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Becoming a preferred customer

The influence of proximity and public procurement on receiving a preferred customer status

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Abstract

The purchasing function of a firm is more and more seen as a strategic relevant function, capable of creating a competitive advantage. One way of creating such an advantage is through receiving a preferred customer status from suppliers, and consequently, receiving preferential treatment. The focus of this research is on identifying the influence of proximity of the buyer to the supplier and obligatory public tendering procedures on having a preferred customer status with the supplier. These two new, not yet researched, influences are placed in a model alongside supplier satisfaction. This research resolves around the question: What is the influence of proximity and public tendering procedures on the preferred customer status of a buyer? Data is gathered amongst suppliers of a public organisation and analysed with PLS path modelling software. The results show that the chance of having a preferred customer status is higher if the supplier is located in the same region as the buyer. Also, the quality of the public tendering procedures used improves the probability of receiving a preferred customer status. The share of sales realised through public tendering procedures does not have an influence. This research ultimately provides suggestions for buying firms to increase the likelihood of receiving a preferred customer status from their suppliers.

Keywords: preferred customer status; supplier satisfaction; preferential treatment; proximity; public procurement; tendering procedures.

Contents

List of abbreviations

AVE = Average Variance Extracted

EU = European Union

GDP = Gross Domestic Product

HTMT = Heterotrait-monotrait

PLS = Partial Least Squares

SEM = Structural Equation Modelling

SET = Social Exchange Theory

SRMR = Standardised Root Mean square Residual

UT = University of Twente

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1. Purchasing as a way to create value for the company

Purchasing can hardly be seen as a new concept. Ever since the days of trade and barter, people and small businesses have been purchasing resources. Without resources, there can be no production and therefore no value creation. However, in the seventies of the previous century, purchasing was still seen as an administrative function of a firm, rather than one with strategic importance.[1] Since Porter's seminal work on the forces of the competitive nature of industry, both buyers and suppliers are seen as two of the five critical forces.[2] Strategic importance of the relationship between suppliers and the buying firm began receiving attention in the strategy literature. Even though the 1980s saw a shift in attitude towards the role of purchasing in corporate strategy and many authors noted the benefits of strategic purchasing and supplier management, it appeared that limited gains were made.[3] Even in 2001, purchasing was still described as "operational in nature".[4] These days, purchasing is getting more and more attention as a relevant strategic management function.[5] One of the main aspects of purchasing is managing the buyer-supplier relationship. Firms increasingly see the value of a good buyer-supplier relationship, which can lead to higher efficiency, flexibility and ultimately a sustainable competitive advantage.[6] It is essential for the buying firm to guarantee the satisfaction of the supplier, to be able to get value from the buyer-supplier relationship.[7] One of the possibilities for a buying firm to profit from a satisfied supplier is by gaining a preferred customer status from that supplier and, consequently, receive some form of preferential treatment from the supplier.[8] Empirical research has shown that supplier satisfaction is a prerequisite for receiving a preferred customer status, but apart from a number of relational influences, supplier satisfaction has been the only statistically tested main antecedent for receiving a preferred customer status, thus far.[9] This research will replicate the proposed relationship between supplier satisfaction and the preferred customer status leading to preferential treatment.[10]

[1] See Ansoff and Brandenburg (1971, p. 718).
[2] See Porter (1979, p. 140).
[3] See Ellram and Carr (1994, p. 11).
[4] Ramsay (2001, p. 257)
[5] See Mol (2003, p. 49)
[6] See Nyaga, Whipple, and Lynch (2010, p. 101)
[7] See H. Schiele, Calvi, and Gibbert (2012, p. 1181)
[8] See Vos, Schiele, and Hüttinger (2016, p. 4618)
[9] See L Hüttinger, Schiele, and Schröer (2014, p. 711); Vos et al. (2016, p. 4618)
[10] See Vos et al. (2016, p. 4618)

Subsequently, two influences on receiving a preferred customer status are examined. The first is the difference in the ease of receiving a preferred status from suppliers located close to the buyer versus suppliers located further away. The other hypothesised influence on the ease of receiving a preferred customer status is the influence of the public status and the accompanying procurement regulations of a buying public firm, contrary to private firms. These are unexplored influences and can therefore provide new insight in research on the preferred customer status literature. Also, organisations that actively pursue a preferred customer status with their suppliers can use this research to adapt their strategy or selection procedure regarding potential suppliers. These two potential influences on receiving a preferred customer status will be integrated in a conceptual model based on the research by Vos et al. (2016). This part of the research provides both the empirical and practical relevance. Literature regards supplier satisfaction as the main antecedent for a preferred customer status, but no research whatsoever has been done to identify other antecedents. Firms striving to gain a preferred customer status and the included benefits from their suppliers can use this research to identify opportunities in selecting the suppliers with whom they anticipate the highest chance of becoming a preferred customer. This thesis is therefore based on two main research questions:

- What is the influence of proximity of the supplier on receiving a preferred customer status from that supplier?
- What is the influence of using public tendering procedures on receiving a preferred customer status from involved suppliers?

The answers to these questions are found through an analysis of data collected amongst suppliers of the University of Twente. Hypotheses are drafted and a conceptual model is created after which statistical analysis confirms or rejects the hypotheses. However, before the creation of such a model and the corresponding hypotheses, a theoretical background will explain all relevant concepts, starting with supplier satisfaction. Theory shows that supplier satisfaction is a necessary condition for receiving a preferred customer status[11] and the respective chapter will elaborate on the reasons for this relationship. Following supplier satisfaction is an extensive

[11] See H. Schiele et al. (2012, p. 1181)

review of the concept of preferred customer status, its consequences and benefits and finally its antecedents. Next are a chapter each on both proximity in general and in buyer-supplier relationships, and on public procurement and its particularities. These two chapters are used to generate a basis for the hypotheses accompanying the conceptual model. They are presented in the subsequent chapter. After that, the methodology section will explain the used methods for writing the theoretical background, as well as the procedures used to examine the conceptual model with the empirical data gathered. The results shall be presented alongside a conclusion, followed by a discussion of the results. This thesis ends with the main implications, limitations and opportunities for future research.

2. Supplier satisfaction: measuring the satisfaction of the supplier

2.1 Supplier satisfaction: when the outcome of the relationship meets the expectations of the supplier

Suppliers can help a firm achieve a competitive advantage by providing resources like raw materials and semi-finished products, but suppliers also provide ideas, knowledge and capabilities which a firm cannot get elsewhere.[12] Obviously it is possible that competitors try to get the same resources from the same supplier,[13] therefore it is not easy to gain a competitive advantage through the resources received from that supplier. Because of this, it is important that a firm is capable of getting better resources from their suppliers than their competitors in order to get competitive advantages.[14] The fact that some buyers get better resources than their competitors means that the allocation of resources to buying firms is a selective process.[15] As already stated in the introduction, supplier satisfaction plays a role in the process of resource allocation: an unsatisfied supplier will probably not do the best it can to help the buying company and may supply raw materials or products of a lesser quality, leading to a lower quality of the buyer's products. This of course has a negative influence on the buyer's sales volumes and profitability, indicating the importance of a satisfied supplier.[16] This chapter will investigate the history of supplier satisfaction and the definition will be explored and explained. In the second part the development of the empirical base will be discussed as well as the already known antecedents of supplier satisfaction. Next, the state of the art of the concept will be discussed. Finally, the benefits of supplier satisfaction are shortly assessed.

Schiele et al. (2011) stated the following about the research on supplier satisfaction: "Customer satisfaction has been recognized as a relevant concept of business success. Despite its apparent significance, supplier satisfaction has been widely neglected and remained largely unexplored."[17] This indicates that the importance of supplier satisfaction is clear, but that there has not been done a lot of research on the concept.[18] The main reason for the lack of research is that the relationship between buyers and suppliers was commonly seen from the perspective of

[12] See Koufteros, Vickery, and Dröge (2012, p. 96)
[13] See Takeishi (2002, p. 323)
[14] See Hunt and Davis (2008, pp. 16-19)
[15] See Pulles, Schiele, Veldman, and Hüttinger (2016, p. 129)
[16] See Snyder (2003), cited by Meena and Sarmah (2012, p. 1236); Essig and Amann (2009, p. 104)
[17] Holger Schiele, Veldman, and Hüttinger (2011, p. 12)
[18] See Benton and Maloni (2005, p. 2)

the suppliers, since they had to satisfy the customers as much as possible to keep them their customers. It has only been recently that there is more and more attention for another perspective: buyers that need to satisfy the suppliers in order to get the best resources from them.[19] This idea of "reverse-marketing" dates back to 1988[20], but it only recently gained more attention in the supply chain management literature.[21] Supplier satisfaction itself was first mentioned in the nineties, but since the early 2000s several scholars have done research into this concept. Wong was, in 2000, one of the first who did research on supplier satisfaction. His study was conceptual in nature, claiming that working together with suppliers will improve both supplier satisfaction and customer satisfaction.[22] In this year the first empirical research on supplier satisfaction was also done. Forker and Stannack (2000) tested the different effects of competitive and cooperative relationships on the level of satisfaction of both the buyers and the suppliers.[23] During the rest of this decade, the basis of the concept of supplier satisfaction developed into how it is known nowadays. This however led to different ways of defining supplier satisfaction. For example, Essig and Amann (2009) defined supplier satisfaction as "a supplier's feeling of fairness with regard to buyer's incentives and supplier's contributions within an industrial buyer-seller relationship as relates to the supplier's need fulfilment."[24] Another definition was given by Schiele et al. (2012): "supplier satisfaction is a condition that is achieved if the quality of outcomes from a buyer-supplier relationship meets or exceeds the supplier's expectations."[25] This definition combines previous definitions with the social exchange perspective, making this the most complete definition of supplier satisfaction. This definition is in line with social exchange theory (SET), which also can be used to define supplier satisfaction. Before two parties engage in a relationship with each other, they have to assess the attractiveness of the other party. This is based on the expectations the parties have of the value of a relationship with each other. When the expected value of a relationship is above a certain level, the other party will be seen as attractive. This is considered as a necessary condition for

[19] See H. Schiele et al. (2012)
[20] See Leenders and Blenkhorn (1988, p. 2)
[21] See Holger Schiele, Ellis, Eßig, Henke, and Kull (2015, p. 133)
[22] See A. Wong (2000, p. 427)
[23] See Forker and Stannack (2000, p. 31)
[24] Essig and Amann (2009, p. 104)
[25] H. Schiele et al. (2012, p. 1181)

starting a relationship by many scholars in the marketing literature.[26] These expectations can be seen as the result of the expected rewards minus the costs of being involved in the relationship. Following the reasoning of social exchange theory, the expectations of the relationship is a relevant construct for suppliers when it comes to evaluating customer relationships. Supplier satisfaction is the result of the comparison between the expectations of a relationship with a buyer and the delivered outcome of this relationship. That means that supplier satisfaction is the degree to which expectations are met, or even exceeded.

2.2 The history of supplier satisfaction

As already stated, Wong (2000) was one of the first who did research on supplier satisfaction. He argued that a relational and cooperative approach towards suppliers will lead to a higher level of supplier satisfaction with the relationship. However, his research was conceptual, and did not test his ideas empirically.[27] Forker and Stannack were in 2000 the first who empirically tested possible antecedents of supplier satisfaction. They compared the effects of competitive and cooperative exchange relationships on the level of satisfaction of buyers and suppliers. In their research they found that the level of satisfaction is higher in a cooperative relationship compared to a competitive relationship, corresponding to the assumption of Wong (2000).[28] Whipple et al. (2002) tested in their research the effect of information-sharing between trading partners on the overall satisfaction of both parties. They found that an increase in the amount of operational information exchanged has a positive impact on the overall level of satisfaction.[29] In her study in 2003, Maunu developed a conceptual framework with nine supplier satisfaction dimensions, divided in two groups: business-related dimensions and communication-related dimensions. The business-related supplier satisfaction dimensions are concrete, fact-based values. The dimensions which belong to this group are profitability, agreements, early supplier involvement, business continuity and forecasting/planning. On the other hand, communication-related dimensions are softer, human-based values. These values consist of roles and responsibilities, openness and trust, feedback and the buying company's values.[30] Based on

[26] See Holger Schiele, Veldman, Hüttinger, and Pulles (2012, p. 140)
[27] See A. Wong (2000, p. 427)
[28] See Forker and Stannack (2000, p. 31)
[29] See Whipple, Frankel, and Daugherty (2002, p. 67), cited by L. Hüttinger, Schiele, and Veldman (2012, p. 1199)
[30] See Maunu (2003, pp. 91-98)

these nine dimensions, Maunu (2003) developed a questionnaire that enables the buying firm to measure supplier satisfaction which can be used to improve its processes with suppliers and external partners.[31] After that, Benton and Maloni (2005) empirically tested the impact of different forms of power and performance on supplier satisfaction. The researchers included coercive-mediated power sources, reward-mediated power sources and non-mediated power sources in their research. Coercive-mediated power sources were found to negatively impact supplier satisfaction, the other two sources had a positive effect on satisfaction. They did not find evidence that performance has a positive effect on the level of satisfaction.[32] Leenders et al. (2006) explained the current buyer-supplier relationship in terms of satisfaction and stability by providing a framework called "The Purchaser-Supplier Satisfaction Matrix" in their book. They stated that buyers can improve the level of satisfaction of their suppliers by using the following four marketing and supply management tools:

1. Granting substantial volumes, long-term commitments, and exclusivity agreements.
2. Sharing internal information and extensive communication.
3. Exhibit a willingness to change behaviour in the purchasing organisation.
4. Respond rapidly to requests from suppliers.

This has also been a conceptual study, they did not test the effects of these tools on satisfaction empirically.[33]

Supplier satisfaction was explored by Essig and Amann (2009) as a factor of buyer–supplier relationship quality. To operationalize supplier satisfaction, they used an index that contains 36 indicators that are subsumed to three dimensions and six indicator groups. The first dimension refers to the 'strategic level' of a relationship and contains indicators that allow for conclusions about the intensity of cooperation. The second dimension is the 'operational level', which contains the order process and billing/delivery as indicators. The 'accompanying level' is the third dimension. 'Communication', 'conflict management' and 'general view' of the relationship are the indicators of this dimension.[34] In 2010, Nyaga et al. tested the effects of collaborative activities such as dedicated investments, information sharing, and joint effort on

[31] See Maunu (2003, pp. 62-90)
[32] See Benton and Maloni (2005, p. 1)
[33] See Leeders, Johnson, Flynn, and Fearon (2006); cited by L. Hüttinger et al. (2012, p. 1199)
[34] See Essig and Amann (2009, pp. 105-107)

satisfaction from the perspectives of both buyers and suppliers. They found that all three collaborative activities lead to commitment and trust, which lead to a higher level of satisfaction and better performance.[35] Ghijsen et al. (2010) tested the effects of influence strategies and supplier development on the supplier commitment and satisfaction. The researchers made a distinction between indirect influence strategies (information exchange and recommendations) and direct strategies (requests, promises, threats and legalistic pleas). Also two dimensions of direct supplier development activities were taken into account, namely human-specific supplier development and capital-specific supplier development. They found that the use of promises and both human- and capital-specific supplier development positively impact supplier commitment, while indirect, the other direct influence strategies and capital-specific supplier development have a positive effect on supplier satisfaction. On the other hand, requests, threats and legalistic pleas were found to have a negative impact on supplier satisfaction.[36] Hüttinger et al. provided a good overview of the known antecedents of supplier satisfaction in 2012. They did an extensive literature review of the antecedents of supplier satisfaction as well as of the drivers of customer attractiveness and preferred customer status. They noticed that the found antecedents of supplier satisfaction can be categorized into four groups, namely 'technical excellence', 'supply value', 'mode of interaction' and 'operational excellence'.[37] The 'technical excellence' group refers mainly to the technical aspects of the business, and the R&D department is an important part of this. Antecedents in this group are for example: 'early supplier involvement', 'technical competence' and 'supplier development'. The 'supply value' refers to the way of value creation in the relationship and is mainly influenced by the purchasing department. 'The profitability', 'the bargaining position' and also 'how cooperative the relationship is' are examples of antecedents in this category. The 'mode of interaction' is about the way of interaction between the companies and is driven by all functions of a business. 'Communication', 'the structure of the communication', 'the way of reacting on the other party' and 'information sharing' are in this group. The 'operational excellence' refers to the operational part of the buying firm that influences the interaction with the supplier and is the responsibility of the production/logistics areas (the production department). 'Forecasting and planning', 'the

[35] See Nyaga et al. (2010, p. 101)
[36] See Ghijsen, Semeijn, and Ernstson (2010, pp. 22-24)
[37] See L. Hüttinger et al. (2012, pp. 1198-1200)

order process' and 'payment habits' are part of this group. So the mode of interaction is driven by all functions, the other three categories can be attributed to different functions of a company. Hüttinger et al. (2012) observed two major trends in the reviewed articles. The first trend they found is that scholars in the field of purchasing and supply management mainly tested the effect of different relationship strategies on supplier satisfaction. The conclusion of this is that suppliers, in contrast to buyers who are more focused on performance and the outcome of the relationship, find the atmosphere of the relationship and the development of norms more important. A buyer should take this into account, since otherwise this difference could lead to dissatisfaction. The second trend they observed is that scholars in this field use marketing or supply chain management literature as a conceptual basis, for studying the impact of business and communication-related factors on supplier satisfaction.[38]

2.3 Ensuring the satisfaction of suppliers to gain additional benefits from the relationship

When managed strategically, purchasing is a value-added resource to the firm.[39] Therefore suppliers and buyers are becoming partners to create value in a supply chain and the relationship with the suppliers is required to be sustainable and long-lasting.[40] The value of the interaction with a supplier does not have to result immediately from lower prices, but is on the long-term due to close cooperation. It is only possible to have a long-lasting relationship with a supplier when the supplier is satisfied with the relationship.[41] Besides that, supplier satisfaction is also directly linked to the quality of the relationship and value creation.[42] Supplier satisfaction also plays a role in the process of resource allocation: an unsatisfied supplier will probably not do the best it can do to help the buying company, for example resulting in supplying products of a lesser quality compared to other customers.[43] Lower quality input will lower the quality of the buyer's output and thus negatively influence the buyer's sales volume and profitability.[44] Pulles et al. (2016) tested the relationship between supplier satisfaction and preferential resource allocation and found that supplier satisfaction has a positive direct effect on preferential resource

[38] See L. Hüttinger et al. (2012, p. 1200)
[39] See Carr and Pearson (1999, p. 498)
[40] See Ulaga and Eggert (2006, pp. 119-120)
[41] See H. Schiele et al. (2012, p. 1181)
[42] See Vos et al. (2016, p. 4613)
[43] See Meena and Sarmah (2012, p. 1236)
[44] See Essig and Amann (2009, p. 104)

allocation.[45] This means that if a buyer cannot meet or exceed the expectations the supplier has about the relationship, they will probably not get the best resources.

Finally, supplier satisfaction can also lead to a preferred customer status. Schiele et al. (2012) state that a customer is awarded a preferential treatment if "this customer is perceived as attractive and if the supplier is currently more satisfied with this customer than with alternative customers."[46] So when the level of satisfaction with a particular customer is higher than the level of satisfaction with other customers of the supplier, that customer is granted with a preferred customer status by that supplier. Consequently, the preferred customer can receive preferential treatment from the supplier, meaning they get a better treatment relative to the other customers of the supplier. The next chapter will describe the concept of preferred customer status and its benefits and antecedents in more detail.

[45] See Pulles et al. (2016, p. 136)
[46] See H. Schiele et al. (2012, p. 1181)

3. Striving for a preferred customer status to gain preferential treatment from suppliers.

3.1 The preferred customer status as a special kind of buyer-supplier relationship.

The management of the relationship between a buyer and its suppliers is key to the success of the supply chain[47] and thus improves firm performance.[48] This should be an incentive for buying firms to manage their relationships with their suppliers in the best way possible. One such way to optimise the relationship is to acquire a preferred customer status from the supplier, to consequently receive a preferential treatment by this supplier. This chapter will investigate the history of the concept and currently available literature on the preferred customer status. After the first part, the benefits and consequences of being a preferred customer will be elaborated. Finally, the antecedents and how to become a preferred customer are assessed.

A firm is a preferred customer of a supplier if that firm receives preferential resource allocation from the supplier.[49] This is not a new term, however it has not been used much in the field of purchasing.[50] The notion of becoming a preferred customer is reversed with respect to traditional marketing literature.[51] The traditional view was, and still is, that firms tried to become preferred suppliers of their customers, whereas the preferred customer concept advocates customers trying to become the preferred customer of their supplier. The first to publish research, albeit a PhD-dissertation, about preferential treatment by suppliers were Brokaw and Davisson in 1976.[52] They did research on supplier preferences in the chemical industry. Fifteen years later, Williamson (1991) first suggested to implement a preferred customer relationship through the signing of contracts between the buyer and the seller to connect both parties for a long time.[53] However, he soon realized that this would not work, stating that "such a contract would quickly become unmanageable"[54] because of the huge number of contingencies possible. The solution lies in building a 'preferred customer relationship' and 'preferred supplier relationship' between both parties. This can be done by the buyer if they purchase the majority of the products at the

[47] See Ambrose, Marshall, and Lynch (2010, p. 1269)
[48] See Tan, Kannan, Handfield, and Ghosh (1999, p. 1047)
[49] See Steinle and Schiele (2008, p. 11)
[50] See L. Hüttinger et al. (2012, p. 1194)
[51] See H. Schiele et al. (2012, p. 1178)
[52] See Brokaw and Davisson (1976); L. Hüttinger et al. (2012, p. 1200)
[53] See Williamson (1991, p. 79)
[54] Williamson (1991, p. 80)

same supplier. On the other hand, the supplier can allocate large amounts of production flexibility for supplying scarce products on short notice to its largest and most loyal customers.[55] These were the very first ideas about how to become a preferred customer. After Williamson, Moody (1992) identified ten characteristics of buyers that were used to describe a 'best customer' by suppliers.[56] She was the first to identify antecedents of the preferred customer, by using the results of a survey conducted by the Association for Manufacturing Excellence. Research on preferred customer status continued but it took numerous years before it really got the attention of scholars. In 2008, Steinle and Schiele researched the influence of preferred customer status on global sourcing and they reasoned that proximity between buyer and supplier has a positive influence on the relationship between the two.[57] The real breakthrough for the concept of preferred customer status came in late 2012, when the journal Industrial Marketing Management dedicated a special issue to it. The nine articles of this issue cover the subjects of customer attractiveness, supplier satisfaction and preferred customer status and gave the research on these concepts a boost. Five of these articles are explicitly about preferred customer status and elaborate on how to become a preferred customer[58], the overarching framework between the three aforementioned concepts[59] and the effect of buyer behaviour on preferred customer status.[60] These articles form the new basis of the preferred customer concept, identifying not only antecedents, but also consequences. The following sections will first discuss the consequences a preferred customer status has, followed by the antecedents of the preferred customer status and a model on how to become one.

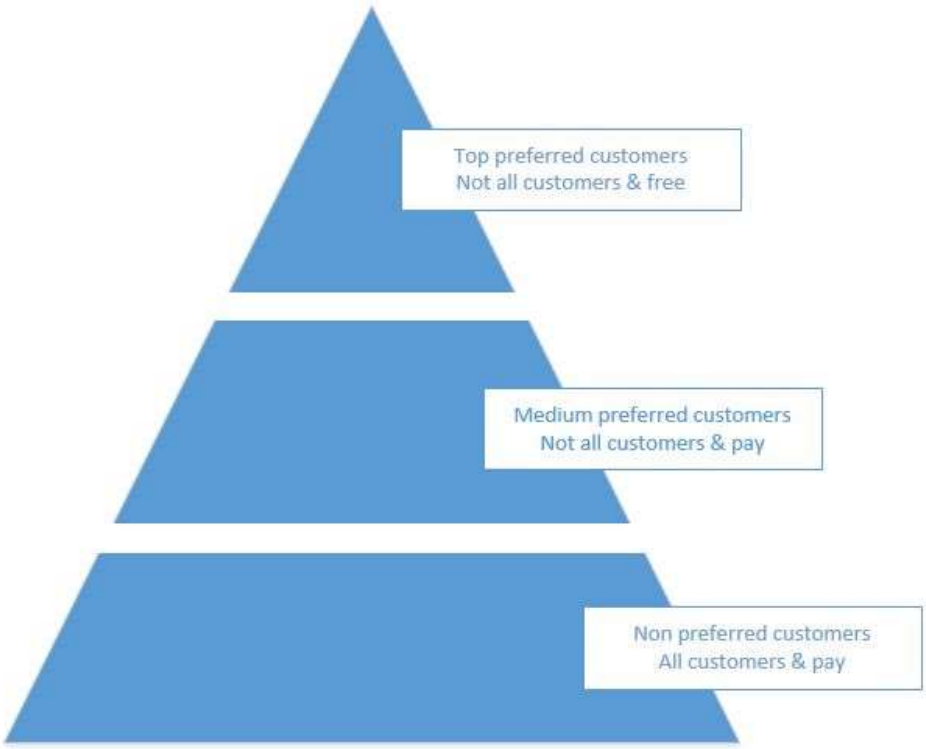
3.2 Benefits of a preferred customer status: preferential resource allocation and economic benefits

The definition by Steinle and Schiele (2008) posed above already reveals the benefits of being a preferred customer. The customer that is awarded a preferred status receives preferential resource allocation from the supplier. There is a general division between gradations of preferred customers, as shown in figure 1. Not preferred customers are the normal customers and they receive no extra benefits for their money. Medium preferred customers receive some

[55] See Williamson (1991, p. 80)
[56] See Moody (1992, p. 52)
[57] See Steinle and Schiele (2008, p. 11)
[58] See Nollet, Rebolledo, and Popel (2012); Baxter (2012)
[59] See H. Schiele et al. (2012); L. Hüttinger et al. (2012)
[60] See Ellis, Henke, and Kull (2012)

benefit, either in the form of exclusive products or for example delivery conditions. These customers do have to pay for the benefits however. The top preferred customers receive the most benefits and do not have to pay extra to receive these benefits. These customers are the most preferred customers of the supplier. This implies that the top preferred customer receives better treatment compared to its competitors that source from the same supplier. Receiving better treatment than competitors means by definition that it leads to an advantage when competing with other customers over a scarce or valuable resource.[61] Better treatment can also come in the form of higher product quality and availability, lower prices, faster delivery or support in the sourcing process.[62] Other types of preferential treatment are for example suppliers that respond first to the needs of their preferred customers whereas non-preferred customers have to wait[63], the dedication of the supplier's best personnel to the relationship with the preferred customer or the sharing of new ideas or innovations with preferred customers before sharing them with non-

Figure 1 - Preferred customer pyramid



[61] See Steinle and Schiele (2008, p. 11)
[62] See Nollet et al. (2012, p. 1186)
[63] See Williamson (1991, p. 83)

preferred customers.[64] Priority of delivery in times of resource scarcity is one of the most important types of preferential treatment. Preferred customers can profit from their status in case of capacity bottlenecks when a supplier has to choose to which customer he allocates his remaining production capacity. This situation can occur when for example a base resource is scarce, but also when the supplier is hit by a natural disaster like a tsunami or earthquake and they have to decide which customer to allocate the remaining products or production capacity to.[65] Next to resource allocation benefits, a preferred customer status can also lead to lower prices for the customer. This was first shown by Bew in 2007, with savings found of 2 to 4 percent.[66] In 2011, Schiele et al. showed a significant positive relationship between being a preferred customer and receiving benevolent pricing of the supplier. They found this result trough a survey with 166 sample cases.[67] The following section describes the antecedents of the preferred customer status and how a firm can become a preferred customer.

3.3 Customer attractiveness and supplier satisfaction as antecedents for preferred customer status

Moody (1992) was the first to empirically identify ten characteristics of buyers that were used to describe a 'best customer' by suppliers and start the empirical quest for antecedents of preferred customer status.[68] Suppliers were asked to rank the importance of 24 characteristics in the relationship with their buyers. The following ten characteristics were rated as most important: early supplier involvement, mutual trust, involvement in product design, quality initiatives, profitability, schedule sharing, response to cost reduction ideas, communication and feedback, crisis management/response, and commitment to partnership.[69] Interesting about these characteristics is that seven out of ten are based on communication or other forms of interaction.[70] It was however not until 2012 that a good overview of antecedents became available through the work of L. Hüttinger et al. (2012). They provided an extensive literature review regarding the antecedents of not only preferred customer status, but also regarding

[64] See Steinle and Schiele (2008, p. 11); L. Hüttinger et al. (2012, p. 1194); Pulles et al. (2016, p. 136)
[65] See Pulles et al. (2016, p. 8)
[66] See Bew (2007, p. 2)
[67] See Holger Schiele et al. (2011, p. 15)
[68] See Moody (1992, p. 52)
[69] See Moody (1992, p. 52)
[70] See L. Hüttinger et al. (2012, p. 1202)

Table 1 - Antecedents of preferred customer status adapted from Hüttinger et al. (2012)

Economic Value	Relational Quality	Instruments of interaction	Strategic compatibility
High purchase volumes	Loyalty	Early supplier involvement	Strategic fit
Profitability	Trust	Involvement in product design	Shared future
Business opportunities	Commitment	Supplier development	Cluster membership
Total cost as basis for purchasing price	Satisfaction	Response to cost reduction ideas	Geographical proximity
Low cost to serve the customer	Customer attentiveness	Communication and feedback	
	Respect	Quality initiatives	
	Fairness	Schedule sharing	
	Strong bonds	Action-oriented crisis management	
		Simple and coordinated business procedures	
		Predictable decision processes	

customer attractiveness and supplier satisfaction.[71] According to them, these three constructs should be analysed in an integrative way. Customer attractiveness is necessary for the supplier to engage in a relationship. If this relationship meets its expectations, the supplier is satisfied. If this satisfaction is higher with certain customers compared to other customers, there is a possibility for a preferential treatment for these customers.[72] Hüttinger et al. (2012) divided all antecedents, or 'drivers', of preferred customer status in four categories, 'economic value', 'relational quality', 'instruments of interaction' and 'strategic compatibility'. See table 1 for a summary of all the antecedents they found in available literature and the division in categories. One of the most important antecedents of preferred customer status is the satisfaction of the supplier.[73] Schiele et al. (2012) state that a customer is awarded a preferential treatment if "this customer is perceived as attractive and if the supplier is currently more satisfied with this customer than with alternative customers."[74] This again shows the important interaction

[71] See L. Hüttinger et al. (2012, pp. 1199, 1201, 1202)
[72] See L. Hüttinger et al. (2012, pp. 1194, 1195); H. Schiele et al. (2012, p. 1180)
[73] See H. Schiele et al. (2012, p. 1181)
[74] H. Schiele et al. (2012, p. 1181)

between customer attractiveness, supplier satisfaction and preferred customer status. According to Ellis et al. (2012), two particular characteristics have a positive effect on the buyer's preferred customer status: supplier involvement and relational reliability. Involving suppliers is a decision of the buyer to involve the supplier early in the development of new products. Relational reliability reflects the fulfilment of promises the buyer has made to the supplier. The higher the relational reliability, the more it reduces risks for future exchanges with the buyer.[75] One of the most influential theories in the research on preferred customer status is the social exchange theory (SET). SET focuses on the reciprocity in an exchange relationship, meaning that "people cooperate under the expectation that they will give and receive from the relationship."[76] When suppliers are satisfied with their relationship with the customer, it is expected that this customer receives something in exchange for this satisfaction.[77] Preferential treatment as a consequence of a preferred customer status can then be seen as a reward for delivering satisfaction to the supplier.

Nollet et al. (2012) developed a four-step model describing how to become a preferred customer using specific tactics that help the customer to get and keep a preferential status. They base their model on social exchange theory. SET, in a business context, assumes that exchanges involve social and/or economic results and that these results are compared to the results with alternative exchange partners. The first step in their model is the initial attraction of the supplier's attention. The supplier has to be aware the potential client exists and the potential client needs to have certain attractiveness factors. Among the most important factors are: the client's market share, growth and influence on the market. The higher the expected value of these factors, the higher the chance that the supplier will accept an initial exchange. In the first step it is imperative that the client presents itself as a valuable partner. [78] The second of four steps to become a preferred customer deals with performance. After the initial exchange, the client has to satisfy the expectations of the supplier that are raised. This step encompasses the creation of supplier satisfaction, one of the necessary antecedents for a preferred customer status. The goal of creating a satisfied supplier is to ensure the supplier will see the advantages of continuing to deal with the client. For the next step, the client has to make the supplier perceive him as

[75] See Ellis et al. (2012, p. 1265)
[76] Nyaga et al. (2010, p. 102)
[77] See Vos et al. (2016, pp. 4614-4615)
[78] See Nollet et al. (2012, p. 1188)

contributing more and performing better than alternative customers, in order to make the supplier invest more in their relationship. To become a preferred customer, the client continually needs to exceed the expectations of the supplier and make sure he outperforms available alternatives.[79] Since the customers of a supplier are constantly being evaluated, step four deals with the sustainability of the relationship with the supplier. As a preferred customer, one needs to keep assessing the supplier's needs and improve the value proposition to maintain the preferred customer status. [80] The research stream started by L Hüttinger et al. (2014) explores the antecedents of customer attractiveness, supplier satisfaction and preferred customer status. Their research explores the influence of eight antecedents that were found through a qualitative study among a sample of buyers of the focal firm. After this, they tested these antecedents through a survey among key account managers of the focal firm's suppliers.[81] They found that 'growth opportunity' and, like Ellis et al. (2012), 'reliability' were significant influences on awarding preferred customer status. Vos et al. (2016) then used both the data of Hüttinger et al. (2014) and data they themselves gathered in a chemical concern to integrate the earlier model in to a single model that differentiates between direct and indirect purchases. They again found the influence of growth opportunity and reliability, and additionally 'relational behaviour' and 'operative excellence'. Next to these they added the variable 'profitability', which also proved a significant influence. They showed that 'supplier satisfaction' influences 'preferred customer status', and that 'preferred customer status' influences 'preferential treatment'.[82] The research done in this thesis will follow this stream of research and will build upon it. As Vos et al. (2016) pointed out, using a mix of replication of existing research and extending on that research can be very valuable when trying to obtain novel insights in a research field.[83] One of the main advantages of replication and extension of previous research is the greater possibility to generalise the results, since a greater population or populations under different circumstances are tested.[84] This research is suited for replication and extension, since it is the most extensive model presented thus far and is the most developed. The following chapters will investigate the expected influence of two characteristics on receiving a preferred customer status and

[79] See Nollet et al. (2012, p. 1190)
[80] See Nollet et al. (2012, p. 1191)
[81] See L Hüttinger et al. (2014, p. 697)
[82] See Vos et al. (2016, p. 4618)
[83] See Vos et al. (2016, p. 4620)
[84] See Bonett (2012, p. 409)

preferential treatment. The first expected influence is the obligatory use of public procurement regulations, in case the buyer is a public organisation. The second is the notion of proximity, or the geographical distance between buyer and supplier.

4. Public procurement regulations as a means to ensure free movement of production factors and uncorrupted competition.

4.1 Public procurement: from need to contract

Over 250.000 public authorities in the European Union (EU) are annually spending around fourteen percent of the GDP (Gross Domestic Product) on the purchase of services, supplies and works.[85] Amongst these public authorities are governments, provinces and municipalities, but also for example hospitals and universities. These public organisations are, for the sake of comprehensiveness, called 'contracting authorities'. Contracting authorities are organisations "which disperse public funds in pursuit of or on behalf of public interest."[86] Public procurement in the EU is regulated through the use of the 'Directive 2014/24/EU' (hereafter: 'EU Directive"), a 178-page long document stating all the rules and regulations with regard to procurement in public organisations.[87] These directives are necessary to ensure free movement of production factors and effective and uncorrupted competition,[88] as they were agreed upon by the European Union in the treaty of Rome in 1957. The EU Directive starts with 138 explanations and definitions, followed by the 94 main articles and ending with 15 annexes. This illustrates the size of the regulations described for public procurement. It is one of the most regulated fields of government.[89] Every public organisation in the countries that are a member state of the European Union need to abide by this law above their own national procurement laws. The EU Directive basically regulates procurement of works, services and supplies which will cost more than certain thresholds. These thresholds are updated every two years to correspond with the thresholds of the World Trade Organisation Agreement on Government Procurement (GPA).[90] If estimated costs of works, services or supplies are higher than the relevant thresholds (ex. VAT), the contracting authority is obliged to follow the rules of the EU Directive. The EU Directive prescribes the use of certain procedures in these cases and regulates procurement of these works, services or supplies. If the estimated costs are below these thresholds, EU law is optional, but national law (if present) may be obligatory. Above these thresholds, tenders must

[85] See European-Commission (2016)
[86] Bovis (2007, p. 63)
[87] See EU (2014, p. 65)
[88] See EEC (1957, Articles 48 and 67); Gelderman et al. (2006, p. 703); Bovis (2007, p. 1)
[89] See Lloyd and McCue (2004, p. 3)
[90] See EU (2014, p. 100)

be advertised in the Official Journal of the European Community and the TED (Tenders Electronic Daily) database.[91] Excluded from the regulations are contracts that are sensitive because of national security or defence. These include for example tanks and fighter planes.

Contracting authorities that want to purchase either a work, service, supply or combination of these three and estimate their costs to be above the relevant thresholds, have two options: either use an open tendering procedure in which any supplier can participate, or use a restricted procedure, which limits the suppliers through a selection procedure. Extensions of the restricted procedure are for example the competitive dialogue, the innovation partnership and the negotiated procedure. For an overview of available procedures and their use, see table 2. Tendering procedures always start with a need for a product, work or service.[92] The contracting authority has to define this need and specify all relevant things associated. What are the properties of the product, service or work? What is the available budget? When does it need to be delivered? These questions, and more, all need to be answered before the tender notice is published on a public medium. This notice is necessary to let the market know that the contracting authority is inviting possible suppliers to participate in the procedure.[93] Depending on the procedure, economic operators interested in the contract can send either a tender (open procedure) or a request to participate to the contracting authority. In the open procedure, the

Table 2 - Public procurement procedures

Public procurement procedures	Why	Who can enroll	Selection of participants	Awarding
Open	All economic operators can participate, to get the most out of the market.	Any interested economic operator can submit a tender	-	Based on criteria set in contract notice
Restricted	Certain economic operators are invited after an initial request to participate has been sent. Usually a minimum of five.	Any interested economic operator can request to participate by providing necessary information	Economic operators invited by the contracting authority based on assessment of information	Based on criteria set in contract notice
Competitive dialogue	For the procurement of a complex, not readily available product, service or work.	Any interested economic operator can request to participate by providing necessary information	Economic operators invited by the contracting authority based on assessment of information	Based on criteria set in contract notice
Innovation partnership	Research and develop a new, non-existing product in cooperation with economic operator	Any interested economic operator can request to participate by providing necessary information	Economic operators invited by the contracting authority based on assessment of information	Based on criteria set in contract notice
Negotiated procedure	Consult contractors of choice and negotiate the terms of the contract	Any interested economic operator can request to participate by providing necessary information	Economic operators invited by the contracting authority based on assessment of information	Based on criteria set in contract notice

[91] See Gelderman et al. (2006, p. 704)
[92] See Bergman and Lundberg (2013, p. 74)
[93] See PIANOo (2016)

deadline for sending a tender is a minimum of 35 days after the contract notice was published.[94] Interested economic operators have a minimum of 30 days for sending a request to participate for the four other procedures. Exceptions to these time limits are possible in case of urgency.[95] When the indicated term ends, the contracting authority will review all submitted tenders and based on the criteria set beforehand, will select the winner of the contract. This is in case of an open procedure. For a non-open procedure, the contracting authority will invite a number of economic operators, based on the relevant information submitted. The selected economic operators are invited to either send a tender, come for a competitive dialogue, cooperate on an innovation partnership or take part in negotiations. The awarding of the contract is based on objective criteria that are published together with the contract notice at the start of the procedure. Contracting authorities are obliged to award the contract based on the most economically advantageous offer.[96] The contracting authority has to award the contract based on several criteria such as product related criteria, organisational criteria or logistic criteria. The economic operator scoring the highest total score on the combination of these criteria will win the contract.

4.2 Principles of public procurement: preventing corruption and discrimination

To ensure unrestricted competition, the EU Directive describes several principles of public procurement that contracting authorities have to abide by. These are found throughout the EU Directive in the different steps of the public procurement process. Five principles are described and summarised by Bovis (2007). He describes the principles of transparency, de minimis, fairness, non-discrimination and objectivity. Transparency in public procurement serves two objectives: the first is to create a 'system of openness', which establishes a greater degree of accountability, and the second objective is to ensure that the supply-side of the 'public procurement equation' can act more proactive when assessing the needs of the demand side.[97] Transparency can be accomplished by publicity and advertisement for all public procurement contracts throughout the entire EU community. This can be done by publication of these contracts by means of three types of notices in the official journal, a prior information notice (PIN), a contract notice and a contract award notice. A PIN is not obligatory for contracting

[94] See EU (2014, p. 94; Art. 27(91)) Art. 27 (1)
[95] See EU (2014, pp. 94, Art. 27 (93)) Art. 27 (3)
[96] See EU (2014, p. 134) Art. 67 (1)
[97] See Bovis (2007, p. 65)

authorities to publish, but can ensure that interested suppliers are aware of upcoming contracts so they can prepare. The prior information notice can have a maximum period of twelve months.[98] The contract notice is used as a means of calling for competition for all procedures.[99] A contract award notice must be used to publish the results of the procurement procedure after the conclusion of a contract.[100] The effect of transparency in public procurement is increased price competitiveness. When more interested suppliers are aware of a contract notice, competition between these suppliers will increase and the prices offered for the contract will decrease.[101] The transparency principle plays a large role in the first part of the public procurement process. The 'de minimis'-principle simply states that the public procurement directives are only applicable if a certain value threshold is met. This means that using the tendering procedures is only obligatory above this threshold, and thus optional below the threshold. Initially, it was expected that the contracts above the thresholds would be responsible for the majority of the contracts, thus decreasing discriminatory public procurement activities. However, monitoring procurement systems in member states has revealed that below-threshold procurement is three times the size of above-threshold procurement.[102] Following these numbers, there is a clear difference between above- and below-threshold procurement. This gives the possibility that suppliers provide products or services based on an above-threshold public procurement procedure and on below-threshold procurement (without an official tendering procedure). The de minimis principle follows on the transparency principle since it is used in the first stage of the public procurement process. After the advertisement and publicity requirements of the first stage follows the selection and qualification of the interested suppliers, or tenderers. This selection is based on two types of requirements: legal requirements and technical/economic requirements. The principle of fairness ensures the equal treatment of all tenderers. All decisions of the contracting authority should be unbiased and based on the requirements stated in the contract notice and the procurement regulations. Tenderers who feel that they have been treated unfairly have the right to challenge the procurement process as it has taken place. Following the principle of fairness is the principle of non-discrimination, which is

[98] See EU (2014) Art. 48
[99] See EU (2014) Art. 49
[100] See EU (2014) Art. 50
[101] See Bovis (2007, p. 67)
[102] See Bovis (2007, p. 71)

not only included in the EU directive, but is one of the most important principles in national law and society. Within public procurement, discrimination is seen as excluding certain economic operators from participating in the procedure by using for example a restricted procedure where an open procedure would suffice, just to be able to select certain economic operators or exclude others from getting the chance to win the contract. To guarantee not only a non-discriminatory procedure, awarding criteria must be published during the contract notice and must be objectively assessed to select a winner. The principle of objectivity ensures an awarding procedure that is based on criteria that are objectively determined and known to all tenderers.

4.3 Particularities with public procurement, differences between private and public organisations regarding procurement

The previous parts of this chapter elaborated on the basics of the public procurement regulations and the public procurement principles. Even though public and private organisations alike procure goods and services, there are a number of differences between the two. This part will show these differences and the consequences of these differences. First and foremost, the biggest difference between the two forms of procurement are the additional rules and regulations that a public organisation has to deal with in order to procure any service, product or work.[103] Of course private organisations have to abide by the law as any other organisation. Any criminal activities, corruption etc. are explicitly prohibited by law. However, when actually procuring, private organisations are not obliged to follow the EU Directive on public procurement with all its procedures and criteria for awarding a contract. Private organisations can simply choose the supplier they deem most fit for the job. Second, the objective of a private organisation when purchasing is to maximise profit and gain a competitive advantage, whereas a public organisation has to serve public interest through the use of public funds. Next to objectives, the approach of a seller differs. Where a private organisation can choose a supplier based on a long-term strategic significance or to reduce the uncertainty, the public organisation has to base their choice on criteria involving competition, fairness, openness and efficiency, all pre-determined by law.[104] Another major difference between private purchasing and public procurement is the amount of accountability for a purchase. Public procurers have less flexibility and freedom compared to buyers from private organisations, due to the amount of regulations. Contracting

[103] See Tadelis (2012, p. 297)
[104] See Wang and Bunn (2004, p. 89)

authorities cannot make any promises to suppliers for future contract awards, even if the contracting authority is satisfied with the current execution of the contract. Suppliers are evaluated on a contract-to-contract basis. This impedes the building of a partnership with the supplier, as opposed to the possibilities a private organisations has.[105] Another difference between public procurement and private purchasing is the amount of information disclosed around their purchases. In a public procurement setting, all activities are closely monitored by the general public, media, suppliers and others. The entire process has to be done in a transparent and economical manner,[106] whereas private organisations can do whatever they like within the constraints of general laws and regulations. These differences make it difficult to assume that buyer-supplier relationships are the same in both public and private organisations. While these differences are not widely researched for general buyer-supplier relationships between public organisations and private suppliers, one aspect of this relationship has been the focus of empirical research. The public procurement of innovation, where public buyers want to purchase a non-existing product from the market, has to deal with contradicting goals and objectives.[107] To facilitate interactive learning and development between the buyer and supplier(s), intense communication is crucial in order to make innovations possible. However, strict regulations exist that limit communication with suppliers to mitigate the potential risk that encourages "favouritism, oligopoly, and artificial creation of barriers to new entrants."[108] In other words, the public procurement regulations obstruct the process of innovation. Amann and Essig (2015) showed that the public procurement regulations created hindrances for the public procurement of innovation. They identified complexity of the process as the most important barrier, created through the combination of regulations and different stakeholders involved.[109] The other important barrier is time consumption. Amann and Essig (2015) argue that procurement of innovation usually costs more time than standard procurement processes, but that public procurement of innovation takes even more time.[110] These two hindrances show the difference between procurement of innovation in public organisations versus private organisations. While

[105] See Wang and Bunn (2004, p. 89)
[106] See Wang and Bunn (2004, p. 89)
[107] See Amann and Essig (2015, p. 284)
[108] Amann and Essig (2015, p. 284)
[109] See Amann and Essig (2015, p. 289)
[110] See Amann and Essig (2015, p. 289)

these are only researched in the quest for innovation, it is expected that these hindrances also apply to the ‘general’ buyer-supplier relationship in public procurement.

5. Proximity as a measure of distances

5.1 Being close still matters: proximity between organisations

In an world that is globalising in a rapid pace, with firms that are increasingly nomadic and where individuals are highly mobile, proximity still matters.[111] Whether it's an urgent order of resources from a supplier or a quick chat to a colleague during lunch, being proximate to each other enables such situations. The term proximity is conceptually defined as "being close to something measured on a certain dimension."[112] This certain dimension indicates a measurement scale, e.g. kilometres or amount of know-how in a particular field. The concept of proximity has been a major part of research on inter-organisational collaboration, innovation and regional economic development.[113] The most used dimension proximity is measured on is physical distance between objects, or 'geographical proximity'. Other forms of proximity are 'institutional', 'organisational', 'cultural', 'social' and 'technological proximity'. These different forms are all explained by Knoben and Oerlemans (2006) in an extensive literature review and are the basis of this part of the theoretical background. In their research, they reduce these forms to three main concepts of proximity relevant for inter-organisational collaboration: geographical, organisational and technological. The goal of their research was to reduce ambiguity of the concept of proximity, regarding inter-organisational collaboration.[114] This research follows that subdivision in the following sections. The remainder of this section will go deeper into geographical proximity. This is followed by a description of the other forms of proximity described above. The final part of this chapter will elaborate on the relevant dimensions of proximity used in this research.

5.2 Geographical proximity as a measure of physical distance

Geographical proximity, or spatial proximity, has two slightly different definitions. A number of studies define geographical proximity as the absolute distance between actors, whereas other studies use the relative distance between actors, or the time necessary to travel the distance between them.[115] Geographical proximity is the most used dimension of proximity in

[111] See Rallet and Torre (2005, p. 1)
[112] Knoben and Oerlemans (2006, pp. 71-72)
[113] See Knoben and Oerlemans (2006, p. 71)
[114] See Knoben and Oerlemans (2006, p. 71)
[115] See Knoben and Oerlemans (2006, p. 74); Kechidi and Talbot (2010, p. 287)

literature.[116] The relevance of geographical proximity lies in the notion that shorter geographical distances foster interactions between organisations and in particular enhance face-to-face contact.[117] This can improve knowledge transfer and innovation. It can also improve cooperation between geographically close players.[118] The reason this happens is because short geographical distances bring organisations closer and thus make information-rich interaction possible.[119] It facilitates the exchange of knowledge between actors as well. Recently, a number of authors have written about 'temporary geographical proximity', indicating that it is not necessary for two parties to be constantly proximate to each other in inter-organisational collaboration, but that being occasionally proximate does the trick as well. They argue that geographical proximity is only relevant in certain phases of the collaboration, e.g. during negotiations or when creating fundamental knowledge.[120] Other benefits of being situated close to suppliers is the reduced cost for the organisation. Delivery costs are usually lower if the product has to travel a smaller distance, long shipment times might compel organisations to carry more inventory[121] and potential time-zone differences can hinder communications and coordination between the buying organisation and the supplier.[122] Both parties in the buyer-supplier relationship can thus benefit from a short distance between them.

5.3 Non-physical proximity: intangible closeness

5.3.1 Organisational proximity: belonging to the same space of relations

Organisational proximity is often defined in the following or a similar way: "actors that are (…) belonging to the same space of relations."[123] Rallet and Torre (2005) however, have broadened this definition in a way that shows resemblance to the description of institutional proximity above. According to them, organisational proximity occurs when "two members of one organization are close to each other because they interact, and because their interactions are facilitated by (explicit or implicit) rules and routines of behaviour that they follow."[124] This definition implies that cooperation between for example engineers and researchers belonging to

[116] See Knoben and Oerlemans (2006, pp. 73-74)
[117] See Ganesan et al. (2005, p. 52)
[118] See Letaifa and Rabeau (2013, p. 2071)
[119] See Shaw and Gilly (2000, p. 171)
[120] See Gallaud and Torre (2004, p. 142)
[121] See Cannon and Homburg (2001, p. 33)
[122] See Levy (1995, p. 346)
[123] Oerlemans and Meeus (2005, p. 94)
[124] Rallet and Torre (2005, pp. 3-4 ????)

the same firm will develop more easily.[125] The importance of organisational proximity for inter-organisational cooperation lies in the fact that cooperation between organisations is more efficient and leads to better results if both parties have a similar organisational context. This similarity enables a mutual understanding between the two.[126] The resemblance with the hereafter described institutional proximity is because of the notion of mutual understanding between different organisations. According to some authors, social proximity is part of organisational proximity,[127] due to its corresponding definition: "Social proximity always refers to actors that belong to the same space of relations."[128]

5.3.2 Institutional proximity: measuring similarities within norms and routines

Institutions are seen as society's rules of the game, and are more formally described as "humanly devised constraints that shape human interaction."[129] They are guidelines for political, social or economic interaction. One can imagine that two parties with completely different 'rules of the game' have a hard time collaborating, or even communicating. This implicates that some kind of similarity between the 'institutions' of both parties is required for a fruitful collaboration. On a more general level, the similarities and differences between institutional frameworks in countries and regions are seen as institutional proximity. These institutional frameworks are for example legislative conditions, labour relations, accounting rules or business practices.[130] When considering a lower level of analysis, one can determine the effects of these frameworks on the norms and routines of organisations.[131] Institutional proximity can, in the case of similar institutional frameworks between organisations, enable collective learning and free knowledge transfers among both parties. This is based on the "common space of representations, models, norms, procedures and rules being applied to thought and action."[132] This common understanding represents a close institutional proximity.

[125] See Rallet and Torre (2005, p. 4)
[126] See Knoben and Oerlemans (2006, p. 75)
[127] See Filippi and Torre (2003, p. 388)
[128] Knoben and Oerlemans (2006, p. 78) based on Oerlemans and Meeus (2005)
[129] North (1991, p. 477)
[130] See Zeller (2004, p. 88)
[131] See Knoben and Oerlemans (2006, p. 76)
[132] Knoben and Oerlemans (2006, p. 76)

5.3.3 Cultural proximity: differences and similarities between cultures

Although cultural proximity research is found in many different disciplines, it is not an often researched type of proximity. Due to its use in these different disciplines, its definition is relatively consistent among authors. They describe culture as "the pattern of thoughts, feelings, behaviors, symbols and so forth that give meaning to actions and behaviors and provide interpretations of situations for people."[133] Cultural proximity therefore indicates the similarities between actors with their culture. However, there are two different levels of analysis that can be distinguished when regarding cultural proximity. One level of analysis involves differences in culture between continents, nations or regions, whereas the other level of analysis focuses on cultural differences between collaborating actors. This last level of analysis is most important for proximity between different organisations. Again, the measure of cultural proximity is roughly equal to both institutional proximity and organisational proximity as described above. For this reason, cultural proximity is often regarded as part of institutional proximity.

5.3.4 Technological proximity as a measure of technological learning ability

Technological proximity refers not so much to a technology itself, but rather to the knowledge actors have about them.[134] Similarities between the technological knowledge of the actors is the technological proximity and the more actors are technologically proximate, the better actors can acquire and develop technological knowledge. Two different levels of analysis are found in literature about technological proximity, the general and the dyadic level. At the general level, technological proximity is based on the concept of absorptive capacity, or the ability of the firm to "recognize the value of new information, assimilate it, and apply it to commercial ends."[135] At the dyadic level, the importance of technological proximity is explained by the concept of relative absorptive capacity. Opposed to the general idea of absorptive capacity (assuming that the organisation's capacity to learn depends solely on itself), relative absorptive capacity argues that an organisation's ability to learn from other organisations depends on the similarity of the knowledge bases of both firms (earlier defined as technological proximity).[136]

[133] Adapted from Knoben and Oerlemans (2006, p. 76)
[134] See Knoben and Oerlemans (2006, p. 77)
[135] Cohen and Levinthal (1990, p. 128)
[136] See Lane and Lubatkin (1998, p. 465)

5.4 The relevance of geographical proximity as opposed to other types of proximity

Geographical proximity has been found numerous times in research to foster both buyer-supplier relationships[137] and inter-organisational collaboration.[138] Geographical proximity enables more frequent face-to-face contact and close collaboration, and the larger the distance between actors of two firms, the more difficult it is for them to transfer knowledge.[139] Cluster theory, developed by Michael Porter, describes organisations in a geographically proximate area, with either vertical or horizontal ties. He states that clusters of geographically close organisations represent both competition and cooperation.[140] Competition, because similar organisations are trying to profit from the same resources or customers found in an area. Suppliers of these organisations can profit from this situation if they also establish themselves in this area, thus creating buyer-supplier relationships, a form of cooperation. Sourcing from geographically proximate suppliers also leads to lower costs for buyers.[141] Geographical proximity is most relevant for this research, since it assesses a type of buyer-supplier relationship, the preferred customer status. According to Porter (1998), being geographically proximate to suppliers allows organisations to gain advantages in productivity and productivity growth, advantages that are harder to gain when gained from a distance.[142] This shows the link to advantages gained from a preferred customer status and the importance of being located close to important suppliers. Research on this combination of factors was done by Steinle and Schiele (2008) and they showed that achieving a preferred customer status with international suppliers is difficult. Their case-study comparison between an oilfield equipment supplier with a globalised supply base and a medical engineering firm with a strong domestic supply base showed that sourcing from within a cluster has relational advantages. They argue, based on interviews and supplier pricing behaviour, that it is easier for organisations to receive a preferred customer status when located in the same regional or national cluster as their suppliers than for foreign firms entering the cluster.[143] Since, according to literature, being geographically close to suppliers fosters buyer-supplier relationships, this research will empirically test this.

[137] See e.g. Cannon and Homburg (2001); Bönte (2008)
[138] See e.g. Cramton (2001); Knoben and Oerlemans (2006)
[139] See Shaw and Gilly (2000, p. 173)
[140] See Porter (2000, p. 25)
[141] See Cannon and Homburg (2001, p. 29)
[142] See Porter (1998, p. 11)
[143] See Steinle and Schiele (2008, p. 3)

Even though there are several types of proximity within organisations and its actors, this research only tests the geographical type. There are several reasons for this choice. The exclusion of organisational proximity is based on the type of organisation at hand. The focal organisation is a combination of several departments with different cultures, different goals and different daily activities, in other words, there is no general 'space of relations'. The fact that an overarching purchasing department is responsible for all these 'smaller organisations', but is for the most part only supporting the procurement process for these departments, shows that it is impossible to generalise the organisational proximity of this case. However, organisational proximity might have an influence on buyer-supplier relationships in other organisations, organisations with a common goal and common culture. This train of thought is basically also the reason that technological proximity is not deemed relevant for this research. The purchasing department at the focal organisation is responsible for cleaning services and business travels, catering and maintenance, furniture and equipment for laboratories, even gardening and rental cars. The great differences in product- and service categories shows that there is no general technological proximity within the organisation. The purchasing department at the focal company is an expert at the procurement process itself, rather than experts of the products and services procured. This however does not mean that technological proximity cannot be a factor in successful buyer-supplier relationships. On the contrary, like-minded firms with the same level of technological knowledge are more likely to have a fruitful relationship with advantages for both parties.[144] This part of the theory showed several different types of proximity and their (ir)relevance for this research. Once again, organisational proximity and technological proximity might influence the buyer-supplier relationship and preferred customer status in different organisations, but is not used in this research. The following chapter will present the hypotheses for this research.

[144] See Lane and Lubatkin (1998, p. 464)

6. Hypotheses

6.1 Replication and extension

Many authors have described the relationship between satisfied suppliers and their preferred customers.[145] The general notion that suppliers who are satisfied with customers more easily give these customers a preferred status is supported by several empirical researches. The basis for the empirical research is laid by Hüttinger et al. (2014).[146] They researched the different antecedents of customer attractiveness, supplier satisfaction and preferred customer status through a survey with 173 respondents. Two years later, Vos et al. (2016) replicated that study and extended the analysis by researching the importance of supplier satisfaction on preferred customer status.[147] They integrated the constructs researched by Hüttinger et al. (2014) to determine the effects on each other. The model of Vos et al. shows a number of organisational antecedents of supplier satisfaction, the effect of supplier satisfaction on preferred customer status and finally the effect of having a preferred customer status on receiving a preferential treatment.[148] This research is based on the model Vos et al. created and adds to it by researching expected influences on receiving a preferred customer status. These influences are (1) the geographical proximity, or distance, of the supplier to the buying firm and (2) the influences of public procurement regulations. The basis for these constructs will be elaborated in their respective chapters below. The conceptual model for this study is presented in fig. 1 and is based on and adapted from the model developed by Vos et al. (2016).

6.2 Supplier satisfaction -> Preferred customer status

Based on previous studies on the antecedents of preferred customer status, this research will replicate the already existing research on the relationship between supplier satisfaction and preferred customer status.[149] In this way, this study can use that relationship as a necessary basis for new expected influences on preferred customer status. Supplier satisfaction is often

[145] See e.g. L. Hüttinger et al. (2012, p. 1203); Ellis et al. (2012, p. 1261) or Bemelmans et al. (2015, p. 186)
[146] See Hüttinger et al. (2014)
[147] See Vos et al. (2016, p. 4614)
[148] See Appendix B – model of Vos et al.
[149] See L Hüttinger et al. (2014); Vos et al. (2016)

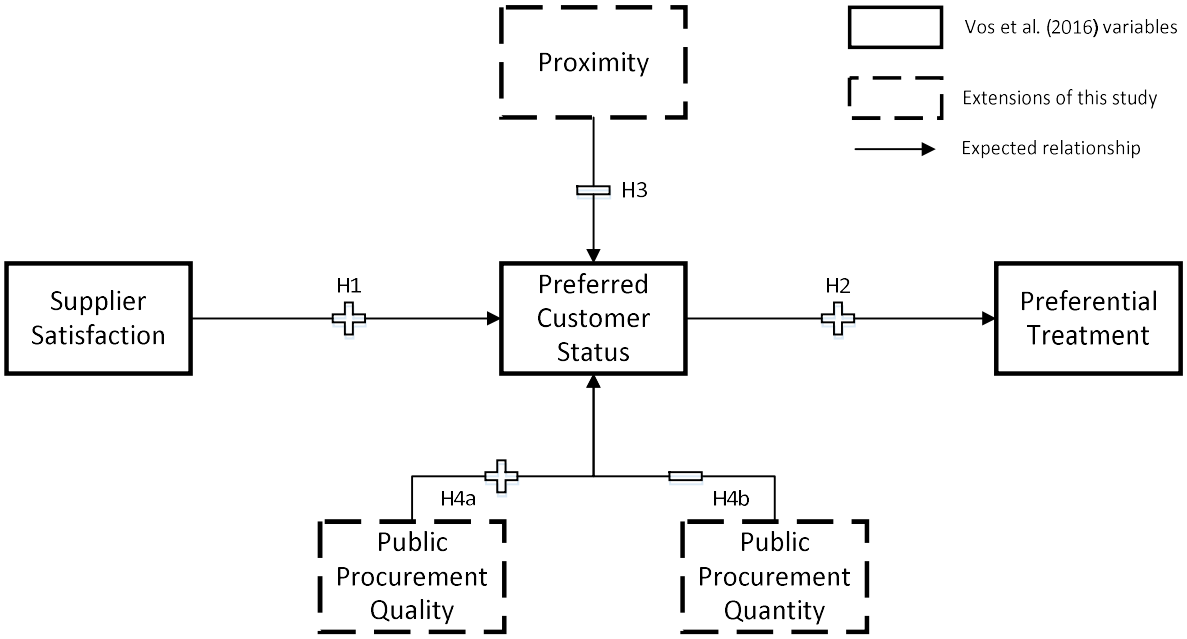


Figure 2 - Conceptual research model

described as a necessary condition for firms to achieve a preferred customer status, but is not sufficient on its own. Even if a supplier is satisfied with the value of the relationship with the customer, it can still choose to chase a more valuable opportunity if that should arise. A supplier will only award a preferred customer status if the customer is seen as attractive and if switching customers would lower the satisfaction, ergo the current customer provides the highest satisfaction.[150] Relationships between buyers and suppliers can be seen as an exchange relationship and social exchange theory describes such exchanges in a social context. However, social exchange theory is not only valid in a social context, it has also proven to be applicable in a business context.[151] A central notion of SET is the idea of reciprocity, or that when receiving a favour of any kind, one is expected to give a favour in return.[152] Buying firms can adjust their behaviour in the buyer-supplier relationship if they intend to receive relational benefits from that relationship. Ensuring that the supplier is satisfied can socially indebt the supplier and make

[150] See H. Schiele et al. (2012, p. 1181)
[151] See Cropanzano and Mitchell (2005, p. 874)
[152] See Blau (1964, p. 92)

them feel obligated to reciprocate this behaviour in future transactions.[153] In case the supplier has both satisfying and unsatisfying relationships with their buyers, it is expected that the supplier has a higher intention of reciprocating relational benefits to relationships that provide higher satisfaction.[154] These relational benefits come in the form of preferential treatment, facilitated by a preferred customer status. Thus, according to SET, the customer giving the most favours, or providing the highest satisfaction, has a higher chance of receiving favours, or a preferred customer status. This reasoning is empirically supported by Vos et al. (2016) in their model based on a survey with 316 respondents.[155] They found a significant positive influence of supplier satisfaction on preferred customer status. Based on the reasoning above and results from previous studies, it is hypothesised that:

Hypothesis 1. Supplier satisfaction has a positive impact on preferred customer status.

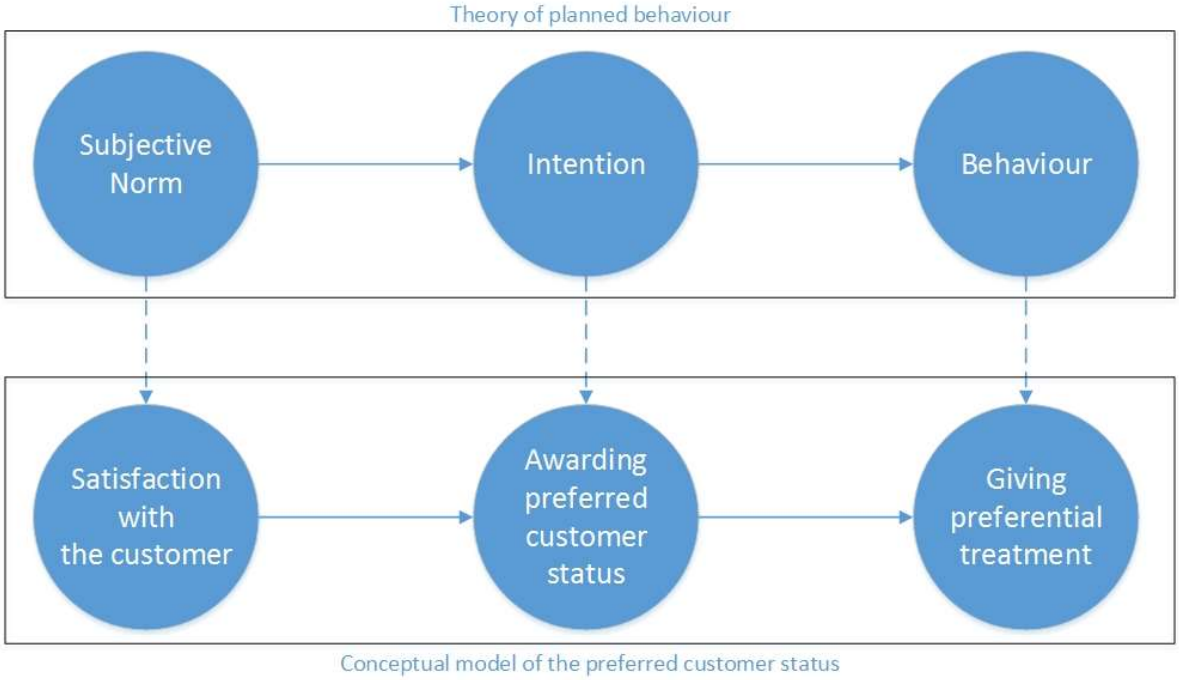


Figure 3 - Theory of planned behaviour vs. conceptual model

[153] See Nyaga, Lynch, Marshall, and Ambrose (2013, p. 44)
[154] See Pulles et al. (2016, p. 132)
[155] See Vos et al. (2016, p. 4618)

6.3 Preferred customer status -> Preferential treatment

A preferred customer status is of no use to the customer if it does not lead to any preferential treatment by the supplier. Ultimately, the preferential treatment will create the added value for the customer. The theory of planned behaviour describes such a situation. This theory shows similarities to the conceptual model described above,[156] and predicts that an intention to do a certain thing will lead to the actual performance of the thing.[157] Figure 3 shows a graphical comparison between the theory of planned behaviour and the conceptual model. In this case, awarding a preferred customer status reflects the intention of the supplier, whereas giving preferential treatment is the actual performance of the intention. Hence, a preferred customer status is useless without the actual preferential treatment. Theory of planned behaviour proposes that in order to expect a relationship between intention and actual performance, the supplier has to have sufficient perceived behavioural control over the matter.[158] This means that the supplier has the choice to give a preferential treatment and that he knows that he has the control. Based on empirical evidence, it is shown that the intention to do a certain action is a good predictor of the actual performance of that action.[159] This relationship was shown to be significant by Vos et al. (2016) through empirical research. Therefore, it is hypothesised that:

> **Hypothesis 2.** Having a preferred customer status has a positive impact on receiving a preferential treatment.

6.4 Proximity -> Preferred customer status

The most influential research done on geographical proximity is the research about cluster theory. Cluster theory describes organisations in a cluster and defines a cluster as "a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities."[160] Porter (2000) states that the scope of a cluster can be on a regional level, but also states, cities or even countries can be seen as a cluster. Cluster theory suggests that a part of achieving competitive advantage lies outside organisations and even the industry, but is found in the location the organisation is based

[156] See figure 3
[157] See Ajzen (1991, p. 181)
[158] See Ajzen (1991, p. 183)
[159] See Sheeran (2002, p. 3)
[160] Porter (2000, p. 16)

in.[161] These clusters are broader than traditional industry categories and can foster links between organisations that cut across different industries.[162] One of these links is the buyer-supplier relationship. The buyer-supplier relationship has proven to be a source of competitive advantage and can thus increase firm performance.[163] Receiving a preferred customer status can provide a competitive advantage through a well-managed buyer-supplier relationship.[164] Although one of the main prerequisites for receiving a preferred customer status is a satisfied supplier,[165] it is dependent on other variables as well. While possibly satisfactory for the supplier, the buyer-supplier relationship might span a too great of a distance for a preferred customer status to be possible. This train of thought is based on the reasoning of Steinle and Schiele (2008), who said that a customer residing in the same regional or national cluster as the supplier has a higher chance of receiving a preferred customer status than a customer from a different cluster.[166] Their reasoning implies that geographical distance is an influencing factor for awarding a preferred customer status to certain customers. Firms can profit from being in a cluster not only through low transaction costs, but also gain additional benefits when allowing constructive interaction with their fellow clustered firms.[167] Regular constructive interaction fosters cooperation between firms.[168] These interactions between cluster firms enable them to "obtain better resources than can firms located outside of the cluster,"[169] since they allocate preferential resources to one another. Therefore, sourcing within the regional cluster provides the buying firm with benefits. The aforementioned additional benefits come in the form of preferential resource allocation, a benefit of the preferred customer status. The notion that geographical proximity fosters close cooperation, combined with the cluster theory explained above leads to the expectation that suppliers located further away to the buyer are less likely to give this distant customer a preferred status. Based on the combination of these arguments, it is hypothesised that a greater distance between buyer and supplier will have a negative influence on being a preferred customer of that supplier.

[161] See Porter (2000, p. 16)
[162] See Porter (2000, p. 18)
[163] See Jap (2001, p. 20)
[164] See L. Hüttinger et al. (2012, p. 1194)
[165] See H. Schiele et al. (2012, p. 1179)
[166] See Steinle and Schiele (2008, p. 5)
[167] See Pulles and Schiele (2013, p. 100)
[168] See Letaifa and Rabeau (2013, p. 2071)
[169] Pulles and Schiele (2013, p. 101)

Hypothesis 3. Geographical distance has a negative effect on preferred customer status.

6.5 Public procurement -> Preferred customer status

Every modern organisation has to deal with laws and legal rules. Even the basic distinction between a private and a public organisation is a legal construct.[170] Public organisations have to abide by even more laws and regulations when purchasing, compared to private organisations.[171] This instigates differences between the two types of organisations, creating more formalization and bureaucracy in public organisations.[172] Hardly any research has been done to assess the influence of the regulations and bureaucracy on relationships between public buyers and public- or private suppliers, or even on inter-organisational collaboration.[173] The only research done in this field focused on innovation in a public environment. The results of this research showed that the public procurement regulations that oblige the use of tendering procedures cause complex processes and makes the process time consuming.[174] Whereas these regulations aim to ensure fair competition, they might impede long-term collaboration between public and private companies because of these barriers. The focus on these obligatory and bureaucratic tendering procedures described in the regulations have restricted opportunities to develop supply relations.[175] It is expected that the legal environment a public organisation is part of hinders the forming of, in this case, the buyer-supplier relationship that firms are aiming for. For example, the mandatory tendering procedures above certain thresholds stimulate fair treatment of suppliers and fosters fair competition, but also decreases the opportunity for interaction and developing relationships with suppliers. Likewise, restrictions regarding the length of contracts ensure that suppliers are never sure that the relationship with the buyer will continue for a longer period of time.[176] However, a distinction between two aspects of public procurement must be made. On the one hand, the quality of the tendering procedure can be assessed, while on the other hand, the quantity of the sales can be determined. Suppliers that have participated in (a) tendering procedure(s) can be satisfied or unsatisfied with the actual procedure(s) used.[177] For

[170] See Edelman and Suchman (1997, p. 480)
[171] See Tadelis (2012, p. 297)
[172] See Rainey and Bozeman (2000, p. 458)
[173] See e.g. Sheth, Williams, and Hill (1983); Wang and Bunn (2004)
[174] See Amann and Essig (2015, p. 289)
[175] See Erridge and Greer (2002, p. 509)
[176] See Erridge and Greer (2002, p. 510); Wang and Bunn (2004, p. 89)
[177] See OECD (2012, p. 23)

example, suppliers can be satisfied or not satisfied with the amount and nature of the communications with the buyer throughout the procedure. The supplier might also (not) be satisfied with the way complaints are handled. These examples are here described as 'Public procurement quality', and this is a reflection of the quality of the purchasing department when using certain procedures, something public buyers should focus on.[178] It has already been shown that overall satisfaction of the supplier leads to a preferred customer status and therefore it is hypothesised that:

> **Hypothesis 4a.** Higher satisfaction of the supplier with the public tendering process has a positive influence on preferred customer status.

Next to a qualitative measure of public procurement, a quantitative measure was developed to assess the influence of the share of sales through public procurement procedures. As explained by the de minimis principle, not every purchase of a public organisation has to follow the public procurement directives. This means that it is possible that suppliers deliver products or services both as a result of a tendering procedure (in case of a big project or delivery) and without the use of a tendering procedure (for smaller or individual purchases). When suppliers provide their product or service in both ways simultaneously, they might be inclined to give the buyer a preferred status for the products bought without a tendering procedure, while the product or service provided realised through a tendering procedure is bound by contractual limitations. Suppliers that mostly realise their sales to this buyer without a tendering procedure can give this buyer a preferred customer status more easily than suppliers that realise the majority of their sales to the buyer through tendering procedures. Suppliers were asked to provide the percentage of their sales to the customer that they had realised through a public procurement procedure. This quantitative measure creates differences between suppliers with low and high percentages of sales through public procurement procedures. Based on the barriers instigated by using public tendering procedures[179] and the expectation that more use of tendering procedures leads to more frequent encounters with these barriers, it is expected that a higher share of sales realised through a public tendering procedure has a negative influence on being a preferred customer. In other

[178] See Rendon (2008, p. 203)
[179] See Amann and Essig (2015, p. 289)

words, it is hypothesised that the ‘quantity of public procurement’, measured as a percentage of total sales volume, has a negative influence on the preferred customer status of a buying firm.

> **Hypothesis 4b.** A higher share of sales realised through public tendering procedures has a negative effect on preferred customer status.

The next section will elaborate on the research procedure and methods of analysis used to test the hypotheses.

7. Methods used for conducting this research

7.1 The search for relevant literature

This research started with a theoretical background on the relevant subjects of supplier satisfaction, preferred customer status, proximity and public procurement. To ensure a solid basis for the empirical research, the review of current theories and streams of literature in these subjects is essential. All four subjects are studied extensively and the most important and most relevant findings have been reported in the previous chapters. The part on supplier satisfaction forms the basis for the preferred customer research, whereas the preferred customer research forms the basis for the chapters on proximity and public procurement. The former two are the general description of the relationship within a preferred customer status, while the latter two are organisational characteristics expected to have an impact on the former. The theory and currently available literature give reason to believe that both the proximity of the supplier and the public procurement regulations influence the obtaining of a preferred customer status with suppliers. Analysis of theory and literature have been done in a structured manner, using general and more specific search terms for all four subjects. It started with a general search on both ‘supplier satisfaction’ and ‘preferred customer status’ using the Scopus-database. Search results to the corresponding search terms are summarised in table 3. Next to the results from the structured search for literature, articles were found through references to them, and based on their abstracts these were added to the folder of literature useable. To get a good understanding of the concept of proximity, literature reviews containing different forms of proximity were used to define the boundaries of the concept, after which specific literature for the different forms of proximity was analysed. One particular article has proven to be very useful, the 2006 article by

Table 3 - Literature review details

Search	Initial	Selection criteria	Useful title	Useful abstract	Final
"supplier satisfaction"	40	-	20	16	**15**
"preferred customer"	42	-	20	17	**15**
"proximity" + "literature review"	26	-	1	1	**1**
"preferential treatment"	1047	51*	4	4	**4**
"public procurement" or "government procurement"	2011	104**	6	4	**3**

Notes: * = searched in 'Business, Management and Accounting', limited to last five years. ** = searched for English articles in 'Business, Management and Accounting', limited to last five years.

Knoben and Oerlemans.[180] Backward reference searching in particular led to numerous interesting and useful articles.

One central concept is found throughout all four subjects in the theoretical background. This concept is the foundation of this research and it is the 'buyer-supplier relationship'. First, suppliers have an amount of satisfaction with their buyers. The supplier satisfaction is a characteristic of a buyer-supplier relationship and consequently can stimulate the awarding of a preferred customer status. Researched influences on the preferred customer status in this thesis are first the proximity of the supplier to the buyer, another characteristic of the buyer-supplier relationship. The final influence on preferred customer status researched in this thesis is the nature of the relationship, is it based on public procurement regulations or not? The focus of the theoretical study was therefore also on the research that has already assessed the relationships between the four concepts and the buyer-supplier relationship.

7.2 Survey design and measures used

The empirical research of this thesis is based on a survey, designed to measure a number of different variables regarding supplier satisfaction, preferred customer status, relational aspects and other influences and general questions. The measures used for the supplier satisfaction and preferred customer status questions are based on the survey done by Vos et al. (2016), extended with additional questions relevant to this research. The measures used are presented in Appendix A. The first part of the questionnaire replicates the research done by both Hüttinger et al. (2014)

[180] See Knoben and Oerlemans (2006)

and Vos et al. (2016) and thus provides more data for subsequent research in this field. The second part of the questionnaire contains questions regarding preferred customer status and preferential treatment. These questions are, like the supplier satisfaction questions, based on the research of Vos et al. (2016). A full replication of the model of Vos et al. (2016) can be found in Appendix B. To assess geographical proximity, suppliers were asked to calculate the distance in kilometres from their location to the University of Twente. Next to that, a classification was introduced, based on the ideas of Porter about cluster theory.[181] Suppliers were asked to answer the following question regarding their location (based on the office that has the most communication with the UT, in case of multiple offices): "To what region does your company belong when choosing from the options below?" Answering options were: 'Enschede' (city), 'Twente' (region), 'Overijssel' (province), 'Netherlands' (country), 'Europe' (continent) and 'Rest of the world'. Suppliers had to pick the smallest option possible from this list. These two measures were used to assess the geographical proximity of the supplier in relation to the focal company. To be able to measure the influence of public procurement, suppliers were asked to calculate the percentage of their sales with the focal company which had been realised through a public tendering procedure, where 0% means that no sales had been realised through a tendering procedure and 100% meaning that all sales were realised through a tendering procedure. This measure was suggested by prof. dr. Jan Telgen, professor and expert in the field of public procurement. Next to this percentage, suppliers were asked for their satisfaction with the way the tendering procedure had been conducted, if applicable. This realised a qualitative measure of the influence of the tendering procedure, next to the quantitative measure provided by the percentage of sales. These measures were developed in collaboration with several employees of the purchasing department of the UT. All measures are done on a five-point Likert scale ranging from 'strongly disagree' to 'strongly agree', except for some numerical questions. Some scales required a 'non applicable'-option, e.g. the questions about public procurement. Suppliers that had not participated in for example a European tendering procedure, would not be able to assess their satisfaction with the procedure. All cases with one or more 'non applicable' answers were treated as a missing value. Missing values were compensated through

[181] See Porter (2000, p. 16)

mean replacement, for the sake of retaining sample size. See Appendix A for an overview of all relevant measures and their corresponding questions.

7.3 Data collection

The quantitative data for this research were collected in collaboration with the purchasing department of the University of Twente. They provided a list of 6.679 suppliers with their purchasing volume. In July 2016, an e-mail with in invitation to participate in an online survey, administered by the UT, was sent to a sample of 620 suppliers, selected based on a minimum purchasing volume of €10.000 and availability of an e-mail address. The purchasing volume threshold was set at €10.000 with the intention to eliminate smaller suppliers from the sample who for example only sold on one instance to the UT, and thus did not build a relationship. The purchasing department had no readily available list or database of contact details of all their suppliers, but they provided a list with contact details of 127 contracted suppliers. The other contact details were found on the websites of the other suppliers, when available. The vast majority of these e-mail addresses were in the form of info@companyX.com or sales@companyX.com. In the subsequent weeks, three reminders were sent via e-mail and suppliers with known phone numbers were called to encourage participation. After approximately four weeks of data collection, 85 useable surveys had been returned. This gives a response rate of 13,5 percent. It is not clear what an acceptable response rate is and there is no agreed upon norm for this.[182] However, 13,5 percent is arguably on the low side. There are a number of explanations for this response rate. The most important reason is the absence of personal e-mail addresses for the majority of the suppliers. This is shown by the difference in response between the two groups. Of the contracted suppliers and suppliers with personal e-mail addresses, 27,6 percent responded, whereas from the other group, only 10,1 percent responded. Another possible reason is the fact that the survey was administered during the summer holidays, while the relevant employees were possibly on vacation. The third reason is the indicated length of the questionnaire. It is assumed that respondents were not keen on answering a thirty-minute survey. To collect more data, firms were invited a second time to answer the questionnaire. The initial questionnaire was shortened and was administered after the holidays. The questionnaire was sent to 207 firms that were also part of the first survey but

[182] See Baruch (1999, p. 422)

Table 4 - Characteristics of sample

Characteristics of sample

1. Length of buying relationship	
< 5 years	27,7%
5 - 10 years	34,9%
11 - 20 years	20,5%
> 20 years	15,7%
Not specified	1,2%

2. Number of employees	
< 10	36,2%
10 - 50	27,7%
50 - 250	21,7%
250 - 1000	8,4%
> 1000	4,8%
Not specified	1,2%

3. Region of respondent	
Enschede	19,3%
Twente	18,1%
Overijssel	3,6%
The Netherlands	49,4%
Europe	9,6%

4. Industry of respondent	
Primary sector (Basic industry, e.g. mining & farming)	1,2%
Secundary sector (Industrial sector, e.g. industry, energy-/waterutilities, construction)	25,3%
Tertiary sector (Service sector, e.g. logistics, retail, cleaning, repair, insurance)	38,6%
Quaternary sector (Information sector, e.g. economic/tax consultant, IT, engineers, lawyers)	33,7%
Unkown	1,2%

had not responded. The second round yielded nineteen additional responses, bringing the total to 104 useable responses. Table 3 summarises several characteristics of the respondents of the UT.

7.4 Method of analysis

The empirical results of this research are analysed trough Partial Least Squares (PLS) path modelling, using SmartPLS 3.0 software.[183] PLS path modelling is popular among scientists and researchers because of four advantages it offers. The first is that PLS path modelling can be used when distributions are highly skewed, since it makes no assumptions about the population or the scale of measurement.[184] Second, PLS path modelling can be used even when having a small sample size.[185] Next to that, the rise of modern PLS path modelling software with graphical user-interfaces has improved the use of the method. Finally, PLS path modelling is preferred over covariance-based SEM (CBSEM) in situations where the number of variables is high in relation to the number of observations and where the number of indicators per latent variable is low.[186] PLS path modelling with SmartPLS gives the advantage that non-normality

[183] See Ringle, Wende, and Becker (2015).
[184] See Fornell and Bookstein (1982, p. 443); Henseler and Sarstedt (2013, p. 566).
[185] See Chin and Newsted (1999, p. 314).
[186] See Henseler and Sarstedt (2013, p. 566).

of the sample has no influence on the results. Additional descriptive statistics and tests for data characteristics are done with IBM SPSS 22.[187]

7.5 Data structure quality assessment and model validity and reliability

In a first analysis of the data, outliers on the used measures were identified by using the outlier labelling rule as described by Hoaglin, Iglewicz, and Tukey (1986), with a g-value of 2.2.[188] This led to the list-wise deletion of two cases, and no further analysis was conducted on these cases. The data were manually checked for inconsistencies by randomly checking samples of the dataset. Subsequently, factor loadings of the components were assessed with a principal component analysis (PCA). Unique variance of items on their hypothesised components are also retained through PCA.[189] The default options for Varimax and Oblique (Delta = 0) rotations are applied and PCA retained five components with an eigenvalue higher than 1. The factor analysis regards the two different variables of public procurement as one factor. A minimum loading of .50 is used as cut-off value, as recommended by Segars and Grover (1993).[190] Results show loadings of all items on the corresponding components of >.50 for all of the Oblique solutions and Varimax solutions. Communalities for each individual item are all above .50, averages for the five factors are all above .60, with a total average of above .70. As long as communalities are high, on average, a factor analysis will accurately recover factors even when sample size is relatively small.[191] If SPSS is forced to extract six components, all components are corresponding to their respective variables in the conceptual model.[192] This goes for both Oblique rotation and Varimax rotation. When checking for reliability and validity, several steps need to be performed.[193] First, indicator reliability will be assessed by examining the outer loadings of the individual indicators. The rule of thumb applied by many researchers is to accept indicators with a minimum loading of 0.7. This number implies that "there is more shared variance between the construct and its measure than error variance."[194] Table 5 shows that every individual indicator has a loading higher than 0.7, indicating that the indicators are reliable as a

[187] See IBM-Corporation (2014)
[188] See Hoaglin et al. (1986)
[189] See Petter, Straub, and Rai (2007, p. 641)
[190] See Segars and Grover (1993, p. 523)
[191] See MacCallum, Widaman, Preacher, and Hong (2001, p. 634)
[192] See rotated component matrix in appendix C
[193] See K. K.-K. Wong (2013, p. 16)
[194] Hulland (1999, p. 198)

Table 5 - Reliability and validity (1)

	Indicator	Outer loadings	Composite Reliability	Convergent validity (AVE)
Supplier satisfaction	SS100_SQ1	0.805	0.944	0.737
	SS100_SQ2	0.870		
	SS100_SQ3	0.876		
	SS100_SQ4	0.888		
	SS100_SQ5	0.870		
	SS100_SQ6	0.840		
Preferred customer	SS110_SQ1	0.846	0.918	0.693
	SS110_SQ2	0.893		
	SS110_SQ3	0.876		
	SS110_SQ4	0.797		
	SS110_SQ5	0.741		
Preferential treatment	SS120_SQ1	0.835	0.857	0.600
	SS120_SQ3	0.704		
	SS120_SQ4	0.759		
	SS120_SQ5	0.795		
Public Procurement Quantity	SS202	Single item construct		
Public Procurement Quality	SS203_SQ1	0.849	0.833	0.714
	SS203_SQ2	0.841		
Proximity	SS204	Single item construct		

measure for the construct. Composite reliability is an additional measure for internal consistency of the construct. It is suggested as a replacement for the 'Cronbach's alpha' as a measure of internal consistency in prior literature, as it tends to provide less conservative measures in PLS. The threshold for composite reliability is 0.7, or 0.6 for exploratory research.[195] Values for the constructs are all definitely higher than the threshold, as indicated in table 5. To ensure that factors are free from systematic measurement error, validity has to be assessed. This is done in two ways: by measuring convergent validity (to assess uni-dimensionality within factors) and discriminant validity (to assess statistical difference between theoretically different factors).[196] Average variance is extracted to determine convergent validity of the constructs, where values higher than 0.6 are considered adequate, according to Bagozzi and Yi (1988). Table 5 shows that every construct is 0.6 or higher. Following the criteria of Bagozzi and Yi (1988), every construct has a high enough AVE.[197] To assess discriminant validity, the Fornell-Larcker criterion is an often used criterion. It suggests that the square root of the AVE in each latent variable has to be larger than other correlation values among these variables.[198] However, Henseler et al. (2015) have shown that this criterion, even though it is the dominant approach,

[195] See Bagozzi and Yi (1988, p. 82); K. K.-K. Wong (2013, p. 22)
[196] See Henseler, Hubona, and Ray (2016, p. 11)
[197] See Bagozzi and Yi (1988, p. 80)
[198] See K. K.-K. Wong (2013, p. 22)

Table 6 - Reliability and validity (2)

	Preferential treatment	Preferred customer	Proximity	Public Procurement Quality	Public Procurement Quantity	Supplier satisfaction
Preferential treatment	-	0.458 - 0.808	0.053 - 0.260	0.045 - 0.218	0.013 - 0.027	0.133 - 0.423
Preferred customer	0.659	-	0.098 - 0.460	0.205 - 0.608	0.028 - 0.157	0.402 - 0.677
Proximity	0.151	0.270	-	0.003 - 0.096	0.011 - 0.268	0.118 - 0.376
Public Procurement Quality	0.159	0.415	0.058	-	0.211 - 0.674	0.327 - 0.804
Public Procurement Quantity	0.035	0.083	0.113	0.416	-	0.045 - 0.230
Supplier satisfaction	0.267	0.552	0.252	0.593	0.113	-

Notes: bottomleft corner holds HTMT-scores for the relationship between the variables on both axes. Topright corner holds HTMT confidence intervals of the relations between variables on both axes.

does not "reliably detect the lack of discriminant validity in common research situations."[199] They propose a new approach, the heterotrait-monotrait (HTMT) ratio of the correlations between the latent variables. The HTMT ratio can be used in two ways to assess discriminant validity, as a criterion or as a statistical test. Both types will be used here. Using HTMT as a criterion requires it to be lower than a certain threshold. Literature suggests 0.85 as the most conservative measure[200], which will be used here. Table 6 shows the HTMT scores for all latent variables compared to each other (scores indicated in the bottom-left half corner). As can be seen, all scores are below the 0.85 threshold and thus ensure discriminant validity. The second method to assess discriminant validity through the HTMT ratio is to use a statistical test. Every relation between two latent variables is assessed and a confidence interval is created based on the null hypothesis (H_0: HTMT $\geq$ 1). If the value '1' lies within the confidence interval, discriminant validity cannot be assured. Or rather, if the value '1' lies outside of the confidence interval, this suggests that the two variables are empirically distinct.[201] Table 6 also shows the confidence intervals (intervals indicated in the top-right half corner), showing that none of the relations have a confidence interval containing the value '1'. Convergent and discriminant validity are both satisfactory. Model fit can be assessed by looking at the standardised root mean square residual (SRMR). A value of zero indicates a perfect fit and model fit can be accepted at a general threshold of 0.08.[202] SRMR for the model used in this research is 0.068. Compared to the threshold of 0.08, model fit is accepted.

[199] Henseler, Ringle, and Sarstedt (2015, p. 115)
[200] See Clark and Watson (1995, p. 314); Henseler et al. (2015, p. 121)
[201] See Henseler et al. (2015, p. 122)
[202] See Henseler et al. (2016, pp. 9-10)

8. Results of the conceptual model in SmartPLS

8.1 Initial results from the model in SmartPLS

The actual results from running the model in SmartPLS 3.0 present the opportunity to assess the hypotheses presented in chapter five. As shown above, the reliability and validity of the latent variables and its indicators have been checked and there is no reason to believe that these are not sufficient. SmartPLS 3.0 gives a number of parameters to play with, but most of the standard settings are used. The model is bootstrapped with 5.000 subsamples and tested on a significance level of 0,05 with a one-tailed test type. This is done because the coefficient is expected to have a sign (either positive or negative), as reflected in the hypotheses.[203] The first and most important results from the PLS path model are the variance of the target endogenous variables and the level and significance of the path coefficients.[204] The target endogenous variables are in this case 'preferred customer status' and 'preferential treatment'. The R^2, or coefficient of determination, shows the amount of variance explained in the latent variable by the explaining latent variables.[205] As a rule of thumb, R^2 values of 0.75, 0.50 and 0.25 can respectively be regarded as substantial, moderate and weak.[206] The R^2 value of 'preferred customer status' is 0.28, and the R^2 value of 'preferential treatment' is 0.33. Both R^2 values can be regarded as weak. Path coefficients are evaluated for significance. Significance among these coefficients is needed to be able to generalise from a sample to a population.[207] Path coefficients are also used to either verify or reject the hypotheses. All the path coefficients are presented in the model with results in figure 4, with corresponding statistics in table 7. As expected, both the relationships between supplier satisfaction and preferred customer status (H1: $t = 4.837$; $\beta = 0.47$; $f^2 = 0.27$) as well as preferred customer status and preferential treatment (H2: $t = 5.104$; $\beta = 0.52$; $f^2 = 0.36$) are significant at an alpha-level of .01. These results are very similar to those found by Vos et al. (2016) and thus imply a successful replication of their research. A full replication of their improved model with the data from this research is provided in appendix B. Hypothesis 3 (Proximity => Preferred customer status) is not supported by the data ($t = 0.003$; $\beta = -0.008$). However, another test will be done in the next section with the other measure of proximity

[203] See Kock (2015, p. 1)
[204] See Hair, Ringle, and Sarstedt (2011, p. 147)
[205] See Henseler et al. (2016, p. 11)
[206] See Hair et al. (2011, p. 147)
[207] See Henseler et al. (2016, p. 11)

(region). Hypothesis 4a (Public procurement quality => Preferred customer status) is supported at an alpha-level of .05 (t = 1.285; β = 0.12; f^2 = 0.02). Based on this data, there is no support for H4b whatsoever. With a p-value of 0.388 and a β of -0.02 it is nowhere near significant.

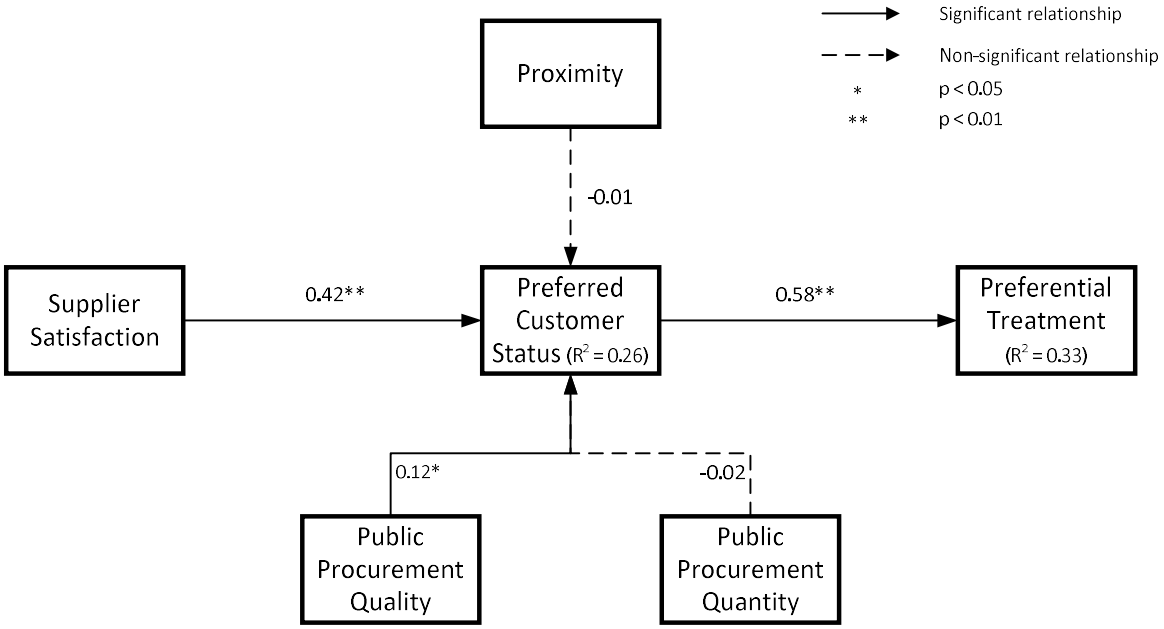


Figure 4 - Results from PLS path modelling

Table 7 - Bootstrap and effect statistic of the model (bootstrap samples = 5000)

	β	SE	t	f^2
Supplier satisfaction => Preferred customer	0.415	0.09	4,646**	0.18
Preferred customer => Preferential treatment	0.576	0.09	6.765**	0.50
Proximity => Preferred customer	-0.008	0.11	0.073	0.00
Public Procurement Quality => Preferred customer	0.120	0.09	1.285*	0.02
Public Procurement Quantity => Preferred customer	-0.021	0.07	0.285	0.00

Notes: β = standardised coefficient beta; SE = standard error of β; t = t-statistic; f^2 = effect size of variance explained by predictor; * = p < 0.05 (one sided); ** = p < 0.01 (one-sided).

8.2 Results of the re-investigation of hypothesis three

Because the results of the analysis in SmartPLS are not satisfactory regarding hypothesis 3, an additional test with the other measure is executed. This measure consists of a distinction in the region the supplier resides in and is as such suitable for a group comparison. Hypothesis 3 describes the expectation that geographical distance has a negative effect on preferred customer status, so it is expected that the buyer is more likely to be a preferred customer of suppliers located inside a cluster rather than outside that cluster. To make a comparison between two

different groups, an independent-samples t-test is performed in SPSS 22.[208] This test uses a single measure and compares the means of the two specified groups for a significant difference. To be able to analyse the data with a sufficient sample size for both groups, the sample is divided as follows: suppliers answering 'Enschede' and 'Twente' were put in group 1, or the 'nearby'-group, while suppliers answering with 'Overijssel' and 'the Netherlands' were put in group 2, or the 'distant'-group. The results of this test are shown in tables 8 and 9. The group comparison shows a significant difference between the two groups when comparing for the variable 'Preferred Customer Status'. It is shown that this variable scores significantly higher in the 'nearby'-group compared to the 'distant'-group. This corresponds to the expectation set in the hypothesis. Based on this division in regions, hypothesis three is significant.

Table 8 & 9 - Group statistics and independent samples test

Group Statistics

Proximity Group		N	Mean
Preferred Customer Status	Nearby	39	3,5128
	Distant	54	2,9037

Independent Samples Test

Preferred Customer Status	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
	3.665	91	.000	.60912	.16620

Notes: N = sample size; t = t-statistic; df = degrees of freedom; Sig. (2-tailed) = significance level of comparison of differences between groups.

[208] See IBM-Corporation (2014)

9. Discussion and implications

9.1 Discussion on findings

The main objective of this thesis was to identify two new antecedents for preferred customer status. Since the study builds upon and extends previous research, it is called a replication-extension study. The advantage of a replication-extension study lies in the fact that such a study is specifically designed to replicate and extend prior studies. Since this is the third time that this specific research has been conducted in cooperation with a different buying firm, the generalisability of the statistical results increases.[209] The model developed by Vos et al. (2016) has shown to be compatible with the data gathered for this research and therefore provides a solid basis on which the additional variables can be added. Without such a basis, a conceptual model as presented alongside the hypotheses would not be possible and only relationships between two variables could have been assessed. The relationships between supplier satisfaction and preferred customer status, and preferred customer status and preferential treatment are once again supported by data. Regarding the influence of proximity (measured as distance in kilometres) on receiving a preferred customer status, the data does not support the hypothesis that proximity between the buyer and a supplier has an influence on being a preferred customer. However, a group comparison with the region-measure shows that there is a significant difference if the means of preferred customer status are compared between two groups. The results show that the variable 'preferred customer status' scores significantly higher for firms residing in the combined region 'Enschede' and 'Twente' versus suppliers located in the rest of the Netherlands. This is in line with the hypothesis. On the contrary, Holger Schiele and Ebner (2013) found that regional suppliers do not perform better than other domestic suppliers. They found that local suppliers perform worse on cost aspects and on complying to special requirements,[210] two aspects of preferential treatment. This is compensated with a better performance on R&D collaboration, another important benefit of being a preferred customer. While the results from this study show that it does pay to source from suppliers located in the same region, it might not be at all attributable to the actual distance between the firms. One explanation regarding the different outcomes of both measures is the effect of culture on the relationships between firms. Cultural proximity makes collaboration easier when firms have to

[209] See Bonett (2012, p. 409)
[210] See Holger Schiele and Ebner (2013, p. 694)

work together with suppliers from the same region rather than from the same country, or from the same country compared to suppliers from different countries.[211] This is due to similarities in cultural values and beliefs, which makes communicating and collaborating more fruitful.[212] Since Enschede is located against the eastern border of the Netherlands, this means that a supplier from Germany can be located ten kilometres away, while a company in the same region (Twente) can be located twenty kilometres away. This provides a discrepancy between both measures used and can explain the different outcomes. Also, a club-like atmosphere within a certain cluster or region might favour local buyer-supplier relationships as opposed to a buyer-supplier relationship between firms in different clusters or regions.[213] It is expected that suppliers residing in the same region as the buyer are more likely to award a preferred customer status to the buyer compared to suppliers from a different region, which are usually located further away. Finally, regular and constructive face-to-face communication, fostered by geographical proximity,[214] between employees of the buyer and supplier improves the buyer-supplier relationship,[215] which can lead to a preferred customer status.

It is not as clear-cut for the other researched influence, public procurement. The results of both hypotheses might even instigate ambiguity within the relationship between public procurement and preferred customer status. Primarily, this is because on the one hand, quality of public procurement is regarded as a positive influence on receiving a preferred customer status, while quantity, measured as share of sales through public tendering procedures, has no apparent influence. The expected positive influence of public procurement quality, measured as the satisfaction of the supplier with the used procedures, is supported by the data. This seems adequate, since the measure shows high similarity to the base measure of supplier satisfaction. As shown in the chapter on supplier satisfaction, it is a prerequisite to have a satisfied supplier when trying to gain a preferred customer status. Satisfaction with the public tendering procedure can then also be seen as a necessity when using such a procedure. The results support that satisfaction with the public procurement procedure has a positive influence on preferred customer status of the buyer. Public organisations should therefore try to satisfy the supplier(s)

[211] See Polenske (2004, p. 1033)
[212] See Knoben and Oerlemans (2006, p. 76)
[213] See Steinle and Schiele (2008, p. 5)
[214] See Ganesan et al. (2005, p. 44)
[215] See Jap (2001, p. 29)

participating in a public procurement procedure. According to the data, it does not matter if this supplier has a high or low share of sales resulting from such procedures, as long as the procedure is done to satisfaction. An explanation for the lack of influence of the share of sales of public procurement (hypothesis 4b) comes from the fact that suppliers can for example deliver three different products realised through three public tendering procedures, while this says nothing about the share of sales. This supplier could both realise ten percent of its sales through these three procedures, but this could also be ninety. The share of sales realised through public procurement procedures is no reflection of the amount of procedures used or the value of those procedures. This corresponds with the finding that general share of sales has no effect on receiving a preferred customer status.[216] Sadly, these results are not generalizable to all firms, since most of the firms are not public organisations.

Previous research by Hüttinger et al. (2014) initially shows a number of relational characteristics influencing supplier satisfaction and preferred customer status,[217] while Vos et al. (2016) integrate these relational characteristics into one model, where having satisfied suppliers depends on some of these characteristics.[218] Subsequently, receiving a preferred customer status depends on having satisfied suppliers. Their research only encompasses these relational characteristics. Even though Vos et al. (2016) revised their original model, still all relational characteristics have an influence on supplier satisfaction, whereas supplier satisfaction is the only antecedent for preferred customer status.[219] This suggests that receiving a preferred customer status solely depends on having a satisfied supplier. This thesis has shown that other, non-relational aspects can also influence the receiving of a preferred customer status.

9.2 Managerial Implications

This research has three managerial implications: Firstly, it is once again shown that supplier satisfaction positively influences the awarding of a preferred customer status and consequently the giving of preferential treatment. Satisfying the supplier is therefore a means to gain a competitive advantage.[220] This is in line with previous research and should therefore be pursued

[216] See Ellis et al. (2012, p. 1264)
[217] See L Hüttinger et al. (2014, p. 711)
[218] See Vos et al. (2016, p. 4618)
[219] See Vos et al. (2016, p. 4620)
[220] See Pulles et al. (2016, p. 136)

by purchasing companies when trying to gain a preferred customer status, and consequently receive preferential treatment from their suppliers. Also, this research shows the influence of geographical proximity on the chance of receiving a preferred customer status. It is recommended that firms adapt their supplier selection strategies to match these findings and select, when possible, suppliers residing in the same geographical region. Doing so leads improves the likelihood of being a preferred customer with that supplier, compared to suppliers that are located in more distant geographical regions. For public organisations using obligatory tendering procedures it is important that the suppliers participating in these tendering procedures are satisfied with the used procedure. Improving the quality of the purchasing department handling these procedures can improve the satisfaction of these suppliers, who are then more likely to make the buying firm a preferred customer.

9.3 Theoretical implications

While practical implications refer to actions to be taken by firms, the theoretical implications of this research apply to the growing literature in the field of purchasing and especially the preferred customer status literature. The findings of this research show that there are possibly more antecedents relevant when assessing the relationship between supplier satisfaction and preferred customer status. Other, theoretically grounded, influences on general buyer-supplier relationships are potential influences on the chance of receiving a preferred customer status. Furthermore, this research shows the value of replication and extension studies, by successfully replicating previous research in a different business context, showing the validity and reliability of the model.

10. Future research recommendations and limitations

10.1 Limitations of this research

The first and foremost limitation of this research is the low response rate amongst the contacted suppliers and the corresponding low sample size. While sample size may have reached general accepted thresholds of one hundred, this number may still be too low to generalise the findings to the entire population. And even though the disclaimer of the questionnaire explicitly stated that the questionnaire could not be used as a marketing tool, non-response bias amongst unsatisfied suppliers cannot be ruled out.[221] The second limitation is the context of the research. Whereas the model proposed by Vos et al. (2016) is predominantly suited for a production- or industry-setting, it is used in this research in a mostly service-oriented organisation: a university. Many respondents commented on the technical focus of the questionnaire, saying that their firm simply delivers a service and that some questions could not be answered easily by them. Even though the main research model does not use variables which questions were 'unanswerable', the fact that suppliers deem the questionnaire not fitting might induce some bias to the rest of the questions. A third limitation of this research, even though self-inflicted, is the lack of a solid measure of the public procurement variables. While the used variables serve their purpose, one can see the lack of depth these variables have. Two causes for the use of these variables can be identified. The first is the lack of a good measure in available literature. As far as is known, this study is the first to measure the effects of the use of public tendering procedures on buyer-supplier relationships and specifically on preferred customer status. The lack of a good measure in literature meant that a new measure had to be invented. However, due to time constraints, the development of this new measure was not optimal and was therefore not to the satisfaction of the researcher.

10.2 Future research possibilities: discover additional antecedents for a preferred customer status

The suggestion that receiving a preferred customer status depends on more than just a satisfied supplier, invites researchers to investigate other antecedents of a preferred customer status. As shown in this research, the distance between buyer and supplier can play a role in receiving a preferred customer status. This finding promotes the search for other antecedents and ultimately,

[221] See Berg (2005)

a generally accepted guideline on how to become a preferred customer. Since geographical proximity in the form of a shared region has been shown to have an influence on receiving a preferred customer status, the other types of proximity mentioned in the theory are also potential influences. Future research on the influence of proximity on preferred customer status should include the different types of proximity not examined in this research.

While the influence of public procurement might not be of interest to every firm, it is worthy of future research. Everybody benefits from a public organisation receiving preferential treatment of some sort. Receiving preferential treatment by definition means getting more value for the money paid, and since public organisations use the money of governments and indirectly, tax-payers, everybody contributes to these costs. To be able to conduct more research on the influences of public procurement not only on preferred customer status, but on buyer-supplier relationships in general, a solid measure must be developed. A measure that can not only differentiate between using public procurement procedures or not, but can also measure gradations of public procurement. The development of such a measure poses a challenge for future researchers on the subject.

A third interesting research opportunity is to examine the model used in this research from the perspective of a supplier. How does a supplier differentiate between its customers, and what are the necessary requirements for a customer to get a preferred customer status from that specific supplier? A corresponding research can involve a comparison between different industries. Account managers of the supplier judge the customers on their ability to satisfy the supplier, on their status and if they receive any preferential treatment. The results can be examined for differences in proximity and possibly the public status of a customer, along with other antecedents found when following the first future research recommendation.

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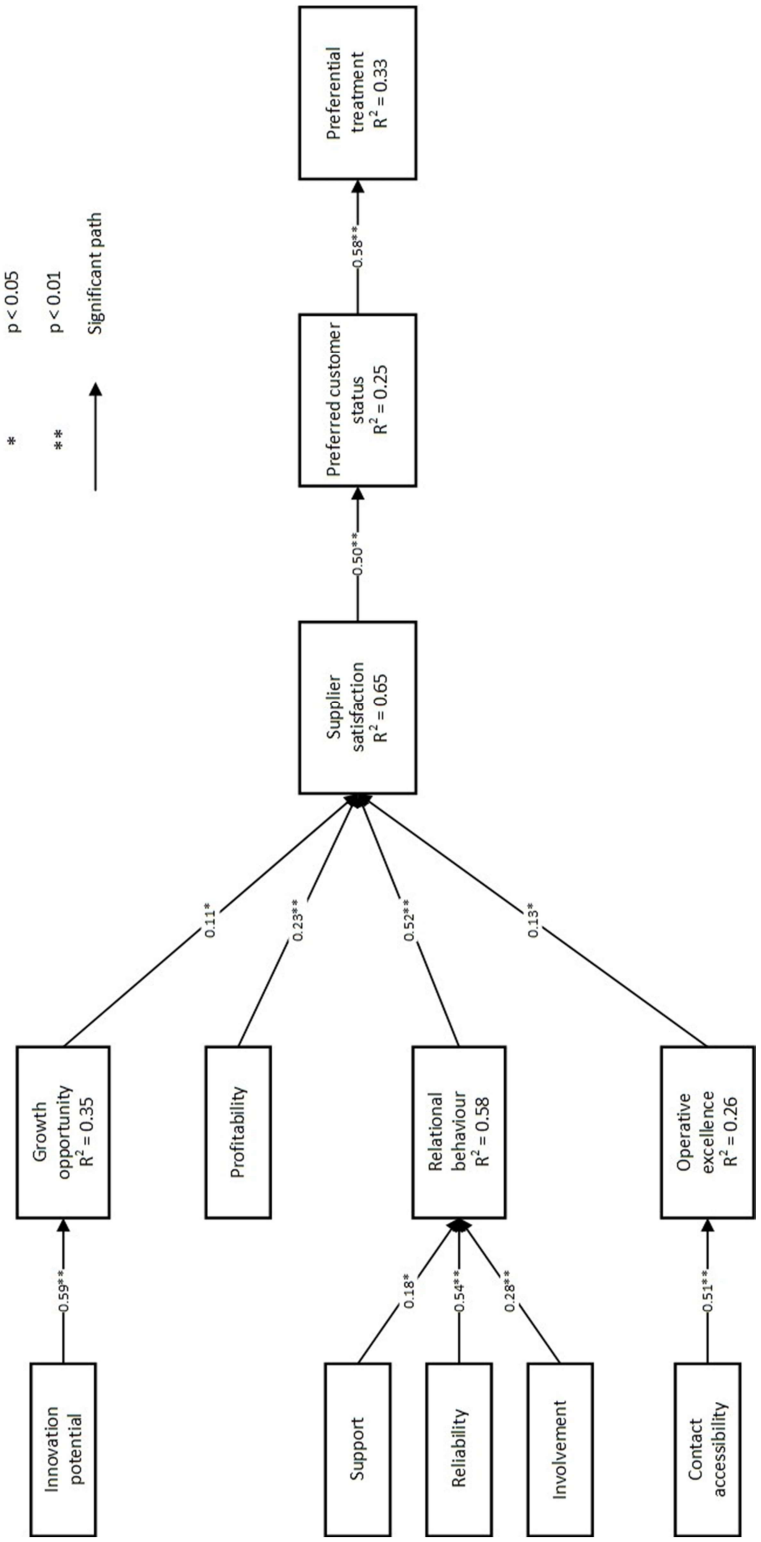
Annexures

Appendix A – Used measures

Supplier satisfaction (source: Vos et al. (2016))	
SS100_SQ1	Our firm is very satisfied with the overall relationship to the University of Twente.
SS100_SQ2	On the whole, our firm is completely happy with the University of Twente.
SS100_SQ3	Generally, our firm is very pleased to have the University of Twente as our business partner.
SS100_SQ4	If we had to do it all over again, we would still choose to use the University of Twente.
SS100_SQ5	Our firm does not regret the decision to do business with the University of Twente.
SS100_SQ6	Our firm is satisfied with the value we obtain from the relationship with the University of Twente.
Preferred customer status (source: Vos et al. (2016))	
Compared to other customers in our firm´s customer base…	
SS110_SQ1	… the University of Twente is our preferred customer.
SS110_SQ2	… we care more for the University of Twente.
SS110_SQ3	… the University of Twente receives preferential treatment.
SS110_SQ4	… we go out on a limb for the University of Twente.
SS110_SQ5	… our firm's employees prefer collaborating with the University of Twente to collaborating with other customers.
Preferential treatment (source: Vos et al. (2016))	
Our firm…	
SS120_SQ1	... allocates our best employees (e.g. most experienced, trained, intelligent) to the relationship with the University of Twente.
SS120_SQ3	… allocates more financial resources (e.g. capital, cash) to the relationship with the University of Twente.
SS120_SQ4	… grants the University of Twente the best utilization of our physical resources (e.g. equipment capacity, scarce materials).
SS120_SQ5	… shares more of our capabilities (e.g. skills, know-how, expertise) with the University of Twente.
Public procurement Quantity (source: developed)	
SS202	What part (in percentage) of your turnover with the University of Twente has been due to tendering procedures? (0-100)
Public procurement Quality (source: developed)	
SS203_SQ1	We are very satisfied with the 'negotiated contract' procedure as utilized by the University of Twente.
SS203_SQ2	We are very satisfied with the 'European tendering' procedure as utilized by the University of Twente.
Proximity (source: Porter (2000))	
SS204	What is the distance of your company to the University of Twente? (in Kilometers)
SS206_SQ1	To what region does your company belong when choosing from the options below?
Answer options:	A: Enschede; B: Twente; C: Overijssel; D: The Netherlands; E: Europe; F: Rest of the world.

Appendix B – Replication of the improved model of Vos et al. (2016)



Appendix C – Rotated component matrix (confirmatory factor analysis)

Rotated Component Matrix[a]

		Component					
		1	2	3	4	5	6
Supplier satisfaction	SS100_SQ1	,827	,277	-,083	-,078	-,076	-,005
	SS100_SQ2	,873	,224	-,048	,010	-,003	-,038
	SS100_SQ3	,863	,164	,117	,049	,013	-,034
	SS100_SQ4	,787	,194	,107	,349	-,015	,149
	SS100_SQ5	,761	,178	,153	,367	-,040	,160
	SS100_SQ6	,823	,099	,243	,107	-,041	,037
Preferred Customer Status	SS110_SQ1	,322	,735	,320	,027	-,027	-,040
	SS110_SQ2	,194	,825	,307	-,029	-,010	-,015
	SS110_SQ3	,180	,740	,307	,153	-,001	,123
	SS110_SQ4	,230	,668	,222	,132	-,100	,159
	SS110_SQ5	,183	,803	,013	,122	-,046	-,039
Preferential treatment	SS120_SQ1	,068	,328	,798	,115	,081	,070
	SS120_SQ3	,064	,398	,539	-,261	,097	-,301
	SS120_SQ4	,102	,201	,753	-,097	-,091	-,029
	SS120_SQ5	,068	,149	,828	-,025	-,102	,008
P.P. Quantity	SS202	,096	,093	-,035	-,188	-,053	,884
P.P. Quality	SS203_SQ1	,263	,139	,012	,820	,005	-,010
	SS203_SQ2	,080	,097	-,136	,837	-,111	-,212
Proximity	SS204	,081	,036	-,006	-,052	,931	-,006
	SS206_SQ1	-,177	-,146	-,085	-,048	,902	-,062

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.