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Presence and origin of perceptual distance in buyer-supplier relationships

Submitted by: Niek ten Buuren

S1110799

1st Supervisor: Dr. Frederik Vos

2nd Supervisor: Dr. Aldís G. Sigurðardóttir

External Supervisor: J. Slot

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Abstract

This research aims to explain where perceptual distance is present in buyer-supplier relationships and how these differences in perceptions are created. A list of essential relationship issues in buyersupplier relationships was created with the help of a literature review investigating where perceptual distance is present. Additionally, in this study, both theories and concepts from the literature explain the origination of perceptual distance – a case study, single firm/multi-case, includes ten of the firm's buyer-supplier relationships with strategic suppliers. This research design will best fit the exploratory nature of the concept of "perceptual distance" which has limited previous research available in the literature — conducting both quantitative and qualitative research, from both buying and supplying side, in the form of an online questionnaire and semistructured interviews. With the online questionnaire results, an overview of both the buying and supplying perception of relationship issues could be created, which enabled the detection of perceptual distance. These perceptual distances were further investigated through the semistructured interviews, which gave answers on the causes of these perceptual distances. The results of this study showed that perceptual distance could be present in all of the listed relationship issues from the conceptual model, with the relationship issues of information exchange, decision making autonomy, and mutual satisfaction having the highest amount of perceptual distance. The results of this research supported the positive influence of the presence of acting in self-interest, asymmetric information, lack of actor's knowledge, and limited computational capacity has in creating perceptual distance in a buyer-supplier relationship.

Insufficient prove collected to indicate that social identification was creating perceptual distance in the researched buyer-supplier relationships.

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1. Introduction

Globalisation paved the way for a global market, in which companies can choose from a continuously increasing number of suppliers located in different countries (Monczka, Handfield, Giunipero, & Patterson, 2015, p. 366). Another noticeable trend in today's market is the growth in outsourcing activities. Many companies choose to focus on their core competencies and outsource activities to specialised suppliers (Nyaga, Whipple, & Lynch, 2010, p. 102). This practice results in a more diverse portfolio of suppliers for many companies. Managing these often-diverse suppliers is a challenging task. Both formal and social control are applied to manage these relationships with suppliers (Oosterhuis, Molleman, & van der Vaart, 2013, p. 160; van der Krift & van Weele, p. 8). Formal control refers to the contractual obligations and rules that define the behavior and actions being expected in the relationships. Social control refers to the shared values and cooperative norms that are present in relationships and to the atmosphere in which trust that the business partners have in each other plays a significant role in enhancing the interests and alignment of the partners (Huang, Cheng, & Tseng, 2014, p. 708; Li, Xie, Teo, & Peng, 2010, p. 333). In the European and American markets, there is a strong focus on formal control mechanisms, while social control mechanisms are often overlooked (Li et al., 2010, p. 334). Research shows that both formal and social control contributes to the performance of a buyer-supplier relationship (Mesquita & Brush, 2008, p. 786). Whether performing in a buyersupplier relationship is achieved, depends on which party you ask this question. While a supplier could be satisfied with the overall performance, it delivered towards a particular company, the company in question can be dissatisfied with several aspects of the performance of this supplier (Oosterhuis et al., 2013, p. 160). Formal control gives reference to how both actors in the relationship are performing. It is easy to measure if predetermined agreements which are stated in a contract are reached. Social control in a relationship leaves more room for interpretation of each other's performance, due to the ambiguity of the agreed performance between both parties.

Previous research has been done on this occurrence of different views on critical issues in a relationship. Multiple researchers used the concept of "perceptual distance" to describe this phenomenon (Barnes, Naudé, & Michell, 2007, p. 663; Gibson, Cooper, & Conger, 2009, p. 63; van der Krift, van Weele, & Gevers, 2017, p. 8). Perceptual distance is defined as the difference between collaborating partners' perception of critical issues in their relationships (Barnes et al.,

2007, p. 663). Not all previous research on perceptual distance gave conclusive answers if perceptual distance is always present in a relationship and indeed has an effect and to what extent on crucial issues in a relationship (Gibson et al., 2009; Homburg & Jensen, 2007; van der Krift et al., 2017). A contributing factor to perceptual distance is the role that organisational culture plays within a company. According to previous research, five determining factors form organisation culture: autonomy, external orientation, interdepartmental coordination, human resource orientation, and improvement orientation (Van den Berg & Wilderom, 2004). Organisational culture has a substantial effect on how employees within a company work, which processes they use, and how they reflect on the performance of their work (Hartnell, Kinicki, Lambert, Fugate, & Doyle Corner, 2016, p. 848). Organisational culture can differ significantly between organisations (Hartnell et al., 2016, p. 850). Some organisations have a very formal and bureaucratic culture, while others are more informal and community-driven.

This discrepancy between organisational cultures can be caused by several reasons, such as industry characteristics, organisational design, and corporate governance. A dominant country culture of employees could additionally play a role in creating organisational culture. A locally based organisation could be heavily influenced by the dominant culture, while a multinational with employees of mixed nationalities would be less affected (Van den Berg & Wilderom, 2004). Due to this difference in organisational culture, representatives from organisations will have different ideas on essential factors such as the role of communication, goals, and philosophies of the work and what strategies will be used (Polychronakis & Syntetos, 2007, p. 433). In a buyer-supplier relationship, these could result in different views on quality expectations, perceptions on the cooperation within the relationship, and setting priority on certain aspects. Previous research has shown that there are differences in behaviour depending on the role of buyer and seller (Sigurðardóttir, Hotait, & Eichstädt, 2019).

In summary, it can be stated that organisational culture can have a direct effect on perceptual distance between organisations.

Perceptual distance is the key concept in this research, from which a short definition and some underlying concepts which influence it have been mentioned.

To know if the perceptual distance is present in buyer-supplier relationships, we will research this in the buyer-supplier relationships of the studied company. This led to the following central question which will be answered in this thesis:

Are perceptual distances present in buyer-supplier relationships of the researched company, and what is the origin of these perceptual distances?

The perceptual distance can play an influence in a wide range of dimensions. A list of critical dimensions is derived from literature and will be given in the I-P-O model in the theory section. Since perceptual distance might not be present in some of these factors, it is necessary to indicate the elements in which perceptual distance is noticeable for each buyer-supplier relationship. Therefore, the following sub-question needs to be answered:

In which dimensions are perceptual distance present in the buyer-supplier relationships of the researched company?

Data will be gathered, to answer the sub-question, by sending a questionnaire to both suppliers and purchasers of company X, which will be elaborated upon in the method section. Based on the findings of these questionnaires, perceptual distance can be found and indicated within specific dimensions for each buyer-supplier relationship. Afterwards, interviews will be conducted with both parties to create a dyadic view and understanding of what causes this perceptual distance.

Which will answer the following sub-question:

What is the origin of perceptual distance within these key dimensions?

These questions will be the foundation of what this research will try to answer. The results of this research will give significant contributions to the relatively unexplored literature of perceptual distance. It is always essential for a study to bring contributions to current literature, and this research achieves this in the following ways. This research builds upon previous work done by van der Krift et al. (2017) on perceptual distance in the construction industry. Krift, Weele, and Gevers are currently working on a perceptual distance monitor, with a categorised list of issues which could be influenced by perceptual distance divided into input, process and output factors (van der Krift et al., 2017, p. 12). The perceptual distance monitor will be used as a "foundation" to test the perceptual distance in this research. This research will contribute to the literature on the subject of perceptual distance in the following ways:

- With qualitative research, a better understanding will be created in the relationship between
 perceptual distance in factors of social control and where their origins lay.
 Previous research focused on quantitative research, indicating the perceptual distance in different
 factors lacked the insightful information that qualitative research can provide.
- 2. By analysing dimensions from both formal and social control, this thesis contributes to the lack of current research on this subject (Li et al., 2010, p. 334). To find the origin of how perceptual distance is created in these dimensions taken from the I-P-O model will give further insight and contributions to previous research (van der Krift et al., 2017, p. 12).
- 3. Moreover, previous research done on perceptual distance was performed by collecting data from companies operating within a focused industry (Oosterhuis et al., 2013; van der Krift et al., 2017). A significant limitation mentioned in these researches was the applicability to other fields and industries (van der Krift & van Weele, p. 67). By conducting this research in a separate industry namely an organisation which operates in a global critical power industry, data collected from this research will contribute to understanding the different dynamics of perceptual distance in organisations working in various industries. With this contributing to the generalizability of findings on perceptual distance in other industries, and/or providing data which contradicts findings from research on perceptual distance in different sectors.

This contribution is achieved by the following means. The researched company has an international supplier base, with suppliers in different countries.

4. It would be interesting to find out if this international aspect will affect the presence of perceptual distance in these buyer-supplier relationships. Previous research mainly focused on the Dutch market, therefore results from this research can be different, possibly influenced by organisational and national culture (Oosterhuis et al., 2013; van der Krift & van Weele). Differences in the industry will also affect findings in the context of perceptual distance. Buyer-supplier relationships will not be the same throughout different sectors, essential aspects of the industry will have an effect on what relationship issues have priority in a relationship and how buyer and supplier interact with each other (Oosterhuis et al., 2013, p. 161).

Data collection involves conducting interviews with both the contractor and the principal of the projects.

- 5. That will give a dyadic view of the buyer-supplier relationship. With this contributing to other researchers who aim to show that dyadic studies are needed to provide insights that studies employing a single viewpoint cannot grasp (Chen, Su, Ro, & Management, 2016, p. 311; Laurenz, 2016, p. 2; Oosterhuis et al., 2013, p. 160).
- 6. Practical contributions will be given towards the organisation on which the research is conducted. This will provide them with insight into the presence of perceptual distance in their buyer-supplier relationships.
- 7. Moreover, the origin of perceptual distance will be researched. That gives the researched organisation a clear starting point on where to implement counter actions to solve these perceptual distances. This will be elaborated upon in the recommendation sections in which strategies will be provided to the organisation to help counter the presence of perceptual distance in their buyer-supplier relationships.

2. Literature review

The previous chapter introduced the research question and the scope of the research. In this chapter, a theoretical basis will be built upon a literature review, which will discuss the different aspects of the concept of ''perceptual distance'' found in the literature. The literature review will discuss the following topics:

What is perceptual distance according to literature, how is it defined and where can it be found. Making a selection of the relevant relationship issues and adding different relationships issues found in the literature to this list. Concluding with the theories and underlying concepts found in literature, which explain the origin of perceptual distances in buyer-supplier relationships.

2.1 Perceptual distance in literature

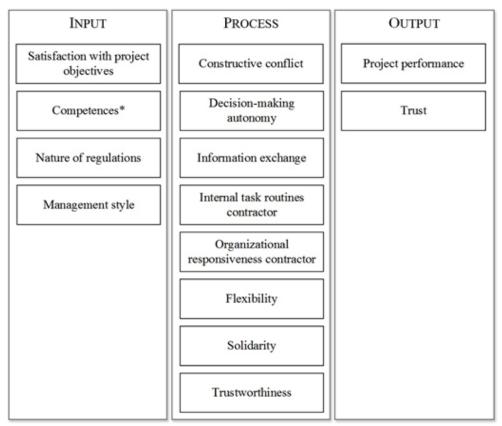
Research on perceptual distance can be found in different fields of study and various settings. Those settings include team-leader relationships (Gibson et al., 2009, p. 63), interdepartmental cooperation (Homburg & Jensen, 2007, p. 124), alliances between organizations (Lavie, Haunschild, & Khanna, 2012, p. 1453) and buyer-supplier relationships (Oosterhuis et al., 2013, p. 158). A general definition used by Van der Krift et al. (van der Krift et al., 2017, p. 8), which will be used for this research, can be defined as: "Perceptual distance refers to a disparity in perceptions between two or more individuals concerning a particular social stimulus'.

A multitude of previous research has been done on possible sources of perceptual distances in a relationship. Conclusions of multiple studies do support sources of perceptual distances (Gibson et al., 2009, p. 63; Lavie et al., 2012, p. 1469; Oosterhuis et al., 2013, p. 169). In contrast, other studies did not find conclusive sources of perceptual distance (Liu, Luo, & Liu, 2009, p. 307). If perceptual distance always is present and consequently plays a role in an (inter-organizational) relationship is still debated among scholars.

A common view on perceptual distances is that it plays a role in the perception of key relationship issues of buyer-supplier relationships (Gibson et al., 2009; Oosterhuis et al., 2013; van der Krift et al., 2017). The difference in perception can occur in a variety of relationship issues or variables within a buyer-supplier relationship. Previous research has provided evidence of perceptual distance in organizational relationships on many topics including goal orientations and performance (Gibson et al., 2009; Homburg & Jensen, 2007; Oosterhuis et al., 2013).

Decision-making autonomy (Andersen, Christensen, & Damgaard, 2009; Gibson et al., 2009) (constructive) conflict (Gibson et al., 2009; Oosterhuis et al., 2013), competences (Homburg & Jensen, 2007; Oosterhuis et al., 2013), regulations and trustworthiness (Andersen et al., 2009). Relational norms such as solidarity, flexibility, trust and information exchange (Andersen et al., 2009) organizational responsiveness of and internal task routines at the agent (Lavie et al., 2012, p. 1446) as well as management style also referred to as formalization or hierarchy (Lavie et al., 2012, p. 1446; Polychronakis & Syntetos, 2007). Following previous research (Steiner, 1972) a model has been constructed by van der Krift et al. (2017, p. 12). The model is shown in table 1 categorized these issues into input, process, and output variables, reflecting the different stages in which these issues are likely to surface in a project. In the following paragraphs, the relationship issues identified along the Input, Process and Output model are discussed.

Table 1. Input-Process-Output model: A categorized overview of issues on which perceptual distance may exist in principal-agent relationships (van der Krift et al., 2017, p. 12).



^{*} Subdivided into specific issues at principal and agent side

Input factors represent characteristics of the team members, the teams, the project and the context in which the project is executed (Hackman, 1987, p. 317).

Perceptual distance is expected in a principal-agent relationship on the following input factors: the satisfaction with the project objectives that are set, the competences on contractor and client-side both in terms of knowledge and in terms of interpersonal skills, the importance of the regulations, and management style (van der Krift et al., 2017, p. 13).

Information asymmetry is bound to lead to perceptual distance regarding competences because knowledge and skills are typically not readily visible for the other party.

Personal experiences in previous projects may have led to an altered view on project objectives and importance of regulations by the different parties. That is also the case for perceptions on goals, competencies, rules and management styles. Which are likely to be individual- and company-specific, and over time they may have developed a reliable identification with and a preference for their way of doing things. Consequently, the principal and agent may attach different values to the regulations and contractual specifications within the collaboration.

Process factors

Process factors will be analysed as interactions and interpersonal behaviour between principal and agent representatives (Hackman & Morris, 1975, p. 52). Perceptual distance is expected between client and contractor representatives on the following process issues: constructive conflict, decision-making autonomy, information exchange, internal task routines and organisational responsiveness at contractor, flexibility, solidarity, and trustworthiness. Both information asymmetry and social identification play a role in the perceptual distance on these issues. Since overtime, representatives from either party have developed their working manners, habits, and ways of collaborating on issues including conflict resolving and level of flexibility in the relationship. Prior experiences in other projects and the types of contracts they have worked with in these previous projects have a large influencing role. Once these processes and routines have been developed, team members at either side are likely to take these for granted, expecting the other party to play by the same rules even without discussing them (Hackman & Morris, 1975, p. 47). Moreover, these processes and routines can be complicated by the complexity of the contract, and incompleteness of project specifications and project activities (Carey, Lawson, & Krause, 2011; Huang et al., 2014; Nyaga et al., 2010). Social identification is mostly manifested in desired attitudes and behaviours by principal and agent (Andersen et al.,

2009, p. 816). Principal and agent representatives both have a perception of what is 'normal' based upon their frame of reference built from experiences in previous projects and the culture and norms that are present within their organisations. These experiences set the expectations that both parties project on one another and determine the behaviour that they each display in their collaborative project, potentially not realising that their expectations do not align. Furthermore, either party may have constraints from internal stakeholders or any of the many other organisations that contribute to the project. These constraints may limit them in satisfying the expectations of the other company.

Output factors

The output factors are divided into the following elements: project performance and trust. van der Krift et al. (2017, p. 14) further subdivide project performance in quality, speed, costs, innovation and sustainability. Different views could exist between principal and agent if these important output factors were achieved in a project. A possible cause of this is that representatives of principal and agent have different information regarding the circumstances or instances that have influenced the project achievements. Information from within the organisation could have been biased due to social identification, which gives preference to highlighting the positive aspects of their organisation. According to Oosterhuis et al. (2013), performance in a project is often seen as directly related to agent capabilities, and thus associated with the identity of that agent. Unforeseen circumstances which were not anticipated beforehand can, therefore, damage the reputation of the agent. Furthermore, as both parties are likely to perceive, they have put in the effort to realise the results, they will attribute failure to the other party. Thus, whereas their failure will likely be attributed to circumstances, other failures will more easily be attributed to a lack of competence and failure at the other side (Pettigrew, 1987). In conclusion, the Input-Process-Output (I-P-O) model gave us input, process and output factors in which perceptual distance may be present. In this research, one would, therefore, expect to find the perceptual distance in these key relationship issues.

2.2 Selection of relevant relationship issues

Not all factors derived from the I-P-O model and relevant literature are usable in the context of this research. A selection of the key relationship issues from the literature review will be made. That is because the I-P-O model was made in the context of a principal-agent relationship in the form of projects within the building industry. The research will investigate ongoing buyer-supplier relationships. Therefore, factors only applicable to this project context within the building industry are filtered out.

Table 2: Selected factors of the Input-Process-Output model

Input	Process	Output	Filtered out Relationship issues due to Project Context or non- applicability
Competences	Constructive	Performance	Satisfaction with
(buying	conflict	(quality, cost, time)	project objectives
organisation/supplying			
organisation)			
	Information	Trust	Internal task routine
	exchange		contractor
	Solidarity		Management style
	Flexibility		Trustworthiness
	Decision-making		Nature of regulations
	autonomy		
			Organizational
			responsiveness

2.3 Additions to key relationship issues

The I-P-O model from the research of van der Krift et al. (2017, p. 12) gave an overview of possible input, process and output factors in which perceptual distance might be present. To contribute to this model, additional factors which are important to buyer-supplier relationships will be investigated—namely attractiveness of the supplying and buying organization and mutual satisfaction of both the supplying and buying organization. In the following part, an explanation will be given based on literature, why these factors are essential to buyer-supplier relationships and how these are linked to perceptual distance.

Organizations benefit in maintaining long-lasting relationships with their suppliers (Nyaga et al., 2010, p. 102). These long-term relationships between buyer-supplier have multiple benefits. By interacting with each other over a more extended period, both parties gain experience and knowledge on how both organizations operate. In retaining suppliers, two concepts play a central role: customer attractiveness and supplier satisfaction (Pulles, Schiele, Veldman, & Hüttinger, 2016, p. 3). Customer attractiveness will lead to suppliers being motivated to retain their relationships with the buying organization. Supplier satisfaction will lead to suppliers being satisfied with the performance of the supplier, prompting them to maintain their relationship with the supplier.

When adequately treated, this can lead to a preferred status off a firm of becoming a preferred customer of the supplier. That may result in a supplier allocating better resources to them, then less preferred buyers (Pulles et al., 2016, p. 1). Having better resources from the contractor in a project would be beneficial for the outcome of a project.

Research done by Pulles et al. (2016, p. 6) explores the different dimensions which contribute to supplier satisfaction and customer attractiveness. While being two theoretically different concepts, the conceptual delineation between these constructs has proved to be challenging in current literature (Pulles et al., 2016, p. 4). Previous research divides customer attractiveness into three dimensions: expected value, trust and dependence (Aminoff, Tanskanen, & Management, 2013, p. 166). La Rocca, Caruana, and Snehota (2012) introduce dimensions of customer attractiveness that refer to both expected value and perceived value within a relationship (La Rocca et al., 2012, p. 1243). The research of Pulles et al. (2016) builds upon previous research to

generate relevant customer attractiveness and supplier satisfaction dimensions. A table of key dimensions is formed in the study, which plays a significant role in achieving customer attractiveness and supplier satisfaction.

Many of these dimensions are also linked to perceptual distance. Example of these dimensions is **trust:** (reputation of trustworthiness, relationships based on trust rather than solely on profits, trust), **Information sharing:** (info sharing, providing feedback, feedback to suppliers) and **different perceptions** between firm and supplier: (values of the company, managing realistic expectations)

According to previous research, these dimensions which play a significant factor in achieving customer attractiveness and supplier satisfaction might be negatively influenced by perceptual distance. Examples of these are the obstruction of trust-building and solidarity between group members due to social identification (Oosterhuis et al., 2013, p. 158), lack of information sharing due to information asymmetry, parties acting in self-interest (Perloff, 2003, p.58), and different perceptions between parties caused by perceptual distance (Barnes et al., 2007, p. 663).

In conclusion, the key relationship issues of mutual attractiveness and mutual satisfaction will be added to the research model.

2.4 Context and theories in literature which explain the origin of perceptual distance

Multiple theories are used in literature to explain the cause of perceptual distance. Most notable of these are agency theory (van der Krift et al., 2017, p. 9) social identity theory (van der Krift et al., 2017, p. 9), organizational social capital (Oosterhuis et al., 2013, p. 160) and bounded rationality theory (Herbert A. Simon, 1990, p. 15). Now a summary of these four theories will be given. Further elaboration upon, and how, these relate to perceptual distance according to literature can be found in the following sub-chapters. The first theory of agency theory explains the problems that can occur in a relationship between an agent and principal. These problems either arise when the desires or goals of the principal and agent conflict, or it is too difficult or expensive for the principal to verify what the agent is doing (Eisenhardt, 1989, p. 58). Which

impacts the trust the principal has in the actions of the agent. The second theory of social identity theory argues that social identification is a perception of oneness with a group of persons concerning its social categories (Ashforth & Mael, 1989, p. 20). That will cause a positive bias through social identification towards members of the same (in)group with shared values, norms and customs. The third theory of organization social capital can be defined as the sum resources derived from social relations within a firm. Organization social capital is realized through members' levels of collective goal orientation and shared trust, which creates value by facilitating successful collective action (Leana III & Van Buren, 1999, p. 538). The fourth theory of bounded rationality theory argues that rationality of humans in charge of making a rational decision is bound on "the cognitive limitations of the decision-maker limitations of both knowledge and computational capacity" (Herbert A. Simon, 1990, p. 15).

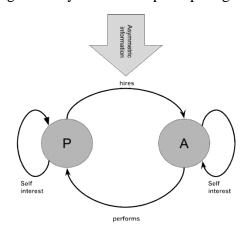
Principal-agent theory

Agency theory aims to explain the agency relationship and its resulting problems, in which one party (principal) delegates work to another (the agent), who performs that work (Jensen & Meckling, 1976, p. 310). The principal-agent theory uses a contract as the unit of measurement in this relationship. However, in a buyer-supplier relationship, the relationship between a buyer and supplier can be seen as an agency relationship (Stephen & Coote, 2007, p. 285). In which the buyer plays the role of the principal and the supplier as the agent (Hald, Cordón, & Vollmann, 2009, p. 960).

Agency theory is concerned with resolving the two problems that can occur in agency relationships. The first is the agency problem that arises when (a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is doing (Eisenhardt, 1989, p. 59). Here lies the problem that the principal (buyer) cannot verify the actions of the agent (supplier) and if he has behaved appropriately to his expectations. Such actions could be the correct execution of ordered work or the deliverance of the assured quality of a product. The second problem underlying agency theory is the problem of risk sharing that arises when the principal and agent have different attitudes toward risk (Eisenhardt, 1989, p. 59). Risk in the context of a buyer-supplier relationship can play a very diverse role such as monetary risks, risk of late delivery, risk of insufficient quality, etc.

The problem here is that the buyer and supplier may prefer different actions because of different risk preferences. The goal of the principal agent-theory is on determining the most efficient contract governing the principal-agent relationship given assumptions about people (self-interest, bounded rationality, risk aversion), organization (goal conflict) and information (purchasable commodity). These assumptions can lead to different behaviour from the agent and/or principal than the other party desires and expectations in a buyer-supplier relationship (Eisenhardt, 1989, p. 60). They are resulting in a loss of trust and an understanding of the buyer towards the supplier. People might have self-interest, resulting in actions which would benefit them the most instead of the relationship. People might have bounded rationality, preventing them from overseeing the whole picture. Or people prefer risk aversion, opting for the safe choice while this could have led to potential opportunities, which the other party might have preferred. Therefore, it plays a role if parties are either risk-seeking or risk-averse and what they expect from the other parties in buyer-supplier relationships. Within an organization, there may be goal conflict present if both organisations want to reach contradictory goals, which results in members of this organization acting differently compared to others. Additionally individuals could see information as a commodity, which should be kept safe and only be shared if paid for. That would also hinder an open relationship between buyer-supplier in which actions from both parties are predictable. Figure 1 illustrates the dynamics of the principal-agent relationship, in which the relationship of principal and agent is influenced by asymmetric information, selfinterest and the previously mentioned assumptions.

Figure 1. Dynamics of a principal-agent relationship



In a principal-agent relationship, the principal depends on the actions and behaviour of the agent to fulfil the agreed-upon contract (Gailmard, 2012, p. 3). Furthermore, there are two means which can influence the outcome of the principal-agent relationship. A principal can use incentives to influence the behaviour of the agent. Incentives such as monetary rewards will positively influence the agent by giving more motivation to act according to the wishes of the principal. There is a risk of moral hazard for both the principal and the agent. Moral hazard occurs when an individual has an incentive to increase their exposure to risk because they do not bear the full costs of that risk (Hölmstrom, 1979, p. 75). That can lead to an excess of risk for either principal or agent, within a contract or buyer-supplier relationship, which can result in adverse outcomes when things go wrong. That way of handling from one party with disregard to risk will lead to a perception change of the other party, on how they evaluate important relationship issues such as trust and competences, which in turn is the development of perceptual distance.

In conclusion, the principal-agent theory is concerned with two problems:

(a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is doing.

The former problem is caused because one of the parties is acting in self-interest.

The latter problem is caused because there is asymmetric information between the principal and agent. Previous argumentation explained how the principal-agent theory is causing perceptual distance. A logical assumption would be that if the two problems underlying principal-agent theory are present in a buyer-supplier relationship, this will result in more perceptual distance. Social identity theory

Social identity theory explains the social aspect of perceptual distance and gives insight into how perceptual distance negatively affects a buyer-supplier relationship.

Social identity theory argues that social identification is a perception of oneness with a group of persons concerning its social categories (Ashforth & Mael, 1989, p. 20).

Social categories such as shared interests, nationality, education level and wealth all play a role. Through social identification, this will cause a definite bias towards members of the same (in)group with shared values, norms and customs. Within organisations, social identification can be found at organisational levels and departmental levels (Ashforth & Mael, 1989, p. 22).

Members perceive themselves to be representatives of the organisation or identify themselves within a team or department of their belonging. Humans are in their core group beings, with a strong desire to belong to a group. In today's society, this manifests itself in individuals identifying themselves and participating with groups in certain sub-cultures. Examples of these are sports clubs, music associations or organisation culture. Organisational cultures are created by a variety of factors, including founders' values and preferences, industry demands, and initial values, goals, and assumptions. Culture is maintained through attraction-selection-attrition, new employee onboarding, leadership, and organisational reward systems.

In buyer-supplier relationships, social identity theory explains that individuals may identify more easily with their team and organisation than with the organisation and/or teams of their collaborating partners (van der Krift & van Weele, p. 12).

Due to social identification, they will give higher importance to shared values, norms and customs of individuals from their organisation compared to individuals from the other organisation (Michael A Hogg, 2016, p. 9). That may lead to a separation between members of collaborating parties, with them comparing behaviour between both groups. That will cause members from the buying and supplying organisation to interpret, understand and perceive key relationship dimensions differently based upon established norms and organisational cultures (Beugelsdijk, Koen, & Noorderhaven, 2009, p. 314). Social identity theory applied to the context of buyer-supplier relationships would have the effect that individuals identify themselves as belonging to either the supplier organisation or the buyer organisation. That may lead to the development of favourable biases for their organisation at the expense of the other organisation (Steinman, Deshpandé, & Farley, 2012, p. 110). These preferences of individuals could be towards the organisational culture of their firm, with which they are familiar and are most confident. A very different organisation culture in the other organisation, which is apparent in the interaction can harm the perception of an individual, which could result in the perceptual distance. The organisation will thus perceive themselves favourable in a buyer-supplier relation, whereas the partner organisation would have a different view on this. Moreover, problems occurring in this relationship may not be seen as being caused by their organisation due to this bias, negatively influencing the perception of the other party.

In conclusion, social identity theory is concerned with the following problem:

Through social identification, a positive bias will be created towards members of their organisation compared to the other organisation. Previous argumentation explained how social identity theory is causing perceptual distance. A logical assumption would be that if the problem underlying social identity theory are present in a buyer-supplier relationship, this will result in more perceptual distance.

Social capital theory

To explain different perceptions in a buyer-supplier relationship, the study of Oosterhuis et al. (2013) uses the concept of organisational social capital. Social capital can be defined as the sum resources derived from social relations within a firm. Organisation social capital is realised through members' levels of collective goal orientation and shared trust, which creates value by facilitating successful collective action (Leana III & Van Buren, 1999, p. 538). Firm develop their unique interpretation and views of events, creating different perceptions (Nahapiet & Ghoshal, 1998, p. 255). In particular, two aspects of social capital cause firms to develop these unique perceptions: access to information and social identification (Oosterhuis et al., 2013, p. 160). Access to information is enabled by social relations which can provide a vehicle for accessing and disseminating information, i.e., 'who you know" affects "what you know" (Nahapiet & Ghoshal, 1998, p. 255). Moreover, the shared language, metaphors, and perspectives often found in an organisation can also be effective and efficient ways of transferring information in the firm (Oosterhuis et al., 2013, p. 160).

Social identification is the process whereby individuals see themselves as one with another person or group of people (Nahapiet & Ghoshal, 1998, p. 248). That may result from their membership in that group or through the group's operation as a reference group, in which the individual takes the values or standards of other group members as a comparative frame of reference (Nahapiet & Ghoshal, 1998, p. 248). Moreover, group members perceive their group identity as being both distinct and definite, compared to relevant other groups (Michael A. Hogg & Terry, 2000, p. 129). In other words, a favourable bias is created for one's group (Steinman et al., 2012, p. 112). Substantial differences between organisational cultures from the buying and supplying organisation will also add to this perceptual distance. Actions influenced by a different organisational culture can be perceived as not familiar or not accepted by individuals from

another organisation, which would lead to a lack of understanding on actions from the other party and possible perceptual distance on relationship issues. Based on social capital theory, perceptual distance is created through the lack of access to information and when individuals strongly identify themselves to an organisation. Figure 2 shows these dimensions in which parties will have different perceptions of the supply chain attributes when a) parties do not possess the same access to information on that particular attribute and b) a quality is firmly related to the identity of one of the parties (Oosterhuis et al., 2013, p. 160).

Figure 2 Perceptual distance through social capital (Oosterhuis et al., 2013, p. 160).

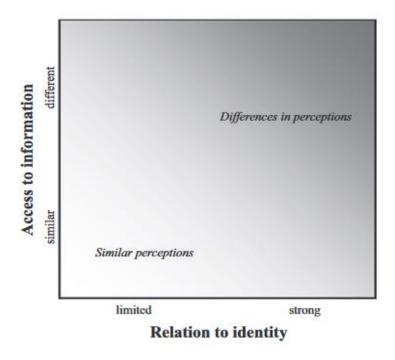


Fig. 1. Similar and different perceptions.

In conclusion, social capital theory discusses how through social identification and access to information perceptual distance is caused.

Bounded rationality theory

Useful literature that gives support to perceptual distances in buyer-supplier relationships stems from the theory of bounded rationality. The theory argues that rationality of humans in charge of making a rational decision is bound on "the cognitive limitations of the decision-maker limitations of both knowledge and computational capacity" (Herbert A. Simon, 1990, p. 15). Bounded rationality is a central theme in the behavioural approach to economics, which is deeply concerned with how the actual decision-making process influences the decisions that are reached (Herbert A. Simon, 1990, p. 15). Literature makes a distinction between bounded rationality in the context of individuals and the context of organisations. While these two bodies of theories are not wholly distinct, the big difference between these two bodies of theories is that the phenomena of goal conflict need to be treated for bounded rationality in organisations. In comparison, this is not always the case for bounded rationality in individuals (Herbert A Simon, 1972, p. 161).

Underlying bounded rationality is the theory of subjective expected utility (SEU theory) that postulates that choices are made: (1) among a given, fixed set of alternatives; (2) with (subjectively) known probability distributions of outcomes for each; and (3) in such a way as to maximise the expected value of a given utility function (Herbert A. Simon, 1990, p. 15). That would be an optimal scenario in which an individual would know beforehand the consequences of each action. On which a decision can be made for an optimal outcome. A rational decision includes the imagination of what happens in the future if a specific action is performed now, by guessing about future consequences of current actions (Laurenz, 2016, p. 20). In theory, this sounds logical; in practice, however, this is often not the case. Therefore, a general assumption of bounded rationality is that actors who must make a rational decision have incomplete information about the alternatives to their choice (Herbert A Simon, 1972, p. 163). Decisions made in real-life scenarios, such as those made in buyer-supplier relationships, will therefore not always the ultimate best choice.

That limited rationality is characterised by the simplicity of the decisions taken by the actors. Actors simplify their decisions because anticipating and considering all the alternatives and information in the decision-making progress is difficult for the actors (March, 1978, p. 591).

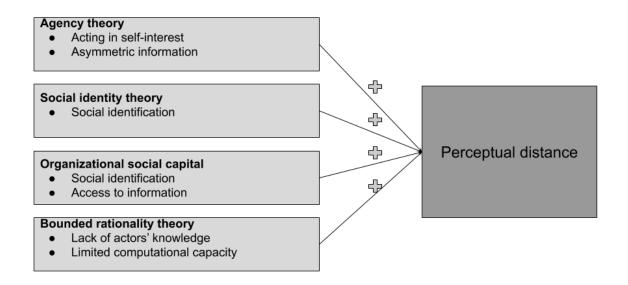
Contextual rationality focuses purely on the context of the decision, whereby the opportunity costs emerging from the situation influence the behaviour, and thus the rational choice(Ince, 2020, p. 13). As a result, depending on the context of the buyer and supplier and the amount of information they have evaluated for their upcoming decision, the likelihood of both parties having different perceptions is plausible (Ince, 2020, p. 13).

In summary, the bounded rationality theory is concerned with the following problem: The rationality of individuals in charge of making a rational decision is bound on the cognitive limitations of the decision-maker of both knowledge and computational capacity. Therefore, actions taken in buyer-supplier relationships are always prone to the available information and competences in overseeing all the alternative decisions. A lack of either of these can lead to actions and perceptions which differ from the expectation of the other party, in turn creating perceptual distance.

Synthesis of theories

Together principal-agent, social identification, social capital theory and bounded rationality theory give a good foundation on how perceptual distance is created. Figure 3 shows the relation between these theories and their underlying factors on perceptual distance. While there are some fundamental differences in what dimensions these theories use to explain the origin of perceptual distance: Principal-agent theory using the concept of parties acting in self-interest, which originates from motivational theory. Social identity theory using the concept of social identification, which originates from culture/organisational theory. Bounded rationality theory using the concept of cognitive limitations in the forms of both knowledge and computational capacity. There is an abundance of similarities and overlap between these theories. All these theories use underlying concepts derived from behavioural theory. They all include the concept of information(exchange) and mention it as an essential dimension influencing the theory. The concept of social identification is used in both social identity theory and social capital theory. And asymmetric or a lack of information is used as a leading concept in principal-agent, social capital theory and bounded rationality theory.

Figure 3: Relation of theories and their underlying factors on perceptual distance



3. Propositions

In the literature research, the concept of "perceptual distance" is researched. Principal-agent theory, social identity theory and social capital theory gave a theoretical basis that perceptual distance exists in buyer-supplier relationships. These theories gave us an underlying problem which can cause perceptual distance in buyer-supplier relationships. That leads to the following propositions, which will be tested in this research:

Proposition 1: Perceptual distance exists in a buyer-supplier relationship in key relationship issues.

A list of key-related issues in a buyer-relationship where perceptual distance may exist was found through the I-P-O model and own contributions. Evidence of previous research suggests that perceptual distance in these key relationship issues exist(Oosterhuis et al., 2013, p. 158; Pulles et al., 2016, p. 3; van der Krift & van Weele, p. 12).

Proposition 2: The presence of acting in self-interest in a buyer-supplier relationship in a buyer-supplier relation influences the amount of perceptual distance positively in key relationship issues.

Evidence found in literature, give support to a state that self-interest will have an influence on perceptual distance in key relationship issues. (Eisenhardt, 1989; Gailmard, 2012; van der Krift & van Weele; van der Krift et al., 2017, p. 9) The following key relationship issues will be expected to be mostly influenced by self-interest: Trust, Solidarity, Performance, Mutual satisfaction and mutual attractiveness.

When parties in a buyer-supplier relationship act in self-interest, the other party will lose trust in the actions of the other party. By prioritising self-interest over the common goals in a buyer-supplier relationship, trust between parties will undoubtedly be affected. That will also affect the view of solidarity from both parties on the relationship. Working in self-interest would be the opposite of acting in mutual agreement and would, therefore, influence both parties' views on solidarity within the buyer-supplier relationship. Performance could also be hindered due to acting in self-interest. Since a common best outcome of performance could be different from the preferred situation of one party acting in self-interest. Therefore, the eventual perceptual view on

performance in a buyer-supplier relationship could be significantly different between the buying and supplying organisation when they measure this according to goals which promote their self-interest. Performance within a buyer-supplier relationship is closely linked to the mutual satisfaction of this relationship. With self-interest negatively influencing how both parties view the performance and outcome of the relationship, it will also affect the level of satisfaction of both parties of the buyer-supplier relationship. Therefore, creating perceptual distance in mutual satisfaction. When one party has a habit of acting in self-interest, eventually affecting how others view their attractiveness as a business partner since they are prone to prefer their interests instead of mutual goals, that is negatively influencing the view on mutual attractiveness of the partner. In contrast, the party which acts in self-interest does not have this negative impact on their view of the attractiveness of the relationship.

Proposition 3: The presence of asymmetric information in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues. Evidence found in literature, give support to a state that asymmetric information will have an influence on perceptual distance in key relationship issues(Eisenhardt, 1989; van der Krift et al., 2017). The following key relationship issues will be expected to be mostly influenced by asymmetric information: Information exchange, performance, competences and constructive conflict

When asymmetric information is present, parties will question if information exchange within the relationship is working smoothly. The lack of information at one party can be caused by a lack of proper information exchange within the relationship, which will be most noticeable by the organisation which lacks needed information from the other party, which will, in turn, create a perceptual distance in how information exchange is viewed within the relationship. In a worst-case scenario, this lack of information can hinder performance. For example, the buying organisation forgot to share, that for a particular product, a strict quality norm is mandatory. That will impact the performance of the said supplying organisation. While the view of the buying organisation on performance from the relationship has changed, the supplying organisation due to this lack of information might not view this a lack of performance. Therefore, enhancing perceptual distance.

Information exchange is reliant on both parties actively communicating and sharing information within the relationship. When one party is not actively doing this, this might hinder the flow of information exchange, possibly causing frustration within the other organisation.

Communication skills are an integral part of the competences of employees in an organisation. And therefore, one party might see this lack of communication competence of their partner as the reason why asymmetric information is caused—as a result of this creating a different view on the competences of this organisation within the buyer-supplier relationship. In constructive conflict, the openness of communications and supportiveness associated with conflict resolution is essential. When asymmetric information is present, the process of information exchange has already been proven to be sub-optimal. Therefore, the exchange of information regarding conflicts, which often is more sensitive and politically charged, will also be affected. Affecting the view of both parties on how constructive conflict is handled within the buyer-supplier relationship.

Proposition 4: The presence of social identification in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues.

Evidence found in literature, give support to a state that social identification will have an influence on perceptual distance in key relationship issues(Ashforth & Mael, 1989; Beugelsdijk et al., 2009; Michael A Hogg, 2016; Steinman et al., 2012; van der Krift et al., 2017). The following key relationship issues will be expected to be mostly influenced by social identification: Constructive conflict, Solidarity and Trust.

Due to social identification, problems within a buyer-supplier relationship are attributed to the out-group, in this case, the other organisation, while this may not be a fair assumption. That will obstruct constructive conflict within the relationship since the openness of communications and supportiveness for the improvement of the relationship is needed. When one party denies or contradicts, everything said in terms of constructive conflict from the other side. That will, in the end, be detrimental for the learning process which can be gained by from constructive conflict in a buyer-supplier relationship. That will also impact both parties view on solidarity in the relationship, since not admitting mistakes made by the own organisation, and blaming everything

on the other side. Will give the impression that they do not value the common goals and interests of the relationship above their reputation. Which will in turn damage the view of this party on the amount of trust they have in this partner organisation and the buyer-supplier relationship itself.

Proposition 5: A lack of actors' knowledge in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues. Evidence found in literature, give support to a state that a lack of actors knowledge will have an influence on perceptual distance in key relationship issues(Ince, 2020; Laurenz, 2016; Herbert A. Simon, 1990).

The concept of asymmetric information is closely related to this proposition. Since a lack of actors' knowledge can be seen as asymmetric information within the buyer-supplier relationship. Therefore, the key relationship issues most influenced by the proposition of asymmetric information: Information exchange, performance, competences and constructive conflict. Are also applicable to this proposition.

Proposition 6: The presence of limited computational capacity of individuals in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues. Evidence found in literature, give support to a state that limited computational capacity of individuals will have an influence on perceptual distance in key relationship issues(Laurenz, 2016; March, 1978; Herbert A. Simon, 1990). The following key relationship issues will be expected to be mostly influenced by the limited computational capacity of individuals: Performance, Flexibility, Competences and mutual attractiveness.

Limited computational capacity of individuals within an organisation has a direct effect on how the other organisation views their buyer-supplier relationship. If they do not take into account, all alternatives which might include the best option for a mutual outcome. That directly impacts the performance within the buyer-supplier relationship. Choosing for inferior actions and choices compared to alternatives will lead to less performance. If the buying organisation is aware of these better alternatives, this will lead to a changed view on how this buyer-supplier relationship is performing—also giving a negative outlook on how flexible the other organisation is, since they are not capable of forming an overview of all the different possible alternatives and therefore not being able to offer flexibility in choosing these options. That will also lead to a changed view on how an organisation views the competences of the other party. Since the ability

to form and provide a complete list of alternatives is in itself, a sign of competence of that organisation.

When a supplying organisation is not able to provide all the different alternatives products and services which are requested by the buying organisation, they will search for alternative suppliers. The latter can fulfil the whole package of needs. Therefore, affecting how this organisation sees the mutual attractiveness within this buyer-supplier relationship.

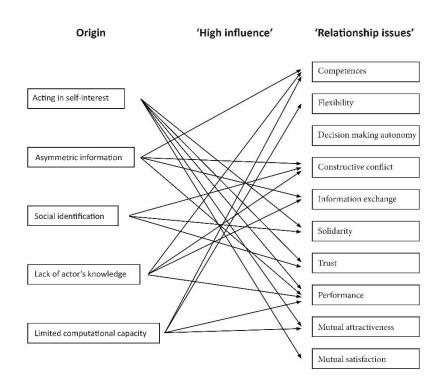


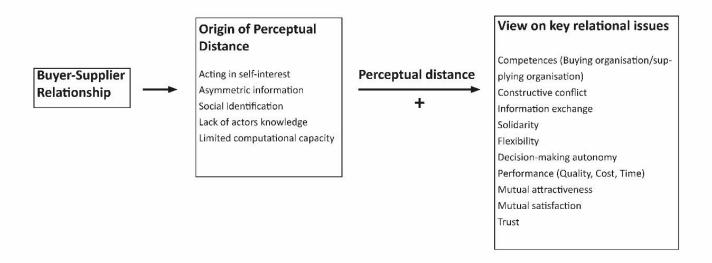
Figure 4: Relation between the theories and perceptual distance in the relationship issues

3.1 Conceptual Framework

The research aims to find the perceptual distance in buyer-supplier relationships and find the origin of these differences. Key relationship issues in a principal-agent relationship in which perceptual distance may exist have been mentioned in the theoretical framework. According to the literature review, origins of perceptual distance can be linked to principal-agency, social identity, social capital and bounded rationality theory, with its underlying problems of self-interest acting, asymmetric information, social identification, a lack of actors' knowledge and computational capacity.

From the I-P-O model and its contributions, a list of key relationship issues relevant to this research has been formed in which perceptual distance might be present. These factors are shown in table 1. Figure 4 shows the conceptual model for this research in which the key related issues in the buyer-supplier relationships will be examined for perceptual distance. From which the origins will be determined and analysed if these can be linked to the four previously mentioned theories.

Figure 5: Conceptual Model



4. Methods

The methods chapter will explain the methodology of how this research is performed—starting with how the literature review was conducted. Then an overview of the scope of this research, information on the analysed organisation and an overview of the buyer-supplier relationships which will be researched. An elaboration on the research design of this thesis will be given, followed by criteria on what cases will be selected and analysed. The data collection method and the characteristics of the research sample will be provided, concluding with an overview of the research sample.

4.1 Literature review

The literature review is conducted using a search matrix, and this matrix can be found in appendix 1 in the appendix. The search matrix was constructed by using the following steps: Search of literature is done by using keywords such as perceptual distance, principal-agent theory and buyer-supplier relationships to create an initial pool of potential literature. That pool will be filtered on time of publication, with preference going to recent articles. That to avoid outdated information which may be found in old articles. The exploratory nature of this research, with the concept of "perceptual distance" having limited previous research. Does influence if articles will be rejected purely based on their year of publication. If articles meet all the other standards, such as a form of publication, citations and quality, they will be included.

To enhance the quality and relevancy of these articles, they will be selected on where they are published—giving preference to articles published in high quality and relevant journals such as Academy of Management Review, Journal of Supply Chain Management and Journal of Applied Psychology. The bibliographies of found articles are used to find additional relevant articles on the given subjects.

4.2 Scope

The research will be conducted at one organisation working in the critical power supply industry: company X. Company X designs power innovations, precisely dynamic uninterruptible power supply systems (UPS). They combined the rotating filter concept with a kinetic energy model

and a diesel generator to provide uninterruptible power supply, also called DRUPS technology. (Company X, 2020) They have customers in various industries where a constant supply of power is critical such as data centres, chip manufacturers, hospitals and airports. Company X has facilities worldwide, with their head office located in Almelo (Netherlands). They have regional overhaul facilities in the US, Taiwan and the UK. Providing comprehensive service with eight customer support centres around the world. (Company X, 2020)

Manufacturing of New products, revisions and overhaul preparation are mainly conducted at the headquarter of Almelo. While company X has suppliers worldwide, a large percentage of the suppliers are located in the Netherlands and Germany. The purchasing department of Company X consists of 4 employees, operating by dividing supplies into commodities. These four commodity purchasers are mainly responsible for the buyer-supplier relationships of company X.

4.3 Research Design

An important aspect influencing this research is the exploratory nature of the concept of perceptual distance. Only limited previous research is available, and no clear theory supporting the concept is present. The best choice of research for this exploratory nature would be a case study since a case study is best used "when boundaries between a phenomenon and context are not clear, and the research has little control over the phenomenon and context" (Yazan, 2015, p. 148). A case study is also used when developing new theory, giving insight into the phenomenon and underlying mechanics of perceptual distance. (Voss, 2010, p. 182; Yazan, 2015, p. 148). That would contrast with the experiment, for instance, which deliberately isolates a phenomenon from its context, focusing on a limited number of variables (Zainal, 2003).

Although choosing for a different type of study, such as an experiment study, would also be a reliable option. Recreating the object of research, the different buyer-supplier relationships, would be a non-feasible option.

There are also some disadvantages to a case study as a research method. Some of these criticisms found in the literature are:

Case studies are often accused of a lack of rigour. Too many times, the case study investigator has been sloppy and has allowed equivocal evidence or biased views to influence the direction of the findings and conclusions" (Zainal, 2007, p. 5).

Case studies provide a minimal basis for scientific generalisation since they use a small number of subjects, some conducted with only one subject. The question commonly raised is "How can you generalise from a single case?" (Yin, 1984). Case studies are often labelled as being too long, difficult to conduct and producing a massive amount of documentation (Yin, 1984).

Weighing the advantages to the disadvantages of the case study and comparing them to the alternative options. Gives the conclusion that case studies are the right choice for this research. These cases will be from a single researched firm with a multiple case study from their different strategic buyer-supplier relationships. A single buying firm is used to ensure data collection of the buying organisation side on the buyer-supplier relationships. Data collection on the supplying side will depend on respondence and willingness to cooperate with the research from the suppliers.

A quantitative study in the form of online surveys will be used to measure perceptual distance in buyer-supplier relationships. Qualitative research in the form of interviews will be used to find the underlying causes of how this perceptual distance is created. That plays into the strengths of both these types of research since qualitative research is a method that is used to build theories, in contrary to quantitative research aiming at testing them (Urquhart, 2012, p. 293). That perceptual distance exists in buyer-supplier relationships has already been proven (Oosterhuis et al., 2013; van der Krift et al., 2017).

Whereas finding the origin of these perceptual distances is uncharted territory in comparison in current literature.

Another essential aspect which needs to be taken into consideration is the importance of a dyadic view on the relationship between buyer and supplier. Differences in perception need to be measured, and therefore it is crucial to measure data at both parties. Authors from previous research advocated the importance of a dyadic research method. At the same time, it is more complex and gives a completer picture and more insights in the relationship between buyer and supplier (Barnes et al., 2007, p. 665; Oosterhuis et al., 2013, p. 158).

In summary, the research design of this thesis will be a case study of a single firm with multiple cases which will measure perspectives from both parties in the relationship to obtain a dyadic view, by using mixed methods from both quantitative and qualitative research.

4.4 Case selection

In line with most supply chain studies, our research focuses on strategic and moderately strategic buyer-supplier relationships (Lawson, Tyler, & Cousins, 2008, p. 456; van der Vaart & van Donk, 2008, p. 46). Within the researched organisation, a selection is made of ten strategic suppliers and their linked commodity buyer. That will ensure variation between the different cases and will improve the quality of results. Since some factors which occur in cooperation with a supplier might not be present for another supplier, because of the different products they deliver, for example. Perceptual distance is a complex concept and analysing this in a high amount of relationship settings, will improve the data gathered on the concept.

The generalizability of results will also increase by creating an extensive research sample (Zikmund, Babin, Carr, & Griffin, 2013). A list of requirements is made to improve the data collection from the chosen buyer-supplier relationships. Buyer-supplier relationships who do not require these requirements are excluded.

Cases are chosen according to the following pre-conditions:

- (1) The buyer-relationship has existed long enough to be able to evaluate and to give indications on key relationship issues. The threshold for this will be a buyer-supplier relationship of over one year.
- (2) The buyer-supplier relationship needs to be actual, with enough interaction between both organisations in the last three months before the start of data collection.
- (3) The buyer-supplier relationship is important for both parties and is of a strategic or moderately strategic nature.
- (4) Within the buyer-supplier relationship, key individuals can be identified and are available for research

Per chosen buyer-supplier relationship, two questionnaires are conducted, one at the buyer and one at the supplier side. Afterwards, two interviews are conducted from the 5 chosen buyer-

supplier relationships with the most relevant perceptual distance, one at the buyer and one at the supplier side. It is vital to measure perspectives from both parties to accomplish a dyadic view and its relevance on the nature of inter-organisational relationships used in this research. If buyer-supplier relationships fail to meet the criteria during the research, they will be excluded from further research.

4.5 Data collection

Before data collection is started, ethical assessment on the research proposal is done by the ethics committee BMS of the University of Twente. Gaining approval will ensure this research confirms to all ethical standards. To measure the perceptual distance within the key relationship issues. They are operationalised, which can be found in appendix 3.

In this thesis, both questionnaires and semi-structured

interviews are used to obtain both quantitative support for the existence of perceptual distance and a more qualitative understanding of the reasons and mechanisms underlying perceptual distance (van der Krift & van Weele, p. 21). The supervisor affiliated with the researched organisation noted that some respondents to his knowledge would have a far better proficiency of the Dutch language compared to the English language. Therefore, both questionnaires and interviews will be conducted in the Dutch language for these respondents. However, there are also some international suppliers for which it is necessary to perform the questionnaire and interview in the English language. Therefore, the survey and interview are prepared in both languages.

Questionnaires

The questionnaires will be conducted online using the research software of Qualtrics. Answers can be given in a 5 point Likert scale, ranging from strongly agree (1) to strongly disagree (5) (Croasmun & Ostrom, 2011, p. 20). The questionnaires are used to discover and as a result of this validate if perceptual distance occurs in the analysed relationship between supplier and buyer. Also indicating in which factors perceptual distance is most noticeable and in which relationships, perceptual distance is most present. That will be used as input for the interview. Interviews

Semi-structured interviews will be conducted to gain qualitative data for meaningful dyadic insights on the origin of perceptual distance. These interviews will be built upon information

obtained by the questionnaires. Asking questions on the key-related issues in which perceptual distance was most apparent. These questions will measure if the underlying concepts derived from the theory are present in these buyer-supplier relationships. And if they play a role in creating the measured perceptual distance. The interviews are used to give a more qualitative understanding of how perceptual distance is caused in buyer-supplier relationships. These interviews will be open-ended and semi-structured. They will be conducted in a personal, one on one setting. An audio program will record them for them to be transcribed. Data from the interviews will be coded and processed in the results section. Both the questionnaire and interviews questions can be found in the appendix.

4.6 Data Analysis

Online questionnaire

Data from the online questionnaires will be processed in perceptual distance tables, which shows in which factors perceptual distance is noticeable per buyer-supplier relationship.

That will be created by establishing a score for every dimension for the buyer and the supplier side. Answers could be given on a Likert scale from one (Totally Disagree) to five (Totally Agree), resulting in a score for every answer on this scale. A mean for every dimension is calculated by dividing the total score for a dimension by the total amount of questions for these dimensions.

Perceptual distance is calculated by subtracting the mean score of the buyer side from the mean score of the supplier side. These tables with resulting scores for every dimension for both the buyer and supplier side can be found in the appendix. Table 3 in the results section will give a comprehensive overview of all the perceptual distances in the different buyer-supplier relationships.

Interviews

Qualitative data will be gathered from the interviews utilising coding. The purposes of coding are organising, reducing, processing and analysing data. The goal of the analysis is to identify underlying concepts, for which a qualitative clustering method is used, were similar patterns or characteristics are grouped and conceptualised by identifying relevant words and phrases (Campbell, Quincy, Osserman, & Pedersen, 2013, p. 300). The encoding will be done in the following steps:

Step 1: Interviews will be recorded, and in a later stage transcribed.

Carefully listening to the recordings and relistening to certain unclear parts are some measures taken to aid in the collection of reliable data.

Step 2: Identifying perceptual distances from the recordings

The next step will be identifying the mentioned perceptual distances from the interview, by isolating these parts of the interviews in which the interviewee indicates perceptual distances. More focus can be given to the data relevant to this research.

Step 3: Placing the perceptual distances into a category(dimension)

Mentioned perceptual distances will be labelled to a relevant dimension from the I-P-O model. The coding process, in which label is assigned to the gathered text from step 2, gives a clear overview in which relational dimensions, instances of perceptual distance were mentioned.

Step 4: Quoting the relevant explanation of the underlying reason for the interviewee During the interviews, questions were asked to identify what the underlying cause was according to the representative of the buying/supplying organisation. The explanation will be quoted to explore the underlying causation of the perceptual distance.

Step 5: Making a linkage to theory and underlying concept from the theoretical framework A link will be made if the perceptual distance and underlying reason mentioned by the interviewee can be explained by the theories and underlying concepts which are explored in the theoretical framework.

Step 6: Visualisation and analysis of the data

The last step will be the visualisation and analysis of the data. Visualisation of the data will be done in a comprehensive table in which the coded data from the previous steps will be mentioned for a buyer-supplier relationship. Analysis of the data will enable further conclusions and valuable answers to both the research question and propositions.

The table will exist of three columns, the first column will mention the perceptual distance labelled to a relationship dimension from the I-P-O model. The second column will mention the expected causes which will include the relevant quote of the interviewee on what causes this perceptual distance. And the last column will mention the relevant theory and underlying concept, which can be linked to this cause of the perceptual distance. Some suggested perceptual distances will not fit a particular dimension from the I-P-O model or cannot be connected to one of the theories/underlying concepts from the theoretical framework. If this is the case, these will be marked by the following symbols: "XXX".

4.7 Research sample

Thirteen questionnaires were sent to suppliers, twelve filled in responses were received, from which two were found to be inadequately filled in. Thirteen questionnaires were sent to purchasers, and thirteen filled in responses were received. From this data pool, a total of ten buyer-supplier relationships could be analysed to gain a dyadic view on key relationships topics. Data of three different respondents from the buying organisation were used in the analysis, and data from ten different respondents of the supplying organisations were used in further analysis. Further characteristics of these respondents were gathered in the questionnaires, including their job title, the total amount of years of the business relationship and years of them personally being involved in the buyer-supplier relationship. The following graphics give a representation of the research sample in these topics. The buyer-supplier relationships and corresponding names of respondents are anonymised to ensure confidentiality.

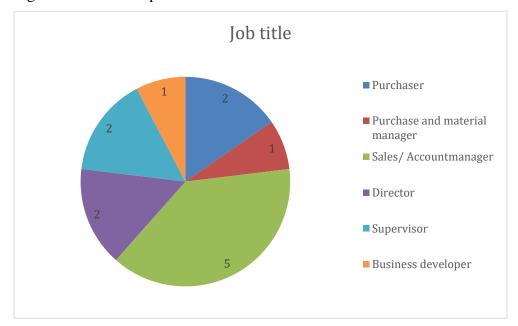


Figure 6. Job title respondents

5. Results

Following the research methodology, data collection has been done. An explanation will be given on the results of this data collection, showing the results of both the online questionnaire and the semi-structured, indicating if the perceptual distance was measured in the relationship issues of the investigated buyer-supplier relationships. And if the origin of perceptual distances within these buyer-supplier relationships can be explained by the relevant theory used in the theoretical framework. Concluding with an evaluation of the propositions, by comparing these pre-set statements to the actual results of this research.

5.1 Perceptual distances in buyer-supplier relationships

With the results of the online questionnaire, a dyadic view is built on key relationship issues from the suppliers and buyers' perspective. Table 3 shows the perceptual distance in every relationship dimension for the different buyer-supplier relationships. Further information can be found in the appendix on the detailed scores per relationship issue for both the buyer and supplier side resulting from the online questionnaire and how the perceptual distance was calculated.

Table 3. Perceptual distance in every relationship issue for the different buyer-supplier relationships

Buyer-supplier relationships	1	2	3	4	5	6	7	8	9	10	Average
Competences(B)	0	0.14	0.14	1.71	0.14	0.43	0	0	1	0	0.36
Competences(S)	0.57	0	0.72	0	0.29	0.29	0	0	0	0.43	0.23
Flexibility	0	0.33	0.33	0	0	0.34	0.33	0.67	0.67	0.33	0.30
Decision-making	1	0	0	1.67	0.67	1	1	0.33	0	0.33	0.6
autonomy											
Constructive	0.8	0	0.2	0.6	0.4	0	0	0.2	0.6	0.2	0.3
conflict											
Information	0.5	0.75	1	0.75	0.5	0	0	0.75	0	1	0.53
exchange											
Solidarity	0.25	0	0.5	1	0	0	0	0	0.25	0	0.2
Trust	0.75	0	0.5	0.5	0.25	0.25	0	0	0.5	0.25	0.3
Performance	0.33	0.67	0.67	0.33	0.67	0.67	1	0.67	0.33	0	0.53
Mutual	0	0.5	0.5	1	0.5	1.5	0	1	0.5	0	0.55
attractiveness											
Mutual	1	0.5	1	0	0.5	0.5	0	0	0.5	0.5	0.45
satisfaction											
Average	0.47	0.26	0.51	0.69	0.36	0.45	0.21	0.33	0.39	0.28	0.39

- (0) Zero measured perceptual distance
- (0>0.5) Low measured perceptual distance
- (0.5>1) Medium measured perceptual distance
- (1>1.5) High measured perceptual distance
- (>1.5) Very high measured perceptual distance

As the results show, in some dimensions, a clear perceptual distance was measured. In which dimension this perceptual distance is present differed for the different buyer-supplier relationship. On average, an average perceptual distance of 0.39 could be measured across the different buyer-supplier relationships, with buyer-supplier relationship 3 and 4 having a high average perceptual distance of 0.69 and 0.51. The dimensions of decision-making autonomy, information exchange, mutual attractiveness and performance had the most measured perceptual distance across the different buyer-supplier relationships, all being above 0.5.

To proceed with the interviews, a selection was made of the total pool of buyer-supplier relationships. The selection was made by identifying the buyer-supplier relationships with the most considerable noticeable perceptual distances in a dimension, preferably over 1. From the results of the online questionnaire, five buyer-supplier relationships could be identified, which had a significant perceptual distance in some of the relationship dimensions. Buyer-supplier relationship: 3,4,6,7,9.

5.2 Results of the interviews

For the five selected buyer-supplier relationships, semi-structured interviews were conducted to gain information on how suppliers and the buying organisation perceive perceptual distance in their relationships. Five interviews for the perspective of the buying organisation and five for the supplying organisations side. In this sub-chapter results will be shown of the results of the interviews. Tables have been constructed for every buyer-supplier relationship, as previously mentioned in the methods section. These can be found in the appendix. These tables give a detailed overview of the mentioned perceptual distances for every buyer-supplier relationship, including the citations from which these perceptual distances were noticed, their categorised relationship issue and by which theory and underlying concept they are explained. Below is Table 4, which shows an overview of all the mentioned perceptual distances classified to their relationship issue and the underlying concept of the theoretical framework.

Table 4. Overview of categorised perceptual distances from the interviews

	Acting in self- interest	Asymmetric information	Social Identification	Lack of an actor's knowledge	Limited computational capacity	Unclassified underlying concept	Total
Competences					1	2	3
Buying O.							
Competences				1	1	1	3
Supplying O.							
Flexibility					1	1	2
Decision-		4				2	6
making							
autonomy							
Constructive conflict							0
Information exchange		6		2		2	10
Solidarity	1		1				2
Trust							0
Performance	3				2	1	6
Mutual		1					1
attractiveness							
Mutual	1	1				2	4
satisfaction						_	
Total	5	12	1	3	5	11	37

In total 37 perceptual distances could be identified from the transcripts of the interviews. Most mentioned perceptual distances were categorised to the relationship issues of Information exchange (10), performance (6) and decision-making autonomy (6). That concurs with the results of the online questionnaire in which these relationship issues had the highest average perceptual distance. Only 1 perceptual distance on mutual attractiveness was mentioned during the interviews, contradicting with the findings from the online questionnaire, in which it also had one of the highest average perceptual distances.

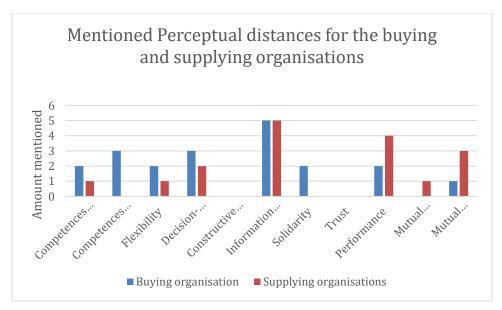
Asymmetric information (12) and unidentified origins (11) had the most influence in creating perceptual distances in the researched buyer-supplier relationships.

The following figures will give an overview of how the total mentioned perceptual distances were divided from the buying and supplying perspective in both the underlying concepts and the related issues.

Figure 7: Mentioned perceptual distances categorised to an underlying concept from the buying and supplying perspective



Figure 8: Mentioned perceptual distances categorised to relationship issues from the buying and supplying perspective



In total, 20 perceptual distances were mentioned by the buying organisation and 17 by the supplying organisations. The division to origins of these perceptual distances was very evenly divided between the buying organisation and supplying organisations, with a maximum

difference of 1 mentioned perceptual distance over these different underlying concepts from the framework. There was more difference in the division of categorisation to a relationship issue between the buyer and supplying perspective, with the buying interviews resulting in more mentioned perceptual distances in competences, decision making autonomy and solidarity. At the same time, the interviews with the supplying organisations resulted in more mentioned perceptual distances in performance, mutual attractiveness and mutual satisfaction.

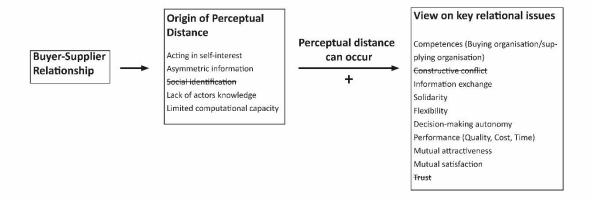
5.3 Propositions

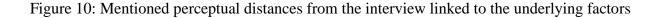
Six propositions were formulated from the theoretical framework. By using the data and results gathered in this research, these propositions will now be evaluated.

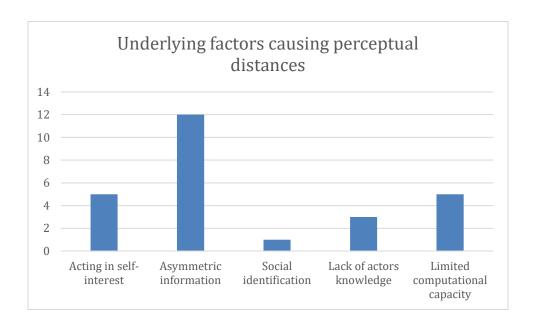
Proposition 1: Perceptual distance exists in a buyer-supplier relationship in key relationship issues.

The various measured perceptual distances from both the online questionnaire and the interviews give supporting evidence to this proposition. However, it also demonstrates that for some relationship issues within a buyer-supplier relationship, no perceptual distance may be present. Therefore, this presence of perceptual distance within key relationship issues is not 100% guaranteed. That calls for a modification of the proposition: Perceptual distance can occur in some of the key relationship issues of buyer-supplier relationships.

Figure 9: Adjusted conceptual model







Proposition 2: The presence of acting in self-interest in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues.

Five perceptual distances gathered from the interviews had a cause linked to acting in self-interest. That supports the statement that the presence of acting in self-interest plays a decisive role in creating perceptual distance in some buyer-supplier relationship. It is impossible to claim that this will always play a role in every buyer-supplier relationship. In the research sample for this research, data collection in one buyer-supplier relation did not result in a perceptual distance linked to acting in self-interest. The presence of acting in self-interest was expected to have the most influence on perceptual distance in the dimensions of Trust, Solidarity, Performance, Mutual satisfaction and mutual attractiveness. The found perceptual distances linked to acting in self-interest were categorised to solidarity (1), performance (3) and mutual satisfaction (1). This conformity with the theoretical framework gives additional support to not reject the proposition.

In conclusion, there is enough supporting evidence not to reject this proposition.

Proposition 3: The presence of asymmetric information in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues.

Twelve perceptual distances gathered from the interviews had a cause linked to asymmetric information. The high amount of found cases linked to asymmetric information gave compelling evidence that asymmetric information, at least for the buyer-supplier relationships of the researched company, plays a significant role in creating perceptual distances in key relationship issues.

The presence of asymmetric information was expected to have the most influence on perceptual distance in the dimensions of information exchange, performance, competences and constructive conflict. The found perceptual distances linked to asymmetric information were categorised to decision making autonomy (4), information exchange (6), mutual satisfaction (1) and mutual attractiveness (1). The evidence mostly confirms with the pre-set expectations, except the high amount of cases in the dimension of decision-making autonomy.

While this is surprising, it is also not illogical. Since data from the interview demonstrated that a different view on decision-making autonomy often originates from a lack of information sharing by a party on why certain decisions take longer than others and a lack of insight on how the decision-making process works within the other organisation.

In conclusion, there is enough supporting evidence not to reject this proposition.

Proposition 4: The presence of social identification in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues.

One perceptual distance gathered from the interviews had a cause linked to social identification. That gives little evidence to support the claim that social identification plays a decisive role in creating perceptual distance in key relationship issues. However, it should be stated that social identification can play a larger role in buyer-supplier relationships of other organisations. Data from the interviews suggested that the stakeholders in the researched buyer-supplier relationships are actively trying to avoid the presence of social identity within the relationship. If

this is not the case for buyer-supplier relationships of other organisations, the role of social identification would also increase. The presence of social identification was expected to have the most influence on perceptual distance in the dimensions of Constructive conflict, solidarity and trust. The only found case of perceptual distance linked to social identification was categorised to solidarity.

In conclusion, there is not enough evidence to support this proposition in the case of our research sample.

Proposition 5: A lack of actors' knowledge in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues.

Three perceptual distances gathered from the interviews had a cause linked to asymmetric information. That supports the statement that the presence of acting in self-interest plays a decisive role in creating perceptual distance in some buyer-supplier relationship.

The presence of a lack of actor's knowledge was expected to have the most influence on perceptual distance in the dimensions of Information exchange, performance, competences and constructive conflict. The found perceptual distances linked to asymmetric information were categorised to competences (1) and information exchange (2). That concurs with the pre-set expectations giving additional support not to reject the proposition.

In conclusion, there is enough supporting evidence not to reject this proposition.

Proposition 6: The presence of limited computational capacity of individuals in a buyer-supplier relationship positively influences the amount of perceptual distance in key relationship issues.

Five perceptual distances gathered from the interviews had a cause linked to limited computational capacity. That supports the statement that the presence of acting in self-interest plays a decisive role in creating perceptual distance in some buyer-supplier relationship.

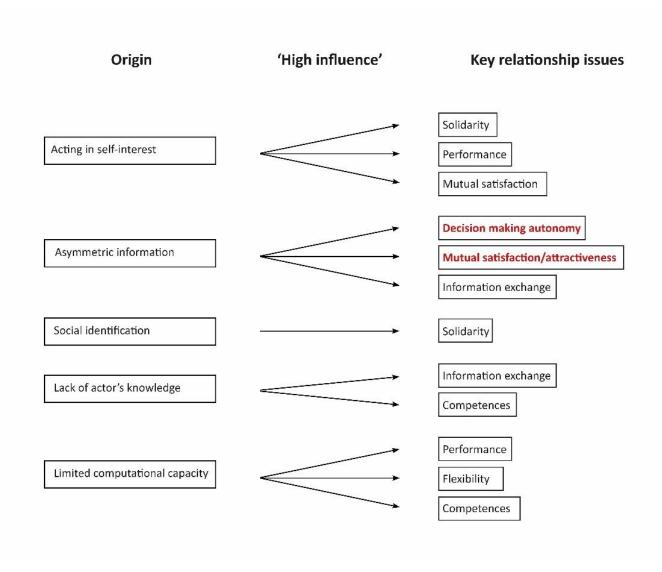
The presence of asymmetric information was expected to have the most influence on perceptual distance in the dimensions of Performance, Flexibility, Competences and mutual attractiveness.

The found perceptual distances linked to asymmetric information were categorised to competences (2), flexibility (1) and performance (2). That concurs with the pre-set expectations giving additional support not to reject the proposition.

In conclusion, there is enough supporting evidence not to reject this proposition.

Figure 11 gives an overview of the relationship on the above mentioned theories and relationship issues. Added relationship issues due to findings from the results are coloured red.

Figure 11. Adjusted relationship between theories and relationship issues



6. Discussion

With the results from this research, answers can be given to the main research question and its sub-questions. In this chapter, these conclusions of the research will be discussed and reflected upon. Theoretical and practical implications of the conclusions will be discussed. Concluding with the limitations of this research and recommendations on how to avoid these in future research.

6.1 Conclusion

Sub-question 1:

In which dimensions are perceptual distance present in the buyer-supplier relationships of the researched company?

A multitude of perceptual distances was discovered in the selected relationship issues from the I-P-O model. In which dimensions these were present differed significantly for every buyer-supplier relationship. Both the results of the online questionnaire and interview suggested that the dimensions of Information exchange, decision making autonomy and mutual satisfaction had the relatively highest amount of perceptual distance in the buyer-supplier relationships of the researched organisation. No relationship issue had zero measured perceptual distance for every buyer-supplier relationship, indicating that perceptual distance can play a role in every relationship issue in a buyer-supplier relationship.

Sub question 2:

What is the origin of perceptual distance within these key dimensions?

Many of the origins of the perceptual distances could be linked to the underlying concepts which were named in the theoretical framework: Acting in self-interest, asymmetric information, social identification, lack of actor's knowledge and limited computational capacity. The number of perceptual distances caused by asymmetric information was high.

The number of perceptual distances which were caused by acting in self-interest, lack of actor's knowledge and limited computational capacity was average. And the number of perceptual distances which were caused by social identification was low. Moreover, many of the found perceptual distances had a cause which was not linked to any of these underlying concepts found in the theoretical framework. In conclusion, the highest contributor to the perceptual distances

within the buyer-supplier relationships of the researched organisation was Asymmetric information. Answering these two sub-questions into detail enables us to give a general answer to the main research question:

Are perceptual distances present in buyer-supplier relationships of the researched company and what is the origin of these perceptual distances?

Yes, they are present in all of the selected I-P-O relationship issues, the relative highest amount of perceptual distance could be found in Information exchange, decision making autonomy and mutual satisfaction.

Many of the found perceptual distances originated from the underlying concepts given in the theoretical framework with asymmetric information having the most substantial influence in creating perceptual distance in the buyer-supplier relationships.

6.2 Theoretical implications

The results of this research confirmed many of the theories and concepts used in the theoretical framework. The results of this research confirmed the existence of perceptual distance in buyer-supplier relationships. In all the related issues of the I-P-O model, the perceptual distance was found in our data collection (van der Krift et al., 2017, p. 12). Giving evidence on the reliability of the I-P-O model on providing a categorised overview of issues in which perceptual distance may exist.

The role which the underlying concepts of acting in self-interest and asymmetric information play in creating perceptual distances has been proven by the numerous measured perceptual distances with this cause in the research sample. Giving support to the explanation principalagent theory presents to the presence of perceptual distance in principal-agent relationships(Eisenhardt, 1989, p. 60; van der Krift et al., 2017, p. 17).

Several perceptual distances from the gathered data found their origin in the underlying concepts of a lack of actors knowledge and limited computational capacity. Giving support to the explanation bounded rationality theory presents to the presence of perceptual distance(Ince, 2020, p. 13).

A minimal amount of perceptual distances was found, which had a cause linked to the underlying concept of social identification. Therefore, claims made by previous research on the role social identity theory provides in explaining perceptual distance, could not be supported (Beugelsdijk et al., 2009, p. 314; van der Krift & van Weele, p. 12). Additionally, the claim that examples of social identity can be found throughout an organisation and its different departments was not confirmed by this research (Ashforth & Mael, 1989, p. 22). Data from multiple interviews indicated that the stakeholders from both the buying and supplying organisations tried to be as unbiased as possible towards their own or other organisations. For example, when problems occurred, they would always keep in mind that mistakes within their organisation could have caused these problems—preferring to postpone with conclusions until all the information is on the table and do not reject possible faults made by themselves.

Results from this research gave support to the addition of the two related issues of mutual attractiveness and satisfaction to the I-P-O model. Multiple perceptual distances were found in by both the online questionnaire and interviews, which confirmed that perceptual distance could exist in these related issues for a buyer-supplier relationship.

Results showed that some relationship issues within a buyer-supplier relationship might have no perceptual distance, while others do show signs of perceptual distance. That concurs with the results of several previous researchers, which also showed that not all relationship issues were always affected by perceptual distance. And that the presence of perceptual distance in different relationships also varies between different buyer-supplier relationships. (Oosterhuis et al., 2013; Pulles et al., 2016; van der Krift et al., 2017)

Results of this research showed that perceptual distance was most present in the relationship issues of information exchange, performance and decision-making autonomy. The support of the role perceptual distance has on performance contradicts the inconclusive findings of previous research which could not support this claim (van der Krift et al., 2017). Moreover, having significant results which support that perceptual distance exists in the related issue of information exchange and decision-making autonomy is something which previous research did not yield. (Oosterhuis et al., 2013; van der Krift et al., 2017)

There was a significant difference noticeable between the type of perceptual distance mentioned from the buying and supplying perspective. Perceptual distances in different relationship issues were more prevalent in the interviews in the buying organisation compared to the supplying organisations. That is in line with the results of previous research which also showed that respondents of buying organisations indicated different types of perceptual distances than those of the supplying organisations (van der Krift et al., 2017). The higher indication of perceptual distances from the buying organisations in the relationship issues of competences, decision making autonomy and solidarity. And the higher indication of perceptual distances from supplying organisations in the relationship issues of performance, mutual attractiveness and mutual satisfaction were not supported by the results of previous research. While the characteristics of the study certainly play a role in this, it would be fascinating to see if this trend would occur in future research with buyer-supplier relationships operating in similar circumstances.

6.3 Practical implications

The most significant contributor to the found perceptual distances in the researched buyer-supplier relationships was Asymmetric information. That was a recurring topic in many of the interviews, that asymmetric information within the relationship caused uncertainty and even friction. A logical way to solve asymmetric information is to share all information with the other party openly. While this is a comprehensive approach, it is not a feasible action which can be implemented by the researched company. Therefore a few recommended steps are given to the researched company, which will diminish the role asymmetric information plays in their buyer-supplier relationships:

1. Identify key information

Plan a meeting with representatives of both the buying/supplying organisation and discuss what information is essential and needs to be shared with the other party.

In the interviews a few examples of this ''essential information'' were discussed:

Change in price/delivery time of current products.

What are the key technological developments (technology roadmap)on the agenda of the company?

Final decisions on large orders such as time planning and product specifications.

2. Information sharing

Make arrangements with each other on how this information is shared. Such as the implementation of monthly/weekly meetings in which key information and other affairs are discussed. Direct contacting of the other party when high priority cases occur, such as a phone call or e-mail if the delivery date of products is delayed.

Pro-actively sharing of information in the meetings such as a possible risk that the schedule of the project might be delayed.

3. Evaluation of information sharing and implementation of improvements

During these meetings, it is important to reflect with each other on how information sharing is going. Did we discover that we still miss the sharing of certain information within the relationship? If so, what information do we also need to include? Are certain aspects of the information sharing lacking? On what channels of information sharing do we need to improve?

Next to information sharing, which is closely related to information asymmetry. Decision-making autonomy was a relationship issue in which many perceptual distances were mentioned in the interviews. Many of the supplying organisations felt that the current decision-making process within the researched company was a long process in which it was hard to make changes even though this could be beneficial for both parties. While it is understandable from an engineering perspective that changes to a part, which is part of a more significant configuration, are not encouraged. Since calculations are made for the whole machine and changing the specifications of one element can have consequences for the rest of the configuration. It is still vital to keep an open mind to changes and improvements from the supplier if these benefits both parties in the long run. A small change in the material which might improve the quality and price of a particular product can seem insignificant for one machine. But in the long run, when multiple machines are built, these little changes can build up to a significant impact on the profitability and quality on their whole product range. In conclusion, the last recommendation to

the researched company is to investigate if improvements can be made to the current process of suppliers' deviation request.

Results from this research reflect the long-term, strategic oriented buyer-supplier relationships of the researched company and its suppliers. Other organisations could have a very different kind of buyer-supplier relationships with its supplier, especially if these relationships are more operational and/or short term oriented. Underlying concepts which played a significant role in this research sample could play no role in creating perceptual distance in other buyer-supplier relationships. Therefore, the generalizability for other companies is minor.

6.4 Limitations and future recommendations

There are also some limitations to this research when critically reflecting on the used research design. One of these is the use of coding by categorisation in the used methods.

Categorising a perceptual distance to a corresponding relationship issue and the cause to an underlying concept rests upon the idea that the theoretical framework of both the chosen L-P-O

underlying concept rests upon the idea that the theoretical framework of both the chosen I-P-O relationship issues and the list of reasons from the literature review will cover everything which will come up during data collection. In practice, there were some mentioned causes from the interviews, which were given during open-ended questioning, which could not be linked to found theory from the literature review. That leaves unanswered questions at the end of this research if these causes can be related to theory and underlying concepts from relevant literature.

Moreover, some cases of perceptual distances had interfaced with multiple relationship issues and linked theory causes. Making it hard for them to be placed in just one of these categories.

What gave further trouble to this difficulty for categorisation is that some of the theories which explain possible causes of perceptual distances, use similar concepts and idea's to explain this causation. That was already touched upon in the synthesis of the theories in the theoretical framework; an example of this is the overall importance of information exchange in all of the different theories. Although it is unrealistic to form a list of every possible relationship issue and all the different theories which might explain the causation of perceptual distances, especially given the scope and time frame of an average master thesis research. That will help to analyse the data by avoiding the situation in which a perceptual distance cannot be linked to a relationship issue and the cause of a theory. In future research, a clear separation and extension

between the different concepts and theories are recommended with specified conditions beforehand to ensure explicit allocations of found perceptual distances to a relationship issue or underlying concept. That might be hard to realise in practice since almost all the literature found for this research. Use concepts, dimensions and theories which were highly similar to each other. Such a clear boundary would be very beneficial in the later stage of a study since it makes allocating the found perceptual distance to a categorised source and dimensionless complex.

Another major limitation is the political nature of this research. In the buyer-supplier relationships which were researched, the supplying organisation will always have a motive to keep the customer pleased. In some interviews this was also mentioned, "the role of the supplying organisation is to keep the buying organisation satisfied." When looking at the enormous (monetary) value that some of these relationships have for the supplying organisation, and, understandably, the supplier wants to preserve the long-term buyer-supplier relationship with all means necessary. Unfortunately, this can affect the answers which will be given during data collection. Painting a negative picture on their view of the relationship could change the perception of the other party. Sensitive subjects such as the constructive conflict in the buyer-supplier relationships can be avoided during the questioning. That certainly was not the case during the majority of data collection for this research, and it undoubtedly played a role in some of the interviews and questionnaires.

To circumvent the political nature of this research, a different choice of research design is recommended. An online questionnaire and interviews, the data collection methods used for this research are susceptible to interviewees giving politically correct answers. There are also data collection methods which are more suitable in circumventing this limitation. Data collection methods such as experiments or observations could be applied to get an objective look of these of buyer-supplier relationships. With these methods, one of the key conditions would be that the key players should not notice they are being judged on how they act within the relationship, which would guarantee an unaltered state of the relationship by the research. And therefore, a realistic measurement of what role perceptual distance plays in this buyer-supplier relationship.

The last major limitation of this research is that the perspectives of both the buyer and supplier side in the researched buyer-supplier relationships are based on the opinion of one representative. At the same time, they gave a comprehensive perspective of the buyer-supplier relationship. They might have little experience with some aspects of the relationship, and their opinion is based on communication with colleagues instead of personal experience. Moreover, the expertise of colleagues in different departments might be very different than their perspective. There it is recommended in future research to focus more on a few buyer-supplier relationships, by expanding the research sample from the buying and supplying the organisation with individuals from different departments which play a crucial role in the buyer-supplier relationship. It is essential to gain information from various departments which play a role to avoid a narrow perspective from the relationship. Since interaction and the perspective of an Engineering department can be very different than a financial or purchasing department. Individuals in these departments often have other contact persons at the other organisation with which they interact daily, resulting in a different perspective on the relationship. By having a diverse research sample from both organisations, this will give a complete view of both the buying and supplying organisation on the buyer-supplier relationship.

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8.Appendix

1. Search Matrix

Keywords	Initial hits	Limit to 2005-2020	Hits only relevant subject areas	Usable and assessed papers	Search key
Perceptual distance	4.704	3.229	1.411	7	TITLE-ABS-KEY (perceptual AND distance) AND (LIMIT-TO (PUBYEAR, 2020-2005) AND (LIMIT-TO (SUBJAREA, "PSYC") OR LIMIT-TO (SUBJAREA, "ARTS") OR LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "MATE") OR LIMIT-TO (SUBJAREA, "MULT") OR LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "DECI")) AND (LIMIT-TO (LANGUAGE, "English"))
Social distance	35.964	29.212	11.874	13	TITLE-ABS-KEY (social AND distance) AND (LIMIT-TO (PUBYEAR, 2020-2005) AND (LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "PSYC") OR LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "ECON")) AND (LIMIT-TO (LANGUAGE, "English"))
Principal -agent theory	1.935	1.629	1.089	9	TITLE-ABS-KEY (principalagent AND theory) AND (LIMIT-TO (PUBYEAR, 2020-2005) AND (LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "ECON") OR

					LIMIT-TO (SUBJAREA, "PSYC") OR LIMIT-TO (SUBJAREA, "MULT") OR LIMIT-TO (SUBJAREA, "MATE")) AND (LIMIT-TO (LANGUAGE, "English"))
Buyer -supplier relationship s	1.534	1.278	1.152	12	TITLE-ABS-KEY (buyer-supplier AND relationships) AND (LIMIT-TO (PUBYEAR, 2020-2005) AND (LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "DECI") OR LIMIT-TO (SUBJAREA, "ECON") OR LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA, "MATE") OR LIMIT-TO (SUBJAREA, "MATE") OR LIMIT-TO (SUBJAREA, "MULT") OR LIMIT-TO (SUBJAREA, "PSYC")) AND (LIMIT-TO (LANGUAGE, "English"))

2. Operationalization Factors (Including definition source and related question in questionnaire)

Definition / description	Source	Question	
Key relationship issues of the organizations			
Competences	(Homburg & Jensen, 2007, p. 126)	7+26	
The hard skills, i.e. "the depth of knowledge required to cope with a complex task".			
"The extent to which a typical employee [] is able to sustain conflicts, to communicate, and to convince."			
Flexibility	(Stephen and Coote, 2007; Heide and John, 1992)	15	
"Flexibility defines a bilateral expectation of willingness to make adaptations as circumstances change."			
Decision making autonomy	(Gibson et al, 2009).	21	
The locus of expertise, responsibility, accountability and authority between client and contractor			
Key relationship issues of the buyer-supplier relationship			
Constructive conflict	(Gladstein, 1984 in Gibson et al. 2009).	9	
Openness of communications and supportiveness associated with conflict resolution			
Information exchange	(Nyaga et al, 2010; Heide and John, 1992)	11	

"Information exchange is the expectation that the parties will freely and actively provide useful information to each other."		
Solidarity	(Stephen and Coote, 2007; Heide and John, 1992)	18
"Solidarity is a bilateral expectation that behaviours are directed toward relationship maintenance and a high value is placed on the joint relationship [and] a feeling of mutuality, a "we-ness" that assures the parties that issues that arise in the course of the relationship will be treated as joint concerns."		
Trust	(van der Krift, H., van Weele, A., & Gevers, J. ;2017)	10
The degree to which partners expect that the other party acts according to what they promised. And in the interest of both parties.		
Key relationship issues of the results		
Performance (Quality, Cost and Time)	(Van der krift et al., 2016,p. 45)	12
The outcomes as compared to the objectives that have been defined, i.e. the extent to which the objectives have been accomplished.		
Mutual attractiveness	(Self-developed)	19
The degree to which both parties value the buyer-supplier relationship		
Mutual satisfaction	(Self-developed)	19
The degree to which both parties are satisfied with the buyer-supplier relationship		

3. Interview Consent form

Titel onderzoek: Presence and origin of perceptual distance in a buyer-supplier relationship

Verantwoordelijke onderzoeker: F.G.S. Vos, Universiteit Twente

In te vullen door de deelnemer:

Ik verklaar op een voor mij duidelijke wijze te zijn ingelicht over de aard, methode en doel van het onderzoek. Ik weet dat de gegevens en resultaten van het onderzoek alleen anoniem en vertrouwelijk aan derden bekend gemaakt zullen worden. Mijn vragen zijn naar tevredenheid beantwoord. Ik begrijp dat geluidsmateriaal of bewerking daarvan uitsluitend voor analyse en/of wetenschappelijke presentaties zal worden gebruikt. Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud me daarbij het recht voor om op elk moment zonder opgaaf van redenen mijn deelname aan dit onderzoek te beëindigen. Naam deelnemer:

Naam deelnemer:
Datum:
Handtekening deelnemer:

In te vullen door de uitvoerende onderzoeker:

Ik heb een mondelinge en schriftelijke toelichting gegeven op het onderzoek. Ik zal resterende vragen over het onderzoek naar vermogen beantwoorden. De deelnemer zal van een eventuele voortijdige beëindiging van deelname aan dit onderzoek geen nadelige gevolgen ondervinden.

Naam onderzoeker: Niek ten Buuren
Datum:
Handtekening onderzoeker:
Contactgegevens onderzoeker: n.tenbuuren@student.utwente.n

4. Online questionnaire buying organization (Dutch only version)

Onderzoek bedrijf X-Inkopers

Start of Block: Default Question Block
Q1 Beste lezer,
U ontvangt deze vragenlijst omdat u een leverancier bent van bedrijf X.
Door middel van dit onderzoek wil ik onderzoek doen naar de koper-leverancier relaties van bedrijf X.
In de vragenlijst volgen vragen over de samenwerking tussen uw bedrijf en bedrijf X. Er worden een aantal stellingen gepresenteerd, waarin u kunt aangeven of u het hier mee eens of mee oneens bent. Op deze manier is het mogelijk om te kijken of er verschillen zijn in perspectieven in koper-leveranciers relaties van bedrijf X over verschillende aspecten.
We willen u vragen de vragenlijst volledig in te vullen.
Mocht u nog vragen hebben over dit onderzoek, dan kunt u terecht bij: Niek ten Buuren, n.tenbuuren@student.utwente.nl
Q13 De gegevens die worden verzameld in deze vragenlijst mogen worden gebruikt voor hierboven beschreven onderzoek.
O Ja, ik geef toestemming (1)
O Nee, ik geef geen toestemming (2)
Page Break

Q3 Hoelang bestaat deze koper-leverancier relatie al	tuss	en be	drijf	X en	de le	evera	nciei	?			
	0	10	20	30	40	50	60	70	80	90	100
Jaren ()						ı				I	
Q24 Hoelang bent U al actief betrokken in de koper-							-				
	0	5	10	15	20	25	30	35	40	45	50
Jaren ()						1				!	

Q5 Er zullen nu een aantal stellingen volgen over verschillende onderwerpen. Er wordt u gevraagd aan te geven in hoeverre u het eens bent met de stelling. Hierin geeft u op een 5 punten schaal aan of u er helemaal mee eens bent tot en met helemaal mee oneens									
Q7 Ik ben tevreden over de competenties van de medewerkers van de leverancier met betrekking tot									
ik ben tevreden over de eon	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)				
de inhoudelijke kennis van de medewerkers (1)	0	0	0	0	0				
de technische vaardigheden van de medewerkers (2)	0	\circ	\circ	\circ	\circ				
de vaardigheid van de medewerkers om als een team te werken (3)	0	0	0	0	0				
de communicatie vaardigheden van demedewerkers (4)	0	\circ	\circ	0	0				
de onderhandelingskwaliteiten van de medewerkers (5)	0	0	0	0	\circ				
de vaardigheid om anderen te overtuigen van een bepaald standpunt (6)	0	0	0	0	\circ				
het empathisch vermogen van de medewerkers (7)	0	0	0	0	0				
	I								

Q28

Ik ben tevreden over de competenties van de medewerkers van mijn bedrijf met betrekking tot..

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
de inhoudelijke kennis van onze medewerkers (1)	0	0	0	0	0
de technische vaardigheden onze medewerkers (2)	0	\circ	\circ	\circ	\circ
de vaardigheid van onze medewerkers om als een team te werken (3)	0	0	0	0	0
de communicatie vaardigheden onze demedewerkers (4)	0	0	0	0	0
de onderhandelingskwaliteiten van onze medewerkers (5)	0	\circ	\circ	0	0
de vaardigheid om anderen te overtuigen van een bepaald standpunt (6)	0	0	0	0	0
het empathisch vermogen van onze medewerkers (7)	0	0	0	0	0

Q9 Binnen de samenwerking...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
worden conflicten tussen beide partijen goed opgelost (1)	0	0	0	0	0
gaat de andere partij met een open houding het gesprek in om een conflict op te lossen (2)	0		0	0	
gaan wij met een open houding het gesprek in om een conflict op te lossen (3)	0		0	0	
is er soms een vijandige sfeer tussen beiden partijen (4)	0	0	0	0	0
is er constructief conflict in de relatie (5)	0	0	0	0	

Q21 Binnen de samenwerking...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
kan er weinig actie ondernomen worden totdat H.P.P. een beslissing goedkeurde (1)	0	0	0	0	0
worden nieuwe beslissingen gemaakt door de leverancier ontmoedigt door H.P.P (2)	0		0	0	0
moeten zelfs kleine zaken toestemming krijgen van beide partijen (3)	0		0	0	

Q11 Binnen de samenwerking...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
wordt informatie die de andere partij kan helpen gedeeld (1)	0	0	0	0	0
wordt de partner geïnformeerd over gebeurtenissen of veranderingen die effect hebben op belangrijke zaken (2)	0	0			
wordt de andere partij vooraf ingelicht over gemaakte veranderingen in het product (3)	0	0	0		0
wordt ook informatie gedeeld op momenten naast de geplande overleggen (4)	0				0
'					

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Q15 Wanneer...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
er onverwachte					
situaties					
ontstaan, is er de					
neiging om een					
nieuwe					
overeenkomst af					
te sluiten met de	\circ	\bigcirc		\bigcirc	\bigcirc
partner, in plaats					
van vast te					
houden aan de					
afgesloten					
overeenkomst					
(1)					
er onverwachte					
situaties					
ontstaan zijn					
beide partijen					
bereid om een					
compromis te					
vormen in dienst					
van de relatie					
(2)					
er nieuwe					
verzoeken door					
ons werden					
gemaakt tijdens					
het produceren					
van het product,	O	\bigcirc	\bigcirc	\circ	\circ
werd dit flexibel					
opgepakt door					
de andere partij					
(3)					
. ,					

Q18 Binnen de samenwerking...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
worden problemen/conflicten opgepakt als gezamenlijke verantwoordelijkheid (1)	0	0	0	0	0
(2)	0	0	0	0	0
streven beide partijen naar verbeteringen die de samenwerking als geheel en niet alleen de individuele partijen gunstig uitkwamen (3)	0		0	0	0
worden problemen aan één partij overgelaten en niet samen opgelost. (4)	0	0	0	0	0
wordt de verantwoordelijkheid om ervoor te zorgen dat de relatie voor alle partijen werkt, gezamenlijk gedeeld. (5)	0			0	

Q12 Binnen de samenwerking,

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
blijven de kosten van					
producten altijd					
binnen het					
vooraf					
besproken					
budget (1)					
worden producten altijd geleverd binnen de gestelde planning (2)	0	0		0	0
voldoet het kwaliteit van producten altijd volgens de vooropgestelde verwachtingen (3)				0	

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Q10 Ik...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
vertrouw de medewerkers van de partner in de samenwerking (1)	0	0	0	0	
heb het idee dat de beloften die zijn gemaakt door de partner werden nagekomen (2)	0		0		
vind dat de leverancier een goede compensatie krijgt voor het geleverde werk (3)	0		0	0	0
vind dat de partner consistent was in hoe zij veranderingen toebrachten aan bestelde producten (4)	0		0		

Q19 Ik...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
ben tevreden over de huidige samenwerking (1)	0	0	0	0	0
zie de ander als een geprefereerde leverancier (2)	0	0	0	0	0
zal actief de andere partij benaderen in toekomstige gerelateerde producten (3)	0		0	0	
vind dat er weinig verbeterpunten zijn in de huidige samenwerking (4)	0		0	0	

Q29 Ik geef de huidige samenwerking met de leverancier, het volgende cijfer op een schaal van 1 tot 10:

0 1 2 3 4 5 6 7 8 9 10

End of Block: Default Question Blo

5.Online questionnaire supplying organization (Dutch and English version)

Onderzoek bedrijf X-Leveranciers

Start of Block: Default Question Block

Q1 Beste lezer,

U ontvangt deze vragenlijst omdat u een leverancier bent van bedrijf X.

Door middel van dit onderzoek wil ik onderzoek doen naar de koper-leverancier relaties bedrijf X.

In de vragenlijst volgen vragen over de samenwerking tussen uw bedrijf en bedrijf X. Er worden een aantal stellingen gepresenteerd, waarin u kunt aangeven of u het hier mee eens of mee oneens bent. Op deze manier is het mogelijk om te kijken of er verschillen zijn in perspectieven in koper-leveranciers relaties van bedrijf X over verschillende aspecten.

We willen u vragen de vragenlijst volledig in te vullen.

Mocht u nog vragen hebben over dit onderzoek, dan kunt u terecht bij: Niek ten Buuren, n.tenbuuren@student.utwente.nl

Q1 Dear reader,

You are a recipient of this questionnaire because you are a supplier of company X. With this questionnaire, we want to research buyer-supplier relationships of company X.

In the questionnaire you will find questions about the collaboration between your company and company X. Multiple statements will be presented, on which you can state if you agree or disagree. This makes it possible to see if perceptual differences in different topics are present within the buyer-supplier relationships of company X.

We would like to ask you to fully complete the questionnaire.

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If you have any questions about this research, you can contact: Niek ten Buuren, n.tenbuuren@student.utwente.nl
Q13 De gegevens die worden verzameld in deze vragenlijst mogen worden gebruikt voor de hierboven beschreven onderzoek.
O Ja, ik geef toestemming (1)
O Nee, ik geef geen toestemming (2)
Q13 The data gathered in this questionnaire may be used for the above described research.
○ Yes, I give my permission (1)
O No, I do not give my permission (2)
Page Break

Q23	Hoe heet het bedrijf waar u voor werkt?											
Q23	What is the name of the company you work for	?										
Q3 \	Wat is uw functie binnen uw bedrijf?											
Q3 '	What is your function within the company you w	ork 1	for?									
Q24	Hoelang bestaat de koper-leverancier relatie al t	tusse.		lrijf 2					70	80	90	100
	Jaren ()						1				l	
Q24	How long has the buyer-supplier relationship of										90	100
	Years ()			_	_	_	-	_	_		!	
		ı										

	0	5	10	15	20	25	30	35	40	45	50
			10								
Jaren ()						I				!	
Q29 How long have you been active in the buyer-sup	oplie	r rela	ıtions	hip b	etwe	en co	ompa	ny X	and	your	
Q29 How long have you been active in the buyer-sup	oplie	r rela	utions	hip b	etwe	en co	ompa	ny X	and	your	
	-		ations 10	-			-				

Page Break

Q5 Er zullen nu een aantal stellingen volgen over verschillende onderwerpen.

Er wordt u gevraagd aan te geven in hoeverre u het eens bent met de stelling.

Hierin geeft u op een 5 punten schaal aan of u er helemaal mee eens bent tot en met helemaal mee oneens.

Q5

A few statements will now follow for different subjects. You will be asked to what scale you agree with the statements. You can indicate on a 5 point scale to what degree you agree or disagree with these statements.

Q7 Ik ben tevreden over de competenties van de medewerkers van bedrijf X met betrekking tot...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
de inhoudelijke kennis van de medewerkers (1)	0	0	0	0	0
de technische vaardigheden van de medewerkers (2)	0	0	0	0	0
de vaardigheid van de medewerkers om als een team te werken (3)	0	\circ	0	0	\circ
de communicatie vaardigheden van de medewerkers (4)	0	0	0	0	0
de onderhandelingskwaliteiten van de medewerkers (5)	0	0	0	0	0
de vaardigheid om anderen te overtuigen van een bepaald standpunt (6)	0	0	\circ	0	0
het empathisch vermogen van de medewerkers (7)	0	0	0	0	0

Q7 I am content with the competences of the employees of company \boldsymbol{X} with regards to...

	Totally agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Totally Disagree (5)
the substansive knowledge of the employees (1)	0	0	0	0	0
the technical skills of employees (2)	0	0	0	0	0
the skill of employees to work together as a team (3)	0	0	0	0	0
the communication skills of employees (4)	0	0	0	0	0
the negotiation qualities of employees (5)	0	0	0	0	0
the skill to convince others of a certain point of view (6)	0		0	0	
the empathic skill of employees (7)	\circ	0	0	0	0

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Q30 Ik ben tevreden over de competenties van de medewerkers van mijn bedrijf met betrekking tot..

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
de inhoudelijke kennis van de medewerkers (1)	0	0	0	0	0
de technische vaardigheden van de medewerkers (2)	0	0	\circ	\circ	0
de vaardigheid van de medewerkers om als een team te werken (3)	0	0	\circ	0	0
de communicatie vaardigheden van demedewerkers (4)	0	0	0	0	0
de onderhandelingskwaliteiten van de medewerkers (5)	0	0	0	0	0
de vaardigheid om anderen te overtuigen van een bepaald standpunt (6)	0	0	0	0	0
het empathisch vermogen van de medewerkers (7)	0	0	0	0	0

Q30 I am content with the competences of the employees of my company with regards to...

	Totally agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Totally disagree (5)
the substansive knowledge of the employees (1)	0	0	0	0	0
the technical skills of employees (2)	0	0	0	0	0
the skill of employees to work together as a team (3)	0	0	0	0	0
the communication skills of employees (4)	0	0	0	0	0
the negotiation qualities of employees (5)	0	0	0	0	0
the skill to convince others of a certain point of view (6)	0	0	0		0
the empathic skill of employees (7)	\circ	0	0	0	0

Q9 Binnen de samenwerking...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
worden conflicten tussen beide partijen goed opgelost (1)	0	0	0	0	0
gaat de andere partij met een open houding het gesprek in om een conflict op te lossen (2)	0		0	0	
gaan wij met een open houding het gesprek in om een conflict op te lossen (3)	0		0	0	
is er soms een vijandige sfeer tussen beiden partijen (4)	0	0	0	0	0
is er constructief conflict in de relatie (5)	0	0	0	0	0

Q9 Within the collaboration...

	Totally agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Totally disagree (5)
conflicts between both parties are resolved well (1)	0	0	0	0	0
the other party has an open attitude in trying to solve conflicts (2)	0	0	0	0	
my company tries to solve conflicts with an open attitude (3)	0	0	0	0	0
there sometimes is a hostile atmosphere between both parties (4)	0	0	0	0	
there is constructive conflict within the relation (5)	0	0		0	0

Q21 Binnen de samenwerking...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
kan er weinig actie ondernomen worden totdat H.P.P. een beslissing goedkeurde (1)	0	0	0		0
worden nieuwe beslissingen gemaakt door uw bedrijf ontmoedigt door H.P.P (2)	0		0		0
moeten zelfs kleine zaken toestemming krijgen van beide partijen (3)	0	0			0

Q21 Within the co-operation...

little action can be undertaken before H.P.P. approved a decision (1) new decision made by your company are not encouraged by H.P.P (2)	disagree 5)
made by your company are not encouraged by H.P.P (2)	0
	0
even minor affairs need to get an approval of both parties (3)	0

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Q11 Binnen de samenwerking...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
wordt informatie die de andere partij kan helpen gedeeld (1)	0	0	0	0	0
wordt de partner geïnformeerd over gebeurtenissen of veranderingen die effect hebben op belangrijke zaken (2)				0	
wordt de andere partij vooraf ingelicht over gemaakte veranderingen in het product (3)	0		0	0	0
wordt ook informatie gedeeld op momenten naast de geplande overleggen (4)	0		0	0	0

Q11 Within the co-operation...

	Totally agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Totally disagree (5)
information that can help the other party is shared (1)	0	0	0	0	0
the partner is informed about events or changes that can have an effect on important matters (2)		0	0		0
the other party is informed beforehand about changes in the product (3)	0	0	0		0
information is also shared outside the planned meetings (4)		0	0		0
ı					

Q15 Wanneer...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
er onverwachte					
situaties					
ontstaan, is er de					
neiging om een					
nieuwe					
overeenkomst af					
te sluiten met de	\circ	\bigcirc		\bigcirc	
partner, in plaats					
van vast te					
houden aan de					
afgesloten					
overeenkomst					
(1)					
er onverwachte					
situaties					
ontstaan zijn					
beide partijen	\circ				
bereid om een					
compromis te					
vormen (2)					
er nieuwe					
verzoeken door					
ons werden					
gemaakt tijdens					
het produceren					
van het product,	O	\bigcirc	\bigcirc	\circ	\bigcirc
werd dit flexibel					
opgepakt door					
de andere partij					
(3)					

Q15 When...

	Totally agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Totally disagree (5)
unexpected situations occur, there is the tendancy to get a new agreement with the partner, instead of holding on to what has been agreed on before (1)					0
unexpected situations occur, both parties are willing to make a compromise in service of the relationship (2)					
new requests were made by us during the process of manufacturing the product, this has been handled with flexibility by the other party (3)	0				0

Q18 Binnen de samenwerking...

Q10 Billion de Sumen	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
worden problemen/conflicten opgepakt als gezamenlijke verantwoordelijkheid (1)	0	0	0	0	0
(2)	0	0	0	0	0
streven beide partijen naar verbeteringen die de samenwerking als geheel en niet alleen de individuele partijen gunstig uitkwamen (3)	0			0	
worden problemen aan één partij overgelaten en niet samen opgelost. (4)	0	0	0	0	0
wordt de verantwoordelijkheid om ervoor te zorgen dat de relatie voor alle partijen werkt, gezamenlijk gedeeld. (7)	0	0	0	0	

Q18 Within the co-operation...

conflicts/problems are handled as a shared responsibility (1) (2) both parties strive to make improvements to the relationship as a whole and do not only look at	0	0
both parties strive to make improvements to the relationship as a whole and do not only look at	0	\circ
make improvements to the relationship as a whole and do not only look at		
improvements that will only benefit one of the parties (3)	0	0
problems are left to be solved by one party and are not solved together (4)	0	0
wordt de verantwoordelijkheid om ervoor te zorgen dat de relatie voor alle partijen werkt, gezamenlijk gedeeld. (7)	0	0

Q12 Binnen de samenwerking...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
blijven de					
kosten van					
producten altijd					
binnen het		\bigcirc	\bigcirc	\bigcirc	\bigcirc
vooraf					
besproken					
budget (1)					
worden					
producten altijd					
geleverd binnen		\bigcirc		\bigcirc	
de gestelde					
planning (2)					
voldoet het					
kwaliteit van					
producten altijd					
volgens de					
vooropgestelde					
verwachtingen					
(3)					

Q12 Within the co-operation...

	Totally agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Totally disagree (5)
the costs of the products remain					
within the discussed budget (1)	0	0	0	0	0
products are always delivered within the discussed time schedule	0	0	0	0	0
the quality of the products always meet the discussed expectations (3)	0	0	0	0	0
	1				

Q10 Ik...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
vertrouw de medewerkers van de partner in de samenwerking (1)	0	0	0	0	0
heb het idee dat de beloften die zijn gemaakt door de partner werden nagekomen (2)	0		0	0	
vind dat mijn bedrijf een goede compensatie krijgt voor het geleverde werk (3)	0		0	0	0
vind dat de partner consistent was in hoe zij veranderingen toebrachten aan bestelde producten (4)	0		0		

Q10 I...

	Totally agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Totally disagree (5)
trust the employees of the partner within the co- operation (1)	0	0	0	0	0
believe that promises made by the partner will be uphold (2)	0	0	0	0	0
think that my company gets a fair compensation for the work which is done (3)	0	0	0		0
think that the partner was consistent in how changes have been made in the ordered products (4)	0			0	0

Q19 Ik...

	Helemaal mee eens (1)	Mee eens (2)	Neutraal (3)	Mee oneens (4)	Helemaal mee oneens (5)
ben tevreden over de huidige samenwerking (1)	0	0	0	0	0
zie de ander als een geprefereerde koper (2)	0		0	0	
zal actief de andere partij benaderen in toekomstige gerelateerde producten (3)	0		0	0	
vind dat er weinig verbeterpunten zijn in de huidige samenwerking (4)	0		0		

Q19 I...

	Totally agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Totally disagree (5)
am satisfied about the					
current	\circ		\bigcirc		\bigcirc
collaboration (1)					
see company X					
as a preferred buyer (2)	O	O	O	O	O
will be actively					
reaching out in the future to the					
other party regarding	0	0	0	0	0
related products (3)					
think there are					
not many improvements					
that can be made within the	\circ	\circ	\circ	\circ	\circ
current collaboration (4)					
Collaboration (4)					

Q31 Ik geef de huidige samenwerking met bedrijf X, het volgende cijfer op een schaal van 1 tot 10: $0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$



Q31 I give the current relationship with company X, the following grade from 1(Very dissatisfied) till 10(Very Satisfied)

0 1 2 3 4 5 6 7 8 9 10



End of Block: Default Question Block

6. Results of the online questionnaire

Table 5 Buyer-supplier relationship 1

Average perceptual distance over dimensions= 5.2/11=0.47

Overall rating of relationship buyer (8) and supplier (8).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	4	4	0
Competences (S)	4.57	4	0.57
Flexibility	4	4	0
Decision-making	3	4	1
autonomy			
Constructive	4.6	3.8	0.8
conflict			
Information	4	4.5	0.5
exchange			

Solidarity	4.25	4.5	0.25
Trust	4.5	3.75	0.75
Performance	4.33	4	0.33
Mutual	5	5	0
attractiveness			
Mutual	4.5	3.5	1
satisfaction			

Table 6 Buyer-supplier relationship 2 $Average\ perceptual\ distance\ over\ dimensions=2.8/11=0.26$ Overall rating of relationship buyer (7) and supplier (8).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	3.86	4	0.14
Competences (S)	4	4	0
Flexibility	3.66	3.33	0.33
Decision-making	3.33	3.33	0
autonomy			
Constructive	3.6	3.6	0
conflict			
Information	4	3.25	0.75
exchange			
Solidarity	3.5	3.5	0
Trust	4	4	0
Performance	3.66	3	0.66
Mutual	4	3.5	0.5
attractiveness			
Mutual	4	3.5	0.5
satisfaction			

Table 7 Buyer-supplier relationship 3

Average perceptual distance over dimensions= 5.55/11= 0.505

Overall rating of relationship buyer (7) and supplier (8).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	4	4.14	0.14
Competences (S)	3.71	4.43	0.72
Flexibility	3	3.33	0.33
Decision-making	3	3	0
autonomy			
Constructive	3.2	3.4	0.2
conflict			
Information	4	5	1
exchange			
Solidarity	3.5	4	0.5
Trust	4	4.5	0.5
Performance	3.33	4	0.66
Mutual	4	4.5	0.5
attractiveness			
Mutual	4	3	1
satisfaction			

Table 8 Buyer-supplier relationship 4
Average perceptual distance over dimensions= 7.56/11=0.69
Overall rating of relationship buyer (8) and supplier (8).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	2.86	4.57	1.71
Competences (S)	4.43	4.43	0
Flexibility	4	4	0
Decision-making	1.66	3.33	1.67
autonomy			
Constructive	3.6	3	0.6
conflict			
Information	4.75	4	0.75
exchange			
Solidarity	4.4	3.4	1
Trust	4.5	4	0.5
Performance	4.66	4.33	0.33
Mutual	5	4	1
attractiveness			
Mutual	4.5	4.5	0
satisfaction			

Table 9 Buyer-supplier relationship 5

Average perceptual distance over dimensions= 3.92/11=0.36

Overall rating of relationship buyer (7) and supplier (8).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	4	3.86	0.14
Competences (S)	3.86	3.57	0.29
Flexibility	3.66	3.66	0
Decision-making	3.33	2.66	0.67
autonomy			
Constructive	3.4	3	0.4
conflict			
Information	3.75	4.25	0.5
exchange			
Solidarity	3.5	3.5	0
Trust	4	4.25	0.25
Performance	3.33	2.66	0.67
Mutual	3.5	4	0.5
attractiveness			
Mutual	3.5	4	0.5
satisfaction			

Table 10 Buyer-supplier relationship 6

Average perceptual distance over dimensions=4.98/11=0.45

Overall rating of relationship buyer (7) and supplier (7).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	4	3.57	0.43
Competences (S)	3.71	4	0.29
Flexibility	4	3.66	0.34
Decision-making	3.33	2.33	1
autonomy			
Constructive	3.6	3.6	0
conflict			
Information	3.75	3.75	0
exchange			
Solidarity	3.25	3.25	0
Trust	4.25	4	0.25
Performance	3.66	4.33	0.67
Mutual	4.5	3	1.5
attractiveness			
Mutual	4	3.5	0.5
satisfaction			

Table 11 Buyer-supplier relationship 7

Average perceptual distance over dimensions= 2.33/11=0.21

Overall rating of relationship buyer (8) and supplier (9).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	4.29	4.29	0
Competences (S)	4.57	4.57	0
Flexibility	4.33	4	0.33
Decision-making	4	3	1
autonomy			
Constructive	3.8	3.8	0
conflict			
Information	4.25	4.25	0
exchange			
Solidarity	4.25	4.25	0
Trust	4.25	4.25	0
Performance	4.33	3.33	1
Mutual	5	5	0
attractiveness			
Mutual	4.5	4.5	0
satisfaction			

Table 12 Buyer-supplier relationship 8

Average perceptual distance over dimensions= 3.6/11= 0.33

Overall rating of relationship buyer (8) and supplier (8).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	4	4	0
Competences (S)	3.86	3.86	0
Flexibility	3.33	4	0.66
Decision-making	3.33	3	0.33
autonomy			
Constructive	3.2	3.4	0.2
conflict			
Information	4	4.75	0.75
exchange			
Solidarity	3.5	3.5	0
Trust	4	4	0
Performance	4	3.33	0.66
Mutual	4	5	1
attractiveness			
Mutual	4	4	0
satisfaction			

Table 13 Buyer-supplier relationship 9

Average perceptual distance over dimensions= 4.34/11=0.39

Overall rating of relationship buyer (8) and supplier (7).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	4	3	1
Competences (S)	4	4	0
Flexibility	3.66	3	0.66
Decision-making	3	3	0
autonomy			
Constructive	3.4	4	0.6
conflict			
Information	3.5	3.5	0
exchange			
Solidarity	3.5	3.25	0.25
Trust	4	3.5	0.5
Performance	3.33	3.66	0.33
Mutual	4	3.5	0.5
attractiveness			
Mutual	3.5	3	0.5
satisfaction			

Table 14 Buyer-supplier relationship 10

Average perceptual distance over dimensions= 3.04/11= 0.28

Overall rating of relationship buyer (7) and supplier (9).

Dimension	Mean score	Mean score	Perceptual
	Buyer Q.	supplier Q.	distance
Competences(B)	4	4	0
Competences (S)	4	4.43	0.43
Flexibility	3.33	3.66	0.33
Decision-making	3.33	3.66	0.33
autonomy			
Constructive	3.2	3.4	0.2
conflict			
Information	4	3	1
exchange			
Solidarity	3.5	3.5	0
Trust	4	3.75	0.25
Performance	3.33	3.33	0
Mutual	4	4	0
attractiveness			
Mutual	4	3.5	0.5
satisfaction			

7.Interview Questions Template

I want to start by thanking you for filling in the questionnaire and making time for this interview. In this interview I want to discuss the results from the questionnaire. My thesis is about perceptual distances in the relationship between buyers and suppliers. A questionnaire on relationship topics was filled in by you and by a representative of the buying/supplier organization, to create a dyadic view of the buyer-supplier relationship. Differences in perception on a topic from both sides creates this perceptual distance in a relationship.

Permission to record this interview and use it for my research? Buyer-supplier relationship X

Opening questions

Do you expect that there is perceptual distance in the buyer-supplier relationship with? If so, in what topics would this occur?

Do you have an idea of what the causes are for these perceptual distances?

Are there any topics/dimensions in which you do not expect any perceptual distance? What is the reason for this?

Dimension questions

I analyzed the results of the questionnaire and in these answers from both sides, there were some examples of perceptual distances noticeable. The following questions will refer to the dimensions in which the most perceptual distance was measured.

Dimension 1

In the dimension of...., a perception difference was measureable(.....). Did you expect there would be a perceptual difference in this dimension?

Could you think of a cause for this different view?

Dimension 2

In the dimension of..., a perception difference was measureable(....). Did you expect there would be a perceptual difference in this dimension?

Could you think of a cause for this different view?

Dimension 3

In the dimension of..., a perception difference was measureable(....). Did you expect there would be a perceptual difference in this dimension?

Could you think of a cause for this different view?

Literature gives some possible explanations in the form of underlying factors which contribute to perceptual distance in a relationship. The following questions will be on these underlying factors derived from literature.

Underlying factor questions

(A definition/short explanation of the underlying factor will be given to the interviewee with each question)

Do you think there is a presence of acting in self interests by either party in the buyer-supplier relationship?

Acting in self-interest: Parties acting to gain results which interests their own party over that of the common relationship.

Do you think there is a presence of asymmetric information in the buyer-supplier relationship? **Asymmetric information**:

One of the parties has insufficient information of what the other party is doing, creating uncertainty and an altered view of what is really going on.

Do you think there is a presence of social identification in the buyer-supplier relationship? **Social identification:**

Social identification is a perception of oneness with a group of persons concerning its social categories This will cause a positive bias through social identification towards members of the same (in)group with shared values, norms and customs. Creating a positive view on the actions of colleagues of their own organisation.

Do you think there is a presence of a lack of actor's knowledge in the buyer-supplier relationship?

Lack of actor's knowledge:

One of the actor's has insufficient information for making the optimal decisions with the best results for both parties.

Do you think there is a presence of limited computational capacity in the buyer-supplier relationship?

Limited computational capacity:

One of the actor's is unable(skill) to oversee all the different options and decisions. And therefore does not make the optimal choice with the best results for both parties.

Connecting questions

Do you think any of the previously mentioned factors(acting in self interest, asymmetric information, social identification, a lack of actor's knowledge or limited computational capacity) plays a role in creating perceptual distance between you and the other party?

In what order would you place these factors(from 1 to 5 in contribution towards perceptual distance in the buyer-supplier relationship?

Table 15. Results of the interviews Buyer-supplier relationship 3

	Buyer Interview	
Perceptual distance	Expected causes	Relevant theory which explains this cause
Information exchange	My personal interaction and	Principal-agent theory
Frequency of Communication	frequency of communication	Asymmetric information
	with this supplier is sufficient. I	
	would guess that my colleagues	
	from other departments also	
	communicate on a very frequent	
	level with this supplier.	
	Therefore, they might	
	experience the frequency of	
	communication between both	
	organisations as more positive	
	then my personal opinion.	
Performance	We always strive to get the best	Principal-agent theory
Pricing of products	price while maintaining the	Acting in self-interest
	quality of the products.	
	Suppliers in turn want to have a	
	good margin over their products.	
	This could lead to a different	
	opinion in how satisfied we are	
	in the monetary results from the	
	buyer-supplier relationship.	
	Supplier Interview	
Perceptual distance	Expected causes	Relevant theory which explains
		this cause
Performance	Buying organisation has more	Principal-agent theory
	importance on certain aspects	Acting in self-interest
	•	•

Different goal priorities of the	such as price of the product and	
buying and supplying	on time delivery. While the	
organisation	supplier wants to guarantee a	
	good quality and suitability of	
	the product.	
Information exchange	In depth technical questions are	Principal-agent theory
The speed in which (technical)	often difficult to answer and	Asymmetric information
questions are answered	need more time from already	
	busy technical specialists then	
	the buying organisation	
	suspects. Sometimes we need to	
	tell them that it is not possible to	
	fully explore or explain a	
	problem, which can be	
	disappointing for the other	
	party.	
Mutual satisfaction	Perhaps we gave a lower score	XXX
	on the mutual satisfaction score	
	since we are more self critical.	
	Self-critical in terms that we are	
	not always satisfied in the	
	answers we give to the buyers'	
	questions. Furthermore, we	
	want to have a minimal amount	
	of technical issues in our	
	relationships with a buying	
	organisation. Unfortunately, this	
	is currently not the case. There	
	is room for improvement and	
	that reflects this lower score	
	from our side.	
Performance	Sometimes purchasers of the	Bounded rationality theory
	buying organisation lay too	Limited computational capacity
	much focus on the price of the	
	l	

Right choice of product focus	product. This can result in	(Lack of technical knowledge)
more on price then the needed	unforeseen costs such as a low	
quality.	lifespan of the product due to	
	additional wear. Which may	
	contribute to a failure of the	
	whole system in the end. Just to	
	save a percentage of the initial	
	purchasing costs.	
Information exchange	Some organisations are reluctant	Bounded rationality theory
	to share information with us	Lack of Actor's Knowledge
	which can damage their image.	
	Such as all the information	
	surrounding a product failure in	
	the field. They ask us to find the	
	cause of the failure of our	
	product, while we are not	
	getting enough data and	
	information from them to find	
	the root cause. Resulting in an	
	altered view from them on our	
	capability to resolve problems.	

Buyer Interview			
Perceptual distance	Expected causes	Relevant theory which explains	
		this cause	
Decision making autonomy	This supplier probably thinks	XXX	
	that we have to much influence		
	in the choices for our combined		
	supply chain. They might feel		
	that they cannot implement their		
	own ideas.		
Competences buying	In my opinion we have a good	XXX	
organisation	relationship with this supplier		

	and the competences we display	
	as an organisation are adequate.	
	I cannot think of a clear reason	
	why they would score the	
	competences of our organization	
	that high, other then to flatter us	
	by giving such a high score as a	
	compliment.	
Decision making autonomy	From a purchasing perspective I	Principal-agent theory
	do not expect we have a	Asymmetric information
	different opinion on this	
	dimension. From a technical	
	perspective this can certainly be	
	present. Colleagues within our	
	engineering department are not	
	always compliant and willing to	
	change things on requests of the	
	supplier. This can give a	
	different view at the supplier on	
	their ability to make decisions.	
Solidarity	I can see why this supplier	Principal-agent theory
	would score the solidarity lower	Acting in self-interest
	in the relationship then us. In the	
	past year we had to revert on	
	previously agreed arrangements	
	due to changing circumstances	
	within our company. This	
	certainly was not positive for the	
	amount of work they do for us.	
	Supplier Interview	<u> </u>
Perceptual distance	Expected causes	Relevant theory which explains
		this cause

Competences buying	It is possible that we rated them	XXX
organisation	higher on this part of the	
	questionnaire. They do a good	
	job in maintaining the	
	relationship and informing us.	
Decision making autonomy	Sometimes it is challenging to	Principal-agent theory
	introduce technical changes to a	Asymmetric information
	product. Hard evidence needs to	
	be provided on why this would	
	be positive and even then, it is	
	not a given that this will be	
	implemented.	

	Buyer Interview	
Perceptual distance	Expected causes	Relevant theory which explains
		this cause
Competences	I sometimes miss the	Bounded rationality theory
Supplying organisation	commercial affinity/mindset	Limited computational
Negotiating	when negotiating with this	capacity
	supplier. They have a tendency	(Negotiation skills)
	to primarily focus on the	
	technical side of things.	
Mutual satisfaction	This supplier often mentions	Principal-agent theory
Forecast	that they do not receive a	Asymmetric information
	reliable forecast from us. Which	
	is something they are eager to	
	start working with.	
	I understand why this would	
	beneficial for them and that this	
	works within other business	
	relationships for them. The	

	project nature of the UPS	
	business with its up and downs	
	does not facilitate such a long	
	term forecasting.	
Information exchange	Sometimes I get an unpleased	Dringing agent theory
information exchange		Principal-agent theory
	surprise when 'normal	Asymmetric information
	products" have an unexpected	
	increase in their delivery time.	
	If this was already known by the	
	supplier, this could have been	
	proactively communicated	
	towards us. In which case we	
	could have planned around it.	
Competences	This supplier supplies us with	Bounded rationality theory
Supplying organisation	quite complex products.	Lack of actor's knowledge
	Sometimes I wonder if they are	
	able to oversee all the different	
	possible alternative parts in the	
	market/ sub-suppliers. Therefore	
	I wonder if the current choices	
	are indeed the best choices for	
	the desired results, which is the	
	best price/quality and delivery	
	time.	
Flexibility	When business is normal, I	Bounded rationality theory
	hardly notice any frustration or	Limited computational
	perceptual distance between us.	capacity
	When things unexpectedly	capacity
	change such as the	
	prices/delivery times of parts in	
	the market. Then I notice an	
	increase in the amount of	
	friction with this supplier.	
	median with this supplier.	

	Supplier Interview	
Perceptual distance	Expected causes	Relevant theory which explains
		this cause
Mutual satisfaction	Currently we produce a couple	XXX
	of products for company X, this	
Scope of services/products	is only a small fraction of our	
within the relationship	services we can offer.	
	Previously, some services and	
	products were offered which	
	could be beneficial for the	
	processes within company X.	
	We never got a clear response	
	on these offerings. In the current	
	situation I feel that we are not	
	fully utilizing the potential of	
	the relationship.	
Mutual attractiveness	Our preferred way to work with	Principal-agent theory
	important customers is to create	Asymmetric information
Strategic implementations	a combined technological	
within the relationship	roadmap. Which visualizes the	
	strategic goals and potential	
	technology/products which we	
	want to develop and produce in	
	the future. This is currently not	
	the case within the relationship	
	with company X, they view the	
	relationship with us as the	
	products they currently buy.	
	And not the	
	opportunities/services which can	
	be offered.	
Mutual satisfaction	Organisations always have their	Principal-agent theory
	own interests in mind. Both the	Acting in self- interest

Goals of the relationship	purchasing and supplying	
	organisation need to attain	
	certain margins. If this is more	
	in favour of one party, this	
	certainly can have an effect on	
	how satisfied both parties are	
	with the relationship.	

	Buyer Interview	
Perceptual distance	Expected causes	Relevant theory which explains
		this cause
Competences	One big perceptual difference I	XXX
Supplying organisation	encounter with this supplier is	
	the way we approach	
	negotiating. They are not used to	
	the more direct and business-	
	oriented way of negotiation in	
	Dutch culture.	
Decision making autonomy	I can imagine that they might	Principal-agent theory
	have a somewhat more negative	Asymmetric information
	opinion on this due to recent	
	events. In which certain	
	decisions for two large projects	
	were postponed multiple times.	
	They needed to reserve	
	production slots for us and it can	
	be frustrating for them if we	
	keep changing or delay the time	
	schedule and final order.	
Performance	The supplier often discusses the	Principal-agent theory
	price erosion of our product	Acting in self-interest

	range in the current market.	
	They also need to attain certain	
	margins within their	
	organisation, and this is not	
	made easy with the current price	
	setting.	
Information exchange	I can recall some cases lately, in	Bounded rationality theory
	which we discovered some very	A lack of actor's knowledge
	interesting products which can	
	be altered to fit our (UPS)	
	products. It would be better if	
	the supplier would also pro-	
	actively communicated these	
	opportunities to us.	
Solidarity	When there are troubles on site,	Social identity theory
	people are quick to blame these	Social identification
	problems on products from	
	suppliers. While a wide array of	
	possible causes such as wrong	
	installation by our service	
	engineers can be the root cause.	
	I try to mediate in this process	
	by not putting the blame on the	
	supplier till the real cause is	
	discovered. Unfortunately not	
	everyone within our company	
	does the same.	
	Supplier Interview	
Perceptual distance	Expected causes	Relevant theory which explains
		this cause

Decision making autonomy	Sometimes we have to wait a	Principal-agent theory
	long time before a final decision	Asymmetric information
	is made. During this process we	
	sometimes feel left in the dark	
	on the reason behind this	
	postponement.	
Performance	A possible cause for this	XXX
	difference could be that we are	
	very self-critical on our	
	performance in the relationship.	
	There are always things on	
	which can be improved.	

	Buyer Interview	
Perceptual distance	Expected causes	Relevant theory which explains
		this cause
Competences	I do not have a technical	Bounded rationality theory
Buying organisation	background/education.	Limited computational capacity
	Therefore, some technical issues	
	which arise in the relationship	
	with the supplier are relatively	
	hard for me to solve.	
Information exchange	I sometimes see some	Principal-agent theory
	frustrations from the supplier.	Asymmetric information
	When they have difficulty in	
	getting a response/information	
	from us as an organisation. This	
	delayed response to their	
	questions is both caused by	
	capacity and the personal	

	knowledge in certain parts of	
	our organisation.	
Flexibility	When we place an order, we	XXX
	prescribe the product on a very	
	detailed level. Making changes	
	to the product is a relatively	
	difficult and time-consuming	
	process. They can always	
	communicate their own ideas	
	with us, but we also need to be	
	oriented towards our own	
	customer. And therefore, we can	
	not always accept these ideas.	
	I can imagine that suppliers	
	would therefore see this as an	
	obstruction to flexibility in the	
	relationship.	
Information exchange	It can happen that wrong or not	XXX
	enough information is shared	
	with our supplier. We use an	
	FTP server (online SharePoint)	
	to share certain files with each	
	other. Our supplier builds upon	
	this information and makes their	
	products accordingly. When	
	mistakes are made due to us	
	uploading wrong files, or that	
	we forget to upload certain files,	
	this can have an impact on how	
	the supplier views the	
	trustworthiness of us giving the	
	right information.	

	Supplier Interview	
Perceptual distance	Expected causes	Relevant theory which explains
		this cause
Information exchange	Due to corona, we would have	XXX
	monthly face to face meetings in	
	which important topics/ongoing	
	topics at both organisations are	
	discussed.	
	The last months this was	
	hindered due to corona.	
Flexibility	It is difficult to make changes in	XXX
	products for company X.	
	Specifications are given	
	beforehand and making changes	
	in these is a hard process. For	
	example: if we have found	
	alternative better materials for a	
	product. It is time costly and we	
	need to provide a lot of	
	information to be able to make	
	changes.	
Performance	Budget prices are set for a	Bounded rationality theory
	standardized product line which	Limited computational capacity
	we frequently deliver to	(Technical knowledge)
	company X. Sometimes orders	
	are placed for new products with	
	these set prices, while these are	
	not standard products. The	
	purchaser of company X is	
	unaware of this and I need to	
	explain from an engineering	
	standpoint on what is special	
	about these products and why it	

	is not a "standard product"	
	which results in a different	
T. C	price.	D 1 1 1 1 1 1
Information exchange	Almost every customer thinks	Principal-agent theory
	they are an A tier customer, and	Asymmetric information
	if they have a problem this will	
	be handled within a day. While	
	in reality we often have multiple	
	cases which we have to address,	
	and we also need	
	enough/complete information	
	from the customers to be able to	
	solve these problems. This can	
	have a negative impact on how	
	companies view our ability to	
	provide good information.	
Information exchange	Previously we worked with a	Principal-agent theory
8	Treviously we worked with a	Frincipal-agent theory
8	standard product, design,	Asymmetric information
•	•	
•	standard product, design,	
•	standard product, design, specifications and materials	
•	standard product, design, specifications and materials were clear for us. Lately projects	
	standard product, design, specifications and materials were clear for us. Lately projects with customer engineering are	
	standard product, design, specifications and materials were clear for us. Lately projects with customer engineering are more prevalent, and somethings	
6	standard product, design, specifications and materials were clear for us. Lately projects with customer engineering are more prevalent, and somethings are unclear for us when we need	
	standard product, design, specifications and materials were clear for us. Lately projects with customer engineering are more prevalent, and somethings are unclear for us when we need to start producing. Only during	
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