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An extended supplier satisfaction model
Examining further impact factors and the effect on KPIs

Master Thesis Business Administration
Specialisation Purchasing and Supply Management

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Hereby, I present my master thesis about the influences of cultural compatibility, operational compatibility and resource complementarity on supplier satisfaction and preferred customer status and the effect of preferential treatment on quality, timeliness and accuracy of amount of deliveries. The thesis was written with the aim of completing the Master of Science in Business Administration (specialisation: Purchasing and Supply Management) at the University of Twente.

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Marie Sende

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Abstract

Firms are increasingly aware of purchasing's role as a strategic function. The buyer-supplier relationship offers a mean for the purchasing function to achieve a firm-wide competitive advantage. The purchasing function can aim to satisfy suppliers to obtain a preferred customer status with important suppliers in order to receive a preferential treatment which leads to a superior market position. Current literature on supplier satisfaction, preferred customer status and preferential treatment does not consider whether cultural compatibility, operational compatibility and resource complementarity of buyer and supplier do influence the supplier's perception of the buyer. Furthermore, the effect of preferential treatment has not been examined by using subjective criteria from a buyer's internal supplier rating.

The empirical quantitative data is collected from the suppliers of a company operating in the food industry. This study uses partial least square structural equation modelling to examine the influence of cultural compatibility, operational compatibility and resource complementarity on supplier satisfaction, preferred customer status and preferential treatment. In an additional research paper, the differences between direct and indirect procurement have been tested by using a multi-group analysis. Furthermore, the influence of preferential treatment on quality, timeliness and accuracy of amount of deliveries has been examined.

The results show that cultural compatibility has a positive impact on supplier satisfaction. Operational compatibility does only influence preferential treatment, whereas resource complementarity has only shown a positive influence on preferred customer status. The outcome of the research paper has shown that indirect and direct procurement do significantly differ. The discussion of the results provides managerial implications on how to handle relationships with suppliers that are or are not compatible when a firm aims to obtain a preferred status and preferential treatment.

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List of abbreviations

AVE	Average variance extracted
CB-SEM	Covariance-based structural equation modelling
CR	Composite reliability
e.g.	Exempli gratia meaning for example
H	Hypothesis
HTMT	Heterotrait-monotrait
KPI	Key performance indicator
PCA	Principal component analysis
PLS	Partial least square
PLS-SEM	Partial least square structural equation modelling
RBV	Resource-based view
SET	Social exchange theory
SPSS	Statistical package for social sciences
SRMR	Standardised root mean square residual

1 Supplier satisfaction is an essential step for a competitive purchasing function

1.1 The importance of the purchasing function and supplier satisfaction for competitive advantage

Since 1980 the topic of purchasing has received increasing attention and the view from purchasing as operative function has shifted towards purchasing as strategic function.[1] The significant role of suppliers as driver of competitive advantage was realised in the 1990s[2] and the topic of "reverse marketing" gained attention.[3] Once said that purchasing is responsible for getting "the right materials, from the right suppliers, in the right quantity, in the right place, at the right time, with the right quality"[4], managers and buyers know that purchasing is not solely a function that ensures the availability of materials. Purchasing and suppliers can help to create a competitive advantage and therefore it is necessary understand how this benefit can be realised. The advantages created through purchasing are often valuable, due to a high profit impact and additionally hard to imitate by competitors.[5] This highly complex topic has not been researched enough to see how this advantage can be best attained and more specifically how it actually materialises in practice.

The concept of supplier satisfaction can be one driver of competitive advantage. Satisfied suppliers are expected to see a firm as a preferred customer and possibly attribute this firm a preferred customer status, which can finally lead to preferential treatment.[6] In increasingly competitive markets, where firms do compete for customers, resources and suppliers, preferential treatment by those suppliers can give a superior position. In the last decade, the concept of supplier satisfaction has started to gain researchers' attention.[7] Despite having received increased attention, current research focuses on how to achieve supplier satisfaction.[8] Overall, the existing models about supplier satisfaction have to be enhanced and further factors influencing the relationship have to be examined.

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[1] See Kraljic (1983), p. 109-110.
[2] See Ellram and Carr (1994), p. 17; Trent and Monczka (1998), p. 3-11.
[3] See Blenkhorn and Banting (1991), p.187.
[4] See Monczka, Handfield, Giunipero, Patterson, and Waters (2010), p. 11.
[5] See Hunt and Davis (2008), p. 18-19.
[6] See Vos, Schiele, and Hüttinger (2016) p. 4621.
[7] See Essig and Amann (2009), p. 103-104; Paul, Semeijn, and Ernstson (2010) ,p. 17; Baxter (2012), p. 1249-1251; Hüttinger, Schiele, and Schröer (2014), p. 698.
[8] See Hüttinger et al. (2014), p. 700; Vos et al. (2016), p. 4614.

1.2 Focus of this research: The impact of preferential treatment and complementarity and compatibility as further influencing factors

Even though an effect of supplier satisfaction on preferred customer status and finally on preferential treatment has been confirmed, concrete research on measurable key performance indicators (KPIs) is lacking. Researchers expect that unsatisfied suppliers will lead to low quality output[9], which impacts the quality of the buying firm's final product.[10] Consequently, this would mean that satisfied suppliers will lead to higher quality.[11] If this holds true, firm's KPIs on quality should reflect this impact. Since preferred customer status can lead to preferential resource allocation, can potentially give a firm a competitive advantage[12], it is relevant to see whether an effect between supplier satisfaction and receiving high quality input exists. Furthermore, treating a buyer preferential should lead to a high service level resulting in accurate and timely deliveries. It could also show that the supplier's intention to treat a buyer preferential does not result in any visible or measurable improvements at the buying firm. Without any effect, the value of a so-called preferential treatment is questionable.

Next to the concrete level of supplier satisfaction, the level of complementarity and compatibility between buyer and supplier firm could influence the likelihood of awarding preferential customer status and receiving preferential treatment, since the success of collaboration is influenced by characteristics of both partners.[13] The fit of two partners does not necessarily lead to satisfaction, but the inter-organisational fit might be the crucial factor that determines which buyer receives a preferential status. An exchange relationship is characterised by mutual benefits and the suppliers needs therefore to offer value, but also needs to obtain benefits.[14] A supplier can be very satisfied with a buyer on several dimensions, but if buyer and supplier are not compatible and do not complement each other in terms of skills and resources, it is unlikely that the supplier will attribute this buyer a preferential status. Furthermore, it can be expected that a supplier, who is equally satisfied with two or more buyers, will award a preferential status to the buyer with a higher complementarity and

[9] See Essig and Amann (2009), p. 104.
[10] See Kannan and Tan (2002), p. 17.
[11] See Benton and Maloni (2005), p. 2; Schiele, Calvi, and Gibbert (2012), p. 1183.
[12] See Pulles, Veldman, and Schiele (2016b), p. 136-137.
[13] See Sarkar, Echambadi, Cavusgil, and Aulakh (2001), p. 358.
[14] See Walter, Ritter, and Gemünden (2001), p. 366.

compatibility. This reflects a more intangible and social dimension that could govern the buyer-supplier relationship.

From a more general point of view, firms commonly classify their procurement in either direct or indirect, respectively purchasing direct and indirect materials. Direct materials are all items and materials that are used during the manufacturing process and end up in the final product. Indirect materials do not end up in the final product, but are still essential in order to keep production and all other day-to-day activities of a business running.[15] The handling of direct and indirect procurement is fundamentally different. Whereas direct materials typically account for around 60% of total purchasing expenditure, indirect materials account only for 20-40%.[16] Direct materials often receive more accurate forecasts and a high value per transaction. Indirect purchases on contrary are less standardised and predictable which results in more orders with a lower total value or a single order with a high value. Often items are only one-time buys, spread across a wide product range which leads to a high number of possible suppliers.[17] In contrast, also project purchases belong into the domain of indirect procurement and entail an extremely high value per order. Due to those differences, it can be expected that suppliers of indirect materials (e.g. services, office materials, machinery), are used to different treatment by purchasers and therefore place a higher value on different relationship dimensions leading to different antecedents of supplier satisfaction.

Summarised, this master thesis will examine whether the supplier's intention to treat a customer preferential is reflected in quantifiable KPIs at the buyer side in terms of quality of delivered materials, timeliness of deliveries and accuracy of amounts delivered. Next to supplier satisfaction, the effect of cultural compatibility, operational compatibility and resource complementarity between buyer and supplier on preferred customer status and preferential treatment will be assessed. Moreover, it will be analysed whether the current effects between described concepts hold true for a different industry. In an additional research paper, differences between direct and indirect procurement will be examined.

[15] See de Boer, Holmen, and Pop-Sitar (2003), p. 911; Kim and Shunk (2004) , p. 153.
[16] See de Boer et al. (2003), p. 911.
[17] See Nandeesh, Mylvaganan, and Siddappa (2015), p. 377.

The central research question of this thesis is:

> *Which factors are influencing supplier satisfaction, preferred customer status, preferential treatment and how does preferential treatment impact deliveries?*

In order to answer this research question, following sub-questions will be answered:

> *Do complementarity and compatibility of buyer and supplier influence supplier satisfaction, the likelihood of awarding preferred customer status and preferential treatment?*
>
> *Has preferential treatment a measurable impact on the KPIs quality, timeliness and accuracy of amount of deliveries?*

1.3 Relevance for firm performance and further research

This research possesses academic relevance, since the research about supplier satisfaction has only scratched the surface of this highly complex topic. Antecedents have been researched, as well as the impact of supplier satisfaction on preferred customer status and preferential treatment[18], but the concrete impact of preferential treatment on quantifiable numbers has barely been explored. This shows a gap between the intention of the supplier to treat a customer preferential and the actual effect of this intention. Furthermore, this research takes a dyadic approach and examines buyer and supplier side while using an objective measure as outcome from preferential treatment. Current research is often limited to a single, more technical and innovation focused industry, whereas this study collects data within the food industry. Moreover, influencing factors on preferred customer status have not been explored widely. Supplier satisfaction is mentioned as the main factor, but due to the complexity of this concept, further relation-specific factors have to be examined since supplier satisfaction is not able to fully explain the relationship. Next to this partly replicated and extended research, the difference between indirect and direct purchasing has to be examined, because the relational behaviour in those relationships is assumed to be different and therefore any impacts might occur within direct purchasing relationships and not in indirect ones or vice versa.

[18] See Hüttinger et al. (2014), p. 703; Vos et al. (2016), p. 4618.

The practical relevance stems from the fact that this research examines the effect on quality, timeliness and accuracy of amount of delivered materials, which are a common KPIs in manufacturing firms.[19] The connection between supplier satisfaction, preferred customer status and preferential treatment is a theoretical concept which has been confirmed in practice.[20] For managers, preferential treatment can sound desirable, but nevertheless it is questionable how this concept relates to reality. The impacts on deliveries are objective numbers, that show how high or low the described effect of supplier satisfaction and preferential treatment can be. Managers benefit more from an analysed impact on a number they work with in their daily business. In case of a positive effect on deliveries, this research will generate attention, since managers can see the direct effect supplier satisfaction can have on their firm performance. If supplier satisfaction has no impact on quality and deliveries, this induces further research about what causes low quality and bad performance and how useful a good buyer-supplier relationship is at all. Additionally, this will trigger more research about the effect on other KPIs firms commonly measure in their supplier assessment. Furthermore, the examination of the effect of cultural and operational compatibility and resource complementarity on preferred customer status and preferential treatment gives interesting insights for companies, because those factors cannot be influences and have to be considered before engaging in a relationship. If complementarity and compatibility are not present, it might be a wasted effort to improve supplier satisfaction in order to obtain preferential treatment. Depending on the size of the effect, this knowledge could affect a firm's sourcing decision.

The overall goal of this master thesis is to replicate, improve and extend the existing models of supplier satisfaction and to present a more complete picture of the antecedents, influencing factors and consequences. For the purpose of answering the research questions, the thesis is structured as follows. In chapter two the history and relevance of supplier satisfaction, preferred customer status and preferential treatment will be discussed. The next chapter will introduce the importance of organisational fit and explains the relevance of operational and cultural compatibility and resource complementarity. In chapter four, the corresponding hypothesis will be developed and the extended model will be presented. Afterwards, the methodology used in this quantitative study will be described and the data will be analysed, followed by a presentation of the results in chapter six. The last chapter will discuss the

[19] See Jevgeni, Eduard, and Roman (2015), p. 512.
[20] See Vos et al. (2016), p. 4613.

findings, as well as theoretical and managerial implications and ends with a final outlook on potential further research. An additional research paper examining the differences between direct and indirect procurement has been written.

2 Supplier satisfaction theory as base for buyer-supplier exchange

2.1 Buyer-supplier relationships resemble a social exchange with the strategic goal of achieving competitive advantage

Social exchange theory (SET) can be used to describe the basics of a buyer-seller relationship. SET argues that interactions between two parties are based on expected rewards, penalties and costs. The theory is based on the "return a favour" principle, where the party that receives a valuable contribution feels obliged to reciprocate with appropriate behaviour and expects to receive something in return. The more the two parties interact and received expected rewards, the more likely it is that they perform rewarded action again.[21] It can be assumed that a supplier becomes satisfied as he receives some treatment that he perceives as rewarding. Following the concept of reciprocity, the satisfied supplier treats the customer preferential in order to receive once again a reward.[22]

Furthermore, the resource-based view (RBV) can be applied. According to RBV, the resources controlled or owned by a firm can lead to enduring competitive advantage, when they are inimitable and not easy to substitute.[23] A firm's network of relationships can be a resource itself by creating value or providing resources competitors cannot access.[24] When a buyer obtains preferential resource allocation from industry key suppliers, he controls rare, valuable, inimitable and non-substitutable resources. Once having reached this position, it is difficult and costly, or even impossible, for competitors to replace the current preferred customer.[25] If this supplier then has a monopoly, or only few potential suppliers exist, the value extracted from the preferred customer status increases further. In cases where supply is scarce, the buyer that receives a preferential resource allocation has a tremendous

[21] See Griffith, Harvey, and Lusch (2006), p. 86.
[22] See Nyaga, Whipple, and Lynch (2010), p. 102.
[23] See Peteraf (1993), p. 182-186.
[24] See Gulati, Nohria, and Zaheer (2000), p. 207.
[25] See Pulles et al. (2016b), p. 1463.

competitive advantage. Resources do not only relate to physical resources. Also, the relationship and knowledge extracted from it can represent a valuable resource.[26]

SET can therefore be used to explain how supplier satisfaction can lead to preferential treatment by acknowledging the reciprocity of rewarding actions in an exchange relationship. RBV describes how supplier satisfaction can be used to gain competitive advantage and thus reasons why firms should try to increase it.

2.2 Alignment of expectations and outcomes creates satisfaction

2.2.1 A basic understanding of satisfaction and its first application

In the last decade, supplier satisfaction has received increasing attention.[27] Supply chain structures start to change fundamentally with more and more responsibility shifted towards the supplier. Furthermore, firms reduce their number of suppliers which increases the need for an efficient and close buyer-supplier relationship.[28] The exploration of supplier satisfaction has begun with general research about the concept of satisfaction, which can be described as "a function of the comparison of environmental factors to an individual's standard".[29] In the beginning of the research, many works focused on satisfaction in a psychological context and job satisfaction.[30]

Satisfaction research in a firm context had its origin within the traditional domain of marketing research.[31] A classical research motivation has been and still is the improvement of a business's performance. The relevance of consumer satisfaction research stems from the fact that satisfaction is one leading factor in intensifying a relationship and making it stable in the long-term, which helps firms to bind customers to a specific brand.[32] Nevertheless, researchers have stated that consumer satisfaction is complex, hard to define and difficult to

[26] See Pulles et al. (2016b), p. 1459.
[27] See Wong (2000), p. 427; Benton and Maloni (2005), p. 1; Paul et al. (2010), p. 17; Hüttinger, Schiele, and Veldman (2012), p. 1194; Ramsay, Wagner, and Kelly (2013), p. 1260; Pulles, Schiele, Veldman, and Hüttinger (2016a), p. 1292.
[28] See Schiele, Ellis, Eßig, Henke, and Kull (2015), p. 132.
[29] See Ilgen (1971), p. 346.
[30] See Lipsett and Wilson (1954), p. 373; Dyer (1956), p. 58; Pearson, Barker, and Elliott (1957), p. 424.
[31] See LaTour and Peat (1979), p. 431-437.
[32] See Bloemer and Kasper (1995), p. 314.

measure due to many different aspects which have to be captured and differ in importance to respondents.[33] The same can be attributed to supplier satisfaction.

From the 1970s on, satisfaction in marketing channel relationships gained increasing attention. Satisfaction can be defined from an economic and non-economic perspective. The economic view defines it as "the perceived discrepancy between prior expectations and actual profits"[34], meaning that a channel member is satisfied when the relationship outcomes contribute towards achieving its organisational goals. Firms can be satisfied with volume, margins and discounts or more generally with the effectiveness and productivity of the relationship and its financial outcomes.[35] The non-economic, psycho-social view defines it "as an emotional response to the overall working relationship with the channel partner"[36], which can be positive when the relationship is fulfilling, effortless, pleasant and partners enjoy working with each other.[37] Channel member satisfaction, as for example in supply chains, can therefore be described more general as "a positive affective state resulting from the appraisal of all aspects of a firm's working relationship with another firm"[38], which includes economic and non-economic aspects of an inter-organisational relationship.

Furthermore, two theories about the extent of satisfaction exits. According to the first one, satisfaction follows an inverted-U relationship, meaning that an individual is most satisfied when events occur as close as possible to his standards and expectations. Any deviation from the expected standards does result in dissatisfaction, meaning that also a positive discrepancy lowers the level of satisfaction. In contrast, satisfaction can also be described as following a monotonic function, where a higher than expected outcome leads to a higher level of satisfaction and a lower than expected outcome results in dissatisfaction.[39] In inter-organisational relationships, it can be expected that satisfaction increases, if there is a positive deviation from an expected standard. It is unlikely that is follows the inverted U-shape in this context, since positive derivations are desirable and firms will prefer the business partner they are more satisfied with.

[33] See Spreng, MacKenzie, and Olshavsky (1996), p. 15-17; Giese and Cote (2000), p. 1-3.
[34] See Geyskens, Steenkamp, and Kumar (1999), p. 223.
[35] See Geyskens and Steenkamp (2000), p. 13.
[36] See Geyskens et al. (1999), p. 223.
[37] See Geyskens and Steenkamp (2000), p. 13.
[38] See Geyskens et al. (1999), p. 224.
[39] See Ilgen (1971), p. 346.

Nevertheless, it can be expected that satisfaction can reach a maximum where more positive deviation does not result in more satisfaction. Once a firm is fully satisfied with a business partner, further positive deviations cannot result in a higher level of satisfaction. Furthermore, firms have to pay attention to a shift in expectations. If expectations are constantly exceeded, this high level can become the new standard and firms have to keep up with the new standard. A deviation to a previous performance level can then be seen as negative and can result in dissatisfaction. Furthermore, the external environment does shape expectations as well and can lead to a shift and decrease, but also increase, in satisfaction.[40]

2.2.2 The research history of supplier satisfaction

Even though supplier satisfaction is a relatively new topic, many different definitions can be found in literature and also parts of the logic behind general and consumer satisfaction research are applicable. Wong (2000) was one of the first authors that linked customer satisfaction to supplier satisfaction.[41] The author recognises that satisfied suppliers can help a firm satisfying its customers which ultimately improves firm performance in terms of economic profit. Moreover, Wong (2000) develops relational aspects how supplier satisfaction can be increased.[42]

Since Wong (2000) did not include a definition in his conceptual study, one of the first definitions of supplier satisfaction can be attributed to Benton and Maloni (2005) who describe it as "a feeling of equity with the supply chain relationship no matter what power imbalances exists between the buyer–seller dyad."[43] This definition is in line with SET and emphasises the reciprocity and mutual benefits both partners have to obtain in a relationship. Furthermore, the authors examined the effect of power on buyer-supplier relationships and satisfaction. The study has shown that in case of power imbalances, the power holder should focus on relational aspects to increase supplier satisfaction underlining the importance of soft factors in achieving satisfaction.[44] Nevertheless, their definition does strongly focus on power which is just one aspect of this complex topic and does not fully capture it.

[40] See Spreng et al. (1996), p. 27.
[41] See Wong (2000), p. 427.
[42] See Wong (2000), p. 427-430.
[43] See Benton and Maloni (2005), p. 2.
[44] See Benton and Maloni (2005), p. 18.

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".[45] This definition corresponds with the general definition of satisfaction, where one party becomes satisfied when actions are in accordance with expectations.[46] A supplier expects a fair treatment and desires fulfilment of his needs. If the buyer meets these expectations or exceeds them by fulfilling more than the supplier's needs, the supplier becomes satisfied.[47]

Schiele et al. (2012) define supplier satisfaction as a "condition that is achieved if the quality of outcomes from a buyer-seller relationship meets or exceeds the supplier's expectations"[48], which is more appropriate, because it entails more factors than just power, fairness and need fulfilment and is in line with SET.

Up until now many antecedents of supplier satisfaction have been found and therefore the more general definition of Schiele et al. (2012), which entails current and also unexplored antecedents, will be used.[49]

2.2.3 Supplier satisfaction is influenced by a range of antecedents

Research about the antecedents of supplier satisfaction has received an upswing with the study of Essig and Amann (2009). Up until 2009, the authors only found ten studies that addressed this topic in the broadest sense. Despite having found various scales, measurements, and index systems addressing customer satisfaction, the development of a scale for assessing supplier satisfaction has been neglected.[50] The named study made the beginning by identifying antecedents on an operational as well as on a relational level. Since business processes involve time and financial resources, they declare ordering, billing and deliveries as antecedents on the operational level, whereas the so-called accompanying level is reflected by communication and conflict management. Furthermore, they introduce a general rating of overall satisfaction for validation of results.[51]

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[45] See Essig and Amann (2009), p.104.
[46] See Geyskens et al. (1999), p. 223.
[47] See Ilgen (1971), p. 346; Geyskens et al. (1999), p. 223.
[48] See Schiele et al. (2012), p.1181.
[49] See Hüttinger et al. (2012), p.1201; Schiele et al. (2012), p. 1181.
[50] See Essig and Amann (2009), p. 104.
[51] See Essig and Amann (2009), p. 105-106.

Meena and Sarmah (2012) found that purchase, coordination, and payment policy of the buying firm have a positive impact on supplier satisfaction. Furthermore, the corporate image positively influences satisfaction, since it symbols growth and a promising future.[52] This study gives an indication that relational as well as operational factors play a role in increasing supplier satisfaction, but no clear recommendation for action can be deducted.

In the same year, a systematic literature review from Hüttinger, Schiele and Veldman (2012) was published in which the authors analyse existing literature and give a comprehensive overview of technical, operational and relational factors that can influence supplier satisfaction. The review has shown that a social concept like satisfaction can be influenced by numerous hard and soft factors and that studies trying to measure overall satisfaction should not focus on one area alone.[53]

Hüttinger et al. (2014) tested the theoretical assumptions about the antecedents of satisfaction by running a "world-café". A world-café is a technique for exploring relatively new research areas. It involves several discussion rounds with a focus group and gives researchers the possibility to include the participants practical experience.[54] The authors derived several drivers of satisfaction and were able to group them into eight categories (see Figure 1).[55]

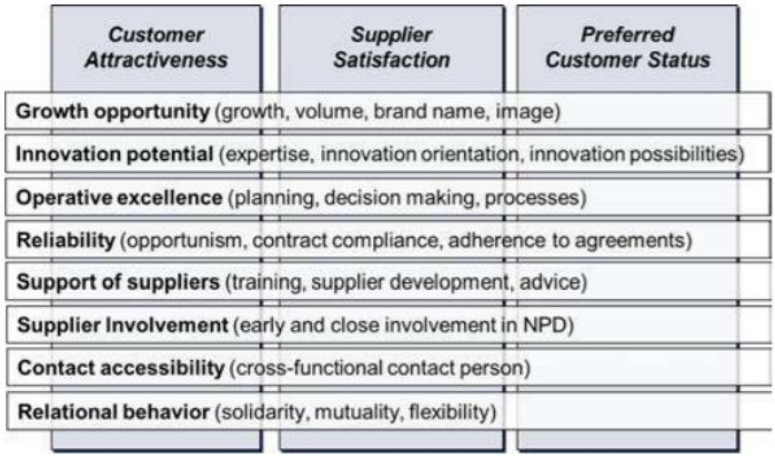

Figure 1: The eight supplier satisfaction antecedents by Hüttinger et al. (2014)

[52] See Meena and Sarmah (2012), p. 1239-1246.
[53] See Hüttinger et al. (2012), p. 1201.
[54] See Ritch and Brennan (2010), p. 402; Hüttinger et al. (2014), p. 701.
[55] See Hüttinger et al. (2014), p. 702.

They also hypothesised an influence on customer attractiveness and preferential treatment.[56] Although the latter is strongly mediated by receiving a preferred customer status as will be discussed in the following chapter. Statistical analysis revealed that only growth opportunity, relational behaviour and operative excellence have a positive impact on supplier satisfaction.[57]

The discussed satisfaction antecedents where further examined by Vos et al. (2016) and a new antecedent, namely profitability, was added. Furthermore, the authors did differentiate between direct and indirect procurement and have shown that antecedents can significantly differ between those groups (see Figure 2).[58]

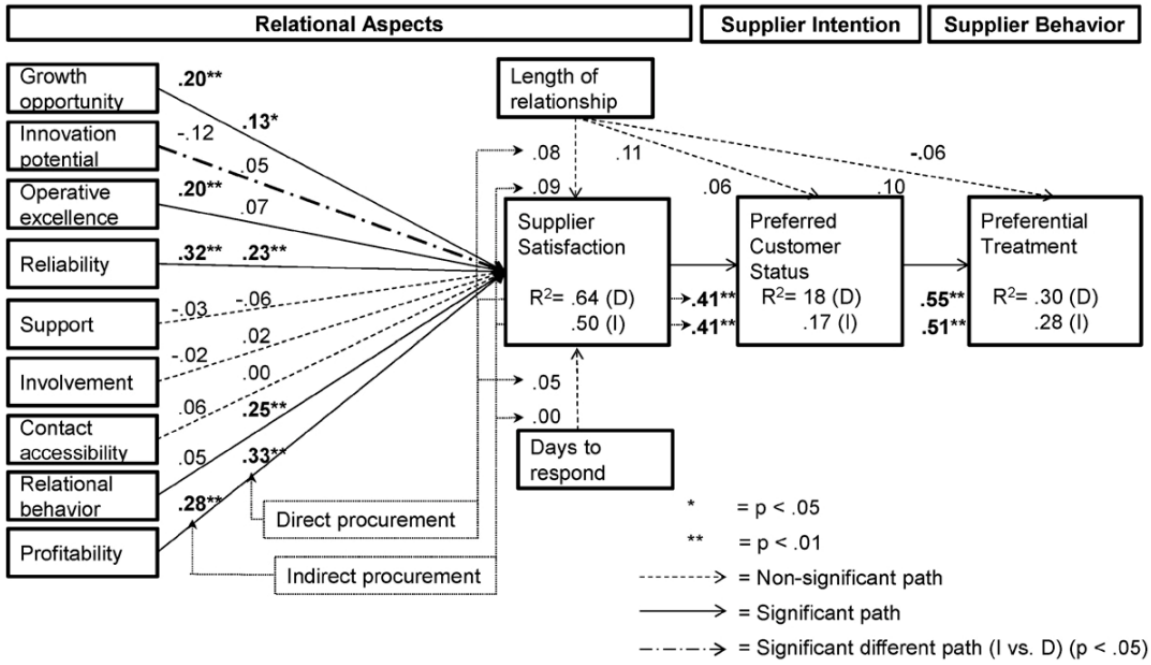

Figure 2: Supplier satisfaction model by Vos et al. (2016)

In order to improve the original model, the antecedents were grouped into first- and second-tier antecedents. The first-tier antecedents growth opportunity, profitability, relational behaviour and operative excellence cover the economic value, operational professionalism and relational factors of the relationship. The second-tier antecedents influence supplier satisfaction only through their respective first-tier mediators (see Figure 3).[59]

[56] See Hüttinger et al. (2014), p. 702.
[57] See Vos et al. (2016), p. 4615.
[58] See Vos et al. (2016), p. 4618.
[59] See Vos et al. (2016), p. 4620.

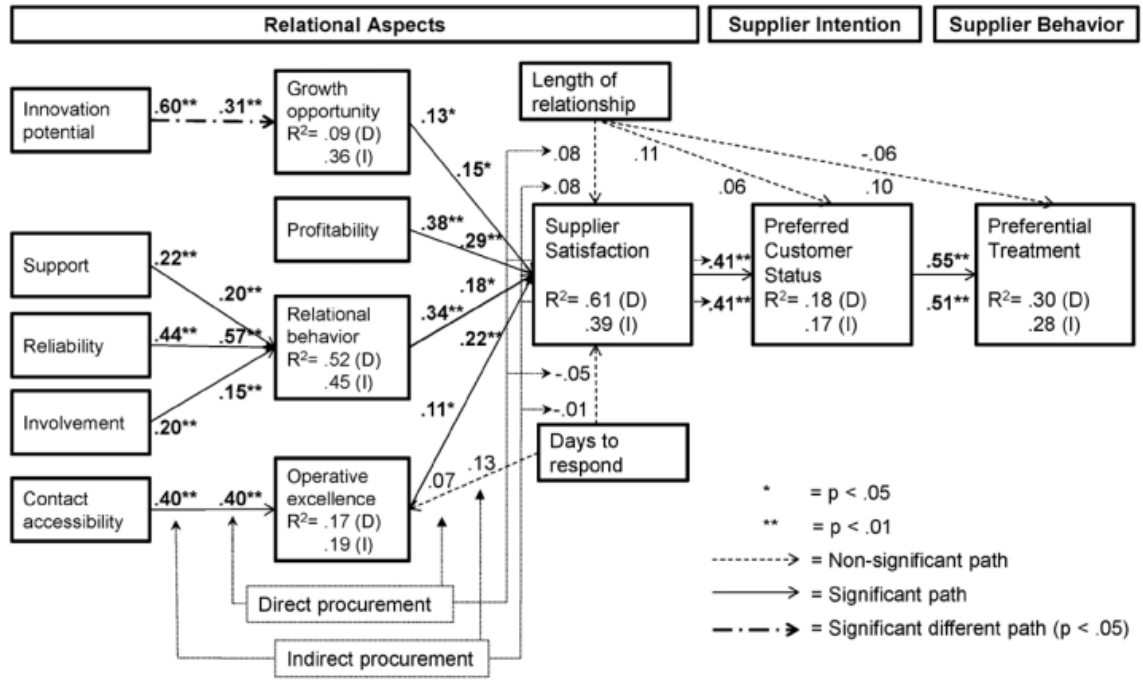

Figure 3: Revised supplier satisfaction model by Vos et al. (2016)

A recent study from Caniëls, Vos, Schiele, and Pulles (2017) has examined the effect of difference dependency configurations of buyer-supplier dyads and argues that a "dependence asymmetry can also foster supplier satisfaction".[60] Their results have shown that in relationships characterised intermediate by levels of dependence, extreme asymmetries can positively influence supplier satisfaction, which shows that having power does not necessarily lead to abusing this power.[61] Interestingly, it does not matter whether the buyer or supplier is in a dominant position. Furthermore, in balanced relationships a higher level of dependency does also lead to higher levels of satisfaction.[62]

The beforehand mentioned model of Vos et al. (2016) will form the theoretical base of this study. In the following chapter, the concepts preferred customer status, preferential treatment and the relationship between both will be discussed.

2.3 Preferred customer status and preferential treatment: Similar or the same?

Most suppliers have, depending on firm size and product portfolio, a small to large customer base and almost always at least more than one customer. The customers or buyers often

[60] See Caniëls et al. (2017), p. 2.
[61] See Caniëls et al. (2017), p. 3.
[62] See Caniëls et al. (2017), p. 6.

operate in the same or a similar industry and can be direct or indirect competitors. Even if they are no direct competitors in downstream markets, they are competitors in the upstream market. All firms buying from the same supplier are competing backwards along the supply chain even if not necessarily competing in their target markets.[63] An example are car and bike manufactures. Both need rubber for the tires of their respective vehicle and are therefore competing for suppliers, but products are not substitutable and thus no competition in the customer market takes place. In cases of direct competition, rivalry and competition for supplier's resources is even stronger, since firms compete in both directions of the supply chain – for customers and suppliers – and want to source from "the best" supplier. The act of making oneself attractive to the supplier to win this competition is also called "reverse marketing".[64]

Nollet, Rebolledo, and Popel (2012) define a preferred customer as "a purchaser (buying organisation) who receives better treatment than other customers from a supplier, in terms of product quality and availability, support in the sourcing process, delivery or/and prices."[65] This definition shows that preferred customer status and preferential treatment are highly related. It could be even argued that both are so similar that they can be treated as one concept since preferred customer status can be seen as a necessary condition for receiving preferential treatment. Despite being an antecedent of preferential treatment, a preferred customer status does not necessarily always lead to the desired treatment. It could be that the supplier might awards a preferred customer status but has not the necessary resources and skills to give a superior treatment to one customer. This shows that the supplier must be able to differentiate between buyers at all. Furthermore, perception of preferential treatment between buyer and supplier can differ, meaning that special treatment awarded by the supplier might not be perceived as such from the buyer's point of view. The supplier might perceive the priority handling of orders as preferential treatment of a specific customer, but on customer side this could be perceived as standard speed. Additionally, the study of Vos et al. (2016) emphasises that "giving preferred customer status (intention) does not necessarily mean that the supplier also treats the customer better (behaviour)".[66]

[63] See Ellram, Tate, and Feitzinger (2013), p. 32.
[64] See Blenkhorn and Banting (1991), p. 185.
[65] See Nollet et al. (2012), p. 1187.
[66] See Vos et al. (2016), p. 4615.

Firms do increasingly shift responsibility to suppliers (outsourcing) and reduce their supply base (volume bundling) and thus dependency on the remaining suppliers increases.[67] Being a preferred customer can become especially essential in boom phases, but also in phases of supply scarcity, since in both scenarios demand exceeds supply. [68] Firms can generate a competitive advantage by having better, cheaper and faster access to industry key resources. In phases of scarcity, also non-strategic resources can become extremely valuable. Firms primarily focus on strategic resources and pay less attention to supporting materials. Therefore, the lack of those can have tremendous impacts on production. Preferred customer status cannot only generate physical access to resources, but also access to innovations or technological developments. Moreover, also the pricing behaviour of supplier's can be influence positively by attaining a preferred status.[69] The value of these effects is hard to measure, but can lead to superior business performance.

As mentioned beforehand, supplier satisfaction is a vital condition for receiving a preferred customer status.[70] Interestingly, Ellis et al. (2012) have found that purchase volume does not influence the awarding of a preferred status and thus also smaller firms can aim to attain it.[71] For examining in depth how firms can attain this status, one has to look at a firm's network and not just the dyad of buyer and supplier. Companies are constantly evaluating their environment and the market. Thus, despite having achieved a preferred customer status, this is not necessarily permanent and has to be "maintained and re-earned".[72] The current level of satisfaction, as pre-condition of a preferred status, is constantly compared to the supplier's expectations. As explained before, a positive discrepancy leads to satisfaction. Furthermore, suppliers are comparing the relationship to possible relationships with alternative buyers. "A supplier awards a buyer a preferred customer status if this customer is perceived as attractive and if the supplier is currently more satisfied with this customer than with alternative customers."[73] This shows that buyers have to constantly strive to be the best alternative available if they want to attain a preferred status or to maintain it.[74] On contrary, this also means that

[67] See Nollet et al. (2012), p. 1911.
[68] See Schiele et al. (2012), p. 1179.
[69] See Schiele, Veldman, and Hüttinger (2011), p. 15; Ellis, Henke, and Kull (2012), p. 1259.
[70] See Schiele et al. (2012), p. 1179-1181.
[71] See Ellis et al. (2012), p. 1265.
[72] See Schiele et al. (2012), p. 1182.
[73] See Schiele et al. (2012), p. 1181.
[74] See Nollet et al. (2012), p. 1911.

suppliers can achieve a preferred status even though the supplier is not fully satisfied, but the buyer is still the best alternative around. In this case, the buyer has to expect a reduced commitment.[75] Additionally, research has shown that evaluations of domestic suppliers are more positive, and thus attaining a preferred status with local suppliers is easier.[76] Attaining and maintaining a preferred customer status can be resource-intensive and companies have to carefully evaluate their relationship portfolio in order to determine their core suppliers.[77]

2.4 Achieving competitive advantage through preferential treatment

Vos et al. (2016) also show that a preferred customer status can lead to preferential treatment, since intention matches behaviour.[78] A preferential treatment materialises since a supplier is expected to "respond first to the needs of his preferred customer".[79] Preferential resource allocation is one form a preferential treatment. The resource-based view argues that firms can achieve a competitive advantage by having better access to resources than its competitors.[80] In cases of supply chain disruptions, which can occur due to environmental or political events, a supplier can differentiate and choose which buyer he supplies first, resulting in a competitive advantage for this customer. A fire, like it happened at the electronics supplier Hynix in Wuxi (China) in 2013, can all of a sudden reduce tremendous amounts of available supply and creates an unexpected shortage and the firm with better access to the remaining resources can benefit through less delay in production or no image loss.[81] In boom phases, the market turns into a "sellers-market" and again the supplier has the choice which buyer he prefers to supply resulting in an advantage.[82]

The competitive advantage of preferential treatment stems from the fact that it can be considered as VRIN – valuable, rare, inimitable and non-substitutable.[83] Especially in industries which are characterised by few suppliers, preferential treatment and better access to resource can increase a firm's performance and is therefore valuable. In markets characterised by few suppliers, this treatment is naturally rare. Also, in markets with many suppliers available,

[75] See Schiele et al. (2012), p. 1181.
[76] See Schiele et al. (2012), p. 1183.
[77] See Steinle and Schiele (2008), p.11.
[78] See Ajzen (2002), p. 665.
[79] See Williamson (1991), p. 83.
[80] See Pulles et al. (2016b), p. 1460.
[81] See Mirani (2013) "How a little-noticed factory fire disrupted the global electronics supply" (Last accessed 21 July, 2018).
[82] See Schiele et al. (2012) p. 1179.
[83] See Barney (1991), p. 106-107.

not all suppliers have the same performance level and expert suppliers are rare as well. Although buyers have to maintain the preferred status to constantly receive preferential treatment, it is still not easy to copy and therefore hard to imitate by competitors. Competitors can try to receive preferential treatment from another industry supplier, but if few suppliers are available or their performance levels differ, this is not an equivalent. Furthermore, it is difficult to substitute the advantage obtained by preferential treatment.

3 Organisational fit: Being complementary and compatible

3.1 Transferring the findings of alliance and joint venture literature

A successful buyer-supplier relationship can be characterised by the level of organisational fit. But was does organisational fit exactly mean? Do "opposites attract" or do "birds of a feather flock together"? One the one hand, two firms must be compatible for having a successful relationship. To a certain extent, similarities in certain cognitive dimensions can ease collaborating and reduce the likelihood of conflict and generally promote a pleasing working atmosphere.[84] On the other hand, the two parties have to complement one another in terms of resources and should not be too similar in order to be valuable for each other and to achieve a mutual beneficial outcome for both parties.[85]

The existing research about complementarity and compatibility is focused on different types of relationships, such as alliances[86] and joint ventures.[87] These relationships have a different objective compared to buyer-supplier relationships researched in this study. Joint ventures and alliances often entail shared risks and returns.[88] Firms engage in these relationships, because they expect to achieve higher profits from combined efforts.[89] Comparably, buyer-supplier relationships often exist, because it is unlikely, or even impossible, that manufacturing or service firms possess all necessary resources, capabilities and own the entire supply chain to carry out their business. Furthermore, alliances and joint ventures can consist of two or more firms, whereas buyer-supplier relationships typically exist as dyads.

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[84] See Ouchi (1980), p. 138; Parkhe (1991), p. 595-596; Williams and Lilley (1993), p. 234.
[85] See Walter et al. (2001), p. 366.
[86] See Sarkar et al. (2001), p. 358; Cobeña, Gallego, and Casanueva (2017), p. 474; Sabidussi, Lokshin, and Duysters (2017), p. 2.
[87] See Lane, Salk, and Lyles (2001), p. 1144.
[88] See Williams and Lilley (1993), p. 236.
[89] See Das and Teng (2001), p. 9.

A joint venture is defined as "a contractual arrangement that creates a separate legal entity in which the parent firms hold ownership interests under conditions and provisions that are specified by a legal document. A fundamental premise is that a joint venture is not expected to last indefinitely."[90] Buyer-supplier relationships might entail a written contract as well, but no separate legal entity is created. Still the findings are transferable, because joint ventures and buyer-supplier relationships have the intended purpose of complementing each other and to obtain benefits from the partner's core competencies. Furthermore, both are not expected to last indefinitely.[91]

Alliances do not create a new legal entity and are defined as "voluntary cooperative inter-firm agreements aimed at achieving competitive advantage for the partners."[92] Furthermore, this relationship type can be subdivided in horizontal and vertical alliances. Horizontal relationships are characterised by coopetition, meaning that firms cooperate and compete at the same time by sharing a similar set of core competencies or operating in the same industry.[93] Nevertheless, firms only engage in a relationship with a competitor, if they expect a higher return compared to not taking this action as stated in the definition. Vertical alliances rather resemble the traditional buyer-supplier relationship, because firms in these relationships are dissimilar and have different core competencies and know-how.[94] In fact, this relationship is comparable to the traditional channel-based relationship, because both partners belong to one value chain, whereby the buyer does acquire skills or resources that do not belong to his core competencies. The competitive advantage stems from working with the best suitable partner and thereby maximising profit.

The effect of complementarity and compatibility in buyer-supplier relationships on preferred customer status has not been researched, and thus one has to draw on the findings of transferable relationship types which have been extensively analysed in literature. Still the relationship in this study is sufficiently different, since buyer-supplier relationships might not be as close as joint ventures and alliances and, depending on the goods purchased, can be terminated more easily. In case of strategically important items, it is even more important for the buying firm to ensure a steady and secure supply. This dependency is known to the

[90] See Park and Ungson (1997), p. 281.
[91] See Park and Ungson (1997), p. 280.
[92] See Das and Teng (2000), p. 33.
[93] See Rindfleisch and Moorman (2001), p.4; Bouncken, Clauß, and Fredrich (2016), p. 78.
[94] See Rindfleisch and Moorman (2001), p. 2; Bouncken et al. (2016), p. 78.

supplier as well, thus it is questionable how complementarity and compatibility influence his relationship behaviour.

Complementarity means that both firms have to bring in part of the necessary resources for a successful transaction. This goes beyond an exchange of materials for money, which resembles the basis in a typical buyer-supplier relationship of a manufacturing firm. Money for materials describes only a simple purchase, but in a business environment it is likely that buyer and supplier engage regularly in transactions and thus form a relationship. The buyer as well as the supplier wants to obtain the highest possible value from the relationship and therefore resources brought into the relationship by both firms have to be valuable for each other. For the supplier, this is can be more than the monetary value, but also know-how and opportunities the supplier is looking for constitute a high value for the firm. Factors leading to supplier satisfaction, such as growth opportunities and innovation potential, do only equal a high value for the supplier when he does strive for them and places a high importance on those factors. Furthermore, the successful outcome of the individual transaction is the ultimate goal of the relationship. Preferably, tasks are done in an efficient and effective manner without wasting time and resources. Both firms need the necessary know-how in order to complete the task. In today's economy, where firms focus on their core activities and increasingly outsource everything else, buyer and supplier should be both experts in their domain.[95] Therefore, by combining complementary skills and resources, the transaction outcome should be of higher value and should lead to a more efficient and effective supply chain compared to the outcome if both firms would try to achieve it on their own. It is essential that both firms possess capabilities and resources which complement each other, because this makes the relationship with another firm attractive.

Compatibility describes in how far buyer and supplier match on cognitive and operational dimensions.[96] A shared way of thinking between both firms can be expected to positively influence to interaction of the two. Shared common goals decreases the likelihood of conflicts and can positively affect the relationship, since both firms are pleased with the joint outcome.[97] Further, compatible philosophies and ways of doing business will ease the exchange. A similar corporate culture and management style will additionally help both firms

[95] See Kannan and Tan (2002), p. 11.
[96] See Sarkar et al. (2001), p. 362.
[97] See Krause, Handfield, and Tyler (2007), p. 532.

to identify themselves with each other. The more similar the supplier firm's identity is to the buyer's, the higher the probability that he prefers this buyer over others, if most of the other satisfaction criteria are sufficiently fulfilled.[98] Furthermore, operational compatibility and a fluent exchange are necessary for ensuring a fit of procedures and processes.[99]

3.2 Being attracted to similar others has deep psychological roots

The previous section has raised the question, whether complementary or compatible groups are attracted to each other. In terms of resources of buyer and supplier, differences are preferable, but otherwise, it can also be expected that similar organisations are attracted to each other. The concept of inter-personal and inter-group behaviour is fascinating the literature since the 1950s. Many papers about behaviour, often in a more psychological context, have been published.[100]

First, it has to be stated that purchasing decisions, and thus buying decisions as well, are mainly based on social factors and not, as one might think, economic ones.[101] The reason could be that calculations and scenarios economic decisions can be based on are never able to capture the full scope and cannot include all influencing factors. This emphasises that intangible social factors are influencing the buyer-supplier relationships next to rational factors. Since subtle factors are harder to explore, literature focuses more on traditional economic decision drivers.[102]

Individuals belonging to one group are exposed to the same social environment and receive similar information.[103] This leads to the fact that individuals receive part of their identity from the organisation they work for making research on an organisational level instead examining personal characteristics applicable.[104] Furthermore, individuals rarely interact on a purely interpersonal level. Their membership of a specific organisational group is influencing their behaviour as well, since in an inter-firm relationship, individuals have to act as representatives of their group.[105]

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[98] See Smith (1998), p. 7.
[99] See Sarkar et al. (2001), p. 362.
[100] See Billig and Tajfel (1973), p. 1; Tajfel (1982), p. 1; Condon and Crano (1988), p. 789.
[101] See Bonoma and Johnston (1978), p. 215; Ellegaard (2012), p. 1220.
[102] See Kaufmann, Wagner, and Carter (2017).
[103] See Hogg and Terry (2000), p. 124.
[104] See Hogg and Terry (2000), p. 121.
[105] See Hornsey (2008), p. 206.

According to similarity-attraction theory, social identity theory and self-categorisation theory, it is assumed that "people are attracted to, prefer and support relationships with similar others."[106] The similarity-attraction view explains this with individuals having similar ideas and opinions which increase communication, support and justification of each other's view.[107] It can also be explained from a cognitive dimension. If an individual likes his own traits, it also prefers these traits in others.[108] Partly, this is a self-enhancing motive, because individuals treat similar others better to make themselves feel better. Interaction with similar individuals can be naturally pleasant due to shared interested and the enjoyment of shared activities.[109] Organisations or individuals with similar attributes receive favourable treatment, compared to less similar parties. The preferential treatment of group members or similar others even takes place when being completely randomly assigned and similarities do not really exist. Different experiments in a psychological setting have shown that individuals favour similar individuals or group members, even when there is no reasonable cause. In experiment by Billig and Tajfel (1973) individuals were randomly divided in groups by coin flip. The individuals had to give points which should equal monetary value to other individuals while only knowing to which group they and the other individual belongs. It was clearly stated, that they will not receive any monetary value no matter to whom they allocate it to. Nevertheless, the results have shown that individuals favour others within the same group, which shows how deeply rooted this behaviour is in an individual's mind.[110]

Smith (1998) was the first author that has researched the impact of similarity in a buyer-supplier context.[111] He found that buyer and supplier put more time, effort and resources in relationships with similar others, which can be categorised as preferential treatment and corresponds with the existing similarity-attraction theory. In the case of high dissimilarity, individuals are expected to invest fewer resources.[112] Interestingly Smith (1998) also found that same sex relationships have a positive impact on relational investments, open communication, trust and satisfaction compared to different sex relationships.[113] In his research,

[106] See Smith (1998), p. 7.
[107] See Ellegaard (2012), p. 1222.
[108] See Ellegaard (2012), p. 1223.
[109] See Smith (1998), p. 7; Stahl, Maznevski, Voigt, and Jonsen (2010), p. 691; Ellegaard (2012), p. 1223.
[110] See Billig and Tajfel (1973), p. 42-50; Tajfel (1982), p. 23.
[111] See Smith (1998), p. 4.
[112] See Smith (1998), p. 15.
[113] See Smith (1998), p. 15.

personality only had a minimal impact, giving further reason to focus on similarity in an organisational context instead of focusing on personality traits, thus research will be conducted at a meso- or firm and portfolio level.[114]

3.3 Resource complementarity is a necessity for relationships

In literature, resource complementarity is also known as type I diversity and deals with "reciprocal strengths and complementary resources."[115] Firms are looking for partners that complement their weaknesses which has a positive impact on performance.[116] Sarkar et al. (2001) even describe it as "crucial to collaborative success".[117] It has to be emphasised that resources and strengths brought into the relationship have to be unique and of value for the other party, otherwise this can become a source of conflict.[118] Besides conflicts, "diversity, non-redundancy, synergy and the breadth of partner resource characteristics are relevant elements connected to company's performance."[119] This short description makes clear that resource complementarity is used on an inter-organisational level referring to the overall firm and not individuals during the course of this thesis.

An example for a situation, where a low resource complementarity led to conflicts is the relationship between Amazon.com, Inc and Google LLC. Both firms operate in the tech industry and have a broad spectrum of skills, products and services offered. Due to the diverse portfolio, parts of their products and services overlap. One of Googles main products is its search engine where the company places paid advertisements, which is considered as "one of the most effective customer acquisition tactics"[120] and therefore used by most companies and web shops. Amazon is one of these web shops and thus one of Googles largest customers, but at the same time it is growing as a first contact point for consumer's online product searches.[121] On contrary, Google is also a supplier of Amazon, since Amazon was selling Google's hardware products (smart speakers and streaming sticks such as Google Home, Chrome Cast, Google Pixel). With Amazon's virtual assistant Alexa, Echo and FireTV

[114] See Smith (1998), p. 16; Schiele et al. (2012), p. 1183.
[115] See Parkhe (1991), p. 580.
[116] See Sarkar et al. (2001), p. 369.
[117] See Sarkar et al. (2001), p. 360.
[118] See Cobeña et al. (2017), p. 466.
[119] See Cobeña et al. (2017), p. 464.
[120] See Yuyu (2014) "Amazon and Google: Friends, Enemies or Frenemies?" (Last accessed 16 July, 2018).
[121] See Charlton (2016) "More online product searches start on Amazon than on Google" (Last accessed 16 July, 2018).

products, the company offers similar products which shows that both firms do not have complementary resources and skills but substitutable ones. Both firms are large players and can be expected to be highly professional and thus probably score high on most supplier satisfaction antecedents, such as contact accessibility and operative excellence. They will never award each other a preferred customer status nor preferential treatment, because their resources do not complement weaknesses but substitute each other's strengths and core competencies.

Returning to literature, previous studies have already shown that companies with complementary resources are more likely to collaborate, which shows that they are more likely to engage in a close relationship as it is the case when a supplier treats one specific customer preferential.[122] According to the resource-based view, complementary resources are one of the reasons why firms engage in a close relationship in the first place. "By pooling complementary resources and capabilities, firms can initiate and perform competitively".[123] The access to resources not owned by a firm creates dependency and fosters the creation of close ties with other firms which is "the key driver of inter-organisational cooperation".[124] Since the dependency is mutual, it does not only give a stimulus to deepen relationship with specific partners, but also influences the selection of prospective partners.[125] Furthermore, the building of relational capital is increased since firms are more likely to engage in acts that create mutual trust due to their vulnerability.[126]

In a buyer-supplier relationship, complementary resources can take on many forms. It seems obvious that a buying firms sees the know-how of products which are bought external as a complementary resource. This situation can also be described by the classical make-or-buy decision, where developing and producing everything in-house is too costly and therefore firms depend on other firms for doing this job and outsource parts of their value chain. The ability to produce cheaper and more efficient can therefore also be a complementary skill or resource. Furthermore, admirable resources can also be intangible, as for example reputation and access to new markets. An example of complementary resources is the apple watch in

[122] See Chung, Singh, and Lee (2000), p. 13; Powell, White, Koput, and Owen-Smith (2005), p. 1180; Rowley, Greve, Rao, Baum, and Shipilov (2005), p. 513; Mitsuhashi and Greve (2009), p. 992.
[123] See Sarkar et al. (2001), p. 361.
[124] See Gulati (1998), p. 299 .
[125] See Williams and Lilley (1993), p. 234.
[126] See Sarkar et al. (2001), p. 363.

the Hermès version. The luxury brand Hermès uses apples technical knowledge and production capabilities, whereas apple takes advantage of Hermès' brand image. These are resources which can be beneficial for the buyer as well as the supplier at the same time. Also, innovation support and technical know-how can be exchanged in a buyer-supplier relationship and especially in tech related industries constitute a valuable resource and can create a competitive advantage. Additionally, the network created and accessed by interactions between buyer and supplier can be extremely valuable for both sides and thus complementary.[127] All these resources are intangible and hard to quantify and cannot be bought on the market. Therefore, firms depend on others for gaining access to those which are not possessed in-house and complement own products and processes.

In some cases, resources are so complementary that joint ventures are created as for example Sony Ericsson with the goal of "incorporating the Ericsson technology and the Sony brand".[128] The joint venture was terminated in 2011 since Sony has developed its own know-how and is hampered by Ericsson slow technological developments. This shows the "necessity for complementary resources is key driver of inter-organisational cooperation"[129] and that some extent of interdependence is needed for successful achievement of joint business goals.[130] Since the relationship was ended as soon as resources were not complementary anymore, this underlines the enduring necessity of resource complementarity.

3.4 Cultural compatibility has an unconscious positive effect on relationships

Culture describes the "collective programming of the mind that distinguishes the members of one group or category of people from others."[131] This definition does entail any form of culture that separates one group from another, such as nationality, gender, occupation and organisation. Culture is an intangible concept and exists within the mind of people and thereby unconsciously influencing behaviour. Business studies often examine national culture, but it is questionable whether this is always an appropriate measure.[132] Living in an

[127] See Cobeña et al. (2017), p. 464.
[128] See Singh (2011) "Can Sony succeed where Sony-Ericsson partnership failed?" (Last accessed 22 July, 2018).
[129] See Gulati (1998), p. 299.
[130] See Sarkar et al. (2001).
[131] See Hofstede (1994), p. 1.
[132] See Stahl et al. (2010), p. 691-694.

increasingly globalised world, clear boundaries between national cultures begin to blur and it is possible that cultural differences within a country are even greater than between countries.[133] Furthermore, differences in cultural values are caused more by organisational cultures compared to national cultures. Especially a strong corporate culture can be expected to overrule national culture within a firm.[134] Some researchers even suggest limiting the use of countries as a measure for culture at all.[135]

Cultural compatibility belongs to type II of inter-firm diversity and deals with differences in partner characteristics and to which extent partners can realise synergies.[136] Perlmutter and Heenan (1986) stressed the importance of shared values, working styles and cultures in inter-firm relationships and that cultural incompatibility could lead to operational difficulties and thus inter-firm diversity can hamper effective joint working.[137] Besides an increasing likelihood of conflicts and decreasing quality of interactions, firms also have to invest energy to acquire skills that are needed to cope with their differences which could be used otherwise.[138] Differences in corporate cultures entail differences in mindsets, expectations and behaviour making the development of relational capital costly.[139] Organisational cultural distance does also negatively impact relationship satisfaction and the investment of resources[140] and therefore research does even discourage the formation of close relationships, like joint ventures, if organisational cultures are not compatible.[141]

Sarkar et al. (2001) found a positive relationship between cultural compatibility and social capital and furthermore a positive effect on strategic performance.[142] The positive effect of compatible cultures on various relationship aspects can be explained by an unconscious feeling of being comfortable with a similar business partner. Sarkar et al. (2001) explain the positive effect on performance by a better quality of the overall relationship.[143] Although Smith (1998) found no effect on relationship quality, the author still found an indirect impact

[133] See Samiee and Jeong (1994), p. 208; Stahl et al. (2010), p. 691.
[134] See Gerhart and Fang (2005), p. 982.
[135] See Schaffer and Riordan (2003), p. 178.
[136] See Parkhe (1991), p. 580; Sarkar et al. (2001), p. 361; Stahl et al. (2010), p. 639.
[137] See Perlmutter and Heenan (1986), p. 146; Parkhe (1991), p. 580; Stahl et al. (2010), p. 692.
[138] See Parkhe (1991), p. 580; Williams and Lilley (1993), p. 236; Sarkar et al. (2001), p. 360.
[139] See Emden, Calantone, and Droge (2006), p. 331.
[140] See Smith (1998), p. 16; Pothukuchi, Damanpour, Choi, Chen, and Park (2002), p. 253; Stahl et al. (2010), p. 691.
[141] See Williams and Lilley (1993), p. 234.
[142] See Sarkar et al. (2001), p. 366.
[143] See Sarkar et al. (2001), p. 369.

of cultural similarity through improved relationship management.[144] Bonoma and Johnston (1978) state that purchasing decisions are mainly based on social factors instead of economic ones. Even though firms nowadays are expected to behave more rationally due an increasingly competitive environment, social factors will still play an unconscious role.[145] This can stem from the fact that "interaction is easier and less cognitively challenging with others who have similar attitudes, values, activities or experiences"[146] and therefore suppliers prefer interactions with a culturally compatible customer. Regarding relationship effectiveness, compatible goals and interests decrease the likelihood of opportunistic behaviour and thereby also decrease monitoring costs.[147] With compatible goals there is no reason to behave opportunistically and win-win situations can be created which fosters the development trust. Furthermore, similarity in work attitudes increases relationship investments, because "buyers and sellers are less likely to invest scarce resources in cultivating a relationship if attitudes […] are not mutually held."[148]

3.5 Efficiency through operational compatibility

Next to cultural compatibility, operational compatibility is a second aspect of type II inter-firm diversity. Operational compatibility is defined as "extent of congruence in the partner's procedural capabilities"[149] and measures the extent to which operations and processes of both firms match and whether they possess a similar skill level. Compatibility in operations is vital for achieving a successful relationship outcome, since divergent processes can decrease performance, create process loss and increase the likelihood of conflicts.[150] If processes do not match, joint working becomes inefficient and firms have to put in extra effort compared to relationships where processes match right away. Without similarity, firms struggle to absorb each other's knowledge.[151] Furthermore, Gilsing, Nooteboom, Vanhaverbeke, Duysters, and van den Oord (2008) found a negative impact on performance and Stahl et al. (2010) justified this with an increase in conflicts.[152]

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[144] See Smith (1998), p. 15.
[145] See Bonoma and Johnston (1978), p. 215.
[146] See Smith (1998), p. 15.
[147] See Villena, Revilla, and Choi (2011), p. 562.
[148] See Smith (1998), p. 15.
[149] See Sarkar et al. (2001), p. 362.
[150] See Stahl et al. (2010), p. 15.
[151] See Sabidussi et al. (2017), p. 3.
[152] See Gilsing et al. (2008),p. 1728; Stahl et al. (2010), p. 692-693.

A high operational compatibility can therefore ease relational exchange similar to cultural compatibility only at a process level. With similar skill levels and capabilities, business partners can capture each other's knowledge and can cooperate successfully.[153] Sarkar et al. (2001) found a positive impact of operational compatibility on trust and commitment and stated that "compatibility in procedural capabilities enhances the quality of the relationship and thus increase the efficiency and effectiveness".[154] This explains why their research has shown that operational compatibility has a positive impact on project performance.[155]

On contrary, Sarkar et al. (2001) found no impact of operational compatibility on information exchange which contradicts the assumption that operating on a similar level eases communication and exchange. Additionally, mentioned research has even shown that operational compatibility can have a negative influence on strategic performance.[156] It is argued that a high similarity and the caused high absorption capacity can be too high and it enhances the "ability to recognize, assimilate and commercialize external information"[157] and "to protect itself from redundancy, a focal firm may be wary of passing information and knowhow that it considers critical to partners that possess high levels of absorptive capacity".[158] Moreover, in industries characterised by high levels of innovation, differences in operations can be preferable, since they foster creativity and innovation.[159] The recombination of differences in knowledge can facilitate the development of novel processes and products.[160]

4 Hypothesis overview

4.1 Replication: Confirming the existing supplier satisfaction model

Supplier satisfaction is an often-described phenomenon in literature. Many authors have examined its antecedents and impacts on the buying firm.[161] A logical, but also research assumption is that a satisfied supplier can assign a firm a preferred customer status and finally

[153] See Gilsing et al. (2008), p. 1728.
[154] See Sarkar et al. (2001), p. 370.
[155] See Sarkar et al. (2001), p. 366-370.
[156] See Sarkar et al. (2001), p. 367-370.
[157] See Sarkar et al. (2001), p. 370.
[158] See Sarkar et al. (2001), p. 370.
[159] See Stahl et al. (2010), p. 692.
[160] See Sabidussi et al. (2017), p. 3.
[161] See Essig and Amann (2009), p.103-107; Hüttinger et al. (2014), p. 697-713; Vos et al. (2016), p. 4613-4614.

grants this firm a preferential treatment.[162] This study uses the model of Vos et al. (2016) as a basis (see Figure 4)[163]. The named model uses the antecedents of supplier satisfaction (growth opportunity, innovation potential, operative excellence, reliability, support, supplier involvement, contact accessibility, relational behaviour) developed by Hüttinger et al. (2014) and includes profitability as further antecedent. Moreover, Vos et al. (2016) divide the antecedents into first and second-tier antecedents, whereas only first-tier antecedents have a direct effect on supplier satisfaction.[164] The antecedents with a direct positive effect on supplier satisfaction are growth opportunity, profitability, relational behaviour and operative excellence. Furthermore, Vos et al. (2016) have shown that supplier satisfaction has a significant positive impact on receiving a preferred customer status which again has a significant positive impact on the supplier's intention to award a preferential treatment.

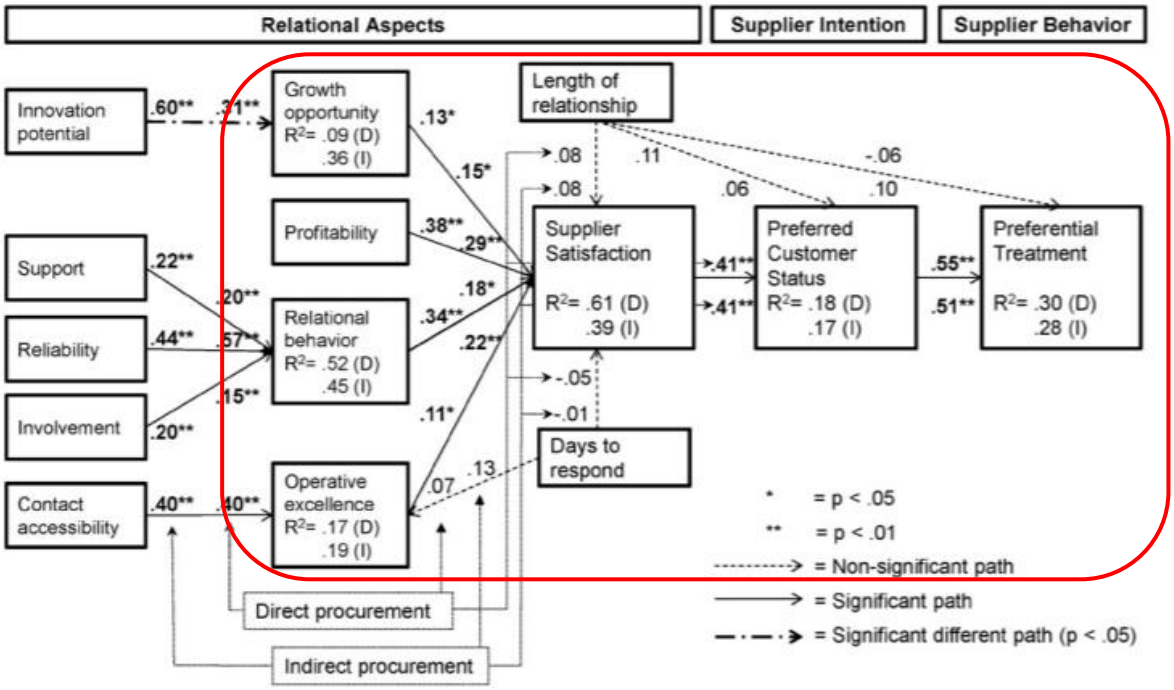

Figure 4: Partial use of the revised supplier satisfaction model of Vos et al. (2016)

As a consequence, it is hypothesised that the four first-tier antecedents will have a positive impact in this study as well as supplier satisfaction on preferred customer status and preferred customer status on preferential treatment.[165]

[162] See (Schiele et al., 2012), p. 1183; (Vos et al., 2016), p. 4620.
[163] See Vos et al. (2016), p. 4620.
[164] See Vos et al. (2016), p. 4619-4620.
[165] See Vos et al. (2016), p. 4620.

H1a: Growth opportunity has a positive impact on supplier satisfaction.

H1b: Profitability has a positive impact on supplier satisfaction.

H1c: Relational behaviour has a positive impact on supplier satisfaction.

H1d: Operative excellence has a positive impact on supplier satisfaction.

H1e: Supplier satisfaction has a positive impact on preferred customer status.

H1f: Preferred customer status has a positive impact on preferential treatment.

4.2 Extension: The impact of cultural and operational compatibility and resource complementarity

Complementary resources are necessary for engaging in close relationships in the first place since transactions occur for receiving resources not owned by a firm. According to the resource-based view, resources for competitive advantage can be accessed external, thus resources from a business partner are necessary and valuable for staying competitive. Next to a high value, complementary resources also create dependency between buyer and supplier. Therefore, a supplier places a high value on the buyer's resources and they can become a necessity in the supplier's business. This mutual dependence can lead to a desire to deepen the relationship and the supplier will award a preferred customer status if resources are highly complementary.

According to social exchange theory, relational behaviour is caused by reciprocity of actions. If a dependency exists due to resource complementarity or resources are just particular valuable, a supplier has an increased need of receiving these resources. Therefore, it is natural that the supplier engages in benevolent behaviour for maintaining access to the buyer's resources. Suppliers do differentiate between buyers, because it is not possible to treat all buyers equal. A high resource complementarity has a positive impact on preferential treatment, because the supplier tries to access valuable resources, even though it is no guarantee that this benevolent behaviour will be reciprocated by the buying firm.[166]

H2a: Resource complementarity has a positive impact on preferred customer status.

H2b: Resource complementarity has a positive impact on preferential treatment.

[166] See Ellis et al. (2012), p. 1260.

Cultural compatibility constitutes a similar cognitive mindset and as stated in similarity-attraction theory, individuals are drawn to similar others even though no rational reasons exist.[167] Furthermore, similarity in cultures eases relational interaction and leads to less conflicts and thus has a positive impact on relationships in general. It can by hypothesised that cultural compatibility has a positive impact on supplier satisfaction since many of the antecedents are positively affected due to less conflicts and improved interaction. The positive attitude towards similar others does lead to seeing the buyer through "rose-tinted glasses". This further increases the evaluation of similar buying firms and impacts satisfaction as well as the antecedents positively.

Additionally, working with similar others eases communication and decreases the likelihood of conflicts and therefore leads to a pleasant working atmosphere. Cultural compatibility also leads to grouping behaviour, where less similar ones are labelled as outsiders, which enhances the effect of a positive perception of more compatible business partners. Thus, a culturally compatible will therefore receive a preferred customer status from the supplier, since the supplier will unconsciously prefer to interact with this customer.

Rooted in psychology, it is stated that similar others are treated favourably. Literature describes it as a self-fulfilling prophecy, since individuals treat oneself good and therefore treat similar others good as well.[168] Also, the before mentioned general positive attitude and the pleasant working atmosphere lead to preferential treatment.

H3a: Cultural compatibility has a positive impact on supplier satisfaction.

H3b: Cultural compatibility has a positive impact on preferred customer status.

H3c: Cultural compatibility has a positive impact on preferential treatment.

Lastly, a positive effect of operational compatibility on preferred customer status is assumed as well. If employees have similar skills and capabilities and can generally work together, since they operate on a similar level, interaction is facilitated. A match of operations further improves joint working.[169] Interactions between buyer and supplier can be easily performed and occur more fluent. Less work is required which leads to a positive impact on awarding

[167] See Stahl et al. (2010), p. 693.
[168] See Stahl et al. (2010), p. 691.
[169] See Sarkar et al. (2001), p. 369.

a preferred customer status, since suppliers will prefer an efficient relationship with a matching customer.

Furthermore, processes and operations have to match and should be on a similar level, so that preferential treatment can be awarded at all. If the supplier has the intention (preferred customer status) to treat a buyer superior compared to others, processes have to match so that the treatment can be executed. Otherwise, the supplier will not be able to award a preferential treatment to its preferred customer.

H4a: Operational compatibility has a positive impact on preferred customer status.

H4b: Operational compatibility has a positive impact on preferential treatment.

4.3 Extension: The impact of preferential treatment on different delivery measures

Preferential treatment can materialise, if the supplier allocates the best personnel to the supplier, invests more financial or physical resources or shares more of his knowledge with the buyer.[170] Since the supplier puts substantially more effort into the relationship, it can be expected that this effort shows up on the buyer side and is measurable. If the supplier allocates its best resources, his materials with the highest quality available, measures of delivered quality should show a positive impact. Furthermore, it can be expected that the supplier tries to pamper its preferred customer whom he wants to award preferential treatment. Therefore, the supplier will put extra effort to make sure that deliveries arrive on time and the amount is as stipulated. A positive effect on the quality, timeliness and accuracy of amount of deliveries is therefore expected (see Figure 5).

H5a: Preferential treatment has a positive impact on delivered quality.

H5b: Preferential treatment has a positive impact on timeliness of deliveries.

H5c: Preferential treatment has a positive impact on accuracy of delivered amounts.

[170] See Ellis et al. (2012), p. 1266.

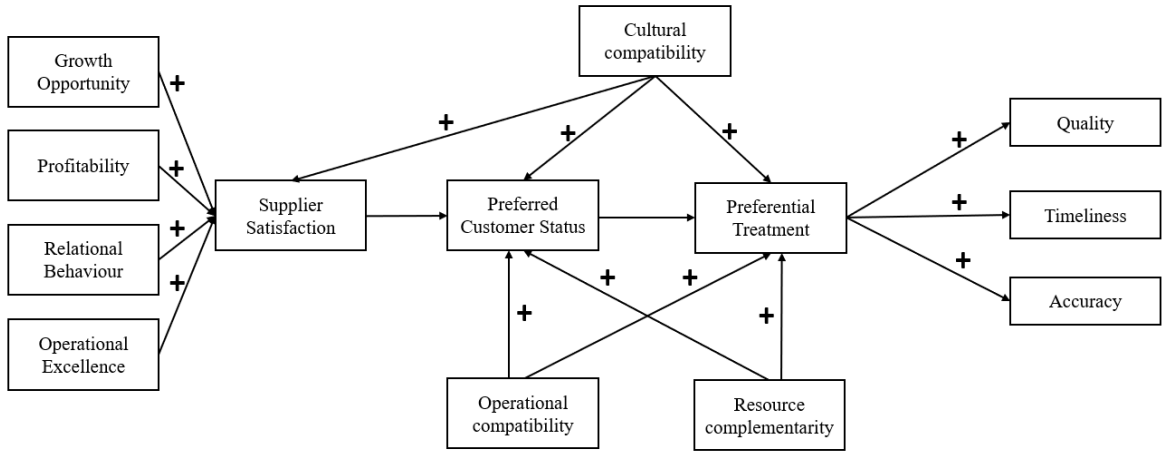

Figure 5: Conceptual mode -: Extension of this study

5 Methodology

5.1 Survey design and measures used

This study uses multi-item scales in form of a questionnaire in order to measure the independent and dependent latent variables to test the hypotheses formulated in the previous chapter. The questionnaire is measuring different variables regarding supplier satisfaction and its antecedents, preferred customer status and preferential treatment as well as variables referring to complementarity and compatibility. All constructs are retrieved from literature and have been tested before.[171] The data about quality, timeliness and accuracy of deliveries is derived from the project company's internal system.

The first part of the questionnaire is examining supplier satisfaction, preferred customer status and preferential treatment and the antecedents of supplier satisfaction. The questions stem from the research of Hüttinger et al. (2014)[172] and Vos et al. (2016).[173] For further insights, a replication of the model of Vos et al. (2016)[174] can be found in appendix A. Regarding the antecedents of supplier satisfaction, this study focuses on the first-tier antecedents examined by Vos et al. (2016), namely growth opportunity, profitability, relational behaviour, and operative excellence. Furthermore, a benchmark-comparison is added where

[171] See Kale, Singh, and Perlmutter (2000), p. 327; Sarkar et al. (2001), p. 367; Hüttinger et al. (2014), p. 720-721; Vos et al. (2016), p. 4622.
[172] See Hüttinger et al. (2014), p. 720-721.
[173] See Vos et al. (2016), p. 4622.
[174] See Vos et al. (2016), p. 4620.

the supplier rates a best-practice firm from his supply base on all supplier satisfaction antecedents as well as on supplier satisfaction, preferred customer status and preferential treatment. For further confirmation of the existing model, an additional replication of the model of Vos et al. (2016) referring to the benchmark best-practice company can be found in appendix B.

The second part of the questionnaire newly introduces the constructs resource complementarity, cultural compatibility and operational compatibility. These measures stem from the research of Kale et al. (2000)[175] and Sarkar et al. (2001).[176] Resource complementarity focuses on how much both partners need each other's resources in order to accomplish their business goals and how good their resources match. Cultural and operational compatibility refer to the perceived fit of values, working styles and operations from the supplier's point of view. Since these measures have not been used in the context of a buyer-supplier relationship before, adaptions have been made to make the items useable. All dependent and independent variables are rated on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree". The measures used are presented in appendix C.

In addition to the mentioned constructs, the last section of the questionnaire includes control variables about characteristics of the supplying firm, the individual taking the survey and the general relationship between both firms. Therefore, questions regarding length of the relationship, turnover, firm size, complexity of supplied products, industry and gender are asked. Finally, the participant is asked to indicate how good he knows the buying company in order to sort out answers from respondents without enough knowledge about the research company. All questionnaire items, besides turnover which is often regarded as sensitive information, were set as mandatory in order to minimise the number of unusable questionnaires due to missing answers. The survey did take approximately 20 to 30 minutes to fill out.

5.2 Sample definition and data collection

The quantitative data was collected in collaboration with the purchasing department of CompanyX. Only suppliers of the German subsidiary with deliveries in 2017 with a value above the threshold of 1,000€ have been considered in order to only contact relevant suppliers which are able to give reliable information. The questionnaire has been sent to 760 suppliers

[175] See Kale et al. (2000), p. 237.
[176] See Sarkar et al. (2001), p. 367.

of which 617 are from Germany or other German-speaking countries and 143 international suppliers. For the international suppliers, the questionnaire has been translated to English. Most e-mail addresses and contact names could be extracted from an internal system. In case of no availability of contact information, the e-mail was sent to a general company e-mail address (e.g. info@company.com). The survey tool used for data collection is was Qualtrics.[177] If names of the contact were available, the e-mail has been personalised to directly address recipient and to increase the response rate. Of 760 e-mails 32 could not be delivered, thus the final sample was reduced to 728 suppliers. Over the course of two weeks, three reminders have been sent and occasional phone calls have been made to motivate suppliers to participate. In the end, 129 completely filled out surveys have been received which represents a response rate of 17.7%. Additional 11 cases had to be deleted from further investigation, since some respondents did indicate that they do not know CompanyX sufficiently enough, had no variation in their response or confessed to a purchaser that they did not answer honestly. Finally, 118 responses remain, which constitutes a rate of 16.2%. There is no generally valid guideline regarding the response rate, since many firm, industry and relationship specific factors can influence it. Nevertheless, a response rate of 17.7% can be seen as average compared to other studies in related fields.[178] Of all response, 80 could be attributed to direct suppliers, whereas 33 responses came from indirect suppliers. The sample consisted of more direct suppliers, therefore this difference was expected. On average, the responding firm has worked for 14 years with CompanyX and has a firm size of 520 employees, whereas the responding sales representative has worked with CompanyX for almost 10 years on average.

[177] See Qualtrics (2005).
[178] See Simpson, Power, and Samson (2007), p. 38; Vos et al. (2016), p. 4616.

Table 1: Sample characteristics

Length of firm relationship		**Tenure of respondent's relationship with CompanyX**	
< 5 years	15%	< 5 years	33%
5 – 10 years	33%	5 – 10 years	30%
11 – 20 years	39%	11 – 20 years	30%
> 20 years	13	> 20 years	7%
average	13.7 years	average	9.7 years
Gender of respondent		**Number of employees**	
		< 100	40%
Female	19%	100 – 499	38%
Male	76%	500 – 9999	8%
Not specified/other	5%	1000 – 5000	12%
		> 5000	2%
		average	520
Industry of respondent		**Percentage of turnover made with CompanyX**	
Primary sector	15%		
Secondary sector	61%	0 – 25%	96%
Tertiary sector	22%	25 – 100%	4%
Quaternary sector	2%		

Furthermore, the quantitative data needed to be tested for non-response bias. Early and late respondents were compared among dependent and independent variables, since late respondents are most similar to non-respondents.[179] By using a parametric t-test, the first quartile (early respondents) was compared with the fourth quartile (late respondents). The test revealed no significant difference between both groups and can be found in appendix D.

5.3 Statistical analysis: PLS path modelling with SmartPLS 3.0

Regarding statistical analysis, Partial Least Square (PLS) path modelling was chosen to analyse the obtained data. The stated method allows modelling complex relationships with

[179] See Armstrong and Overton (1977), p. 397; Paulraj, Lado, and Chen (2008), p. 51.

multiple observed and latent variables[180] and is described as a "second generation SEM technique".[181] SmartPLS 3.0[182], a software with an easy-to-use graphical interface, was used to model the relationship between constructs.[183] Furthermore, PLS path modelling is preferred over covariance-based SEM (CB-SEM) due to having less restrictive assumptions.[184] This study is characterised by non-normal data and a small sample size which makes the use of CB-SEM inappropriate and suggests using PLS path modelling.[185] PLS path modelling does not require specific measurement scales and makes no assumptions about the population making it suitable for satisfaction research where a high skewedness can be expected.[186] A widely used approach for determining the minimum sample size is the "ten-times arrowhead rule" which states that the minimum sample size is the maximum number of arrow heads pointing at any latent variables multiplied by ten (which is in this case 40).[187] Since the "ten-times arrowhead rule" can lead to inaccurate results, the inverse square root method is applied as well. This method accounts for at least one further factor, namely the predictive power of the model and the recommended sample size for this model is stated as at least 42 which is similar to the "ten-times arrow head rule".[188] With 118 useable cases, this study exceeds the required minimum sample size needed for PLS path modelling.

For bootstrapping, a confidence interval bias-corrected and accelerated bootstrap was chosen, since this method is applicable when data is expected to be skewed. This method is superior over a regular bootstrap when looking at power, accuracy and error rate. It is recommended to use a 5,000-bootstrap sample for this confidence interval.[189]

5.4 Quality assessment of data

The quality of data was assessed by performing a principal component analysis (PCA). This dimension reduction method is a recommended approach to examine the factor loadings and the unique variance of each item.[190] The options Varimax and Direct Oblimin (Delta = 0)

[180] See Esposito Vinzi, Chin, Henseler, and Wang (2010), p. 2.
[181] See Hair, Sarstedt, Pieper, and Ringle (2012), p. 321.
[182] See Ringle, Wende, and Becker (2015).
[183] See Temme, Kreis, and Hildebrandt (2006), p. 12.
[184] See Hair, Ringle, and Sarstedt (2011), p. 144; Hair et al. (2012), p. 321; Streukens and Leroi-Werelds (2016), p. 5.
[185] See Hair et al. (2012), p. 321, Hair, Sarstedt, Hopkins, and Kuppelwieser (2014), p. 108.
[186] See Henseler and Sarstedt (2013), p. 566.
[187] See Hair et al. (2014), p. 109.
[188] See Kock and Hadaya (2018), p. 228-233.
[189] See Streukens and Leroi-Werelds (2016), p. 5.
[190] See Petter, Straub, and Rai (2007), p. 641.

have been chosen and reveal similar results. Based on an eigenvalue above one, only nine factors are extracted instead of ten as expected. Operational compatibility and resource complementarity load on the same factor. Moreover, "S_Satisfaction_100_1", "S_Satisfaction_100_3" and "MS_RC_4" do not load sufficiently (above the threshold of 0.5) on any factor. The full rotated component matrix can be found in appendix E. The item "MS_RC_4" asks the respondent to rate whether resources and capabilities of both firms are necessary to accomplish own firm goals, which is a very direct question and rates whether the firms depend on each other. All other resource complementarity items are asked in a less obvious way and are not related to the field of dependency. The item "MS_RC_4" is therefore left out in further analysis. Nevertheless, the supplier satisfaction items are retained to not reduce the number of items too much and for the sake of replicating the model of Vos et al. (2016). Pre-setting the number of factors to ten leads to only one item loading on the additional factor in both, the all-item setting and also when the beforehand mentioned items are left out. One reason for the items of operational compatibility and resource complementarity loading on the same factor could be that questions about both are related to processes, resources and skills. The resources and core competencies described within the resource complementarity are highly related to operations, skills and capabilities and therefore these constructs are likely to be similar. The statistical analysis was performed using SPSS version 25.[191]

For further assessment of data validity and reliability, indicators and latent variables were assessed within SmartPLS 3.0 by using a 5,000-bootstrap sample.[192] In order to retain as much information as possible, pairwise deletion in case of missing data was used. Since all questionnaire items were set as mandatory, this only refers to data about the deliveries (timeliness, quality, accuracy), since this information is only available for specific direct materials. A case wise deletion would reduce the sample size too much and would only retain cases with information about deliveries, whereas a mean replacement for delivery data would not be reasonable since delivery data is not applicable for all respondents (e.g. accuracy of delivered amount for service providers).[193]

[191] See IBM Corportation (2017).
[192] See Ringle et al. (2015).
[193] See Parwoll and Wagner (2012), p. 538-539.

The outer loadings in SmartPLS are comparable to factor loadings calculated beforehand in SPSS. Running the bootstrap shows that only "S_Satisfaction_100_5" does not load sufficiently on the latent variable and is therefore left out for further analysis. All the remaining indicators load above the threshold of 0.7 and are thus a reliable measure for the latent variable. Furthermore, composite reliability (CR) is assessed, which is a superior measure to Cronbach's alpha since it takes differences in loadings into account and is recommended for PLS path modelling.[194] For more advanced stages of research, CR should be above the threshold of 0.6, which is giving in this study (see table 2).[195]

Table 2 shows that all Cronbach's alpha values are lower and that the use of this measure would have led to an underestimation of reliability. Additionally, discriminant validity of constructs needs to be assessed to ensure to ensure that they capture the unique variance of each construct. The average variance extracted (AVE) gives the amount of variance that the observed variable is able to explain and should be higher than 0.5 which is given here (see Table 2).[196] Since the delivery measures timeliness, quality and accuracy have only one indicator, this indicator perfectly measures the variable which results in an AVE of one.

[194] See Hair et al. (2011), p. 145.
[195] See Bagozzi and Yi (1988), p. 82.
[196] See Farrell (2010), p. 324-325; Hair et al. (2014), p. 111.

Table 2: Data quality assessment

	Composite Reliability (CR)	Cronbach´s Alpha	AVE
Contact accessibility (CA)	0.943	0.909	0.945
Growth opportunity (GO)	0.891	0.837	0.671
Innovation potential (IP)	0.938	0.900	0.834
Operational excellence (OE)	0.885	0.828	0.658
Reliability (R)	0.889	0.833	0.667
Support (S)	0.936	0.898	0.831
Involvement (I)	0.936	0.897	0.829
Relational behavior (RB)	0.923	0.899	0.666
Profitability (P)	0.948	0.931	0.785
Supplier satisfaction (SS)	0.868	0.700	0.767
Preferred customer status (PC)	0.936	0.914	0.744
Preferential treatment (PT)	0.919	0.883	0.740
Cultural compatibility (CC)	0.939	0.914	0.795
Operational compatibility (OC)	0.899	0.832	0.748
Resource complementarity (RC)	0.850	0.738	0.655
Timeliness (T)	1.000	1.000	1.000
Quality (Q)	1.000	1.000	1.000
Accuracy (A)	1.000	1.000	1.000

Although extensively used, Henseler, Ringle, and Sarstedt (2015) have shown that the dominant approaches for assessing discriminant validity are not reliable in common research situations.[197] Based on the multitrait-multimethod matrix, they have developed the heterotrait-monotrait ratio of correlations (HTMT). There is much discussion whether the HTMT should be below 0.85 or 0.90. Only the variables resource complementarity and operational compatibility are barely above the threshold of 0.85 with a value of 0.855. The prior factor analysis did already indicate that these variables do correlate more than other. Nevertheless, the HTMT below 0.90 still detects discriminant validity with a rate of 99.45% and is fully met in this study (see appendix F).[198] Lastly, the standardised root mean square residual is determined to assess model fit, whereas a value close to zero determines a perfect fit.[199] Values between 0.05 and 0.10 are regarded as acceptable fit, but the recommended cut-off value is 0.08.[200] With a SRMR of 0.068 for the saturated and 0.083 for the estimated model, this model has an acceptable fit.[201]

[197] See Henseler et al. (2015), p. 115.
[198] See Henseler et al. (2015), p. 124.
[199] See West, Taylor, and Wu (2012), p. 216.
[200] See West et al. (2012), p. 219.
[201] See Hu and Bentler (1998), p. 449.

6 Results

6.1 Hypothesis testing with SmartPLS 3.0

In order to test the hypothesis presented in chapter four, a PLS path modelling as discussed in chapter five will be calculated. The model will be tested using a 5,000-sample bootstrap with a significance level of 0.05. Since relationships are expected to be positive, a one-tailed test is recommended.[202] The reliability and validity check in chapter five has shown that the data is not constrained. The predictive power of a model is determined by the coefficient of determination R^2. It is commonly relied on a "rule of thumb regarding an acceptable R^2 with 0.75, 0.50, 0.25, respectively, describing substantial, moderate, or weak levels of predictive accuracy".[203] The R^2 of supplier satisfaction is 0.634 and can be regarded as moderate. Preferred customer status has a R^2 of 0.477 and has to be regarded as weak. The R^2 of preferential treatment is 0.502 and can be regarded as moderate. Compared to the replication model of the model of Vos et al. (2016), R^2 showed an increase of 0.04, 0.13, and 0.11 for satisfaction, preferred status and preferential treatment which represents a considerable increase in explanatory power. The R^2 of the delivery dimensions quality, timeliness, and accuracy are almost zero showing that preferential treatment is not able to explain any variance in these variables.

Next the path coefficients are examined. They can be assessed regarding their sign and absolute size, but if the goal is "to generalize from a sample to a population, the path coefficients should be evaluated for significance".[204] Thus, the hypothesis from chapter four will be supported when a significant effect is found and rejected if no effect is found.[205] Furthermore, Cohen's effect size f^2 is examined. f^2 checks whether R^2 changes when a variable is removed from the model. A large change represents a huge effect and will therefore result in a high effect size f^2.[206] Effect sizes of 0.02, 0.15 and 0.35 can be regarded as small, medium and large effects respectively.[207] All path coefficients, significance levels and respective R^2 and f^2 can be found in the following tables.

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[202] See Kock (2015), p. 5.
[203] See Hair et al. (2014), p. 113.
[204] See Henseler, Hubona, and Ray (2016), p. 11.
[205] See Hair et al. (2011), p. 147.
[206] See Hair et al. (2014), p. 114.
[207] See Cohen (1988), p. 413-414.

The replication of the model of Vos et al. (2016) supports that the first-tier antecedents growth opportunity, profitability and relational behaviour have a significant effect on supplier satisfaction. Growth opportunity and relational behaviour have even an effect at an alpha level of 0.001. Therefore, hypotheses H1a, H1b and H1c are support. Operative excellence has shown no significant impact, not even on a higher alpha level and thus hypothesis H1d is rejected. Furthermore, supplier satisfaction has a significant impact on preferred customer status which in turn has a significant impact on preferential treatment. H1e an H1f are supported at an alpha level of 0.001 and show moderate effect sizes with f^2 0.221 and 0.238 respectively. Therefore, the model of Vos et al. (2016) can only be partially replicated, since operative excellence has shown no effect on supplier satisfaction (see Table 3).

Table 3: Effect statistics of replication of Vos et al. (2016) H1a-H1f

	Path	t	β	f^2
H1a	GO → SS**	2.990	0.224	0.059
H1b	P → SS*	2.294	0.186	0.043
H1c	RB → SS**	3.505	0.314	0.136
H1d	OE → SS	0.136	0.012	0.000
H1e	SS → PC**	4.675	0.419	0.221
H1f	PC → PT**	4.795	0.431	0.238

*Notes: t = t-statistic; β = standardised coefficient beta; f^2 =effect size of variance explained by predictor; *= p <0.05 (one-sided); **= p <0.01 (one-sided); GO = growth opportunity, P = profitability, RB = relational behaviour, OE = operative excellence, SS = supplier satisfaction, PC = preferred customer status, PT = preferential treatment*

The effect of resource complementarity on preferred customer status is significant at an alpha level of $p < 0.05$ and thus hypothesis H2a is support. Nevertheless, with an f^2 of 0.045 the effect is only weak. On contrary, resource compatibility has shown no significant effect of preferential treatment and H2b is therefore rejected, even though it is almost significant (see Table 4).

Cultural compatibility has shown a significant effect on supplier satisfaction, even at an alpha level of 0.001 supporting hypothesis H3a. With an f^2 of 0.115 this effect is moderate and represents the largest effect size of the model extension. Nevertheless, no statistical effect of cultural compatibility on preferred customer status and preferential treatment has been found and hypothesis H3b and H3c are rejected (see Table 4).

Regarding operational compatibility, only an effect on preferential treatment has been found. The effect is significant at an alpha level of 0.001 and supports hypothesis H4a. In contrast, no effect of preferred customer status has been found and hypothesis H4b is rejected (see table 4).

Hypothesis H5a, H5b and H5c deal with the delivery quality, timeliness, and accuracy. All three are not significant and are rejected. The previous analysis already revealed that R^2 of delivery quality, timeliness, and accuracy has no predictive power and also f^2 is far below the threshold of 0.02 for a weak effect (see Table 4). Quality, timeliness and accuracy are therefore not meaningful in explaining the model. A graphical overview of all hypothesises and the respective path coefficients can be found in appendix G.

Table 4: Effect statistics of model extension H2a-H5c

	Path	t	β	f^2
H2a	RC → PC*	1.815	0.213	0.045
H2b	RC → PT	1.614	0.175	0.031
H3a	CC → SS**	3.620	0.254	0.115
H3b	CC → PC	1.256	0.120	0.013
H3c	CC → PT	0.333	-0.032	0.001
H4a	OC → PC	1.116	0.132	0.016
H4b	OC → PT**	2.390	0.267	0.068
H5a	PT → Q	0.122	0.017	0.000
H5b	PT → T	0.029	0.003	0.000
H5c	PT → A	0.495	0.042	0.003

*Notes: t = t-statistic; β = standardised coefficient beta; f^2 =effect size of variance explained by predictor; *= p <0.05 (one-sided); **= p <0.01 (one-sided); RC = resource complementarity, CC = cultural compatibility, OC = operational compatibility, PC = preferred customer status, PT = preferential treatment, Q = quality, A = accuracy, T = timeliness*

6.2 Examining differences between direct and indirect procurement

Direct and indirect procurement are substantially different. Not only goods, but also the relationship of buyer and supplier differs. The original model of Vos et al. (2016) did differentiate between indirect and direct suppliers and found a significant difference between of effect of innovation potential. Furthermore, operative excellence was only found to be significant for indirect suppliers, whereas relational behaviour has only shown a significant effect for direct ones. This gives reason to assume that suppliers of both groups differ on other aspects as well.

As part of this thesis, the effects of cultural compatibility, operational compatibility and resource complementarity will be examined for direct and indirect procurement. A multi-group analysis will be performed using SmartPLS 3.0. The paper will be published and is therefore not attached to this thesis.

7 Discussion and conclusion

7.1 Evaluation and discussion of statistical results

The aim of this thesis was to explore whether cultural and operational compatibility and resource complementarity have an effect on supplier satisfaction, preferred customer status and preferential treatment. Furthermore, the effect of preferential treatment on quality, timeliness and accuracy of amount of deliveries was examined.

The replication of the model of Vos et al. (2016) has shown that only growth opportunity, relational behaviour and profitability have an influence on supplier satisfaction, but no effect for operative excellence was found. The original model has also shown a weaker effect of operative excellence for direct suppliers and even no effect when antecedents are not grouped into first- and second-tier. Since the sample consisted of mainly direct suppliers, a very weak effect of operative excellence could have been expected. Nevertheless, the outcome is not unusual, but still not in line with previous findings of Vos et al. (2016). Another reason could be the different industry setting. The original study was carried out in the automotive and chemical industry. Both industries deal with complex products, compared to the food industry, and might have to rely more on operative excellence. Furthermore, there could be a general problem with the variable operative excellence. Two questions examine excellence of forecasts and two examine processes. It is thinkable, that responses are very split since a supplier can be very satisfied with the process, but still receives inaccurate forecasts.

The extension of the model has shown a positive impact of cultural compatibility on supplier satisfaction, but not on preferred customer status and preferential treatment. An explanation for no effect on preferred customer status and preferential treatment could be that a pleasant working atmosphere created by cultural compatibility is not enough to stand out compared to other customers. A supplier can be satisfied with numerous customers, but his resources are limited and so he cannot award every good customer a preferential treatment. Since also

no effect on a preferred status was found, it can be assumed that suppliers do not even take into consideration awarding a preferred status, if they cannot give a preferential treatment.

Regarding operational compatibility, only an effect on preferential treatment and not on preferred customer status was found. The effect on preferential treatment was hypothesised, since operational compatibility is seen as the "deliverer" of preferential treatment. The replication of Vos et al. (2016) has revealed that innovation potential has a strong effect and is mediated by growth opportunity. A high operational compatibility was stated to be counterproductive for creativity and innovation. Since suppliers of the food industry value innovation more than expected by purchasers of the department, it can be assumed that they award no preferential status if operations and skills are similar, since they cannot learn from the customer and a high compatibility hampers innovation. Furthermore, the results show that suppliers value soft factors like relational behaviour. The fit of operations does not influence the relationship sufficiently to have an impact on satisfaction and preferred customer status.

In contrast, resource complementarity has only shown a significant effect on preferred customer status and not preferential treatment. It was assumed that a high resource complementarity creates inter-dependence between buyer and supplier, because both parties have valuable resources which are important for each other's business goals. According to social exchange theory, an effect of high complementarity on preferential treatment would be reasonable, since the supplier should try to treat the other party good to expect the favour to be returned. A reason for no effect on preferential treatment could be that even if complementary, the supplier is not necessarily dependent. In the food industry, suppliers have a wide range of customers with complementary resources since products are common and produced in large volumes and therefore this cannot be the reason for differentiating between all customers. Additionally, a supplier can only award preferential treatment to a few customers, and thus a buyer has not to be only complementary, but the most complementary one.

Preferential treatment has shown no effect on any of the delivery measures. One reason could be that part of the data was received from a subjective questionnaire, whereas the other part of the data was derived from the internal system of the research company. Furthermore, it can be assumed that preferential treatment influences soft factors which are hard to measure. Aspects like helpfulness, support, sharing of knowledge and flexibility of the supplier are not measured in a normal quantitative supplier assessment. Moreover, the supplier

assessment system is not managed by the purchasers, but from the quality department that receives the deliveries, which makes it hard to track how accurate it is filled out. Another reason could be, that suppliers are already operating close to maximum capacity and huge performance and service increases are not possible even if the intention exists. Low performance can also be caused by external factors and not by a low status assigned to the buying firm. Especially in the food industry, ingredients are exposed to environmental influences which cannot also be accounted for.

7.2 Theoretical and managerial implications

This study contributes to the existing research about supplier satisfaction by applying the model of Vos et al. (2016) to a less technical industry, namely the food industry. Most of the findings could be confirmed which strengthens the existing model. New antecedents from a psychological context have been introduced to broaden the understanding what impacts supplier satisfaction, preferred customer status and preferential treatment. All three new factors have shown an effect, but on different variables. The explanatory power of the model increased and the new factors can be seen as important in explaining the supplier satisfaction model.

Furthermore, this study has several implications for practice.

1) The replication study has shown that supplier satisfaction is an essential step in receiving a preferred customer status and finally preferential treatment and therefore a mean for gaining competitive advantage. Moreover, suppliers do value soft factors, like relational behaviour, even more than profitability. Thus, when a buyer cannot excel with high economic value for the supplier, he can still satisfy the supplier and achieve the positive benefits of a preferred status.
2) Additionally, cultures have to be compatible for satisfying suppliers. This is a factor that has to be considered early, since corporate culture is set and cannot be adapted to different suppliers. Managers also have to keep in mind, that culture is subject to change and even though once compatible, it is no guarantee for being compatible in the long-term. This accounts for supplier satisfaction and all antecedents as well, and therefore firms have to strive for attaining and also maintaining a superior position.
3) Moreover, the study has shown that complementary resources create a dependency between firms which increases the likelihood of receiving a preferred status. When

aiming to become a preferred customer, firms have to actively look for suppliers that complement them like a puzzle. This underlines that being supportive and relying on a cooperative relationship is important, so that not only materials complement each other, but also skills and know-how.

4) The effect of operational compatibility shows the necessity of compatible processes for actually receiving preferential treatment. Mangers have to keep in mind that if processes do not match, intention does not lead to behaviour. For strategic or industry key suppliers, managers should actively try to match processes in order to benefit from the relationship.
5) Not finding any effect on measurable KPIs has shown, that managers should not expect concrete monetary advantages or even a linear relationship between supplier satisfaction and any form of preferential treatment. The relationship has to be closely examined for recognising preferential treatment since it can take many intangible forms. The buying firm has to evaluate the supplier closely. Even though rewarding preferential treatment, a bad supplier can still perform worse regarding deliveries compared to a good supplier that does not award preferential treatment but has generally a higher performance level.

7.3 Limitations and further research

The generalisability of this study is limited, since only data of one project company was used. Although the replication model has been tested for different industries, the newly introduced constructs have not. With a sample size of 118, this study is rather at the low end and small effects cannot be found. Although the e-mail invitation has emphasised the anonymity, some feedback did indicate that suppliers do not necessarily believe that. Respondents do not want to raise a source of conflict and desire to be seen as favourable. Therefore, a response bias due to the phenomenon of social desirability can exist. From a methodical point of view, data about deliveries was not collected by the researcher and therefore validity and reliability cannot be guaranteed.

Further research should examine the newly introduced constructs within a different industry setting, a larger sample size and the suppliers of several buying firms. Up until now, research about supplier satisfaction is focused on manufacturing related industries. Whether the confirmed effects hold true for the service industry has been widely neglected. Furthermore, the

subjective and objective rating of supplier's deliveries needs to be compared. A discrepancy between perceived and actual performance of suppliers could be the reason why no effect of preferential treatment on deliveries was found. A qualitative approach could be used to interview suppliers which did indicate that they award a preferential treatment to examine how this can materialise, since it did not result in a high delivery performance. Subsequent studies can than take intangible effects of preferential treatment into account, e.g. measure support, helpfulness, flexibility and relational behaviour from the buyer's point of view. Further research should also focus on examining antecedents of preferred customer status, since here the lowest R^2 was found which means more variance was explained by other constructs and even though new constructs pointing at preferred customer status were introduced, the explanatory power is still weak. Lastly, it has to be mentioned that buyer and supplier do not operate isolated in a dyad but in a network of firms. Following studies should therefore account for the supplier's alternatives which are available in the market and further external factors like environment and market structure.

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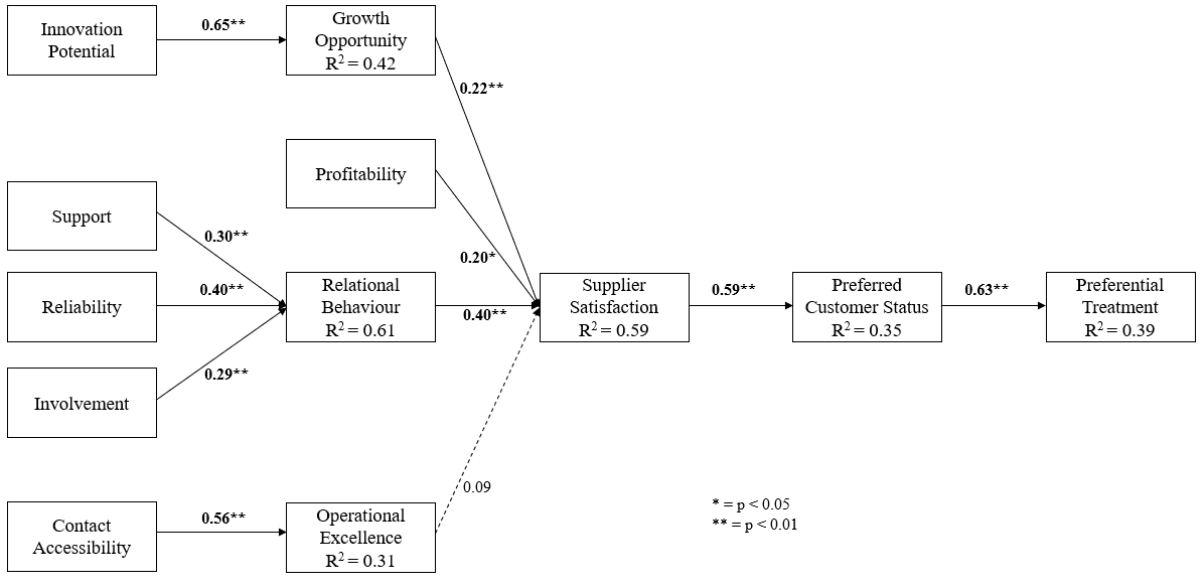
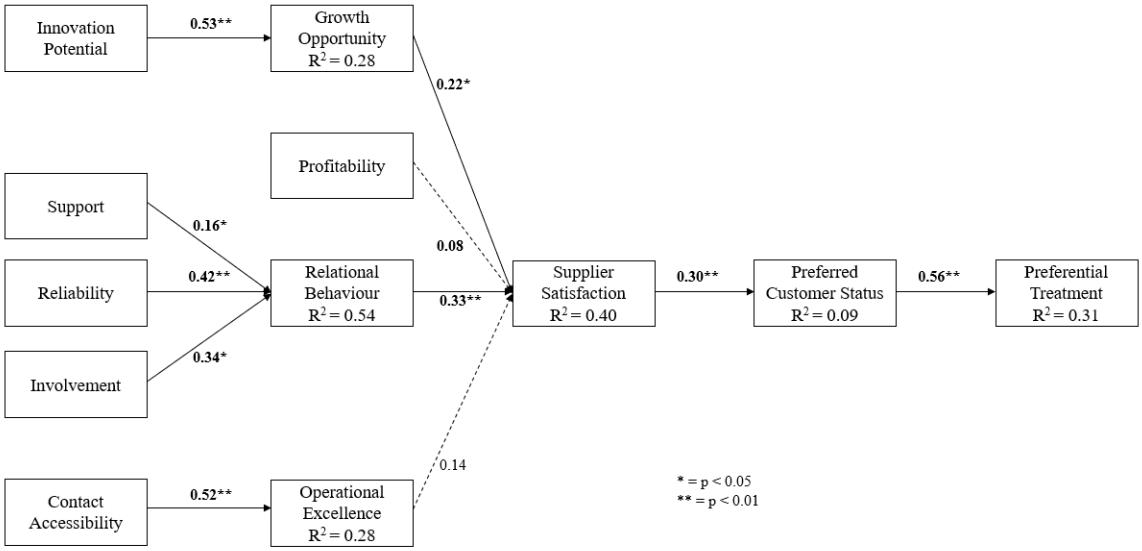
Appendix A – Replication of the model of Vos et al. (2016)



Appendix B – Best practice benchmark model replication of Vos et al. (2016)



Appendix C – Survey items

Growth opportunity (GO)		**Vos et al. 2016**
		The relationship with…
S_Growth_20_1	Buying Firm	...Buying Firm provides us with a dominant market position in our sales area.
S_Growth_20_2	Buying Firm	...Buying Firm is very important for us with respect to growth rates.
S_Growth_20_3	Buying Firm	...Buying Firm enables us to attract other customers.
S_Growth_20_4	Buying Firm	...Buying Firm enables us to exploit new market opportunities.
Innovation potential (IP)		**Vos et al. 2016**
S_InnovationPot_30_1	Buying Firm	In collaborating with the Buying Firm/the Best Practice, our firm developed a very high number of new products/services.
S_InnovationPot_30_2	Buying Firm	In collaborating with Buying Firm/the Best Practice, our firm was able to bring a very high number of new products/services to market.
S_InnovationPot_30_3	Buying Firm	The speed with which new products/services are developed and brought to market with ...is very high.
Operational excellence (OE)		**Vos et al. 2016**
		Buying Firm/the Best Practice…
S_OperativeExc_40_2	Buying Firm	...has always exact and in time forecasts about future demand.
S_OperativeExc_40_3	Buying Firm	...provides us with forecasts our firm can rely and plan on.
S_OperativeExc_40_4	Buying Firm	...has for our firm simple and transparent internal processes.
S_OperativeExc_40_5	Buying Firm	...supports short decision-making processes.
S_OperativeExc_40_7	Buying Firm	...has an excellent payment habit.
Reliability (R)		**Vos et al. 2016**
		In working with our company, Buying Firm/the Best Practice…
S_Collaboration_50_1	Buying Firm	...provided a completely truthful picture when negotiating.
S_Collaboration_50_2	Buying Firm	...always negotiated from a good faith bargaining perspective.
S_Collaboration_50_3	Buying Firm	...never breached formal or informal agreements to benefit themselves.
S_Collaboration_50_4	Buying Firm	...never altered facts in order to meet its own goals and objectives.
Support (S)		**Vos et al. 2016**
		Buying Firm/the Best Practice
S_Support_60_1	Buying Firm	...collaborates with us to improve our manufacturing processes or services.
S_Support_60_2	Buying Firm	...gives us (technological) advice (e.g. on materials, software, way of working).
S_Support_60_3	Buying Firm	...gives us quality related advice (e.g. on the use of inspection equipment, quality assurance procedures, service evaluation).
Involvement (I)		**Vos et al. 2016**
S_Involvement_70_2	Buying Firm	We are early involved in the new product/service development process of the customer.
S_Involvement_70_3	Buying Firm	We are very active in the new product development process of the customer.
S_Involvement_70_4	Buying Firm	Communication with our firm about quality considerations and design changes is very close.
Relational behavior (RB)		**Vos et al. 2016**
S_RelBehavior_80_1	Buying Firm	Problems that arise in the course of the relationship are treated by ...as joint rather than individual responsibilities.
S_RelBehavior_80_2	Buying Firm	The buying firm is committed to improvements that may benefit our relationship as a whole and not only themselves.
S_RelBehavior_80_3	Buying Firm	We each benefit and earn in proportion to the efforts we put in.
S_RelBehavior_80_4	Buying Firm	Our firm usually gets at least a fair share of the rewards and cost savings from our relationship with Buying Firm/the Best Practice.
S_RelBehavior_80_5	Buying Firm	Buying Firm/the best practice-firm would willingly make adjustments to help us out, if special problems/needs arise.
S_RelBehavior_80_6	Buying Firm	Buying Firm/the Best Practice is flexible when dealing with our firm.

Profitability (P)		**Vos et al. 2016**
		The customer…
S_Profitability_90_2	Buying Firm	... provides us with large sales volumes.
S_Profitability_90_3	Buying Firm	... helps us to achieve good profits.
S_Profitability_90_4	Buying Firm	... allows us to gain high margins.
S_Profitability_90_5	Buying Firm	... has a positive influence on the profitability of our firm.
S_Profitability_90_6	Buying Firm	... enables us to raise our profitability together.
Supplier satisfaction (SS)		**Vos et al. 2016**
S_Satisfaction_100_1	Buying Firm	Our firm is very satisfied with the overall relationship to Buying Firm/the Best Practice.
S_Satisfaction_100_3	Buying Firm	Generally, our firm is very pleased to have Buying Firm/the best-practice as our business partner.
S_Satisfaction_100_4	Buying Firm	If we had to do it all over again, we would still choose Buying Firm/the Best Practice, even if alternatives are available.
S_Satisfaction_100_5	Buying Firm	Our firm does not regret the decision to do business with Buying Firm/the Best Practice.
Preferred customer status (PC)		**Vos et al. 2016**
		Compared to other customers in our firm´s customer base…
PC_PC_110_2	Buying Firm	...Buying Firm/the-best practice firm is our preferred customer.
PC_PC_110_3	Buying Firm	...we care more for Buying Firm/the Best Practice.
PC_PC_110_4	Buying Firm	...Buying Firm/the-best practice firm receives preferential treatment.
PC_PC_110_5	Buying Firm	...we go out on a limb for Buying Firm/the Best Practice.
PC_PC_110_6	Buying Firm	...employees prefer collaborating with ...to collaborating with other customers.
Preferential treatment (PT)		**Vos et al. 2016**
PC_PrefTreat_120_1	Buying Firm	Our firm allocates our best employees (e.g. most experienced, trained, intelligent) to ...Buying Firm/the Best Practice.
PC_PrefTreat_120_3	Buying Firm	Our firm allocates more financial resources (e.g. capital, cash) to ...Buying Firm/the Best Practice.
PC_PrefTreat_120_4	Buying Firm	Our firm grants The best utilization of our physical resources (e.g. equipment capacity, scarce materials).
PC_PrefTreat_120_5	Buying Firm	Our firm shares more of our capabilities (e.g. skills, know-how, expertise) with Buying Firm/the Best Practice.
Cultural compatibility (CC)		**Kale et al. 2000; Sarkar et al. 2001**
MS_CC_1		Organizational cultures of both firms are compatible.
MS_CC_2		Our goals and objectives are compatible with those of Buying Firm.
MS_CC_3		Organizational values and social norms prevalent in both firms are congruent.
MS_CC_4		There is a match in our philosophies/approaches to business dealings with Buying Firm.
Operational compatibility (OC)		**Sarkar et al. 2001**
MS_OC_1		Technical capabilities of both firms are compatible with each other.
MS_OC_2		Our organizational procedures get along with those of Buying Firm.
MS_OC_3		Employees of both firms have similar professional or trade skills.
Resource complementarity (RC)		**Kale et al. 2000; Sarkar et al. 2001**
MS_RC_1		Resources and capabilities of both partners complement each other.
MS_RC_2		There is a high similarity/overlap of core competencies between our firm and Buying Firm.
MS_RC_3		Resources and capabilities of both partners are valuable for each other.
MS_RC_4		Both firms need each others' resources and capabilities to accomplish their own goals.

Appendix D – Comparison of late and early respondents

						t-test for Equality of Means			
		N	Mean	Std. Deviation	Std. Error mean	T-statistic	P-value	Mean Difference	Std. Error Difference
Growth opportunity	first quartile	29	3,68	0,94	0,17	0,49	0,63	0,11	0,23
	fourth quartile	29	3,57	0,81	0,15				
Operational excellence	first quartile	29	4,03	0,92	0,17	0,86	0,39	0,21	0,24
	fourth quartile	29	3,82	0,91	0,17				
Relational behavior	first quartile	29	3,95	0,81	0,15	0,34	0,73	0,07	0,20
	fourth quartile	29	3,89	0,71	0,13				
Profitability	first quartile	29	2,76	0,97	0,18	-0,91	0,37	-0,23	0,25
	fourth quartile	29	2,99	0,93	0,17				
Supplier satisfaction	first quartile	29	4,81	0,47	0,09	1,97	0,05	0,33	0,17
	fourth quartile	29	4,48	0,76	0,14				
Preferred customer status	first quartile	29	3,90	1,21	0,22	-0,23	0,82	-0,06	0,27
	fourth quartile	29	3,97	0,80	0,15				
Preferential treatment	first quartile	29	3,64	1,03	0,19	-0,62	0,54	-0,16	0,25
	fourth quartile	29	3,79	0,86	0,16				
Cultural compatibility	first quartile	29	4,47	0,64	0,12	1,02	0,31	0,18	0,18
	fourth quartile	29	4,28	0,72	0,13				
Operational compatibility	first quartile	29	4,10	0,80	0,15	0,60	0,55	0,13	0,21
	fourth quartile	29	3,98	0,81	0,15				
Resource complementarity	first quartile	29	4,03	0,76	0,14	1,85	0,07	0,39	0,21
	fourth quartile	29	3,64	0,84	0,16				

Appendix E – Factor loadings matrix

Rotated component matrix

	1	2	3	4	5	6	7	8	9
S_Growth_20_1	0,242	0,302	0,135	0,106	0,150	0,172	0,291	0,555	0,273
S_Growth_20_2	0,365	0,131	0,050	0,041	0,209	0,005	0,094	0,667	0,286
S_Growth_20_3	0,342	0,235	-0,161	0,222	0,085	0,166	0,143	0,623	-0,146
S_Growth_20_4	0,359	0,312	-0,043	0,101	0,078	0,299	0,139	0,568	0,194
S_OperativeExc_40_2	0,069	0,062	0,090	0,143	0,219	0,004	0,804	0,125	-0,014
S_OperativeExc_40_3	0,225	0,252	-0,040	0,230	0,244	0,372	0,646	-0,007	-0,120
S_OperativeExc_40_4	0,300	0,070	0,227	0,196	0,031	0,063	0,682	0,121	0,254
S_OperativeExc_40_5	0,144	0,289	0,173	0,120	0,169	0,049	0,631	0,147	0,167
S_RelBehavior_80_1	0,208	0,658	0,171	0,083	0,184	-0,095	0,313	0,227	0,106
S_RelBehavior_80_2	0,092	0,687	0,233	0,195	0,269	0,139	0,090	0,287	0,000
S_RelBehavior_80_3	0,254	0,756	0,102	0,247	0,106	0,006	-0,006	0,180	-0,012
S_RelBehavior_80_4	0,242	0,795	0,197	0,133	0,105	0,131	0,069	0,119	0,065
S_RelBehavior_80_5	0,231	0,732	0,038	0,146	0,033	0,287	0,107	-0,123	0,181
S_RelBehavior_80_6	0,091	0,578	0,151	0,135	0,165	0,077	0,291	0,116	0,334
S_Profitability_90_2	0,626	0,168	-0,071	0,123	0,348	0,227	0,238	0,272	0,069
S_Profitability_90_3	0,853	0,270	0,085	0,080	0,098	0,132	0,094	0,106	-0,002
S_Profitability_90_4	0,841	0,245	0,156	0,095	0,001	0,031	0,087	0,100	0,058
S_Profitability_90_5	0,810	0,176	0,079	0,084	0,214	0,154	0,139	0,222	0,121
S_Profitability_90_6	0,770	0,104	0,101	0,117	0,227	0,151	0,160	0,213	0,222
S_Satisfaction_100_1	0,255	0,438	-0,013	0,438	0,280	-0,099	0,217	0,303	0,343
S_Satisfaction_100_3	0,416	0,395	-0,046	0,353	0,337	0,067	0,095	0,147	0,365
S_Satisfaction_100_4	0,276	0,300	0,136	0,285	0,244	-0,161	0,015	0,286	0,569
S_Satisfaction_100_5	0,172	0,186	0,016	0,050	0,156	0,137	0,140	0,130	0,724
PC_PC_110_2	0,259	0,240	0,231	0,165	0,672	0,107	0,150	0,198	0,081
PC_PC_110_3	0,177	0,293	0,146	0,163	0,728	0,253	0,208	0,118	0,071
PC_PC_110_4	0,126	0,081	0,248	0,081	0,739	0,306	0,199	0,175	0,130
PC_PC_110_5	0,096	0,052	-0,003	0,146	0,797	0,221	0,166	-0,031	0,114
PC_PC_110_6	0,218	0,247	0,357	0,356	0,635	0,058	0,014	0,132	0,057
PC_PrefTreat_120_1	0,019	-0,031	0,418	0,129	0,186	0,573	0,124	0,249	0,068
PC_PrefTreat_120_3	0,288	0,114	0,301	0,056	0,226	0,717	0,021	0,118	-0,105
PC_PrefTreat_120_4	0,272	0,192	0,175	0,132	0,339	0,687	0,103	-0,011	0,153
PC_PrefTreat_120_5	0,122	0,124	0,373	0,176	0,269	0,721	0,057	0,153	0,031
MS_CC_1	0,109	0,209	0,232	0,772	0,162	0,016	0,153	0,149	0,031
MS_CC_2	0,099	0,204	0,195	0,771	0,275	0,065	0,111	0,021	0,170
MS_CC_3	0,072	0,108	0,314	0,783	0,007	0,174	0,127	0,050	0,048
MS_CC_4	0,122	0,177	0,259	0,785	0,178	0,176	0,205	0,075	0,032
MS_OC_1	-0,034	0,290	0,591	0,266	0,164	0,318	0,134	-0,157	0,128
MS_OC_2	-0,057	0,107	0,579	0,346	0,160	0,180	0,277	-0,110	0,179
MS_OC_3	-0,020	0,098	0,693	0,174	-0,036	0,306	0,166	-0,146	0,218
MS_RC_1	0,078	0,047	0,801	0,131	0,216	0,029	0,240	0,017	-0,067
MS_RC_2	0,161	0,154	0,746	0,125	0,072	0,121	-0,160	0,103	-0,063
MS_RC_3	0,136	0,130	0,539	0,284	0,104	0,145	0,040	0,086	-0,038
MS_RC_4	0,257	0,226	0,354	0,399	0,136	0,203	0,075	0,196	-0,319

Extraction method: Principal component analysis
Rationmethod: Varimax.

a. Rotation converged in 9 iterations.

Appendix F – Heterotrait-monotrait table

	GO	OE	RB	P	SS	PC	PT	CC	OC	RC	T	Q	A
Growth opportunity (GO)													
Operational excellence (OE)	0.615												
Relational behavior (RB)	0.688	0.604											
Profitability (P)	0.792	0.574	0.612										
Supplier satisfaction (SS)	0.750	0.594	0.769	0.679									
Preferred customer status (PC)	0.595	0.616	0.604	0.577	0.645								
Preferential treatment (PT)	0.504	0.513	0.485	0.527	0.379	0.690							
Cultural compatibility (CC)	0.448	0.572	0.573	0.404	0.635	0.589	0.500						
Operational compatibility (OC)	0.225	0.515	0.487	0.234	0.354	0.526	0.662	0.658					
Resource complementarity (RC)	0.297	0.444	0.495	0.380	0.064	0.567	0.674	0.647	0.855				
Timeliness (T)	0.086	0.107	0.095	0.138	0.348	0.091	0.059	0.056	0.050	0.162			
Quality (Q)	0.154	0.262	0.122	0.213	0.092	0.093	0.107	0.131	0.102	0.142	0.376		
Accuracy (A)	0.137	0.048	0.116	0.025	0.074	0.098	0.110	0.076	0.077	0.264	0.259	0.393	

Appendix G – PLS model of this study