

The effect of customer attractiveness and supplier satisfaction on the preferred customer status in the context of public procurement

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1. INTRODUCTION

Public buying organizations have differing goals from private buying organizations. In contrast to the private sector, public buying organizations and government departments are created to fulfill responsibilities of the government and are expected to cooperate in the policy development and the delivery of differentiating services¹. Public buying organizations and government departments focus more on efficiency and flexibility². More recent objectives of public buying organizations are stimulation of innovation, circularity, social return and sustainability³. Previous research gives various examples of how organizations could improve their performance, as in the objectives above, through collaborations with suppliers⁴. These collaborations with suppliers can provide the buying organization with the advantage of a preferred customer status⁵. There are two concepts that play a role in becoming a preferred customer. These are customer attractiveness⁶ and supplier satisfaction⁷. A customer is perceived as “attractive” by suppliers if the suppliers have a positive expectation on the relationship with this customer⁸. According to Schiele et al. (2012): “If the quality of outcomes of a relationship remain below expectations, the supplier will be dissatisfied. In contrast, if the supplier feels that a relationship produces outcomes that are equal to or exceed expectations, the supplier will be satisfied.” This is in accordance with social exchange theory, which suggests that parties will remain in a collaborative relationship when the satisfaction of the rewards surpasses a minimum comparison level⁹. Therefore, in most cases supplier satisfaction is important for collaborative relationships. These two concepts can play a big role in achieving supplier satisfaction and preferred customer status for public buying organizations. Suppliers usually provide the buying organizations, that have the preferred customer status, with their best personnel for product development, customized products, innovations, and privileged approaches if bottleneck situations occur. This preferred customer status has been studied in the private sector and not for the public sector.

Thus, what does supplier satisfaction, customer attractiveness and preferred customer status mean in the public context? Supplier satisfaction can also be defined as “a supplier’s feeling

¹ Matthews, 2005, p.388-399

² Kay, 1995

³ J. G. Murray, 2001; Sykes, 2012

⁴ Krause et al., 2007, p. 540, Nyaga et al., 2010

⁵ Ramsay, 2001, Hüttinger et al., 2012

⁶ Christiansen and Maltz, 2002, Ellegaard et al., 2003, Hald et al., 2009, Ramsay and Wagner, 2009

⁷ Essig and Amann, 2009, Nyaga et al., 2010, Ramsay et al., 2013

⁸ Schiele, Calvi, et al., 2012, p. 1180

⁹ Lambe et al., 2001

of fairness with regard to buyer's incentives and supplier's contributions within an industrial buyer-seller relationship as relates to the suppliers' need fulfillment"¹⁰. As already stated, supplier satisfaction could be achieved when the quality of outcomes of a buyer-supplier relationship meet or exceed the suppliers' expectations¹¹. In other words, buyers could be rewarded the preferred customer status if they meet or exceed their suppliers' expectations. Research by Vos et al. (2015) focusses on factors leading to supplier satisfaction. This research concludes that growth opportunity, reliability and profitability can positively influence supplier satisfaction. As buyers' attractiveness is in positive correlation with these factors, supplier satisfaction can be achieved through buyers' attractiveness.

The following aspects will be researched in this study. The public sector usually procures goods, services and works through a tendering procedure. The tendering procedure has to be followed by public entities to procure their needs when exceeding the thresholds. The IT procurement is the main focus of the public buying organizations in this study. Furthermore, proven relational antecedents to supplier satisfaction and customer attractiveness will be tested in the public sector. As the public sector has different rules and regulations, these effects could be different in the public sector. Thus the effect of profitability, relational behavior, operative excellence and realized growth will be tested on supplier satisfaction and customer attractiveness. Also, the paper of Vos et al. (2016) tested support on supplier satisfaction. This relational antecedent will be divided into financial terms and information sharing. These two concepts will also be tested on supplier satisfaction and customer attractiveness. Both buyers and suppliers have to deal with a lot of regulations and legislation of the European Union (Public Procurement Law). Long-term relationships mostly cannot be realized due to specific limits on contracting in the public sector¹². There are always exceptions, which do lead to long-term relationships. However, as already stated, these are exceptions. However, to reduce the negative effect of not being able to build a long-term relationship with suppliers, public buying organizations could invest more resources into delivering better financial terms and information sharing. Financial terms ensures that payments are timely based, goods are procured based on value, payments schemes are convenient and that there is little interaction need for payment¹³. Information sharing focusses

¹⁰ Essig et al., 2009, p. 104

¹¹ Schiele, Calvi & Gibbert, 2012, p. 1180

¹² Uyarra et al., 2014, p.635

¹³ Aschhoff & Sofka, 2009, p. 1235-1247

on public buying organizations investing in information technology to develop the supplier¹⁴. As supplier development is used to develop better performance outcomes out of buyer-supplier relationships¹⁵. Information sharing could lead to more supplier satisfaction in the buyer-supplier relationship. The reasoning for this is the study of Schiele et al. (2012). Schiele et al. (2012) state: ‘‘If the quality of outcomes of a relationship remain below expectations, the supplier will be dissatisfied. In contrast, if the supplier feels that a relationship produces outcomes that are equal to or exceed expectations, the supplier will be satisfied.’’. Due to information sharing, suppliers could see the expectations of the buyer-supplier relationship exceed.

By researching what influences financial terms, information sharing, realized growth, profitability, relational behavior, operative excellence and customer attractiveness have on supplier satisfaction, the future of public buying organizations’ supplier satisfaction level and in turn public buying organizations’ performance could improve.

In summary, given the public context, regulation and legislation, it could be more difficult for public organizations to achieve supplier satisfaction and customer attractiveness. This leads to the following research question in this research:

To what extent do different variables have effect on supplier satisfaction and customer attractiveness in the public sector?

The following sub-questions are going to be answered throughout this research. These questions relate to the relational antecedents on supplier satisfaction in the public sector in this research. Every sub-question will be explained in the conclusion section. By answering the following sub-questions, the main research question can be answered.

- 1. How can regulations and legislation out of the Public Procurement Act in Europe constrain the buyer-supplier relationship?*
- 2. How can realized growth in sales effect supplier satisfaction and customer attractiveness in the public sector?*

¹⁴ Wagner, 2011, p. 277-283

¹⁵ Wagner, 2011, p.277-283

3. *How can financial terms lead to supplier satisfaction and customer attractiveness in the public sector?*
4. *How can information sharing lead to supplier satisfaction and customer attractiveness in the public sector?*
5. *How can relational aspects found in the private sector influence supplier satisfaction and customer attractiveness in the public sector?*

This study will provide practical contributions for public buying organizations. As they will be aware of the fact what supplier satisfaction and customer attractiveness can do for their organization and how they can get the preferred customer status. The public buying organizations can use the results in the conclusion section to improve their supplier satisfaction and customer attractiveness. Thereby they could also receive more preferred customer status from their suppliers. This leads to various advantages in the buyer-supplier relationship.

Besides the practical contributions of this study, the scientific contributions of this study are also important. Supplier satisfaction and customer attractiveness are being researched more and more in nowadays dynamic environment for buying organizations. Different elements are being research to gain the benefits of supplier satisfaction and customer attractiveness in the literature. However, most research is based on the private sector. The public sector in combination with supplier satisfaction and customer attractiveness has hardly been researched. As supplier satisfaction and customer attractiveness bring benefits for both private and public organizations, this research brings more insights. Building further on the research of Hüttinger et al. (2014) and Vos (2017), the aims of this research are: (1) Studying supplier satisfaction and customer attractiveness in a new context (i.e., public procurement); (2) Extending their analyses by disassembling the relational aspect support into financial terms and information sharing.

In order to answer the research question and sub-questions, this research will be organized as following. First of all, the introduction will give background information on supplier satisfaction, customer attractiveness, public procurement, the problem statement, the research motivation, the research objectives and an overview of the research question(s). Next, the theoretical background will be triangulated with existing literature about this subject. Third, the methodology part will describe the way of measuring, data collecting, data analyzing and

planning of the research. Fourth, in order to analyze the data of the surveys a results part will be designed. Finally, a conclusion will be written in combination with a discussion part and limitations of the research.

2. THEORETICAL FRAMEWORK

2.1. The European Public Procurement Law and the significant changes over the years for IT procurement

This chapter will give insights in the European Public Procurement Law and the significant changes over the years for public buying organizations and thus also their (potential) suppliers.

Both public and private procurement organizations have to acquire goods, services or works. Striving for the ‘‘best deal’’ is in both sectors essential. However, the public procurement sector is quite different from the private sector¹⁶. Knight, Harland and Telgen (2012) have listed all the differences between the two sectors in one paper. This paper will be used to explain the differences and additional demands between the private and public procurement sector.

Each year, more than 250.000 public entities in the EU spend around 14% of GDP on the procurement of goods, services and works¹⁷. Public procurement refers to the process in which public entities, as government bodies or local authorities procure goods, services or works from suppliers. The EU law sets out public procurement rules to create a level playing field for every business across Europe. These public procurement rules and regulations organize how public entities have to procure goods, services and works. These EU laws are translated into national legislation of EU countries and apply when the value exceeds a threshold. Values below the tendering threshold will be procured within national rules. The core principles of the EU directives on public procurement are transparency, equal treatment, open competition and sound procedural management. These core principles have to drive the

¹⁶ Erridge, 1996; Thai, 2001; Thai et al., 2004

¹⁷ Cernat & Kutlina-Dimitrova, 2015, p. 1

procurement market to be competitive, open and regulated. This way, the public funds are secured and put to good use.

Since the European Public Procurement Law 2012 (hereinafter: EPPL) , there are quite some changes incorporated into the EPPL. These changes are incorporated into the EPPL, because of developments in the economic, social and political scope. Rather than discussing every change in directives since the EPPL 2012, this section will give a summarized overview on what goals these changes in the EPPL 2012 have to reach.

Table 1 – Summarized overview of change in goals of the EPPL 2012

More space for sustainability and innovation	Less corruption and conflicts of interest	More chances for SME's
More freedom	Less bureaucracy	Better regulation for acquiring social services

There is a need for more sustainability and innovation in the public procured goods, services and/or works. This could be achieved through more freedom of space in dialogue conversations with potential suppliers. Another goal which gives more freedom to public procurement sector is there needs to be more freedom in tenders, that are good for the population regarding social aspects, environment, employment opportunities and social return (social integration). There has to be less bureaucracy and easier regulations. Furthermore, public entities should focus more on sourcing SME's rather than big corporations. As SME's ensure employment opportunities, growth and innovation. Another goal is to reduce corruption, conflicts of interest and illegal practices. Last but not least, there should be better regulations when acquiring social services. The reason for this is that social services usually are not cross-border and they can differ on national level as there are different cultures in every country.

For public entities, which are procuring IT related products and services, there are several important changes for IT-tenders. The Personal Declaration is exchanged for the 'Uniform

European Tender Document'', including the principle that only the selected tenderer is required to submit supporting evidence documents. However, there is an addition that evidence can be requested during the procedure when this is necessary for a proper conduct of the procedure. The minimum time period for publishing the latest Information Notice shifts from six to ten days before the deadline of submitting quotations. The other deadlines of public and restricted procedures remain the same if all information exchange is digitally. The term ''market consultation'' is explicitly mentioned from which can be deduced that these consultations are desirable in relevant cases. Certainly in the rapidly changing world of IT, market consultations are extremely useful. To stimulate innovative solutions, there is another procedure available ''innovation partnership''. Innovation Partnership offers the opportunity to deal more effectively with innovation-oriented procurement. This procedure is intended ''for an assignment that is aimed at development and procurement of an innovative product, work or service, which is not already available on the market and which through negotiations with one or more suppliers is being finalized''. However, this should involve innovative products (services or works) with the following definition: ''the application of a new or significantly improved product, a new or significantly improved service or a new or significantly improved process''. The ''Competition procedure with negotiation'' replaces the ''Negotiation procedure with announcement''. In this respect, negotiations with one or more suppliers will lead to finalizing the tender. In these negotiations, the to be procured good, service or work should be an innovative solution, in which already available solutions are insufficient or technical specifications cannot be determined sufficiently. These are characteristics of complex ICT projects. Furthermore, requiring certification marks is permitted. However, this is under the condition that it may not result in a disproportionate administrative burden. Thus, it must be proportional and it may not impede innovation. This is relevant for IT tenders as for example tendering cloud services. When tendering for cloud services, you want the host to have all the right security certificates for example.

These are the most important changes for IT related tenders. However, there are a lot more changes in the EPPL 2012. It is always handy to read through the changes and find the relations that these changes may have for your buying organization. In the next chapter the additional demands to public procurement compared to the private sector will be explained. These additional demands will help answering the research question in the results section of this study and interpreting the collected data.

2.2. There are several additional demands to public procurement compared to private procurement

In the following table a view on differences and additional demands will be given between the public and private procurement sector. In this chapter these additional demands will be explained. Public and private procurement sectors focus on acquiring good and services with the goal to strive for optimal results in acquiring the required goods and services¹⁸. However, the public procurement sector differentiates from the private procurement sector¹⁹.

Table 2 – Additional demands in the public procurement sector

Additional demands in the public procurement sector	
External demands	<i>Transparency</i>
	<i>Integrity</i>
	<i>Accountability</i>
	<i>Exemplary behavior</i>
	<i>Public value</i>
Internal demands	<i>Many goals at the same time</i>
	<i>Political goals</i>
	<i>Many stakeholders</i>
Demands originating from the context	<i>Budget driven</i>
	<i>Budgets are open</i>
	<i>Mutually dependent budget situations</i>
	<i>Cultural setting</i>
Demands on the process	<i>Limits imposed by legal rules and organizational procedures</i>
	<i>Long-term relationships more difficult</i>
	<i>Cooperating with other public entities</i>

¹⁸ Knight, Harland & Telgen, 2012, p. 16

¹⁹ Erridge, 1996; Thai, 2001; Thai et al., 2004

Multiple roles for the public organization itself	<i>Large buyers</i>
	<i>Reciprocity</i>
	<i>Determination of the rules and regulations</i>

The additional demands for public procurement have been grouped out of existing literature (as stated above) for clarity and oversight.

The external demands consist out of four additional demands. Transparency refers to making know all actual means and processes by which the contracts will be awarded and managed to all interested participants. This implies the equal opportunities for all bidders and a clear process without corruption, etc. The public sector is bound to be integer with all their procurements. This means that public entities have to avoid wasteful or corrupt and fraudulent practices. Public entities should always be able to explain their way of operating at all times. This is called accountability. Public entities are set accountable for effectiveness, efficiency, legal and ethical manner in which they conduct procurements²⁰. The government and/or public entities should behave in an exemplary behavior. This is set for not only ethical standards but also in terms of operations.

The additional demands for internal demands also differ between the public and private sector. Public organizations have many goals at the same time²¹. The buying organization itself has various internal goals (economic, managerial, etc.). However, at the same time, the public which the public buying organization should serve, may have very differing goals and even conflicting goals²². Furthermore, political goals have to be accounted for. However, most political goals tend to be broad and not well defined. Thus political goals need enough explanation and enough measurement instruments²³. In the public procurement sector, there are many stakeholders (e.g. citizens, taxpayers, elected officials, employees, etc.) with different objectives²⁴. Thus only sharing the same objectives is not enough, because most

²⁰ Knight, Harland and Telgen, 2012, p. 17

²¹ Murray, 1999, p. 33-42

²² Callender & Matthews, 2002, p. 216-236

²³ Premchand, 1993

²⁴ Murray, 1999, p. 33-42

stakeholders have different interests with the same objectives. Trying to allocate the objectives and interest is a very important task.

Demands originating from the context are based on budgets and cultural settings. In the public procurement sector the budgets are driven. Budgets eventually decide what is procured. Buying organizations can only spend the budget. Trying to change the budget, because the expense is more than budgeted for, requires an organizational upheaval. Furthermore, in most budget driven organizations, the budget for next year is based on spending of this year. Thus underspending (due to negotiations, inflation, etc.) one year can affect operations for the coming next years. Furthermore, as we all know, the budgets are open for the general public. Thus, suppliers also have access to departmental budgets. When suppliers know what budgets an organization has, the buyer-supplier relationship changes considerably²⁵. When there are mutually dependent budget situations, this means that for example two adjoining local departments are involved in procuring the same case. Then the budgets can be seen as mutually dependent. Employees working in public organizations have a cultural setting in which they are concerned with public interests. Thus decision-making is tedious and in line with risk adversity²⁶.

The process of public procurement also has additional demands. The procurements have strict limits imposed by legal rules and organizational procedures (EU directives or political decisions)²⁷. These rules can be cumulative or contradictory as these rules are internationally, nationally or locally imposed. These same rules and regulations make long-term relationships with suppliers in the public sector difficult²⁸. However, for the IT sector, there are tenders put into the market where long-term relationships are very important but difficult to maintain due to the rules and regulations. For example: the whole IT tender for Euro vignette or for Tax IT components for a whole country. These tenders are not software, hardware or services which are directly available on the market. These needs need to be procured and aligned throughout the whole process. Public procurement sectors can cooperate with other public entities. There are very good reason to do this, as it can be commercially good and it can minimize total costs²⁹.

²⁵ Covington, 2006, p. 3

²⁶ Johnson et al., 2003

²⁷ Murray, 1999, p. 33-42

²⁸ Covington, 2006, p. 4

²⁹ Schotanus & Telgen, 2005, p. 8

The last grouped of additional demands are the multiple roles for the public organization itself. Public entities are usually large buyers. The procured goods, services and/or works are procured for their organization and in the end for the citizens that are needed to be served with the goods, services and/or works. The GDP involved in public procurement ranges from 10 per cent up to 80 per cent (developing countries)³⁰. Furthermore, the reciprocity in the public procurement has its additional demands on the buyer-supplier relationship in policy and operational level. As the to be procured need for the citizens are procured from citizens itself. Last but not least, the public sector can also determine rules and regulations in which they have to operate. Thus the public procuring sector is a player, decision maker and a referee. This is always a big challenge, the public procurement sector faces.

As can be seen, there are a lot of additional demands to public procurement. Ahlstrom and Brege (1999) state that the public procurement sector is more complex than the private procurement sector. To handle all of these additional demands in a good way, the public procurement should be developed further to deal with all these complex situations³¹. In the next chapter an overview will be given on the most important aspects when procuring ICT in the public sector.

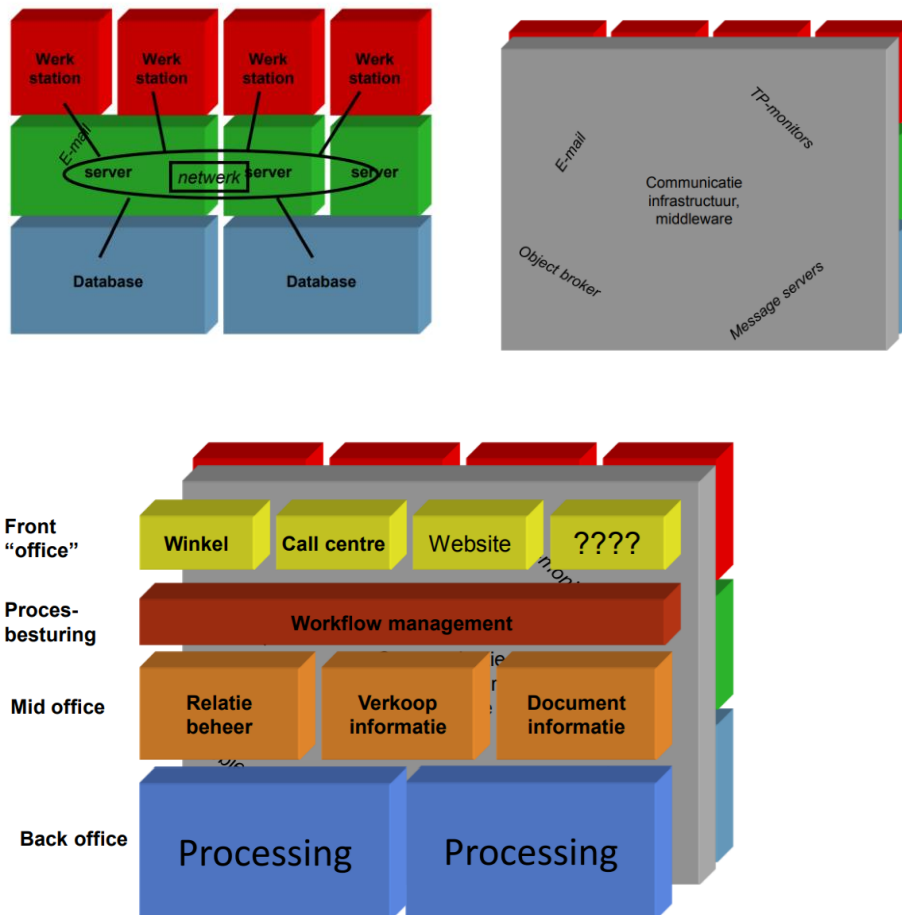
2.3. Procuring ICT in the public sector has several challenges

³⁰ Ssennoga, 2006, p. 229

³¹ Telgen, 2012, p. 19; Vadiya et al., 2004, p. 21

Procuring ICT in the public domain has a lot of challenges which the public sector has to deal with. ICT components are usually procured in three forms: software, hardware and related services. In the following figure the correlation of ICT in an organization is presented.

Table 3 – ICT components and it's correlation in an organization (NEVI 2019, Procuring ICT)



The first figure shows how the first layer of ICT components in an ICT organization should be structured. In this first layer the work stations, servers and databases have to be available in the organization. An important aspect in this is that the management of what servers, databases and work stations has to be in place. As later on this could influence procurement in a negative way. The second picture is the layer on top of the first layer. This second layer is all the middleware, infrastructure and communication software/hardware components. Whenever, procuring components out of the second layer, the connection with the first layer has to be made. Not every software/hardware can run on the same databases, servers or working stations. Thus when procuring your second layer, an IT architecture has to be

available in your organization³². The top layer is based on front offices, processes, mid offices and back offices. Thus every ICT component that belongs in one of these four areas, should be divided from each other in tenders. As these components can be easily procured from each other.

When procuring software, hardware and related services, the three layers above should always be consulted. For example: when procuring a new software component in the second layer, the license agreement of the software should be in line with the first layer of your ICT in your organization. When the license agreement does not fit into your first layer, this would lead to migration, transitions and additional fees to make it fit. Thus you need to be very specific and clear on what you want to procure and how it needs to fit in your ICT organization. To give a better overview on what important aspects have to be accounted for when procuring software or hardware components (and related services), the following chapter will help.

When procuring software, software asset management should be in place in your organization. As this gives you an overview on what licenses you have and what license agreements there are. A license is a user right for a software³³. The definition of user rights effects your flexibility and costs in the future. The user rights can differ in the following aspects based on what NEVI explains in their cursus procuring ICT:

- Only a part of a business unit/department/holding can use the license
- Temporarily or perpetual
- Named license versus concurrent license (this indicates whether the license can be used by everyone (concurrent) or person-based (named))
- Type of users (heavily, lite, etc.)
- Site license
- Number of processors the license is needed
- Location
- Platform (Windows, OS, Linux)
- Application Specific for Use
- Revenue
- OTAP (Development, Test, Acceptation or Production environment)
- Closed source versus open source

³² Ross & Westerman, 2004, p. 13

³³ Hippel & Krogh, 2003, p. 1150

- Indirect access (portal access or likewise)

These aspects can limit the use of a license. Whenever procuring licenses, these aspects should fit with your ICT in your organization to minimize future costs. Furthermore, maintenance and support is usually 15-20 per cent of your license price³⁴. Maintenance and support offers you updates, upgrades, patches, releases, versions and help desks.

Hardware is less difficult to manage than software components. With hardware the most important aspects to take into account based on NEVI's cursus procuring ICT are:

- Price and lead times
- Delivery location (DOA – Dead on Arrival)
- Technical specifications of components
- Supplier independency (avoid lock-in situations)
- Forecast and safety stock
- Warranty
- Environmental issues (sustainable products)
- Product life cycle
- Environment settings

Taking all these aspects for software and hardware into account, ensures that your procured needs will not surprise you in the future when your ICT organization changes. As this is very normal in the ICT world, because technology changes rapidly³⁵.

This section concludes the important aspects of procurement of ICT. In every tender for ICT, the aspects above have to be analyzed thoroughly. Also, suppliers could help public buying organizations with defining their “needs” in a tender through a market consultation before publishing a tender. This ensures that the market in which you want to procure your needs is thinking with you in the best possible way. This could affect how suppliers think of the buying organization. Suppliers could be more satisfied if information is shared more often and if they can help with their expertise. Also the public buying organizations could be more of an attractive customer to suppliers when suppliers realize that the public buying organization is transparent and open to the whole market. The next chapters will give background information on the relational aspects for supplier satisfaction and customer attractiveness. The

³⁴ Seethamraju, 2015, p. 485

³⁵ Golding & Katz, 2008

combination of background information on public procurement, ICT and relational aspects for supplier satisfaction and customer attractiveness will give insight to answer the research question and analyze the collected data.

2.4. Customer attractiveness: the perception of suppliers on positive expectations towards the relationship with a customer

Leenders & Blenkhorn (1988) state that the buyer-supplier relationship has changed. Buying organizations try to find suppliers that are able to match the needs of their organization. Blenkhorn & Leenders (1988) call this type of buyer-supplier relationship; reversed marketing. A couple of years later, Blenkhorn & Banting (1991) emphasize that buying organizations try to convince suppliers to fulfill their needs. Thus, the procurement department needs to maintain relationships with their supply base³⁶. Therefore the procurement department also needs to have reverse-marketing purchasers.

As explained above, buying organizations have to be attractive to their supply base if they want to get the best resources available³⁷. These resources can be tangible or intangible resources ranging from financial, human, intellectual, organizational and physical resources, which increase the competitive advantages of an organization³⁸. This is called customer attractiveness in the literature. Customer value is in monetary terms the benefits that customers get from specific good, services or works³⁹. Supplier value on the other hand is the benefits, which a supplier receives from a customer⁴⁰. Therefore a customer is perceived as attractive by suppliers when suppliers have positive expectations from a relationship with the customer⁴¹. “These expectations are based on the expected value of a given buyer leading to the supplier's interest to intensify or engage in a relationship with this buyer. By creating attractiveness, buyers induce supplier interest by showing potential value to incentivize suppliers to engage into (closer) collaborations”⁴². Therefore, attractiveness can be seen as an interest of organizations to intensify or engage in relationships⁴³. Furthermore, customer attractiveness can create situations where suppliers make an effort to be attractive for attractive buyers⁴⁴. This can help buying organizations obtain better resources. The reasoning behind this is: when suppliers perceive buyers as attractive, they might allocate better resources to that relationship. The expected value of the relationship ensures that suppliers

³⁶ Brownell and Reynolds, 2002, p. 50

³⁷ Schiele, 2012, p.3

³⁸ Hunt and Davis, 2008, p. 11, Newbert, 2008

³⁹ Lindgreen & Wynstra, 2005, p. 737

⁴⁰ Ramsay, 2005, p. 549-565

⁴¹ Schiele et al., 2012, p. 1180

⁴² Ellegaard et al., 2003, Mortensen et al., 2008

⁴³ Blau, 1964

⁴⁴ Aminoff & Tanskanen, 2013, p. 175

become very interested in intensifying a relationship with the expectation of allocating better resources to the customer⁴⁵.

There is a significant relationship between customer attractiveness and supplier satisfaction⁴⁶. Both customer attractiveness and supplier satisfaction are based on the notion of supplier value⁴⁷. However the two constructs are conceptually different. A buying organization is perceived attractive by suppliers if suppliers expect positive outcomes of a relationship with the buying organization (customer)⁴⁸. On the other hand, supplier satisfaction is based on outcomes from a buyer-supplier relationship that meet or exceeds suppliers expectations⁴⁹.

Relational antecedents of customer attractiveness can be categorized into market growth factors, risk factors, technological factors, economic factors and social factors⁵⁰. Receiving the best resources of suppliers is not only based on attractiveness of buyers. When suppliers are unsatisfied but the buyer is very attractive, the buying organization could have a hard time receiving a preferred customer status. The reasoning behind this is, that both customer attractiveness and supplier satisfaction have influence on the preferred customer status. The customer attractiveness is based on what the perception is of a relationship and the supplier satisfaction is the actual outcome of a relationship⁵¹. Therefore, it is even important for buying organizations who are already attractive to acknowledge supplier satisfaction. These three topics; supplier satisfaction, preferred customer status and relational antecedents that lead to supplier satisfaction and customer attractiveness will be reviewed in the next chapters.

⁴⁵ Pulles et al., 2016. p.9

⁴⁶ Pulles et al. 2016, p.9.

⁴⁷ Pulles et al. 2016, p.9.

⁴⁸ Schiele, Calvi, et al., 2012, p.1180

⁴⁹ Schiele, Calvi, et al., 2012, p. 1180

⁵⁰ Hüttinger et al., 2012, p. 1203

⁵¹ Schiele, Calvi, et al., 2012, p. 1180

2.5. Supplier satisfaction: The feeling of equity with the relationship no matter what power imbalance exists

In the previous paragraph we reviewed customer attractiveness and its effect on the allocation of resources by a supplier. This chapter will review supplier satisfaction and its effect on allocation of resources. Supplier satisfaction is important in a buyer-supplier relationship as this gives the buyer a preferred customer status. This preferred customer status will be explained in the next chapter of this theoretical framework. However, the preferred customer status gives the buyer better access to resources of the supplier. Supplier satisfaction is defined as a ‘suppliers’ feeling of fairness with regard to buyers’ incentives and suppliers’ contributions within an industrial buyer-seller relationship’’⁵². Another definition is ‘supplier satisfaction is the feeling of equity with the relationship no matter what power imbalance exists’’⁵³. Schiele (2012) defined: “if the quality of outcomes of a relationship remain below expectations, the supplier will be dissatisfied. In contrast, if the supplier feels that a relationship produces outcomes that are equal to or exceed expectations, the supplier will be satisfied. Therefore, supplier satisfaction is a condition that is achieved if the quality of outcomes from a buyer-supplier relationship meets or exceeds the supplier’s expectations.” This study of Schiele (2012) makes clear that the buyer-supplier relationship is not only based on what the supplier gets from the buying firm, but also what the supplier expects of their buyers.

The reason why businesses outsource many activities to suppliers, that used to be performed in-house⁵⁴, is because the supplier base in business-to-business markets have been reduced. Furthermore, organizations see the need for quality and these organizations try to increase the quality by increasing suppliers’ control, simplifying management and reduce noise and costs of communication⁵⁵. In order to achieve business excellence, the buying organizations should actively look for ‘good’ suppliers⁵⁶. Buying organizations, which outsource most of their activities to suppliers, should even more be focused on supplier satisfaction⁵⁷. Thus, supplier

⁵² Essig & Amann, 2009

⁵³ Benton & Maloni, 2005, p. 4

⁵⁴ Prahalad, 1990, p. 79-91

⁵⁵ Biemans & Brand, 1995, p. 28-37

⁵⁶ Wong, 2000, p. 430

⁵⁷ Wong, 2000, p. 430

satisfaction is of importance and a necessary condition in order to gain and maintain access to capable suppliers and their resources in our dynamic and competitive environment⁵⁸. The buying organizations that satisfy their supplier receive a preferred customer status over other buying organizations and this will give them access to the best resources⁵⁹.

Relationships and partnerships can only be built, when the perception of the relationship and/or partnership is seen by both buyer and supplier as satisfied. Better and more close relationships and/or partnerships with a limited amount of capable suppliers could contribute to the increasing strategic relevance of procurement⁶⁰. When comparing world-class purchasing organizations with average purchasing organizations, factors as cost, time, quality of products and quality of deliveries get better results⁶¹. World-class purchasing organizations have lower lead times and less late deliveries than average purchasing organizations. This is all in accordance with the preferred customer status and smaller supply base. The supply is smaller than what average purchasing organizations have, but the relationships with the smaller set of suppliers is very good.

The relational antecedents of supplier satisfaction are studied over the years. Whipple, Frankel and Daugherty (2002) found that information sharing between trading partners had an overall positive effect on supplier satisfaction⁶².

Maunu (2003) described a framework with business-related dimensions and communication-related dimensions. Business-related dimensions in this framework are fact-based values. The antecedents affecting supplier satisfaction are: profitability, agreements, business continuity, forecasting and early supplier involvement. Communication-related dimensions are more human-based values. These antecedents that affect supplier satisfaction are: roles and responsibilities, feedback and the buying organization's values, openness and trust.

Benton and Maloni (2005) tested how power-driven buyer-supplier relationships affect performance and satisfaction. Reward-mediated and non-mediated power sources positively affect supplier satisfaction. In contrast, coercive-mediated power sources negatively affect supplier satisfaction.

⁵⁸ Vos et al., 2016

⁵⁹ Hüttinger et al., 2012

⁶⁰ Kraljic, 1983, p. 109-117

⁶¹ McKinsey and Co, 1995, p. 5

⁶² Whipple et al., 2002, p. 67-82

Leenders et al. (2005) provided a framework “the purchaser-supplier satisfaction matrix”. Buying organizations can improve their position in this matrix in four ways. The first way is granting substantial volumes and long-term commitments. The second way is by sharing information and interactive communication. The third way is having the willingness to change the behavior of the purchasing organization. The last way is by responding actively and fast to suppliers’ requests.

Essig and Amann (2009) made three dimensions for supplier satisfaction. The first dimension is the strategic level of a relationship. This level contains indicators on intensity of cooperation. The second dimension is the operational level. In this level questions on order process, billing and payment procedures are incorporated. The third dimension is the accompanying level. In this level the following variables are incorporated: communication, conflict management, quality and frequency of information and reaction speed.

Hüttinger (2014) stated that innovation potential, growth opportunity, relational behavior, reliability, operative excellence, involvement, support and access to contacts are relational antecedents to supplier satisfaction. Vot et al. (2016) added profitability as a relational antecedent to supplier satisfaction. In contrast, when suppliers are dissatisfied, the suppliers might produce low quality products that can influence the end-product of the buying organization. This could lead to lower sales volume, lower profitability, worse brand image, etc. This can be seen as an extra motivation to achieve the preferred customer status by supplier satisfaction, as you would also not get the cons of dissatisfied suppliers.

As can be seen, over the years the studies on supplier satisfaction gave us more information on how to measure supplier satisfaction, improve supplier satisfaction and what antecedents can help buying organizations receive supplier satisfaction. These studies help buying organizations incorporate the importance of supplier satisfaction and thereby receiving the preferred customer status. The next chapter will be a review on the preferred customer status.

2.6. Preferred customer status: becoming a preferred customer is contrary to the classic notion of the seller alone to become attractive to the buyer

As stated before, buying organizations are relying more on less suppliers. In order to meet or exceed the same results, which buying organizations received from bigger supply bases, buying organizations could focus more on becoming preferred customer in their supply base. The preferred customer status that buying organizations should receive is achieved when their suppliers are satisfied⁶³. Customer attractiveness is also an indirect relational antecedent to the preferred customer status as explained in earlier chapters⁶⁴. Thus having a smaller supply base, gives you more time to focus on building a good buyer-supplier relationship with your suppliers. Steinle & Schiele (2008) state that buying organizations receiving preferential resource allocation from the supplier have the preferred customer status. Schiele (2012) also states that the preferential treatment will only be obtained when these three constructs are incorporated: customer attractiveness, supplier satisfaction and preferred customer status. “The concept of becoming a preferred customer is contrary to the classic notion of the seller alone to become attractive to the buyer⁶⁵. “The importance of being preferred customer, therefore, is most relevant in the event of scarcity of suitable suppliers”⁶⁶. This explains when the preferred customer status would give the buyer the most benefits. The preferential treatment by a supplier “preferred customer status” can be seen as a competitive advantage for the buying organizations. Furthermore, the preferred customer status is positively correlated with technological innovation access⁶⁷. Ellis (2012) states that technology access is “the extent to which a supplier willingly invests in and shares new technologies without the promise of future orders, this will advance the buying firm’s innovative capabilities”. Schiele et al. (2011) states that suppliers give preferred customers first access to new technologies. This can lead to a competitive advantage for the buyer, as other buying organizations with the same supplier do not get the preferential customer status and thus do not get first access to new technologies.

However, the benefits of a preferential customer status have to be both for the buyer as supplier. Otherwise the buyer-supplier relationship will not succeed⁶⁸. In order for the buying

⁶³ Hüttinger et al., 2012, p. 1194-1205

⁶⁴ Pulles et al., 2016, p. 136

⁶⁵ Schumacher et al., 2008

⁶⁶ Steinle & Schiele, 2008, p. 3-14

⁶⁷ Ellis, 2012, p. 1257

⁶⁸ Schiele, 2012, p. 48

organization to choose their suppliers strategically, Schiele (2012) developed a supplier portfolio. In this supplier portfolio there are four different scenarios. These scenarios are: the squire, the king, the quacksalver and the black knight. The buying organization uses the scenario the squire to increase the competitiveness of the organization. The king is used by the buying organization to incorporate a collaboration strategy to achieve competitive advantages for the buying organization. The quacksalver can be seen as a replacement strategy in which the buying organization seeks for new capable suppliers that offer a few more advantages. Last but not least, the black knight is being used by the buying organization to find excellent suppliers with a bonding strategy in order to attain a preferred customer status. The squire and the king scenario's, the buying organization is already a preferred customer. However, in the squire scenario the supplier is not a technological leader in the market yet as in the king scenario the supplier already is. The quacksalver scenario already implicates that the already standing supplier cannot give preferential treatment to the buying organization and that is the reason that the buying organizations is looking for replacing suppliers. The last scenario has threats, because the excellent suppliers already gave buying organizations a preferred customer status. The chance on getting more resource access than the already attained preferred customer buying organizations is relatively lower.

The antecedents of preferred customer status all have groupings and are economic value, relational quality, instruments of interaction and strategic compatibility⁶⁹. These grouping all have factors which could lead to preferred customer status. With the economic value, high purchase volumes and profitability are essential. The relational quality groups factors as loyalty, trust and commitment. The instruments of interaction include factors as early supplier involvement, involvement in product design and supplier development. The strategic compatibility aims at a shared future and strategic fit between buyer and supplier.

The three important constructs; customer attractiveness, supplier satisfaction and preferred customer status, that are being used during this study have been explained in previous chapters. The definitions and antecedents will be used to elaborate on in the next chapters and finally conceptualize a research model that will be tested with this study. In the next chapters the factors affecting customer attractiveness and supplier satisfaction will be reviewed.

⁶⁹ Hüttinger et al., 2012, p. 1194-1205

2.7. Information sharing: inter-firm communication is an important part of buying organization's supplier development effect

We noted before that information sharing is one of the factors that could have effect on customer attractiveness and supplier satisfaction. We would like to test whether information sharing does have an effect on these constructs. This chapter on information sharing will build a literature background on what information sharing is and how it could affect customer attractiveness and supplier satisfaction.

Moh and Spekman (1994) state that information sharing is conveying critical information to a party's relationship partners. This could be involving your partners/suppliers in early stages of product design, being transparent on books and sharing cost information, future product development plans or providing supply and demand forecasts together⁷⁰. Krause (1999) states that inter-firm communication is an essential part of buying organization's supplier development effect. When partners realize the benefits of collaboration, information sharing is an essential factor⁷¹. Trust-building processes are highly based on sharing critical information⁷². As partners are developing an understanding of each other's routines and are more eager to find resolutions for conflicts. Information sharing could help managers in the buying organizations to analyze the opportunities and assess the risks of building tighter relationships with their suppliers through informational technology⁷³. Weitz (1992) states that information sharing encourages parties to commit to a relationship.

Whipple et al. (2002) concluded that for buyers, the accuracy of the partner's information exchange was important. On the other hand, for suppliers the timeliness of the partner's information exchange was important. In all cases the impact of information exchange had a positive and significant effect on satisfaction of the relationship.

Furthermore, information sharing positively affects commitment and trust⁷⁴. Nyaga et al. (2010) also states that commitment and trust positively affects satisfaction of both buyers and suppliers. Therefore we can say that information sharing indirectly affects supplier satisfaction. Also when buying organizations choose to start the information sharing process interactively and in the early phases of a relationship, suppliers could expect positive

⁷⁰ Cannon and Perreault, 1999, p. 439-460

⁷¹ Min et al., 2005

⁷² Kwon and Suh, 2004, p. 4-14

⁷³ Mulligan & Gordon, 2002, p. 32

⁷⁴ Nyaga et al., 2010, p. 101-114

outcomes of a relationship. This means that information sharing also affects customer attractiveness. Information sharing has a stronger positive effect on commitment for suppliers than buyers⁷⁵. This means that suppliers are more likely to commit to relationships with buying organizations, that share information. The reasoning behind this is that suppliers can help providing products and services more effectively and efficiently⁷⁶. Christiansen and Maltz (2002) conclude that customers must analyze the preferences of suppliers and focus on creating indirect value. Customers become more attractive to suppliers if they are perceived attractive not only economically but also on other areas⁷⁷. One of those other areas is information exchange (sharing). Thus, you can say that information sharing has a positive effect on customer attractiveness in a buyer-supplier relationship.

The figure below shows the causal relationships between information sharing, commitment, trust, satisfaction with relationship and performance⁷⁸. As Nyaga et al. (2010) concludes; information sharing has more significant results for suppliers on commitment and trust than buyers. Furthermore, commitment and trust has more significant results for buyers on satisfaction with relationships and performance. This means that suppliers find information sharing important to receive commitment and trust. On the other hand buyers find commitment and trust more important for satisfaction with the relationship and performance. In this study we would like to test the direct effect that information sharing has on supplier satisfaction and customer attractiveness. As information sharing is a sub-part of the relational antecedent support in the study of Vos et al. (2016), we will only test the direct effect of information sharing on supplier satisfaction and customer attractiveness. These are both outcomes that buying organization highly value.

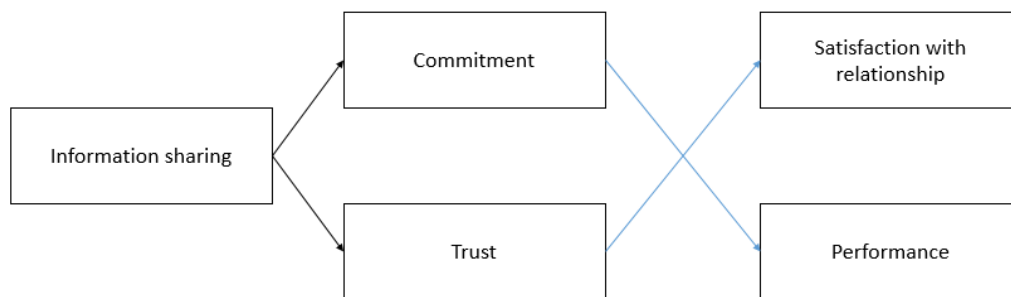
⁷⁵ Nyaga et al., 2010, p. 103

⁷⁶ Nyaga et al., 2010, p. 103

⁷⁷ Christiansen and Maltz, 2002, p. 177-195

⁷⁸ Nyaga et al., 2010, p. 101-114

Figure 4 – Theoretical assumptions of information sharing



Notes: Black arrow: Suppliers emphasize these relationships more than buyers; Blue arrow: Buyers emphasize these relationships more than buyers.

In this chapter we reviewed the definitions of information sharing in the literature and the effect information sharing can have on supplier satisfaction and customer attractiveness. Indirectly there are significant positive effects of information sharing on supplier satisfaction and customer attractiveness. The next chapter will review how financial terms can affect supplier satisfaction and customer attractiveness.

2.8. Financial terms: timely payments, convenient payment schemes and interaction needed for payment are related to good financial terms

This chapter will be devoted to financial terms and its implications on supplier satisfaction and customer attractiveness. Also different definitions will be given out of literature for financial terms in a buyer-supplier relationship.

Purchasing literature has a lot of recommendations to issues which are important for successful partnerships⁷⁹. In these studies, tangible and intangible factors are separated. Tangible factors that must be present in a buyer-supplier relationship are: reduced costs, total quality management, zero defects, on-time payments and convenience in payment schedules. We will combine the payment policies and convenience in payment policies to one definition: financial terms.

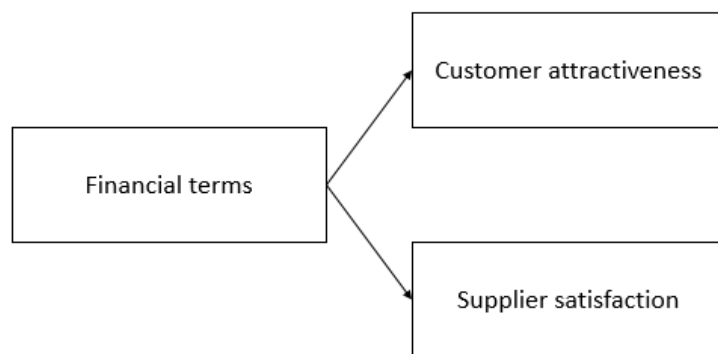
Financial terms in this study are based on the timely payments of the buying organizations, convenient payment schemes of the buying organizations and the little interaction needed for payment. Time schedule and timely payments affect supplier satisfaction directly⁸⁰. Soetanto and Proverbs (2002), Essig and Amann (2009), Maunu (2003) and Wong (2000) state that timely payments of goods or services, payment practices and the way of receiving goods or services have a direct effect on supplier satisfaction. Verhoef et al. (2001) concludes that bad payment policies of buying organizations can result in suppliers to go cross-selling. You can conclude from this that financial terms have a direct influence on supplier satisfaction. Furthermore, good payment policies also improve overall image of a buying organization⁸¹. When the image of a buying organization is good, suppliers expect positive outcomes out of the buyer-supplier relationship. This means that financial terms also has effect on customer attractiveness.

⁷⁹ Ellram, 1990; 1991a,b; Lamming, 1993; Briggs, 1994

⁸⁰ Lascelles and Dales, 1989; Essig and Amann, 2009; Maunu, 2003

⁸¹ Maunu, 2003

Table 5 – Theoretical assumptions of financial terms



In the table above, we combined the payment policy, financial policy and little interaction needed for payment into financial terms. In this study the effect of financial terms on customer attractiveness and supplier satisfaction will be tested.

In this chapter we reviewed the definition of financial terms and its effect on supplier satisfaction and customer attractiveness based on literature. The next chapter will give a review on realized growth in sales volume and its implications with supplier satisfaction and customer attractiveness.

2.9. Realized growth: buying organizations with high purchase volumes are more likely to achieve benefits out of the buyer-supplier relationship

Fiocca (1982), argued that suppliers need to evaluate their customers on attractiveness. Fiocca (1982) made an overview of the factors that make a customer attractive to suppliers. These factors are market factors, competition, financial and economic factors, technological factors and lastly socio-political factors. In this chapter we will be reviewing what realized growth means in the literature and how it can affect supplier satisfaction and customer attractiveness as this is a financial factor argued by Fiocca (1982).

The market factors that make a customer attractive are customer's size, growth rate and influence in the market⁸². Suppliers find customers more attractive when their purchasing volumes are larger than their other customers⁸³. Growth opportunity has been set as an antecedent for customer attractiveness. But what is growth opportunity? And what is the difference with realized growth? Growth opportunity's most important factors are: steady mutual growth, a strong brand name, possible access to other customers and the role of the buying company as a global player⁸⁴. Hald et al. (2009) and Ramsay and Wagner (2009) say that economic elements as price, volume, growth, access to new buyers are components of attraction. In the study of Hüttinger (2014), growth opportunity was also attended as a antecedent for supplier satisfaction. Parties strive for value creation and will maintain a relationship as this relationship achieves satisfactory rewards⁸⁵. Large and prestigious customers are able to create value for suppliers, which lets suppliers access new markets⁸⁶. This access to markets in combination with opportunity to receive substantial sales volumes⁸⁷, can increase supplier satisfaction. Therefore you can also say that growth opportunity is an antecedent of supplier satisfaction. But what is the real difference between growth opportunity and realized growth? Harms (2010) states that not only innovation potential but also growth in sales volume is a predictor for growth opportunity for organizations. The logical reasoning behind this is: when an organization is exponentially having an increase in sales volume, the organization is likely to grow further in the future. As more resources can be put into the

⁸² Fiocca, 1982, p. 53-62

⁸³ Hüttinger et al., 2012, p. 1194-1205

⁸⁴ Fiocca, 1982, p. 53-62

⁸⁵ Homans, 1958, p. 567-606; Blau, 1968, p. 452-457

⁸⁶ Walter et al., 2001, p. 372

⁸⁷ Leenders et al., 2005

R&D departments of organizations to ensure continuity of an organization⁸⁸. When the buyer is only responsible for a small part of the revenue of the supplier, the effect on supplier satisfaction would be little.

Since the existing literature missed factors as sales increase on customer attractiveness and supplier satisfaction, this study will use realized growth as an antecedent for customer attractiveness and supplier satisfaction⁸⁹. Vos et al. (2016) studied growth opportunity on supplier satisfaction with questions relating to growth in sales. Brokaw and Davisson (1978) conclude that high purchase volumes by a buying organization can be an antecedent for supplier satisfaction. Beekman & Robinson (2004) found that big organizations are more likely to achieve benefits in a buyer-supplier relationship than smaller organizations, because the purchase volume is larger. Ramsay & Wagner (2009) state that buying organizations that are accountable for a large share in a supplier's revenue will stimulate the attractiveness of the buying organization. Ellis (2012) concludes that increases in a buying organization's share of sales in supplier's revenue provide more opportunities to impress the supplier. Meaning that increases in sales volume stimulate customer attractiveness⁹⁰.

This chapter reviewed the definition of growth opportunity and the positively significant effect of it on supplier satisfaction and customer attractiveness. Furthermore, the effect of realized growth in sales volume on growth opportunity has been explained with literature. Literature on realized growth in sales volumes, supplier satisfaction and customer attractiveness has been reviewed. The conclusion of this review is that realized growth in sales volume could also have a direct effect on supplier satisfaction and customer attractiveness. These direct causal relationships will be tested in this study. The next chapters will contain a review on established causal relationships between relational behavior, operative excellence and profitability on supplier satisfaction and customer attractiveness⁹¹.

⁸⁸ Ilyina & Sergeeva, 2015

⁸⁹ Harms et al., 2010, 135-152

⁹⁰ Ellis et al., 2012, p. 1261

⁹¹ Vos et al., 2016, p. 4613-4623

2.10. Operative excellence: low levels of operative excellence lead to dissatisfied perceptions on business transactions

The studies of Hüttinger et al. (2014) and Vos et al. (2016) conclude that operative excellence positively affects customer attractiveness and supplier satisfaction. This variable can be seen as a relational antecedent for these two constructs.

Operative excellence is an essential factor in supplier satisfaction. Low levels of operative excellence (i.e., slow order processing) make sure that business transactions are not perceived satisfactory⁹². Therefore it is important to supplier satisfaction. Essig & Amann (2009) also state that operative excellence has effect on supplier's access to the buying organization's contacts. When suppliers have a person in the buying organization, which takes cares of the relationship and activities, the supplier perceives better operational excellence of the buying organization⁹³. Another way to increase operative excellence is the focus of the buying organization on timely and correct forecasts⁹⁴. Hüttinger et al. (2014) made a table for the main categories of customer attractiveness, supplier satisfaction and preferred customer status. In this overview, we can see that operative excellence has sub-categories for customer attractiveness and supplier satisfaction. The sub-categories for customer attractiveness are: planning reliability, reliable forecasting, simple internal processes and quick decision-making. The sub-categories for supplier satisfaction are: low number of changes and simple internal processes.

Buying organizations consider reliable forecasts mostly to be essential for suppliers to score high on operative excellence⁹⁵. Suppliers can devote their capacity planning to this reliable forecasts. Furthermore, reliable forecasts minimize supplier risk and has positive effect on the behavior of suppliers⁹⁶. Therefore the reasoning: operative excellence has positive effect on customer attractiveness.

Buying organizations consider simple internal processes mostly to be essential for suppliers to score high on supplier satisfaction. The buying organization's ordering processes has a direct impact on supplier satisfaction⁹⁷. Furthermore, Mauna (2003) incorporated forecasting to the

⁹² Essig & Amann, 2009, p. 104

⁹³ Essig & Amann, 2009, p. 104

⁹⁴ Hüttinger et al., 2014

⁹⁵ Hüttinger et al., 2014

⁹⁶ Ramsay and Wagner, 2009, p. 127-138

⁹⁷ Essig and Amann, 2009, p. 105

supplier satisfaction measurement tool. Therefore the reasoning: operative excellence has positive effect on supplier satisfaction.

This chapter reviewed the definitions of operative excellence and the causal relationships of operative excellence on customer attractiveness and supplier satisfaction backed with up with literature and studies. The next chapter will be a review on relational behavior on customer attractiveness and supplier satisfaction.

2.11. Relational behavior: an reflection of an overall cooperative and professional supply chain strategy

The studies of Hüttinger et al. (2014) and Vos et al. (2016) conclude that relational behavior positively affects customer attractiveness and supplier satisfaction. This variable can be seen as a relational antecedent for these two constructs. However, what is relational behavior?

Relational behavior reflects an overall cooperative and professional supply chain strategy⁹⁸. Hüttinger et al. (2014) made a table with sub-categories for relational behavior. These sub-categories belong to the three essential constructs in this study: customer attractiveness, supplier satisfaction and preferred customer status. The sub-categories of relational behavior that are essential for customer attractiveness are readiness to talk, openness and problem solving in bad times⁹⁹. The sub-categories of relational behavior that are essential for supplier satisfaction are openness and reciprocity in agreements¹⁰⁰.

Huttinger et al., (2012) identified critical antecedents to supplier satisfaction. Essig and Amann (2009) focused on specific relational variables that lead to supplier satisfaction¹⁰¹. There are various studies that theoretically indicate that relational behavior has a positive effect on supplier satisfaction¹⁰². Huttinger et al. (2014) empirically tested these theoretical assumption as critical antecedents (i.e., relational behavior) to customer attractiveness and supplier satisfaction. Relational behavior is one of the antecedents that lead to customer attractiveness and supplier satisfaction¹⁰³.

⁹⁸ Nyaga et al., 2010, p. 101-114

⁹⁹ Hüttinger et al., 2014, p. 697-721

¹⁰⁰ Hüttinger et al., 2014, p. 697-721

¹⁰¹ Essig and Amann, 2009, p. 107

¹⁰² Benton and Maloni, 2005; Forker and Stannack, 2000; Hüttinger et al., 2014; Nyaga et al., 2010

¹⁰³ Hüttinger et al., 2014, p. 697-721

The theoretical reasoning behind the causal relationship of relational behavior on customer attractiveness is based on multiple literature studies. Harris et al. (2003) argue that social content of relationships and social compatibility as factors leading to customer attractiveness. Ellegaard et al. (2003) state that human relationships play an important role in successful business to business relationships. Moreover, Hald et al. (2009) find that relational factors as: sharing values, fair play and loyalty are important for customer attractiveness.

Literature gives ground for the theoretical assumption on the causal relationship between relational behavior and supplier satisfaction. Forker and Stannack (2000) argue that buyers and suppliers in cooperative relationships are more satisfied than their opposites in competitive relationships. Benton and Maloni (2005) and Nyaga et al. (2010) found that supplier satisfaction is driven by cooperative supply chain strategies.

This chapter reviewed the meaning of relational behavior and its effect on customer attractiveness and supplier satisfaction. These causal relationships are based on theoretical assumptions and an empirically tested causal relationship. The next chapter will give a review on a later added relational antecedent to supplier satisfaction by Vos et al. (2016): profitability.

2.12. Profitability: variables as profitability have a positive effect on satisfaction of partners in a B2B relationship

Hüttinger et al. (2014) extended the antecedents to supplier satisfaction. These antecedents are reviewed in the previous chapters. In short the antecedents that relate to supplier satisfaction are: innovation potential, growth opportunity, operative excellence, relational behavior, reliability, access to contacts and support. Vos et al. (2016) further extended the study of Hüttinger et al. (2014) with the addition of the relational antecedent ‘profitability’ on supplier satisfaction. Reasoning behind this is that Vos et al. (2016) state that the study of Hüttinger et al. (2014) ignored the effect of the perceived profitability by the supplier in their study. Therefore, the addition of the new variable profitability is made. Essential in this was the literature background. At the moment of Hüttinger et al. (2014). Growth opportunity was the only economical aspect leading to supplier satisfaction. According to Kauser and Shaw (2004) and Nyaga et al. (2010) variables as profitability and realized growth in sales have a positive effect on the satisfaction of partners in a business to business relationship. Grundy and Welsch (2009) and Liu et al. (2009) concluded that growth opportunity exists out of more economical aspects. Ruekert and Churchill Jr. (1984) define: ‘satisfaction in relationships are based on the feeling of reward and profitability’. Furthermore, supply research argued that both economical and relational factors are important to achieve supplier satisfaction¹⁰⁴. Other studies also indicate that profitability is an essential factor for the perception of suppliers on relationships¹⁰⁵. Vos et al. (2016) tested the variable profitability on supplier satisfaction and the results were positively significant.

This chapter summarizes the growth of the variable profitability in the supplier satisfaction literature. We reviewed what profitability is and saw various studies that indicate that profitability can lead to supplier satisfaction. The next chapters will give an overview of public procurement and ICT procurement. This background information will be used to explain the data collected from the public buying organization used in this study.

¹⁰⁴ Essig & Amann, 2009, p. 106

¹⁰⁵ Hald et al., 2009; Hüttinger et al., 2012; Ramsay & Wagner, 2009

3. HYPOTHESES

Through in-depth literature analysis on customer attractiveness, supplier satisfaction, preferred customer status, public procurement and relational antecedents for the three main constructs, a research model with linked hypotheses is created in order to test hypotheses on antecedents for customer attractiveness and supplier satisfaction in the context of public procurement.

This study focusses on nine variables; (1) Financial terms, (2) Information sharing, (3) Realized growth, (4) Profitability, (5) Relational behavior, (6) Operative excellence, (7) Customer attractiveness, (8) Supplier satisfaction and (9) Preferred customer status. The antecedents four, five and six are replicated out of the studies of Hüttinger et al. (2014) and Vos et al. (2016). The antecedents one and two are disassembled from the relational antecedent ‘‘support’’ used in the study of Hüttinger et al. (2014) as this antecedent did not appear to be significant in the study of Hüttinger et al. (2014). However, based on theoretical assumptions reviewed in the theoretical framework, this study assumes that the disassembled antecedents one and two will be significant. The relational antecedent ‘‘three’’ realized growth in sales is a new added antecedent in this study as discussed in the theoretical framework. Furthermore, the relation of customer attractiveness will be tested on supplier satisfaction. Also the relationship between customer attractiveness and supplier satisfaction will be tested on the preferred customer status. The other difference in this study is the focus on procurement in the public sector (i.e., public procurement).

Financial terms and information sharing as predictors of customer attractiveness and supplier satisfaction

The first two added variables to customer attractiveness and supplier satisfaction are financial terms and information sharing. The purchasing literature has a lot of recommendations to issues which are important for successful partnerships¹⁰⁶. Financial terms in this study are based on timely payments, convenient payment schemes and little interaction needed for payment. Time schedule and timely payments affect supplier satisfaction directly¹⁰⁷.

¹⁰⁶ Ellram, 1990; 1991a, b; Lamming, 1993; Briggs, 1994

¹⁰⁷ Lascelles and Dale, 1989; Essig and Amann, 2009; Maunu, 2003

Furthermore, good payment policies also improve overall image of a buying organization¹⁰⁸. When the image of a buying organization is good, suppliers will also expect positive outcomes out of a buyer-supplier relationship. Furthermore, as earlier stated in the theoretical framework for IT public procurement, long-term relationships are almost not possible due to rules and regulations. However, the IT is a very dynamic market and good buyer-supplier relationships could have a lot of advantages for the buying firm. Therefore the buyer-supplier relationship could be improved by financial terms. Therefore you could assume that financial terms also have a positive effect on customer attractiveness.

With the theoretical background on financial terms and its relation with customer attractiveness and supplier satisfaction, the following hypotheses will be tested:

H1a: Financial terms have a positive effect on customer attractiveness.

H1b: Financial terms have a positive effect on supplier satisfaction.

Information sharing is conveying critical information to a party's relationship partners¹⁰⁹. This could be involving your partners/suppliers in early stages of product design, being transparent on books and sharing cost information, future product development plans or providing supply and demand forecasts together¹¹⁰. Furthermore, trust-building processes are highly based on critical information¹¹¹. Whipple et al. (2002) the accuracy of the partner's information exchange was important and had a positive and significant effect on satisfaction of the relationship. Also, customers become more attractive to suppliers if they are perceived attractive not only economically but also in terms of information exchange (sharing)¹¹². Given the context of procuring IT in the public sector, information sharing could be another factor which could lead to better buyer-supplier relationships. The buyer and supplier are very open and transparent to each other with knowing the rules and regulations of public procurement. This could lead to different conversations and ultimately a better buyer-supplier relationship. Therefore you can say that information sharing has positive effect on customer attractiveness.

¹⁰⁸ Maunu, 2003, p. 75

¹⁰⁹ Mohr and Spekman, 1994, 135-152

¹¹⁰ Cannon and Perreault, 1999, p. 443

¹¹¹ Kwon and Suh, 2004, p. 4-14

¹¹² Christiansen and Maltz, 2002, p. 182

With the theoretical background on information sharing and its relation with customer attractiveness and supplier satisfaction, the following hypotheses will be tested:

H1c: Information sharing has a positive effect on customer attractiveness.

H1d: Information sharing has a positive effect on supplier satisfaction.

Realized growth as a predictor of customer attractiveness and supplier satisfaction

Fiocca (1982) argued that suppliers need to evaluate their customers on attractiveness. The market factors that make a customer attractive are: customer's size, growth rate and influence in the market¹¹³. Hald et al. (2009) and Ramsay and Wagner (2009) say that economic elements as price, volume, growth and access to new buyers are components of attraction. Hüttinger et al. (2014) argued that growth opportunity is an antecedent for customer attractiveness and supplier satisfaction. To define the distinction between growth opportunity of the study of Hüttinger et al. (2014) and realized growth, we gave theoretical information on what realized growth in sales volume does for customer attractiveness and supplier satisfaction. Harms (2010) states that not only innovation potential but also growth in sales volume is a predictor for growth opportunity for organizations. Brokaw and Davisson (1978) concludes that high purchase volumes by a buying organization can be an antecedent for supplier satisfaction. Ramsay & Wagner state that buying organizations that are accountable for a large share in a supplier's revenue, will stimulate the attractiveness of the buying organization. Ellis (2012) also argues the fact that buying organization's share in sales volume has effect on customer attractiveness.

With the theoretical background on realized growth and its relation with customer attractiveness and supplier satisfaction, the following two hypotheses will be tested:

H2a: The realized growth in sales by suppliers due to the buying organization's purchasing volume has positive effect on customer attractiveness.

¹¹³ Fiocca, 1982, p. 53-62

H2b: The realized growth in sales by suppliers due to the buying organization's purchasing volume has positive effect on supplier satisfaction.

Operative excellence, relational behavior and profitability as predictors for customer attractiveness and supplier satisfaction

The positively significant relationships between profitability, relational behavior and operative excellence will be tested on customer attractiveness and supplier satisfaction (in a public sector environment). The studies of Hüttinger et al. (2014) and Vos et al. (2016) conclude that operative excellence positively affects customer attractiveness and supplier satisfaction. Reliable forecasts minimize supplier risk and has positive effect on the behavior of suppliers¹¹⁴. Furthermore, the buying organization's ordering processes has a direct impact on supplier satisfaction¹¹⁵.

The studies of Hüttinger et al. and Vos et al. (2016) conclude that relational behavior positively effects customer attractiveness and supplier satisfaction. Harris et al. (2003) argue that social content of relationships and social compatibility are factors that are leading to customer attractiveness. Ellegaard et al. (2003) state that human relationships play an important role in successful business to business relationships. Furthermore, Forker and Stannack (2000) argue that buyers and suppliers in cooperative relationships are more satisfied than their opposites in competitive relationships.

Vos et al. (2016) further extended the study of Hüttinger et al (2014) with the relational antecedent profitability on supplier satisfaction. Vos et al. (2016) state that the study of Hüttinger et al. (2014) ignored the effect of the perceived profitability by the supplier in their study. According to Kauser and Shar (2004) and Nyaga et al. (2010) variables as profitability and realized growth in sales have a positive effect on the satisfaction of partners in a business to business relationship. In this study the relational antecedent profitability will also be tested on customer attractiveness as attractiveness has effect on supplier satisfaction.

Above standing causal relationships were tested in a private sector environment and in this study will be tested in a public sector environment. With the theoretical background on

¹¹⁴ Ramsay and Wagner, 2009, p. 127-138

¹¹⁵ Essig and Amann, 2009, p. 103-113

operative excellence, relational behavior and profitability, the following hypotheses will be tested in this study:

H3a: Operative excellence has positive effect on customer attractiveness in the public sector.

H3b: Operative excellence has a positive effect on supplier satisfaction in the public sector.

H3c: Relational behavior has a positive effect on customer attractiveness in the public sector.

H3d: Relational behavior has a positive effect on supplier satisfaction in the public sector.

H3e: Profitability has a positive effect on customer attractiveness in the public sector.

H3f: Profitability has a positive effect on supplier satisfaction in the public sector.

Customer attractiveness and supplier satisfaction as predictors of the preferred customer status

In this study the three main constructs are customer attractiveness, supplier satisfaction and the preferred customer status. Pullet et al. (2016) show that these constructs are correlated with each other. In this study a positive significant relation between customer attractiveness and supplier satisfaction is concluded¹¹⁶. You should keep in mind that these two constructs are conceptually different from each other. A buying organization is perceived attractive by suppliers if the suppliers expect positive outcomes of a relationship with the buying organization (customer)¹¹⁷. On the other hand, supplier satisfaction is based on outcomes from a buyer-supplier relationship that meet or exceeds suppliers expectations¹¹⁸. Furthermore, customer attractiveness is also an indirect relational antecedent to the preferred customer status¹¹⁹. Schiele (2012) argues how supplier satisfaction can lead to the preferred customer status. In this study the three constructs are linked with each other from a social exchange perspective¹²⁰.

¹¹⁶ Pulles et al., 2016, p.9

¹¹⁷ Schiele et al., 2012

¹¹⁸ Schiele et al., 2012

¹¹⁹ Pullet et al., 2016, p. 9

¹²⁰ Schiele, 2012, p.1179

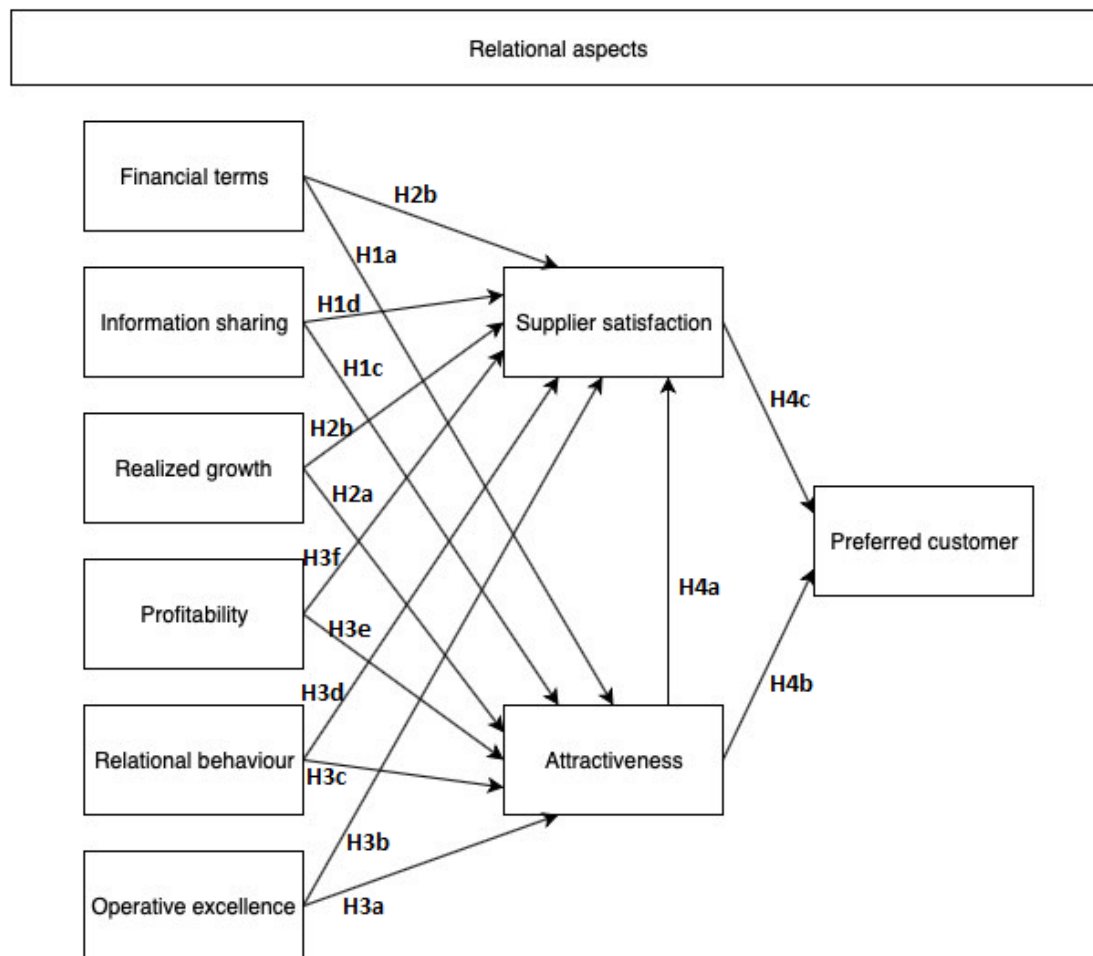
With the theoretical background on the three constructs: customer attractiveness, supplier satisfaction and the preferred customer status, the following two hypotheses will be tested in the public sector environment:

H4a: Customer attractiveness has positive effect on supplier satisfaction in the public sector.

H4b: Customer attractiveness has a positive effect on the preferred customer status in the public sector.

H4c: Supplier satisfaction has a positive effect on the preferred customer status in the public sector.

Figure 6 – Research model with relational aspects with the three main constructs



4. METHODOLOGY

4.1. Public buying organization IUC De Belastingdienst is a large public buyer

In order to assess whether the hypotheses in this research can be rejected and give answer on the research questions, an empirical study is designed. This research focuses on one of the biggest public buying organizations in the Netherlands: Belastingdienst (The Dutch Tax Authority) (hereinafter ‘‘DTA’’). For this research, only the suppliers of the ICT department are going to be contacted. As I have access to contact the suppliers of the ICT department, this study will only focus on this department. In the ICT market there are a lot of technological changes and services. In the survey a difference will be made between software, hardware and related services, which suppliers supply to the DTA. The ICT department of DTA focusses on procurement of hardware, software and related services. The DTA is a taxation authority of the government that is responsible for the intake of government revenue. This government revenue can be taxes and non-tax revenues. The DTA has different procurement department for different categories of goods. The procurement department of the DTA is done by the IUC (UK translation = Procurement execution centre). The research on what effect different elements have on supplier satisfaction and customer attractiveness will be done within the ICT department. The ICT procurement department procures all software, hardware and additional services regarding ICT for every department of the DTA.

4.2. Measurement

To test the dependent and independent variables in this study, multi-item scales are used. The study of Vos et al. (2016) will be used as basis for this study. This study introduces new constructs financial terms and information sharing as predictor variables for customer attractiveness and supplier satisfaction. Furthermore, the predictor variables out of the study of Vos et al. (2016) on supplier satisfaction will be tested in this study in the public sector on both supplier satisfaction as customer attractiveness. The predictor variable financial terms includes aspects as timely payments, convenient payment schemes, compensation for RFI’s; RFQ’s and RFP’s and the interaction need for payment. For the predictor variable information sharing, aspects as active information sharing between buyer-supplier will be researched and

the way of information sharing. The search terms used in this research to find literature on information sharing, financial support and realized growth are differing. I have used the search terms which define the terms. Also an use of purchasing literature has been used to find relevant articles on what happens when knowledge sharing, information sharing, timely payments and realized growth in sales do with the buyer-supplier relationship. Furthermore, the used literature in papers that study supplier satisfaction have been analyzed. The questions used to collect data in this study are incorporated in the Appendix.

4.3. Data collection with survey

The data collected in this study, was through a survey, which was administered to the suppliers of the ICT department within the DTA. Surveys are useful in describing the characteristics of a large population. No other research method can provide this broad capability to gather targeted results by a chosen sample. Conclusions and important decisions can be easily concluded after the data is collected and analyzed¹²¹. The survey was sent to the ICT suppliers of the DTA with the request to participate in a survey for supplier satisfaction and customer attractiveness. The data collected with this survey on individual levels will stay anonymous. The survey was sent to 102 suppliers. This survey ended with a response rate of 59,8% and thereby 61 respondents. During the process of data collection, multiple reminders were sent to the suppliers (as in phone calls and email reminders). Another factor that supports using surveys in this research is obtrusiveness. Suppliers will be anonymous with these surveys, which will result in high validity and high reliability. The sample is based on the ICT suppliers of the DTA ranging from SME's to big market leading organizations. These suppliers supply the DTA with software, hardware and related services.

The N=61 in this study without outliers. Also respondents, which did not know the DTA good enough, were deleted out of the data set. In Table 7 the characteristics of the sample and respondents are shown. Also a pie chart of the annual turnover in % due by tendering processes is shown in table 9. Furthermore, table 8 shows the division of the type of firm of the suppliers.

¹²¹ Sapsford and Jupp, 2006, p. 23

Table 7 – Characteristics of sample and respondents

Characteristics of sample		Characteristics of respondents	
1. Length of buying relationship		1. Tenure of respondent in company	
< 1 years	0%	< 1 years	0%
1 – 5 years	36%	1 – 5 years	37%
6 – 10 years	34%	6 – 10 years	33%
11 – 20 years	26%	11 – 20 years	27%
> 21 years	4%	> 21 years	4%
2. Annual turnover with DTA in % of supplier's total turnover		2. Tenure of respondent as sales representative	
< 5%	36%	< 1 years	0%
5% – 10%	30%	1 – 5 years	46%
11% - 20%	12%	6 – 10 years	29%
21% - 30%	11%	11 – 20 years	20%
> 30%	11%	> 21 years	4%
3. Number of employees		3. Involvement of respondent with the DTA	
< 100	31%	< 1 years	0%
100 – 1.000	25%	1 – 5 years	55%
1001 – 10.000	15%	6 – 10 years	31%
10.001 – 50.000	23%	11 – 20 years	12%
> 50.000	7%	> 21 years	2%

Table 8 – Type of firm

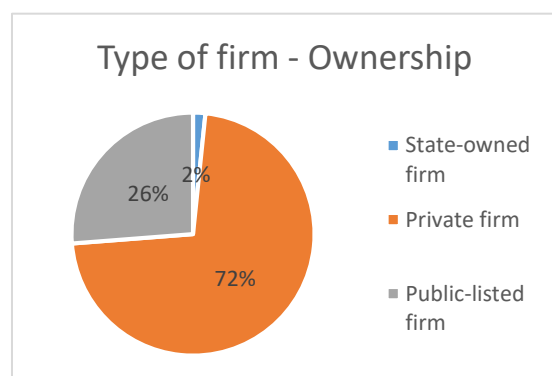
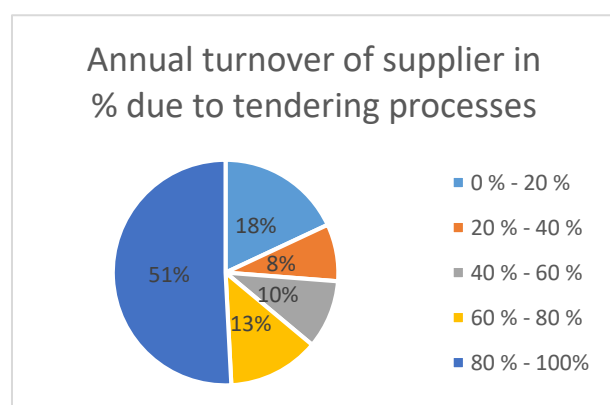


Table 9 – Annual turnover in % due to tendering processes



4.4. Choice of statistical analysis

The Partial Least Squares (hereinafter: PLS) is used in this study to test the hypotheses. PLS is an approach to Structural Equation Models (SEM), which allows researchers to analyze relationships simultaneously¹²². PLS makes sure that there are not made any assumptions on the data distribution through the regression based technique¹²³. Furthermore, as this is a predictive study, PLS analysis is better suited than covariance based statistical analyses¹²⁴. Therefore a PLS path modelling-based statistical analysis will be used. The PLS paths are shown in table 10. Furthermore, PLS displays paths that are easy to understand. Also PLS analysis provides less contradictory results regarding mediation effects in contrast to regression analysis¹²⁵.

The software used in this study is SMARTPLS 3.0 and IBM SPSS 22. The values used to discuss the predictive research hypotheses in this study come from SMARTPLS 3.0. IBM SPSS 22 is used in this study for descriptive statistics, data characteristics and analyzing outliers. Although, all the significant results in this study have a significance level of $P < 0,05$, I have still incorporated a significance level of $P < 0,10$. The reason behind this is, that I have not succeeded in receiving more than 100 respondents. The P value of 0,10 is two tailed.

¹²² Ramli N.A., Latan H., Nartea G.V., 2018, p. 171-209

¹²³ Pulles, Veldmand & Schiele 2014, p.413

¹²⁴ Barroso, Carrión & Roldán 2010, p.2

¹²⁵ Ramli N.A., Latan H., Nartea G.V. 2018, p. 171-209

Table 10 – Relational paths in this study

Paths	β	M	SE	T	P-Value
A -> PC	0,41	0,42	0,16	2,57	0,010**
A -> SS	0,38	0,35	0,12	3,10	0,002**
FT -> A	0,38	0,40	0,14	2,75	0,006**
FT -> SS	-0,01	-0,01	0,14	0,06	0,949
IS -> A	0,26	0,22	0,16	1,58	0,115
IS -> SS	0,20	0,20	0,14	1,45	0,149
O -> A	-0,26	-0,21	0,15	1,76	0,079**
O -> SS	-0,03	-0,01	0,13	0,24	0,807
P -> A	-0,05	-0,06	0,19	0,26	0,794
P -> SS	0,02	0,02	0,14	0,13	0,901
RG -> A	0,08	0,08	0,17	0,47	0,635
RG -> SS	-0,03	-0,03	0,15	0,19	0,853
RB -> A	0,16	0,16	0,17	0,95	0,345
RB -> SS	0,37	0,35	0,15	2,52	0,012**
SS -> PC	0,19	0,19	0,18	1,07	0,285

Notes: A = Customer attractiveness; FT = Financial terms; IS = Information sharing; O = Operative excellence; P = Profitability; RG = Realized growth; RB = Relational behavior; SS = Supplier satisfaction; PC = Preferred customer status.

4.5. Quality assessment of research design

The Cronbach's Alpha measures the internal consistency reliability¹²⁶. To test the convergent validity, the Cronbach's Alpha and Composite Reliability have to score above a threshold of 0,70¹²⁷ and the Average variance extracted above a threshold of 0,50. As can be seen in table 11 below, all constructs score above the threshold. This means the constructs support the convergent validity in this study. The Variance Inflation Factors (VIF in the table) of the variables in the table below should score below a threshold of 2,5. In the table below we can see that variables 6, 7 and 8 score above 2,5. However, they do not score much above the threshold. Thus, there are no substantive high VIF values in this study¹²⁸.

¹²⁶ Gliem & Gliem, 2003, p.83

¹²⁷ Bagozzi & Yi 1988

¹²⁸ Diamantopoulus & Siguaw, 2006, p.263-282; Pan & Jackson, 2008, p.421-431

Table 11 – Quality criteria of constructs

	1	2	3	4	5	6	7	8	9
Quality criteria									
Average variance extracted	0,52	0,66	0,73	0,63	0,66	0,61	0,82	0,67	0,62
Composite Reliability	0,82	0,89	0,92	0,89	0,85	0,90	0,93	0,91	0,91
Cronbach's Alpha	0,72	0,83	0,89	0,89	0,81	0,87	0,89	0,88	0,87
Highest VIF	2,08	2,09	1,54	2,06	1,64	2,77	2,72	1,63	2,77

Notes: 1 = Financial terms; 2 = Information sharing; 3 =Operative excellence; 4 = Profitability; 5 = Realized growth; 6 = Relational behaviour; 7 = Attractiveness; 8 = Preferred customer; 9 = Supplier satisfaction; VIF = Variance Inflation Factors.

5. RESULTS

In this chapter we will review the results and conclude whether hypotheses will be supported or rejected. The tables 12 and 13 will be used for this section.

For financial terms and information sharing we had four hypotheses, which we wanted to test in this study. The results in table 12 and table 13 show a highly positive significant relationship between the variables financial terms and customer attractiveness (H1a; $t = 2.75$, $\beta = 0.38$). However, the results show a slightly negative non-significant relationship between the variables financial terms and supplier satisfaction (H1b; $t = 0.06$, $\beta = -0.01$). Therefore we can say that H1a is supported and H1b is rejected.

The results show a positive non-significant relationship between the variables information sharing and customer attractiveness (H1c; $t = 1.58$, $\beta = 0.26$). Also for the variables information sharing and supplier satisfaction the results show a positive non-significant relationship (H1d; $t = 1.45$, $\beta = 0.20$). The research model was based on the expectation of supporting both hypotheses (H1c and H1d). However, with regard to the results we have to reject both H1c and H1d.

For realized growth in sales volume we had two hypotheses, which we wanted to test in this study. The results show a positive non-significant relationship between realized growth in sales volume and customer attractiveness (H2a; $t = 0.47$, $\beta = 0.08$). For the variables realized growth in sales volume and supplier satisfaction a slightly negative non-significant relationship is found (H2b; $t = 0.19$, $\beta = -0.03$). The research model was based on the expectation of support both hypotheses positively (H2a and H2b). However, we have to reject these hypotheses on basis of the results.

For operative excellence, relational behavior and profitability we had six hypotheses, which we wanted to test in this study. The results show a negative significant relationship between operative excellence and customer attractiveness (H3a; $t = 1.76$, $\beta = -0.26$). For the variables operative excellence and supplier satisfaction a slightly negative non-significant relationship was found (H3b; $t = 0.24$, $\beta = -0.03$). The research model was based on the expectation of supporting both hypotheses (H3a and H3b) positively. However, we have to reject these hypotheses on basis of the results. H3a has to be rejected, because the results show a negative

significant relationship and the hypotheses was based on a positive outcome. H3b has to be rejected, because the results show a slightly negative non-significant relationship.

The results show a positive non-significant relationship between relational behavior and customer attractiveness (H3c; $t = 0.95$, $\beta = 0.16$). On the other hand, the results show a highly positive significant relationship between the variables relational behavior and supplier satisfaction (H3d; $t = 2.52$, $\beta = 0.37$). Therefore we can say that we will reject H3c and support H3d.

The results show a slightly negative non-significant relationship between profitability and customer attractiveness (H3e; $t = 0.26$, $\beta = -0.05$). Furthermore, the results show a positive non-significant relationship between profitability and supplier satisfaction (H3f; $t = 0.13$, $\beta = 0.02$). Therefore we have to reject both H3e and H3f on basis of the results.

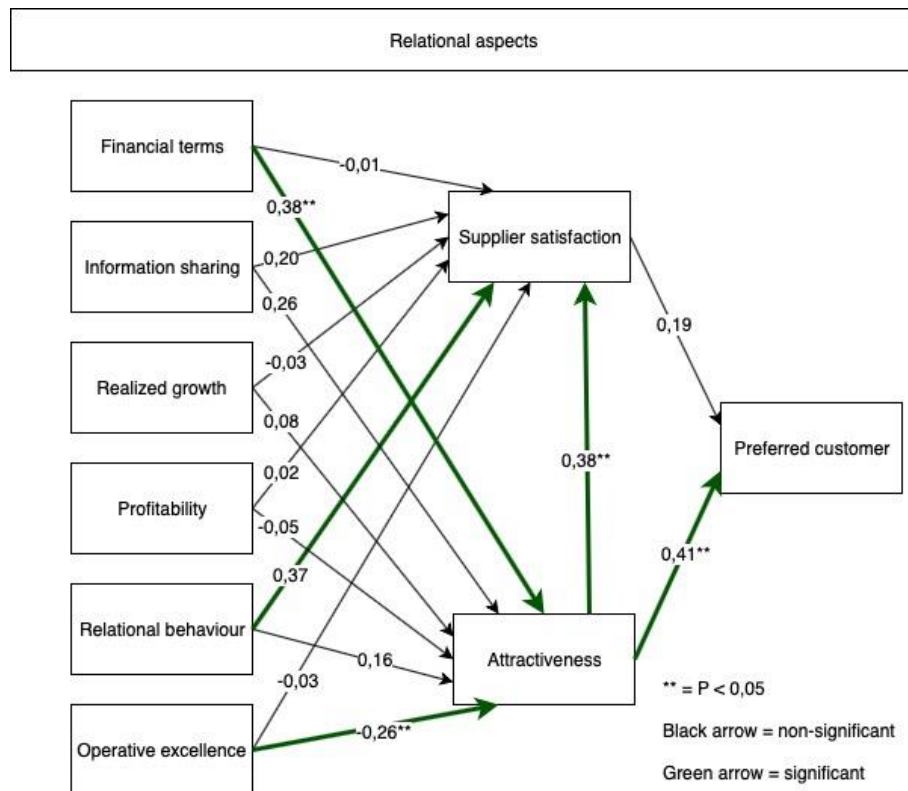
The three main constructs were also included in our research model; customer attractiveness, supplier satisfaction and the preferred customer status. These are dependent variables in our research model. The results show a highly positive significant relationship between customer attractiveness and supplier satisfaction (H4a; $t = 3.10$, $\beta = 0.38$). Furthermore, we see a highly positive significant relationship between customer attractiveness and the preferred customer status (H4b; $t = 2.57$, $\beta = 0.41$). In contrast we see that supplier satisfaction does not have a positive significant relationship with the preferred customer status in this study. We see here a positive non-significant relationship (H4c; $t = 1.07$, $\beta = 0.19$). Therefore we have to say that the hypotheses H4a and H4b are supported on basis of the results. However, H4c has to be rejected in this study.

Table 12 – Bootstrap and effect statistics of the research model

Paths	β	M	SE	T	P-Value
A -> PC	0,41	0,42	0,16	2,57	0,010**
A -> SS	0,38	0,35	0,12	3,10	0,002**
FT -> A	0,38	0,40	0,14	2,75	0,006**
FT -> SS	-0,01	-0,01	0,14	0,06	0,949
IS -> A	0,26	0,22	0,16	1,58	0,115
IS -> SS	0,20	0,20	0,14	1,45	0,149
O -> A	-0,26	-0,21	0,15	1,76	0,079**
O -> SS	-0,03	-0,01	0,13	0,24	0,807
P -> A	-0,05	-0,06	0,19	0,26	0,794
P -> SS	0,02	0,02	0,14	0,13	0,901
RG -> A	0,08	0,08	0,17	0,47	0,635
RG -> SS	-0,03	-0,03	0,15	0,19	0,853
RB -> A	0,16	0,16	0,17	0,95	0,345
RB -> SS	0,37	0,35	0,15	2,52	0,012**
SS -> PC	0,19	0,19	0,18	1,07	0,285

Notes: A = Customer attractiveness; FT = Financial terms; IS = Information sharing; O = Operative excellence; P = Profitability; RG = Realized growth; RB = Relational behavior; SS = Supplier satisfaction; PC = Preferred customer status; B = beta; M = Mean; SE = Standard error; T = T-value.

Table 13 – Research model with results of PLS-PM



6. DISCUSSION AND CONCLUSION

Public buying organizations have differing goals from private buying organizations. In contrast to the private sector, public buying organizations and government departments are created to fulfill responsibilities of the government and are expected to cooperate in the policy development and the delivery of differentiating services¹²⁹. Public buying organizations and government departments focus more on efficiency and flexibility¹³⁰. More recent objectives of public buying organizations are stimulation of innovation, circularity, social return and sustainability¹³¹. Customer attractiveness, supplier satisfaction and the preferred customer status could help public buying organizations achieve their objectives effectively and efficiently. Furthermore, the research on these three constructs was mostly based on the private sector. This study will give more insights for public buying organizations, which would like to focus on these three constructs to achieve their objectives.

This study focused on the variables financial terms, information sharing, realized growth, operative excellence, relational behavior and profitability and their causal relations with the three main constructs; customer attractiveness, supplier satisfaction and the preferred customer status. Furthermore, this study is based on scientific literature on earlier mentioned variables and the quantitative research was done with the suppliers of one of the biggest public buying organizations in the Netherlands; De Belastingdienst (DTA). The hypotheses based on the research model were not all supported. We will discuss the research model in this section and answer the research questions of this study.

Based on the theoretical assumptions, this study assumed that financial terms have positive significant relationships with customer attractiveness and supplier satisfaction. One of the two were tested positive significant (financial terms on attractiveness). This means that in the public procurement sector financial terms are important, as this is highly correlated with the customer's attractiveness. This is an addition to the literature, as financial terms have not been researched in the context of customer attractiveness and supplier satisfaction. With the context of the public ICT sector, you could therefore say that financial terms lead to more customer attractiveness. However, these financial terms do not have positive significant effect on supplier satisfaction. We even see a slight negative non-significant correlation. The reasoning

¹²⁹ Matthews et al., 2005

¹³⁰ Kay, 1995

¹³¹ J. G. Murray, 2001; Sykes, 2012

behind this could be that financial terms should also be in order. It will make customer more attractive. However, the post relationships outcome analysis on whether financial terms are positively correlated with supplier satisfaction is not true. Suppliers in this public ICT context do not base their satisfaction on financial terms. Information sharing was also explained in the theoretical framework and hypotheses section. Information sharing did have both positive relationships with customer attractiveness and supplier satisfaction. However, it was not significant. The reasoning behind this is, the sample used in this study is not big enough. The P-value of information sharing on customer attractiveness is 0,115 and the P-value of information sharing on supplier satisfaction is 0.149. The relationships would be significant if the P-value was $P\text{-value} < 0,1$. When the sample is bigger, information sharing could have been positive significant in both paths. The public procurement sector has difficulties and there are more rules and regulations than in the private sector. Combine this with procuring ICT, as we earlier explained in the theoretical framework and there is a complex purchasing portfolio. Thus, it is logical to make the conclusion here: information sharing could be needed in the public procurement sector for ICT and this can lead to customer attractiveness and supplier satisfaction.

Realized growth was not significant in both paths. The assumption before this study was conducted was: the DTA is a big buying organization and has a lot of influence on their suppliers. However, when you look at the tables in the methodology section, you will see that DTA is accountable for only 0% - 10% of the annual turnover of the supplier. This could be high numbers for some, but mostly the suppliers had between 0 – 1000 employees (56% of the sample). Therefore you can say, realized growth in sales volume could be significant on customer attractiveness and supplier satisfaction. However, this would only be the case if your buying organization is accountable for more than 20% of the supplier's annual turnover. When you are the buying organization and you hold more than 20% of the annual turnover of a supplier, you could say that the supplier sees you as an important customer. If the sample were bigger, you could have tested for a moderation effect. Then you split the sample in high and low dependent suppliers and do the analysis of realized growth on customer attractiveness and supplier satisfaction again. You would probably see that high dependent suppliers score positive significant on the relationship between realized growth and customer attractiveness and/or supplier satisfaction. As earlier stated, the research has been done in the ICT public procurement context. The biggest ICT needs are mostly offered by big international ICT

organizations and therefore the realized growth on these suppliers could not be significant for customer attractiveness and supplier satisfaction.

The relational antecedents; operative excellence, relational behavior and profitability on customer attractiveness and supplier satisfaction, that have been studied by Hüttinger et al. (2014) and Vos et al. (2016) were also tested in this public procurement sector. These studies for the private sector showed that these antecedents scored significant on supplier satisfaction. The results of operative excellence in this study did not show any relationship with supplier satisfaction. However, operative excellence did show a negative significant relationship with customer attractiveness. The reasoning behind this is in the theoretical assumptions of operative excellence. Operative excellence as earlier explained in the theoretical framework is based on forecasting, lean ordering processes; you could say less bureaucracy. However, with a public buying organization as big as the DTA, bureaucracy is needed. This bureaucracy has effect on the lean ordering processes, forecasting, etc. As the size of the organization influences the way forecasting is done. Big buying organizations as the DTA supply ICT for the whole DTA. There are a lot of divisions in the DTA, that the buying organization for the DTA could have problems with good forecasting. The whole DTA organization should forecast their ICT needs, if the buying organization for the DTA want their forecast in order. There are also big private organizations. However, the bureaucracy in the public sector is bigger than in the private sector¹³².

Furthermore, relational behavior did not have a significant effect on customer attractiveness. However, relational behavior did have a significant effect on supplier satisfaction. This significant effect is in accordance with the theoretical assumptions and earlier study done by Vos et al. (2016). In the public procurement sector we have to deal with rules and regulations and objectives of the EPPL as explained in the theoretical framework. Meaning, the standard objectives always have to be available in the buying organization; transparency, non-discrimination, equal treatment, proportionality and mutual recognition. Meaning the suppliers always expect the buying organization to already have a good relational behavior. There are also organizations that control the public buying organizations on these objectives. Therefore public buying organizations always try to score well on the relational behavior objectives and suppliers probably know that. This could be a reasoning for why this relationship did not light up significant on customer attractiveness. However, when the

¹³² Buelens and Van den Broeck, 2007, p. 65-74

suppliers really see that the relational behavior of the public buying organization exceeds the expectations, you could say that suppliers become satisfied on this point.

Profitability did not have any significant effects in this study. Vos et al. (2016) did find a significant relationship between profitability and supplier satisfaction. The reasoning behind this could be that the public procurement sector significantly reduces the margins for the suppliers, due to the tendering processes and the way suppliers should do their bidding¹³³.

Furthermore, customer attractiveness had both high significant relationships with supplier satisfaction and the preferred customer status as the theoretical assumptions were always stating in the theoretical framework. Reasoning behind this: when the public buying organization is perceived attractive, the suppliers expect a lot out of the buyer-supplier relationship. Therefore they invest their best resources into the relationships and the public buying organizations therefore can help even further exceed the expectations of suppliers. On the other hand, we see that supplier satisfaction did not have a significant relationship with the preferred customer status in the public procurement sector. Other studies did find a significant relationship between supplier satisfaction and the preferred customer status. However, these studies were done in the private sector with almost the same survey questions. Another possibility could be the low sample size in this study. If the sample size were bigger, the P-value could be $P < 0,1$. Now the P-value for supplier satisfaction on the preferred customer status is $P = 0,285$.

Hereby we tried answering the main research question: *To what extent do different variables have effect on supplier satisfaction and customer attractiveness in the public sector?*

The advice that could be given to the DTA and other public organizations procuring ICT are: financial terms show significant positive effect on customer attractiveness. If your organization wants to attract more suppliers or bids on tenders, you could focus on improving your financial terms and show these standing and potential suppliers. Also operative excellence has significant effect on customer attractiveness. Your buying organization should focus on making more lean processes, better ordering and better forecasting. As these factors explain operative excellence and ensure that the customer attractiveness becomes higher. Furthermore, relational behavior had positive significant effect on supplier satisfaction. The sub-categories of relational behavior that are essential for supplier satisfaction are openness

¹³³ Lettink, 2016

and reciprocity in agreements¹³⁴. To ensure better supplier satisfaction, public buying organizations should focus on openness and reciprocity in agreements. To conclude this paragraph with advices, public ICT buying organizations see in this study, that customer attractiveness lead to supplier satisfaction and the preferred customer status. Therefore above standing advices could be essential for public ICT buying organizations and in particular for the DTA.

¹³⁴ Huttinger et al., 2014

7. LIMITATIONS AND FURTHER RESEARCH

Almost every study has limitations. This study also has limitations, which should be taken into account when considering to use the results and drawing conclusions. However, you can also see opportunities in your own limitations. Therefore, the following limitations also provide opportunities for further research.

The first limitation is the small sample size ($N=61$) and this is also the biggest limitation in this study. Usually in these kind of studies you have a sample size of $N>100$. This means that some relationships were not found significant in this study. These relationships could be significant or totally different if the sample size were bigger. As this study was done in the context of public procurement of ICT, distinctions between suppliers could not be made due to the small sample size. As suppliers, supplying software, hardware or related services could all have different relationships. As information sharing could have more impact on software suppliers than hardware suppliers. As software is dynamically changing and hardware is also changing, but less dynamic. Therefore information sharing between buyers and suppliers in software could be more of an importance.

The second limitation of this research is that the author of this study, also works in the buying organization DTA. I tried to let this not affect the results of this study. However, suppliers could also fill the survey's in differently as they are aware, that I am also a purchaser at the buying organization.

The third limitation is that we are doing the study in the public sector. In the public procurement sector, we have a lot of rules and regulations as explained in this paper and very different sectors and buying volumes. Therefore broader conclusions could not be made for the whole public sector. As this study was only done in the public procurement of ICT.

Future research on this topic in the public sector could be done with the following recommendations: there should be a bigger sample ($N>100$) and the survey's should be sent to suppliers of different public buying organizations. This way relationships could be more significant and a more in depth analysis into the suppliers from different sectors could be done. Furthermore, I would recommend that the study should be done by an external person, which is not working in the buying organization. As this could cause obtrusiveness.

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9. APPENDICES

Appendix A - Questionnaire items

Realized growth (Delmar et al. (2003); Hüttinger (2014))

1. Due to this customer we have obtained an succesfull increase in our employment rate.
2. Our relationship with this customer is very important for us with respect to increased sales figures.
3. Our relationship with this company is very important for us with respect to realized growth in sales volume.

Information sharing (Eckerd, S., & Hill, J. A. (2012))

1. In this relationship, we are supplied with any information that might help us fulfill the buyer's needs.
2. In this relationship, we supply the buying organization with any information that might help them fulfill their needs.
3. Exchange of information in this relationship takes place informally and not just according to a pre-specified plan.
4. We are satisfied with the way of information sharing with this organization.
5. How does your company and our company do information sharing? (Answers that can be given are: digital, paper, real time)

Financial terms (Meena & Sarmah (2012))

1. We are satisfied with the timely payments of this organization.
2. We are satisfied with the convenient payment schemes of this organization.
3. We are satisfied with the compensation for the RFI's, RFP's and RFQ's of this organization.
4. We are satisfied with the little interaction needed for payment by this organization.