditional face-to-face meetings. These are essential to build trust between both parties and solve more complex issues (Wognum, Fisscher, & Weenink, 2002, p. 347). However, it can be assumed that face-to-face meetings with remote suppliers are not a regularity due to the large distance. Therefore, the use of traditional communication ways such as phone calls is essential. Other methods such as e-mails and fax are used as well, yet it is questionable to what extent they can satisfy the social component of a relationship (Sriram & Stump, 2004, p. 51).

Lastly, the category *Mitigating supply risk* is specifically important for remote sourcing. Sourcing from far suppliers is likely to result in longer lead times. Long lead times and possibly unreliable suppliers require firms to maintain a higher safety stock (Golini & Kalchschmidt, 2011, pp. 86-87). Regarding delivery or lead time problems with remote suppliers, companies might use additional safety stock, which is expensive (Holweg, Reichhart, & Hong, 2011, p. 338). Therefore, it is to examine to what extent safety stock is actually used to mitigate supply risks.

### 2.1.3 Alternatives for global sourcing through local sourcing, re-shoring, and insourcing

According to Kotabe and Murray (2018) there have been three visible trends in global sourcing. In the 1980's it started with firms started to outsource manufacturing activities to reduce labour costs. Then, in the 1990's firms started to outsource IT departments, as firms had little interest in developing those themselves. In the 2000's, outsourcing was seen as a way to reduce costs and increase customer satisfaction as well, by not only outsourcing manufacturing, but entire business processes (Kotabe & Murray, 2018, p. 370). This shows that the importance of outsourcing has grown in the last decades. Therefore, the question arises what will be the future of global or remote sourcing in the next decade?

As stated above, global sourcing has been a major trend in the last years (Dankbaar, 2007, p. 271). However, it has its pitfalls, as discussed by (Stanczyk et al., 2017), which naturally leads to discussing alternatives for global sourcing. Alternatives for global sourcing could be local sourcing, re-shoring or insourcing. One proposed replacement is local sourcing. A case study by Ashby (2016, p. 85) indicates that "[…]more informal governance, and socially complex, long-term relationships in developing and managing a sustainable supply network." are achieved by sourcing locally. Further, Bohnenkamp, Schiele, and Visser (2020) introduce the topic of deep localisation. Deep localisation refers to not only sourcing from local suppliers, it goes further by attempting to localise the entire supply chain. This can be challenging since it is difficult for the buying firm to determine second-tier suppliers (Bohnenkamp et al., 2020, p. 85).

Other authors discuss the topic of re-shoring. Re-shoring can be defined as reversing offshoring processes and moving the activities back to the home country of the firm or in close neighbouring countries (De Backer, Menon, Desnoyers-James, & Moussiegt, 2016, p. 8). Re-shoring of manufacturing has gained attention by governments, such as in Germany with "Industry 4.0" (Lund & Steen, 2020, p. 2). Industry 4.0 is supposed to increase the adoption of digitalised manufacturing technologies and thus increase domestic manufacturing activities (Kinkel, 2018, p. 182). Another example for governments promoting re-shoring activities is during the 2014

campaign for US elections (Tate, 2014, p. 66). Re-shoring refers to a location choice, not to an ownership choice. Therefore it means that manufacturing is brought back more closely to the home country, but it does not imply that it is brought back in-house (Gray, Skowronski, Esenduran, & Johnny Rungtusanatham, 2013, p. 29). Reasons for re-shoring can be the inability of maintaining offshoring goals. However, even when the ability to off-shore is given, other reasons might be that firms deliberately want to keep sourcing close as a strategic decision (Mykhaylenko, Motika, Waehrens, & Slepniov, 2015, p. 279). Ellram, Tate, and Petersen (2013, p. 20) argue, that firms move away from simply using cost-savings as a decision factor for the location of manufacturing, since these savings become less as the economies become stronger. Instead, value creation has become an important decision factor for location as well.

A related phenomenon to re-shoring is insourcing. It can be defined as "[…] the decision to reincorporate an outsourced activity within a company that had formerly been transferred to an external supplier." (Cabral, Quelin, & Maia, 2014, p. 2), which means switching to in-house manufacturing. In their research about insourcing in Danish companies, Stentoft et al. (2015, p. 10) see the main drivers of insourcing as not at attained goals regarding quality, lead times and the increasing use of automation in the home country. Nonetheless the researched firms of the study stated, that the amount of manufacturing in the home country will decrease, and more production will be outsourced in the future (Stentoft et al., 2015, p. 10).

In this section future alternatives for global sourcing have been discussed, such as local sourcing, re-shoring and insourcing. They all have different definitions, but the commonality that they deal with reversing global sourcing by sourcing from closer locations or even bringing production back in-house. However, there is no consent about the relevance of these phenomena for the future. As stated by De Backer et al. (2016, p. 5): "The debate on re-shoring is ongoing and considerable disagreement exists about how important this trend actually is. Some predict that reshoring will become a fundamental trend of the early 21st century, while more sceptical voices point to the small number of companies that are currently bringing activities and jobs home." Further, Bohnenkamp et al. (2020, p. 85) argue that the shift from global to local suppliers has not been discussed a lot in literature. As previously stated, there is neither much existing literature regarding the future of remote sourcing, nor consent about possible alternatives for it.

## 2.2 Theoretical framework describes problems and solutions for buyer-supplier relationship

### 2.2.1 Principal Agent Theory: Supplier engages in opportunistic behaviour, buyer mitigates risk with screening, contracting, and monitoring

The PAT focuses on the problem that two entities have different perceptions and attitudes towards risk (Eisenhardt, 1989, p. 58). Central actors in this theory are the principal and the agent. As stated by Rungtusanatham, Rabinovich, Ashenbaum, and Wallin (2007, p. 118), "Several crucial assumptions underlie this agency relationship, including […] that the principal and the agent have conflicting goals, that each behaves in its own self-interest, that the agent is more risk averse than the principal, and that information asymmetry exists between the

principal and the agent." The principal delegates responsibilities to the agent, who has to fulfil those in the best interest of the principal. The so-called agency problem then emerges then because the principal and agent have different interests and the agent does not act in the best interest of the principal (Eisenhardt, 1989, p. 58). Existing literature has criticised this view on human behaviour, since it displays humans as purely opportunistic beings that only pursue their own goals (Shankman, 1999, pp. 329-330) However, the problem of opportunistic behaviour seems to be legitimate to some extent, as it has found attention in literature (Steinle, Schiele, & Ernst, 2014, p. 124; Talluri, Narasimhan, & Chung, 2010, p. 171; Wang, Ye, & Tan, 2014, p. 7056). The theory does not consider that it might be beneficial for both sides to develop a trusting relationship (Shankman, 1999, pp. 329-330). This however has been revised in recent literature on the PAT. Delbufalo (2018, p. 49) states, that suppliers benefit from being reliable partners, since commitment makes them more attractive to other potential customers. This contrasts the traditional view of the PAT, where the supplier tends to be more described as a potential threat to the buyer which needs to be controlled.

The principal agent relationship displays contractual relations between two entities and occurs in various business contexts, among those the buyer supplier relationship (Wohlstetter, Datnow, & Park, 2008, p. 241). Panda and Leepsa (2017, p. 75) claim that every company has suffered from the agency problem to some extent, which underlines the relevance for this research. When interpreting the buyer supplier relationship as a principal-agent relationship, the buyer (principal) delegates work to the supplier (agent). According to Eisenhardt (1989), the agency problem is created by two conditions, information asymmetry and goal conflict, due to opportunism. The information asymmetry refers to the agent having more information than the principal which he intentionally kept. The goal conflict means the agent and principal have different goals which causes the agent to act in self-interest (Eisenhardt, 1989, p. 61; Whipple & Roh, 2010, p. 343). Two problems derive from these conditions, the first pre contractual and the second post contractual. When the agent misinterprets his abilities, or hides weaknesses from the principle prior the contract, this is called adverse selection. Adverse selection is an information asymmetry which is caused by hidden characteristics, prior to entering the contract. (Fayezi, O'Loughlin, & Zutshi, 2012, p. 557). This can i.a refer to the agent exaggerating his abilities to the principal in order to portray himself better (Shapiro, 2005, p. 263). The second problem is, that suppliers often act differently than agreed in the contract (Steinle et al., 2014, p. 124). More specifically, this so-called moral hazard occurs when the agent does not comply with post-contractual agreements (Fayezi et al., 2012, p. 557). The agent might ignore the interests of the principal in order to pursue own benefits (Ketchen & Hult, 2007, p. 576).

The PAT is linked to this research since it explains that opportunism can harm the buyer-supplier relationship and suggests ways on how to mitigate this risk. Some of the in 2.1.1 proposed activities, supplier selection and supplier evaluation/ monitoring also refer to activities that are suggested by the agency theory. In order to mitigate the risks of adverse selection and moral hazard, the principal should take precautions. Pre-contractual screening can possibly decrease the risk of adverse selection, while post- contractual close monitoring as well as rewards and punishment which are defined in the contract can help to mitigate the risk of moral hazard (Kaplan & Stromberg, 2001, p. 429). As proposed by Bayo-Moriones et al. (2011, p. 257), monitoring can be executed by demanding compliance with QM systems such as ISO 9000. However, current

literature states that there is still no full understanding on how exactly supplier monitoring should be executed (Shevchenko, Pagell, Lévesque, & Johnston, 2020, p. 319). Further, the agency theory suggests two types of contracts in order to manage the principal agent relationship. The first one is behaviour based, meaning it focused on monitoring the agent's behaviour. When monitoring the agents' behaviour, reporting procedures or budgeting systems can be established. However, when monitoring turns out to be too complicated or expensive, there is a second contract option (Kivistö, 2005, p. 6) That one is outcome based, measuring the outcomes of the agent's actions. (Rungtusanatham et al., 2007, p. 119). Choosing the right form of contracting is crucial for the buyer supplier relationship. The buyer depends on the supplier to provide products which conform with agreed standards, such as quality and price (Zu & Kaynak, 2012, p. 428). The behaviour based contracts focus assessing the processes of suppliers rather than the final outcomes (Eisenhardt, 1989, p. 62; Zsidisin & Ellram, 2003, p. 430). Behaviour based contracting is related to supplier quality management. This can require substantial effort, while measuring outcomes is rather a routine task. Therefore the choice between behaviour based or outcome based contracts depends to some extent on the buyer's ability to perform supplier quality management (Zu & Kaynak, 2012, pp. 430-431). Prosman, Scholten, and Power (2016, pp. 505-506) further explain, that the effectiveness on behaviour-based methods also depends on the supplier's level of power. Suppliers who have a lot of power require way more effort from the buyer, while for suppliers with low power, less intensive methods can be effective.

Summarising, the implications of the PAT for the buyer-supplier relationship are, that due to the larger distance it is easier for the supplier to follow own interests. It is more difficult for the buyer to control the suppliers' actions. The traditional PAT literature portrays the supplier as opportunistic, which needs to be controlled by the buyer. The risks of supplier non-compliance are mitigated by conservative methods such as contracting and monitoring. Newer approaches view the PAT from a different side and show that it is beneficial for the supplier as well to conform to agreements and be a trusting partner in the relationship.

### 2.2.2 Cluster Theory: Being part of a remote cluster can lead to competitive advantage

A lot of different explanations and definitions of the cluster theory exist. Marshall (2009, pp. 222-231) talks about the concentration of specialised industries in particular locations which he calls localised industries. More research has been conducted which resulted in multiple definitions of cluster theory. One of the most cited researchers on this topic, Porter, has the following definition: "A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities." (Porter, 2000, p. 16). According to Porter, the cluster theory can be linked to the diamond of national advantage. The diamond of national advantage refers to creating an environment that promotes clusters of competitive industries (Porter, 1990, p. 86). Competitive industries are usually linked through vertical (buyer-seller) or horizontal (common customers, technology, channels) relationships and they tend to be concentrated geographically (Porter, 1990, p. 86). Once a cluster forms, the whole group of industries becomes mutually supporting (Porter, 1990, p. 86). According to Porter, companies have the responsibility to play an active role in forming clusters and to work with its home-nation

buyers, suppliers, and channels to help them upgrade and extend their own competitive advantage (Porter, 1990, p. 90).

Further definitions of clusters are: "a regional cluster is an industrial cluster in which member firms are in close proximity to each other." (Enright, 1996, p. 191)." A cluster is very simply used to represent concentrations of firms that are able to produce synergy because of their geographical proximity and interdependence, even though their scale of employment may not be pronounced or prominent." (Rosenfeld, 1997, p. 4). "We define an innovative cluster as a large number of interconnected industrial and/or service companies having a high degree of collaboration, typically through a supply chain, and operating under the same market conditions." (Simmie & Sennett, 1999, p. 51). "A cluster is an agglomeration of closely related industries." (Delgado, Porter, & Stern, 2010, p. 2). Schiele goes a bit further in the definition and does not only mention firms in the cluster. He says a cluster is a spatially concentrated agglomeration of direct competitors, most important customers, innovative suppliers as well as supporting organisations like universities or other educational institutions. Of these institutions other important aspects are the mutual influence and various dependencies (Schiele, 2003; as cited in Körber & Schiele, 2020, p.7).

Summarising, there are some words or terms which are visible in each definition. Words like agglomeration, related industries, interconnected and geographical proximity. The most important parts of cluster theory definition are interconnected companies with geographical proximity in a related industry. These clusters bring certain advantages and disadvantages with them. Companies inside a cluster gain different advantages such as access to specialised technologies, synergy effects, cost savings, the possibility of transferring knowledge and innovation and an increase of innovative capacity and productivity. Firms inside this group of firms can be complementary to each other (Morgan, 2007, p. 315; Schiele, 2003; as cited in Körber & Schiele, 2020, p.7). Because of this opportunity of cooperation, a cluster offers several advantages to all involved parties (Kiese & Schätzl, 2008; as cited in Körber & Schiele, 2020, p.7). Clusters of different actors such as suppliers, other buyers and technologies are located far away, while the buyer still operates domestically and is not part of that network (Körber & Schiele, 2020, p. 5). For companies outside the cluster, this may result in competitive disadvantages because they miss the benefits from the cluster (Mazur, Barmuta, Demin, Tikhomirov, & Bykovskiy, 2016, p. 273). Besides these disadvantages of not being part of the cluster, there are also possible disadvantages for companies inside the cluster. "Fatal dependencies" can arise between companies within a cluster which can destroy the whole agglomeration of companies (Schiele, 2003; as cited in Körber & Schiele, 2020, p.7). Companies become too dependent on each other and if one collapses more or all of them collapse. As companies within a cluster move increasingly closer together, the innovative capacity can decrease. This can cause a certain "blindness" to external ideas and changes. This is called "lock-in" and is something like a tunnel vision. Next to this, significant knowledge and technology can be lost to other companies within the cluster (Schiele, 2003; as cited in Körber & Schiele, 2020, p.7). Despite this drawbacks, recent research confirmed, that companies set up inter-organisational connections across countries, to gain access to new knowledge and resources which are locally unavailable (Turkina & Van Assche, 2018, p. 706). This displays the need for firms to access remote clusters. As stated above, buying firms can benefit from being part of their supplier's industrial cluster. Accessing the cluster helps firms to remain competitive, but large distances make accessing

foreign clusters more difficult. Therefore, it is to be examined what methods and tools can be applied by buying firms to penetrate remote clusters.

### 2.2.3 Social Capital Theory: Building social capital with remote suppliers is challenging

Coleman (1988, p. 98) defines social capital as a function that produces value just like human capital, while Nahapiet and Ghoshal (1998, p. 243) define social capital as "[…]the sum of actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit." Bourdieu and Wacquant (1992, p. 119) define social capital as the resources that result from a social structure. While examining these definitions, it shows that to some extent they all carry the same message. First, social capital is created in a social structure through connection with different actors. Secondly social capital can be seen as a resource that is useful for either an individual or a company. (Nahapiet & Ghoshal, 1998, p. 244) argue that although social capital exists in a lot of forms, they all have two characteristics in common. These are that they are all part of a social structure and they act as a facilitator for individuals in the afore mentioned structure (Nahapiet & Ghoshal, 1998, p. 244). Social capital, such as friendship or trust, is created between two or more actors, never by an individual by itself. No single individual or firm can thus have the ownership of social capital, like any other form of capital. Social capital should rather be seen as a public good (Putnam, 1993, p. 4).

Past research often separates social capital in three different dimensions: structural capital, relational capital and cognitive capital (Nahapiet & Ghoshal, 1998, p. 243; Yli-Renko, Autio, & Sapienza, 2001, p. 590). Structural capital is defined by (Nahapiet & Ghoshal, 1998, p. 243) as the properties of the social and of the network of relations as a whole. Burt (2002, p. 207) states that social structural capital is about who to reach and how to reach them. It is beneficial for the structural capital of an actor to be in the same geographic location. Structural capital thus is not about the actual relation or communication between two actors in a social network, but rather about the framework and the pattern in which this communication is established. The second aspect of social capital is relational capital. Kale, Singh, and Perlmutter (2000, p. 222) state that relational capital refers to "the level of mutual trust, respect, and friendship that arises out of close interaction at the individual level between alliance partners." This also is in line with examples of the relational aspect that Wasserman and Faust (1994, p. 295) propose, which are behavioural interaction and evaluation of one person by another. In addition, Nahapiet and Ghoshal (1998, p. 244) describe the relational aspect of social capital as the personal relationships that actors have created through a series of interactions. All these definitions state that relational capital has to do with the actual relationship between two or more actors. This relationship is built up in a period of time where mutual trust and trustworthiness are important factors in creating the relational capital. Lastly, the third aspect of social capital is cognitive capital, which according to Nahapiet and Ghoshal (1998, p. 244) refers to those resources providing shared representations, interpretations and systems of meaning among parties. Tsai and Ghoshal (1998, p. 465) state that the two largest aspects of cognitive capital are common values and a shared vision. Inside an organisation, cognitive capital in terms of a shared vision or shared values can act as a motivator for the actors inside that organisation. As the actors inside the organisation have an increased level of motivation this can in turn be beneficial for the organisation as a whole (Tsai & Ghoshal, 1998, p. 465). In

an inter-organisational perspective, cognitive social capital translates to the resources that come forth from codes and shared narratives, values, and other cultural elements (Macke, Vallejos, & Toss, 2010, p. 68).

A high level of the research that is conducted on social capital links social capital with a firm's capability to create value and competitive advantage. Social capital is seen as an important factor for the worldwide economic growth. Horn, Scheffler, and Schiele (2014, p. 60) argue that the accumulation of social capital is a condition for successful external integration which in turn is of high significance for global sourcing success. In addition, Nahapiet and Ghoshal (1998) find that social capital increases the efficiency of a firm. This is achieved by reducing the amount of redundant information by sharing all the information across different actors (Nahapiet & Ghoshal, 1998, p. 248) This way not all separate actors have to find this information themselves but everything has to be find out once and then can be shared. Furthermore, Putnam (1993, p. 5) states that with the examining of the rapid growth of economies in East Asia, social capital plays an important role. Putnam (1993, p. 5) also argues that parties are more likely to engage in cooperative activities when there is already a level of mutual trust, which in turn allows for the accumulation of trust. For example, when two parties have successfully collaborated in one task, the trust rises in future collaboration, even in another unrelated task.

There is reason to expect that is more difficult to build up social capital with remote suppliers. In terms of the three facets of social capital that Nahapiet and Ghoshal (1998, p. 246) describe, which are cognitive, relational and structural, there are obvious difficulties that have to be overcome. Since intercontinental relationships often consist of two actors from different cultures, it is likely that they do not have the same values as the other one. Thus, for the cognitive dimension this will probably create issues. Additionally, because of the large distance between the buyer and supplier, there will be limited contact between the actors which makes it harder to build up a friendship and a level of trust. Lastly, for the structural dimension, as stated before, it is beneficial that two parties are operating in the same geographic location. This is not the case for a remote sourcing relationship as this relationship is intercontinental by nature. In conclusion, there are some difficulties that are to be overcome for buyers who want to participate in remote sourcing, though there are methods and tools available. Therefore, firms need to put substantial effort in building social capital with their suppliers, since the large distance makes the conditions more difficult. As long as human interactions are part of business relationships, it is likely that social capital remains an important factor to consider.

# 3. METHODOLOGY

## 3.1 Interviews as choice for data collection

The research for this study is qualitative by nature, interviews were conducted. Advantages interviews are, that it is possible to integrate multiple perspectives and gain deep knowledge about a subject, that goes beyond describing. It is possible to explore the reasoning behind arguments (Weiss, 1995, p. 3). Since the objective for this research is to gain a deeper understanding of the motivations and reasons of the purchasers, interviews are the choice of data collection. Limitations of the individual interview approach are, that participants responses can be biased. They might want to portray themselves/their company in a different light (Boyce & Neale, 2006, p. 3).

Despite this drawback, individual interviews are the preferred method over others, such as group interviews, or quantitative methods. That it because group interviews can lead to participants exaggerating their answers due to peer pressure, or participants might be more hesitant to show negative attitudes in fear of disapproval from others (Folch-Lyon & Trost, 1981, p. 445). Further, group interviews make it more difficult to ask targeted follow-up questions to individuals (Watts & Ebbutt, 1987, p. 33). Quantitative methods have the disadvantage to not obtain full information and finding explanations to answers is rather difficult (Weiss, 1995, p. 2). Therefore, the choice for this research is to perform individual interviews.

A semi-structured questionnaire will be used, as interview questions are given but it is possible to deviate from this structure when questions have been answered before already, or questions need to be added in order to obtain more clarity about certain topics (Alsaawi, 2014, p. 151). The choice for a semi-structured interview allows to have somewhat control over the direction of the interview while still enabling the participant to talk freely and highlight things that he/she finds important. This way the participant is not restricted with answering and a more complete image of the difficulties and solutions of remote sourcing can be obtained. The questionnaire regards to relevant literature. Especially the Principal Agent theory (2.2.1), Cluster theory (2.2.2) and Social Capital theory (2.2.3) build the foundation for these questions. These theories discuss problems that can arise from remote sourcing and propose solutions. Thus, they were useful for providing a theoretical framework for the questionnaire. The questionnaire can be found in Appendix B.

## 3.2 Collecting data from literature and interviews

For the first part of this research, existing literature about remote sourcing has been reviewed. For that the global sourcing literature was borrowed since remote sourcing is a new concept. First, remote/global sourcing was defined and the rationale of global souring as well as (dis)advantages explained. Then, current literature was examined about existing research for the two research questions. The last part of the literature review discussed three explanatory theories for remote sourcing. The theories can be related to remote sourcing problems and, to some extent, provide solutions.

The second part consists of the interviews that were collected for this research. In total, 15 interviews were conducted at companies with purchasers responsible for the procurement of commodities/products/raw materials from suppliers outside of Europe. These companies are operating in different industries. All companies are located in the Netherlands and Germany, different in firm size industry. However, due to the novelty of the topic remote sourcing, this research can provide interesting insights. The size of the companies varied from small to medium and big enterprises selling products locally and globally. Since the research was focused on suppliers outside of Europe one inclusion criteria was used. A company should have a large share of suppliers from outside Europe (transcontinental). The companies were local companies as well as multinational companies.

The data collection was conducted in the form of online interviews such as Google Meet, Skype or Microsoft Teams, due to COVID-19. Face to face interviews were mostly impossible and only in a few cases company visits were conducted and interviews held at location. To improve reliability all interviews were conducted in a quiet environment in a one-on-one interview approach. The interviews were held

in the months of April and May 2020. The interviews were conducted in English, Dutch and German and recorded with a voice recorder. The recordings could be transcribed with the software Amberscript, which automatically converts spoken language into text, which gives a reliable textual version of the interviews instead of writing it down in own words or keywords. To ensure the quality of the transcription, it was manually checked again and corrected if necessary. Further, all interviews were translated into English. With the textual version of the conducted interviews it was possible to proceed to the next step which was the data analysis.

## 3.3 Interview coding and making sense of the data with help of Atlas.ti

The next step was the analysis of the gathered data from the interviews. For that, the data was coded in order to manage the data and analyse it. Based on the findings in 2.1.2 and 2.1.3, different codes were designed. Regarding 2.1.2, the literature suggested multiple ways on how to manage global sourcing. These findings were summarised in a table and used to categorise the interviews. The same was done with the findings from 2.1.3, where possible futures for remote sourcing have been examined. Overall, these literature findings provide the basis for coding the interviews. In addition to that, the list was expanded by findings that have not been mentioned in literature but were stated in the interviews. The codes can be found in Appendix C. [1] Every starred code in the following tables displays a code that was established by interview data. The data analysis was supported by the software Atlas.ti. It supported a structured analysis of qualitative data. In order to have a better overview over the interviews, this software enabled organised coding. The process of coding interviews is iterative. To ensure proper data analysis, the coding process was repeated multiple time until the results matched. Furthermore, through Atlas.ti, the cases could be compared since the software allows to select and display different codes and cases together. This way, the qualitative data from the interviews could be analysed in a structured way. The focus of the analysis lies in the frequencies of each category/ subcategory since this is an indicator for the importance of each.

## 4. EMPIRICAL FINDINGS

### 4.1 Case descriptions

Subject of this research were 15 interviews, conducted with purchasing professionals from different industries and different firm sizes. The firm size was determined based on the number of employees. The categories were the following: small (<50 employees); medium (51-200); large (>200). More details about the firms can be found in Appendix A. To protect the confidentiality, the firm names are replaced by the letters A-O.

### 4.2 Cross-case analysis

*4.2.1 Supplier performance evaluation/monitoring is the most important method used by purchasers*

**Table 1: Methods and tools used by purchasers summarised**

| Category count | Subcategory | Interview answers |
|---|---|---|
| Establis hing a | Business intelligence | Established inventory management system (F, C, |

| | | |
|---|---|---|
| global sourcing infrastructure | (ERP, other management systems) | N, E); SAP (H), Track and Trace (I); Warning system (J) |
| | Information sharing between units | Contact person (C, M); Weekly meetings w other departments (I) |
| | Global purchasing offices | Purchasing team abroad (D, F, J) |
| | Specialised, Skilled personnel | Speaks Chinese (D, A); Different Nationalities (F); Special people in charge for communication. (E, B); Local buyer (J) |
| Enhancing innovation and ensuring quality | Supplier selection | Capabilites (D); Audits, physical meeting (H, C, B, J), Trade exhibition (A); Sampling (B, F) |
| | Supplier integration in NPD | Design and production (L) |
| | Supplier performance evaluation, monitoring | On-site checks (D, A, L, O); QM (F), Audit (C, J); Benchmarking (H); Evaluation system/KPI (G); ISO 9001 (E); keep a close eye (N); |
| | Supplier development/ support | Updating systems, measuring, training people (D); a lot is done by developing (G); support, offer lean workshops (J) |
| | Contracting | Framework contracts (F); Contracts (I, E); not allowed to supply to competitor (B); |
| | Innovation* | Using Universities/ Research centres for innovation (E) |
| Building the buyer-supplier relationship | Cultural understanding and language | Speak language, understand culture (D); Diverse operating office (F); Seminars and learn English (G); patience with other cultures (I); get a book about the culture (A), Local buyer (J), Respecting culture (O) |
| | Face-to-face meetings important | Face-to-face (G,B); Company dinner (C, N, L); talk to them, shake their hands (I); Invite, visit, exhibitions (A); visit all of them (K); access to their factories (O) |

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[1] * shows codes that were created based on interview data

| | Digital communication important | We can't be on the road all the time (F), mainly telephone (G, L, A); mail, phone, zoom (B); WeChat(N); communicate intensively (M, I) |
|---|---|---|
| Mitigating supply risk | Warehousing/ safety stock | Look at warehousing options (D); Build bigger warehouse, increase stock (F, C, B, A, N); produce as much as possible in advance and store it (O) |
| | Consignment stock* | Supplier is forced to keep stock for us (G); consignment stock (E) |
| Other* | Buy raw materials for suppliers* | Organise procurement and give it to supplier (E, F); we want to not be dependent on imports (A) |
| | Trust* | We expect relationship to be good enough to act in our interest (M) |
| | Use power of customer* | Report our customer, they call, supplier delivers (I, K) |

Table 1 shows the different categories as defined in 2.1.2, with their subcategories, namely methods and tools for remote sourcing. The right column shows the answer of the purchasers, the letters behind each statement refers to a company, as defined in Appendix A. To get an overview of the most notable answers, first total numbers of each category is displayed in Figure 1. In order to compare, the average of each number was taken, since the number of subcategories varied, and the total number might not be meaningful enough. The higher the number, the more important the category. The next step is to count the frequencies of the methods/tools that were mentioned to answer the research question.
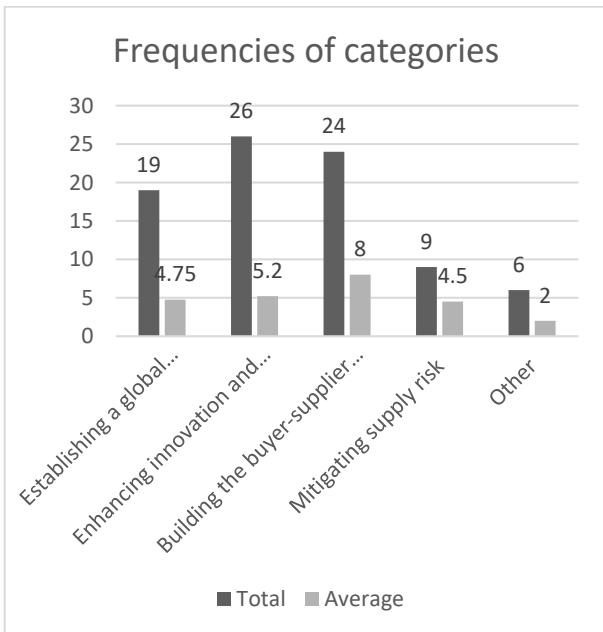


**Figure 1: Frequencies of categories**

When looking at the category frequencies in total, it becomes visible that purchasers emphasised the category *enhancing innovation and ensuring quality* the most. From the categories introduced in 2.1.2, *mitigating supply risk* received the least attention among purchasers. Regarding the average numbers, it can be seen, that the most mentioned category was *building the buyer supplier relationship*, with a score of 8. The other three categories range from 4.5 to 5.2, which indicates that their significance is similar among purchasers.
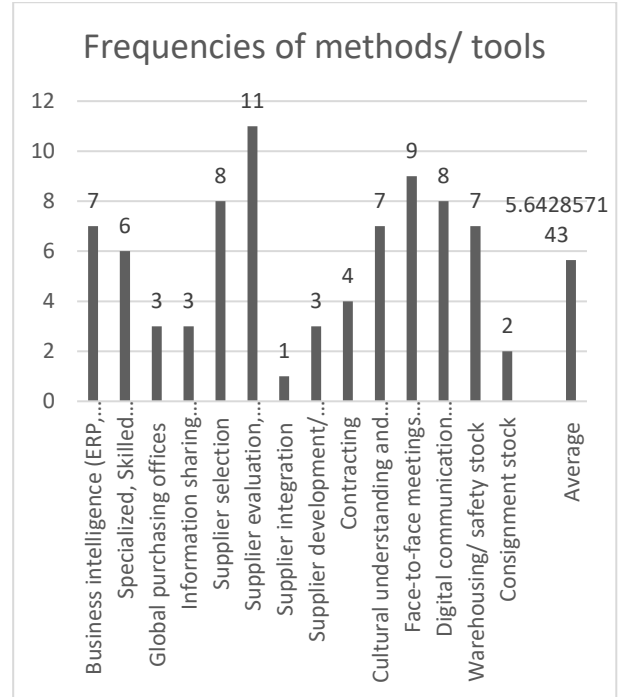


**Figure 2: Frequencies of each method/ tool**

Next, the methods and tools will be examined individually. The most mentioned tool by purchasers was *supplier performance evaluation/ monitoring*. It is notable, that the least mentioned tool, *supplier integration* comes from the same category as the most mentioned. The second most named method is *face-to-face meetings*. All methods from that category *building the buyer supplier relationship* score higher than average, between 7 and 9. *Business intelligence, cultural understanding/ language* and *warehousing/ stock* also score above average, with a value of 7, and are all to find in different categories. Overall, it is noticeable that the ranges within the different categories vary a lot. The ranges between the methods in the first category are medium, they start from 3 as the lowest score to 7, the highest score. The second category has the highest span, with supplier development having been mentioned once, and supplier evaluation being mentioned 11 times. In the last category the amounts were similar, all were named a bit more than average.

In general, purchasers seem to emphasise methods from the category *building the buyer supplier relationship*. All three methods received similar attention among purchasers. The social component of purchasing appears to be realised by purchasing professionals since it scored high. Companies C (p.7), N (p.5) and L (p.4) stated to have dinner with their suppliers, while others stated to not have time for regular visits, but still emphasise keeping good contact to most of their suppliers (F, p.3). The only purchasers who did not talk about the relational aspects, were from company E and H. Company E's purchaser explicitly stated to not emphasise building relationships with suppliers. The company uses automated

orders once mass production is running. "[…] it is just automated. We don't have time.", (E, p.3). Furthermore, the importance of *supplier performance evaluation/ monitoring* is recognised among the firms, with methods ranging from on-site checks, to supplier benchmarking. *Supplier selection* scored 8 thus was also relevant considering the average of 5.6. However, those two methods were an exemption in the category, since the other three methods were among the least noticed methods and below average. Not belonging to any categories, are the methods from *Others*. There were no striking high numbers in this category since all scored below average, which is why they will not be further examined in this research. Nonetheless, it is notable that 'buying raw materials for suppliers' was mentioned by three firms.

The last step is to examine to what extent the answers can be assigned to the explanatory theories from 2.2. The following table shows which findings can be explained by those theories.

**Table 2: Explanatory theories and findings**

| CT | Penetrate Cluster | Research centres, universities in clusters for technology (E) |
|---|---|---|
| PAT | Avoid adverse selection | Samples, Capabilities (D, B, A); Meet at first contact (H); New supplier audits (J); go there (L); |
| | Avoid moral hazard | On-site checks (D, A, O); QM (F), Audit (C, J); Benchmarking (H); Evaluation system/KPI (G); ISO 9001 (E); Agreements (N); Framework contracts (F); Contracts (I, E), not allowed to supply to competitor (B) |
| SCT | Structural Capital | Large team in China (D, J); Office in India, China (F); Physical contact); local employees (K); Contact person (M); |
| | Relational Capital | Reliability, partnership (D); Spend time (C; N); Build relationship (B, A, L); reliability in communication (K); |
| | Cognitive Capital | language and understand culture (D); ethnically diverse (E); learn language (G); patience with cultural diff (I); learn about culture (A), respect (O) |

A lot of the mentioned methods can be assigned to the Principal Agent theory and the Social Capital Theory. The answers regarding the category *supplier selection* could be assigned to avoid adverse selection. A lot of the methods from *supplier evaluation/ monitoring and contracting* were assigned to avoid moral hazard.

Methods assigned to avoid adverse selection refer to knowing as much about the supplier pre-contractual as possible and keep him from hiding important information. To avoid adverse selection, purchasers stated to demand samples and check capabilities (D, p.4; B, p.2; A, p.4) and meet them face to face (H, p.3; L, p.4). Regarding avoid moral hazard, the firms mainly use monitoring and contracting. There are several methods used to monitor the suppliers' activities such as physical checks (O, p.4; D, p.6, A, p.3). Further, contracting is used so the suppliers stick to agreements. A notable method was introduced by purchaser B (p.8), who explained to make

agreements that prohibits the supplier to deliver to competitors. Further, there are high penalties for breach of contract (E, p.2).

The next point concerns methods which can be applied to the SCT. For structural capital, suitable methods were that companies try to access foreign markets by having offices (F, p.3) or contact people (M, p.4) in order to create networks. The relational capital refers to the methods from the category *buyer supplier relationship building*, especially to the ones that focus on having a tight relationship with the suppliers. Methods that could be assigned to cognitive capital are mostly from the category *cultural understanding and language*. The purchasers mentioned to learn about the culture and language, for example as stated by purchaser D (p.5): "Challenge in international business is the awareness of different cultures. And it starts with something which is very obvious, […] language skills."

Lastly, with regards to the CT, there was one purchaser who stated to penetrate clusters. However, this referred to using research centres and universities to develop new technologies, and not to the suppliers in the cluster (E, p.3).

To sum up; regarding categories, the methods from *building the buyer supplier relationship* were by far the most important. They all scored relatively similar, so the importance among the methods in that category was distributed equally. 13 out of 15 purchasers mentioned at least one of the methods in that category. The most noticed method was *supplier performance evaluation/ monitoring*, mentioned 11 times. Furthermore, *supplier selection* was also important. *Business intelligence, cultural understanding/ language* and *warehousing/ stock* all score 7 and are all to find in different categories. Not so relevant appear to be *global purchasing units, supplier integration* and *consignment stock*, which has been added based on the interview findings. With regards to the research question: *Which tools and methods do firms use to professionalise remote sourcing?* every method as proposed in literature has been mentioned at least once. However, the purchasers put importance on methods for *building the buyer supplier relationship,* and furthermore *supplier selection* and *supplier performance evaluation/ monitoring*. These findings support the explanatory theories PAT and SCT. For the CT there were no purchasers who stated to take measures to penetrate their supplier's cluster.

### *4.2.2 Opinions regarding future of remote sourcing differ among purchasers, but tendency that remote sourcing will be relevant*

**Table 3: Future expectations of purchasers summarised**

| Category count | Codes | Interview answers |
|---|---|---|
| Relevance of remote sourcing in the future | Number of remote suppliers stays stable | Constant numbers (F, H); stays the same (L) |
| | More remote sourcing in the future | Globalisation (F); more global sourcing (G); have to go more east for some parts (C, J); must be more for standard parts (E); more outside Europe (A, N) |
| | Reasons for remote sourcing are the same | Price (F, E, A, L); Technology (G, M); Price, availability (C); Reliable, Fast (N); |

| | | Price, Quality, Diversity (O) |
|---|---|---|
| | Remote sourcing remains relevant | It won't disappear (F, H, D, K), promote remote sourcing (E,O); Important (A, J), China will never go away (B), People don't care where it's from as long as its cheap (C) |
| Alternatives for remote sourcing | Personal preference for local suppliers * | Prefer local (D, F, H, G, C, E, B, J, M, L) |
| | Local sourcing will be important in the future | Trend (D, B); Chance we buy more regional (C); more local (I, J); |
| | Automation/ Influence Industry 4.0 | Better use of data (D); Automation (K, M, J, B); makes communication easier (N) |
| | Re-shoring | Production back in Europe (F, I, B, M) |
| | Insourcing | You can build it yourself (K) |
| | Deep localisation | |

The future expectations were split in two categories, first expectations about the *relevance of remote sourcing* itself, and then about possible *alternatives to remote sourcing*.

From all the subcategories, *the personal preference for local sourcing* was mentioned the most. It was not discussed in literature but mentioned so often that it was distinguished from the subcategory *local sourcing*. This will be further elaborated below (Table 4). When looking at the findings for the relevance for remote sourcing, it was mentioned 30 times in total. Most companies stated that the reasons why they started remote sourcing are still the same. Price was the main driver for remote sourcing, along with others such as technology and availability. As stated by the purchaser from Company C, "[…] you [are] only are obligated to move to remote suppliers because of the costs from certain products and availability.", (C, p.8). In general, 7 companies stated that there will be more remote sourcing in the future. Purchaser E says that standard parts should be sourced to 100% from remote supplier (p.4). For their own company, 3 purchasers say that the number of remote suppliers remains constant in the future. As purchaser F (p.4) states: "I think our numbers will remain relatively constant" and "[…] in general, we change our suppliers very rarely." In total, 8 purchasers claimed that remote sourcing will also be relevant in the future. In accordance with that, "If you want to make a difference, you have to get it from somewhere else." (A, p.12). Summarising, every purchaser, except from company D mentioned at least one aspect from the category *Relevance of remote sourcing in the future*. This shows that remote sourcing is likely to remain an important topic in the future, despite the reasons and motives for remote sourcing differ. Company N says the remote suppliers are reliable and fast, and "it is really nice to work with them." (p.5). Others, such as company F says that besides the price, having remote suppliers has no further added value (p.4).

Next, the category *alternatives for remote sourcing* will be reviewed. Special attention will be given to *personal preference for local sourcing*. It was stated by 10 purchasers that they prefer local suppliers. Therefore, this will serve as a reference statement, and will be compared with three statements from *relevance of remote sourcing in the future*. It is visible, that even though 10 purchasers state that they prefer local sourcing, 6 of them think that remote sourcing will be important in the future. 4 of them state, that the number of remote suppliers increases. Therefore, even though there is a personal preference for local sourcing visible, sometimes there is no choice. "I personally prefer local suppliers, but I have to say that often it just doesn't make sense to use them. If they can offer what we need, we are happy to do so, but we don't make any concessions just to have local suppliers." (G, p. 2-3). Purchaser H states, to prefer to have local suppliers, especially for more complex products (p.3).

**Table 4: Personal preference for remote sourcing compared with three categories from relevance of remote sourcing**

| Category/ Company | B | C | D | E | F | G | H | J | L | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Personal preference for local sourcing | x | x | x | x | x | x | x | x | x | x |
| More remote supplier | | x | | x | | x | | x | | |
| Number of remote suppliers stays stable | | | | | x | | x | | x | |
| Remote souring remains relevant | x | x | x | x | | | x | x | | |

For the other aspects of *alternatives for remote sourcing*, different opinions were raised. Local sourcing as well as re-shoring have been mentioned 5 and 4 times, respectively. Purchaser F (p.4) says that production is relocated back to Europe, and purchaser I says that part of the supply base goes back to the Netherlands (p.5), and business outside Europe becomes less due to increasing prices (p.4). The influence of Industry 4.0 has been mentioned five times. Purchaser K refers to the automation of things, which can lead moving production back in-house (p.6). Furthermore, the automation of things leads to less social capital because the human aspect decreases (M, p.6).

**Table 5: Future of Social Capital**

| Social capital | Less social capital needed | Process becomes more important than people (B), Re-shoring possible with high automation (K, J), less social capital, technology makes language less a problem (N) |
|---|---|---|
| | More social capital needed | Cultural differences will remain in the future (I) |
| | | Time differences remain a problem for communication (A) |

Table 5 shows the findings in relation to the SCT. No statements were made about the future of remote sourcing that could be related to the PAT or CT. However, some opinions were raised about the importance of social capital. Four purchasers stated that due to higher automation, it is likely that there is less social or human capital needed in the future. Others said, that structural and cultural differences with remote suppliers will remain. As stated by purchasers I (p.5) "I don't think culture will change", which speaks for the necessity to build more social capital.
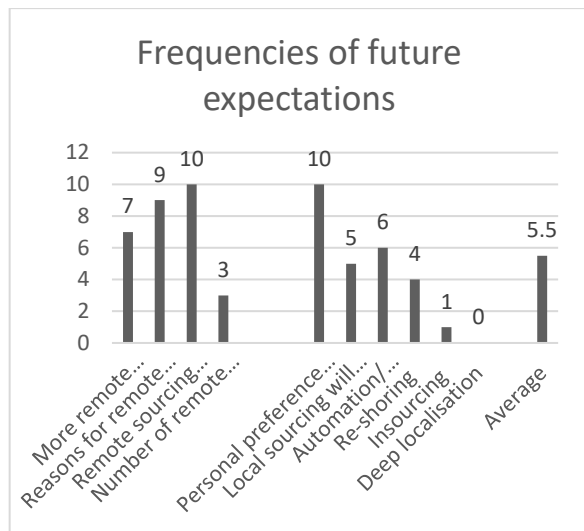


**Figure 3: Frequencies of remote sourcing expectations**

Overall, Figure 3 shows that the subcategories of *relevance of remote sourcing* have been mentioned more frequently than the ones from *alternatives for remote sourcing*. Yet, the most mentioned subcategories were the *personal preference for local sourcing* and *remote sourcing will remain relevant*. Despite this, the findings indicate that purchasers expect remote sourcing to be still relevant in the future. This becomes clear when comparing the averages of both categories. From *alternatives for remote sourcing*, only *the personal preference for remote sourcing* scored above average, every other statement scored lower. Regarding the research question *What are the future expectations regarding the importance of remote sourcing?* a definite answer cannot be given based on the findings. The tendency is that remote sourcing will remain a relevant topic. At the same time, the wish for more local suppliers in the future was raised clearly by the purchasers, and possible alternatives were not completely excluded. Purchaser E explains to prefer local sourcing because it "is more stress free for purchasers" (p.4).

# 5. DISCUSSION
## 5.1 Large differences between the importance of methods/ tools are not supported by existing literature

So far there has been no study that compared procurement methods from different fields of interest together. Research has focused on more specified approaches, which also influenced establishing the different categories in 2.1.2. The findings of this study partly support existing literature. Relationship management's importance was recognised to a large part by the participants in this study. Mutual understanding, digital contact,

but also the importance physical meetings with remote suppliers have been mentioned by the purchasers.

*"You do call more often. We go to [them], try to have contact physically at least once a year." (A, p.3)*

This supports the findings of Ambrose, Marshall, and Lynch (2010, p. 15). They state the importance of effective communication between buyer and supplier. Furthermore, small efforts by the buyer to improve communication can result in large benefits, especially when larger distances exist. The most mentioned methods, supplier performance evaluation/monitoring also find back-up in literature. Evaluating and monitoring supplier performance can improve cost and quality of the products (Nair, Jayaram, & Das, 2015, p. 6272). However Nair et al. (2015, p. 6272) also state, that improving product innovation performance can only be achieved by including suppliers in NPD. Therefore, the results of this research regarding supplier integration are surprising and do not support literature which has extensively discussed supplier integration in NPD (Petersen et al., 2005, pp. 371-372; Primo & Amundson, 2002, p. 52). The same applies to other categories that scored low. As discussed in Chapter 2.2.1, all the established categories received support in literature and were considered crucial for managing remote suppliers.

Furthermore, the results of combining the explanatory theories and findings (Table 2) will be interpreted. The findings of the interviews could be connected the PAT and the SCT to a large extent. That is, because the implications of these theories are traditional ways to manage remote sourcing. For the PAT, the suggested methods refer to screening and monitoring suppliers (Kaplan & Stromberg, 2001, p. 429). Those are, so to speak, obvious methods to mitigate risks in mistrust-based relationships, where the buyer has to protect himself from opportunism. Consequently, these are popular methods and it is natural that they have been mentioned so frequently. The same applies for the SCT, even though it has a contrary view to the PAT. When buyers want to build a relationship with their suppliers, it implies to build social capital. That is, because social capital refers to shared understandings, trust, respect and social interactions (Chen, Huang, & Davison, 2017, p. 1565). Thus, it is understandable that, a lot of the findings could be applied to the SCT, since they are basic tools to strengthen the buyer supplier relationship. Lastly, the CT was not supported by the findings. This is surprising, regarding the consistent opinion in literature on how important it is for firms to access foreign clusters and related benefits (Turkina & Van Assche, 2018, p. 706). It should be noted that some purchasers did mention the benefits of clusters. However, except for purchaser E, nobody said to explicitly use methods to penetrate the clusters. There is reason to assume, that a lot of companies have not thought as far, as to actively try to penetrate remote clusters.

Altogether, the high scores for certain methods/ tools match literature, considering that they all have been widely discussed. Therefore, it is inherent that purchasers perceive building the buyer supplier relationship, supplier selection and performance evaluation/ monitoring as important and use these in practice. More unexpected are the low scores for other methods such as supplier integration, development or information sharing between purchasing units. They all received attention in literature so far and have been researched. Although every proposed method/ tool was used by purchasers, the numbers how often each method/tool was mentioned varied significantly. This also became visible when comparing the results with the three grand theories. The findings supported the PAT and SCT implications, but not for the CT. Hence, the

results of this research only partly support the reviewed literature.

## 5.2 No clear opinion about future relevance of remote sourcing

Based on the findings, it appears that remote sourcing will remain relevant in the future. Even though a lot of purchasers clearly favour local sourcing, the results show that this does not necessarily mean they expect more local sourcing, re-shoring or insourcing. Some purchasers even expect both cases, more local and global sourcing in the future. It is not necessarily a contradiction when one purchaser stated both. One reason for expecting an increase for both cases could be, that the overall number of local sourcing increases, but specific parts are sourced more globally. Purchaser C explains, that even though there is a chance for buying certain parts more locally, some products will be sourced more from Asia (p. 2). Furthermore, purchaser E states that overall, the company increases the number of local suppliers, but for standard parts global sourcing should be increased to 100% (p. 4). Contradicting answers for this part of the research can be considered as a result of different personal opinions, considering it dealt with future expectations which are difficult to estimate. This also confirms existing literature. De Backer et al. (2016, p. 5) investigated the re-shoring trend, but state there is no predominant opinion about what to expect. Kinkel, Dewanti, and Coates (2018, p. 23) researched about back-shoring activities in Europe. From the Dutch and German companies, only 4% were actively re-shoring. Therefore, the actual application of re-shoring seems to be low. However, the research also showed that from those who performed re-shoring activities, most made use of Industry 4.0 technology. Automation plays an important role in re-shoring since it renders the labour cost advantage of remote sourcing (Kinkel et al., 2018, p. 27) These results confirm the findings from this research, where purchasers also stated the potential of automation to replace remote sourcing, or at least increase the number of re-shoring activities (J, p.3; K, p.6; M, p.6). As purchaser M (p.6) stated: *"Because of the automatization I think indeed that less social capital is needed, simply because the human aspect decreases."* Those who believed in an increase of automation also think that less human capital is needed in the future, thus social capital becomes less relevant. However, there were opinions stating the opposite. This was related to the cultural (cognitive) differences, as stated by purchaser I (p.5): *"I don't think culture will change. The people don't have the same freedom."* and time (structural) differences (A, p.5). These statements imply, that it is necessary to build more social capital with suppliers to overcome these challenges.

Overall, the possibility of re-shoring or local sourcing in the future is not ruled out by the purchasers, but currently the circumstances do not allow it yet. Especially in strongly price-driven industries the companies do not have a choice if they want to compete. Remote sourcing is not an option anymore, but rather a requirement to compete on the market.

*"[...] even if we wanted to move it back, it's not possible because the price conditions are still too good to leave." (C, p.8)*

The stated necessity of the firms to source globally due to cost-reasons has also been confirmed in literature (Birou & Fawcett, 1993, p. 33) and listed price reasons as the most important offshoring reason (Baldassarre & Campo, 2015, p. 18). However, newer findings as by (Vos et al., 2016) suggest, that remote sourcing does not always necessarily result in cost-savings. Remote sourcing is a controversial topic, and the future will show how relevant it remains. The findings show

that there is no agreement among purchasing professionals either. While there is a preference for local suppliers, the expectations go towards more remote sourcing. Nonetheless, potential for more local sourcing is seen, which is also influenced by the future development of Industry 4.0. The development of Industry 4.0 could result in less need for social capital.

# 6. CONCLUSION AND RECOMMENDATIONS

## 6.1 Different views of purchasers regarding remote sourcing

Remote sourcing is a recently emerging topic without large literature backup. Even though it is a part of global sourcing, it is explicitly concerned with intercontinental suppliers and should be viewed separately. Three grand theories, namely PAT, CT and SCT, as well as other important literature provided the basis for the research. The data collection through interviews had the purpose of gaining new insights and helped to understand why purchasers made certain statements. This study's purpose was to examine how purchasers manage these intercontinental "remote" suppliers. It turned out, that purchasers use traditional methods such as monitoring, screening and relationship management the most. This confirmed existing literature, among which the PAT and SCT. However, proposed methods regarding a purchasing infrastructure or supplier development were not mentioned a lot. The second part of the study was to examine future expectations of purchasers regarding remote sourcing. It became clear that purchasers preferred local sourcing, yet they expected remote sourcing to remain relevant. Having local suppliers is easier for purchasers, with regards to social aspects such as communication, but also other factors like shorter lead times. However, the cost factor in sourcing plays an important role. As long as remote sourcing will provide a large cost advantage for firms, it is not to expect that they go back to local sourcing.

## 6.2 Recommendation to carefully reconsider unilateral use of methods and purely cost-based supplier location decision

Based on the findings and the discussion, this research provides some practical implications for purchasers. The proposed methods have all been evaluated as important in literature but received mixed importance by the interviewed purchasers. To summarise, it is recommended for the firms to have a more equal balance for each method. Managing the social aspect of the buyer-supplier relationship is important and should not be underestimated. At the same time, it is important to monitor suppliers to ensure reliable and high-quality supply. Furthermore, purchasing is more than a support function, and a suitable infrastructure is crucial. It can make sense for firms to have an IT infrastructure that enables them to process all the complex data and use it to their advantage. Sharing of information with other purchasing units but also other departments should be considered too since it can improve coordination and efficiency. Another aspect is the penetration of clusters. Companies might want to take into account which benefits they could gain from accessing supplier's clusters and approach this more actively. It is further recommended to re-evaluate the location of suppliers. So far, the decision has been made based on the cost advantage to a large extent. However, as it is shown in literature, the promised cost-savings are not always as high as estimated. Furthermore, building a

relationship with suppliers is a lot more difficult over a large distance. Therefore, it can make sense for firms to see which possibilities Industry 4.0 brings through automation and possible re-shoring of activities. This does not imply all products should be re-shored. Rather it can be recommended to carefully evaluate from time to time if remote sourcing is still beneficial or if there are options to move to local markets.

# 7. LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

One limit of this research is to assume, that aspects that were not mentioned by purchasers are not used by them. The goal of the semi-structured approach was to let the interviewees talk freely and not restrict their answers. However, this can lead to the problem that not all aspects could be discussed in detail with each purchaser. Due to the time limit and the scope of this research it was impossible to cover all the aspects that concern remote sourcing tools and future expectations. The results should not be viewed as methods and expectations the purchasers use exclusively. Instead, it can be more useful to look at them as preferred choices, among others. The aspects that were listed by the purchasers indicate that they might have been more important than others, but not that those were the only ones that were used. This is especially indicated by the fact that only four purchasers mentioned contracting, while it is to assume that all companies use contracting. It serves more as an indicator for what companies consider important in the buyer-supplier relationship. Another limitation might be that the purchasers came from different industries and the sample size of 15 was relatively low. Therefore, the results should not be generalised, but rather serve as indicators for the researched topics.

Regardless, this research gave insights on a newly emerging topic. It complemented and partly confirmed existing literature on this topic. For future research it can make sense to study methods and tools in a broader scope. Since there is no overarching framework for methods and tools, further research can further examine those. An interesting aspect could be to study why firms to not have strategies to penetrate clusters, even though they recognise its benefits. It can further make sense to determine the importance of the proposed methods and tools in a quantitative research, to have a larger sample size and numbers to compare. Besides that, this research investigated future expectations for remote sourcing. Existing literature about this topic has been limited so far, so this study raised some awareness for the future of remote sourcing and can build the foundation for future research. Future studies can either focus more specifically on the development of remote sourcing in the future or compare remote sourcing alternatives and their likelihood. This can help to discuss both cases more detailed and gain new insights.

# 8. ACKNOWLEDGEMENTS

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# APPENDICES

## Appendix A

| Name | Industry | Products | % remote suppliers | Size small=<50; medium= 51-200; big= >200 | Country |
|------|----------|----------|--------------------|-------------------------------------------|---------|
| A | Construction | Everything needed in construction except raw materials | 5 | Medium | Netherlands |
| B | Metalworking | Kitchen components | 5 | Medium | Netherlands |
| C | Oil and gas | Valve bodies/Valves | 25 | Big | Netherlands |
| D | Automotive | Hydraulic components | 40-50 | Big | Netherlands |
| E | Automotive | Infotainment/ Electronics | 65-70 | Big | Germany |
| F | Cleantech, Environmental Technologies | Water and Wastewater Treatment, MBR Filtration, Odour, Treatment, Stormwater Control | 80% (for specific components, overall number varies a lot) | Medium | Germany |
| G | Harvesting technologies | Tractors, mowers, rakes, tedders, silage trailers, wheel loaders and other machinery | 30 | Big | Germany |
| H | Intralogistic solutions | Conveying,Loading, Palletising, Packaging, Sortation and baggage handling | 20 | Big | Germany |
| I | Mechanical/ Industrial Engineering | Specialised products for automotive, heating, building etc | 20-25 | Medium | Netherlands |
| J | Automotive | Lighting/ Electronics | 60 (for specific components, overall number varies) | Big | Germany |
| K | Aerospace | Turbomachines, Motor systems | 80-90 | Big | Netherlands, Romania |
| L | Recreation/Tourism | Furniture, sanitair, electronics for in caravans/campers/ | 25 | Medium | Netherlands |

| | | tents, | | | |
|---|---|---|---|---|---|
| M | ICT | ICT infrastructure | 80 | Medium | Netherlands |
| N | Fashion | Clothes, Accesoires, Shoes | 90 | Medium | Netherlands |
| O | Metalworking | Aluminum profiles | 60 | Medium | Netherlands |

**Appendix B**

**Interview questions "remote suppliers"**

1. **Could you explain the nature of your firm and the commodities under your responsibility? (RQ1)**

   - Which industry sector?

   - What commodity group?

   - What is the origin of suppliers?

   - Are these suppliers clustered or dispersed?

   - How large is the share of remote suppliers?

2. **A current issue: How is your company coping with Corona? Any particularities with remote suppliers? (RQ4)**

**General approach**

   - How is your company affected?

   - Which strategy do you pursue? (Continuing, ramping up)

**Particularities of remote suppliers**

   - Do you have any special means for remote suppliers?

   - Do you think, after corona, remote sourcing will continue? How is it changing?

3. **Which (a) benefits and (b) challenges did you find with remote sourcing?**

**Benefits / reasons to (RQ2)**

   - Why did you chose for those remote suppliers (expectations)?

   - How do you screen remote suppliers (avoid adverse selection)?

   - Why did you start with remote sourcing?

   - Which criteria did you apply for choosing for remote suppliers (cost, quality, technology / innovation, availability, sustainability)?

**Challenges (RQ3)**

**Which are the three most common problems you face with remote suppliers?**

   - SCT: Cognitive / relational / structural challenges?

   - PAT: moral hazard occurs / adverse selection?

   - CT: Dependent on cluster / penetration problems?

- Are there other problems?
    - How transparent is your supply chain?
    - Losing control?
    - Loss of technology?
    - Image problems
    - Quality issues
    - Risks
    - Did you experience preferred treatment of domestic customers / second class treatment of you?

## 4. Do you notice a difference if suppliers are embedded in a strong local cluster at their home country?

**General approach (RQ3)**

- Do the suppliers have a lot of local customers? Are they very advanced?

- Are there many alternative suppliers in that location / country?

- Are the suppliers relying on any specialized institutions (universities, associations, consultants…)

- Are there any special problems with clustered remote suppliers?

**Actions (RQ5)**

- Are there implications?

- Do you have measures to penetrate the cluster?

**Cluster theory**

- Is there collaboration between suppliers?

- Is there direct contact?

- What do you do in order to become more attractive than the local customers?

## 5. Which solutions do you pursue for managing the challenges with remote suppliers? (RQ5)

**Main problems → Solution**

- You named 1, 2 and 3 as main problems, how do you try to face them?

- Do you have a special process / change / adapted your process for remote suppliers?

- Do you have special measures for remote suppliers / KPI?

**Social capital theory**

- How do you handle the cognitive (cultural) distance and find solutions for that?

- Is there a special department / function for this?

- How do you stay in contact? Go there, invite them, supplier days?

**Principal-agent theory**

- How do you monitor the remote suppliers (to reduce opportunism)?

## 6. Which trends do you see in remote sourcing? (RQ6)

**Occurred changes**

- When did your firm start with remote sourcing? Any changes?

- Are the motives / objectives still the same?

**Expectations for the future**

- Does your company prefer local or remote suppliers?

- Are there current trends to localise, reshore, deep localisation?

- Are there changes with I4.0?

- Is the relevance changing?

- Less moral hazard? Less cluster? Less social capital needed?

- How will it be in 10 years?

**Appendix C**

| Category | Code |
|---|---|
| Building the buyer-supplier relationship | Regular Face-to-face meetings |
| Building the buyer-supplier relationship | Regular Phone calls, E-mail, Fax |
| Building the buyer-supplier relationship | Cultural understanding, language * |
| Mitigating supply risk | Warehousing/safety stock |
| Mitigating supply risk | Consignment stock * |
| Enhancing innovation and ensuring quality | Supplier development and support |
| Enhancing innovation and ensuring quality | Supplier integration/ collaboration |
| Enhancing innovation and ensuring quality | Supplier performance evaluation/ monitoring |
| Enhancing innovation and ensuring quality | Supplier selection |
| Enhancing innovation and ensuring quality | Contracting |
| Establishing a global sourcing infrastructure | Business Intelligence (ERP systems) |
| Establishing a global sourcing infrastructure | Information sharing between purchasing units |
| Establishing a global sourcing infrastructure | International/Global purchasing offices |
| Establishing a global sourcing infrastructure | Specialised/ Skilled personnel |
| Others | Buy themselves and then give supplier* |
| Others | Use power of customer* |
| Others | Trust* |
| Relevance of remote souring | More remote supplier |
| Relevance of remote souring | Number of remote suppliers stays stable |
| Relevance of remote souring | Reasons for remote sourcing same |
| Relevance of remote souring | Remote souring remains relevant |
| Alternatives for remote sourcing | Deep localisation |
| Alternatives for remote sourcing | Influence through Industry 4.0 |
| Alternatives for remote sourcing | Insourcing |
| Alternatives for remote sourcing | Local sourcing |
| Alternatives for remote sourcing | Re-shoring |
| Alternatives for remote sourcing | Personal preference for local sourcing * |